OWNER PROVIDED CHART

#	ITEM	SUPPLIED BY OWNER	INSTALLED BY G.C.	INSTALLED BY OWNER	NOTES	REMARKS
1	HOODS, EXHAUST FAN SYSTEM AT COOKLINE, PREP LINE AND DISHWASH	X	X			
2	ANSUL FIRE SUPPRESSION SYSTEM FOR HOODS	X		X		
3	ALL OTHER EXHAUST FANS	X	X			
4	WALK-IN COOLERS, CONDENSERS, COILS	X		X		
5	REFRIGERATION LINES TO ICE MACHINES AND WALK-INS	X		X		
6	STAINLESS STEEL WALL PANELING AT COOKLINE, PREP LINE AND DISHWASH AREA	X	X			
7	STAINLESS STEEL CORNER GUARDS	X	X			
8	STAINLESS STEEL CUSTOM KITCHEN EQUIPMENT	X		X		
9	KITCHEN EQUIPMENT	X		X		
10	INTERIOR POT PLANT PACKAGE AND LINERS	X	X			
11	INTERIOR DECOR PACKAGE, ARTWORK	X	X			
12	FIRE ALARM SYSTEM	X		X		
13	SECURITY SYSTEM	X		X		
14	SOUND SYSTEM	X		X		
15	TELEVISION, TV BRACKETS	X	X			
16	TELEPHONES	X		X	2	ROUGH IN BY G.C.
17	SODA	X		X		ROUGH IN BY G.C.
18	BEER	X		X		ROUGH IN BY G.C.
19	FROZEN DRINKS	X		X		ROUGH IN BY G.C.
20	BUILDING SIGNS	X		X	4	ROUGH IN BY G.C.
21	MISC. STAINLESS STEEL, TICKET RAIL, CAN OPENER	X		X		
22	STAINLESS STEEL TROUGH DRAIN	X	X			
23	POS INSTALLATION, TERMINALS SET UP	X		X	2	POS PANEL BY G.C.
24	SAFE	X	X			
25	CO2	X		X	2	G.C. PROVIDE CHASES PER PLAN
26	UPS (BY POS VENDOR)	X		X		
27	LANDSCAPE AND IRRIGATION		X		3	G.C. TO SUPPLY AND INSTALL
28	MONUMENT SIGN	X		X		CONDUIT, WIRING AND STONE BASE BY G.C.
29	SMALLWARES	X		X		
30	WATER SOFTENER	X		X		
31	WINDOW BLINDS	X		X		
32	COFFEE AND TEA EQUIPMENT	X		X		G.C. TO SUPPLY AND HOOK UP WATER
33	LEMONADE DISPENSERS	X		X		G.C. TO SUPPLY AND HOOK UP WATER
34	TOILET PAPER & PAPER TOWEL	X	X			
35	WATER HEATER	X	X			
36	ALL PORCELAIN TILE, QUARRY TILE, GROUT, THINSET, SCHLUTER TRIM AND WATERPROOFING	X	X			
37	LUTRON PANEL	X	X			
38	CPI	X	X			
39	HVAC SYSTEM	X	X			
40	CARPET AND WALK OFF MAT	X	X			
41	IT RACK	X	X			
42	US AND STATE FLAGS, FRAMED	X	X			
43	MISC. SIGN PACKAGE	X	X			
44	STORAGE SHED	X	X			
45	NASCAR PACKAGE	X	X			
46	WAITING BENCHES	X	X			
47	FRYER OIL DISPOSAL BIN	X	X			

NOTES

1 . ADA SIGNS FOR RESTROOM BY G.C. MISC. STICK ON SIGNS, DESIGNATING VARIOUS UTILITY ROOMS AND DELIVERY HOURS, THAT ARE FURNISHED BY OWNER, TO BE INSTALLED BY G.C.
2 . G.C. TO PROVIDE CONDUIT WITH PULL STRINGS.
3 . ALL ISLANDS AND MEDIANS FILLED TO WITHIN 2" OF TOP OF CURB, GENERAL AREAS GRADED TO .1' OF GRADE SET BY CIVIL GRADING PLAN.
4 . G.C. TO PROVIDE CONDUIT AND POWER

DEFERRED SUBMITTALS

AUTOMATIC SPRINKLER SYSTEM SHOP DRAWINGS

TRUSS SHOP DRAWINGS

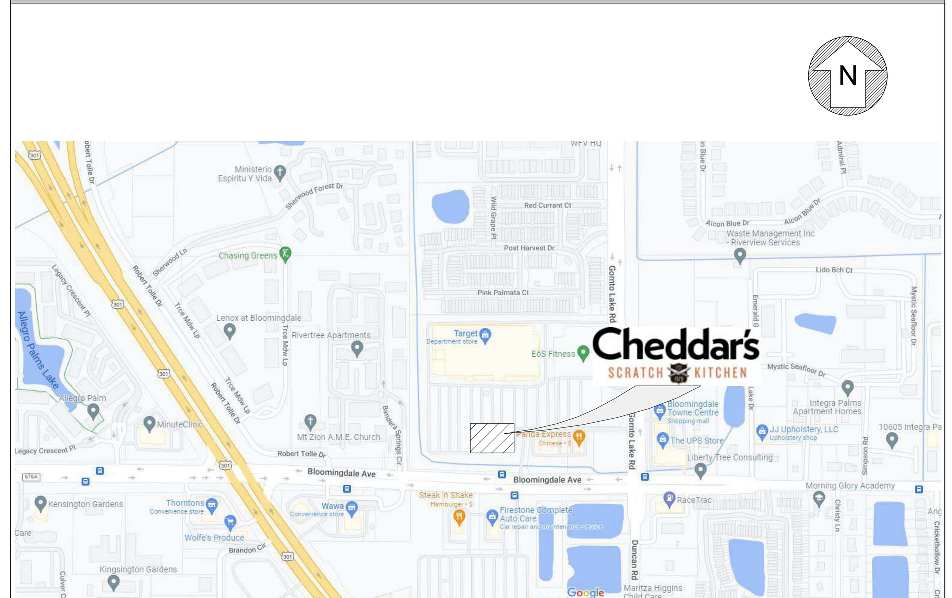
SYMBOL LEGEND

SYMBOL		DESCRIPTION
DRAWING TITLE	FLOOR PLAN 1/4" = 1'-0" 1	
SECTION	SIM 1 A101	SECTION I.D. NUMBER; SHEET WHERE SECTION IS LOCATED
DETAIL (ENLARGED)	SIM 1 A101	DETAIL I.D. NUMBER; SHEET WHERE DETAIL IS LOCATED
DETAIL (ENLARGED)	1 // A101	SHEET WHERE ELEVATION IS LOCATED; ELEVATOIN I.D. NUMBER
CEILING HEIGHT	9'-0"	CEILING HEIGHT ABOVE FINISHED FLOOR
DOOR	101	DOOR NUMBER DESIGNATION
WINDOW	1t	WINDOW NUMBER DESIGNATION
FINISH MATERIAL	? TRIM ONLY	FINISH DESIGNATION; COMMENTS IF APPLICABLE
KEYED NOTES	A#	KEYED NOTE DESIGNATION ON APPLICABLE SHEET
REVISION	1	ADDENDUM NUMBER; REVISED AREA CLOUDED
ELEVATION HEIGHT	T.O. SLAB 100 ' -0"	REFERENCE POINT; ELEVATION HEIGHT
ELEVATION HEIGHT	A#	EQUIPMENT NUMBER / LETTER DESIGNATION
WALL TYPE	1i	WALL TYPE LETTER

PROJECT NOTES

1	STAMPED PLANS TO REMAIN IN FIELD OFFICE. THE GENERAL CONTRACTOR SHALL ENSURE ALL TRADES ARE USING MOST CURRENT SET OF CONSTRUCTION DOCUMENTS. ERRORS THAT RESULT FROM THE USE OF OUT-DATED DRAWINGS ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL MAINTAIN ONE COMPLETE SET OF PLANS ON THE PREMISES IN GOOD CONDITION AT ALL TIMES. THIS SHALL INCLUDE ALL ADDENDA AND CHANGE MEMOS. ONLY PLANS STAMPED "FOR CONSTRUCTION" TO BE USED ON SITE.
2	THE GENERAL CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO STARTING ANY WORK AND SHALL BE RESPONSIBLE FOR ALL WORK AND MATERIALS INCLUDING THOSE FURNISHED BY SUBCONTRACTORS AND OWNER. ALL DISCREPANCIES TO BE REPORTED TO CONSTRUCTION MANAGER PRIOR TO START OF CONSTRUCTION.
3	DISCREPANCIES BETWEEN PORTIONS OF THE CONTRACT DOCUMENTS, DRAWINGS AND SPECIFICATIONS ARE NOT INTENDED. THE GENERAL CONTRACTOR IS TO CLARIFY ANY SUCH DISCREPANCIES WITH THE OWNER PRIOR TO COMMENCING WORK AND COPY SAME CLARIFICATIONS REQUEST TO ARCHITECT.
4	STATED DIMENSIONS TAKE PRECEDENCE OVER GRAPHICS, DO NOT SCALE DRAWINGS TO DETERMINE LOCATIONS. THE OWNER AND ARCHITECT SHALL BE NOTIFIED OF ANY SUCH DISCREPANCIES PRIOR TO CONTINUING WITH WORK.
5	GENERAL CONTRACTOR SHALL REFER AND CONFORM TO ALL RECOMMENDATIONS AND FINDINGS AS SET FORTH IN SOILS GEOTECH REPORT. THE OWNER AND/ OR ARCHITECT ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF THE FINDINGS OR FOR THE FINAL RECOMMENDATIONS, GRADING, TRENCHING, ETC. - CONTACT OWNER FOR INSTRUCTIONS PRIOR TO THE CONTINUATION OF WORK SHOULD ANY UNUSUAL CONDITIONS BECOME APPARENT DURING GRADING OR FOUNDATION CONSTRUCTION. EXISTING ELEVATIONS AND LOCATIONS TO BE JOINTED SHALL BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO CONSTRUCTION. IF THEY DIFFER FROM THOSE INDICATED ON THE DRAWINGS, THE GENERAL CONTRACTOR SHALL NOTIFY THE OWNER AND ITS ARCHITECT SO THAT MODIFICATIONS CAN BE MADE BEFORE PROCEEDING WITH THE WORK.
6	IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER INDICATED HEREIN OR NOT AND TO PROTECT THEM FROM DAMAGE. THE GENERAL CONTRACTOR SHALL BEAR THE EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE EXECUTION OF THE WORK.
7	GENERAL CONTRACTOR TO PROVIDE FIRE SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13 PER THE REQUIREMENTS OF SECTION 903.3.1.1 AND INDICATED HEREIN. FIRE SPRINKLER CONTRACTOR IS TO SUBMIT COMPLETE SHOP DRAWINGS, LAYOUT AND RELATED DATA TO ARCHITECT/OWNER FOR APPROVAL FIRST AND PRIOR TO SUBMISSION TO BUILDING DEPARTMENT AND FIRE MARSHAL FOR APPROVAL PRIOR TO INSTALLATION. ANY REVISIONS TO SPRINKLER DRAWINGS AS A RESULT OF SUCH SUBMISSION SHALL FURTHER BE APPROVED BY OWNER PRIOR TO FABRICATION.
8	GENERAL CONTRACTOR TO REFER TO THESE DOCUMENTS AS WELL AS SPECIFICATIONS FOR IDENTIFICATION OF ALL OWNER SUPPLIED ITEMS, ALL ITEMS NOT MARKED AS 'OWNER SUPPLIED' ARE TO BE SUPPLIED BY GENERAL CONTRACTOR. UNLESS NOTED OTHERWISE, ALL ITEMS ARE TO BE INSTALLED BY GENERAL CONTRACTOR.
9	FOR CONSTRUCTION DETAILS NOT INDICATED, USE THE MANUFACTURER'S APPROVED SHOP DRAWINGS/ DATA SHEETS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
10	THE GENERAL BUILDING PERMITS SHALL BE PAID FOR BY THE OWNER. ALL OTHER PERMITS SHALL BE SECURED AND PAID FOR BY THE SUBCONTRACTOR DIRECTLY RESPONSIBLE. ALL REQUIRED CITY, COUNTY AND /OR STATE LICENSES SHALL BE ACQUIRED AND PAID FOR BY THE INDIVIDUAL SUBCONTRACTOR.
11	THE GENERAL CONTRACTOR SHALL VERIFY LOCATIONS OF ALL FOOD SERVICE EQUIPMENT AND COORDINATE LOCATION OF FLOOR SINKS, FLOOR DRAINS, SLOPES/ SLAB DEPRESSIONS, RAISED CURBS, ELECTRICAL AND PLUMBING STUB OUTS, AND ALL OTHER WORK UNDER THIS SCOPE OF RESPONSIBILITY RELATED TO THIS EQUIPMENT. CONTRACTOR TO BEAR COSTS FOR RELOCATION'S OF ALL ROUGH-INS, IF NOT INSTALLED PER APPROVED PLANS.
12	THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE JOB IS IN PROGRESS AND UNTIL JOB IS COMPLETED. THEFT OF ANY OWNER SUPPLIED ITEMS, ACCEPTED BY CONTRACTOR, SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
13	ALL DEBRIS SHALL BE REMOVED FROM PREMISES AND ALL AREAS SHALL BE LEFT IN A CLEAN (BROOM) CONDITION AT ALL TIMES DURING CONSTRUCTION.
14	THE GENERAL CONTRACTOR SHALL PROVIDE TEMPORARY WATER, POWER, HEATING, TELEPHONE, OFFICE, AND TOILET FACILITIES AS NECESSARY FOR DURATION OF PROJECT. OFFICE SHALL PROVIDE ADEQUATE MEETING SPACE.
15	GENERAL CONTRACTOR IS RESPONSIBLE FOR RECEIVING, UNLOADING AND HOOKUP OF ALL FOOD SERVICE EQUIPMENT AND OTHER OWNER FURNISHED ITEMS. PROVIDE LIFT AND DUMPSTER AS REQUIRED.
16	THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REPLACE OR REMEDY ANY FAULTY, IMPROPER OR INFERIOR MATERIALS OR WORKMANSHIP WHICH SHALL APPEAR WITHIN ONE (1) YEAR OR AS OTHERWISE SPECIFIED FOR A SPECIFIC COMPONENT AFTER THE OPENING OF THE RESTAURANT UNDER THIS CONTRACT. EXCEPTION, (THE ROOFING SUBCONTRACTOR SHALL FURNISH AND MAINTAIN AGREEMENT CO-SIGNED BY THE GENERAL CONTRACTOR TO MAINTAIN THE ROOFING IN A WATERTIGHT CONDITION FOR A PERIOD OF TWO (2) YEARS STARTING AFTER DATE OF FINAL TURNOVER INSPECTION.) MANUFACTURER WARRANTY IS SEPARATE OF MENTIONED WARRANTY.
17	GENERAL CONTRACTOR IS REQUIRED TO LABEL ALL ELECTRICAL PANELS, MECHANICAL EQUIPMENT, PLUMBING VALVES, AND ROOF TOP EQUIPMENT WITH PLASTIC PHENOLIC ENGRAVED PLATE, SECURELY ATTACHED.
18	ALL ELECTRICAL, MECHANICAL, AND PLUMBING WORK SHALL CONFORM TO THE REQUIREMENTS OF LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION.
19	GENERAL CONTRACTOR SHALL SUBMIT WITHIN FOUR (4) WEEKS OF PROJECT AWARD ALL SHOP DRAWINGS, UNLESS NOTED OTHERWISE. OWNER AND/ OR ARCHITECT WILL REVIEW ALL SHOP DRAWINGS AND SAMPLES FOR CONFORMANCE WITH DESIGN CONCEPT OF THE PROJECT. THE OWNER AND/ OR ARCHITECT'S APPROVAL OF A SEPARATE SPECIFIC ITEM SHALL NOT INDICATE APPROVAL OF AN ENTIRE ASSEMBLY IN WHICH THE SPECIFIC ITEM FUNCTIONS.
20	MINIMUM FLAME SPREAD CLASSIFICATION OF INTERIOR FINISH SHALL CONFORM TO THE BUILDING CODE AND LOCAL GOVERNING BUILDING CODES/ ORDINANCES. 1
21	PIPES AND DUCTS EXCEEDING ONE THIRD THE CONCRETE SLAB OR CONCRETE WALL THICKNESS SHALL NOT BE PLACED WITHIN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED AS SUCH. REFER TO MECHANICAL AND/ OR ELECTRICAL DRAWINGS FOR LOCATION OF SLEEVES, ACCESSORIES, ETC.
22	HOT WATER TEMPERATURE AT ALL HAND SINKS TO BE CALIBRATED TO 110 DEGREES FAHRENHEIT.
23	ALL BIDDING IS ADMINISTERED BY DARDEN CONSTRUCTION DEPARTMENT. ALL REQUESTS FOR CLARIFICATIONS SHALL BE SENT TO DARDEN CONSTRUCTION MANAGER AND THE ARCHITECT.
24	IT IS THE INTENT OF THE ARCHITECT THAT THIS WORK BE IN CONFORMANCE WITH ALL REQUIREMENTS OF THE BUILDING AUTHORITIES HAVING JURISDICTION OVER THIS TYPE OF CONSTRUCTION AND OCCUPANCY.
25	THE GENERAL CONTRACTOR SHALL SUPPLY, LOCATE AND INSTALL INTO THE WORK: ALL INSERTS, ANCHORS, ANGLES, PLATES, OPENINGS, SLEEVES, HANGERS, SLAB DEPRESSIONS AND PITCHES THAT MAY BE REQUIRED FOR ATTACHMENT AND ACCOMMODATION OF OTHER WORK.
26	MOST DETAILS AND SECTIONS INDICATED ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO SIMILAR SITUATIONS ELSEWHERE IN THE PROJECT EXCEPT SPECIFICALLY WHERE A DIFFERENT DETAIL IS INDICATED.
27	IT IS THE GENERAL CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCING.
28	APPROVAL FOR DEVIATIONS FROM THESE PLANS SHALL BE OBTAINED IN WRITING FROM OWNER PRIOR TO EXECUTION OF THE AFFECTED WORK.
29	ALL REQUEST FOR CLARIFICATIONS DURING CONSTRUCTION TO BE SUBMITTED TO OWNER AND COPIED TO THE ARCHITECT.
30	NO SUBSTITUTION ALLOWED FOR PAINTING OR MATERIALS SPECIFICATIONS.
31	SPRINKLER SYSTEM IS TO BE CENTRALLY MONITORED PER THE REQUIREMENTS OF SECTION 903.4, SPRINKLER SYSTEM SUPERVISION AND ALARMS.
32	SUBCONTRACTORS SHALL NOT CONTACT THE OWNER, OWNERS REPRESENTATIVE, ARCHITECT OR ENGINEERS DIRECTLY DURING EITHER BID PERIOD OR CONSTRUCTION.
33	GENERAL CONTRACTOR SHALL NOT EXCLUDE OR MODIFY ANY PROVISIONS, NOTES, OR DETAILS REFERENCED IN THE CONSTRUCTION DOCUMENTS FROM THEIR BID OR SCOPE OF WORK.
34	MILLWORK IS BY GENERAL CONTRACTOR
35	G.C. TO BUY AND INSTALL LADDERS AND WALL HANGERS IN DUMPSTER. LADDERS TO PURCHASE ARE ONE (1) 6 FOOT FIBERGLASS STEP LADDER AND ONE (1) 12 FOOT, 6" STEP FIBERGLASS EXTENSION LADDER. ALL LADDERS TO BE 250 LB CAPACITY OR BETTER, TYPE I DUTY RATED LADDERS MUST BE CLEAN AND NOT USED FOR CONSTRUCTION.
36	G.C. TO PROVIDE A PLAQUE WITH THE OCCUPANT LOAD, POSTED INSIDE THE MAIN ENTRANCE, COORDINATE LOCATION WITH CONSTRUCTION MANAGER

SITE LOCATION



LIST OF CONTACTS

OWNER		ARCHITECTURAL	
DARDEN RESTAURANTS, INC		ID STUDIO 4, LLC.	
1000 DARDEN CENTER DRIVE		6201 CAMPUS CIRCLE DR. E	
ORLANDO, FLORIDA 32837		IRVING, TEXAS 75063	
PHONE:	407.245.4503	PHONE:	972.870.1288
EMAIL:	RCATTOOR@DARDEN.COM	EMAIL:	RRIDGE@IDSTUDIO4.COM
CONTACT:	RODNEY CATTOOR	CONTACT:	RUSTY RIDGE
CIVIL / LANDSCAPE		STRUCTURAL	
KIMLEY-HORN		TAMARACK GROVE ENGINEERING	
445 24TH STREET, SUITE 200		812 LA CASSIA DRIVE	
VERO BEACH, FL 32960		BOISE, ID 83705	
PHONE:	772.794.4151	PHONE:	208.985.3655
EMAIL:	LIZ.MEEKS@KIMLEY-HORN.COM	EMAIL:	DEREK.PECK@TAMARACKGROVE.COM
CONTACT:	LIZ MEEKS	CONTACT:	DEREK PECK
MECHANICAL / PLUMBING / ELECTRICAL		FOOD SERVICE	
CHOICE ENGINEERING		DARDEN RESTAURANTS, INC.	
5950 BERKSHIRE LN		1000 DARDEN CENTER DR.	
DALLAS, TEXAS 75225		ORLANDO, FL 32837	
PHONE:	469.608.1268	PHONE:	407.245.4564
EMAIL:	MMANSKE@CHOICE.ENGINEERING	EMAIL:	STIDWELL@DARDEN.COM
CONTACT:	MATTHEW MANSKE, P.E.	CONTACT:	SHAWN TIDWELL
FIRE AND ALARM		CCTV	
JOHNSON CONTROLS		NAVCO SECURITY SYSTEMS	
10500 UNIVERSITY CENTER DRIVE, SUITE 275		1041 N. PACIFICENTER DRIVE	
TAMPA, FLORIDA		ANAHEIM, CALIFORNIA 92806	
PHONE:	813.917.1770	PHONE:	281.463.0214
EMAIL:	DAVID.DUPUIS@JCI.COM	EMAIL:	SELLIOTT@NAVCO.COM
CONTACT:	DAVID DUPUIS	CONTACT:	SCOTT ELLIOTT
WATER SYSTEMS		PUBLIC IMAGERY	
ECOLAB		PUBLIC IMAGERY	
875 CONCOURSE PARKWAY SOUTH SUITE 150		7704 C INDUSTRIAL LANE	
MAITLAND, FLORIDA 32751		TAMPA, FLORIDA 33637	
PHONE:	570.807.8128	PHONE:	813.985.9000
EMAIL:	SCOTT.NEVIL@ECOLAB.COM	EMAIL:	JSTEFAN@PUBLICIMAGERY.COM
CONTACT:	SCOTT NEVIL	CONTACT:	JIM STEFAN
		SOUND AND MEDIA	
		MOOD MEDIA	
		2100 S. IH-35 FRONTAGE RD., SUITE 200	
		AUSTIN, TEXAS 78704	
		PHONE:	
		EMAIL:	DARDEN@MOODMEDIA.COM
		CONTACT:	

BUILDING CODE INFORMATION

REQUIRED BUILDING CODES:	
BUILDING CODE:	2020 FLORIDA BUILDING CODE 7TH EDITION
ELECTRICAL CODE:	2017 NATIONAL ELECTRICAL CODE
MECHANICAL CODE:	2020 FLORIDA BUILDING CODE 7TH EDITION
PLUMBING CODE:	2020 FLORIDA BUILDING CODE 7TH EDITION
FIRE PREVENTION CODE:	2020 FLORIDA FIRE PREVENTION CODE 7TH EDITION
FUEL / GAS CODE	2020 FLORIDA BUILDING CODE 7TH EDITION
ENERGY CODE:	2020 FLORIDA BUILDING CODE 7TH EDITION
ACCESSIBILITY CODE:	2020 FLORIDA BUILDING CODE 7TH EDITION
USE AND OCCUPANCY TYPE:	
OCCUPANCY:	A-2 ASSEMBLY GROUP - RESTAURANT
CONSTRUCTION TYPE:	V-B UNPROTECTED (0 HOUR FIRE-RESISTANCE RATING), FULLY SPRINKLERED
ZONING CLASSIFICATION	PD - BLOOMINGDALE CROSSING

RESTROOM REQUIREMENTS

OCCUPANT LOAD: 271 (136 MEN / 136 WOMEN)

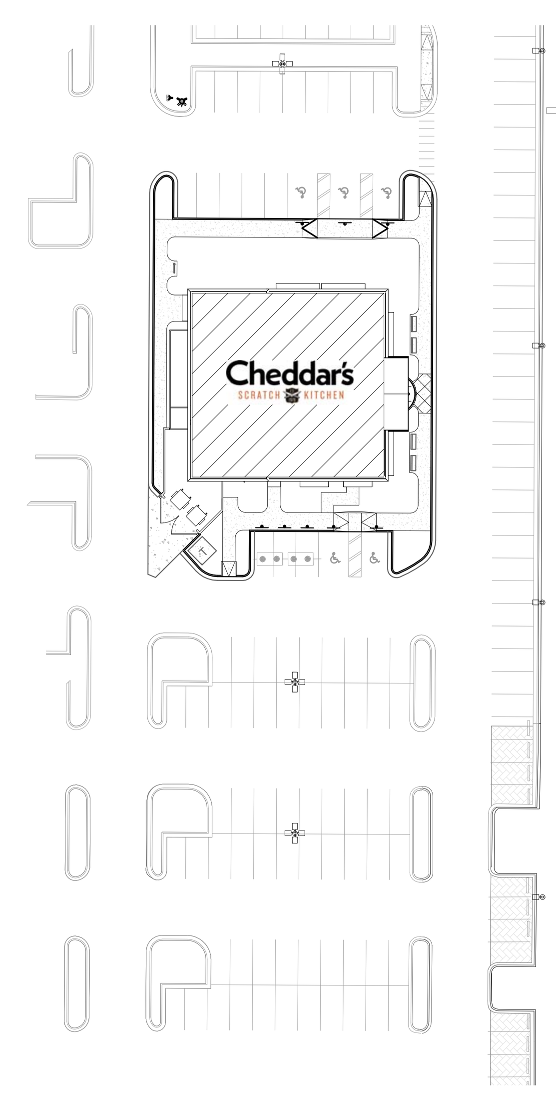
REQUIRED FACILITIES:

	WATER CLOSETS	LAVATORIES	URINALS
MEN	1:75	1:200	NO MORE THAN 67%
	2	1	
WOMEN	1:75	1:200	-
	2	1	

PROVIDED FACILITIES:

	WATER CLOSETS	LAVATORIES	URINALS
MEN	1	3	1
WOMEN	2	3	

SITE VICINITY MAP



RIVERVIEW, FL

10150 BLOOMINGDALE AVE
RIVERVIEW, FL 33578

SHEET INDEX

SHEET	TITLE	02.15.23	01	02
T1.1	COVER SHEET	●	●	●
T1.2	LIFE SAFETY PLAN	●	●	
T1.3	ACCESSIBILITY REQUIREMENTS	●		
T1.4	ACCESSIBILITY REQUIREMENTS	●		
SITE PLAN				
SP1.1	ARCHITECTURAL SITE PLAN	●		●
SP1.2	ENLARGED DUMPSTER	●		●
CIVIL				
C1.1	COVER SHEET	●		●
C1.3	GENERAL NOTES	●		
C2.1	DEMOLITION AND EROSION CONTROL PLAN	●		●
C2.2	EROSION CONTROL DETAILS	●		
C3.1	SITE PLAN	●		●
C4.1	UTILITY PLAN	●		●
C5.1	UTILITY DETAILS	●		
C6.1	PAVING, GRADING AND DRAINAGE PLAN	●		
C7.1	PAVING, GRADING AND DRAINAGE DETAILS	●		●
CS1	DARDEN CIVIL SPECIFICATIONS	●		
CS2	DARDEN CIVIL SPECIFICATIONS	●		
CS3	DARDEN CIVIL SPECIFICATIONS	●		
CS4	DARDEN CIVIL SPECIFICATIONS	●		
CS5	DARDEN CIVIL SPECIFICATIONS	●		
LANDSCAPE				
L1.1	LANDSCAPE PLAN	●		●
L1.2	LANDSCAPE DETAILS	●		
L2.1	IRRIGATION PLAN	●		●
L2.2	IRRIGATION DETAILS	●		
LS1	DARDEN LANDSCAPE AND IRRIGATION SPECIFICATIONS	●		
ARCHITECTURE				
A1.1	DIMENSIONED FLOOR PLAN	●		●
A1.2	NOTED FLOOR PLAN	●		●
A1.3	FLOOR FINISH AND CURB PLAN	●		●
A1.4	FURNISHING PLAN	●		●
A2.1	DIMENSIONED CEILING PLAN	●		●
A2.2	NOTED CEILING PLAN	●		●
A3.1	ROOF PLAN	●		●
A4.1	INTERIOR FINISH SCHEDULES	●		
A4.2	EXTERIOR FINISH SCHEDULES	●		
A4.3	DOOR AND WINDOW SCHEDULE	●		●
A4.4	DOOR AND WINDOW DETAILS	●		
A4.5	DOOR AND WINDOW DETAILS	●		
A5.1	EXTERIOR ELEVATIONS	●		●
A5.2	EXTERIOR ELEVATIONS	●		●
A6.1	BUILDING SECTION	●		●
A6.2	WALL SECTIONS	●		
A6.3	WALL SECTIONS	●		
A6.4	WALL SECTIONS	●		●
A6.5	WALL SECTIONS	●		●
A7.1	INTERIOR ELEVATION	●		●
A7.2	INTERIOR ELEVATION	●		●
A7.3	INTERIOR ELEVATION	●		●
A7.4	INTERIOR ELEVATION	●		
A7.5	ENLARGED RESTROOM PLAN AND ELEVATIONS	●		
A7.6	ENLARGED OFFICE / IT / MECH PLAN	●		
A7.7	ENLARGED BAR AND ELEVATIONS	●		●
A7.8	BAR DETAILS	●		●
A8.1	EXTERIOR DETAILS	●		
A8.2	EXTERIOR DETAILS	●		
A8.3	EXTERIOR DETAILS	●		
A9.1	INTERIOR DETAILS	●		●
A9.2	INTERIOR DETAILS	●		●
A9.3	INTERIOR DETAILS	●		●
A9.4	INTERIOR DETAILS	●		
A9.5	RCP DETAILS	●		
A9.6	RCP DETAILS	●		
AS1	SPECIFICATIONS	●		
AS2	SPECIFICATIONS	●		
AS3	SPECIFICATIONS	●		
AS4	SPECIFICATIONS	●		
AS5	SPECIFICATIONS	●		
AS6	SPECIFICATIONS	●		
AS7	SPECIFICATIONS	●		
AS8	SPECIFICATIONS	●		
AS9	SPECIFICATIONS	●		
AS10	SPECIFICATIONS	●		

DATE	REVISION	ISSUE
02.15.23		ISSUE FOR PERMIT
04.04.23	01	CITY COMMENTS
04.05.23	02	COORDINATION COMMENTS

SHEET	TITLE	02.15.23	01	02
STRUCTURAL				
S0.0	GENERAL STRUCTURAL NOTES	●		●
S0.1	GENERAL NOTES	●		
S0.2	TYPICAL DETAILS	●	●	●
S1.0	FOUNDATION PLAN	●		●
S1.1	SHEAR WALL PLAN	●		●
S2.0	FOUNDATION DETAILS	●		●
S2.1	FOUNDATION DETAILS	●		●
S2.2	BUILDING SECTIONS		●	
S3.0	ROOF FRAMING PLAN	●		●
S3.2	CEILING FRAMING PLAN	●		●
S4.0	FRAMING DETAILS	●		●
S4.1	FRAMING DETAILS	●		●
S4.2	FRAMING DETAILS	●		●
S4.3	FRAMING DETAILS	●		●
S4.4	FRAMING DETAILS	●		●
FOOD SERVICE				
FS-1	EQUIPMENT FLOOR PLAN	●		●
FS-2.1	EQUIPMENT SCHEDULE	●		
FS-2.2	FOOD SERVICE GENERAL AND MEP NOTES	●		
FS-3.1	FOOD SERVICE DRAIN LOCATIONS	●		●
FS-3.2	FOOD SERVICE WATER REQUIREMENT PLAN	●		
FS-3.3	FOOD SERVICE ELECTRICAL REQUIREMENT PLAN	●		
FS-3.4	FOOD SERVICE KDS LOCATIONS	●		●
FS-3.5	FOOD SERVICE GAS REQUIREMENT PLAN	●		
FS-3.6	FOOD SERVICE EXHAUST HOOD LOCATION PLAN	●		
FS-3.7	FOOD SERVICE SODA & CO2 CHASES	●		●
FS-3.8	FOOD SERVICE REMOTE REFRIGERATION PLAN	●		
FS-3.9	FOOD SERVICE SLAB CONSITIONS & DETAIL	●		
FS-3.10	FOOD SERVICE WALL BACKING FLOOR PLAN	●		●
FS-4.1	FOOD SERVICE CRITICAL DIMENSION & ELEVATION KEY	●		
FS-4.2	FOOD SERVICE ELEVATIONS	●		
FS-4.3	FOOD SERVICE ELEVATIONS	●		
FS-4.4	FOOD SERVICE ELEVATIONS	●		
PLUMBING				
FP1.1	FIRE SYSTEM PLAN	●		
P1.1	NOTES AND SCHEDULES	●		●
P1.2	DETAILS	●		●
P1.3	DETAILS	●	●	●
P2.1	SANITARY AND VENT FLOOR PLAN	●		●
P2.2	WATER FLOOR PLAN	●	●	●
P2.3	GAS FLOOR PLAN	●	●	
P3.1	ROOF PLAN	●		
P4.1	DWV RISER PLAN	●		
P4.2	WATER RISER PLAN	●		
P4.3	GAS RISER PLAN	●		
MECHANICAL				
M1.1	HVAC NOTES AND SCHEDULES	●	●	●
M1.2	HVAC DETAILS	●		●
M2.1	HVAC ROOF PLAN	●	●	●
M3.1	HVAC FLOOR PLAN	●		●
M3.2	HVAC CONTROLS PLAN	●		
M3.3	HVAC SECTIONS	●		
M4.1	KITCHEN HOOD INFORMATION	●		
M4.2	KITCHEN HOOD INFORMATION	●		
M4.3	KITCHEN HOOD INFORMATION	●		
M4.4	KITCHEN HOOD INFORMATION	●		
M4.5	KITCHEN HOOD INFORMATION	●		
ELECTRICAL				
E0.1	ELECTRICAL SCHEDULES	●		●
E0.2	ELECTRICAL DETAILS	●		
E0.3	ELECTRICAL DETAILS	●		●
E1.0	LIGHTING FLOOR PLAN	●		●
E2.0	POWER FLOOR PLAN	●		●
E3.0	SPECIAL SYSTEMS FLOOR PLAN	●		●
E4.0	ELECTRICAL ROOF PLAN	●		●
E5.0	ELECTRICAL RISER DIAGRAMS AND DETAILS	●		●
E5.1	ELECTRICAL PANEL SCHEDULES	●		●
ES.0	SITE ELECTRICAL PLAN	●		
ES.1	SITE PHOTOMETRIC PLAN	●		

DATE	REVISION	ISSUE
02.15.23		ISSUE FOR PERMIT
04.04.23	01	CITY COMMENTS
04.05.23	02	COORDINATION COMMENTS

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6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT

REV 02: 04.18.2023

Issue Date: 02.15.2023

REVISION INFORMATION

1 04.04.2023
CITY COMMENTS

2 04.05.2023
COORDINATION COMMENTS

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

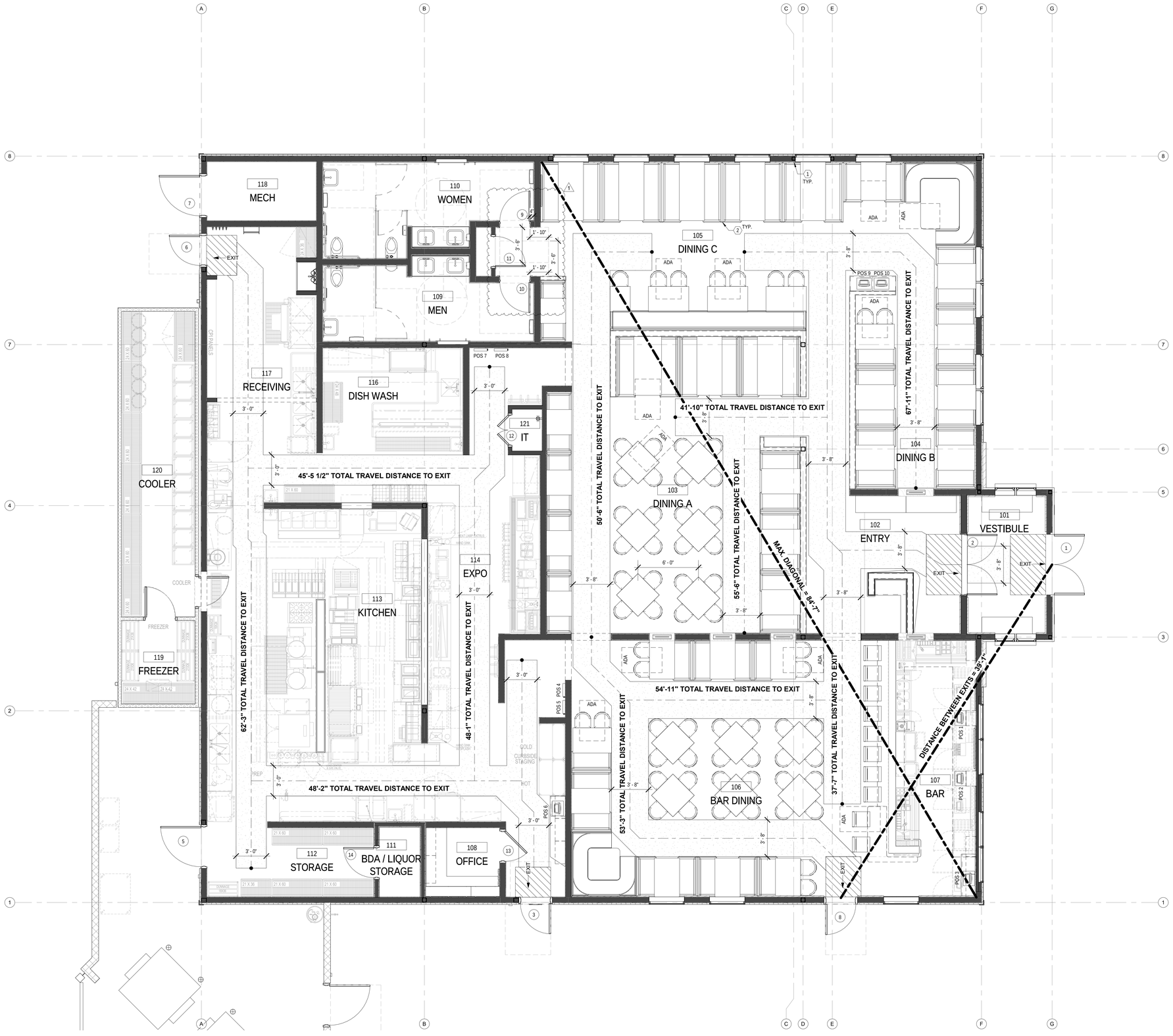
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
COVER SHEET

T1.1



LIFE SAFETY AND EGRESS FLOOR PLAN 1

1/4" = 1'-0"

KEYNOTES - LIFE SAFETY

1	INSTALL CHAIR RAIL ON BACK OF BOOTH ONCE INSTALLED
2	PROVIDE 4" FILLER TRIM BETWEEN BOOTHS

BUILDING DATA

GROSS BUILDING AREA		5,827 SQ.FT.
COOLER / FREEZER		315 SQ.FT.
DUMPSTER ENCLOSURE		590 SQ.FT.
TOTAL		6,732 SQ.FT.

OCCUPANCY LOAD CALCULATION

USE	SQUARE FOOTAGE	OCCUPANT LOAD FACTOR	OCCUPANCY AMOUNT
DINING ROOM	-	-	148
BAR DINING	-	-	62
BAR/POS/LIQUOR	196	200	1
ENTRY/VESTIBULE	234	5	47
KITCHEN	2016	200	11
MECHANICAL	79	200	1
OFFICE	74	100	1
TOTAL			271

EGRESS CALCULATION 271 x .2 = 55

REQUIRED EGRESS WIDTH		55 IN.
PROVIDED EGRESS WIDTH		170 IN.

EXIT OCCUPANT LOADS

DOOR #	EGRESS WIDTH	OCCUPANCY LOAD
#1	68 IN.	195
#3	34 IN.	6
#6	34 IN.	6
#8	34 IN.	63

KEYNOTES - EGRESS

1	TACTILE EXIT SIGNS SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS.
A)	EACH GRADE LEVEL EXTERIOR DOOR SHALL BE IDENTIFIED BY A TACTILE EXIT WITH THE WORD "EXIT".
B)	EACH EXIT, EXIT ACCESS DOOR FROM AN INTERIOR ROOM OR AREA TO A CORRIDOR OR HALLWAY THAT IS REQUIRED TO HAVE A VISUAL EXIT SIGN, SHALL BE IDENTIFIED BY A TACTILE EXIT SIGN WITH THE WORDS, "EXIT ROUTE"

SEATING COUNT

TYPE	COUNT	TOTAL
2 TOP BOOTH x	5	10
4 TOP BOOTH x	19	76
6 TOP BOOTH x	8	48
6 TOP ROUND x	1	6
BARSTOOL CHAIRS x		10
8 TOP ROUND x	1	8
4 TOP TABLE x	12	48
4 TOP BANQUETTE x	3	12
2 TOP BANQUETTE x	1	2
TOTAL DINING:	50	220

SEATING COUNT REQUIRED ACCESSIBLE

SEATS: 220	X .05 =	11 SPACES REQ'D

FURNISHING NOTES

1	EXTERIOR SIGNAGE BY OWNER. G.C. TO COORDINATE FINAL LOCATIONS AND MOUNTING REQUIREMENTS WITH SIGNAGE VENDOR, RE: EXTERIOR ELEVATIONS FOR HEIGHTS

*FIXED SEATING DETERMINED USING FOLLOWING FORMULA:
18 LINEAR INCHES=1 OCCUPANT

CLEAR FLOOR EXIT SPACE

EXIT PATH

idstudio

6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIBBE
AR98116
LICENSED ARCHITECT

REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023

REVISION INFORMATION

1	CITY COMMENTS	04.04.2023
2	COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:

LIFE SAFETY PLAN

T1.2

2010 ADA Standards for Accessible Design for Public Accommodations and Commercial Facilities: Title III

CHAPTER 3: BUILDING BLOCKS

301 General

301.1 Scope. The provisions of Chapter 3 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

302 Floor or Ground Surfaces

302.1 General. Floor and ground surfaces shall be stable, firm, and slip resistant and shall comply with 302.
EXCEPTIONS:
1. Within animal containment areas, floor and ground surfaces shall not be required to be stable, firm, and slip resistant.
2. Areas of sport activity shall not be required to comply with 302.

302.2 Carpet. Carpet or carpet tile shall be securely attached and shall have a firm cushion, pad, or backing or no cushion or pad. Carpet or carpet tile shall have a level loop, textured loop, level cut pile, or level cut/uncut pile texture. Pile height shall be 1/2 inch (13 mm) maximum. Exposed edges of carpet shall be fastened to floor surfaces and shall have trim on the entire length of the exposed edge. Carpet edge trim shall comply with 303.

302.3 Openings. Openings in floor or ground surfaces shall not allow passage of a sphere more than 1/2 inch (13 mm) diameter except as allowed in 407.4.3, 409.4.3, 410.4, 810.5.3 and 810.10. Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

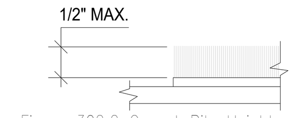


Figure 302.2 Carpet Pile Height

303 Changes in Level

303.1 General. Where changes in level are permitted in floor or ground surfaces, they shall comply with 303.
EXCEPTIONS:
1. Animal containment areas shall not be required to comply with 303.
2. Areas of sport activity shall not be required to comply with 303.

303.2 Vertical. Changes in level of 1/4 inch (6.4 mm) high maximum shall be permitted to be vertical.

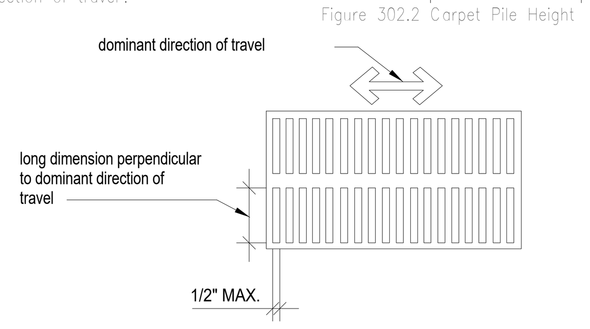


Figure 302.3 Elongated Openings in Floor or Ground Surfaces

303.3 Beveled. Changes in level between 1/4 inch (6.4 mm) high minimum and 1/2 inch (13 mm) high maximum shall be beveled with a slope not steeper than 1:2.

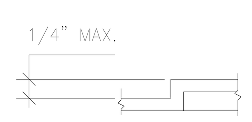


Figure 303.2 Vertical Change in Level

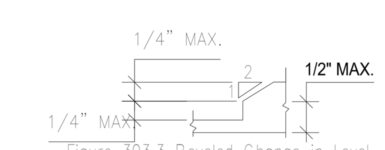


Figure 303.3 Beveled Change in Level

303.4 Ramps. Changes in level greater than 1/2 inch (13 mm) high shall be ramped, and shall comply with 405 or 406.

304 Turning Space
304.1 General. Turning space shall comply with 304.

304.2 Floor or Ground Surfaces. Floor or ground surfaces of a turning space shall comply with 302. Changes in level are not permitted.
EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

304.3 Size. Turning space shall comply with 304.3.1 or 304.3.2.

304.3.1 Circular Space. The turning space shall be a space of 60 inches (1525 mm) diameter minimum. The space shall be permitted to include knee and toe clearance complying with 306.

304.3.2 T-Shaped Space. The turning space shall be a T-shaped space within a 60 inch (1525 mm) square minimum with arms and base 36 inches (915 mm) wide minimum. Each arm of the T shall be clear of obstructions 12 inches (305 mm) minimum in each direction and the base shall be clear of obstructions 24 inches (610 mm) minimum. The space shall be permitted to include knee and toe clearance complying with 306 only at the end of either the base or one arm.

304.4 Door Swing. Doors shall be permitted to swing into turning spaces.

305 Clear Floor or Ground Space
305.1 General. Clear floor or ground space shall comply with 305.

305.2 Floor or Ground Surfaces. Floor or ground surfaces of a clear floor or ground space shall comply with 302. Changes in level are not permitted.
EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

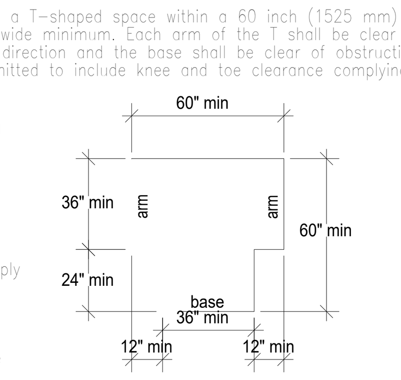


Figure 304.3.2 T-Shaped Turning Space

305.3 Size. The clear floor or ground space shall be 30 inches (760 mm) minimum by 48 inches (1220 mm) minimum.

305.4 Knee and Toe Clearance. Unless otherwise specified, clear floor or ground space shall be permitted to include knee and toe clearance complying with 306.

305.5 Position. Unless otherwise specified, clear floor or ground space shall be positioned for either forward or parallel approach to an element.

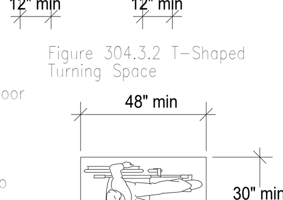


Figure 305.3 Clear Floor or Ground Space

305.6 Approach. One full unobstructed side of the clear floor or ground space shall adjoin an accessible route or adjoin another clear floor or ground space.

305.7 Maneuvering Clearance. Where a clear floor or ground space is located in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearance shall be provided in accordance with 305.7.1 and 305.7.2.

305.7.1 Forward Approach. Alcoves shall be 36 inches (915 mm)wide minimum where the depth exceeds 24 inches (610 mm).

305.7.2 Parallel Approach. Alcoves shall be 60 inches (1525 mm) wide minimum where the depth exceeds 15 inches (380 mm).

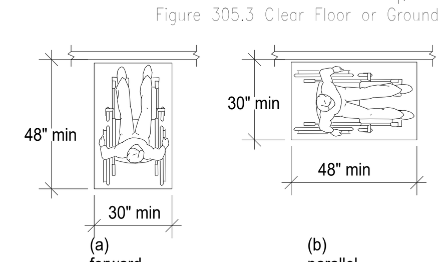


Figure 305.5 Position of Clear Floor or Ground Space

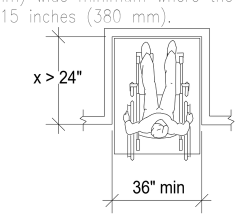


Figure 305.7.1 Maneuvering Clearance in an Alcove, Forward Approach

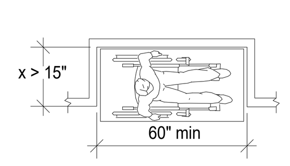


Figure 305.7.2 Maneuvering Clearance in an Alcove, Parallel Approach

306 Knee and Toe Clearance

306.1 General. Where space beneath an element is included as part of clear floor or ground space or turning space, the space shall comply with 306. Additional space shall not be prohibited beneath an element but shall not be considered as part of the clear floor or ground space or turning space.

306.2 Toe Clearance.

306.2.1 General. Space under an element between the finish floor or ground and 9 inches (230 mm) above the finish floor or ground shall be considered toe clearance and shall comply with 306.2.

306.2.2 Maximum Depth. Toe clearance shall extend 25 inches (635 mm) maximum under an element.

306.2.3 Minimum Required Depth. Where toe clearance is required at an element as part of a clear floor space, the toe clearance shall extend 17 inches (430 mm) minimum under the element.

306.2.4 Additional Clearance. Space extending greater than 6 inches (150 mm) beyond the available knee clearance at 9 inches (230 mm) above the finish floor or ground shall not be considered toe clearance.

306.2.5 Width. Toe clearance shall be 30 inches (760 mm) wide minimum.

306.3 Knee Clearance.

306.3.1 General. Space under an element between 9 inches (230 mm) and 27 inches (685 mm) above the finish floor or ground shall be considered knee clearance and shall comply with 306.3.

306.3.2 Maximum Depth. Knee clearance shall extend 25 inches (635 mm) maximum under an element at 9 inches (230 mm) above the finish floor or ground.

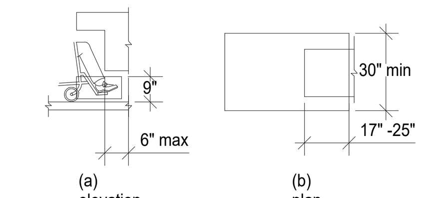


Figure 306.2 Toe Clearance

306.3.3 Minimum Required Depth. Where knee clearance is required under an element as part of a clear floor space, the knee clearance shall be 11 inches (280 mm) deep minimum at 9 inches (230 mm) above the finish floor or ground, and 8 inches (205 mm) deep minimum at 27 inches (685 mm) above the finish floor or ground.

306.3.4 Clearance Reduction. Between 9 inches (230 mm) and 27 inches (685 mm) above the finish floor or ground, the knee clearance shall be permitted to reduce at a rate of 1 inch (25 mm) in depth for each 6 inches (150 mm) in height.

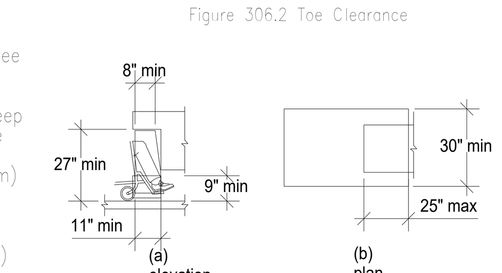


Figure 306.3 Knee Clearance

306.3.5 WIDTH. Knee clearance shall be 30 inches (760 mm) wide minimum.

307 Protruding Objects.

307.1 General. Protruding objects shall comply with 307.

307.2 Protrusion Limits. Objects with leading edges more than 27 inches (685 mm) and not more than 80 inches (2030 mm) above the finish floor or ground shall protrude 4 inches (100 mm) maximum horizontally into the circulation path.
EXCEPTION: Handrails shall be permitted to protrude 4 1/2 inches (115 mm) maximum.

307.3 Post-Mounted Objects. Free-standing objects mounted on posts or pylons shall overhang circulation paths 12 inches (305 mm) maximum when located 27 inches (685 mm) minimum and 80 inches (2030 mm) maximum above the finish floor or ground. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches (305 mm), the lowest edge of such sign or obstruction shall be 27 inches (685 mm) maximum or 80 inches (2030 mm) minimum above the finish floor or ground.
EXCEPTION: The sloping portions of handrails serving stairs and ramps shall not be required to comply with 307.3.

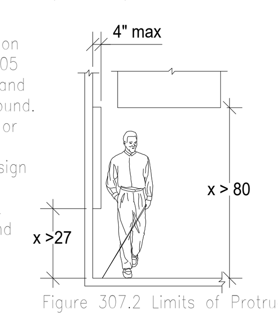


Figure 307.2 Limits of Protruding Objects

307.4 Vertical Clearance. Vertical clearance shall be 80 inches (2030 mm) high minimum. Guardrails or other barriers shall be provided where the vertical clearance is less than 80 inches (2030 mm) high. The leading edge of such guardrail or barrier shall be located 27 inches (685 mm) maximum above the finish floor or ground.
EXCEPTION: Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the finish floor or ground.

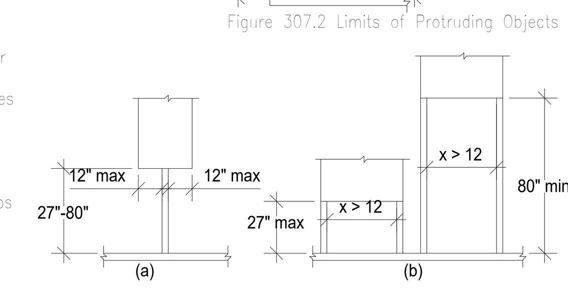


Figure 307.3 Post-Mounted Protruding Objects

307.5 Required Clear Width. Protruding objects shall not reduce the clear width required for accessible routes.

308 Reach Ranges

308.1 General. Reach ranges shall comply with 308.

308.2 Forward Reach.

308.2.1 Unobstructed. Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the finish floor or ground.

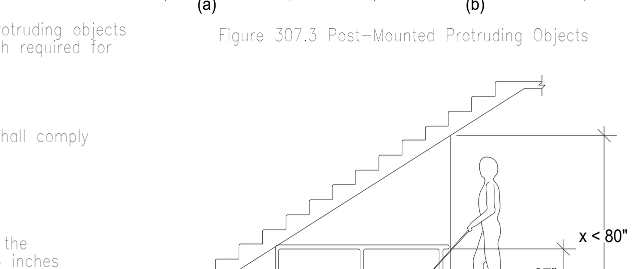


Figure 307.4 Vertical Clearance

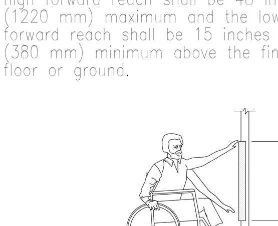


Figure 308.2.1 Unobstructed Forward Reach

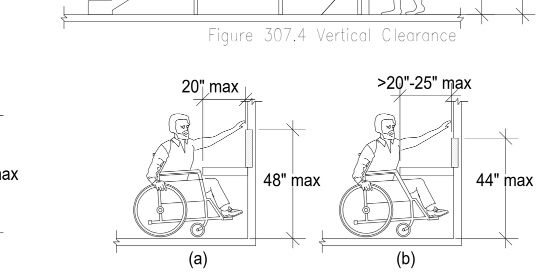


Figure 308.2.2 Obstructed High Forward Reach

308.2.2 Obstructed High Reach. Where a high forward reach is over an obstruction, the clear floor space shall extend beneath the element for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 48 inches (1220 mm) maximum where the reach depth is 20 inches (510 mm) maximum. Where the reach depth exceeds 20 inches (510 mm), the high forward reach shall be 44 inches (1120 mm) maximum and the reach depth shall be 25 inches (635 mm) maximum.

308.3 Side Reach.

308.3.1 Unobstructed. Where a clear floor or ground space allows a parallel approach to an element and the side reach is unobstructed, the high side reach shall be 48 inches (1220 mm) maximum and the low side reach shall be 15 inches (380 mm) minimum above the finish floor or ground.
EXCEPTIONS:
1. An obstruction shall be permitted between the clear floor or ground space and the element where the depth of the obstruction is 10 inches (255 mm) maximum.
2. Operable parts of fuel dispensers shall be permitted to be 54 inches (1370 mm) maximum measured from the surface of the vehicular way where fuel dispensers are installed on existing curbs.

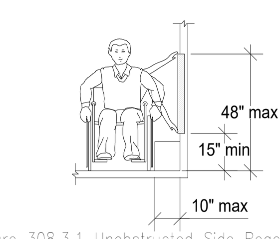


Figure 308.3.1 Unobstructed Side Reach

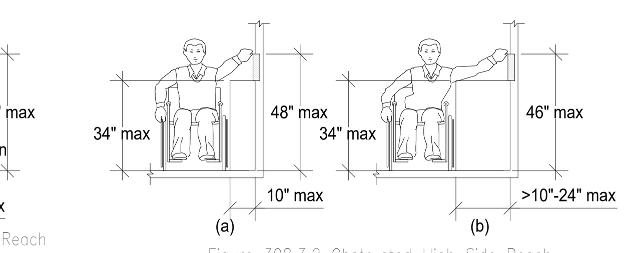


Figure 308.3.2 Obstructed High Side Reach

308.3.2 Obstructed High Reach. Where a clear floor or ground space allows a parallel approach to an element and the high side reach is over an obstruction, the height of the obstruction shall be 34 inches (865 mm) maximum and the depth of the obstruction shall be 24 inches (610 mm) maximum. The high side reach shall be 48 inches (1220 mm) maximum for a reach depth of 10 inches (255 mm) maximum. Where the reach depth exceeds 10 inches (255 mm), the high side reach shall be 46 inches (1170 mm) maximum for a reach depth of 24 inches (610 mm) maximum.
EXCEPTIONS:
1. The top of washing machines and clothes dryers shall be permitted to be 36 inches (915 mm) maximum above the finish floor.
2. Operable parts of fuel dispensers shall be permitted to be 54 inches (1370 mm) maximum measured from the surface of the vehicular way where fuel dispensers are installed on existing curbs.

309 Operable Parts

309.1 General. Operable parts shall comply with 309.

309.2 Clear Floor Space. A clear floor or ground space complying with 305 shall be provided.

309.3 Height. Operable parts shall be placed within one or more of the reach ranges specified in 308.

309.4 Operation. Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds (22.2 N) maximum.
EXCEPTION: Gas pump nozzles shall not be required to provide operable parts that have an activating force of 5 pounds (22.2 N) maximum.

CHAPTER 4: ACCESSIBLE ROUTES

401 General

401.1 Scope. The provisions of Chapter 4 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

402 Accessible Routes

402.1 General. Accessible routes shall comply with 402.

402.2 Components. Accessible routes shall consist of one or more of the following components: walking surfaces with a running slope not steeper than 1:20, doorways, ramps, curb ramps excluding the flared sides, elevators, and platform lifts. All components of an accessible route shall comply with the applicable requirements of Chapter 4.

403 Walking Surfaces

403.1 General. Walking surfaces that are a part of an accessible route shall comply with 403.

403.2 Floor or Ground Surface. Floor or ground surfaces shall comply with 302.

403.3 Slope. The running slope of walking surfaces shall not be steeper than 1:20. The cross slope of walking surfaces shall not be steeper than 1:48.

403.4 Changes in Level. Changes in level shall comply with 303.

403.5 Clearances. Walking surfaces shall provide clearances complying with 403.5.
EXCEPTION: Within employee work areas, clearances on common use circulation paths shall be permitted to be decreased by work area equipment provided that the decrease is essential to the function of the work being performed.

403.5.1 Clear Width. Except as provided in 403.5.2 and 403.5.3, the clear width of walking surfaces shall be 36 inches (915 mm) minimum.
EXCEPTION: The clear width shall be permitted to be reduced to 32 inches (815 mm) minimum for a length of 24 inches (610 mm) maximum provided that reduced width segments are separated by segments that are 48 inches (1220 mm) long minimum and 36 inches (915 mm) wide minimum.

403.5.2 Clear Width at Turn. Where the accessible route makes a 180 degree turn around an element which is less than 48 inches (1220 mm) wide, clear width shall be 42 inches (1065 mm) minimum approaching the turn, 48 inches (1220 mm) minimum at the turn and 42 inches (1065 mm) minimum leaving the turn.
EXCEPTION: Where the clear width at the turn is 60 inches (1525 mm) minimum compliance with 403.5.2 shall not be required.

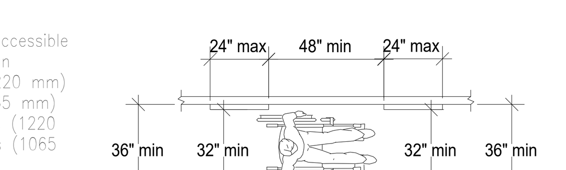


Figure 403.5.1 Clear Width of an Accessible Route

403.5.3 Passing Spaces. An accessible route with a clear width less than 60 inches (1525 mm) shall provide passing spaces at intervals of 200 feet (61 m) maximum. Passing spaces shall be either: a space 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum; or, an intersection of two walking surfaces providing a T-shaped space complying with 304.3.2 where the base and arms of the T-shaped space extend 48 inches (1220 mm) minimum beyond the intersection.

403.6 Handrails. Where handrails are provided along walking surfaces with running slopes not steeper than 1:20 they shall comply with 505.

404 Doors, Doorways, and Gates

404.1 General. Doors, doorways, and gates that are part of an accessible route shall comply with 404.
EXCEPTION: Doors, doorways, and gates designed to be operated only by security personnel shall not be required to comply with 404.2.7, 404.2.8, 404.2.9, 404.3.2 and 404.3.4 through 404.3.7.

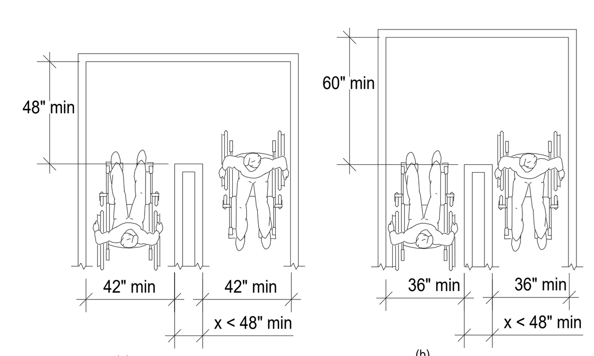


Figure 403.5.2 Clear Width at Turn

404.2 Manual Doors, Doorways, and Manual Gates. Manual doors and doorways and manual gates intended for user passage shall comply with 404.2.

404.2.1 Revolving Doors, Gates, and Turnstiles. Revolving doors, revolving gates, and turnstiles shall not be part of an accessible route.

404.2.2 Double-Leaf Doors and Gates. At least one of the active leaves of doorways with two leaves shall comply with 404.2.3 and 404.2.4.

404.2.3 Clear Width. Door openings shall provide a clear width of 32 inches (815 mm) minimum. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Openings more than 24 inches (610 mm) deep shall provide a clear opening of 36 inches (915 mm) minimum. There shall be no projections into the required clear opening width lower than 34 inches (865 mm) above the finish floor or ground. Projections into the clear opening width between 34 inches (865 mm) and 80 inches (2030 mm) above the finish floor or ground shall not exceed 4 inches (100 mm).
EXCEPTIONS:
1. In alterations, a projection of 5/8 inch (16 mm) maximum into the required clear width shall be permitted for the latch side stop.
2. Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the finish floor or ground.

404.2.4 Maneuvering Clearances. Minimum maneuvering clearances at doors and gates shall comply with 404.2.4. Maneuvering clearances shall extend the full width of the doorway and the required latch side or hinge side clearance.
EXCEPTION: Entry doors to hospital patient rooms shall not be required to provide the clearance beyond the latch side of the door.

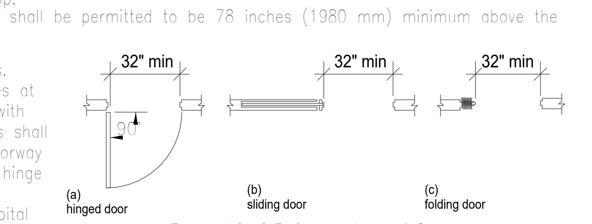


Figure 404.2.3 Clear Width of Doorways

404.2.4.1 Swinging Doors and Gates. Swinging doors and gates shall have maneuvering clearances complying with Table 404.2.4.1. (as illustrated on Figures 404.2.4.1)

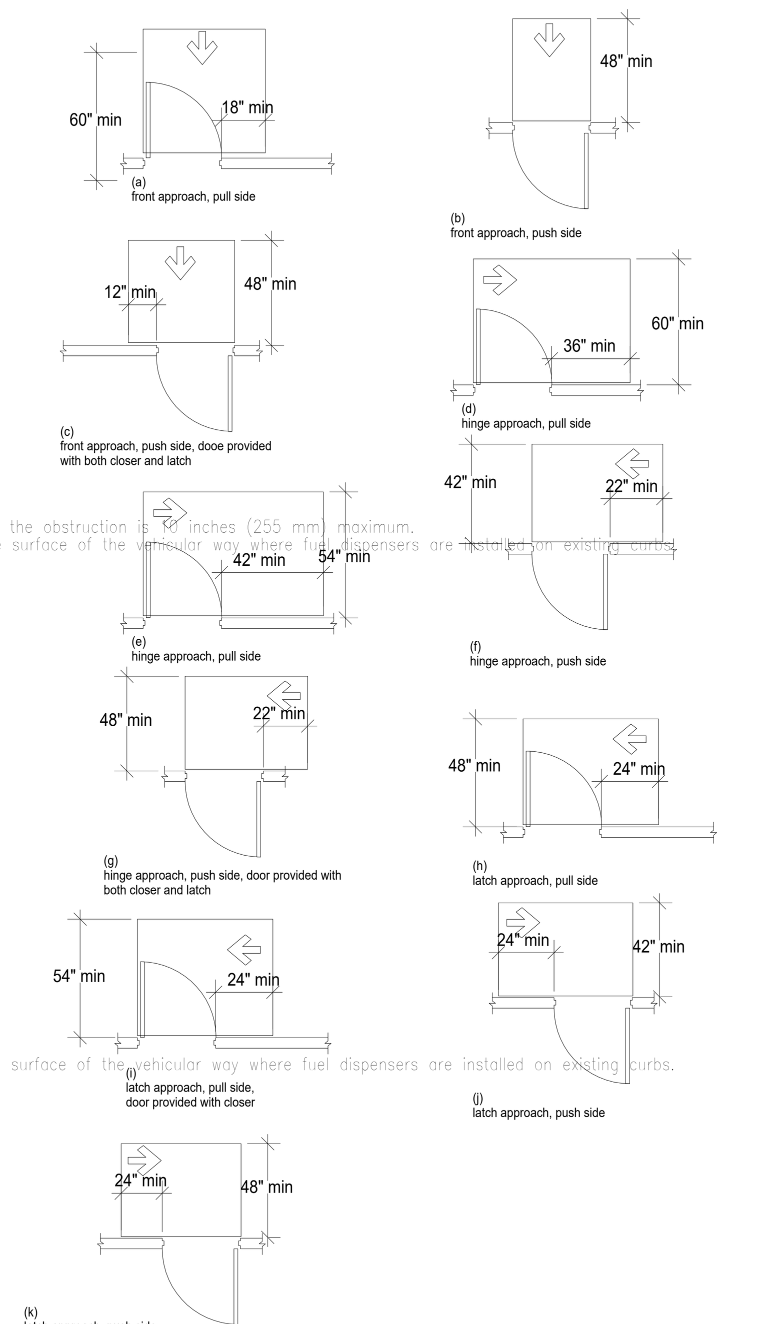


Figure 404.2.4.1 Maneuvering Clearances at Manual Swinging Doors and Gates

404.2.4.2 Doorways without Doors or Gates, Sliding Doors, and Folding Doors. Doorways less than 36 inches (915 mm) wide without doors or gates, sliding doors, or folding doors shall have maneuvering clearances complying with Table 404.2.4.2. (as illustrated on Figure 404.2.4.2)

404.2.4.3 Recessed Doors and Gates. Maneuvering clearances for forward approach shall be provided when any obstruction within 18 inches (455 mm) of the latch side of a doorway projects more than 8 inches (205 mm) beyond the face of the door, measured perpendicular to the face of the door or gate.

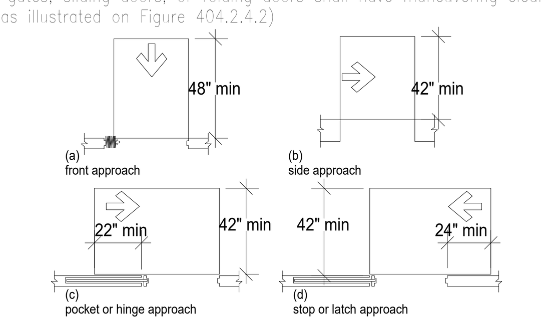


Figure 404.2.4.2 Maneuvering Clearances at Doorways without Doors, Sliding Doors, Gates, and Folding Doors

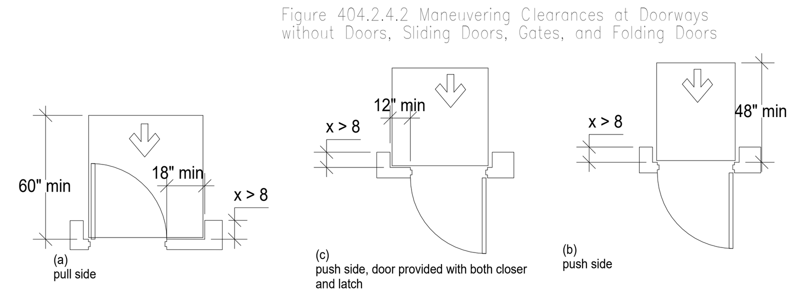


Figure 404.2.4.3 Maneuvering Clearances at Recessed Doors and Gates

404.2.4.4 Floor or Ground Surface. Floor or ground surface within required maneuvering clearances shall comply with 302. Changes in level are not permitted.
EXCEPTIONS:
1. Slopes not steeper than 1:48 shall be permitted.
2. Changes in level at thresholds complying with 404.2.5 shall be permitted.

404.2.5 Thresholds. Thresholds, if provided at doorways, shall be 1/2 inch (13 mm) high maximum. Raised thresholds and changes in level at doorways shall comply with 302 and 303.
EXCEPTION: Existing or altered thresholds 3/4 inch (19 mm) high maximum that have a beveled edge on each side with a slope not steeper than 1:2 shall not be required to comply with 404.2.5.

404.2.6 Doors in Series and Gates in Series. The distance between two hinged or pivoted doors in series and gates in series shall be 48 inches (1220 mm) minimum plus the width of doors or gates swinging into the space.

404.2.7 Door and Gate Hardware. Handles, pulls, latches, locks, and other operable parts on doors and gates shall comply with 309.4. Operable parts of such hardware shall be 34 inches (865 mm) minimum and 48 inches (1220 mm) maximum above the finish floor or ground. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.
EXCEPTIONS:
1. Existing locks shall be permitted in any location at existing glazed doors without stiles, existing overhead rolling doors or grilles, and similar existing doors or grilles that are designed with locks that are activated only at the top or bottom rail.
2. Access gates in barrier walls and fences protecting pools, spas, and hot tubs shall be permitted to have operable parts of the release of latch on self-latching devices at 54 inches (1370 mm) maximum above the finish floor or ground provided the self-latching devices are not also self-locking devices and operated by means of a key, electronic opener, or integral combination lock.

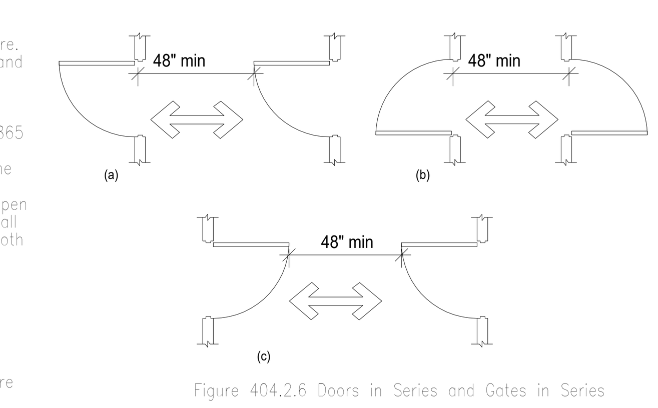


Figure 404.2.6 Doors in Series and Gates in Series

404.2.8 Closing Speed. Door and gate closing speed shall comply with 404.2.8.

404.2.8.1 Door Closers and Gate Closers. Door closers and gate closers shall be adjusted so that from an open position of 90 degrees, the time required to move the door to a position of 12 degrees from the latch is 5 seconds minimum.

404.2.8.2 Spring Hinges. Door and gate spring hinges shall be adjusted so that from the open position of 70 degrees, the door or gate shall move to the closed position in 1.5 seconds minimum.

404.2.9 Door and Gate Opening Force. Fire doors shall have a minimum opening force allowable by the appropriate administrative authority. The force for pushing or pulling open a door or gate other than fire doors shall be as follows:
1. Interior hinged doors and gates: 5 pounds (22.2 N) maximum.
2. Sliding or folding doors: 5 pounds (22.2 N) maximum.
These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door or gate in a closed position.

404.2.10 Door and Gate Surfaces. Swinging door and gate surfaces within 10 inches (255 mm) of the finish floor or ground measured vertically shall have a smooth surface on the push side extending the full width of the door or gate. Parts creating horizontal or vertical joints in these surfaces shall be within 1/16 inch (1.6 mm) of the same plane as the other. Cavities created by added kick plates shall be capped.
EXCEPTIONS:
1. Sliding doors shall not be required to comply with 404.2.10.
2. Tempered glass doors without stiles and having a bottom rail or shoe with the top leading edge tapered at 60 degrees minimum from the horizontal shall not be required to meet the 10 inch (255 mm) bottom smooth surface height requirement.
3. Doors and gates that do not extend to within 10 inches (255 mm) of the finish floor or ground shall not be required to comply with 404.2.10.
4. Existing doors and gates without smooth surfaces within 10 inches (255 mm) of the finish floor or ground shall not be required to provide smooth surfaces complying with 404.2.10 provided that if added kick plates are installed, cavities created by such kick plates are capped

404.2.11 Vision Lights. Doors, gates, and side lights adjacent to doors or gates, containing one or more glazing panels that permit viewing through the panels shall have the bottom of at least one glazed panel located 43 inches (1090 mm) maximum above the finish floor.
EXCEPTION: Vision lights with the lowest part more than 66 inches (1675 mm) from the finish floor or ground shall not be required to comply with 404.2.11.

404.3 Automatic and Power-Assisted Doors and Gates. Automatic doors and automatic gates shall comply with 404.3. Full-powered automatic doors shall comply with ANSI/BHMA A156.10 (incorporated by reference, see "Referenced Standards" in Chapter 1). Low-energy and power-assisted doors shall comply with ANSI/BHMA A156.19 (1997 or 2002 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1).

404.3.1 Clear Width. Doorways shall provide a clear opening of 32 inches (815 mm) minimum in power-on and power-off mode. The minimum clear width for automatic door systems in a doorway shall be based on the clear opening provided by all leaves in the open position.

404.3.2 Maneuvering Clearance. Clearances at power-assisted doors and gates shall comply with 404.2.4. Clearances at automatic doors and gates without standby power and serving an accessible means of egress shall comply with 404.2.4.

EXCEPTION: Where automatic doors and gates remain open in the power-off condition, compliance with 404.2.4 shall not be required.

404.3.3 Thresholds. Thresholds and changes in level at doorways shall comply with 404.2.5.

404.3.4 Doors in Series and Gates in Series. Doors in series and gates in series shall comply with 404.2.6.

404.3.5 Controls. Manually operated controls shall comply with 309. The clear floor space adjacent to the control shall be located beyond the arc of the door swing.

404.3.6 Break Out Opening. Where doors and gates without standby power are a part of a means of egress, the clear break out opening at swinging or sliding doors and gates shall be 32 inches (815 mm) minimum when operated in emergency mode.
EXCEPTION: Where manual swinging doors and gates comply with 404.2 and serve the same means of egress compliance with 404.3.6 shall not be required.

404.3.7 Revolving Doors, Revolving Gates, and Turnstiles. Revolving doors, revolving gates, and turnstiles shall not be part of an accessible route.

405 Ramps

405.1 General. Ramps on accessible routes shall comply with 405.
EXCEPTION: In assembly areas, aisle ramps adjacent to seating and not serving elements required to be on an accessible route shall not be required to comply with 405.

405.2 Slope. Ramp runs shall have a running slope not steeper than 1:12.
EXCEPTION: In existing sites, buildings, and facilities, ramps shall be permitted to have running slopes steeper than 1:12 complying with Table 405.2 where such slopes are necessary due to space limitations.

Table 405.2 Maximum Ramp Slope and Rise for Existing Sites, Buildings, and Facilities

Slope (A slope steeper than 1:8 is prohibited.)	Maximum Rise
Steeper than 1:10 but not steeper than 1:8	3 inches (75 mm)
Steeper than 1:12 but not steeper than 1:10	6 inches (150 mm)

405.3 Cross Slope. Cross slope of ramp runs shall not be steeper than 1:48.

405.4 Floor or Ground Surfaces. Floor or ground surfaces of ramp runs shall comply with 302. Changes in level other than the running slope and cross slope are not permitted on ramp runs.

405.5 Clear Width. The clear width of a ramp run and, where handrails are provided, the clear width between handrails shall be 36 inches (915 mm) minimum.
EXCEPTION: Within employee work areas, the required clear width of ramps that are a part of common use circulation paths shall be permitted to be decreased by work area equipment provided that the decrease is essential to the function of the work being performed.

405.6 Rise. The rise for any ramp run shall be 30 inches (760 mm) maximum.

405.7 Landings. Ramps shall have landings at the top and the bottom of each ramp run. Landings shall comply with 405.7.

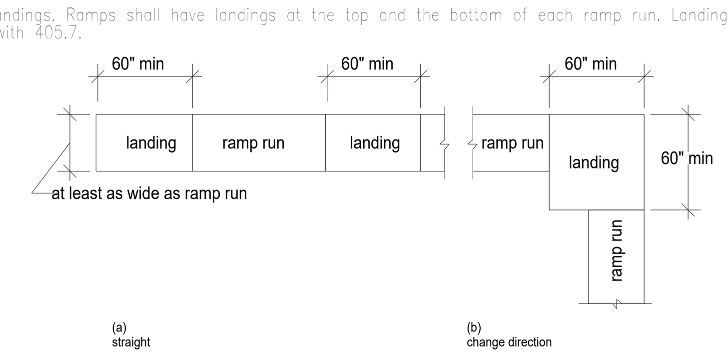


Figure 405.7 Ramp Landings

405.7.1 Slope. Landings shall comply with 302. Changes in level are not permitted.
EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

405.7.2 Width. The landing clear width shall be at least as wide as the widest ramp run leading to the landing.

405.7.3 Length. The landing clear length shall be 60 inches (1525 mm) long minimum.

405.7.4 Change in Direction. Ramps that change directi on between runs at landings shall have a clear landing 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum.

405.7.5 Doorways. Where doorways are located adjacent to a ramp landing, maneuvering clearances required by 404.2.4 and 404.3.2 shall be permitted to overlap the required landing area.

405.8 Handrails. Ramp runs with a rise greater than 6 inches (150 mm) shall have handrails complying with 505.
EXCEPTION: Within employee work areas, handrails shall not be required where ramps that are part of common use circulation paths are designed to permit the installation of handrails complying with 505. Ramps not subject to the exception to 405.5 shall be designed to maintain a 36 inch (915 mm) minimum clear width when handrails are installed.

405.9 Edge Protection. Edge protection complying with 405.9.1 or 405.9.2 shall be provided on each side of ramp runs and at each side of ramp landings.
EXCEPTIONS:
1. Edge protection shall not be required on ramps that are not required to have handrails and have sides complying with 406.3.
2. Edge protection shall not be required on the sides of ramp landings serving an adjoining ramp run or stairway.
3. Edge protection shall not be required on the sides of ramp landings having a vertical drop-off of 1/2 inch (13 mm) maximum within 10 inches (255 mm) horizontally of the minimum landing area specified in 405.7.

405.9.1 Extended Floor or Ground Surface. The floor or ground surface of the ramp run or landing shall extend 12 inches (305 mm) minimum beyond the inside face of a handrail complying with 505.

405.9.2 Curb or Barrier. A curb or barrier shall be provided that prevents the passage of a 4 inch (100 mm) diameter sphere, where any portion of the sphere is within 4 inches (100 mm) of the finish floor or ground surface.

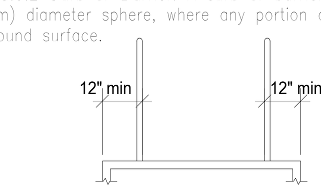


Figure 405.9.1 Extended Floor or Ground Surface Edge Protection

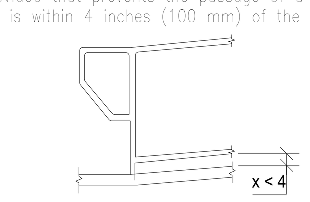


Figure 405.9.2 Curb or Barrier Edge Protection

405.10 Wet Conditions. Landings subject to wet conditions shall be designed to prevent the accumulation of water.

406 Curb Ramps
406.1 General. Curb ramps on accessible routes shall comply with 406, 405.2 through 405.5, and 405.10.

406.2 Counter Slope. Counter slopes of adjoining gutters and road surfaces immediately adjacent to the curb ramp shall not be steeper than 1:20. The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall be at the same level.

406.3 Sides of Curb Ramps. Where provided, curb ramp flares shall not be steeper than 1:10.

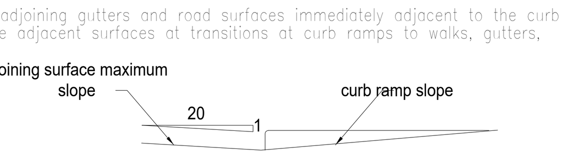


Figure 406.2 Counter Slope of Surfaces Adjacent to Curb Ramps

406.4 Landings. Landings shall be provided at the tops of curb ramps. The landing clear length shall be 36 inches (915 mm) minimum. The landing clear width shall be at least as wide as the curb ramp, excluding flared sides, leading to the landing.
EXCEPTION: In alterations, where there is no landing at the top of curb ramps, curb ramp flares shall be provided and shall not be steeper than 1:12.

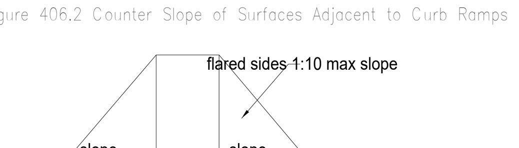


Figure 406.3 Sides of Curb Ramps

406.5 Location. Curb ramps and the flared sides of curb ramps shall be located so that they do not project into vehicular traffic lanes, parking spaces, or parking access aisles. Curb ramps at marked crossings shall be wholly contained within the markings, excluding any flared sides.

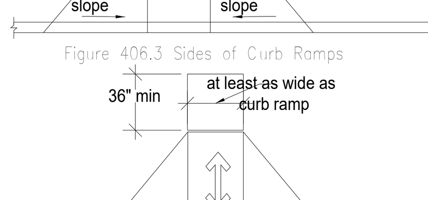


Figure 406.4 Landings at the Top of Curb Ramps

406.6 Diagonal Curb Ramps. Diagonal or corner type curb ramps with returned curbs or other well-defined edges shall have the edges parallel to the direction of pedestrian flow. The bottom of diagonal curb ramps shall have a clear space 48 inches (1220 mm) minimum outside active traffic lanes of the roadway. Diagonal curb ramps provided at marked crossings shall provide the 48 inches (1220 mm) minimum clear space within the markings. Diagonal curb ramps with flared sides shall have a segment of curb 24 inches (610 mm) long minimum located on each side of the curb ramp and within the marked crossing.

406.7 Islands. Raised islands in crossings shall be cut through level with the street or have curb ramps at both sides. Each curb ramp shall have a level area 48 inches (1220 mm) long minimum by 36 inches (915 mm) wide minimum at the top of the curb ramp in the part of the island intersected by the crossings. Each 48 inch (1220 mm) minimum by 36 inch (915 mm) minimum area shall be oriented so that the 48 inch (1220 mm) minimum length is in the direction of the running slope of the curb ramp it serves. The 48 inch (1220 mm) minimum by 36 inch (915 mm) minimum areas and the accessible route shall be permitted to overlap.

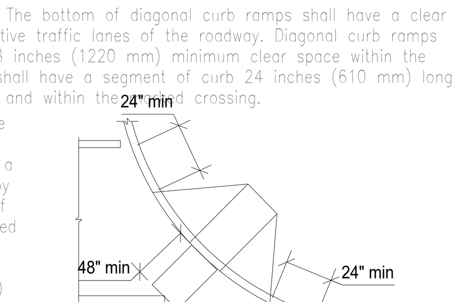


Figure 406.6 Diagonal or Corner Type Curb Ramps

CHAPTER 5: GENERAL SITE AND BUILDING ELEMENTS

501 General

501.1 Scope. The provisions of Chapter 5 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

502 Parking Spaces

502.1 General. Car and van parking spaces shall comply with 502. Where parking spaces are marked with lines, width measurements of parking spaces and access aisles shall be made from the centerline of the markings.
EXCEPTION: Where parking spaces or access aisles are not adjacent to another parking space or access aisle, measurements shall be permitted to include the full width of the line defining the parking space or access aisle.

502.2 Vehicle Spaces. Car parking spaces shall be 96 inches (2440 mm) wide minimum and van parking spaces shall be 132 inches (3350 mm) wide minimum, shall be marked to define the width, and shall have an adjacent access aisle complying with 502.3.
EXCEPTION: Van parking spaces shall be permitted to be 96 inches (2440 mm) wide minimum where the access aisle is 96 inches (2440 mm) wide minimum.

502.3 Access Aisle. Access aisles serving parking spaces shall comply with 502.3. Access aisles shall adjoin an accessible route. Two parking spaces shall be permitted to share a common access aisle.

502.3.1 Width. Access aisles serving car and van parking spaces shall be 60 inches (1525 mm) wide minimum.

502.3.2 Length. Access aisles shall extend the full length of the parking spaces they serve.

502.3.3 Marking. Access aisles shall be marked so as to discourage parking in them.

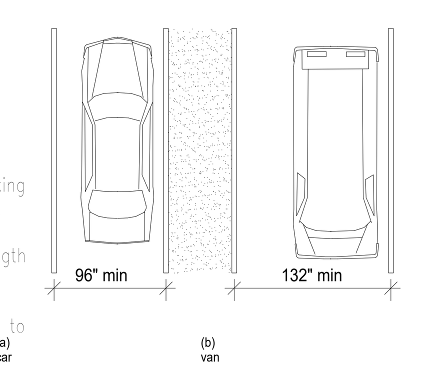


Figure 502.2 Vehicle Parking Spaces

502.3.4 Location. Access aisles shall not overlap the vehicular way. Access aisles shall be permitted to be placed on either side of the parking space except for angled van parking spaces which shall have access aisles located on the passenger side of the parking spaces.

502.4 Floor or Ground Surfaces. Parking spaces and access aisles serving them shall comply with 302. Access aisles shall be at the same level as the parking spaces they serve. Changes in level are not permitted.
EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

502.5 Vertical Clearance. Parking spaces for vans and access aisles and vehicular routes serving them shall provide a vertical clearance of 98 inches (2490 mm) minimum.

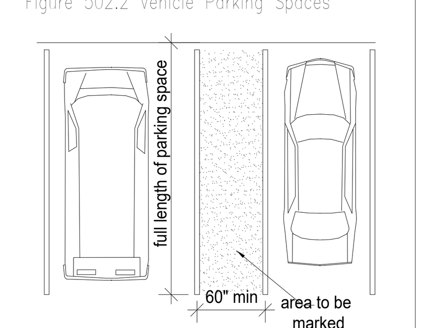


Figure 502.3 Parking Space Access Aisle

502.6 Identification. Parking space identification signs shall include the International Symbol of Accessibility complying with 703.7.2.1. Signs identifying van parking spaces shall contain the designation "van accessible." Signs shall be 60 inches (1525 mm) minimum above the finish floor or ground surface measured to the bottom of the sign.

502.7 Relationship to Accessible Routes. Parking spaces and access aisles shall be designed so that cars and vans, when parked, cannot obstruct the required clear width of adjacent accessible routes.

503 Passenger Loading Zones

503.1 General. Passenger loading zones shall comply with 503.

503.2 Vehicle Pull-Up Space. Passenger loading zones shall provide a vehicular pull-up space 96 inches (2440 mm) wide minimum and 20 feet (6100 mm) long minimum.

503.3 Access Aisle. Passenger loading zones shall provide access aisles complying with 503 adjacent to the vehicle pull-up space. Access aisles shall adjoin an accessible route and shall not overlap the vehicular way.

503.3.1 Width. Access aisles serving vehicle pull-up spaces shall be 60 inches (1525 mm) wide minimum.

503.3.2 Length. Access aisles shall extend the full length of the vehicle pull-up spaces they serve.

503.3.3 Marking. Access aisles shall be marked so as to discourage parking in them.

503.4 Floor and Ground Surfaces. Vehicle pull-up spaces and access aisles serving them shall comply with 302. Access aisles shall be at the same level as the vehicle pull-up space they serve. Changes in level are not permitted.
EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

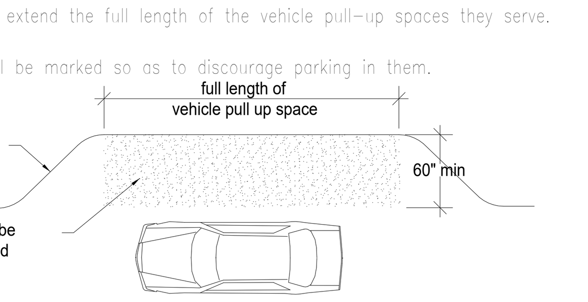


Figure 503.3 Passenger Loading Zone Access Aisle

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6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT
02.15.2023

Cheddar's SCRATCH KITCHEN EST 1979

Issue Date: 02.15.2023

REVISION INFORMATION

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
ACCESSIBILITY REQUIREMENTS

T1.3

CHAPTER 5: GENERAL SITE AND BUILDING ELEMENTS (CONT.)

503.5 Vertical Clearance. Vehicle pull-up spaces, access aisles serving them, and a vehicular route from an entrance to the passenger loading zone, and from the passenger loading zone to a vehicular exit shall provide a vertical clearance of 114 inches (2895 mm) minimum.

504 Stairways
504.1 General. Stairs shall comply with 504.

504.2 Treads and Risers. All steps on a flight of stairs shall have uniform riser heights and uniform tread depths. Risers shall be 4 inches (100 mm) high minimum and 7 inches (180 mm) high maximum. Treads shall be 11 inches (280 mm) deep minimum.

504.3 Open Risers. Open risers are not permitted.

504.4 Tread Surface. Stair treads shall comply with 302. Changes in level are not permitted.
EXCEPTION: Treads shall be permitted to have a slope not steeper than 1:48.

504.5 Nosings. The radius of curvature at the leading edge of the tread shall be 1/2 inch (13 mm) maximum. Nosings that project beyond risers shall have the underside of the leading edge curved or beveled. Risers shall be permitted to slope under the tread at an angle of 30 degrees maximum from vertical. The permitted projection of the nosing shall extend 1 1/2 inches (38 mm) maximum over the tread below.

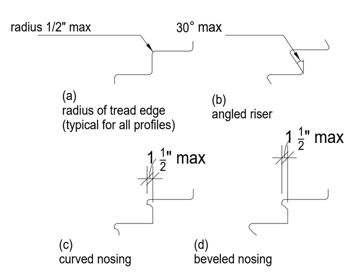

Figure 504.5 Stair Nosings

504.6 Handrails. Stairs shall have handrails complying with 505.

504.7 Wet Conditions. Stair treads and landings subject to wet conditions shall be designed to prevent the accumulation of water.

505 Handrails

505.1 General. Handrails provided along walking surfaces complying with 403, required at ramps complying with 405, and required at stairs complying with 504 shall comply with 505.

505.2 Where Required. Handrails shall be provided on both sides of stairs and ramps.
EXCEPTION: In assembly areas, handrails shall not be required on both sides of aisle ramps where a handrail is provided at either side or within the aisle width.

505.3 Continuity. Handrails shall be continuous within the full length of each stair flight or ramp run. Inside handrails on switchback or dogleg stairs and ramps shall be continuous between flights or runs.
EXCEPTION: In assembly areas, handrails on ramps shall not be required to be continuous in aisles serving seating.

505.4 Height. Top of gripping surfaces of handrails shall be 34 inches (865 mm) minimum and 38 inches (965 mm) maximum vertically above walking surfaces, stair nosings, and ramp surfaces. Handrails shall be at a consistent height above walking surfaces, stair nosings, and ramp surfaces.

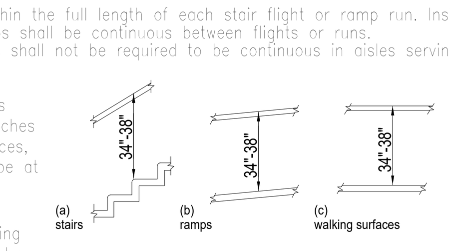

Figure 505.4 Handrail Height

505.5 Clearance. Clearance between handrail gripping surfaces and adjacent surfaces shall be 1 1/2 inches (38 mm) minimum.

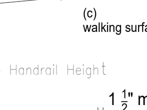

Figure 505.5 Handrail Clearance

505.6 Gripping Surface. Handrail gripping surfaces shall be continuous along their length and shall not be obstructed along their tops or sides. The bottoms of handrail gripping surfaces shall not be obstructed for more than 20 percent of their length. Where provided, horizontal projections shall occur 1 1/2 inches (38 mm) minimum below the bottom of the handrail gripping surface.
EXCEPTIONS:
1. Where handrails are provided along walking surfaces with slopes not steeper than 1:20, the bottoms of handrail gripping surfaces shall be permitted to be obstructed along their entire length where they are integral to crash rails or bumper guards.

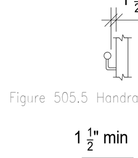

Figure 505.6 Horizontal Projections Below Gripping Surface

2. The distance between horizontal projections and the bottom of the gripping surface shall be permitted to be reduced by 1/8 inch (3.2 mm) for each 1/2 inch (13 mm) of additional handrail perimeter dimension that exceeds 4 inches (100 mm).

505.7 Cross Section. Handrail gripping surfaces shall have a cross section complying with 505.7.1 or 505.7.2.

505.7.1 Circular Cross Section. Handrail gripping surfaces with a circular cross section shall have an outside diameter of 1 1/4 inches (32 mm) minimum and 2 inches (51 mm) maximum.

505.7.2 Non-Circular Cross Sections. Handrail gripping surfaces with a non-circular cross section shall have a perimeter dimension of 4 inches (100 mm) minimum and 6 1/4 inches (160 mm) maximum, and a cross-section dimension of 2 1/4 inches (57 mm) maximum.

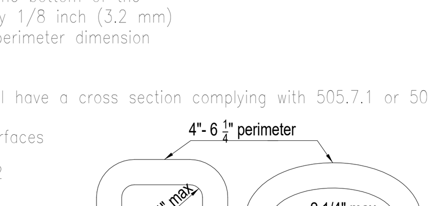

Figure 505.7.2 Handrail Non-Circular Cross Section

505.8 Surfaces. Handrail gripping surfaces and any surfaces adjacent to them shall be free of sharp or abrasive elements and shall have rounded edges.

505.9 Fittings. Handrails shall not rotate within their fittings.

505.10 Handrail Extensions. Handrail gripping surfaces shall extend beyond and in the same direction of stair flights and ramp runs in accordance with 505.10.
EXCEPTIONS:
1. Extensions shall not be required for continuous handrails at the inside turn of switchback or dogleg stairs and ramps.
2. In assembly areas, extensions shall not be required for ramp handrails in aisles serving seating where the handrails are discontinuous to provide access to seating and to permit crossovers within aisles.
3. In alterations, full extensions of handrails shall not be required where such extensions would be hazardous due to plan configuration.

505.10.1 Top and Bottom Extension at Ramps. Ramp handrails shall extend horizontally above the landing for 12 inches (305 mm) minimum beyond the top and bottom of ramp runs. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent ramp run.

505.10.2 Top Extension at Stairs. At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches (305 mm) minimum beginning directly above the first riser nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

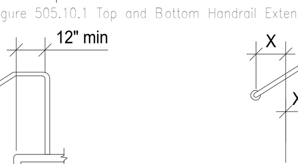

Figure 505.10.1 Top and Bottom Handrail Extension at Ramps

505.10.3 Bottom Extension at Stairs. At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance at least equal to one tread depth beyond the last riser nosing. Extension shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

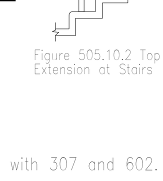

Figure 505.10.2 Top Handrail Extension at Stairs

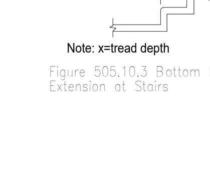

Figure 505.10.3 Bottom Handrail Extension at Stairs

CHAPTER 6: PLUMBING ELEMENTS & FACILITIES

601 General

601.1 Scope. The provisions of Chapter 6 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

602 Drinking Fountains

602.1 General. Drinking fountains shall comply with 307 and 602.

602.2 Clear Floor Space. Units shall have a clear floor or ground space complying with 305 positioned for a forward approach and centered on the unit. Knee and toe clearance complying with 306 shall be provided.
EXCEPTION: A parallel approach complying with 305 shall be permitted at units for children's use where the spout is 30 inches (760 mm) maximum above the finish floor or ground and is 3 1/2 inches (90 mm) maximum from the front edge of the unit, including bumpers.

602.3 Operable Parts. Operable parts shall comply with 309.

602.4 Spout Height. Spout outlets shall be 36 inches (915 mm) maximum above the finish floor or ground.

602.5 Spout Location. The spout shall be located 15 inches (380 mm) minimum from the vertical support and 5 inches (125 mm) maximum from the front edge of the unit, including bumpers.

602.6 Water Flow. The spout shall provide a flow of water 4 inches (100 mm) high minimum and shall be located 5 inches (125 mm) maximum from the front of the unit. The angle of the water stream shall be measured horizontally relative to the front face of the unit. Where spouts are located less than 3 inches (75 mm) of the front of the unit, the angle of the water stream shall be 30 degrees maximum. Where spouts are located between 3 inches (75 mm) and 5 inches (125 mm) maximum from the front of the unit, the angle of the water stream shall be 15 degrees maximum

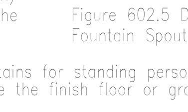

Figure 602.5 Drinking Fountain Spout Location

602.7 Drinking Fountains for Standing Persons. Spout outlets of drinking fountains for standing persons shall be 38 inches (965 mm) minimum and 43 inches (1090 mm) maximum above the finish floor or ground.

603 Toilet and Bathing Rooms

603.1 General. Toilet and bathing rooms shall comply with 603.

603.2 Clearances. Clearances shall comply with 603.2.

603.2.1 Turning Space. Turning space complying with 304 shall be provided within the room.

603.2.2 Overlap. Required clear floor spaces, clearance at fixtures, and turning space shall be permitted to overlap.

603.2.3 Door Swing. Doors shall not swing into the clear floor space or clearance required for any fixture. Doors shall be permitted to swing into the required turning space.
EXCEPTIONS:
1. Doors to a toilet room or bathing room for a single occupant accessed only through a private office and not for common use or public use shall be permitted to swing into the clear floor space or clearance provided the swing of the door can be reversed to comply with 603.2.3.
2. Where the toilet room or bathing room is for individual use and a clear floor space complying with 305.3 is provided within the room beyond the arc of the door swing, doors shall be permitted to swing into the clear floor space or clearance required for any fixture.

603.3 Mirrors. Mirrors located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 40 inches (1015 mm) maximum above the finish floor or ground. Mirrors not located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 35 inches (890 mm) maximum above the finish floor or ground.

603.4 Coat Hooks and Shelves. Coat hooks shall be located within one of the reach ranges specified in 308. Shelves shall be located 40 inches (1015 mm) minimum and 48 inches (1220 mm) maximum above the finish floor.

604 Water Closets and Toilet Compartments

604.1 General. Water closets and toilet compartments shall comply with 604.2 through 604.8.
EXCEPTION: Water closets and toilet compartments for children's use shall be permitted to comply with 604.9.

604.2 Location. The water closet shall be positioned with a wall or partition to the rear and to one side. The centerline of the water closet shall be 16 inches (405 mm) minimum to 18 inches (455 mm) maximum from the side wall or partition, except that the water closet shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum from the side wall or partition in the ambulatory accessible toilet compartment specified in 604.8.2. Water closets shall be arranged for a left-hand or right-hand approach.

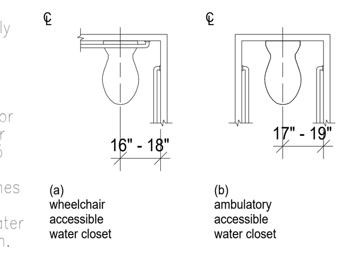

Figure 604.2 Water Closet Location

604.3 Clearance. Clearances around water closets and in toilet compartments shall comply with 604.3.

604.3.1 Size. Clearance around a water closet shall be 60 inches (1525 mm) minimum measured perpendicular from the side wall and 56 inches (1420 mm) minimum measured perpendicular from the rear wall.

604.3.2 Overlap. The required clearance around the water closet shall be permitted to overlap the water closet, associated grab bars, dispensers, sanitary napkin disposal units, coat hooks, shelves, accessible routes, clear floor space and clearances required at other fixtures, and the turning space. No other fixtures or obstructions shall be located within the required water closet clearance.

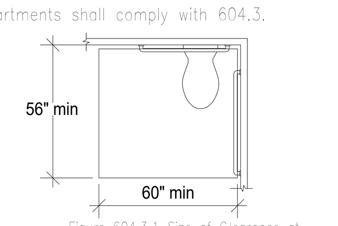

Figure 604.3.1 Size of Clearance at Water Closets

604.4 Seats. The seat height of a water closet above the finish floor shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum measured to the top of the seat. Seats shall not be sprung to return to a lifted position.
EXCEPTIONS:
1. A water closet in a toilet room for a single occupant accessed only through a private office and not for common use or public use shall not be required to comply with 604.4.
2.--

604.5 Grab Bars. Grab bars for water closets shall comply with 609. Grab bars shall be provided on the side wall closest to the water closet and on the rear wall.
EXCEPTIONS:
1. Grab bars shall not be required to be installed in a toilet room for a single occupant accessed only through a private office and not for common use or public use provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with 604.5.
2. --
3. In detention or correction facilities, grab bars shall not be required to be installed in housing or holding cells that are specially designed without protrusions for purposes of suicide prevention.

604.5.1 Side Wall. The side wall grab bar shall be 42 inches (1065 mm) long minimum, located 12 inches (305 mm) maximum from the rear wall and extending 54 inches (1370 mm) minimum from the rear wall.

604.5.2 Rear Wall. The rear wall grab bar shall be 36 inches (915 mm) long minimum and extend from the centerline of the water closet 12 inches (305 mm) minimum on one side and 24 inches (610 mm) minimum on the other side.
EXCEPTIONS:
1. The rear grab bar shall be permitted to be 24 inches (610 mm) long minimum, centered on the water closet, where wall space does not permit a length of 36 inches (915 mm) minimum due to the location of a recessed fixture adjacent to the water closet.

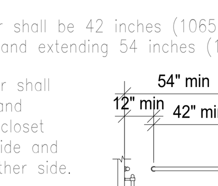

Figure 604.5.1 Side Wall Grab Bar at Water Closets

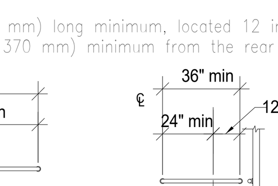

Figure 604.5.2 Rear Wall Grab Bar at Water Closets

2. Where an administrative authority requires flush controls for flush valves to be located in a position that conflicts with the location of the rear grab bar, then the rear grab bar shall be permitted to be split or shifted to the open side of the toilet area.

604.6 Flush Controls. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with 309. Flush controls shall be located on the open side of the water closet except in ambulatory accessible compartments complying with 604.8.2.

604.7 Dispensers. Toilet paper dispensers shall comply with 309.4 and shall be 7 inches (180 mm) minimum and 9 inches (230 mm) maximum in front of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 15 inches (380 mm) minimum and 48 inches (1220 mm) maximum above the finish floor and shall not be located behind grab bars. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow.

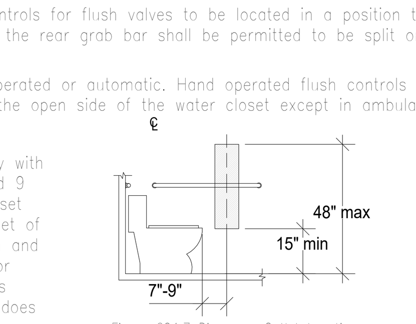

Figure 604.7 Dispenser Outlet Location

604.8 Toilet Compartments. Wheelchair accessible toilet compartments shall meet the requirements of 604.8.1 and 604.8.3. Compartments containing more than one plumbing fixture shall comply with 603. Ambulatory accessible compartments shall comply with 604.8.2 and 604.8.3.

604.8.1 Wheelchair Accessible Compartments. Wheelchair accessible compartments shall comply with 604.8.1.

604.8.1.1 Size. Wheelchair accessible compartments shall be 60 inches (1525 mm) wide minimum measured perpendicular to the side wall, and 56 inches (1420 mm) deep minimum for wall hung water closets and 59 inches (1500 mm) deep minimum for floor mounted water closets measured perpendicular to the rear wall. Wheelchair accessible compartments for children's use shall be 60 inches (1525 mm) wide minimum measured perpendicular to the side wall, and 59 inches (1500 mm) deep minimum for wall hung and floor mounted water closets measured perpendicular to the rear wall.

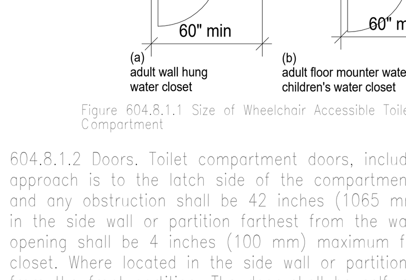

Figure 604.8.1.1 Size of Wheelchair Accessible Toilet Compartment

Figure 604.8.1.1 Size of Wheelchair Accessible Toilet Compartment

604.8.1.2 Doors. Toilet compartment doors, including door hardware, shall comply with 404 except that if the approach is to the latch side of the compartment door, clearance between the door side of the compartment and any obstruction shall be 42 inches (1065 mm) minimum. Doors shall be located in the front partition or in the side wall or partition farthest from the water closet. Where located in the front partition, the door opening shall be 4 inches (100 mm) maximum from the side wall or partition farthest from the water closet. Where located in the side wall or partition, the door opening shall be 4 inches (100 mm) maximum from the front partition. The door shall be self-closing. A door pull complying with 404.2.7 shall be placed on both sides of the door near the latch. Toilet compartment doors shall not swing into the minimum required compartment area.
604.8.1.3 Approach. Compartments shall be arranged for left-hand or right-hand approach to the water closet.

604.8.1.4 Toe Clearance. The front partition and at least one side partition shall provide a toe clearance of 9 inches (230 mm) minimum above the finish floor and 6 inches (150 mm) deep minimum beyond the compartment-side face of the partition, exclusive of partition support members. Compartments for children's use shall provide a toe clearance of 12 inches (305 mm) minimum above the finish floor.
EXCEPTION: Toe clearance at the front partition is not required in a compartment greater than 62 inches (1575 mm) deep with a wall-hung water closet or 65 inches (1650 mm) deep with a floor-mounted water closet. Toe clearance at the side partition is not required in a compartment greater than 66 inches (1675 mm) wide. Toe clearance at the front partition is not required in a compartment for children's use that is greater than 65 inches (1650 mm) deep.

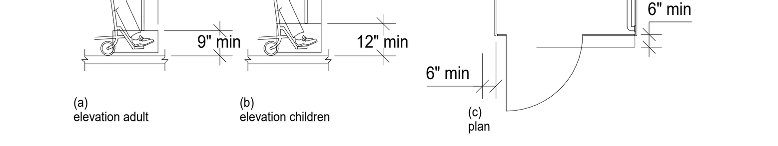

Figure 604.8.1.4 Wheelchair Accessible Toilet Compartment Toe Clearance

604.8.1.5 Grab Bars. Grab bars shall comply with 609. A side-wall grab bar complying with 604.5.1 shall be provided and shall be located on the wall closest to the water closet. In addition, a rear-wall grab bar complying with 604.5.2 shall be provided.

604.8.2 Ambulatory Accessible Compartments. Ambulatory accessible compartments shall comply with 604.8.2.

604.8.2.1 Size. Ambulatory accessible compartments shall have a depth of 60 inches (1525 mm) minimum and a width of 35 inches (890 mm) minimum and 37 inches (940 mm) maximum.

604.8.2.2 Doors. Toilet compartment doors, including door hardware, shall comply with 404, except that if the approach is to the latch side of the compartment door, clearance between the door side of the compartment and any obstruction shall be 42 inches (1065 mm) minimum. The door shall be self-closing. A door pull complying with 404.2.7 shall be placed on both sides of the door near the latch. Toilet compartment doors shall not swing into the minimum required compartment area.

604.8.2.3 Grab Bars. Grab bars shall comply with 609. A side-wall grab bar complying with 604.5.1 shall be provided on both sides of the compartment.

604.8.3 Coat Hooks and Shelves. Coat hooks shall be located within one of the reach ranges specified in 308. Shelves shall be located 40 inches (1015 mm) minimum and 48 inches (1220 mm) maximum above the finish floor.

604.9 Water Closets and Toilet Compartments for Children's Use. Water closets and toilet compartments for children's use shall comply with 604.9

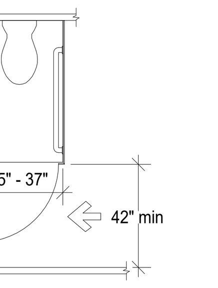

Figure 604.8.2 Ambulatory Accessible Toilet Compartment

604.9.1 Location. The water closet shall be located with a wall or partition to the rear and to one side. The centerline of the water closet shall be 12 inches (305 mm) minimum and 18 inches (455 mm) maximum from the side wall or partition, except that the water closet shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum from the side wall or partition in the ambulatory accessible toilet compartment specified in 604.8.2. Compartments shall be arranged for left-hand or right-hand approach to the water closet.

604.9.2 Clearance. Clearance around a water closet shall comply with 604.3.

604.9.3 Height. The height of water closets shall be 11 inches (280 mm) minimum and 17 inches (430 mm) maximum measured to the top of the seat. Seats shall not be sprung to return to a lifted position.

604.9.4 Grab Bars. Grab bars for water closets shall comply with 604.5.

604.9.5 Flush Controls. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with 309.2 and 309.4 and shall be installed 36 inches (915 mm) maximum above the finish floor. Flush controls shall be located on the open side of the water closet except in ambulatory accessible compartments complying with 604.8.2.

604.9.6 Dispensers. Toilet paper dispensers shall comply with 309.4 and shall be 7 inches (180 mm) minimum and 9 inches (230 mm) maximum in front of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 14 inches (355 mm) minimum and 19 inches (485 mm) maximum above the finish floor. There shall be a clearance of 1 1/2 inches (38 mm) minimum below the grab bar. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow.

604.9.7 Toilet Compartments. Toilet compartments shall comply with 604.8.

605 Urinals

605.1 General. Urinals shall comply with 605.

605.2 Height and Depth. Urinals shall be the stall-type or the wall-hung type with the rim 17 inches (430 mm) maximum above the finish floor or ground. Urinals shall be 13 1/2 inches (345 mm) deep minimum measured from the outer face of the urinal rim to the back of the fixture.

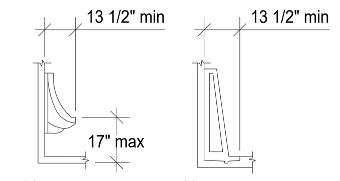

Figure 605.2 Height and Depth of Urinals

605.3 Clear Floor Space. A clear floor or ground space complying with 305 positioned for forward approach shall be provided.

605.4 Flush Controls. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with 309.

606 Lavatories and Sinks

606.1 General. Lavatories and sinks shall comply with 606.

606.2 CLEAR FLOOR SPACE. A clear floor space complying with 305, positioned for a forward approach, and knee and toe clearance complying with 306 shall be provided.
EXCEPTIONS:
1. A parallel approach complying with 305 shall be permitted to a kitchen sink in a space where a cook top or conventional range is not provided and to wet bars.
2. A lavatory in a toilet room or bathing facility for a single occupant accessed only through a private office and not for common use or public use shall not be required to provide knee and toe clearance complying with 306.
3. --
4. --
5. --
6. The dip of the overflow shall not be considered in determining knee and toe clearances.
7. No more than one bowl of a multi-bowl sink shall be required to provide knee and toe clearance complying with 306.

606.3 HEIGHT. Lavatories and sinks shall be installed with the front of the higher of the rim or counter surface 34 inches (865 mm) maximum above the finish floor or ground.
EXCEPTIONS:
1. A lavatory in a toilet or bathing facility for a single occupant accessed only through a private office and not for common use or public use shall not be required to comply with 606.3.
2. --

606.4 FAUCETS. Controls for faucets shall comply with 309. Hand-operated metering faucets shall remain open for 10 seconds minimum.

606.5 EXPOSED PIPES AND SURFACES. Water supply and drain pipes under lavatories and sinks shall be insulated or otherwise configured to protect against contact. there shall be no sharp or abrasive surfaces under lavatories and sinks.

609 Grab Bars

609.1 General. Grab bars in toilet facilities and bathing facilities shall comply with 609.

609.2 Cross Section. Grab bars shall have a cross section complying with 609.2.1 or 609.2.2.

609.2.1 Circular Cross Section. Grab bars with circular cross sections shall have an outside diameter of 1 1/4 inches (32 mm) minimum and 2 inches (51 mm) maximum.

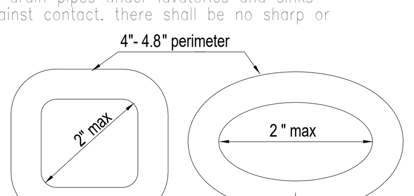

Figure 609.2.2 Grab Bar Non-Circular Cross Section

609.2.2 Non-Circular Cross Section. Grab bars with non-circular cross sections shall have a cross-section dimension of 2 inches (51 mm) maximum and a perimeter dimension of 4 inches (100 mm) minimum and 4.8 inches (120 mm) maximum.

609.3 Spacing. The space between the wall and the grab bar shall be 1 1/2 inches (38 mm). The space between the grab bar and projecting objects below and at the ends shall be 1 1/2 inches (38 mm) minimum. The space between the grab bar and projecting objects above shall be 12 inches (305 mm) minimum.
EXCEPTION: The space between the grab bars and shower controls, shower fittings, and other grab bars above shall be permitted to be 1 1/2 inches (38 mm) minimum.

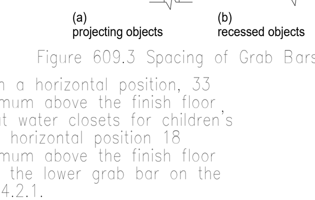

Figure 609.3 Spacing of Grab Bars

609.4 Position of Grab Bars. Grab bars shall be installed in a horizontal position, 33 inches (840 mm) minimum and 36 inches (915 mm) maximum above the finish floor measured to the top of the gripping surface, except that at water closets for children's use complying with 604.9, grab bars shall be installed in a horizontal position 18 inches (455 mm) minimum and 27 inches (685 mm) maximum above the finish floor measured to the top of the gripping surface. The height of the lower grab bar on the back wall of a bathtub shall comply with 607.4.1.1 or 607.4.2.1.

609.5 Surface Hazards. Grab bars and any wall or other surfaces adjacent to grab bars shall be free of sharp or abrasive elements and shall have rounded edges.

609.6 Fittings. Grab bars shall not rotate within their fittings.

609.7 Installation. Grab bars shall be installed in any manner that provides a gripping surface at the specified locations and that does not obstruct the required clear floor space.

609.8 Structural Strength. Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 pounds (1112 N) is applied at any point on the grab bar, fastener, mounting device, or supporting structure.

CHAPTER 7: COMMUNICATION ELEMENTS AND FEATURES

701 General

701.1 Scope. The provisions of Chapter 7 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

702 Fire Alarm Systems

702.1 General. Fire alarm systems shall have permanently installed audible and visible alarms complying with NFPA 72 (1999 or 2002 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1), except that the maximum allowable sound level of audible notification appliances complying with section 4-3.2.1 of NFPA 72 (1999 edition) shall have a sound level no more than 110 dB at the minimum hearing distance from the audible appliance. In addition, alarms in guest rooms required to provide communication features shall comply with sections 4-3 and 4-4 of NFPA 72 (1999 edition) or sections 7.4 and 7.5 of NFPA 72 (2002 edition).
EXCEPTION: Fire alarm systems in medical care facilities shall be permitted to be provided in accordance with industry practice.

703 Signs

703.1 General. Signs shall comply with 703. Where both visual and tactile characters are required, either one sign with both visual and tactile characters, or two separate signs, one with visual, and one with tactile characters, shall be provided.

703.2 Raised Characters. Raised characters shall comply with 703.2 and shall be duplicated in braille complying with 703.3. Raised characters shall be installed in accordance with 703.4.

703.2.1 Depth. Raised characters shall be 1/32 inch (0.8 mm) minimum above their background.

703.2.2 Case. Characters shall be uppercase.

703.2.3 Style. Characters shall be sans serif. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

703.2.4 Character Proportions. Characters shall be selected from fonts where the width of the uppercase letter "O" is 55 percent minimum and 110 percent maximum of the height of the uppercase letter "I".

703.2.5 Character Height. Character height measured vertically from the baseline of the character shall be 5/8 inch (16 mm) minimum and 2 inches (51 mm) maximum based on the height of the uppercase letter "I".
EXCEPTION: Where separate raised and visual characters with the same information are provided, raised character height shall be permitted to be 1/2 inch (13 mm) minimum.

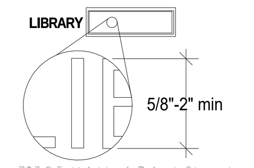

Figure 703.2.5 Height of Raised Characters

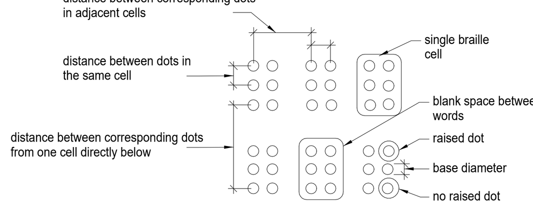

Figure 703.3.1 Braille Measurement

703.2.6 Stroke Thickness. Stroke thickness of the uppercase letter "I" shall be 15 percent maximum of the height of the character.

703.2.7 Character Spacing. Character spacing shall be measured between the two closest points of adjacent raised characters within a message, excluding word spaces. Where characters have rectangular cross sections, spacing between individual raised characters shall be 1/8 inch (3.2 mm) minimum and 4 times the raised character stroke width maximum. Where characters have other cross sections, spacing between individual raised characters shall be 1/16 inch (1.6 mm) minimum and 4 times the raised character stroke width maximum at the base of the cross sections, and 1/8 inch (3.2 mm) minimum and 4 times the raised character stroke width maximum at the top of the cross sections. Characters shall be separated from raised borders and decorative elements 3/8 inch (9.5 mm) minimum.

703.2.8 Line Spacing. Spacing between the baselines of separate lines of raised characters within a message shall be 135 percent minimum and 170 percent maximum of the raised character height.

703.3 Braille. Braille shall be contracted (Grade 2) and shall comply with 703.3 and 703.4.

703.3.1 Dimensions and Capitalization. Braille dots shall have a domed or rounded shape and shall comply with Table 703.3.1. The indication of an uppercase letter or letters shall only be used before the first word of sentences, proper nouns and names, individual letters of the alphabet, initials, and acronyms.

Table 703.3.1 Braille Dimensions

Measurement Range	Minimum in Inches to Maximum in Inches
Dot base diameter	0.059 (1.5 mm) to 0.063 (1.6 mm)
Distance between two dots in the same cell[1]	0.090 (2.3 mm) to 0.100 (2.5 mm) measured center to center
Distance between corresponding dots in adjacent cells[1]	0.241 (6.1 mm) to 0.300 (7.6 mm)measured center to center
Dot height	0.025 (0.6 mm) to 0.037 (0.9 mm)
Distance between corresponding dotsfrom one cell directly below[1]	0.395 (10 mm) to 0.400 (10.2 mm)measured center to center

1. Measured center to center.

703.3.2 Position. Braille shall be positioned below the corresponding text. If text is multi-lined, braille shall be placed below the entire text. Braille shall be separated 3/8 inch (9.5 mm) minimum from any other tactile characters and 3/8 inch (9.5 mm) minimum from raised borders and decorative elements.
EXCEPTION: Braille provided on elevator car controls shall be separated 3/16 inch (4.8 mm) minimum and shall be located either directly below or adjacent to the corresponding raised characters or symbols.

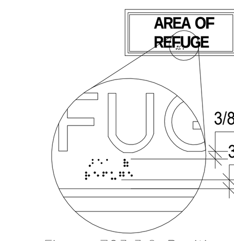

Figure 703.3.2 Position of Braille

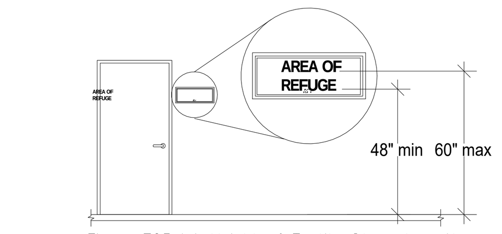

Figure 703.4.1 Height of Tactile Characters Above Finish Floor or Ground

703.4 Installation Height and Location. Signs with tactile characters shall comply with 703.4.

703.4.1 Height Above Finish Floor or Ground. Tactile characters on signs shall be located 48 inches (1220 mm) minimum above the finish floor or ground surface, measured from the baseline of the lowest tactile character and 60 inches (1525 mm) maximum above the finish floor or ground surface, measured from the baseline of the highest tactile character.
EXCEPTION: Tactile characters for elevator car controls shall not be required to comply with 703.4.1.

703.4.2 Location. Where a tactile sign is provided at a door, the sign shall be located alongside the door at the latch side. Where a tactile sign is provided at double doors with one active leaf, the sign shall be located on the inactive leaf. Where a tactile sign is provided at double doors with two active leafs, the sign shall be located to the right of the right hand door. Where there is no wall space at the latch side of a single door or at the right side of double doors, signs shall be located on the nearest adjacent wall. Signs containing tactile characters shall be located so that a clear floor space of 18 inches (455 mm) minimum by 18 inches (455 mm) minimum, centered on the tactile characters, is provided beyond the arc of any door swing between the closed position and 45 degree open position.
EXCEPTION: Signs with tactile characters shall be permitted on the push side of doors with closers and without hold-open devices.

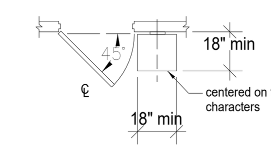

Figure 703.4.2 Location of Tactile Signs at Doors

703.5 Visual Characters. Visual characters shall comply with 703.5.
EXCEPTION: Where visual characters comply with 703.2 and are accompanied by braille complying with 703.3, they shall not be required to comply with 703.5.2 through 703.5.9.

703.5.1 Finish and Contrast. Characters and their background shall have a non-glare finish. Characters shall contrast with their background with either light characters on a dark background or dark characters on a light background.

703.5.2 Case. Characters shall be uppercase or lowercase or a combination of both.

703.5.3 Style. Characters shall be conventional in form. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

703.5.4 Character Proportions. Characters shall be selected from fonts where the width of the uppercase letter "O" is 55 percent minimum and 110 percent maximum of the height of the uppercase letter "I".

703.5.5 Character Height. Minimum character height shall comply with Table 703.5.5. Viewing distance shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign. Character height shall be based on the uppercase letter "I".

Table 703.5.5 Visual Character Height

Height to Finish Floor or Ground From Baseline of Character	Horizontal Viewing Distance	Minimum Character Height
40 inches (1015 mm) to less than or equal to 70 inches (1780 mm)	less than 72 inches (1830 mm)	5/8 inch (16 mm)
	72 inches (1830 mm) and greater	5/8 inch (16 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 72 inches (1830 mm)
Greater than 70 inches (1780 mm) to less than or equal to 120 inches (3050 mm)	less than 180 inches (4570 mm)	2 inch (51 mm)
	180 inches (4570 mm) and greater	2 inches (51 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 180 inches (4570 mm)
Greater than 120 inches (3050 mm)	less than 21 feet (6400 mm)	3 inch (75 mm)
	21 feet (6400 mm) and greater	3 inches (75 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 21 feet (6400 mm)

703.5.6 Height From Finish Floor or Ground. Visual characters shall be 40 inches (1015 mm) minimum above the finish floor or ground.
EXCEPTION: Visual characters indicating elevator car controls shall not be required to comply with 703.5.6.

703.5.7 Stroke Thickness. Stroke thickness of the uppercase letter "I" shall be 10 percent minimum and 30 percent maximum of the height of the character.

703.5.8 Character Spacing. Character spacing shall be measured between the two closest points of adjacent characters, excluding word spaces. Spacing between individual characters shall be 10 percent minimum and 35 percent maximum of character height.

703.5.9 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

703.6 Pictograms. Pictograms shall comply with 703.6.

703.6.1 Pictogram Field. Pictograms shall have a field height of 6 inches (150 mm) minimum. Characters and braille shall not be located in the pictogram field.

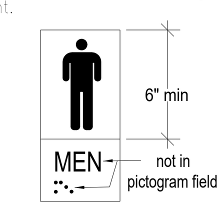

Figure 703.6.1 Pictogram Field

703.6.2 Finish and Contrast. Pictograms and their field shall have a non-glare finish. Pictograms shall contrast with their field with either a light pictogram on a dark field or a dark pictogram on a light field.

703.6.3 Text Descriptors. Pictograms shall have text descriptors located directly below the pictogram field. Text descriptors shall comply with 703.2, 703.3 and 703.4.

703.7 Symbols of Accessibility. Symbols of accessibility shall comply with 703.7.

703.7.1 Finish and Contrast. Symbols of accessibility and their background shall have a non-glare finish. Symbols of accessibility shall contrast with their background with either a light symbol on a dark background or a dark symbol on a light background.

703.7.2 Symbols.

703.7.2.1 International Symbol of Accessibility. The International Symbol of Accessibility shall comply with Figure 703.7.2.1.

703.7.2.2 International Symbol of TTY. The International Symbol of TTY shall comply with Figure 703.7.2.2.

703.7.2.3 Volume Control Telephones. Telephones with a volume control shall be identified by a pictogram of a telephone handset with radiating sound waves on a square field such as shown in Figure 703.7.2.3.

703.7.2.4 Assistive Listening Systems. Assistive listening systems shall be identified by the International Symbol of Access for Hearing Loss complying with Figure 703.7.2.4.

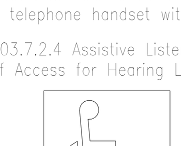
Figure 703.7.2.1 International Symbol of Accessibility

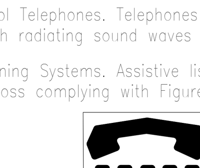
Figure 703.7.2.2 International Symbol of TTY

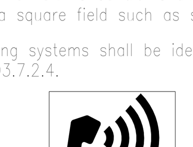
Figure 703.7.2.3 Volume Control Telephone

Figure 703.7.2.4 International Symbol of Access for Hearing Loss

705 Detectable Warnings

705.1 General. Detectable warnings shall consist of a surface of truncated domes and shall comply with 705.

705.1.1 Dome Size. Truncated domes in a detectable warning surface shall have a base diameter of 0.9 inch (23 mm) minimum and 1.4 inches (36 mm) maximum, a top diameter of 50 percent of the base diameter minimum to 65 percent of the base diameter maximum, and a height of 0.2 inch (5.1 mm).

705.1.2 Dome Spacing. Truncated domes in a detectable warning surface shall have a center-to-center spacing of 1.6 inches (41 mm) minimum and 2.4 inches (61 mm) maximum, and a base-to-base spacing of 0.65 inch (17 mm) minimum, measured between the most adjacent domes on a square grid.

705.1.3 Contrast. Detectable warning surfaces shall contrast visually with adjacent walking surfaces either light-on-dark, or dark-on-light.

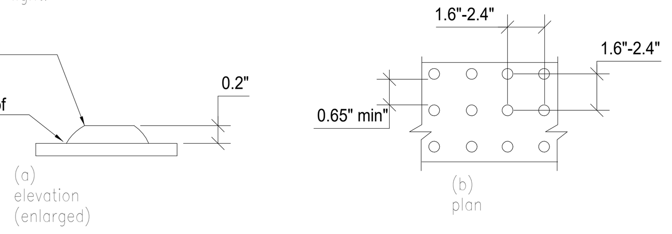

Figure 705.1 Size and Spacing of Truncated Domes

705.2 PLATFORM EDGES. Detectable warning surfaces at platform boarding edges shall be 24 inches (610 mm) wide and shall extend the full length of the public use areas of the platform.

CHAPTER 9: BUILT-IN ELEMENTS

901 General

901.1 Scope. The provisions of Chapter 9 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

902 Dining Surfaces and Work Surfaces

902.1 General. Dining surfaces and work surfaces shall comply with 902.2 and 902.3.
EXCEPTION: Dining surfaces and work surfaces for children's use shall be permitted to comply with 902.4.

902.2 Clear Floor or Ground Space. A clear floor space complying with 305 positioned for a forward approach shall be provided. Knee and toe clearance complying with 306 shall be provided.

902.3 Height. The tops of dining surfaces and work surfaces shall be 28 inches (710 mm) minimum and 34 inches (865 mm) maximum above the finish floor or ground.
902.4 Dining Surfaces and Work Surfaces for Children's Use. Accessible dining surfaces and work surfaces for children's use shall comply with 902.4.
EXCEPTION: Dining surfaces and work surfaces that are used primarily by children 5 years and younger shall not be required to comply with 902.4 where a clear floor or ground space complying with 305 positioned for a parallel approach is provided.

902.4.1 Clear Floor or Ground Space. A clear floor space complying with 305 positioned for forward approach shall be provided. Knee and toe clearance complying with 306 shall be provided, except that knee clearance 24 inches (610 mm) minimum above the finish floor or ground shall be permitted.

902.4.2 Height. The tops of tables and counters shall be 26 inches (660 mm) minimum and 30 inches (760 mm) maximum above the finish floor or ground.

903 Benches
903.1 General. Benches shall comply with 903.

903.2 Clear Floor or Ground Space. Clear floor or ground space complying with 305 shall be provided and shall be positioned at the end of the bench seat and parallel to the short axis of the bench.

903.3 Size. Benches shall have seats that are 42 inches (1065 mm) long minimum and 20 inches (510 mm) deep minimum and 24 inches (610 mm) deep maximum.

903.4 Back Support. The bench shall provide for back support or shall be affixed to a wall. Back support shall be 42 inches (1065 mm) long minimum and shall extend from a point 2 inches (51 mm) maximum above the seat surface to a point 18 inches (455 mm) minimum above the seat surface. Back support shall be 2 1/2 inches (64 mm) maximum from the rear edge of the seat measured horizontally.

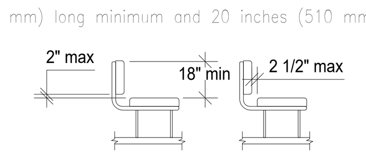

Figure 903.4 Bench Back Support

903.5 Height. The top of the bench seat surface shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum above the finish floor or ground.

903.6 Structural Strength. Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 pounds (1112 N) is applied at any point on the seat, fastener, mounting device, or supporting structure.

903.7 Wet Locations. Where installed in wet locations, the surface of the seat shall be slip resistant and shall not accumulate water.

904 Check-Out Aisles and Sales and Service Counters

904.1 General. Check-out aisles and sales and service counters shall comply with the applicable requirements of 904.

904.2 Approach. All portions of counters required to comply with 904 shall be located adjacent to a walking surface complying with 403.

904.3 Check-Out Aisles. Check-out aisles shall comply with 904.3.

904.3.1 Aisle. Aisles shall comply with 403.

904.3.2 Counter. The counter surface height shall be 38 inches (965 mm) maximum above the finish floor or ground. The top of the counter edge protection shall be 2 inches (51 mm) maximum above the top of the counter surface on the aisle side of the check-out counter.

904.3.3 Check Writing Surfaces. Where provided, check writing surfaces shall comply with 902.3.

904.4 Sales and Service Counters. Sales counters and service counters shall comply with 904.4.1 or 904.4.2. The accessible portion of the counter top shall extend the same depth as the sales or service counter top.
EXCEPTION: In alterations, when the provision of a counter complying with 904.4 would result in a reduction of the number of existing counters at work stations or a reduction of the number of existing mail boxes, the counter shall be permitted to have a portion which is 24 inches (610 mm) long minimum complying with 904.4.1 provided that the required clear floor or ground space is centered on the accessible length of the counter.

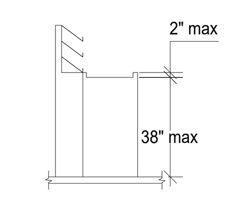

Figure 904.3.2 Check-Out Aisle Counters

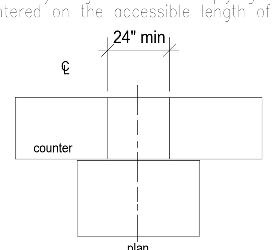

Figure 904.4 (Exception) Alteration of Sales and Service Counters

904.4.1 Parallel Approach. A portion of the counter surface that is 36 inches (915 mm) long minimum and 36 inches (915 mm) high maximum above the finish floor shall be provided. A clear floor or ground space complying with 305 shall be positioned for a parallel approach adjacent to the 36 inch (915 mm) minimum length of counter.
EXCEPTION: Where the provided counter surface is less than 36 inches (915 mm) long, the entire counter surface shall be 36 inches (915 mm) high maximum above the finish floor.

904.4.2 Forward Approach. A portion of the counter surface that is 30 inches (760 mm) long minimum and 36 inches (915 mm) high maximum shall be provided. Knee and toe space complying with 306 shall be provided under the counter. A clear floor or ground space complying with 305 shall be positioned for a forward approach to the counter.

904.5 Food Service Lines. Counters in food service lines shall comply with 904.5.

904.5.1 Self-Service Shelves and Dispensing Devices. Self-service shelves and dispensing devices for tableware, dishware, condiments, food and beverages shall comply with 308.

904.5.2 Tray Slides. The tops of tray slides shall be 28 inches (710 mm) minimum and 34 inches (865 mm) maximum above the finish floor or ground.

904.6 Security Glazing. Where counters or teller windows have security glazing to separate personnel from the public, a method to facilitate voice communication shall be provided. Telephone handset devices, if provided, shall comply with 704.3.

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6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT
02.15.2023

Cheddar's SCRATCH KITCHEN EST 1979

Issue Date: 02.15.2023

REVISION INFORMATION

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

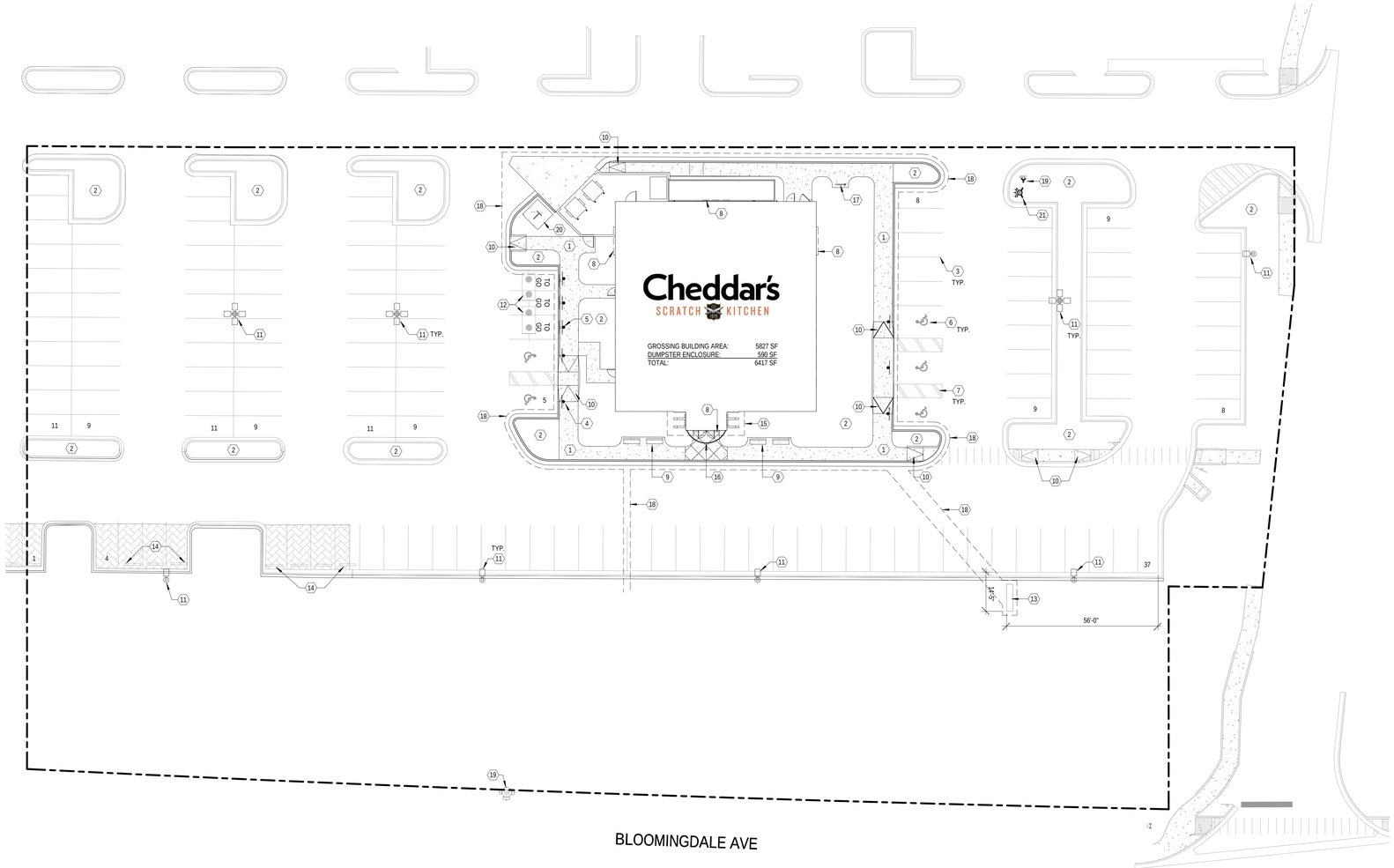
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:

ACCESSIBILITY REQUIREMENTS

T1.4



KEYNOTES - SITE PLAN

1	CONCRETE SIDEWALK, RE: CIVIL
2	LANDSCAPE AREA, RE: LANDSCAPE
3	PAINTED STRIPING, RE: CIVIL
4	ACCESSIBLE PARKING SIGNAGE, RE: CIVIL
5	TO-GO PARKING SIGNAGE, RE: CIVIL
6	PAINTED ACCESSIBLE PARKING SYMBOL, RE: CIVIL
7	PAINTED ACCESS AISLE, RE: CIVIL
8	BUILDING SIGNAGE BY OWNER, RE: ELEVATION
9	WAITING BENCH BY OWNER INSTALLED BY G.C.
10	ACCESSIBLE RAMP, RE: CIVIL
11	LIGHT POLE BASES, POLE AND LIGHT FIXTURE, BY DEVELOPER
12	GREASE INTERCEPTOR, RE: CIVIL AND PLUMBING
13	MONUMENT SIGN BY OWNER
14	EXISTING BUMPER BLOCKS
15	LINE OF ROOF OVERHANG ABOVE
16	LINE OF CANOPY ABOVE
17	BIKE RACK, RE: CIVIL
18	LIMITS OF DISTURBANCE, RE: CIVIL
19	EXISTING FIRE HYDRANT, RE: CIVIL
20	ELECTRICAL EQUIPMENT, RE: CIVIL AND ELECTRICAL
21	FIRE HYDRANT, BY DEVELOPER, RE: CIVIL

SITE STATISTICS:

LOT: 108,188 SQ.FT.

ZONING DISTRICT: PD (BLOOMINGDALE CROSSING 86-0077)

NEW BUILDING SIZE: 5827 SQ FT
NEW BUILDING HEIGHT: 23'-0"
NEW TOTAL SEATING: 220 SEATS
USAGE: RESTAURANT WITH ALCOHOL SERVICE

PARKING SPACES PROVIDED:

STANDARD PARKING SPACES: 117 SPACES
ACCESSIBLE (1 VAN SPACE): 5 SPACES
TOTAL= 122 SPACES (5 ACCESSIBLE)
TOTAL PARKING PROVIDED FOR OUTPARCEL(BY DEVELOPER) = 141 SPACES
(INCLUDES 5 ADA SPACES)

SITE PLAN
1" = 20'-0"
1

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6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:

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1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
LICENSED ARCHITECT

REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

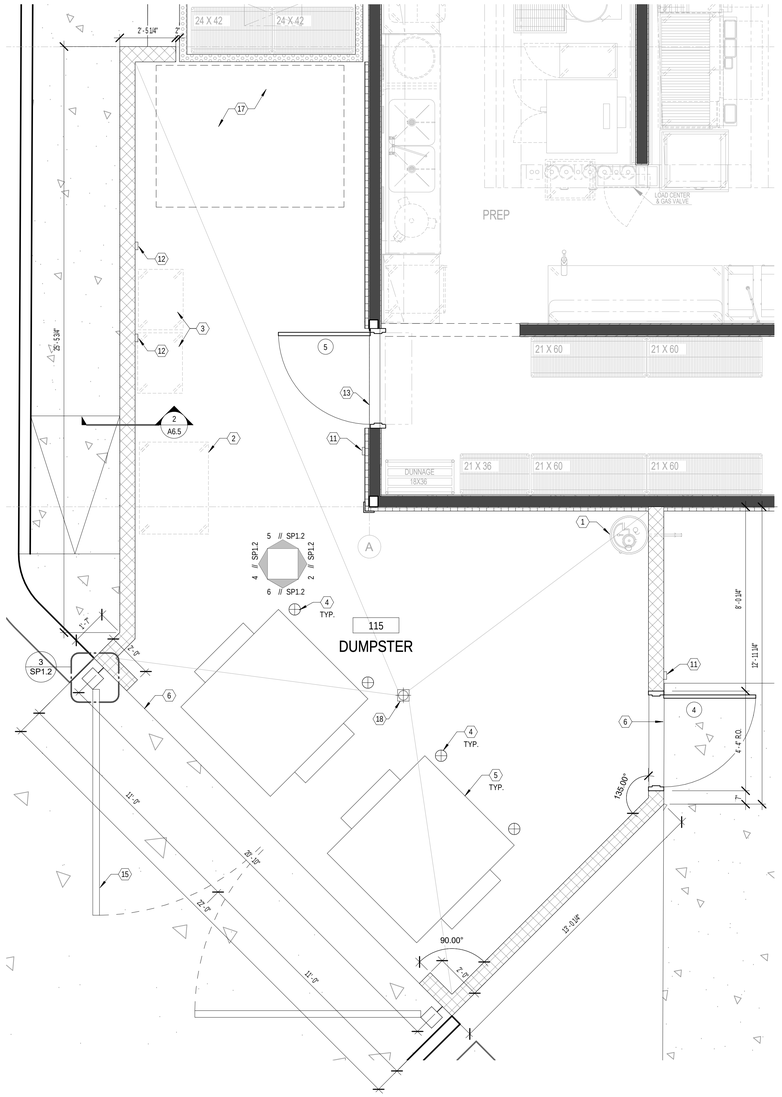
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

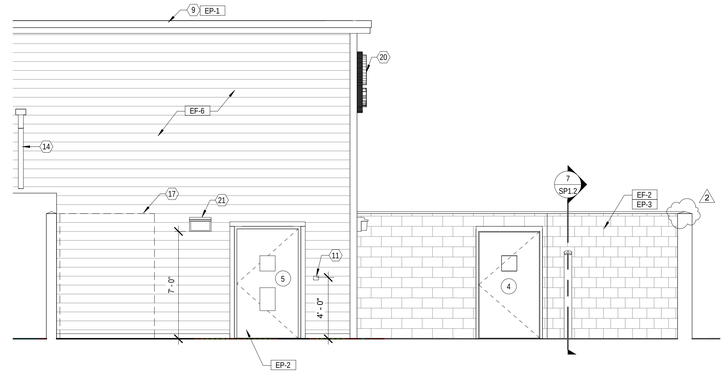
RIVERVIEW, FL

Drawing:
ARCHITECTURAL SITE PLAN

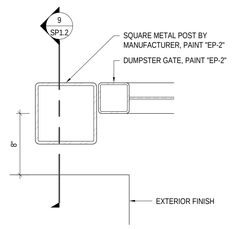
SP1.1



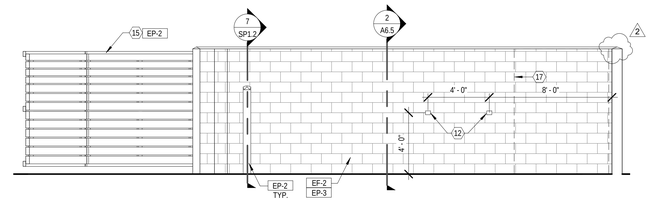
ENLARGED DUMPSTER FLOOR PLAN 3/8" = 1'-0" | 1



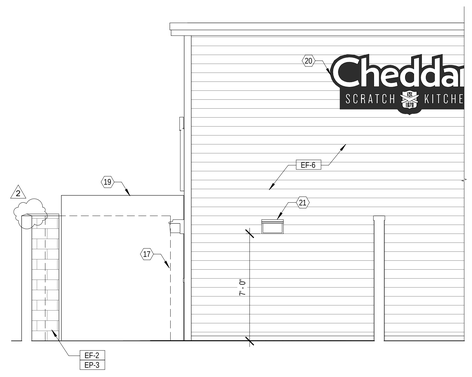
ELEVATION AT DUMPSTER 115 1/4" = 1'-0" | 2



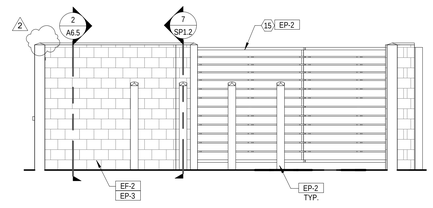
DETAIL AT DUMPSTER GATE CLOSURE 1 1/2" = 1'-0" | 3



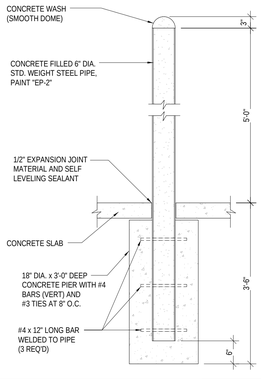
ELEVATION AT DUMPSTER 115 1/4" = 1'-0" | 4



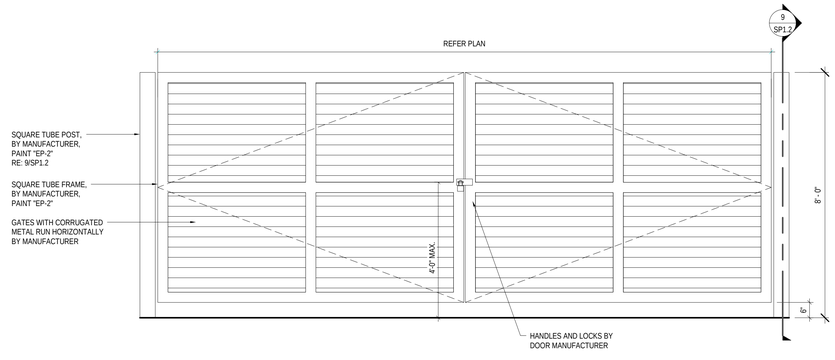
ELEVATION AT DUMPSTER 115 1/4" = 1'-0" | 5



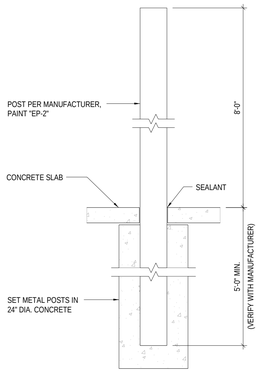
ELEVATION AT DUMPSTER 115 1/4" = 1'-0" | 6



DETAIL AT DUMPSTER BOLLARD 3/4" = 1'-0" | 7



ELEVATION AT DUMPSTER GATE 1/2" = 1'-0" | 8



DETAIL AT DUMPSTER GATE POST 3/4" = 1'-0" | 9

KEYNOTES - DUMPSTER

1	CO2 TANK BY OTHERS
2	GREASE HOLDING BIN (100 GALLON , BY OTHERS)
3	FRYER OIL DISPOSAL CART BY OTHERS
4	BOLLARD, PAINT, RE: 7/SP1.2
5	DUMPSTER, BY OTHERS
6	EDGE OF SLAB
7	ROOF OVERHANG AND GUTTER ABOVE
8	PRE-FINISHED METAL SNAP CAP FLASHING TO MATCH EP-2
9	ROUGH SAWN STAINED CEDAR FASCIA
10	1X4 STAINED CEDAR TRIM
11	DOOR BUZZER, RE: ELECTRICAL
12	LADDER HANGER MOUNTED 4'-0" A.F.F.
13	ALUMINUM THRESHOLD SET IN FULL BED OF MASTIC
14	PRE-FINISHED ALUMINUM SEAMLESS GUTTER AND DOWNSPOUT TO MATCH EP-2
15	DUMPSTER GATE, RE: 8/SP1.2
16	G.C. TO COORDINATE LOCATION OF CO2 ACCESS WITH VENDOR
17	STORAGE SHED BY OWNER, RE: SHOP DRAWINGS
18	DUMPSTER DRAIN, RE: PLUMBING
19	EXPOSED COOLER / FREEZER, RE: FOOD SERVICE
20	SIGNAGE, RE: EXTERIOR ELEVATIONS
21	LIGHT FIXTURE, RE: ELECTRICAL

FINISH SCHEDULE - EXTERIOR

EXTERIOR PAINT	
EP-1	ANTIQUE WHITE
EP-2	MISSISSIPPI BRONZE ENAMEL
EP-3	IBIS WHITE
EP-4	CHARWOOD
STONE	
ST-1	STONE
EXTERIOR FINISH	
EF-1	MODULAR BRICK
EF-2	SPLIT-FACE CMU BLOCK - 8" THICK
EF-3	CMU BLOCK - 4" THICK
EF-4	HARDIE PLANK HORIZONTAL LAP SIDING - NAVAJO BEIGE
EF-5	PLYWOOD-ROUGH SAWN CEDAR
EF-6	HARDIE PLANK HORIZONTAL LAP SIDING - KHAKI BROWN
EF-7	BRICK SILL
EF-8	4" HARDIE TRIM
EF-9	6" HARDIE TRIM - ARCTIC WHITE
ROOFING	
R-1	SINGLE PLY ROOF
R-2	ARCHITECTURAL COMPOSITION SHINGLES
R-3	STANDING SEAM COPPER

idstudio4

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TEL: 972.870.1288
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PROJECT NUMBER
DCH22007

CLIENT:

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ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIGGS
AR98116
REGISTERED ARCHITECT

REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:

ENLARGED DUMPSTER

SP1.2

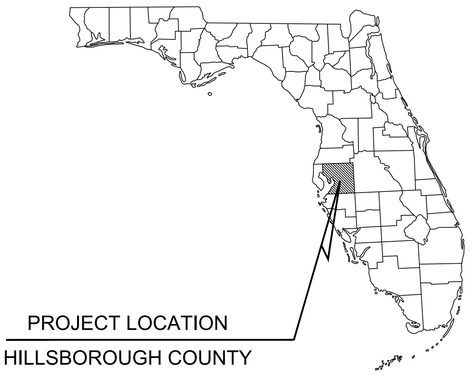
CONSTRUCTION PLANS

FOR

CHEDDAR'S SCRATCH KITCHEN

LOCATED AT

10150 BLOOMINGDALE AVE
RIVERVIEW, FL 33578



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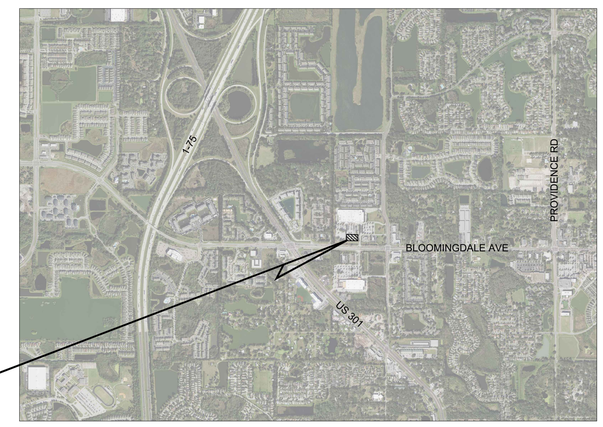

VICINITY MAP
N.T.S.

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TAMPA, FL 33619
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SPECTRUM BUSINESS
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CABLE PROVIDER
DIRECT TV
(877) 451-6172

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CONTACT: FRANK HERNANDEZ

PREPARED BY:
Kimley»Horn

ISSUANCE DATE: 02/15/23
LATEST REVISION DATE: 04/05/23

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com

ARCHITECTS PROJECT #: DCH22007

Kimley»Horn
445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
PH: (772) 794-4100
REGISTRY NO. 696
KHA PROJECT # 047916134

KEVIN M. ROBERSON ★ PROFESSIONAL ENGINEER ★ LICENSE No. 52074 ★ STATE OF FLORIDA
5/8/2023

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY KEVIN M. ROBERSON ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Cheddar's SCRATCH KITCHEN

Issue Date: 02/15/23

REVISION INFORMATION
2 4/5/23
COORDINATION COMMENTS

Restaurant #: 21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING
COVER SHEET

C1.1

Drawing name: K:\VRB_LDEV\047916 - Darden\134_CSK Riverview\CADD\PlanSheets\101-C1.1 COVER SHEET.dwg 101-C1.1 COVER SHEET May 08, 2023 12:58pm by: Liz.Meeks
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR AND SUBCONTRACTORS SHALL OBTAIN A COPY OF THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (LATEST EDITION) AND BECOME FAMILIAR WITH THE CONTENTS PRIOR TO COMMENCING WORK, AND, UNLESS OTHERWISE NOTED, ALL WORK SHALL CONFORM AS APPLICABLE TO THESE STANDARDS AND SPECIFICATIONS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE APPROVING AUTHORITIES, SPECIFICATIONS AND REQUIREMENTS. CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS UNLESS OTHERWISE INDICATED, REMOVING TREES, STUMPS, ROOTS, MUCK, EXISTING PAVEMENT AND ALL OTHER DELETERIOUS MATERIAL.

3. EXISTING UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF THE TOPOGRAPHIC SURVEY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. GUARANTEE IS NOT MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE SHOWN ARE ENTIRELY ACCURATE. FINDING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE DONE BEFORE COMMENCING ANY WORK IN THE VICINITY. FURTHERMORE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.

4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION. AN APPROXIMATE LIST OF THE UTILITY COMPANIES WHICH THE CONTRACTOR MUST CALL BEFORE COMMENCING WORK IS PROVIDED ON THE COVER SHEET OF THESE CONSTRUCTION PLANS. THIS LIST SERVES AS A GUIDE ONLY AND IS NOT INTENDED TO LIMIT THE UTILITY COMPANIES WHICH THE CONTRACTOR MAY WISH TO NOTIFY.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED CONSTRUCTION PERMITS AND BONDS IF REQUIRED PRIOR TO CONSTRUCTION.

6. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF THE CONSTRUCTION DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, GEOTECHNICAL REPORT AND SPECIAL CONDITIONS AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.

7. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER.

8. ALL COPIES OF COMPACTION, CONCRETE AND OTHER REQUIRED TEST RESULTS ARE TO BE SENT TO THE OWNER AND DESIGN ENGINEER OF RECORD DIRECTLY FROM THE TESTING AGENCY.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING TO THE ENGINEER A CERTIFIED RECORD SURVEY SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA DEPICTING THE ACTUAL FIELD LOCATION OF ALL CONSTRUCTED IMPROVEMENTS THAT ARE REQUIRED BY THE JURISDICTIONAL AGENCIES FOR THE CERTIFICATION PROCESS. ALL SURVEY COSTS WILL BE THE CONTRACTORS RESPONSIBILITY.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING AND MAINTAINING AS-BUILT INFORMATION WHICH SHALL BE RECORDED AS CONSTRUCTION PROGRESSES OR AT THE COMPLETION OF APPROPRIATE CONSTRUCTION INTERVALS AND SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS TO THE OWNER FOR THE PURPOSE OF CERTIFICATION TO JURISDICTIONAL AGENCIES AS REQUIRED. ALL AS-BUILT DATA SHALL BE COLLECTED BY A STATE OF FLORIDA PROFESSIONAL LAND SURVEYOR WHOSE SERVICES ARE ENGAGED BY THE CONTRACTOR.

11. ANY WELLS DISCOVERED ON SITE THAT WILL HAVE NO USE MUST BE PLUGGED BY A LICENSED WELL DRILLING CONTRACTOR IN A MANNER APPROVED BY ALL JURISDICTIONAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS REQUIRED.

12. ANY WELL DISCOVERED DURING EARTH MOVING OR EXCAVATION SHALL BE REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES WITHIN 24 HOURS AFTER DISCOVERY IS MADE.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK THAT WOULD BE AFFECTED. FAILURE TO NOTIFY OWNER OF AN IDENTIFIABLE CONFLICT PRIOR TO PROCEEDING WITH INSTALLATION RELIEVES OWNER OF ANY OBLIGATION TO PAY FOR A RELATED CHANGE ORDER.

DEMOLITION NOTES

1. ALL MATERIAL REMOVED FROM THIS SITE BY THE CONTRACTOR SHALL BE DISPOSED OF BY THE CONTRACTOR IN A LEGAL MANNER.

2. REFER TO THE TOPOGRAPHIC SURVEY FOR ADDITIONAL DETAILS OF EXISTING STRUCTURES, ETC., LOCATED WITHIN THE PROJECT SITE. UNLESS OTHERWISE NOTED, ALL EXISTING BUILDINGS, STRUCTURES, SLABS, CONCRETE, ASPHALT, DEBRIS PILES, SIGNS, AND ALL APPURTENANCES ARE TO BE REMOVED FROM THE SITE BY THE CONTRACTOR AND PROPERLY DISPOSED OF IN A LEGAL MANNER AS PART OF THIS CONTRACT. SOME ITEMS TO BE REMOVED MAY NOT BE DEPICTED ON THE TOPOGRAPHIC SURVEY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND DETERMINE THE FULL EXTENT OF ITEMS TO BE REMOVED. IF ANY ITEMS ARE IN QUESTION, THE CONTRACTOR SHALL CONTACT THE OWNER PRIOR TO REMOVAL OF SAID ITEMS.

3. THE CONTRACTOR SHALL REFER TO THE DEMOLITION PLAN AND TREE INVENTORY PLAN FOR DEMOLITION/PRESERVATION OF EXISTING TREES. ALL TREES NOT SPECIFICALLY SHOWN TO BE PRESERVED OR RELOCATED SHALL BE REMOVED AS A PART OF THIS CONTRACT. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ANY DEMOLITION.

4. CONTRACTOR SHALL ADJUST GRADE OF ANY EXISTING UTILITIES TO REMAIN.

PAVING, GRADING AND DRAINAGE NOTES

1. ALL PAVING, CONSTRUCTION, MATERIALS, AND WORKMANSHIP WITHIN JURISDICTION'S RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH LOCAL OR COUNTY SPECIFICATIONS AND STANDARDS (LATEST EDITION) OR FDOT SPECIFICATIONS AND STANDARDS (LATEST EDITION) IF NOT COVERED BY LOCAL OR COUNTY REGULATIONS.

2. ALL UNPAVED AREAS IN EXISTING RIGHTS-OF-WAY DISTURBED BY CONSTRUCTION SHALL BE REGRADED AND SODDED.

3. TRAFFIC CONTROL ON ALL FDOT, LOCAL AND COUNTY RIGHTS-OF-WAY SHALL MEET THE REQUIREMENTS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (U.S. DOT/FHA) AND THE REQUIREMENTS OF THE STATE AND ANY LOCAL AGENCY HAVING JURISDICTION. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.

4. THE CONTRACTOR SHALL GRADE THE SITE TO THE ELEVATIONS INDICATED AND SHALL REGRADE WASHOUTS WHERE THEY OCCUR AFTER EVERY RAINFALL UNTIL A GRASS STAND IS WELL ESTABLISHED OR ADEQUATE STABILIZATION OCCURS.

5. ALL OPEN AREAS WITHIN THE PROJECT SITE SHALL BE SODDED UNLESS INDICATED OTHERWISE ON THE LANDSCAPE PLAN.

6. ALL AREAS INDICATED AS PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TYPICAL PAVEMENT SECTIONS AS INDICATED ON THE DRAWINGS.

7. WHERE EXISTING PAVEMENT IS INDICATED TO BE REMOVED AND REPLACED, THE CONTRACTOR SHALL SAW CUT A MINIMUM 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT AND REPLACE THE PAVEMENT WITH THE SAME TYPE AND DEPTH OF MATERIAL AS EXISTING OR AS INDICATED.

8. WHERE NEW PAVEMENT MEETS THE EXISTING PAVEMENT, THE CONTRACTOR SHALL SAW CUT THE EXISTING PAVEMENT A MINIMUM 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT AND MATCH THE EXISTING PAVEMENT ELEVATION WITH THE PROPOSED PAVEMENT UNLESS OTHERWISE INDICATED.

9. THE CONTRACTOR SHALL INSTALL FILTER FABRIC OVER ALL DRAINAGE STRUCTURES FOR THE DURATION OF CONSTRUCTION AND UNTIL ACCEPTANCE OF THE PROJECT BY THE OWNER. ALL DRAINAGE STRUCTURES SHALL BE CLEANED OF DEBRIS AS REQUIRED DURING AND AT THE END OF CONSTRUCTION TO PROVIDE POSITIVE DRAINAGE FLOWS.

10. IF DEWATERING IS REQUIRED, THE CONTRACTOR SHALL OBTAIN ANY APPLICABLE REQUIRED PERMITS. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER AND THE DESIGN ENGINEER PRIOR TO ANY EXCAVATION.

11. STRIP TOPSOIL AND ORGANIC MATTER FROM ALL AREAS OF THE SITE AS REQUIRED. IN SOME CASES TOPSOIL MAY BE STOCKPILED ON SITE FOR PLACEMENT WITHIN LANDSCAPED AREAS BUT ONLY AS DIRECTED BY THE OWNER.

12. FIELD DENSITY TESTS SHALL BE TAKEN AT INTERVALS IN ACCORDANCE WITH THE LOCAL JURISDICTIONAL AGENCY OR TO FDOT STANDARDS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.

13. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED AS PER PLANS. THE AREAS SHALL THEN BE SODDED OR SEEDED AS SPECIFIED IN THE PLANS, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE JOB SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL EARTHEN AREAS WILL BE SODDED OR SEEDED AND MULCHED AS SHOWN ON THE LANDSCAPING PLAN.

14. ALL CUT OR FILL SLOPES SHALL BE 4 (HORIZONTAL) :1 (VERTICAL) OR FLATTER UNLESS OTHERWISE SHOWN.

15. THE CONTRACTOR SHALL TAKE ALL REQUIRED MEASURES TO CONTROL TURBIDITY, INCLUDING BUT NOT LIMITED TO THE INSTALLATION OF TURBIDITY BARRIERS AT ALL LOCATIONS WHERE THE POSSIBILITY OF TRANSFERRING SUSPENDED SOLIDS INTO THE RECEIVING WATER BODY EXISTS DUE TO THE PROPOSED WORK. TURBIDITY BARRIERS MUST BE MAINTAINED IN EFFECTIVE CONDITION AT ALL LOCATIONS UNTIL CONSTRUCTION IS COMPLETED AND DISTURBED SOIL AREAS ARE STABILIZED. THEREAFTER, THE CONTRACTOR MUST REMOVE THE BARRIERS. AT NO TIME SHALL THERE BE ANY OFF-SITE DISCHARGE WHICH VIOLATES THE WATER QUALITY STANDARDS IN CHAPTER 17-302, FLORIDA ADMINISTRATIVE CODE.

16. SOD, WHERE CALLED FOR, MUST BE INSTALLED AND MAINTAINED ON EXPOSED SLOPES WITHIN 48 HOURS OF COMPLETING FINAL GRADING, AND AT ANY OTHER TIME AS NECESSARY, TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES.

17. THE CONTRACTOR MUST REVIEW AND MAINTAIN A COPY OF THE ENVIRONMENTAL RESOURCE PERMIT COMPLETE WITH ALL CONDITIONS, ATTACHMENTS, EXHIBITS, AND PERMIT MODIFICATIONS IN GOOD CONDITION AT THE CONSTRUCTION SITE. THE COMPLETE PERMIT MUST BE AVAILABLE FOR REVIEW UPON REQUEST BY WATER MANAGEMENT DISTRICT REPRESENTATIVES.

18. THE CONTRACTOR SHALL ENSURE THAT ISLAND PLANTING AREAS AND OTHER PLANTING AREAS ARE NOT COMPACTED AND DO NOT CONTAIN ROAD BASE MATERIALS. THE CONTRACTOR SHALL ALSO EXCAVATE AND REMOVE ALL UNDESIRABLE MATERIAL FROM ALL AREAS ON THE SITE TO BE PLANTED AND PROPERLY DISPOSED OF IN A LEGAL MANNER.

19. THE CONTRACTOR SHALL INSTALL ALL UNDERGROUND STORM WATER PIPING PER MANUFACTURER'S RECOMMENDATIONS.

RECORD DRAWINGS

1. CONTRACTOR SHALL PROVIDE TO THE ENGINEER AND OWNER A MINIMUM OF 2 HARD COPIES OF A PAVING, GRADING AND DRAINAGE RECORD DRAWING AND A SEPARATE UTILITY RECORD DRAWING, AS WELL AS BOTH IN AUTOCAD 2007 OR LATER, BOTH PREPARED BY A FLORIDA REGISTERED SURVEYOR. THE RECORD DRAWINGS SHALL VERIFY ALL DESIGN INFORMATION INCLUDED ON THE DESIGN PLANS OF THE SAME NAME.

WATER AND SEWER UTILITY NOTES

1. THE CONTRACTOR SHALL CONSTRUCT GRAVITY SEWER LATERALS, MANHOLES GRAVITY SEWER LINES AND DOMESTIC WATER AND FIRE PROTECTION SYSTEM AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIALS, EQUIPMENT, MACHINERY, TOOLS, MEANS OF TRANSPORTATION AND LABOR NECESSARY TO COMPLETE THE WORK IN FULL AND COMPLETE ACCORDANCE WITH THE SHOWN, DESCRIBED AND REASONABLY INTENDED REQUIREMENTS OF THE CONTRACT DOCUMENTS AND JURISDICTIONAL AGENCY REQUIREMENTS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.

2. ALL EXISTING UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS FOR UTILITY LOCATION AND COORDINATION IN ACCORDANCE WITH THE NOTES CONTAINED IN THE GENERAL CONSTRUCTION SECTION OF THIS SHEET.

3. THE CONTRACTOR SHALL RESTORE ALL DISTURBED VEGETATION IN KIND, UNLESS SHOWN OTHERWISE.

4. DEFLECTION OF PIPE JOINTS AND CURVATURE OF PIPE SHALL NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS. SECURELY CLOSE ALL OPEN ENDS OF PIPE AND FITTINGS WITH A WATERTIGHT PLUG WHEN WORK IS NOT IN PROGRESS. THE INTERIOR OF ALL PIPES SHALL BE CLEAN AND JOINT SURFACES WIPED CLEAN AND DRY AFTER THE PIPE HAS BEEN LOWERED INTO THE TRENCH. VALVES SHALL BE PLUMB AND LOCATED ACCORDING TO THE PLANS.

5. ALL PHASES OF INSTALLATION, INCLUDING UNLOADING, TRENCHING, LAYING AND BACK FILLING, SHALL BE DONE IN A FIRST CLASS WORKMANLIKE MANNER. ALL PIPE AND FITTINGS SHALL BE CAREFULLY STORED FOLLOWING MANUFACTURER'S RECOMMENDATIONS. CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE COATING OR LINING IN ANY D.I. PIPE FITTINGS. ANY PIPE OR FITTING WHICH IS DAMAGED OR WHICH HAS FLAWS OR IMPERFECTIONS WHICH, IN THE OPINION OF THE ENGINEER OR OWNER, RENDERS IT UNFIT FOR USE, SHALL NOT BE USED. ANY PIPE NOT SATISFACTORY FOR USE SHALL BE CLEARLY MARKED AND IMMEDIATELY REMOVED FROM THE JOB SITE, AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

6. WATER FOR FIRE FIGHTING SHALL BE AVAILABLE FOR USE PRIOR TO COMBUSTIBLES BEING BROUGHT ON SITE.

7. ALL UTILITY AND STORM DRAIN TRENCHES LOCATED UNDER AREAS TO RECEIVE PAVING SHALL BE COMPLETELY BACK FILLED IN ACCORDANCE WITH THE GOVERNING JURISDICTIONAL AGENCY'S SPECIFICATIONS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.

8. UNDERGROUND LINES SHALL BE SURVEYED BY A STATE OF FLORIDA PROFESSIONAL LAND SURVEYOR PRIOR TO BACK FILLING.

9. CONTRACTOR SHALL PERFORM, AT HIS OWN EXPENSE, ANY AND ALL TESTS REQUIRED BY THE SPECIFICATIONS AND/OR ANY AGENCY HAVING JURISDICTION. THESE TESTS MAY INCLUDE, BUT MAY NOT BE LIMITED TO, INFILTRATION AND EXFILTRATION, TELEVISION INSPECTION AND A MANDREL TEST ON GRAVITY SEWER. A COPY OF THE TEST RESULTS SHALL BE PROVIDED TO THE UTILITY PROVIDER, OWNER AND JURISDICTIONAL AGENCY AS REQUIRED.

EROSION CONTROL NOTES

1. THE STORM WATER POLLUTION PREVENTION PLAN ("SWPPP") IS COMPRISED OF THIS EROSION CONTROL PLAN, THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN SPECIFICATIONS OF THE SWPPP, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.

2. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF FLORIDA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERIC PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

3. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO THE OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

4. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY THE PERMITTING AGENCY OR OWNER.

5. EROSION CONTROL PLAN MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.

6. THE CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERIC PERMIT.

7. CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.

8. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

9. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

11. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

12. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THE PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

EROSION CONTROL NOTES (CONT.)

13. STABILIZATION PRACTICES SHOULD BE INITIATED AS SOON AS PRACTICAL, BUT IN NO CASE MORE THAN 7 DAYS WHERE CONSTRUCTION HAS TEMPORARILY CEASED.

14. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 7 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRED IN THESE AREAS. REFER TO SECTION 981 OF THE STANDARD SPECIFICATIONS FOR SEEDING AND MAINTENANCE REQUIREMENTS.

15. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.

16. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED AS SOON AS POSSIBLE.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

18. ON-SITE & OFF SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE EROSION CONTROL PLAN AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

19. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

20. DUE TO GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION.

21. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACK FILLING OF TRENCHES FOR UTILITY CONSTRUCTION.

MAINTENANCE

ALL MEASURES STATED ON THE EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.

2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED AND RESEEDED AS NEEDED. FOR MAINTENANCE REQUIREMENTS REFER THE STANDARD SPECIFICATIONS.

3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.

4. THE CONSTRUCTION ENTRANCE(S) SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.

5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

6. OUTLET STRUCTURES, IF APPLICABLE, IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 55 CUBIC YARDS / ACRE.

7. ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER BUT IN NO CASE LATER THAN 2 CALENDAR DAYS FOLLOWING THE INSPECTION.

TYPICAL ENGINEER OBSERVATIONS

CONTRACTOR SHALL NOTIFY ENGINEER 48 HOURS IN ADVANCE OF THE FOLLOWING ACTIVITIES:

- PRE-CONSTRUCTION MEETING
- SUBGRADE PREPARATION
- BASE INSTALLATION
- ASPHALT INSTALLATION
- UNDERGROUND PIPING AND UTILTIES INSTALLATION
- INSTALLATION OF STRUCTURES, DDCV, HYDRANTS, METERS, ETC.
- SIDEWALK INSTALLATION
- CONNECTIONS TO WATER AND SEWER MAINS
- TESTS OF UTILITIES

3RD PARTY TEST REPORTS REQ'D

TEST REPORTS REQUIRED FOR CLOSE OUT INCLUDE, BUT ARE NOT LIMITED TO:

- DENSITY TEST REPORTS
- BACTERIOLOGICAL TESTS OF WATER SYSTEM
- PRESSURE TEST OF WATER/SEWER
- LEAK TESTS ON SEWER SYSTEM AND GREASE TRAPS
- ANY OTHER TESTING REQUIRED BY THE AGENCY

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

Always call 811 two full business days before you dig to have underground utilities located and marked.

Sunshine811.com

ARCHITECTS PROJECT #:
DCH22007

Kimley»Horn

445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
PH: (772) 794-4100

REGISTRY NO. 696
KHA PROJECT # 047916134

KEVIN M. ROBERSON ★ LICENSE ★ No. 52074 ★ STATE OF FLORIDA ★ PROFESSIONAL ENGINEER
5/8/2023

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY KEVIN M. ROBERSON ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Cheddar's SCRATCH KITCHEN

Issue Date:	02/15/23
REVISION INFORMATION	
Restaurant #:	21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING

GENERAL NOTES

C1.3

Drawing name: K:\VRB_LDEV\047916 - Darden\134_CSK Riverview\CADD\PlanSheets\103-C1.3 GENERAL NOTES.dwg 103-C1.3 GENERAL NOTES May 08, 2023 12:59pm by: Liz.Meeks

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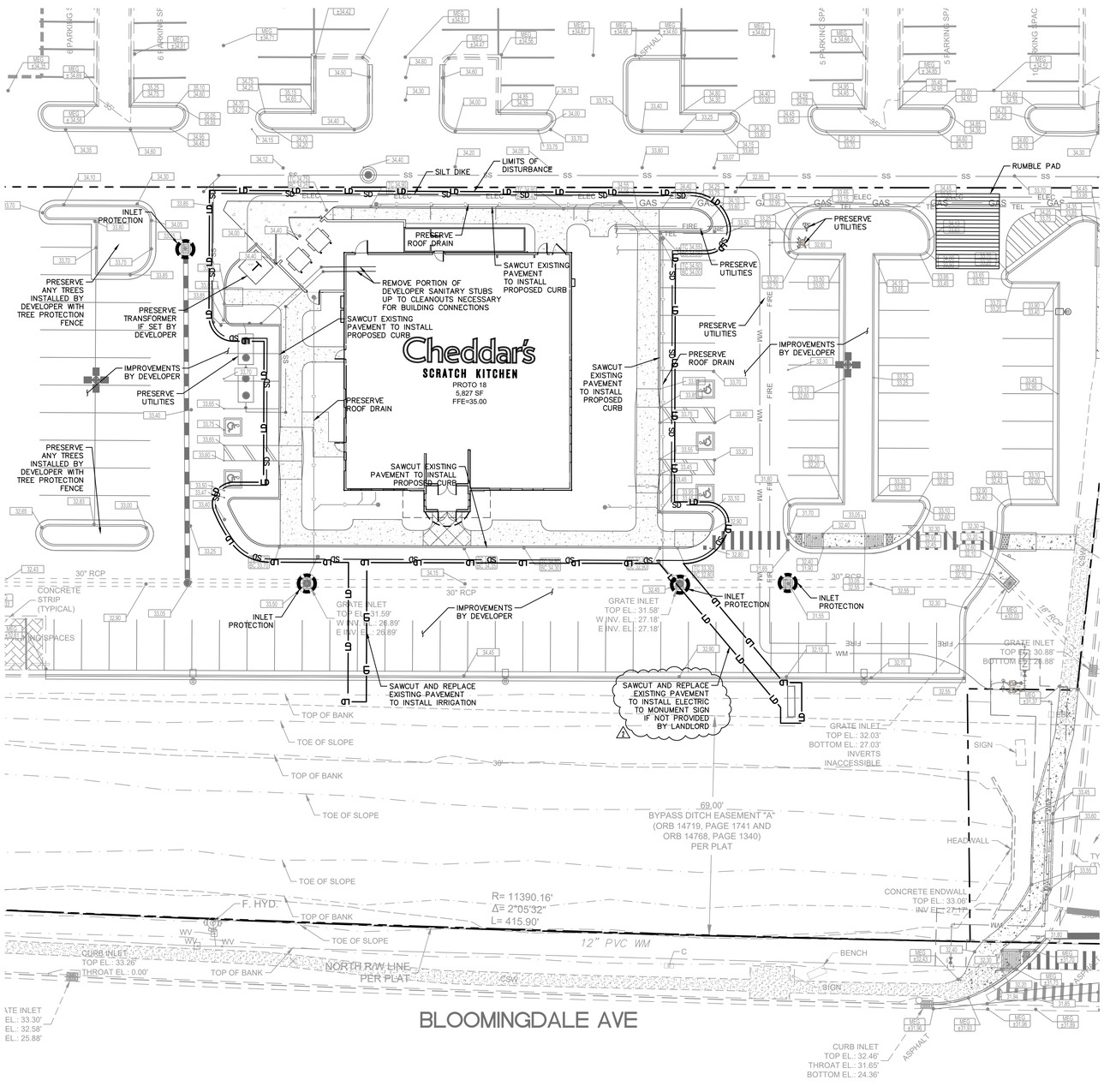

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

LEGEND

- LEASE LINE
- WM — EXISTING WATERMAIN
- FIRE — EXISTING FIREMAIN
- SS — EXISTING SANITARY SEWER
- EXISTING DRAINAGE
- LD — LD — LIMITS OF DISTURBANCE
- SD — SILT DIKE
- INLET PROTECTION
- CURB TO REMAIN

NOTES:

1. CONTRACTOR TO CONSIDER DEWATERING ACTIVITIES WHEN PREPARING BID DOCUMENTS FOR THIS PROJECT.
2. CONTRACTOR SHALL OBTAIN ANY NECESSARY DEWATERING PERMITS AS SITE CONDITIONS AND CONSTRUCTION ACTIVITIES REQUIRE.
3. CONTRACTOR TO USE BEST MANAGEMENT PRACTICES TO ENSURE COMPLIANCE WITH NPDES AND WATER MANAGEMENT DISTRICT REGULATIONS FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES AND DEWATERING OPERATIONS.

SITE PREPARATION SHOULD BE IN ACCORDANCE WITH GEOTECHNICAL INVESTIGATION

ACREAGE SUMMARY	
TOTAL PROJECT AREA	0.36 AC
ON-SITE DISTURBED AREA	0.36 AC
OFF-SITE DISTURBED AREA	0.00 AC
TOTAL DISTURBED AREA	0.36 AC
IMPERVIOUS AREA AT COMPLETION	0.26 AC
PERVIOUS / SEEDED AREA AT COMPLETION	0.10 AC

SEQUENCE OF CONSTRUCTION

UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAYDOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.

PHASE 1:
1. CONSTRUCT RUMBLE PAD (1) AND INSTALL SILT FENCE/SILT DIKE.
2. INSTALL INLET PROTECTION AT EXISTING INLET(S).
3. INSTALL AND STABILIZE ANY NECESSARY HYDRAULIC CONTROL STRUCTURES (DIKES, CHECK DAMS, OUTLET TRAPS, RISER PIPE DISCHARGE POINT, ETC.)

HALT ALL ACTIVITIES AND CONTACT THE CONSULTANT TO PERFORM INSPECTION AND CERTIFICATION OF BMPS. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH CONSULTANT AND ALL GROUND-DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.

PHASE 2:
4. ROUGH GRADE TO ESTABLISH PROPOSED DRAINAGE PATTERNS.
5. START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES.
6. TEMPORARILY SEED WITH PURE LIVE SEED, THROUGHOUT CONSTRUCTION, DISTURBED AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE OR AS REQUIRED BY GENERIC PERMIT.

CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING ALL DEWATERING PERMITS NECESSARY FOR CONSTRUCTION

MAINTENANCE

ALL MEASURES STATED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.

DEMOLITION NOTES:

1. THE INTENT OF THE DEMOLITION PLAN IS TO DEPICT EXISTING FEATURES THAT ENCUMBER THE PROPOSED CONSTRUCTION AREA AND ARE SCHEDULED FOR REMOVAL. SOME INCIDENTAL ITEMS MAY HAVE BEEN INADVERTENTLY OMITTED FROM THE PLAN. THE CONTRACTOR IS ENCOURAGED TO THOROUGHLY INSPECT THE SITE AS WELL AS REVIEW THE PLANS AND SPECIFICATIONS PRIOR TO SUBMITTING PRICING. CONTRACTOR WILL NOT RECEIVE ADDITIONAL COMPENSATION FOR INCIDENTAL ITEMS NOT SHOWN ON THIS DEMOLITION PLAN.
2. THIS DEMOLITION PLAN IS BASED ON AVAILABLE UTILITY INFORMATION AND MAY OR MAY NOT BE ALL INCLUSIVE FOR THIS SITE. ANY UTILITIES ENCOUNTERED DURING DEMOLITION THAT ARE NOT DEPICTED/ADDRESSED ON THIS DRAWING SHOULD BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER IMMEDIATELY.
3. CONTRACTOR IS REQUIRED TO OBTAIN ALL DEMOLITION PERMITS.
4. ALL FEATURES IDENTIFIED ON THIS PLAN WHICH ARE LISTED TO BE DEMOLISHED ARE TO BE REMOVED FROM THE SITE. AFTER DEMOLITION IS COMPLETE THE SITE SHALL BE DELIVERED IN A CONDITION SUITABLE FOR DEVELOPMENT.
5. CONTRACTOR SHALL LIMIT ALL DEMOLITION ACTIVITIES TO THOSE AREAS DELINEATED ON THE CONSTRUCTION DRAWINGS UNLESS OTHERWISE DIRECTED BY THE DEVELOPER OR AS REQUIRED FOR CONSTRUCTION OF IMPROVEMENTS.
6. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING AIRBORNE DUST AND POLLUTANTS BY USING WATER SPRINKLING OR OTHER SUITABLE MEANS OF CONTROL.
7. CONTRACTOR TO USE CARE IN HANDLING DEBRIS FROM SITE TO ENSURE THE SAFETY OF THE PUBLIC. HAUL ROUTE TO BE CLOSELY MONITORED FOR DEBRIS OR MATERIALS TRACKED ONTO ADJOINING ROADWAYS, SIDEWALKS, ETC. ROADWAYS AND WALKWAYS TO BE CLEARED DAILY OR AS NECESSARY TO MAINTAIN PUBLIC SAFETY.
8. DEWATERING SHOULD BE ANTICIPATED AND INCLUDED.
9. ALL ASPHALT TO BE REMOVED SHALL BE SAW CUT ADJACENT TO REMAINING IMPROVEMENTS.
10. WHERE REMAINING, INLETS, MANHOLE COVERS, AND VALVE COVERS TO BE PROTECTED IN PAVEMENT REMOVAL AREAS, CONTRACTOR SHALL REPLACE DAMAGED STRUCTURES AT THEIR EXPENSE.
11. CONTRACTOR SHALL INSTALL A CONTINUOUS SCREENED CONSTRUCTION FENCING ALONG PROJECT BOUNDARY.
12. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC. AS APPROVED BY HILLSBOROUGH COUNTY AND CONSTRUCTION MANAGER.
13. CONTINUOUS ACCESS SHALL BE MAINTAINED FOR SURROUNDING PROPERTIES AT ALL TIMES DURING DEMOLITION OF EXISTING FACILITIES AND CONSTRUCTION OF NEW FACILITIES. SIGNAGE SHALL BE POSTED TO DIRECT THE PUBLIC TO THE PATH OF TRAVEL.
14. EXISTING RETAIL BUILDING SHALL HAVE UNDISRUPTED ACCESS AT ALL TIMES. ALL PARKING SPACES AND DRIVE AISLES OUTSIDE OF THE LIMITS OF DISTURBANCE SHALL BE ACCESSIBLE AND SHIELDED FROM CONSTRUCTION ACTIVITIES AT ALL TIMES.

SURVEY NOTES:

1. INFORMATION ON THE PLAN BASED UPON "TARGET OUTPARCEL" PLANS PREPARED BY THOMAS ENGINEERING GROUP, DATED JANUARY 31, 2020.

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TEMPORARY CONSTRUCTION EXITS																								
TEMPORARY CONTROL MEASURES																								
SEDIMENT CONTROL BASINS																								
STRIP & STOCKPILE TOPSOIL																								
ROUGH GRADE																								
STORM FACILITIES																								
SITE CONSTRUCTION																								
PERMANENT CONTROL STRUCTURES																								
FOUNDATION / BUILDING CONSTRUCTION																								
FINISH GRADING																								
LANDSCAPING/SEED/FINAL STABILIZATION																								

Drawing name: K:\VRB_LDEV\047916 - Darden\134_CSK Riverview\CADD\PlanSheets\104-C2.1 DEMOLITION AND EROSION CONTROL PLAN May 08, 2023 12:59pm by: Liz.Meeks 104-C2.1 DEMOLITION AND EROSION CONTROL PLAN.dwg
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ARCHITECTS PROJECT #: DCH22007

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445 24TH STREET, SUITE 200
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PH: (772) 794-4100
REGISTRY NO. 696
KHA PROJECT # 047916134

KEVIN M. ROBERSON LICENSE No. 52074 STATE OF FLORIDA PROFESSIONAL ENGINEER
5/8/2023

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY KEVIN M. ROBERSON ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Cheddar's SCRATCH KITCHEN

Issue Date:	02/15/23
REVISION INFORMATION	
2 COORDINATION COMMENTS	4/5/23

Restaurant #: 21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

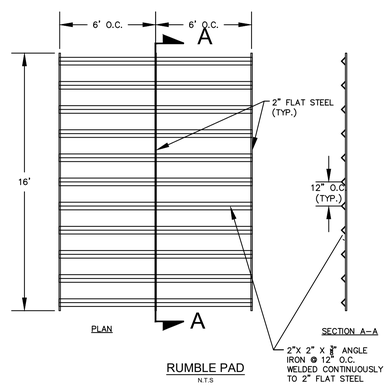
DRAWING
DEMOLITION AND EROSION CONTROL PLAN

C2.1

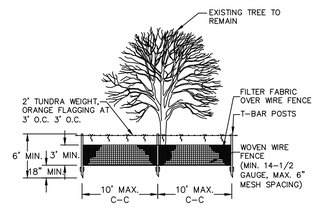
Section 1	Project Name and location information:	CHEDDAR'S SCRATCH KITCHEN, 10150 BLOOMINGDALE ACE, RIVERVIEW, FL
Section 2	Describe the nature of the construction activity:	CONSTRUCTION OF INFRASTRUCTURE FOR NEW RESTAURANT
Section 3	Describe the intended sequence of major soil disturbing activities:	CONSTRUCTION OF EROSION AND SEDIMENT CONTROLS, GRADING AND CONSTRUCTION OF STORM SEWER
Section 4	Total area of the site:	0.36 AC.
Section 5	Total area of the site to be disturbed:	0.36 AC.
Section 6	Existing data describing the soil or quality of any stormwater discharge from the site:	EXISTING
Section 7	Estimate the drainage area size for each discharge point:	EXISTING
Section 8	Latitude and longitude of each discharge point and identify the receiving water or MS4 for each discharge point:	PROJECT LOCATION: LAT: 27°53'39.84" N LONG: 82°20'0.87" W RECEIVING WATER: ALAFIA RIVER
Section 9	Give a detailed description of all controls, Best Management Practices (BMPs) and measures that will be implemented at the construction site for each activity identified in the intended sequence of major soil disturbing activities section. Provide time frames in which the controls will be implemented. NOTE: All controls shall be consistent with performance standards for erosion and sediment control and stormwater treatment set forth in s. 62-40.432, F.A.C., the applicable Stormwater or Environmental Resource Permitting requirements of the Department or a Water Management District, and the guidelines contained in the State of Florida Erosion and Sediment Control Designer and Reviewer Manual, FDOT, FDEP, and any subsequent amendments.	
	SILT FENCE AND SILT DIKE SHALL BE INSTALLED AROUND THE PERIMETER OF THE CONSTRUCTION SITE. INLET PROTECTION SHALL BE INSTALLED ON OPEN GRATE DRAINAGE INLETS SURROUNDING CONSTRUCTION SITE.	
Section 10	Describe all temporary and permanent stabilization practices. Stabilization practices include temporary seeding, mulching, permanent seeding, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, vegetative preservations, etc.	
	THE PERIMETER SILT FENCE SHALL BE MAINTAINED AROUND THE ENTIRE PROJECT SITE UNTIL LANDSCAPE HAS BEEN INSTALLED.	
Section 11	Describe all structural controls to be implemented to divert stormwater flow from exposed soils and structural practices to store flows, retain sediment on-site or in any other way limit stormwater runoff. These controls include silt fences, earth dikes, diversions, swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, coagulating agents and temporary or permanent sediment basins.	
	SILT FENCE/SILT DIKE	
Section 12	Describe all sediment basins to be implemented for areas that will disturb 10 or more acres at one time. The sediment basins (or an equivalent alternative) should be able to provide 3,600 cubic feet of storage for each acre drained. Temporary sediment basins (or an equivalent alternative) are recommended for drainage areas under 10 acres.	
	N/A	
Section 13	Describe all permanent stormwater management controls such as, but not limited to, detention or retention systems or vegetated swales that will be installed during the construction process.	
	N/A	

Section 14	Waste disposal, this may include construction debris, chemicals, litter, and sanitary wastes:	All construction materials and debris will be placed in a dumpster and hauled off site to a landfill or other proper disposal site. No materials will be buried on site.
Section 15	Offsite vehicle tracking from construction entrances/exits:	Off site vehicle tracking of sediments and dust generation will be minimized via a rock construction entrance, street sweeping and the use of water to keep dust down.
Section 16	The proper application rates of all fertilizers, herbicides and pesticides used at the construction site:	Florida-friendly fertilizers and pesticides will be used at a minimum and in accordance with the manufacturer's suggested application rates.
Section 17	The storage, application, generation and migration of all toxic substances:	All paints and other chemicals will be stored in a locked covered shed.
Section 18	Other:	Port-o-lets will be placed away from storm sewer systems, storm inlet(s), surface waters and wetlands. No vehicle maintenance shall be conducted on-site. A washdown area shall be designated at all times and will not be located in any area that will allow for the discharge of polluted runoff.
Section 19	Provide a detailed description of the maintenance plan for all structural and non-structural controls to assure that they remain in good and effective operating condition.	
	Contractor shall provide routine maintenance of permanent and temporary sediment and erosion control features in accordance with the technical specifications or as follows, whichever is more stringent: • Silt fence shall be inspected at least weekly. Any required repairs shall be made immediately. Sediment deposits shall be removed when they reach approximately one-half the height of the barrier. • Maintenance shall be performed on the rock entrance when any void spaces are full of sediment. • Inlet(s)/outfalls shall be inspected immediately after each rain event and any required repairs to the filter inlets, silt fence, or filter fabric shall be performed immediately. • Bare areas of the site that were previously seeded shall be reseeded per manufactures' instructions. • Mulch and sod that has been washed out shall be replaced immediately. • Maintain all other areas of the site with proper controls as necessary.	
Section 20	Inspections: Describe the inspection and inspection documentation procedures, as required by the FDEP NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities.	
	Qualified personnel will inspect all points of discharges, all disturbed areas of construction that have not been stabilized, constructed areas and locations where vehicles enter and exit the site, and all BMPs at least once every 7 calendar days and within 24 hours of the end of a rainfall event that is 0.5 inches or greater. Where sites have been finally stabilized, said inspections shall be conducted at least once every month until the Notice of Termination is filed.	
Section 21	Identify and describe all sources of non-stormwater discharges as allowed by the FDEP NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities.	
	N/A	
Section 22	All contractor(s) and subcontractor(s) identified in the SWPPP must sign the following certification:	
	"I certify under penalty of law that I understand, and shall comply with, the terms and conditions of the State of Florida Generic Permit for Stormwater Discharge from Large and Small Construction Activities and this Stormwater Pollution Prevention Plan prepared thereunder."	

Section 22	Name	Title	Company Name, Address and Phone Number	Date



RUMBLE PAD
N.T.S

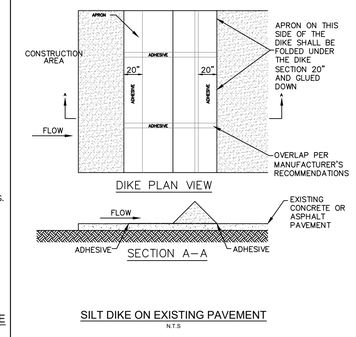


NOTES:
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES.
2. FILTER FABRIC TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF GEOTEXTILE ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
5. ALL SILT FENCE SHALL INCLUDE WIRE SUPPORT UNLESS INDICATED OTHERWISE.

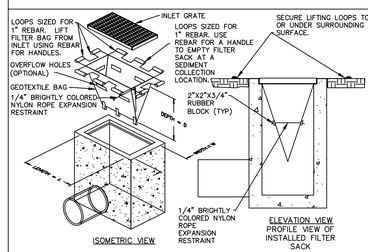
COMBINED SILT AND NATURAL RESOURCE PROTECTION FENCE

NOTES:
1. INSTALLED SILT DIKE UNIT SHALL HAVE CONTINUOUS AND FIRM CONTACT WITH PAVEMENT.

2. ADHESIVES SHALL BE LIQUID NAIL OR APPROVED EQUAL FOR CONCRETE PAVEMENT APPLICATIONS AND EMULSIFIED ASPHALT FOR ASPHALT APPLICATIONS.
ADHESIVE SHALL BE PLACED WHERE THE UNITS OVERLAP AND A 20" STRIP ALONG BOTH EDGES.



SILT DIKE ON EXISTING PAVEMENT
N.T.S



1. EMPTY FILTER SACK WHEN BRIGHTLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
2. GEOTEXTILE WILL BE A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.
3. AN OIL ADSORBENT PAD OR PILLOW CAN BE PURCHASED WHEN OIL SPILLS ARE A CONCERN.
4. INSPECT PER REGULATORY REQUIREMENTS.
5. THE WIDTH, "W", OF THE FILTER SACK WILL MATCH THE INSIDE WIDTH OF THE GRATED INLET BOX.
6. THE DEPTH, "D", OF THE FILTER SACK WILL BE BETWEEN 18 INCHES AND 36 INCHES.
7. THE LENGTH, "L", OF THE FILTER SACK WILL MATCH THE INSIDE LENGTH OF THE GRATED INLET BOX.

LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	15 %
TRAPEZOID TEAR	ASTM D-4533	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC-1

MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	30 %
MULLEN BURST	ASTM D-3786	135 LBS
TRAPEZOID TEAR	ASTM D-4533	50 LBS
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	30 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

FILTER SACKS (GRATED INLETS)

DO NOT USE ON ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

Always call 811 two full business days before you dig to have underground utilities located and marked.

Sunshine811.com

ARCHITECTS PROJECT #: DCH22007

Kimley»Horn

445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
PH: (772) 794-4100
REGISTRY NO. 696
KHA PROJECT # 047916134

KEVIN W. ROBERSON ★ LICENSE ★ No. 52074 ★ STATE OF FLORIDA ★ PROFESSIONAL ENGINEER
5/8/2023

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Cheddar's SCRATCH KITCHEN

Issue Date:	02/15/23
REVISION INFORMATION	
Restaurant #:	21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING

EROSION CONTROL DETAILS

C2.2

Drawing name: K:\VRB_LDEV\047916 - Darden\134_CSK Riverview\CADD\PlanSheets\105-C2.2 EROSION CONTROL DETAILS.dwg 105-C2.2 EROSION CONTROL DETAILS May 08, 2023 12:59pm by: Liz.Meeks
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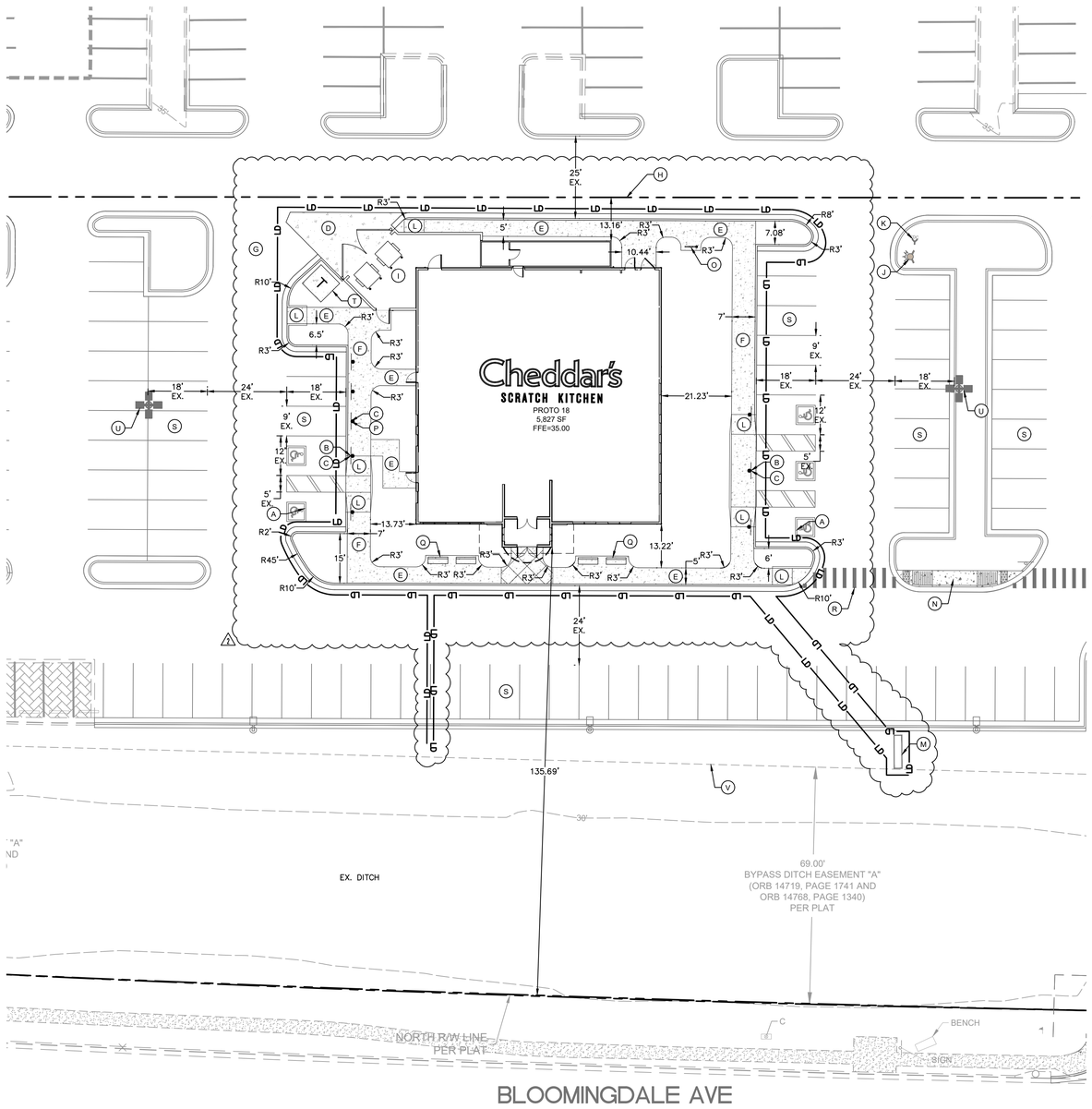

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

LEGEND

- (A) ACCESSIBLE PARKING SPACE (TYP. OF 5) (BY DEVELOPER)(SEE DETAIL SHEET C7.1)
- (B) ACCESSIBLE PARKING AND PENALTY SIGN (TYP. OF 5)(SEE DETAIL SHEET C7.1)
- (C) 6" CONCRETE BOLLARD SIGN BASE (SEE DETAIL SHEET C7.1)
- (D) THICKENED CONCRETE PAD (SEE DETAIL SHEET C7.1)
- (E) 5' WIDE CONCRETE SIDEWALK
- (F) 7' WIDE CONCRETE SIDEWALK
- (G) LOADING ZONE (DELIVERIES AND GARBAGE TRUCK PICKUPS WILL BE MADE WHEN RESTAURANT IS NOT OPEN FOR BUSINESS
- (H) LEASE LINE
- (I) DUMPSTER AREA (REFER TO ARCHITECTURAL PLANS)
- (J) FIRE HYDRANT (BY DEVELOPER)
- (K) FIRE DEPARTMENT CONNECTION (BY DEVELOPER)
- (L) ACCESSIBLE RAMPS (SEE DETAIL SHEET C7.1)
- (M) MONUMENT SIGN (REFER TO SIGNAGE PLANS FOR DETAILS)
- (N) SIDEWALK (BY DEVELOPER)
- (O) BIKE RACK (POWDER COATED LBR3PING 3 SPACES) (SUPPLIED BY GENERAL CONTRACTOR)
- (P) TO-GO PARKING SIGN (TYP. OF 3) (REFER TO ARCH. PLANS FOR DETAIL)
- (Q) BENCH (TYP. OF 4) (SEE ARCHITECTURAL PLANS FOR DETAIL)
- (R) CROSSWALK (BY DEVELOPER)
- (S) PARKING (BY DEVELOPER)
- (T) TRANSFORMER
- (U) LIGHT POLE (BY DEVELOPER)
- (V) EXISTING EASEMENT

SITE DATA

PROJECT DESCRIPTION:	CONSTRUCTION OF CHEDDAR'S SCRATCH KITCHEN
FOLIO NO:	073784-1003
LOCATION:	SECTION 5, TOWNSHIP 30S, RANGE 20E
ADDRESS:	10150 BLOOMINGDALE AVE RIVERVIEW, FL
ZONING DISTRICT:	PD (BLOOMINGDALE CROSSING 86-0077)
LAND USE:	COMMERCIAL
FLOOD ZONE:	ZONE X, AS SHOWN ON FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 12057C0389J, EFFECTIVE DATE OCTOBER 7, 2021
SITE WORK AREA:	15,602 S.F. (0.36 AC.)
FLOOR AREA RATIO:	5,827 / 15,602 = 0.37

SITE COVERAGE:	PROVIDED		
SITE WORK AREA:	15,602 S.F.	(0.36 AC)	100.0%
BUILDING AREA:	5,827 S.F.	(0.13 AC)	36.11%
IMPERVIOUS AREA:	5,373 S.F.	(0.12 AC)	33.33%
PERVIOUS AREA:	4,402 S.F.	(0.11 AC)	30.56%

BUILDING SETBACKS:	REQUIRED	PROVIDED
FRONT (S)	30'	135.69'
SIDE (E)	8'	170.90'
SIDE (W)	0'	217.78'
REAR (N)	0'	13.16'

LANDSCAPE BUFFER	REQUIRED	PROVIDED
FRONT (S)	8'	N/A
SIDE (E)	8'	8'
SIDE (W)	20'	N/A
REAR (N)	20'	N/A

PARKING SUMMARY:

PROPOSED CHEDDAR'S BUILDING 5,827 SF @ 15 SP/1,000 SF = 88 SPACES

TOTAL PARKING PROVIDED FOR OUTPARCEL (BY DEVELOPER) = 141 SPACES (INCLUDES 5 ADA SPACES)

3 BIKE SPACES PROVIDED

SIGN LEGEND

- PARKING BY DISABLED PERSONS ONLY — FTP-21-06
- $ 250 FINE F.S. 316.1945 — FTP-22-06

SYMBOL LEGEND

- ACCESSIBLE PARKING SPACE
- CONCRETE SIDEWALK
- (D) THICKENED CONCRETE
- PROPERTY LINE
- (T) TRANSFORMER PAD
- LD — LIMITS OF DISTURBANCE

NOTE:

1. SEE SHEET C6.1 FOR CURBING AND PAVING INFORMATION.
2. SEE SHEET C7.1 FOR ACCESSIBILITY AND RAMP DETAILS.
3. ALL ITEMS SHOW AS "EX" ARE BY THE DEVELOPER.

ARCHITECTS PROJECT #:
DCH22007

Kimley»Horn
445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
PH: (772) 794-4100
REGISTRY NO. 696
KHA PROJECT # 047916134

KEVIN W. ROBERSON ★ LICENSE ★ No. 52074 ★ STATE OF FLORIDA ★ PROFESSIONAL ENGINEER
5/8/2023

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Cheddar's SCRATCH KITCHEN

Issue Date:	02/15/23
REVISION INFORMATION	
2 COORDINATION COMMENTS	4/5/23

Restaurant #: 21K0037

CHEDDAR'S
SCRATCH KITCHEN
RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING
SITE PLAN

C3.1

Drawing name: K:\VRB_LDEV\047916 - Darden\134_CSK Riverview\CADD\PlanSheets\106-C3.1 SITE PLAN.dwg 106-C3.1 SITE PLAN May 08, 2023 12:59pm by: Liz.Meeks
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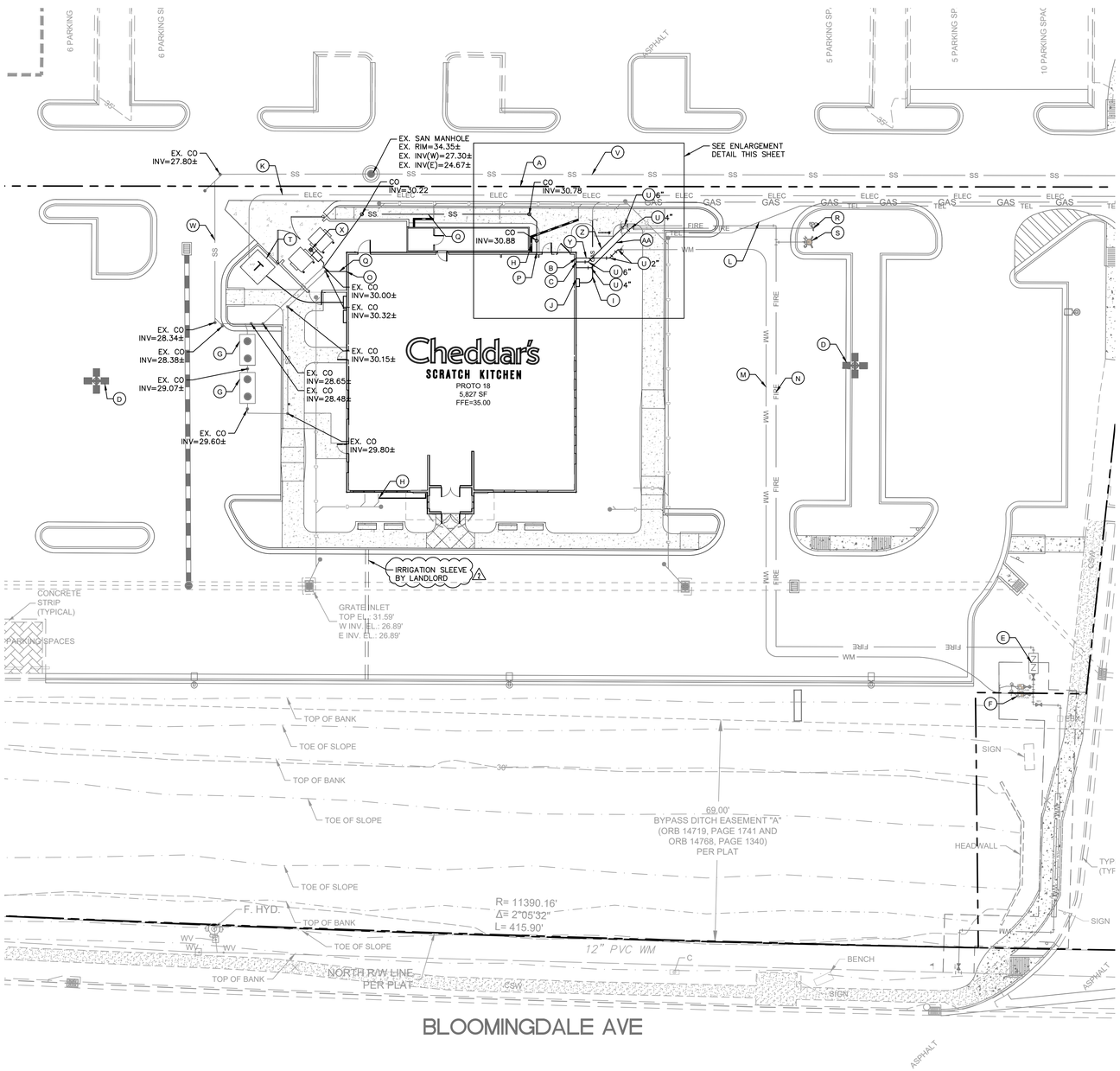


NORTH

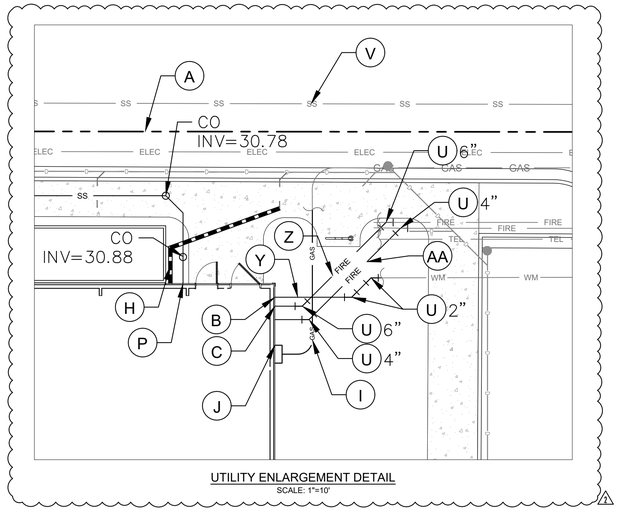
GRAPHIC SCALE IN FEET
0 10 20 40

NOTE:
PRIVATE FIRE SERVICE MAIN SHOWN FOR ALIGNMENT PURPOSES ONLY. FIRE SERVICE MAIN TO BE DESIGNED BY A LICENSED FIRE SERVICE DESIGNER. PRIVATE FIRE SYSTEM MAIN DESIGN INSTALLATION IS PER NFPA 24. PLUMBING CONTRACTOR MUST SECURE FIRE SERVICE PERMIT.

LEGEND

- (A) LEASE LINE
- (B) DOMESTIC WATER CONNECTION (REFER TO PLUMBING PLANS FOR CONTINUATION)
- (C) FIRELINE CONNECTION (REFER TO PLUMBING PLANS FOR CONTINUATION)
- (D) LIGHT POLE (TYP.) (BY DEVELOPER)
- (E) 6" DDCV CONNECTION ASSEMBLY (BY DEVELOPER)
- (F) 1-1/2" WATER METER AND RPZ (BY DEVELOPER)
- (G) GREASE INTERCEPTORS (SEE ALSO NOTE 7) (REFER TO PLUMBING PLANS FOR DETAIL AND SIZING) (BY DEVELOPER)
- (H) ROOF DRAINAGE (SEE SHEET C6.1)
- (I) 3" GAS SERVICE (REFER TO PLUMBING PLANS - FINAL SIZE TO BE DETERMINED BY GAS COMPANY)
- (J) GAS METER (REFER TO PLUMBING PLANS FOR SIZE)
- (K) ELECTRIC SERVICE (REFER TO ELECTRICAL PLANS FOR CONTINUATION FROM TRANSFORMER TO BUILDING) (BY DEVELOPER)
- (L) 1 - 4" TELEPHONE SERVICE CONDUIT (BY DEVELOPER)
- (M) 2" I.D. POLY PIPE DOMESTIC SERVICE (BY DEVELOPER)
- (N) 6" I.D. DR14 PVC (305 PSI) FIRE SERVICE (BY DEVELOPER)
- (O) 6" GREASE LINE CONNECTION (REFER TO PLUMBING PLANS FOR CONTINUATION)
- (P) 6" SANITARY LINE CONNECTION (REFER TO PLUMBING PLANS FOR CONTINUATION)
- (Q) 6" PVC SANITARY SERVICE @ 1.04% MIN. (TYP.)
- (R) 4" FIRE DEPARTMENT CONNECTION (BY DEVELOPER)
- (S) FIRE HYDRANT ASSEMBLY (BY DEVELOPER)
- (T) TRANSFORMER
- (U) 45° BEND (SIZE AS SHOWN)
- (V) EX. 8" PVC SANITARY @ 0.44% MIN. (BY DEVELOPER)
- (W) EX. 8" PVC SANITARY @ 1.04% MIN. (BY DEVELOPER)
- (X) DUMPSTER DRAIN WITH 300 GALLON GREASE INTERCEPTOR
- (Y) 2" I.D. POLY PIPE DOMESTIC SERVICE
- (Z) 6" I.D. DR14 PVC (305 PSI) FIRE SERVICE
- (AA) 4" I.D. DR14 PVC (305 PSI) FDC SERVICE

1. THE CONTRACTOR SHALL PROTECT EXISTING UNDERGROUND UTILITIES AND APPURTENANCES FROM DAMAGE DURING CONSTRUCTION OPERATIONS.
2. THE LOCATION OF EXISTING UTILITIES, STORM DRAINAGE STRUCTURES AND OTHER ABOVE AND BELOW-GRADE IMPROVEMENTS ARE APPROXIMATE AS SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION, SIZE AND INVERT ELEVATIONS OF SUCH PRIOR TO THE START OF CONSTRUCTION.
3. A MINIMUM OF 10' SEPARATION IS REQUIRED BETWEEN UTILITIES AND TREES UNLESS ROOT BARRIER IS INSTALLED. IF A TREE IS PLANTED WITHIN (5) FEET OF UTILITIES, IT SHALL BE MOVED AT THE OWNER/DEVELOPER EXPENSE.
4. GAS, PHONE AND ELECTRIC SERVICES SHOWN FOR INFORMATIONAL PURPOSES ONLY. DRY UTILITY COMPANIES MAY ALTER THE DESIGN LAYOUT DURING THEIR REVIEW.
5. FIRE SERVICES TO BE CONSTRUCTED USING DR14 PVC PIPE UNLESS OTHERWISE NOTED.
6. 6" SANITARY LATERALS MUST MAINTAIN A 1.04% MINIMUM SLOPE TO ENSURE PROPER FLOW.
7. GREASE INTERCEPTOR RIMS WITHIN TRAFFIC AREAS TO BE H-20 RATED OR BETTER. SEE PLUMBING PLANS FOR DETAIL.
8. FDC IS LOCATED 77.11 FEET FROM THE CHEDDAR'S BUILDING AND 5 FEET FROM THE NEAREST HYDRANT.
9. THE CLOSEST BUILDING CORNER IS 75.37 FEET FROM THE NEAREST HYDRANT AND THE FURTHEST BUILDING CORNER IS 388.42 FEET FROM THE NEAREST HYDRANT.
10. CONTRACTOR SHALL ADJUST EXISTING VALVES AND OTHER APPURTENANCES TO FINAL GRADE. ALL SURFACE UTILITIES TO REMAIN SHALL HAVE TRAFFIC-RATED LIDS IN PAVEMENT AREAS.
11. CONTRACTOR TO PROVIDE AS-BUILTS AND ALL NECESSARY TESTS AND CERTIFICATION TO ENGINEER.
12. FIRE HYDRANTS SHALL BE INSTALLED AND IN SERVICE PRIOR TO COMBUSTIBLE MATERIALS BEING BROUGHT ON SITE.



UTILITY ENLARGEMENT DETAIL
SCALE: 1"=10'

ARCHITECTS PROJECT #: DCH22007

Kimley»Horn
445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
PH: (772) 794-4100
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KEVIN M. ROBERSON ★ LICENSE ★ No. 52074 ★ STATE OF FLORIDA ★ PROFESSIONAL ENGINEER
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Cheddar's SCRATCH KITCHEN

Issue Date:	02/15/23
REVISION INFORMATION	
2 COORDINATION COMMENTS	4/5/23

Restaurant #: 21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING
UTILITY PLAN

C4.1

Drawing name: K:\VRB_LDEV\047916 - Darden\134_CSK Riverview\CADD\PlanSheets\107-C4.1 UTILITY PLAN.dwg 107-C4.1 UTILITY PLAN May 08, 2023 1:00pm by: Liz Meeks
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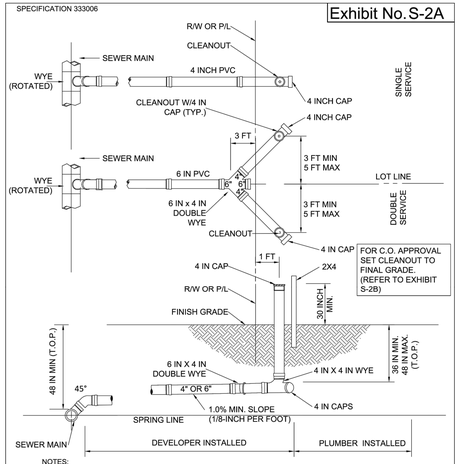
SPECIFICATION 333006

Exhibit No. S-2A



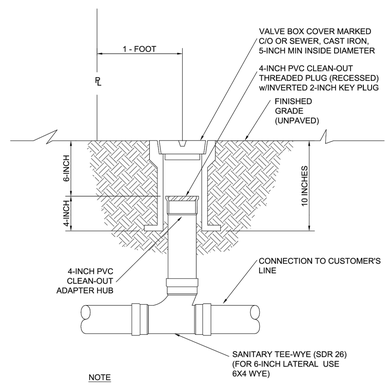
NOTES:

1. CENTER A DOUBLE WYE FITTING ON THE LOT LINE.
2. INVERT OF SERVICE LATERAL SHALL NOT ENTER SEWER BELOW SPRING LINE.
3. THE TOP OF THE CLEANOUT SHALL TERMINATE 30 TO 40 INCHES ABOVE DESIGN GRADE UNTIL CONNECTION TO A STRUCTURE IS MADE.
4. ALL LATERALS SHALL BE CONSTRUCTED OF SDR 26 PVC.
5. ALL LATERAL LOCATIONS SHALL BE MARKED WITH AN "S" SAW CUT INTO THE TOP OF CURB.
6. CLEANOUTS SHALL NOT BE INSTALLED IN CONCRETE (NO DRIVEWAYS OR SIDEWALKS).

TYPICAL PVC SANITARY SEWER NEW CONNECTION W/CLEANOUT	3/2020
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

SPECIFICATION 333006

Exhibit No. S-2B

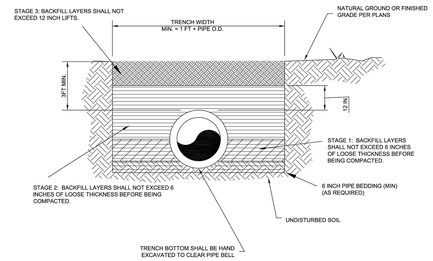


NOTE

1. ALL PIPING AND FITTINGS TO BE PVC SDR 26
2. CLEANOUT SHALL NOT BE INSTALLED IN CONCRETE

CLEAN-OUT DETAIL WITH VALVE BOX COVER	3/2020
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-14



NOTES:

1. TESTING: SEE SPECIFICATION 331001, PART 4.12 FOR TESTING REQUIREMENTS.
2. BEDDING: 6 INCHES BEDDING (MIN) AS REQUIRED. IN THE EVENT UNSUITABLE OR UNSTABLE SOIL IS ENCOUNTERED, REMOVE IT AND REPLACE WITH MATERIAL MEETING AASHTO SOIL CLASSIFICATION A-1, A-2, OR A-3. SEE SPECIFICATION 331001 PART 4.4.
3. STAGE 1: ADEQUATE COMPACTED FILL SHALL BE PLACED ABOVE THE BEDDING MATERIAL AND BENEATH THE HAUNCHES OF THE PIPE. BACKFILL LAYERS SHALL NOT EXCEED 6 INCHES OF LOOSE THICKNESS BEFORE BEING COMPACTED.
4. STAGE 2: BACKFILL LAYERS SHALL NOT EXCEED 6 INCHES OF LOOSE THICKNESS BEFORE BEING COMPACTED. COMPACTION SHALL BE 98% OF THE MAXIMUM DENSITY (AASHTO T-180/ASTM D1557) TO A POINT 1 FT ABOVE THE PIPE (OR AS STATED IN THE SPECIFICATION).
5. STAGE 3: BACKFILL LAYERS SHALL NOT EXCEED 12-INCH LIFTS. COMPACTION SHALL BE 98% OF THE MAXIMUM DENSITY (AASHTO T-180/ASTM D1557) OR AS STATED IN THE SPECIFICATION.

TRENCH DETAIL BACKFILL & COMPACTION	3/2020
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

ARCHITECTS PROJECT #: DCH22007

Kimley»Horn

445 24TH STREET, SUITE 200
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REVISION INFORMATION	

Restaurant #:	21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING

UTILITY DETAILS

C5.1

Drawing name: K:\VRB_LDEV\047916 - Darden\134_CSK Riverview\CADD\PlanSheets\108-C5.1 UTILITY DETAILS.dwg 108-C5.1 UTILITY DETAILS May 08, 2023 1:00pm by: Liz.Meeks

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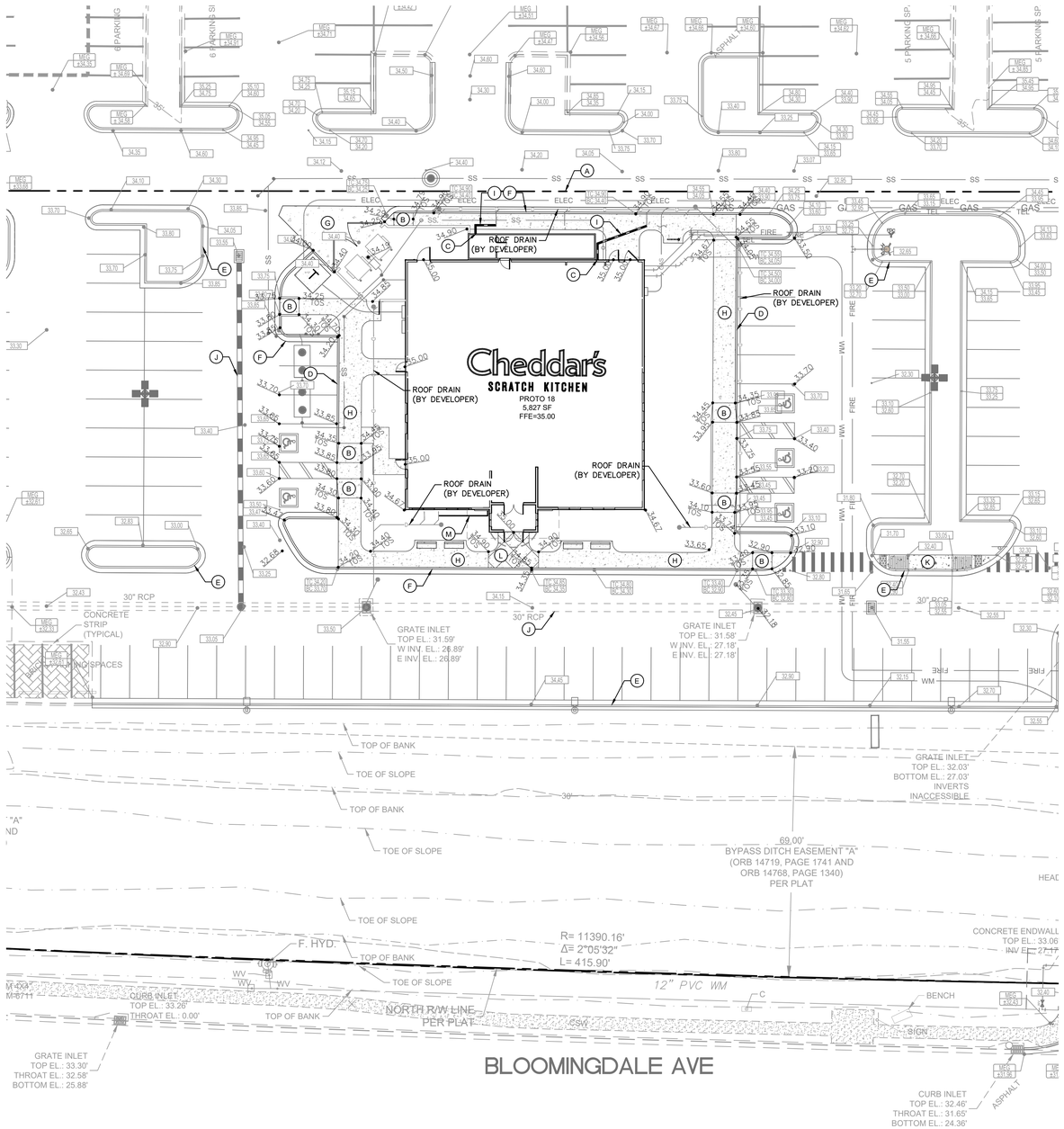

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

LEGEND

- (A) LEASE LINE
- (B) ACCESSIBLE RAMP (SEE DETAIL SHEET C7.1)
- (C) DOWNSPOUT (REFER TO PLUMBING PLANS FOR DETAIL)
- (D) FDOT TYPE "D" CURB (SEE DETAIL SHEET C7.1)
- (E) CURB (BY DEVELOPER)
- (F) FDOT TYPE "F" CURB (SEE DETAIL SHEET C7.1)
- (G) HEAVY DUTY CONCRETE
- (H) STANDARD CONCRETE SIDEWALK (SEE NOTE 4)
- (I) 6" PVC ROOF DRAIN @ 1.04% MIN.
- (J) EXISTING DRAINAGE PIPE (SIZE AS SHOWN)
- (K) SIDEWALK (BY DEVELOPER)
- (L) SCORED CONCRETE (SEE DETAIL SHEET C7.1)
- (M) 2" PVC ROOF DRAIN @ 1.04% MIN.

XX.XX PROPOSED GRADE

EXISTING GRADES (FROM DEVELOPER PLANS)

TOC TOP OF CURB GRADE
TOS TOP OF SIDEWALK GRADE
EX DENOTES EXISTING FEATURE

(G) THICKENED CONCRETE PAVEMENT

(H) STANDARD CONCRETE SIDEWALK

NOTES:

1. CONTRACTOR TO VERIFY ALL EXISTING UTILITY RINGS AND COVERS ON SITE ARE HEAVY DUTY TRAFFIC RATED. CONTRACTOR TO REPLACE DEFICIENT RINGS AND COVERS WITH HEAVY DUTY TRAFFIC RATED RINGS AND COVERS. CONTRACTOR TO ADJUST RIM ELEVATIONS OF ANY UTILITIES THAT CHANGE IN ELEVATION DURING CONSTRUCTION. ALL EXISTING COVERS TO REMAIN SHALL BE ADJUSTED TO FINAL GRADE.
2. ALL CLEANOUT COVERS SHOULD BE RATED FOR HEAVY DUTY TRAFFIC.
3. ALL EXISTING PAVEMENT AND CONCRETE TO BE JOINED SHALL BE SAWCUT.
4. SIDEWALKS AND CROSSWALKS SHALL NOT EXCEED 2% CROSS SLOPE NOR 5% LONGITUDINALLY. GRADES IN ACCESSIBLE PARKING SPACES SHALL NOT EXCEED 2% IN ANY DIRECTION. IN CASES OF SIDEWALK LANDINGS AT BUILDING ENTRANCES, GRADES SHALL NOT EXCEED 2% IN ANY DIRECTION. ACCESSIBLE CURB RAMPS SHALL NOT EXCEED 6' IN LENGTH AND 1:12 SLOPE. LANDINGS AT CHANGES IN DIRECTION SHALL BE MINIMUM 60"x60" AND SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION.
5. SPOT ELEVATIONS ARE AT FACE OF CURB UNLESS OTHERWISE NOTED.
6. EXISTING INFORMATION HAS BEEN TAKEN FROM A "TARGET OUTPARCEL' PLANS PREPARED BY THOMAS ENGINEERING GROUP, DATED JANUARY 31,2020.
7. FLOOD ZONE: X, AS SHOWN ON FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 12057C0389J, EFFECTIVE DATE OCTOBER 7, 2021. NO BASE FLOOD ELEVATION..
8. ROOF DRAIN CONNECTIONS TO DRAINAGE PIPE SHALL BE AS FOLLOWS:
   A. FOR ADS N-12 CORRUGATED POLYETHYLENE DRAINAGE PIPE USE ADS DUAL WALL FABRICATED REDUCING SADDLE TEE 4"-24" DIAMETER.
   B. FOR RCP DRAINAGE PIPE MAKE CONNECTION PER FDOT INDEX 280,CONCRETE COLLAR FOR JOINING MAINLINE PIPE AND STUB PIPE DETAIL
   C. NOTIFY CONSULTANT FOR CONNECTION METHOD TO STEEL PIPE.
9. ALL CONCRETE SHALL BE A MINIMUM OF 3,000 PSI AT 28 DAYS WITH FIBERMESH REINFORCEMENT.
10. STORM DRAIN PIPE SHALL BE AS FOLLOWS:
   A. RCP CLASS III PER ASTM C-76
   B. ALUMINIZED STEEL TYPE 2 ULTRA FLO
      48"Ø AND SMALLER SHALL BE 3/4"x3/4"x7-1/2" CORRUGATION
      16 GA WITH A MINIMUM THICKNESS OF 0.064"
      54"Ø AND LARGER SHALL BE 3/4"x3/4"x7-1/2" CORRUGATION
      14 GA WITH A MINIMUM THICKNESS OF 0.079"
   C. CORRUGATED POLYETHYLENE PIPE PER AASHTO M294
      JOINTS SHALL BE WATER TIGHT
   D. ANY STORM PIPE USED MUST BE APPROVED BY LOCAL AUTHORITIES. CONTRACTOR SHALL SELECT THE MOST ECONOMICAL PRODUCT.

ARCHITECTS PROJECT #:
DCH22007

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KHA PROJECT # 047916134

KEVIN M. ROBERSON ★ ENGINEER ★ PROFESSIONAL
LICENSE No. 52074 ★ STATE OF FLORIDA
5/8/2023

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY KEVIN M. ROBERSON ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Cheddar's SCRATCH KITCHEN

Issue Date:	02/15/23
REVISION INFORMATION	
Restaurant #:	21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

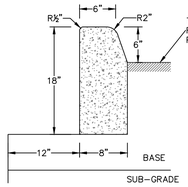
PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

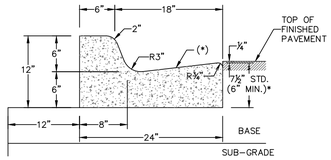
DRAWING
PAVING, GRADING AND DRAINAGE PLAN

C6.1

Drawing name: K:\VRB_LDEV\047916 - Darden\134_CSK Riverview\CADD\PlanSheets\109-C6.1 PAVING, GRADING AND DRAINAGE PLAN.dwg 109-C6.1 PAVING GRADING AND DRAINAGE PLAN May 08, 2023 1:01pm by: Liz.Meeks
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

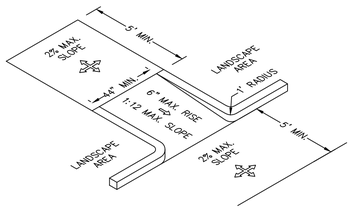


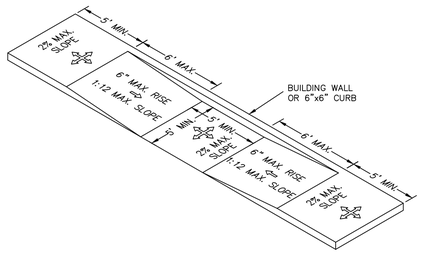
FDOT TYPE "D" CURB
scale: N.T.S. ref. C3.1, C6.1 (1 / C7.1)



* WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT AND THE THICKNESS OF THE LIP SHALL BE 6" UNLESS OTHERWISE SHOWN ON THE PLANS. ASPHALT SURFACE ON HIGH SIDE TO BE FLUSH WITH LIP OF CURB OR CURB & GUTTER.

FDOT TYPE "F" CURB
scale: N.T.S. ref. C3.1, C6.1 (2 / C7.1)





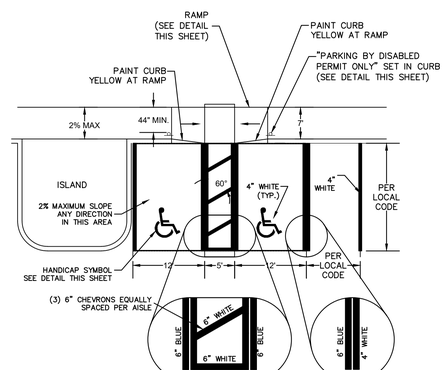
1. ALL ACCESSIBLE COMPONENTS CONSTRUCTED AS PART OF THESE PLANS SHALL COMPLY WITH CHAPTER 11 OF THE FLORIDA BUILDING CODE.
2. ACCESSIBLE ROUTE TO ACCESSIBLE SPACES, BUILDING ENTRANCES, AND PUBLIC STREETS SHALL NOT EXCEED 5% RUNNING SLOPE AND 2% CROSS SLOPE.
3. UNLESS OTHERWISE SHOWN ON THE PLANS, THE MINIMUM CLEAR ROUTE SHALL BE 36" WIDE WITH A 60" X 60" PASSING SPACE EVERY 200 FEET.
4. ACCESSIBLE ROUTES THROUGH PLANTERS SHALL BE LEVEL WITH THE SURROUNDING PAVEMENT OR PROVIDE CURB RAMPS AT EACH END WITH A MINIMUM 48" LEVEL LANDING IN BETWEEN.
5. THE ACCESSIBLE ROUTE IN FRONT OF PULL - IN PARKING SHALL BE A MINIMUM OF 44" WIDE AND NOT REDUCED BY VEHICLE OVERHANGS, CURBING, SIGN POSTS, OR OTHER OBSTRUCTIONS.
6. SPECIAL RAMP RULES APPLY FOR ANY RISE GREATER THAN 6" INCLUDING BUT NOT LIMITED TO RESTRICTION ON SLOPE, TOTAL RISE BETWEEN LANDINGS, AND USE OF HANDRAILS, PER F.B.C 11-4.8.
7. PUBLIC SIDEWALK CURB RAMPS CONSTRUCTED WITHIN A PUBLIC RIGHT-OF -WAY, IN ABSENCE OF LOCAL ROADWAY GUIDELINES, SHALL MEET THE REQUIREMENTS OF F.D.O.T INDEX 304.

   WHEN ACCESSIBLE PARKING ABUTS CURB OR EDGE OF PAVEMENT, PLEASE REFER TO DETAIL FOR STRIPING COLOR, STALL DIMENSIONS AND SLOPE.

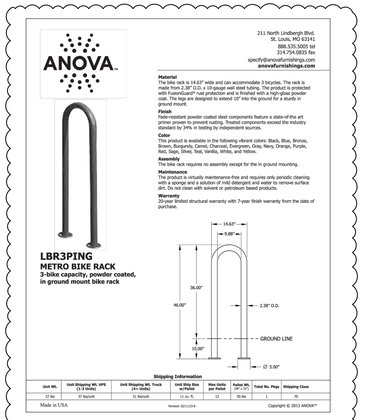
   CHANGE IN LEVEL ALONG ACCESSIBLE ROUTE IS NOT TO EXCEED ½" WITHOUT A RAMP PER SECTION 11-4.3.8.

   ALL HANDICAPPED PARKING SPACES SHALL BE SIGNED AND MARKED IN ACCORDANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS INDEX 17346.

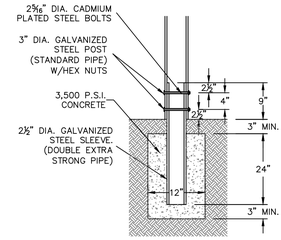
ACCESSIBLE RAMPS
scale: N.T.S. ref. C3.1 (4 / C7.1)



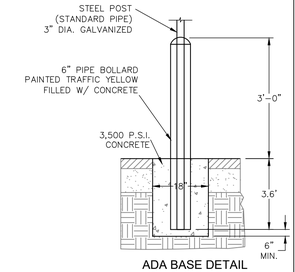
ACCESSIBLE PARKING-STRIPING DETAIL
scale: N.T.S. ref. C3.1 (5 / C7.1)



BIKE RACK DETAIL
scale: N.T.S. ref. C3.1 (13 / C7.1)



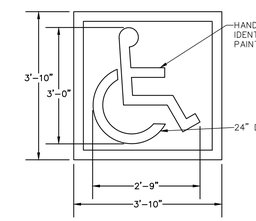
BASE DETAIL IN LAWN OR LANDSCAPED AREAS



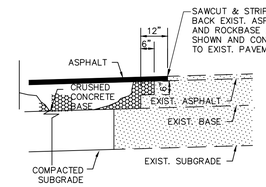
ADA BASE DETAIL IN PAVED AREAS

NOTE:
1. SIGNS IN BUILDING SIDEWALKS SHALL BE SET DIRECTLY IN THE CONCRETE AND SHALL UTILIZE 3" DIAMETER SIGN POST PER THE SPECIFICATIONS

SIGN BASE DETAIL
scale: N.T.S. ref. C3.1 (3 / C7.1)

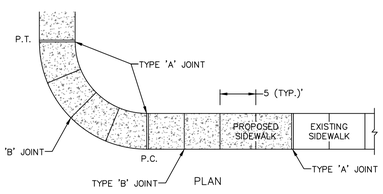


HANDICAP SYMBOL DETAIL
scale: N.T.S. ref. C3.1 (6 / C7.1)

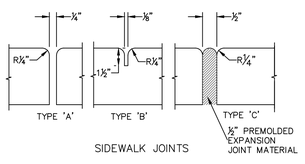


NOTE: ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION, AND CONSTRUCTED IN ACCORDANCE WITH THE FDOT DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM, CURRENT EDITION.

CONNECTION TO EXISTING PAVEMENT DETAILS
scale: N.T.S. ref. C6.1 (7 / C7.1)

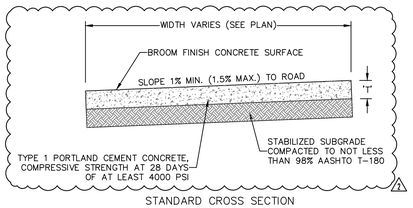


PLAN



SIDEWALK JOINTS

TABLE OF SIDEWALK JOINTS	
TYPE	LOCATION
'A'	100' MAX. SPACING, P.C./P.T. OF CURVES, JUNCTION OF EXISTING AND NEW SIDEWALKS.
'B'	5'-0" CENTER TO CENTER
'C'	WHERE SIDEWALK ABUTS CONCRETE CURBS, DRIVEWAYS AND SIMILAR STRUCTURES.

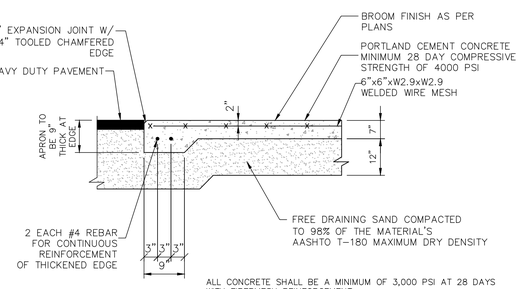


STANDARD CROSS SECTION

TABLE OF SIDEWALK THICKNESS	
LOCATION	"T"
PEDESTRIAN ONLY AREAS	5"
DRIVEWAYS AND OTHER TRAFFIC AREAS	7"

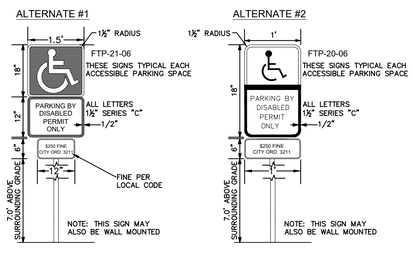
NOTE:
ALL SIDEWALK STREET CROSSINGS MUST MEET THE REQUIREMENTS OF THE AMERICAN DISABILITIES ACT (ADA) COMPLIANCE GUIDE. TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.ALL CONCRETE SHALL BE A MINIMUM OF 3,000 PSI AT 28 DAYS WITH FIBERMESH REINFORCEMENT.

CONCRETE SIDEWALK AND BENCH PAD
scale: N.T.S. ref. C6.1 (9 / C7.1)



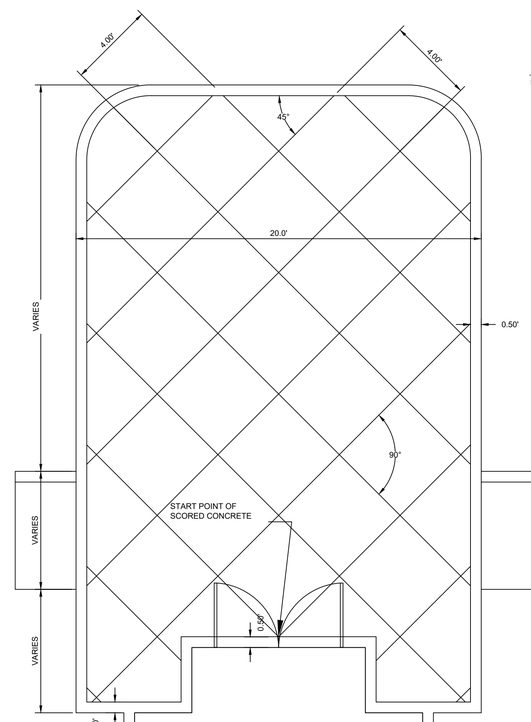
ALL CONCRETE SHALL BE A MINIMUM OF 3,000 PSI AT 28 DAYS WITH FIBERMESH REINFORCEMENT.

THICKENED CONCRETE PAVEMENT AT DUMPSTER PAD
scale: N.T.S. ref. C6.1 (11 / C7.1)



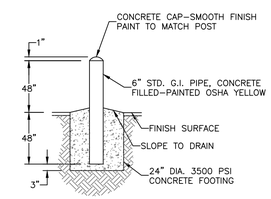
NOTE: ALL SIGNS SHALL BE DESIGNED TO WITHSTAND 120 M.P.H. WIND SPEED.

ACCESSIBLE PARKING SIGN DETAIL
scale: N.T.S. ref. C3.1 (10 / C7.1)



NOTE: PLEASE SEE SHEET C3.1 FOR EXACT ENTRANCE LAYOUT

ENTRANCE DETAIL
scale: N.T.S. ref. C3.1, C4.1 (12 / C7.1)



PIPE BOLLARD DETAIL
scale: N.T.S. ref. C3.1, C4.1 (8 / C7.1)

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ARCHITECTS PROJECT #: DCH22007

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REGISTRY NO. 696
KHA PROJECT # 047916134

KEVIN M. ROBERSON ★ LICENSE ★ No. 52074 ★ STATE OF FLORIDA ★ PROFESSIONAL ENGINEER
5/8/2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02/15/23
REVISION INFORMATION	
2	4/5/23
COORDINATION COMMENTS	

Restaurant #: 21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING
PAVING, GRADING AND DRAINAGE DETAILS

C7.1

Drawing name: K:\VRB_LDEV\047916 - Darden\134_CSK Riverview\CADD\PlanSheets\110-C7.1 PAVING, GRADING AND DRAINAGE DETAILS.dwg May 08, 2023 1:01pm by: Liz.Meeks
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SECTION 02210
SITE EARTHWORK

Part 1.00 General

1.01 WORK INCLUDED
A. The work specified in this Section consists of furnishing all labor, materials and equipment, and performing all operations required to complete the site preparation, earthwork and grading as shown on the Drawings and as specified herein. This work shall include, but not be limited to: site clearing and grubbing; root-raking; stripping; removal of muck and other unsuitable material; proof-rolling; earthwork for site grading, including dewatering, excavation, filling or backfilling, and compaction; supplying approved fill material; final site grading; and other related requirements.
B. The operations specified herein shall be performed within the limits indicated for site grading and other construction, as shown on the Drawings.
C. The Contractor shall provide adequate protection against construction activity for all existing structures and utilities, above the surface or underground, including trees that are to remain, and other construction activities concurrently occurring on the site.
D. Should damage occur to any structure, utility or other facility from these construction activities, repair or replacement to a condition equal to or better than the original shall be immediately made by the Contractor, at no cost to the Owner.
E. The Contractor must determine for himself the total volume of all fill materials required for the project site.
F. Definitions:
1. Open Areas: Open areas shall be those areas that do not include building sites, paved areas, and street right-of-way and parking areas.
2. Maximum Dry Density: Maximum dry soil unit weight in pounds per cubic foot at optimum moisture content of a specific material as determined by ASTM Test Designation D-1557 (Modified Proctor).
3. Optimum Moisture Content: Percentage of water in a specific soil material at maximum dry density.

1.02 RELATED WORK
A. Per local Transportation Standard Specifications for Highway and Bridge Construction, latest edition.

1.03 REFERENCE INFORMATION
A. The following pertinent geotechnical investigation report has been prepared. The Contractor shall perform his own site observations/investigations as necessary and obtain and review the contents of the referenced report to become familiar with the site subsurface soil and groundwater conditions. The requirements of the geotechnical report shall prevail where discrepancies between the geotechnical report and the specifications exist.

1.04 QUALITY ASSURANCE
A. Testing of materials to be used for fill, determination of unsuitable soil limits, density testing to adequately confirm the specified compaction, proof-rolling and strip subgrade observations shall be made by a Geotechnical Consultant approved by the Owner, at the expense of the Owner, with reports therefrom submitted to the Owner documenting that the testing and compaction requirements as outlined in this specification have been satisfied. If initial density tests fail to meet the specifications, retesting shall be performed by the Owner's Geotechnical Consultant at the expense of the Contractor. Said tests shall be performed for each lift of fill, if more than one is required for the depth of fill, and shall be taken where directed by the Engineer. Should test results be unsatisfactory, the Contractor shall recompact the fill lift and allow for supplemental tests by the Geotechnical Consultant for the area in question.
B. A sufficient time shall be allotted for the Geotechnical Consultant to perform all control tests necessary to determine that proper fill material is being used and compaction is being obtained. The Contractor shall schedule filling operations so as to permit the making of the necessary control tests for each layer prior to the placing of subsequent layers. All fill lifts and all stripped or cut subgrades (in pavement and building areas) shall be tested on a general schedule of one (1) test per 7,500 to 10,000 square feet. Building floor slab subgrade shall be tested on a general schedule of one (1) test per 2,500 square feet. More frequent testing may be required, particularly in areas with previous failing density tests.

Part 2.00 Products

2.01 MATERIALS
A. Suitable materials for fills shall be classified as A-1, A-3, A-2-4, or A-2-6 in accordance with AASHTO Designation M-145 and shall be free from vegetation, organic material, debris, trash, roots and similar deleterious material. Suitable materials for imported fills shall be classified as A-1 or A-3 in accordance with AASHTO Designation M-145 and shall consist of clean, granular soils and be free from vegetation, organic material, debris, trash, roots and similar deleterious material. Not more than 15 percent by weight of fill material shall pass the U.S. No.200 sieve.
The use of fill materials from on-site excavations, which may contain more than 15 percent fines passing the No. 200 sieve, shall be approved in writing by the Owner provided Geotechnical Consultant before any reuse. If allowed, the location of placement and additional handling requirements for use of any material not meeting the above specified requirements for suitable materials, must be documented in writing by the testing laboratory and approved by the Engineer prior to placement of said material.
B. Suitable Material To Be Placed In Water: Suitable material for fills to be placed in water shall be classified as A-1 or A-3 in accordance with AASHTO Designation M-145. Not more than 15 percent by weight of fill material shall pass the U.S. No. 100 sieve.
C. Unsuitable materials are classified as A-2-5, A-2-7, A-4, A-5, A-6, A-7 and A-8 in accordance with AASHTO Designation M-145.

Part 3.00 Execution

3.01 PREPARATION
A. Clearing, Grubbing, and Stripping
1. Clearing, grubbing, and stripping shall be performed in the areas where required, including ditches, paved areas, areas to be excavated, areas where fill will be placed, and where structures will be erected. It shall include the complete removal and satisfactory disposal of all timbers, brush, stumps, weeds, rubbish, root-laden topsoil, and all other obstructions resting on or protruding through the surface of the existing ground. Where excavation is designated within the areas to be cleared and grubbed, all stumps, roots and deleterious material thereby exposed, protruding through or appearing on the surface of the completed excavation, shall be removed to a depth of two feet minimum below the excavated surface and replaced with suitable compacted backfill. Within all areas where clearing and grubbing Is to be done, all stumps, roots, and other debris projecting through or appearing on the surface of the ground shall be removed to a depth of one (1) foot below the surface. Cleared, grubbed and stripped areas shall be inspected and approved by the Owner's Geotechnical Consultant prior to any subsequent excavation or filling operations.
2. Discing shall be performed within the limits of construction. Designated discing areas shall be mowed and raked to remove cuttings prior to discing operations. The designated areas shall be disced two times such that the first pass is in a direction 90 degrees opposite the second pass and discing operations shall be completed to a depth of 12-inches. Surficial soils to be removed from the disced areas shall be placed only in non-structural or embankment/berm areas approved by the Engineer soils in disced areas to be filled shall be tested for organic or filling by the Owner's Geotechnical Consultant prior to any in, or filling. If the organic content exceeds 10 percent in areas to be paved, or 5 percent in building areas, the surficial disced soils shall be removed and placed in non-structural areas as indicated above.
3. Selective clearing shall be performed in areas shown on the Drawings or as required by the Owner, in order to save selected trees. The tree areas designated to be saved shall be protected from construction equipment by the Contractor in a manner as shown on the Drawings or as approved by the Engineer.
4. Areas to be excavated or filled upon shall be stripped of grass, roots, and any unsuitable material, if present, shall be completely removed. Stripped materials suitable for topsoil shall be raked to remove materials larger than 2 inches in diameter and stockpiled on-site, as directed by the Owner.
5. Timber, stumps, roots, brush, rotten wood and other refuse and unsuitable materials from clearing, grubbing, and stripping operations shall be disposed of either by burning or removal to an approved legal dump area. Burning on-site is permitted provided the Contractor obtains all necessary permits and provides copies to the Owner. Burning, if permitted, shall be done at locations and at times as directed, in a manner that will avoid all hazards such as damage to existing structures, construction progress, trees and vegetation, and interference with traffic.
Disposal by burning shall be kept under constant attendance until the fires have burned out or have been extinguished and shall be done in compliance with all State and local laws and regulations relative to the building of fires.

3.02 PERFORMANCE
A. Excavation
1. Excavation shall conform to the limits indicated on the Drawings or specified herein. This work shall include shaping and sloping and other work necessary in bringing the earthwork to the required grade, alignment and cross-section.
2. All suitable materials removed from excavation areas shall be used as far as practicable in future pavement or building areas, or in the formation of embankments, subgrades, shoulders, building sites and other places as shown on the Drawings, or as directed by the Engineer. All suitable excavated material shall be considered property of the Owner and shall not be removed from the property without permission of the Owner. Excess excavated suitable material shall be stockpiled on-site at a location approved by the Owner and Engineer.
3. Suitable on-site excavated materials containing silty, and slightly clayey to clayey fine sands shall be sufficiently dried by surface spreading and discing if necessary, or by mixing with cleaner fine sands prior to reuse/placement in fill areas, as directed by the Owner's Geotechnical Consultant.
4. Existing or remaining silty and slightly clayey to clayey fine sand materials, as determined by the Owner's Geotechnical Consultant, at or below the area of the building slab or foundations shall be removed and replaced (if necessary) to a depth of 24-inches (minimum), as directed by the Owner's Geotechnical Consultant, with suitable compacted structural materials.
5. Muck, organic, silty and clayey sediments, or other unsuitable materials encountered under fill areas, structures, pavement areas, underground utilities and/or as shown on the drawings, shall be excavated and removed as directed by the Owner's Geotechnical Consultant. Removal of unsuitable material in areas where buildings are to be constructed shall include the area under the building and extend to a minimum of ten (10) feet beyond the building limits, or as directed by the Engineer. Removal of unsuitable material in areas where pavement is to be placed shall include the area under the surfacing and extend to a minimum of five (5) feet beyond the outside edges, or as directed by the Owner's Geotechnical Consultant. At locations where underground utilities (piping, etc.) are to be installed with a top (crown) elevation above the bottom surface of any unsuitable material, removal shall be completed to a minimum width of three (3) feet outside the utility alignment.
6. Muck, organic, silty and clayey sediments, and other unsuitable material excavated under the requirements of this Section shall be disposed of off-site, unless otherwise indicated on the Drawings or as directed by the Owner, at the Contractor's expense.

B. Fills and Compaction
1. Suitable backfill or fill material shall be provided, placed and compacted where unsuitable material has been removed, and as required to perform construction and elevate the site to the finish grades, as shown on the Drawings. Materials to be used for fill shall be approved by the Owner's Geotechnical Consultant prior to their placement. If a suitable fill material source is available within the limits of the project, the Owner may allow the use thereof and shall designate the borrow site whereby the Contractor may acquire the fill. If a suitable fill material source is not available on the project site; the Contractor shall furnish the necessary additional suitable fill material to complete the work to the lines and grades indicated on the Drawings. Off-site fill sources shall be tested and approved by the Owner's Geotechnical Consultant prior to moving any material on-site.
2. Areas excavated to building and pavement subgrade elevations, and excavated areas required to be filled shall be leveled, compacted, and tested prior to placement of fill material. Compaction shall be by means of a vibrating drum roller or by other suitable methods capable of completing the work in an efficient manner. The vibratory drum roller shall have a- minimum static drum weight of 20,000 pounds and be capable of exerting a minimum impact energy of 36,000 pounds. Soft, pumping, disturbed, unsuitable or yielding soils encountered during compaction shall be brought to the attention of the Owner's Geotechnical Consultant to determine whether over-excavation and replacement, of any of these types of materials is required. A minimum of 10 overlapping passes in a criss-cross pattern shall be made with the vibratory drum roller to initially compact the subject areas. Compaction shall continue until a minimum density equivalent to 95 percent of the Maximum Modified Proctor Density is achieved in accordance with ASTM D-1557. Compaction shall be tested for a minimum depth of three (3) foot below the excavated or stripped surface in pavement areas, and a minimum of three (3) feet below building areas.
3. The backfill and fill materials shall be placed and compacted as specified hereinafter. Fills shall be constructed of approved suitable material placed at a moisture content near optimum in successive uniform lifts of not more than twelve (12) inches in depth loose measure, and compacted by the use of a vibrating steel wheel roller as described above, or other suitable method(s). Thickness of layers may be increased (to no greater than 18 inches loose) provided the equipment and methods used are proven by field density testing to be capable of compacting thicker layers to specified densities. Layer thickness shall be decreased if equipment and methods used are proven to be incapable of compacting layers to specified densities. Where applicable, the first lift may be up to eighteen (18) inches above the groundwater table, if approved by the Owner's Geotechnical Consultant to serve as a working platform for the compaction equipment. The use of this procedure does not relieve the Contractor of the requirement to achieve the specified density for a minimum depth of 1 or 2 feet below the natural grade depending on the area.
4. Fills shall be compacted to a density of not less than 95 percent of its maximum Modified Proctor Density as determined by ASTM D-1557. The subgrade materials immediately below the building floor slab, footings, pavement base, subbase, and base shall be re-compacted to a minimum of 98 percent of ASTM D-1557 just prior to the Darden Concept building slab, footing or pavement subbase construction. Should tests indicate unsatisfactory results, compaction procedures shall continue until subsequent tests indicate the stipulated requirements.
5. Backfill soils placed adjacent to footings or walls below grade shall be carefully compacted with a light rubber-tired roller or vibratory plate compactor to avoid damaging the footings or walls and shall be compacted to 98 percent of ASTM D-1557 around footings (and slabs), and to 95 percent of ASTM D-1557 against below grade walls. Suitable sand fills placed in footing excavations above the bearing level, and in other areas which are expected to provide support or foundation embedment constraint (including all pipeline or utility excavations within the structure and pavement areas), shall be placed in loose lifts not exceeding 12 inches and shall be compacted to a minimum of 98 percent of the maximum modified Proctor dry density (ASTMD-1557).
6. Suitable fill materials containing silty, slightly clayey to clayey fine sand materials which exhibit characteristics of high plasticity or wetness, spongy and/or unstable conditions, shall be sufficiently air-dried or adequately mixed with cleaner fine sands prior to use for fill. Placement of these materials in fill areas shall be directed by the Owner's Geotechnical Consultant, and such fill materials shall be positioned within lower lift levels of high fill areas, with a top elevation a minimum of four (4) feet below any proposed pavement surface or structure foundation or slab, unless otherwise approved by the Owner's Geotechnical Consultant.
7. Fine sands to slightly silty fine sands classified as suitable fill materials, as determined by the Owner's Geotechnical Consultant, excavated from on-site areas shall be placed in the upper levels in all fill areas.
8. The preceding specified placement and compaction shall be required within the specified areas, and to the depths described as follows:
a. Structures (foundations and slabs): Under the complete structure and to a dimension ten (10) feet outside the maximum perimeter of the structure; from the pre-compacted surface up to an elevation specifically required for placement of the structure slab or foundation.
b. Pavement: The full area beneath the surfacing and extending five (5) feet beyond the outside edges thereof; from the surface of approved clean in-place soil up to the bottom elevation of the base or subbase course. Soil material within 18 inches of the bottom of the subbase course, whether in situ or filled material, shall have not more than 12 percent by weight of material pass the U.S. No. 200 sieve.
c. Sidewalks: For a width three (3) feet beyond each side of the walk; from the surface of approved clean in-place soil to the finish grade.
d. Utilities (piping, etc.): For a width three (3) feet beyond each side of the utility; from the surface of approved clean in-place soil to the finish grade.
9. In areas of fill placement requiring greater than four feet or more of structural fill (where building structures or pavement are proposed), the completed fill area shall be allowed to settle for a period of not less than 60 days prior to construction of the building foundation construction or construction of the pavement base or subbase course. Settlement plates shall be installed by the Owner's Geotechnical Consultant for monitoring purposes in higher fill areas.
10. The Contractor shall maintain the surface of the fill to prevent ponding or collection of surface runoff and subsequent saturation of compacted or uncompacted layers. When inclement weather can reasonably be expected during off-shift hours, any uncompacted layer shall be rolled to provide a surface seal. During periods of inclement weather, the Contractor shall control surface runoff in such a manner as to prevent erosion of the fill or slope surfaces.
11. Should suitable excavated material exceed the backfill and fill requirements, said excess suitable fill shall be hauled off site to a location approved by the Owner.
12. Some types of excavated unsuitable material may be adequately mixed with suitable fill material and may be used in open areas of the project if approved in writing by the Owner's Geotechnical Consultant and Engineer. Unsuitable material to be mixed shall be raked to remove all materials larger than two (2) inches in diameter prior to mixing. In no case shall such mixed material be used to fill under structures, pavements, sidewalks or utilities. The extent of mixing and suitability of the material to be mixed shall be approved by the Owner's Geotechnical Consultant and the Engineer.
13. Mixed fill material, as specified above, shall be placed in layers of not more than 12 inches in depth measured loose. When dry or as directed by the testing laboratory or Engineer, this layer shall be disced and harrowed to break up large pieces of the material. The above density requirements shall not apply to unsuitable material placed.

C. Grading
1. Grading shall be performed over the total construction area, as indicated on the Drawings. This work shall include all cutting and filling necessary in order to comply with the elevations shown on the Drawings.
2. The final finish grading shall provide a surface, which is within 0.1 foot of the required elevations shown on the Drawings, unless otherwise approved by the Engineer. Finished grades shall be uniform between final contours, and shall not include abrupt changes in grade, potholes, or eroded areas. Where grading meets with the existing surface, a smooth interface shall be provided. Roundings shall be provided at the top and bottom of embankments, dikes or other breaks in grade. Around buildings and other structures, the finish grade shall slope away from walls in all directions at ¼-inch per foot minimum for at least ten (10) feet. Allowance shall be made in finish grading elevations for sodding or other surface treatment, as indicated on the Drawings.

END OF SECTION

SECTION 02220
STRUCTURE EXCAVATION AND BACKFILL

Part 1.00 General

1.01 WORK INCLUDED
A. The work specified in this Section consists of furnishing all labor, materials and equipment, and performing all operations required to complete the site preparation, earthwork and grading as shown on the Drawings and as specified herein for construction of the storm drainage, sanitary sewer, and water distribution system structures. This work shall include, but not be limited to site clearing and grubbing; stripping; dewatering; removal of muck and other unsuitable material; earthwork for grading around structures; excavation; backfilling; compaction; supplying approved fill material; final grading; and other related requirements.
B. The operations specified herein shall be performed within the limits indicated for site grading and other construction, as shown on the Drawings.
C. The Contractor shall provide adequate protection against construction activity for all existing structures and utilities, above the surface or underground, including trees that are to remain, and other construction activities concurrently occurring on the site.
D. Should damage occur to any structure, utility or other facility from these construction activities, repair or replacement to a condition equal or better than the original shall be immediately made by the Contractor, at no cost to the Owner.
E. Definitions:
1. Maximum Density: Maximum weight in pounds per cubic foot of a specific material as determined by ASTM Test Designation D-1557.
2. Optimum Moisture: Percentage of water in a specific material at maximum density.

1.02 RELATED WORK
A. Section 02210 - Site Earthwork
B. Section 02221- Trenching, Back-filling and Compaction for Utility and Drainage Systems
C. Section 2530 - Dewatering System

1.03 REFERENCE INFORMATION
A. If a geotechnical report pertaining to the site has been prepared, it may be obtained from the Engineer upon request.
B. Contractor may obtain copies of standard specifications from the City, at his own expense, for requirements of related standards.

1.04 QUALITY ASSURANCE
A. Density tests to adequately confirm the specified compaction shall be made by a testing laboratory approved by the Owner, at the expense of the Owner, with reports therefrom submitted to the Owner documenting that the compaction requirements as outlined in this specification have been satisfied. If initial density tests fail to meet the specifications, retesting shall be done at the expense of the Contractor. Said tests shall be performed for each lift of fill, if more than one is required for the depth of fill, and shall be taken where directed by the Engineer. Should test results be unsatisfactory, the Contractor shall recompact the fill and provide supplemental tests for the area in question.
B. A sufficient time shall be allotted for the testing laboratory to perform all control tests necessary to determine that proper fill material is being used and compaction is being obtained. The Contractor shall schedule backfilling operations so as to permit the making of the necessary control tests for each layer prior to the placing of subsequent layers.

Part 2.00 Products

2.01 MATERIALS
A. Suitable materials for fills shall be classified as A-1, A-3, A-2-4, or A-2-6 in accordance , with AASHTO Designation M-145 and shall be free from. vegetation, organic material, debris, trash, roots and similar deleterious material. Suitable materials for imported fills shall be classified as A-1 or A-3 in accordance with AASHTO Designation M-145 and shall consist of clean, granular soils and be free from vegetation, organic material, debris, trash, roots and similar deleterious material. Not more than 15 percent by weight of fill material shall pass the U.S. No. 200 sieve.
B. Suitable Material To Be Placed In Water: Suitable material for fill to be placed in water shall be classified as A-1 or A-3 in accordance with AASHTO Designation M-145. Not more than 15 percent by weight of fill material shall pass the U.S. No. 100 sieve.
C. Unsuitable materials are classified as A-2-5, A-2-7, A-4, A-5, A-6, A-7 and A-8 in accordance with AASHTO Designation M-145.
D. Graded Limerock: Material for backfill below precast structures shall be graded limerock equal to state DOT specifications.
E. Select Material: Select material shall be suitable material that does not contain any rock larger than that which will pass through a 3-inch diameter ring.

Part 3.00 Execution

3.01 PREPARATION
A. Clearing, Grubbing, and Stripping
Clearing, grubbing, and stripping shall be performed in the areas where required for the proper installation of structures at locations shown on the Drawings. It shall include the complete removal and satisfactory disposal of all timbers, brush, stumps, weeds, rubbish, topsoil, and all other obstructions resting on or protruding through the surface of the existing ground.
B. Selective clearing shall be performed in areas shown on the Drawings or as required by the Owner, in order to save plantings, shrubbery, trees, utility poles, or structures. The above items, where designated by the Owner or Engineer, shall be transplanted, relocated, braced, shored, or otherwise protected and preserved.

3.02 PERFORMANCE
A. Excavation:
I. The Contractor shall perform all excavation of every description and of whatever substances encountered, to the dimensions required for construction and as specified herein. All excavations shall be made by open cut.
2. Slopes of temporary excavations below 4 feet deep should be sloped at 1.5 horizontal (H) to 1 vertical (V) or flatter and be protected from seepage and erosion. Temporary excavations greater than 10 feet should have side slopes of 2H: 1V or flatter or be properly sheeted and braced. Excavation areas shall be properly sheeted and braced if required to protect the safety of workmen, the general public, this or other work or structures, or excavation walls. Excavation for the structures shall be sufficient to provide a clearance between their outer surfaces and the face of the excavation, sheeting, or bracing, of not less than 2 feet. Materials encountered in the excavation which have a tendency to slough or flow into the excavation, undermine the banks, weaken the overlying strata, or are otherwise rendered unstable by the excavation operation shall be retained by sheeting, stabilization, grouting or other approved methods.
3. Excavation for the structures shall be carried to an elevation one (1) foot lower than the proposed outside bottom of the structure to provide space for the select backfill material. Any unsuitable material encountered below proposed structures shall be removed and replaced with suitable material. Prior to placing the select backfill, the excavation shall be leveled so that it is reasonably uniform over the area to be occupied by the structure.
4. Excavation for structures shall be carried down to the bottom of the structure where dewatering methods are such that a dry excavation bottom is exposed and the naturally occurring material at this elevation leveled and left ready to receive the structure.
5. Any water which accumulates in the excavations for structures shall be removed promptly by well point system or by other means satisfactory to the Engineer in such a manner as to not cause injury to public health, to public or private property, to work completed or in progress, to the surface of the streets, or cause any interference with the use of the same by the public. Pumps and engines for dewatering systems shall be operated with mufflers and at a minimum noise level suitable to a residential area. The Contractor shall be responsible for any nuisance created due to the disposal of water from his drainage system.
6. All excess suitable material shall be stockpiled on-site at a location approved by the Owner and Engineer. Muck, organic, silty and clayey sediments, and other unsuitable material excavated under the requirements of this Section shall be disposed of offsite, unless otherwise indicated on the Drawings or as directed by the Owner, at the Contractor's expense.

B. Backfills and Compaction
1. The space between the proposed outside bottom of the structure and the bottom of the excavation shall be backfilled with graded limerock and leveled to receive the proposed structure.
2. Suitable backfill material shall be provided, placed and compacted around the structures as required to fill the excavated area up to finish grades, as shown on the Drawings. Materials to be used for fill shall be approved by the Engineer prior to their placement. If a suitable fill material source is available within the limits of the project, the Owner may allow the use thereof and shall designate the borrow site whereby the Contractor may acquire the fill. If a suitable fill material source is not available on the project site; the Contractor shall furnish the necessary additional fill material to complete the work to the lines and grades indicated on the Drawings.
3. Excavated areas below proposed structures shall be leveled, compacted and tested prior to placement of the structure and any backfill material. Compaction shall be to a minimum density equivalent to 95 percent of the Maximum Modified Proctor Density in accordance with ASTM D-1557 and as tested for a minimum depth of two (2) feet below the bottom of structure slabs.
4. The backfill under and around structures shall be placed and compacted as specified hereinafter. Fills shall be constructed of suitable material placed in successive lifts of not more than 12 inches in depth loose measure, and compacted by the use of a vibrating steel wheel roller or other suitable method(s). Thickness of layers may be increased provided the equipment and methods used are proven by field density testing to be capable of compacting thicker layers to specified densities. Layer thickness shall be decreased if equipment and methods used are proven to be incapable of compacting layers to specified densities. Where applicable, the first lift may be up to eighteen (18) inches above the groundwater table, if approved by the Engineer, to serve as a working platform for the compaction equipment. The use of this procedure does not relieve the Contractor of the requirement to achieve the specified density for a minimum depth of one (1) foot below the natural grade.
5. Backfills shall be compacted to a density of not less than 95 percent of its Maximum Modified Proctor Density in accordance with ASTM D-1557. Should tests indicate unsatisfactory results, compaction procedures shall continue until subsequent tests indicate the stipulated requirements.

END OF SECTION

SECTION 02221
TRENCHING, BACKFILLING AND COMPACTION FOR UTILTY AND DRAINAGE SYSTEMS

Part 1.00 General

1.01 WORK INCLUDED
A. The work specified in this Section consists of furnishing all labor, materials and equipment, and performing all operations required to complete the site preparation, earthwork and grading as shown on the Drawings and as specified herein for construction of the utility and drainage systems consisting of piping and appurtenances. This work shall include, but not be limited to: site clearing and grubbing; stripping; dewatering; trenching; bed preparation; removal of muck and other unsuitable material; earthwork for grading above and around utility and drainage system improvements; excavation; backfilling; compaction; supplying approved fill material; final site grading; and other related requirements.
B. The operations specified herein shall be performed within the limits indicated for site grading and other construction, as shown on the Drawings.
C. The Contractor shall provide adequate protection against construction activity for all existing structures and utilities, above the surface or underground, including trees that are to remain, and other construction activities concurrently occurring on the site.
D. Should damage occur to any structure, utility or other facility from these construction activities, repair or replacement to a condition equal or better than the original shall be immediately made by the Contractor, at no cost to the Owner.
E. Definitions:
1. Maximum Density: Maximum weight in pounds per cubic foot of a specific material as determined by ASTM Test Designation D-1557.
2. Optimum: Moisture: Percentage of water in a specific material at maximum density.

1.02 RELATED WORK
A. Section 02210 - Site Earthwork
B. Section 02220 - Structure Excavation and Backfill
C. Section 02530 - Dewatering System

1.03 REFERENCE, INFORMATION
A. Contractor may obtain the geotechnical report(s) pertaining to the site from the Owner.
B. Contractor may obtain a copy of standard specifications from the City, at his own expense, for requirements of related standards.

1.04 QUALITY ASSURANCE
A. Density tests to adequately confirm the specified compaction shall be made by a testing laboratory approved by the Engineer, at the expense of the Owner, with reports therefrom submitted to the Engineer documenting that the compaction requirements as outlined in this specification have been satisfied. If initial density tests fail to meet the specifications, retesting shall be done at the expense of the Contractor. Said tests shall be performed for each lift of fill, if more than one is required for the depth of fill, and shall be taken where directed by the Engineer. Should test results be unsatisfactory, the Contractor shall recompact the fill and provide supplemental tests for the area in question.
B. A sufficient time shall be allotted for the testing laboratory to perform all control tests necessary to determine that proper fill material is being used and compaction is being obtained. The Contractor shall schedule backfilling operations so as to permit the making of the necessary control tests for each layer prior to the placing of subsequent layers.

Part 2.00 Products

2.01 MATERIALS
A. Suitable materials for fills shall be classified as A-1, A-3, A-2-4, or A-2-6 in accordance, with AASHTO Designation M-145 and shall be free from vegetation, organic material, debris, trash, roots and similar deleterious material. Suitable materials for imported fills shall be classified as A-1 or A-3 in accordance with AASHTO Designation M-145 and shall consist of clean, granular soils and be free from vegetation, organic material, debris, trash, roots and similar deleterious material. Not more than 15 percent by weight of fill material shall pass the U.S. No. 200 sieve.
B. Suitable Material To Be Placed In Water: Suitable material for fill to be placed in water shall be classified as A-1 or A-3 in accordance with AASHTO Designation M-145. Not more than 15 percent by weight of fill material shall pass the U.S. No. 100 sieve.
C. Unsuitable materials are classified as A-2-5, A-2-7, A-4, A-5, A-6, A-7 and A-8 in accordance with AASHTO Designation M-145.
D. Granular Backfill Material: Material for backfill below precast structures shall be conform to state DOT specifications.

Part 3.00 Execution

3.01 PREPARATION
A. Clearing, Grubbing, and Stripping
Clearing, grubbing, and stripping shall be performed in the areas where required for proper installation of all piping and appurtenances at locations shown on the Drawings. It shall include the complete removal and satisfactory disposal of all timbers, brush, stumps, weeds, rubbish, topsoil, and all other obstructions resting on or protruding through the surface of the existing ground.
B. Selective clearing shall be performed in areas shown on the Drawings or as required by the Owner, in order to save plantings, shrubbery, trees, utility poles, or structures. The above items, where designated by the Owner or Engineer, shall be transplanted,
relocated, braced, shored, or otherwise protected and preserved.

3.02 PERFORMANCE
A. Excavation:
1. The Contractor shall perform all excavation of every description and of whatever substances encountered, to the dimensions and depth shown on the Drawings or as directed by the Engineer.
All excavations shall be made, by open cut, unless otherwise specified on the Drawings. All existing utilities such as pipes, poles and structures shall be carefully supported and protected from injury, and in case of damage, they shall be restored or replaced at the Contractor's expense.
2. Where trench widths are limited by right-of-way and/or easement widths, property line restrictions, existing adjacent improvements, or other restrictions, trench walls shall be kept vertical, and, if required to protect the safety of workmen, the general public, this or other work or structures, or to maintain trench widths specified on the Drawings or hereinafter specified, shall be properly sheeted and braced. Where wood sheeting or certain designs of steel sheeting are used, the sheeting shall be cut off at a level 2 feet above the top of the installed pipe and that portion below that level shall be left in place. If interlocking steel sheeting is used, it may be removed, providing removal can be accomplished without disturbing the bedding, pipe or alignment of the pipe. Any damage to the pipe bedding, pipe or alignment of the constructed utility caused by removal of sheeting shall be cause for rejection of the affected portion of the work. Not more than 100 feet of trench shall be opened ahead of pipe laying operations at one time unless a greater length of open trench is approved by the Engineer.
3. In areas where trench widths are not limited by right-of-way, and/or easement widths, property line restrictions, existing adjacent improvements, including pavements, structures and other utilities, and maintenance of traffic, the trench sides may be sloped to a stable angle of repose of the excavated material. A substantially and safely constructed movable shield, "box" or "mole" may be used in place of sheeting when the trench is opened immediately ahead of the shield and closed immediately behind the shield as pipe laying proceeds inside the shield.
4. Ladders or steps shall be provided for and used by workmen to enter and leave trenches.
5. Pipe trenches for utility lines shall be excavated to a width within the limits of the top of the pipe and the trench bottom so as to provide a clearance on each side of the pipe barrel, measured to the face of the excavation or sheeting, if used, of 8 inches to 12 inches. Where the pipe size exceeds 12 inches, the clearance shall be from 12 inches to 18 inches. All pipe trenches shall be excavated to a level 8 inches below the outside bottom of the proposed pipe barrel.
6. Excavation for appurtenances shall be sufficient to provide a clearance between their outer surfaces and the face of the excavation or sheeting, if used, of not less than 12 inches. Manhole excavations shall be carried to sufficient depth to permit their construction on the undisturbed bottom of the excavation.
7. Materials removed from the trenches shall be stored and disposed of in such a manner that they will not interfere unduly with traffic on public streets and sidewalks and they shall not be placed on private property. In congested areas, such materials that cannot be stored adjacent to the trench or used immediately as backfill, shall be removed to places of storage, as approved by the Engineer.
8. All materials suitable for use as backfill shall be hauled to and used in areas where not enough suitable material is available from the excavation.
9. All excess suitable or unsuitable material shall be disposed of as directed by the Engineer. Material disposed of within the limits of the project shall be finish graded upon completion of the work. Material to be removed from the project shall be hauled away and disposed of at the Contractor's expense.
10. Trench Stabilization: No claim for extras, or additional payment will be considered for cost incurred in the stabilization of trench bottoms which are rendered soft or unstable as a result of construction methods, such as improper or inadequate
sheeting, dewatering or other causes. In no event shall pipe be installed when such conditions exist and the Contractor shall correct such conditions so as to provide proper bedding or foundations for the proposed installations at no additional cost to the Owner.

B. Removal of Water:
1. It is a basic requirement of these specifications that excavations shall be free from water before pipe or structures are installed.
2. The Contractor shall provide all necessary pumps, underdrains, well-point systems, and other means for removing water from trenches and other parts of the work. The Contractor shall continue dewatering operations until the backfill has progressed to a sufficient depth over the pipe to prevent flotation or movement of the pipe in the trench and so that it is above the natural water table.
3. Water from the trenches and excavation shall be disposed of in such a manner as will not cause injury to public health, to public or private property,, to the work completed or in progress, to the surface of the streets, or cause any interference with the use of the same by the public. The Contractor shall submit his proposed methods of handling trench water and locations at which the water will be disposed of to the Engineer for approval and shall receive approval before starting the excavation. The Contractor shall obtain and pay for all additional required permits from state or local agencies for dewatering activities.
4. Ladders or steps shall be provided for and used by workmen to enter and leave trenches.
5. Pipe trenches for utility lines shall be excavated to a width within the limits of the top of the pipe and the trench bottom so as to provide a clearance on each side of the pipe barrel, measured to the face of the excavation or sheeting, if used, of 8 inches to 12 inches. Where the pipe size exceeds 12 inches, the clearance shall be from 12 inches to 18 inches. All pipe trenches shall be excavated to a level 8 inches below the outside bottom of the proposed pipe barrel.
6. Excavation for appurtenances shall be sufficient to provide a clearance between their outer surfaces and the face of the excavation or sheeting, if used, of not less than 12 inches. Manhole excavations shall be carried to sufficient depth to permit their construction on the undisturbed bottom of the excavation.
7. Materials removed from the trenches shall be stored and disposed of in such a manner that they will not interfere unduly with traffic on public streets and sidewalks and they shall not be placed on private property. In congested areas, such materials that cannot be stored adjacent to the trench or used immediately as backfill, shall be removed to places of storage, as approved by the Engineer.
8. All materials suitable for use as backfill shall be hauled to and used in areas where not enough suitable material is available from the excavation.
9. All excess suitable or unsuitable material shall be disposed of as directed by the Engineer. Material disposed of within the limits of the project shall be finish graded upon completion of the work. Material to be removed from the project shall be hauled away and disposed of at the Contractor's expense.
10. Trench Stabilization: No claim for extras, or additional payment will be considered for cost incurred in the stabilization of trench bottoms which are rendered soft or unstable as a result of construction methods, such as improper or inadequate
sheeting, dewatering or other causes. In no event shall pipe be installed when such conditions exist and the Contractor shall correct such conditions so as to provide proper bedding or foundations for the proposed installations at no additional cost to the Owner.

B. Removal of Water:
1. It is a basic requirement of these specifications that excavations shall be free from water before pipe or structures are installed.
2. The Contractor shall provide all necessary pumps, underdrains, well-point systems, and other means for removing water from trenches and other parts of the work. The Contractor shall continue dewatering operations until the backfill has progressed to a sufficient depth over the pipe to prevent flotation or movement of the pipe in the trench and so that it is above the natural water table.
3. Water from the trenches and excavation shall be disposed of in such a manner as will not cause injury to public health, to public or private property, to the work completed or in progress, to the surface of the streets, or cause any interference with the use of the same by the public. The Contractor shall submit his proposed methods of handling trench water and locations at which the water will be disposed of to the Engineer for approval and shall receive approval before starting the excavation. The Contractor shall obtain and pay for all additional required permits from state or local agencies for dewatering activities.
4. Pumps and engines for dewatering systems shall be operated with mufflers and at a minimum noise level suitable to a residential area. The Contractor shall be responsible for any nuisance created due to the disposal of water from his drainage system.

C. Pipe Bedding:
1. As described above, all pipe trenches shall be excavated to a level 8 inches below the outside bottom of the proposed pipe barrel for rigid pipe and up to 4 inches above crown for flexible (ADS or similar) pipe. The resulting excavation shall be backfilled with approved pipe bedding material, up to the level of the lower one-third of the proposed pipe barrel. This backfill shall be tamped and compacted to provide proper bedding for the pipe and shall then be shaped to receive the pipe. Bedding shall be provided under the branch of all fittings to furnish adequate support and bearing under the fitting. Bedding material for piping shall be pea rock, drainfield limerock, or similar materials as approved by the Engineer. Limerock screenings, sand or other suitable material from the excavation may be used for bedding material when pipe is installed above the natural water table.
2. Any excavation below the levels required for installation of the pipe bedding shall be backfilled with approved bedding material provided by the Contractor, tamped, compacted and shaped to provide proper support for the proposed pipe, at no additional cost to the Owner.

D. Backfills and Compaction
1. Backfilling of trenches shall not be allowed until the work has been approved by the Engineer, pressure tested if required, and the Engineer indicates that backfilling may proceed. Any work which is covered or concealed without the knowledge and consent of the Engineer shall be uncovered or exposed for inspection at no cost to the Owner. Partial backfill may be made to restrain the pipe during pressure testing.
2. Backfill material shall be suitable material as described herein. Backfill material placed within 1 foot of piping and appurtenances shall not contain any stones or rocks larger than 2 inches in diameter (1 inch for PVC pipe) and no stones or rocks larger than 6 inches in diameter will be permitted in any backfill.
3. If a sufficient quantity of suitable backfill material is not available from the trench or other excavations within the site of the work, the Contractor shall provide additional material suitable for this purpose. The additional material shall be installed as specified herein.
4. Suitable backfill material containing no stones or rocks larger than 2 inches shall be placed in 6-inch layers and thoroughly tamped to a depth of 12 inches over the top of the pipe. Particular attention and care shall be exercised in obtaining thorough support for the branch of all service connection fittings and compaction of the fill under the haunches of the pipe. Care shall be taken to preserve the alignment and gradient of the installed pipe.
5. After the backfill has been placed to a level 12 inches over the waterline or force main pipe, the remainder of the backfill shall be placed in layers, not to exceed 12 inches, and compacted with mechanical vibrators or other suitable equipment, to obtain a density of the backfilled material of not less than 98 percent of its maximum density as hereinafter defined.
6. After selected backfill has been placed to a depth of 12 inches over the storm drainage and sanitary sewer pipe, backfilling shall proceed to a depth of 30 inches over the pipe by placing the backfill material in 9-inch layers and thoroughly compacting it with mechanical vibrators. Backfill in this portion of the work shall be compacted to 95 percent of maximum density of the material as hereinafter defined.
7. After the backfill has been placed to a level 30 inches over the storm drainage' and sanitary sewer pipe, the remainder of the backfill shall be placed in layers, net to exceed 12 inches, and compacted with mechanical vibrators or other suitable equipment to obtain a density of the backfilled material of not less than 95 percent of its maximum density as hereinafter defined.
8. For storm drainage and sanitary sewer pipe in unpaved areas outside the right-of-way, the backfill shall be placed to a level 36 inches above the crown of the pipe by placing the backfill material in 9 inch layers and compacted to a minimum density of 95 percent of its maximum density, as hereinafter defined. The remaining backfill shall be placed in layers of not more than 12 inches and compacted to a minimum density of 95 percent of its maximum density.
9. Within paved areas of trench excavation, the base and surfacing shall be reconstructed as specified under Section 02574 - Pavement Removal and Replacement (granular material all the way up).
10. No more than 800 feet of trench with pipe in place shall be partially backfilled at any time.

E. Additional Excavation and Backfill:
1. Where unsuitable material, such as organic soils, roots, mulch, other vegetable matter, or other material which, in the opinion of the Geotechnical Engineer, will result in unsatisfactory foundation conditions, is encountered below the level of the proposed pipe bedding material, it shall be wholly or partially removed as directed by the Geotechnical Engineer and disposed of off-site at the Contractor's expense. Sheeting shall be installed, if necessary, to maintain pipe trenches within the specified limits. The resulting excavation shall be backfilled with suitable backfill material, placed in 6 inch layers, tamped and compacted up to the level of the bottom of the proposed pipe bedding material. Sufficient compaction of this material shall be performed to protect the proposed pipe against settlement. Construction shall then proceed in accordance with the provisions as specified above.
2. Additional excavation shall be performed only when ordered by the Engineer. Where organic or other unsuitable material is encountered in the excavation, the Contractor shall bring the condition to the attention of the Engineer and obtain his determination as to whether or not the material will require removal, prior to preparing the pipe bedding.

F. Restoration of Existing Surfaces: Paved and grassed areas disturbed by the operations required under this Section shall be restored to a condition equal to or better than the existing condition, or as indicated on the Drawings and/or specified herein.

3.03 COMPACTION AND DENSITIES
A. Methods of control and testing of backfill construction to be employed in this work are:
1. Maximum density of the material in trenches shall be determined by ASTMD-1557.
B. Laboratory and field density tests which, in the opinion of the Engineer, are necessary to establish compliance with the compaction requirements of these specifications, will be conducted at the Owner's expense. Tests will be made at depths and locations selected by the Engineer.
C. Trench backfill that does not comply with the specified densities, as indicated by such tests, shall be reworked and recompacted until the required compaction is secured, at no additional cost to the Owner. The costs for retesting such work shall be paid for by the Contractor.

END OF SECTION

SECTION 02232
GRANULAR SUBBASE MATERIAL

Part 1.00 General

1.01 WORK INCLUDED
A. The work specified in this Section consists of the construction of a base course composed of granular subbase material. It shall be constructed upon the prepared subgrade in accordance with these specifications and in conformity with the lines, grades, notes and typical cross-sections shown on the Drawings.

1.02 QUALITY ASSURANCE
A. Laboratory analysis shall be complete, and the material accepted by the Engineer prior to placement.

Part 2.00 Products

2.01 MATERIALS
A. Description: All granular subbase material shall comply with state DOT specifications.
B. Gradation: At least 97 percent (by weight) of the material shall pass a 3-1/2 inch sieve and the material shall be graded uniformly down to dust. The fine material shall consist entirely of dust of fracture.
C. Quality:
1. The granular subbase material shall be uniform in quality and shall not contain cherty or other extremely bard pieces or lumps, balls or pockets of sand or clay size material in sufficient quantity as to be detrimental to prevent proper bonding, finishing or strength of the granular-subbase material base. Granular subbase material shall be nonplastic, and the plasticity index shall not exceed 5.

Part 3.00 Execution

3.01 PERFORMANCE
A. Transporting Granular Subbase Material: The granular subbase material shall be transported to the point where it is to be used, over rock previously placed if practicable, and dumped on the end of the preceding spread. No hauling over the subgrade or dumping on the subgrade shall be done.
B. Spreading Granular Subbase Material:
1. The granular subbase material shall be spread uniformly, and all segregated areas of fine or coarse rock shall be removed and replaced with well-graded rock.
2. When the specified compacted thickness of the base is greater than 6 inches, the base shall be constructed in two courses. The thickness of the first course shall be approximately one-half the total thickness of the finished base, or enough additional to bear the weight of the construction equipment without disturbing the subgrade.
C. Compacting and Finishing Base:
1. General:
a. For single course base, after spreading is completed, the entire surface shall be scarified and then shaped so as to produce the required grade and cross-section after compaction.
b. For double course base, the first course shall be cleaned of foreign material, bladed and brought to a surface cross-section approximately parallel to that of the finished base. Prior to the spreading of any material for the upper course, the density tests for the lower course shall be made and the Engineer shall have determined that the required compaction has been obtained. After the spreading of the material for the second course is completed, its surface shall be finished and shaped so as to produce the required grade and cross-section after compaction and free of scabs and laminations.
2. Moisture Content: When the material does not have the proper moisture content to insure the required density, wetting or drying will be required. If the material is deficient in moisture, water shall be added and uniformly mixed in by discing the base course to its full depth. If the material contains an excess of moisture, such excess shall be reduced or removed until the required moisture content is attained before being compacted. Wetting or drying operations shall involve manipulation of the entire width and depth of the base as a unit.
3. Density Requirements: As soon as proper conditions of moisture are attained, the material shall be compacted to a density of not less than 98 percent of the maximum density as determined by AASHTO Designation T-180.
4. Density Tests:
a. During final compacting operations, if blading of any areas is necessary to obtain the true grade and cross-section, the compacting operations for such areas shall be completed prior to making the density determinations on the finished base.
b. At least three density determinations shall be made on each day's final operations on each course, and the density determinations shall be made at more frequent intervals if deemed necessary by the Engineer.
5. Correction of Defects:
a. If at any time the subgrade material should become mixed with the base course material, the Contractor shall dig out and remove the mixture, reshape and compact the subgrade and replace the materials removed with clean base material, which shall be shaped and compacted as specified above.
b. If cracks or checks appear in the base, either before or after priming, which in the opinion of the Engineer would impair the structural efficiency of the base course, the Contractor shall remove such cracks or checks by rescarifying, reshaping, adding base material where necessary and recompacting.
D. Testing Surface: The finished surface of the base course shall be checked with a template cut to required crown and cross-section and with a 15-foot straightedge laid parallel to the centerline of the road. All irregularities greater than 1/4 inch shall be corrected by scarifying and removing or adding granular subbase material as may be required, after which the entire area shall be recompacted as specified herein before.
E. Thickness Determinations:
1. The thickness of the compacted granular subbase material shall be measured at intervals of not more than 200 feet or one test per 10,000 square feet. Measurements shall be taken at various points on the cross-sections prior to the application of the prime coat.
2. The measurements shall be taken in holes through the base of not less than 3 inches in diameter. Where the compacted base is deficient by more than 1/2 inch from the thickness called for on the Drawings, the Contractor shall correct such areas by scarifying to a depth of at least 3 inches and adding granular material. The base shall be scarified and rock added for a distance of 100 feet in each direction from the edge of the deficient area. The affected areas shall then be brought to the required state of compaction and to the required thickness and cross-section.
F. Priming and Maintaining:
1. The prime coat shall be applied only when the base meets the specified density requirements and the moisture content in the top half of the base does not exceed 90 percent of the optimum moisture content of the base material. At the time of priming, the base shall be firm and unyielding.
2. The Contractor will be responsible for assuring that the true crown and grade are maintained with no rutting or other distortion and that the base meets all the requirements at the time the surface course is applied.

END OF SECTION

SECTION 02240
STABILIZED SUBGRADE

Part 1.00 General

1.01 WORK INCLUDED
A. The work specified in this Section consists of the construction of a stabilized subgrade where indicated on the Drawings. Construction shall be to the uniformity, density and bearing ratio specified hereinafter. Roadways, streets, and parking areas shall be stabilized to the depths and dimensions indicated on the Drawings.
B. Definitions: The stabilizing shall be stone per state DOT or as described hereinafter. The required bearing ratio value shall be obtained either by constructing the subgrade of selected materials from the roadway and borrow areas, or by stabilizing the subgrade material by the addition and mixing in of suitable stabilizing material. Such work shall be done in accordance with these specifications, lines, grades, thicknesses and notes as shown on the Drawings.

1.02 RELATED WORK
A. Section 02210 - Site Earthwork

FOR INFORMATIONAL PURPOSES ONLY

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KHA PROJECT # 047916134

Cheddar's SCRATCH KITCHEN

Issue Date: 02/15/23

REVISION INFORMATION

Restaurant #: 21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING
DARDEN CIVIL SPECIFICATIONS

CS1

Drawing name: K:\VRB_LDEV\047916 - Darden\134_CSK Riverview\CADD\PlanSheets\113-CS1 DARDEN CIVIL SPECIFICATIONS.dwg 113-CS1 DARDEN CIVIL SPECIFICATIONS May 08, 2023 1:01pm by: Liz.Meeks
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Part 2.00 Products

2.01 MATERIALS
A. General: The particular type of stabilizing material to be used shall be in accordance with Paragraph 2.01.E hereinafter and shall meet the following requirements:
B. Use of Materials from Existing Base:
1. When the utilization of materials from an existing base is called for, the Engineer will direct the locations, placing and distribution of such materials, and this work shall be done prior to the spreading of any additional commercial or local materials. Removal of any section of existing base will not be required until the need for it in maintaining traffic is fulfilled.
2. The utilization of materials from an existing base may be called for in combination with the designated type of stabilizing.
C. Commercial Materials:
1. General: Materials that are designated as Commercial Materials that are to be used for stabilizing may be either commercial limerock, limerock overburden or crushed shell, or state DOT specified.
2. Limerock: For limerock and limerock overburden, the percentage of carbonates of calcium and magnesium shall be at least 70, and the plasticity index shall not exceed 10. The gradation of both commercial limerock and limerock overburden shall be such that 97 percent of these materials will pass a 1–inch sieve.
3. Crushed Shell: Crushed shell for this use shall be mollusk shell (i.e., oysters, mussels, clams, cemented coquina, etc.). Steamed shell will not be permitted. This shell shall meet the following requirements:
a. At least 97 percent by weight of the total material shall pass a 3–1/2 inch screen and at least 50 percent by weight of the total material shall be retained on the No. 4 sieve.
b. Not more than 20 percent by weight of the total material shall pass the No. 200 sieve. The determination of the percentage passing the No. 200 sieve shall be made by washing the material over the sieve.
c. In the event that the shell meets the above requirements without crushing, crushing will not be required.
D. Local Material:
1. General: Local materials used for stabilizing may be high–bearing–value soils of sand–clay material. The material passing the 40–mesh sieve shall have a liquid limit not greater than 30 and a plasticity index not greater than 10.
2. Blending: No blending of materials to meet these requirements will be permitted unless authorized by the Engineer. When blending is permitted, the blended material shall be tested and approved before being spread on the roadway or parking area.
E. Type B Stabilization:
1. The type of materials, Commercial or Local, shall be at the Contractor's option.
2. No separate payment for stabilizing materials will be made.
3. Under this method, it shall be the Contractor's responsibility that the finished subgrade section meets the bearing value requirements, regardless of the quantity of stabilizing materials necessary to be added. Also under this method, full payment will be made for any areas where the existing sub–grade materials meet the design bearing value requirements without the addition of stabilizing additives, as well as areas where the Contractor may elect to place select high–bearing materials from other sources, within the limits of the stabilizing.
4. After the subgrade grading operations have been substantially completed, the Contractor shall make his own determination as to the quantity (if any) of stabilizing material, of the type selected by him, necessary for compliance with the bearing value requirements. The Contractor shall notify the Engineer of the approximate quantity to be added, and the spreading and mixing in of such quantity of materials shall meet the approval of the Engineer as to uniformity and effectiveness.

Part 3.00 Execution

3.01 PREPARATION
A. General:
1. Prior to the beginning of stabilizing operations, the area to be stabilized shall have been constructed to an elevation such that upon completion of stabilizing operations the completed stabilized subgrade will conform to the lines, grades and cross–section shown in the plans. Prior to the spreading of any additive stabilizing material, the surface of the subgrade shall be brought to a plane approximately parallel to the plane of the proposed finished surface.
2. The subgrade to be stabilized may be processed in one course, unless the equipment and methods being used do not provide the required uniformity, particle size limitation, compaction and other desired results, in which case, the Engineer will direct that the processing be done in more than one course.

3.02 APPLICATION
A. Stabilizing Material:
1. When additive stabilizing materials are required, the designated quantity shall be spread uniformly over the area to be stabilized.
2. When materials from an existing base are to be utilized in the stabilizing .at a particular location, all of such materials shall be placed and spread prior to the addition of other stabilizing additives.
3. Commercial stabilizing material shall be spread by the use of mechanical material spreaders except that where use of such equipment is not practicable other means of spreading may be used, but only upon written approval by the Engineer of the proposed alternate method.
B. Mixing:
1. The mixing shall be done with rotary tillers, or other suitable equipment. The area to be stabilized shall be thoroughly mixed throughout the entire depth and width of the stabilizing limits.
2. The mixing operations, as specified, will be required regardless of whether the existing soil, or any select soils placed within the limits of the stabilized sections, have the required bearing value without the addition of stabilizing materials.
C. Maximum Particle Size of Mixed Materials: At the completion of mixing, all particles of material within the limits of the area to be stabilized shall pass a 3–1/2 inch ring. Any particles not meeting this requirement shall be removed from the stabilized area or shall be broken down so as to meet this requirement.
D. Compaction: After the mixing operations have been completed and requirements for bearing value, uniformity and particle size have been satisfied, the stabilized area shall be compacted, in accordance with Paragraph 3.03.B hereinafter. The materials shall be compacted at a moisture content permitting the specified compaction. If the moisture content of the material is improper for attaining the specified density, either water shall be added or the material shall be permitted to dry until the proper moisture content for the specified compaction is reached.
E. Finish Grading: The completed stabilized subgrade shall be shaped to conform with the finished lines, grades and cross–section indicated in the Drawings. The subgrade shall be checked by the use of elevation stakes, or other means approved by the Engineer.
F. Requirements for Condition of Completed Subgrade:
1. After the stabilizing and compacting operations have been completed, the subgrade shall be firm and substantially unyielding, to the extent that it will support construction equipment and will have the bearing value required by the Drawings.
2. All soft and yielding material, and any other portions of the subgrade that will not compact readily, shall be removed and replaced with suitable material and the whole subgrade brought to line and grade, with proper allowance for subsequent compaction.
G. Maintenance Of Completed Subgrade: After the subgrade has been completed as specified above, the Contractor shall maintain it free from ruts, depressions and any damage resulting from the hauling or handling of materials, equipment, tools, etc. It shall be the Contractor's responsibility to maintain the required density until the subsequent base or pavement is in place. Such responsibility shall include any repairs, replacement, etc., of curb and gutter, sidewalk, etc., which might become necessary in order to recompact the subgrade in the event of underwash or other damage occurring to the previously compacted subgrade. Any such work required for recompaction shall be at the Contractor's expense. Ditches and drains shall be constructed and maintained along the completed subgrade section to provide adequate drainage.

3.03 FIELD QUALITY CONTROL
A. Bearing Value Requirements:
1. General: Bearing value samples will be obtained and tested by the Engineer at completion of satisfactory mixing of the stabilized area. For any area where the bearing value obtained is deficient from the value indicated in the Drawings, in excess of the tolerances established herein, additional stabilizing material shall be spread and mixed in accordance with 3.02.B.1 & 2. This reprocessing shall be done for the full width of the roadway being stabilized and longitudinally for a distance of 50 feet beyond the limits of the area in which the bearing value is deficient. The Contractor shall make his own determination of the quantity of additional stabilizing material to be used in reprocessing.
B. Density Requirements:
1. General: Within the entire limits of the width and depth of the areas to be stabilized, the minimum density acceptable at any location will be 98 percent of the maximum density as determined by AASHTO T–180, Test Method D.
C. Testing: Tests for the subgrade bearing capacity and compaction shall be located no more than 300 feet apart and shall be staggered to the left, right, and on the centerline of roadways, and at a frequency of one test per 1,100 square yards of stabilized area in parking areas, at locations to be determined by the Engineer.

END OF SECTION

SECTION 02276
TEMPORARY EROSION AND SEDIMENTATION CONTROL

Part 1.00 General

1.01 WORK INCLUDED
A. The work specified in this Section consists of designing, providing, maintaining and removing temporary erosion and sedimentation controls as necessary.
B. Temporary erosion controls include, but are not limited to, grassing, mulching, seeding, watering and reseeding on–site surfaces and spoil and borrow area surfaces, and providing interceptor ditches of ends of berms, installing staked silt barriers or floating silt barriers at those locations which will ensure that erosion and pollution during construction will be prevented in accordance with state DOT Standard Specifications for Road and Bridge Construction.
C. Contractor is responsible for providing effective temporary erosion and sedimentation control measures during construction or until final controls become effective, so as to ensure that sedimentation and/or turbidity problems are not created in the receiving water bodies. The Contractor shall be responsible for the correction of any erosion, shoaling, or water quality problems that result from the construction or operation of the surface water management system.
D. Sufficient precautions shall be taken during construction to minimize the runoff of polluting substances such as silt, clay, fuels, oils, bitumens, calcium chloride, or other polluting materials harmful to humans, fish, or other life, into the supplies and surface waters of the State. Control measures must be adequate to assure that turbidity in the receiving water will not be increased in the receiving water more than 25 nephelometric turbidity units (NTU). Special precautions shall be taken in the use of construction equipment to prevent operations that promote erosion.
E. Temporary sedimentation controls include, but are not limited to, silt dams, traps, barriers, and appurtenances at the foot of sloped surfaces which will ensure that sedimentation pollution will be either eliminated or maintained within acceptable limits as established by the Owner.
F. Temporary erosion and sediment control measures shall include effective means to maintain water quality prior to discharge from project site.

1.02 RELATED WORK
A. Section 02210– Site Earthwork
B. Section 02932 – Seeding and Mulching
C. Section 02934 – Sodding

1.03 SUBMITTALS
A. The Contractor shall be required to submit to state and local agencies (with copy to the Owner and Engineer) for review and approval the program for temporary erosion and sediment control to be implemented by the Contractor prior to commencing construction. All additional permits required by the agencies shall be obtained and paid for by the Contractor.
B. The approval by the state and local agency of the Contractor's program in no way relieves the Contractor from the responsibility to meet all applicable rules, regulations, and permitting conditions.

Part 2.00 Products

2.01 EROSION CONTROL
A. Materials to control erosion and sedimentation shall comply with Section 104 of FDOT Standard Specifications for Road and Bridge Construction and FDOT Roadway and Traffic Design Standards, Index No. 103.

2.02 SEDIMENTATION CONTROL
A. Install and maintain silt dams, traps, barriers, and other appurtenances as necessary. Hay bales, which deteriorate, and filter stone which dislodges, shall be replaced.

Part 3.00 Execution

3.01 PREPARATION
A. Minimum procedures for grassing are:
1. Scarify slopes to a depth of not less than six inches and remove large clods, rock, stumps, roots larger than ½–inch in diameter, and debris.
2. Sow seed within twenty–four (24) hours after the ground is scarified with either mechanical seed drills or rotary band seeders.
3. Apply mulch loosely and to a thickness of between ¾–inch and 1–1/2 inches.
4. Apply netting over mulched areas on sloped surfaces.
5. Roll and water seeded areas in a manner that will encourage sprouting of seeds and growing of grass. Reseed areas which exhibit unsatisfactory growth. Backfill and seed eroded areas.
B. Floating Silt Barriers:
1. This work shall consist of installing, maintaining and removal of floating silt barriers to contain turbidity that may occur as the result of dredging, filling, dewatering, or other construction activities in Waters of the State or any of the existing on–site lakes, ponds, or storm–water management systems.
2. The type of barrier used, the deployment and maintenance of the barrier shall be such as to minimize dispersion of turbid waters and will not cause an increase in the existing permitted turbidity from the construction site into the receiving waters.

3.02 PERFORMANCE
A. Should any of the temporary erosion and sedimentation control measures employed by the Contractor fail to produce results which comply with the requirements of this specification, the Contractor shall immediately take whatever steps necessary to correct the deficiency.

END OF SECTION

SECTION 02285
TERMITE CONTROL

Part 1.00 General

1.01 SECTION INCLUDES
A. Soil poisoning treatment.
B. Warranty

1.02 INTENT
A. To guard against termites and other common ground insects detrimental to wood construction. Materials mentioned in Part 2.00 of this Specification are suggested for use but shall not be used if disallowed by governing laws and/or ordinances.

1.03 QUALITY ASSURANCE
A. Applicator:
Company specializing in soil treatment for termite control with five years documented experience.
B. Materials:
Provide certification that toxicants conform to requirements.

1.04 REGULATORY AGENCY REQUIREMENTS
A. Conform to governing authority requirements for application licensing and authority to use toxicant chemicals.

1.05 SUBMITTALS
A. Product Data:
Submit per SUBMITTALS Section; Indicate toxicants to be used, composition by percentage, dilution schedule, and intended application rate. Owner's acceptance is required prior to shipment.
B. Manufacturer's Installation Instructions: Submit per SUBMITTALS Section.

1.06 GUARANTEE
A. Bonded Guarantee which covers against invasion or propagation of subterranean termites, damage to building or building contents caused by termites; repairs to building or building contents so caused, for a period of five years after substantial completion; subject to annual renewal thereafter.

Part 2.00 Products

2.01 TOXICANT CHEMICAL(S)
A. Termidor, BASF – apply per manufacturer's recommendations.

2.02 MIXES
A. Dilute toxicant chemical to a percent solution specified by manufacturer.

Part 3.00 Execution

3.01 DELIVERY
A. Deliver materials in original unopened manufacturer's packaging with labels and seals identifying content.

3.02 INSPECTION
A. Verify exposed soil surfaces are unfrozen, sufficiently dry to absorb toxicant, ready to receive treatment. Beginning of application means acceptance means acceptance of soil conditions.

3.03 APPLICATION
A. Safety:
Apply materials in accord with recommended safety precautions for materials used.
B. Toxicant Chemicals:
Apply toxicant immediately prior to installation of vapor barrier under slab–on–grade or finish grading outside foundation walls. Apply extra treatment to structure penetrations, pipe, ducts, and other soil penetrations. Apply as a coarse spray to ensure uniform distribution. Coordinate soil treatment at foundation perimeter with finish grading and landscaping work to avoid disturbance of treated soil.

3.04 CLEAN–UP
A. Upon completion of work of this Section, remove related debris from premises.

END OF SECTION

SECTION 02507
PRIME AND TACK COATS

Part 1.00 General

1.01 WORK INCLUDED
A. The work specified in this Section consists of an application of bituminous material on previously prepared bases and on existing pavement surfaces in accordance with these specifications and in conformity with the lines, grades, dimensions and notes shown on the Drawings.

Part 2.00 Products

2.01 MATERIALS
A . Prime Coat: Unless otherwise indicated, the material used for the prime coat shall be cutback Asphalt Grade RC–70 or RC–250 and shall conform to the requirements specified in AASHTO Designation M–81. Unless otherwise indicated, the use of either RC–70 or RC–250 shall be at the Contractor's option.
B. Tack Coat: The material used for the tack coat shall be emulsified asphalt, Grade RS–2 and shall conform to the requirements specified in AASHTO Designation M–140.

2.02 EQUIPMENT
A. The pressure distributor used for placing the tack or prime coat shall be equipped with pneumatic tires having sufficient width of rubber in contact with the road surface to avoid breaking the bond of or forming a rut in the surface. The distance between the centers of openings of the outside nozzles of the spray bar shall be equal to the width of the application required, within an allowable variation of 2 inches. The outside nozzle at each end of the spray bar shall have an area of opening of not less than 25 percent, nor more than 75 percent in excess of the other nozzles which shall have uniform openings. When the application covers less than the full width, the normal opening of the end nozzle at the junction line may remain the same as those of the interior nozzles.

Part 3.00 Execution

3.01 PREPARATION
A. Before applying any bituminous material, all loose material, dust, dirt, and foreign material, which might prevent proper bond with the existing surface, shall be removed. Particular care shall be taken to clean the outer edges of the strip to be treated in order to ensure that the prime or tack coat will adhere.
B. When the prime or tack coat is applied adjacent to curb and gutter, or any other concrete surface (except where they are to be covered with a bituminous wearing course), such concrete surfaces shall be protected by heavy paper or other protective material while the prime or tack coat is being applied. Any bituminous material deposited on such concrete surfaces shall be removed immediately.

3.02 WEATHER LIMITATIONS
A. No bituminous material shall be applied when the air temperature is less than 50°F in the shade, or when the weather conditions or the condition of the existing surface is unsuitable. In no case shall bituminous material be applied while rain is falling or when there is water on the surface to be covered.

3.03 APPLICATION OF PRIME COAT
A. After the base has been finished; the full width of surface shall be swept with a power broom supplemented with hand brooms and mechanical blowers prior to the application of the prime coat. Care shall be taken to remove all loose dust, dirt and objectionable matter. If deemed necessary, the base shall be lightly sprinkled with water immediately in advance of the prime coat. The prime coat shall be applied to the full width of the base.
B. The temperature of the prime material shall be such as to ensure uniform distribution. The material shall be applied with a pressure distributor as specified above. The amount to be applied shall be sufficient to coat the surface thoroughly and uniformly without any excess to form pools or to flow off the base. For limerock base, the rate of application shall not be less than 0.10 gallons per square yard; for shell base, the rate of application shall not be less than 0.15 gallons per square yard; for soil cement base, the rate of application shall not be less than 0.15 gallons per square yard.
C. If the roadway is to be opened for use following the application of the prime material, a light uniform application of clean sand shall be applied and rolled. The sand shall be nonplastic, shall be free from silt and rock particles and shall not contain any sticks, vegetation, grass, roots or organic matter. After the sand covering has been applied, the surface may be opened to traffic.

3.04 APPLICATION OF TACK COAT
A. In general, a tack coat will not be used on primed bases except in areas which have become excessively dirty and cannot be cleaned or where the prime has cured and lost all of its bonding effect.
B. No tack coat shall be applied until the primed base or leveling course has been cleaned and is free from sand, dust or other objectionable material.
C. The tack coat shall be applied with a pressure distributor as specified above. It shall be heated to a suitable consistency and applied in a thin uniform layer at the rate between 0.02 gallons and 0.08 gallons per square yard.
D. The tack coat shall be applied sufficiently in advance of the laying of the wearing surface to permit drying, but shall not be applied so far in advance or over such an area as to lose its adhesiveness as a result of being covered with dust or other foreign material. Suitable precautions shall be taken by the Contractor to protect the surface while the tack coat is drying and until the wearing surface is applied.

END OF SECTION

SECTION 02512
ASPHALTIC CONCRETE PAVING

Part 1.00 General

1.01 SCOPE OF WORK
A. The work specified in this Section consists of the construction of asphaltic concrete surface courses composed of a mixture of aggregates, mineral filler and asphalt cement properly laid upon a prepared base, or a newly constructed binder course, in accordance with these specifications and all requirements of State Department of Transportation Standard Specifications (latest edition) and in conformity with the lines, grades, thickness and typical cross section shown on the Drawings. Contractor shall furnish Types I, S–I or S–III asphaltic concrete as specified by the Drawings. Asphaltic concrete pavement around drain inlets and catch basins shall conform to the following provisions, except placing material may be by hand methods.

1.02 RELATED WORK
A. Section 02210 – Site Earthwork
B. Section 02234 – Soil Cement Base
C. Section 02240 – Stabilized Subgrade
D. Work and materials will conform to requirements of the state for transportation Standard Specifications for Road and Bridge Construction (latest edition) except that the use of recycled or milled asphalt will not be permitted. In case of conflict between these specifications and State Department of Transportation Standard Specifications for Road and Bridge Construction (latest edition), the more stringent specification shall govern.

1.03 QUALITY ASSURANCE
A. Laboratory analysis by a Certified Testing Laboratory on all materials shall be completed and the materials accepted by the Engineer prior to placement.
B. The Contractor shall submit manufacturer's Certificate of Compliance for approval of paving materials.
C. The Contractor shall submit a statement of source of materials and design mix formula for approval prior to processing at the asphalt plant.

Part 2.00 Products

2.01 MATERIALS
A. Bituminous Material: Asphalt cement, Viscosity Grade AC–20, shall conform to the requirements of State Standard Specifications for Road and Bridge Construction (latest edition).
B. Coarse Aggregate:
1. The coarse aggregate shall be composed of clean, durable limerock. When subjected to the Los Angeles Abrasion Test, (AASHTO T–96), the loss shall not exceed 45 percent.
2. Extraneous Substances: All coarse aggregate shall be washed and free from disintegrated pieces, salt, alkali, vegetable matter and adherent coating.
a. The weight of the extraneous substances shall not exceed the following percentages:

	Percent
Coal and Lignite	1.00
Clay Lumps	0.05
Cinders and Clinkers	0.05
Soft Fragments	10.00
Free Shells	1.00
Sticks (Wet)	0.03
Material Passing No. 200 Sieve	1.75

b. In addition, the sum of the percentages of all materials listed above shall not exceed 10 percent. Coarse aggregate containing any appreciable amount of phosphate shall not be used.
3. Stone: Pre–Cenozoic limestone and dolomites shall not be used as crushed–stone aggregates, either coarse or fine, for wearing courses of asphaltic concrete surface courses. This specifically includes materials from the Ketona Dolomite (Cambrian), Newala Limestone (Lower Ordovician), Bangor Limestone (Mississippian), and other formations of similar composition and origin occurring in central and northern Alabama and Georgia.
4. Slag: Slag shall be clean, tough and durable. It may be either air–cooled blast–furnace slag or phosphate slag. It shall be reasonably uniform in density and quality, and free from deleterious substances other than as permitted above. It shall contain not more than 1.5 percent of sulfur. The dry–rodded weight shall be not less than 70 pounds per cubic foot. The loss, when the slag is subjected to the Los Angeles Abrasion Test, shall not exceed 45 percent.
C. Fine Aggregate:
1. Fine aggregate concrete shall consist of natural sand, stone screenings, slag screenings or a combination thereof, composed of clean, tough, angular grains, free from clay, loam or other foreign matter. Stone or slag screenings shall be produced from materials complying with the abrasion requirements for coarse aggregate specified above.
2. Any screenings used in the combination of aggregate shall contain not more than 15 percent of material passing the No.200 sieve and shall be washed if necessary to meet this requirement.
3. The natural sand portion of the fine aggregate other than screenings shall be siliceous containing not more than 10 percent of material passing the No. 200 sieve.
4. The fine aggregate, when tested by means of laboratory sieves, shall meet the following requirements:

Passing Sieve	Retained On Sieve	Percent By Weight
No. 4		90 - 100
No. 4	No. 10	0 - 15
No. 10	No. 40	15 - 50
No. 40	No. 80	25 - 60
No. 80	No. 200	8 - 40
No. 200		0 - 10

5. Fine aggregate containing more than 1.00 percent of phosphate shall not be used.
D. Mineral Filler:
1. Mineral filler shall consist of limerock dust, Portland cement, slag dust, hydrated lime or other inert mineral matter approved by the Engineer and conforming to the following gradation requirements:
Total Passing No. 30 Sieve .... 100 Percent
Total Passing No. 80 Sieve .... 95 Percent (Min.)
Total Passing No. 200 Sieve .... 65 Percent (Min.)
2. The mineral filler shall be thoroughly dry and free from lumps consisting of
aggregations of fine particles. Ground phosphate will not be allowed as a mineral filler.

2.02 GENERAL COMPOS–ON OF MIXTURE
A. The bituminous mixture shall be composed of a combination of aggregate (coarse, fine, or mixtures thereof), mineral filler, if required, and bituminous material. The several aggregate fractions shall be sized, uniformly graded and combined in such proportions that the resulting mixture will meet the grading and physical properties of the approved job mix formula
B. In all cases, the job mix formula shall be within the design ranges specified in the following table:

Gradation Design Range			
Sieve Size	Percent by Weight Passing		
	Type S-I	Type S-III	Type I
3/4 inch	100		
1/2 inch	88-100	100	100
318 inch	75-93	88-100	88-100
No. 4	47-75	60-90	54-85
No. 10	31-53	40-70	35-50
No. 40	19-35	20-45	16-41
No. 80	7-21	10-30	7-28
No. 200	2-7	2-7	4-8

C. Asphalt cement (Bitumen) shall consist of 4–1/2 to 9 percent by weight of the total mix as determined by job mix formula. For highly absorptive aggregates, the upper limit may be raised.
D. Where hand placing and finishing is permitted for small and irregular areas, such as turnouts, crossovers, acceleration and deceleration lanes, etc., the portion of the Grade No. 16 coarse aggregate retained on a No. 4 sieve may be omitted from the mixture and the percent by weight of the coarse aggregate passing the No. 4 sieve and retained on the No. 10 sieve shall be within the range specified for the total coarse aggregate in the mix.
E. Proportions of Silica Sand and Local Materials: Not more than 25 percent by weight of the total aggregate used shall be silica sand or local materials. The silica sand shall conform to all requirements of specificatons and the local materials shall meet the requirements of state DOT Standard Specifications for Road and Bridge Construction (latest edition).

2.03 FORMULA FOR JOB MIX
A. The general composition limits prescribed above are master ranges of tolerances to govern mixtures made from any materials meeting the specifications, and they are maximum and minimum for all cases. A closer control appropriate to the job materials will be required for the specific project in accordance with the job mix formula.
B No work shall be started until the Engineer has approved the job mix formula.
C. Materials that will be used to make up the approved job mix should be stockpiled in sufficient quantity to meet the demands for the entire project in progress. If this is not practicable, care must be taken to ensure adequate quality control of the materials used in each job mix. Should the source of supply for the materials used in the job mix be changed, or should the materials from the source vary appreciably from the materials used in the job mix formula, the job mix formula must be altered accordingly.
D. Combined dry aggregate gradation of the hot bins shall be within the following limits of the job mix formula:

Sieve Size	Tolerance Percent		
	One Test	Two Tests	Three Tests
3/4 inch	5.0	3.5	2.9
1/2 inch	5.0	3.5	2.9
3/8 inch	5.0	3.5	2.9
No. 4	5.0	3.5	2.9
No. 10	5.0	3.5	2.9
No. 40	4.0	2.8	2.3
No. 80	3.0	2.1	1.7
No. 200	2.0	1.4	1.2

E. After the job mix formula is established, each mix for the project shall meet the approved formula within the following tolerances:

Characteristic	Tolerance
Asphalt Content (Extraction)	± 0.70%
Asphalt Content (Printout)	± 0.30%
Passing No. 10 Sieve	± 6.50%
Passing No. 200 Sieve	± 3.00%

F. In no case shall a job mix that is within the tolerances stated above be such that it falls out of the master range.
G. Samples of the mixture in use will be taken as many times daily as is necessary in the opinion of the Engineer. The mixtures shall be maintained uniformly throughout the project within the above tolerances.
H. Job materials found to have characteristics requiring a content of bituminous material less than is indicated in the formula prescribed above, will be rejected or adjusted to forma blend, which will produce a balanced mixture under the terms of the formula. Where job materials otherwise meeting specifications are found, on account of highly absorptive or other special characteristics, to produce an acceptable balanced mix only if the bituminous material content is increased over The amount specified, the mixture may be accepted provided that the job mix shall be adjusted to require the use of such additional bituminous material content.
I. The asphaltic content shall be such for the material used that when the mixture is tested, in accordance with ASTIVI Designation D 1559, the stability shall be at a maximum with an optimum asphalt cement content. Physical properties of the mix shall be as shown in the following table:

Mix Type	Minimum Marshall Stability lbs	Flow (0.01 in.)	Minimum VMA (%)	Air Voids (%)
S-I	1500	8-14	14	3-5
S-III	1000	8-16	15	3-7
I	1000	8-14	14	3-5

Part 3.00 Execution

3.01 PREPARATION OF ASPHALTIC CEMENT
A. The asphalt cement shall be delivered to the asphalt plant at a temperature not to exceed 350°F and shall be maintained within a range of 230°F to 350°F in advance of mixing operations. Heating within these limits shall be constant and wide fluctuations of temperature during a day's production will not be permitted.

3.02 PREPARATION OF AGGREGATES
A. Stockpiling coarse aggregate shall be done in such a manner so the aggregate will not segregate.
B. All aggregates to be blended or proportioned shall be placed in separate bins at the cold hopper and proportioned by means of calibrated gates or other approved devices. When two or more aggregates are blended, the use of two or more bins shall be employed for the blending of such material.
C. The aggregates shall be heated and dried at the paving plant before entering the mixer. The temperature of the aggregates shall be so controlled that the temperature of the completed mixture at the plant will fall within the permissible range allowed by these Specifications. Any dried aggregated contaminated with fuel oil shall be wasted.

3.03 PREPARATION OF MIXTURE.
A. Batch Mixing
1. The dried aggregate, prepared as described herein before and combined in batches to meet the job mix formula by weighing each separate bin size, shall be conveyed to the empty mixer.
2. The hot asphalt cement, accurately measured, shall then be introduced, and the mixing continued until the mixture is thoroughly uniform and homogeneous. The total mixing time in no case shall be less than 35 seconds. Each batch must be kept separate throughout the weighing and mixing operations.
B. Continuous Mixing: The dried aggregate, prepared as described herein before and proportioned to meet the job mix formula by volumetric measurement, shall be introduced into the mixer. The hot asphalt cement shall be introduced into the mixer in synchronization with the feeding of aggregate. The quantity shall be measured by volume. Mixing shall be sufficient to produce a thoroughly uniform and homogeneous mixture.
C. General: The ingredients of the mix shall be heated and combined in such a manner as to produce a mixture which shall beat a temperature, when discharged from the pugmill or surge bin, between the limits of 230°F and 310°F.

3.04 TRANSPORTATION OF MIXTURE
A. The mixture shall be transported in tight vehicles previously cleaned of all foreign material and, if necessary, each load shall be covered with a waterproof canvas cover of sufficient dimensions to protect it from weather conditions. The inside surface of the truck bodies may be thinly coated with soapy water, or a mixture of water with not more than five percent of lubricating oil, but no excess of either shall be used. After the truck bodies are coated and before any mixture is placed therein, they shall be raised so that all excess water will drain out. Kerosene, gasoline or similar products shall not be used to prevent adhesion.

3.05 LIMITATIONS FOR SPREADING
A. The mixture shall be spread only when the surface is properly prepared and is intact, firm, cured and dry. No mixture shall be spread when the air temperature is less than 40°F, or when the spreading cannot be finished and compacted during daylight hours. The temperature of the mix at the time of spreading shall not be less than 230°F.

3.06 PLACING MIXTURE
A. Upon arrival, the mixture shall be dumped into an approved mechanical spreader and immediately spread and struck off to the full width required and to such appropriate loose depth for each successive course that when the work is completed the required thickness or weight of mixture per square yard will be secured. An excess amount of mixture shall be carried ahead of the screed at all times. Hand raking shall be done behind the machine as required.
B. In limited areas, where, on account of irregularities or unavoidable obstacles, the use of mechanical spreading and finishing equipment is impracticable, the mixture may be spread by hand, when so authorized by the Engineer.
C. The mixture shall be laid only when the surface to be covered is dry and only when weather conditions are suitable. All defective areas in the foundation shall be replaced in advance of laying the mixture.
D. All structures which will be in actual contact with the asphaltic mixture, including the vertical faces of existing pavements, shall be painted with a uniform coating of asphalt material to provide a closely bonded, watertight joint.
E. When necessary, due to the traffic requirements, the mixture shall be laid in strips in such manner as to provide for a passage of traffic. When the road is closed to traffic, the mixture may be laid the full width of pavement, by machines traveling in echelon.
F. Before any rolling is started, the surface shall be checked, any inequalities adjusted, and the drippings, fat sandy accumulations from the screed, and fat spots from any source. shall be removed and replaced with satisfactory material.

3.07 COMPACTING MIXTURE
A. After the spreading, the mixture shall be rolled when it has set sufficiently or come to the proper condition to be rolled, and when the rolling does not cause undue displacement.
B. Rolling shall begin at the center and progress toward the outside, paralleling the centerline of the roadway, uniformly lapping at least one–half of the width of the roller.
C. The motion of the roller shall' at all times be slow enough to avoid displacement of the mixture, and any displacement shall at once be corrected by the use of rakes and fresh mixture where required. The rolling shall include transverse, longitudinal, diagonal and, where practicable, crescent rolling, as may be necessary to obtain the specified density.
D. The seal rolling with steel–wheeled rollers weighing from 5 tons to 12 tons shall follow as close behind the spreader as is possible without picking up, displacing, or blistering the material. Rolling with the self–propelled pneumatic–tired rollers shall follow as soon as possible and as close behind the seal rolling as the heat of the mixture will permit. This rolling shall be done such that the self–propelled traffic roller shall cover every area of the surface with at least six passes. This final rolling shall be done before the pavement temperature is lower than 140°F, and shall be continued until all roller marks or tire marks are eliminated. Self–propelled, pneumatic–tired rollers shall be used for the rolling of patching and leveling courses. At the option of the Contractor, a steel–wheeled roller may be used to supplement the self–propelled pneumatic–tired rollers, but not more than one steel–wheeled roller may be used in conjunction with the necessary number of selfpropelled pneumatic–tired rollers. After final compaction, the finished pavement shall at no point have a density less than 95 percent of the laboratory compacted density. Rolling with the self–propelled pneumatic–tired roller shall proceed at a speed from 6 to 10 miles per hour and the rate of rolling shall not exceed 3,000 square yards per hour per roller. A sufficient number of self–propelled pneumatic–tired rollers shall be used so that the rolling of the surface for the required number of passes within this maximum rolling rate shall not delay any other phase of the placing operation, nor result in excessive cooling of the mixture before the rolling is complete. In the event that the rolling is not properly maintained to schedule as outlined above, the laying operation shall be discontinued until the rolling operations have caught up to the spreader(s).
E. In all places inaccessible to a roller, such as adjacent to curbs, headers, gutters, bridges, manholes, etc., the required compaction shall be secured with tamps. Depressions which may develop before the completion of the rolling shall be remedied by loosening the mixture laid and adding new material to bring such depressions to a true surface.
F. Should any depressions remain after final compaction has been obtained the mixture shall be removed sufficiently and new material added to form a true and even surface.
G. The mixture, after compaction, shall be of the thickness shown on the Drawings, The surface, after compaction, at no place shall show an excess of asphalt, and any area showing such excess, or other defect, shall be cut out and replaced with fresh mixture and immediately compacted to conform with the surrounding area. Any mixture which becomes loose or broken, mixed or coated with dirt or in any way defective prior to laying the wearing course shall be removed and replaced with fresh mixture which shall be immediately compacted to conform with the surrounding area.
H. Gasoline or oil from rollers shall not be allowed to deposit on the pavement and any pavement damaged by such deposits shall be removed and replaced.
I. Any mixture remaining unbonded after rolling shall be removed and replaced.

3.08 JOINTS
A. Transverse Joints: At the end of each day's work, or whenever the laying is to be discontinued for such length of time as to allow the mixture to become chilled, transverse joints shall be formed either by laying a board, equal in thickness to the compacted thickness of the pavement, across the width of strip being spread and rolling the mixture against the board, or by using paper or sand, provided in either case the asphalt is cut back to well bonded material of the required thickness before placing additional asphalt.
B. Longitudinal Joints: Where only a portion of the width of pavement is to be laid and opened to traffic, longitudinal joints shall be formed rolling the exposed edge of the strip first laid. When the adjacent strip is constructed, the edge of the mixture in place shall be trimmed back so as to expose an unsealed or granular vertical surface. When the strip first laid is closed to traffic, the edge shall not be sealed, but shall be left vertical and the adjacent strip placed against it without trimming.
C. General: The exposed edge of the transverse joints, trimmed or formed as provided above, shall be painted with a thin coat of hot asphalt cement just prior to the laying of fresh surface course mixture adjacent. The fresh mixture shall be raked against the joint and rolled.

3.09 FIELD QUALITY CONTROL
A. Surface Requirements:
1. For the purpose of testing the finished surface, a 15–foot straightedge and a standard template cut to the true cross section of the road shall at all times be available on the work site. The Contractor shall provide or designate some employee whose duty is to handle the straightedge and template in checking all rolled surfaces, under the direction of the Engineer.
2. The finished surface shall be such that it will not vary more than 1/4 inch from the template cut to the cross section of the road, not more than 3/16 inch from the 15foot straightedge applied parallel to the center line of the pavement. Any irregularity of the surface exceeding the above limits shall be corrected. Depressions that may develop after the initial rolling shall be remedied by loosening or removing the mixture and adding new material to bring the areas to a true surface. No skin patching shall be done. Such portions of the completed pavement that are defective in surface compaction or in composition, or that do not comply with all other requirements of these specifications, shall be taken up and replaced with suitable mixture, properly laid in accordance with these specifications and at the expense of the Contractor.
B. Removing and Replacing: If correction is made by removing and replacing the pavement, the removal must be for the full depth of the course and extend at least 50 feet on either side of the defective area, for the full width of the paving lane.
C. Overlaying: If correction is made by overlaying, the overlay shall cover the length of the defective area and taper uniformly to a featheredge thickness at a minimum distance of 50 feet on either side of the defective area. The overlay shall extend full width of the roadway. Care shall be taken to maintain the specified cross slope. The mix used for the overlay may be adjusted as necessary for this purpose by the Engineer. Overlaying will not be permitted, when the finished pavement surface is a friction course or abuts concrete curbs.
D. Other Methods: For courses which will not be the final pavement surface, correction of minor straightedge deficiencies by methods other than specified above may be approved by the Engineer.
E. Thickness Requirements: The thickness of the compacted asphaltic concrete surface course shall be determined by coring and shall be no less than that shown on the Drawings. Any surface course found to be less than the thickness shown on the Drawings by greater than ¼–inch shall be removed and replaced.
F. Protection of Pavement: After the completion of the pavement, no vehicular traffic of any kind shall be permitted on the pavement until it has set sufficiently to prevent rutting or other distortion.

3.10 TESTING AND REPORTS
A. Testing for performance in accordance with these Specifications will be paid for by the Owner. The frequency of testing shall be a minimum of that specified below and at the locations as directed by the Engineer. However, any retesting necessary in areas not initially meeting these Specifications shall be paid for by the Contractor.
B. Prior to the start of the placing of the asphaltic concrete, the job mix formula prepared by a certified material–testing laboratory shall be submitted to and be approved by the Engineer. All job mix design formulas design shall be current within the last 12 months.
C. During construction of the asphaltic concrete wearing surface, the following tests must be completed and reports submitted to the Engineer before acceptance can be given:
1. Extraction stability and gradation of combined aggregate –1 test per day. Bitumen content, stability and gradation of aggregates to conform to intent of job mix formula.
2. Density and depth checks –1 test per 250 lineal feet of roadway (minimum 2 tests per street) and one test per 2,700 square yards of parking lot area. Minimum acceptable density for each course of asphaltic concrete material shall be 95 percent of the design unit weight in the job mix formula.

END OF SECTION

SECTION 02528
CONCRETE SIDEWALK; CURB AND GUTTER, AND TRAFFIC SEPARATOR

Part 1.00 General

1.01 WORK INCLUDED

A. The work included in this Section consists of furnishing all labor, material, equipment and transportation for the construction of the concrete sidewalks, curb and gutter, and traffic separator to the lines and grades as shown on the Drawings.

1.02 RELATED WORK
A. Section 02210 – Site Earthwork
B. Section 03000 – Concrete (Site Work)

1.03 SUBMITTALS
A. All materials specified shall be certified by the producer or manufacturer that the furnished material meets the specific requirements of the specifications.

Part 2.00 Products

2.01 MATERIALS
A. Concrete: Concrete shall be Class B that conforms to the requirements of Section 03000 – Concrete (Site Work).
B. All other necessary materials shall comply with those described in Article 2.01 of Section 03000 – Concrete (Site Work).

Part 3.00 Execution

3.01 PREPARATION
A. Subgrade Condition:
1. The finished subgrade shall be maintained in a smooth, compact condition and any areas that are disturbed prior to placing of the concrete shall be restored at the Contractor's expense. The subgrade shall be moist at the time the concrete is placed. . Water shall be uniformly applied ahead of the pouring operations. Large rocks and other obstructions shall be removed to a minimum depth of 6 inches below the finished subgrade elevation, and the space shall be backfilled with sand, base course material or other suitable material, which shall be thoroughly compacted by rolling or tamping.
2. The subgrade shall be accurately trimmed to the required elevation with a ¼–inch tolerance. High areas shall be trimmed to proper elevation. Low areas may be filled with suitable material and compacted to the specified density or filled with concrete integrally with the placing of the pavement.
B. Setting Forms: The forms shall be accurately set to line and grade and such that they rest firmly, throughout their entire length upon the compacted subgrade surface. Forms shall be jointed neatly and tightly and braced to resist the pressure of the concrete and the finished operations. The alignment and grade of all forms shall be approved before and immediately prior to the placing of concrete.
C. Slipforming: The slipforming method will be allowed, provided that an acceptable finished product, true to line, grade, and cross–section is consistently produced.
D. Mixing Concrete: Concrete shall be mixed in accordance with the requirements of Section 03000 –Concrete (Site Work).

3.02 INSTALLATION
A. Placing Concrete:
1. The concrete shall be distributed on the subgrade to such depth that, when it is consolidated and finished, the thickness required by the Drawings will be obtained at all points and the surface will at no point be below the grade specified for the finished surface. The concrete shall be deposited on the subgrade in a manner that will require as little rehandling as possible. Placing of the concrete shall be continuous between transverse joints, without the use of intermediate bulkheads.
2. Reinforcement shall be placed as shown on the Drawings and shall be maintained at this location during the placing and finishing operations.
3. Concrete shall be thoroughly consolidated against and along the faces of all forms by means of vibrators. Vibrators shall not be permitted to come in contact with the subgrade or a side form. Vibration at any one location shall not continue so long as to produce puddling or the accumulation of excessive grout on the surface.
B. Striking–off, Consolidating and Finishing Concrete: Immediately after the placing, the concrete shall be struck off, consolidated and finished, to produce a finished product conforming to the cross–section, width and surface finish required by the Drawings and Specifications.
C. Straightedging and Surface Corrections:
1. After floating has been completed and the excess water removed, but while the concrete is still in a plastic state, the surface of the concrete shall be tested for trueness with an accurate 10–foot straightedge. The straightedge shall be furnished by the Contractor. The straightedge shall be held in successive positions parallel to the walk centerline, in contact with the surface, and the whole area tested from one side of the slab to the other as necessary. The advance along the walk shall be in successive stages of not more than one–half the length of the straightedge. Any depressions shall be immediately filled with freshly mixed concrete and struck–off, consolidated and refinished. High areas shall be cut down and refinished. Straightedge testing and surface correction shall continue until the entire surface appears to conform to the required grade and cross–section. All surface irregularities exceeding 1/4 inch in 10 feet shall be corrected.
D. Final Finish: For sidewalks, as soon as the water sheen has disappeared and just before the concrete becomes nonplastic, all edges, including expansion joint edges, shall be finished with an edging tool having a radius of 1/4 inch and a light broom finish shall be given to the surface perpendicular to the forms. For curbs, as soon as the water sheen has disappeared and just before the concrete becomes nonplastic, a light broom finish shall be given to the surface in the longitudinal direction of the curb.
E. Joints–Sidewalks:
1. Transverse Construction Joints: Transverse construction joints shall be conducted at the end of all pours and at other locations where the pouring operation are stopped for as long as 30 minutes. Construction joints, however, shall not be placed within five feet of any other transverse joint or of either end of a section of walk. If sufficient concrete has not been placed to form a slab at least five feet long, the excess concrete, back to the last preceding joint, shall be removed. The joints shall be formed by placing a wood or metal bulkhead accurately and securely in place, in a plane perpendicular to the profile and centerline of the walk. Construction joints shall have tooled edges with a 1/4–inch radius.
2. Transverse Contraction Joints: Transverse contraction joints shall be formed at fivefoot intervals, unless otherwise shown on the Drawings, and shall consist of planes of weakness created by an edging tool. The cut in the fresh concrete shall be perpendicular to the surface of the walk, shall extend to a depth of 1–1/2 inches below the top surface and shall have 1/4–inch radius tooled edges.
3. Transverse Expansion Joints: One–half inch expansion joints shall be formed by placing preformed joint filler around all structures and at intervals not exceeding 100 feet, or as shown on the Drawings
F. Joints–Curb, Curb and Gutter, and Traffic Separator:
1. Transverse Construction Joints: Transverse construction joints shall be constructed at the end of all pours and at other locations where the pouring operations are stopped for as long as 30 minutes. Construction joints, however, shall not be placed within ten feet of any other transverse joint or at either end of a section of curb. If sufficient concrete has not been placed to form a slab at least ten feet long, the excess concrete, back to the last preceding joint, shall be removed. The joints shall be formed by placing a wood or metal bulkhead accurately and securely in place, in a plane perpendicular to the profile and centerline of the pavement. Construction joints shall be sawed, in a manner similar to contraction joints, so that a groove will be formed for holding the joint sealing compound.

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Drawing name: K:\VRB_LDEV\047916 – Darden\134_CSK Riverview\CADD\PlanSheets\113–CS1 DARDEN CIVIL SPECIFICATIONS.dwg 114–CS2 DARDEN CIVIL SPECIFICATIONS May 08, 2023 1:01pm by: Liz.Meeks
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Cheddar's SCRATCH KITCHEN

Issue Date: 02/15/23

REVISION INFORMATION

Restaurant #: 21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING
DARDEN CIVIL SPECIFICATIONS

CS2

2. Transverse Contraction Joints: Transverse contraction joints shall be constructed at ten-foot intervals and shall consist of planes of weakness created by sawing the surface of the hardened concrete. The cut shall be perpendicular to the surface of the pavement, and shall extend to a depth of six inches below the top of the curb and one and one-half inches below the gutter.
   a. It shall be the Contractor's responsibility to see that the sawing equipment does not damage the curb and to saw the transverse contraction joints as soon as the curb, and curb and gutter has hardened to the degree that tearing and raveling are not excessive and before uncontrolled shrinkage cracking begins. If, at any time, uncontrolled cracking occurs, the Contractor will be required to modify his methods.
3. Transverse Expansion Joints: One-half inch expansion joints shall be formed by placing preformed joint filler at the ends of each radius return, around all structures, and at intervals not exceeding 500 feet.
4. Cleaning and Sealing Joints: Joints in gutters which are to be sealed, shall be filled with joint sealing material before the roadway is opened to traffic and as soon after completion of the curing period as is feasible. Just prior to sealing, each joint shall be thoroughly cleaned of all foreign material (including any membrane curing compound) and the joint faces shall be clean and surface-dry when the sealer is applied.
   a. The sealing material shall be applied to each joint to conform to the details shown on the Drawings and in accordance with the manufacturer's recommendation. The pouring shall be done in such manner that the material will not be spilled on the exposed surfaces of the concrete. Any excess material on the surface of the concrete gutter shall be removed immediately and the gutter surface cleaned.
   b. All cracks occurring in the gutter prior to its acceptance shall be cleaned out and sealed as specified above, except that the cracks and fractures shall be completely filled with joint sealer and any excess filler material cut down level with the gutter surface.

G. Curing:
1. After the finishing operations have been completed and as soon as the concrete has hardened sufficiently that marring of the surface will not occur, the entire surface and the edges of the newly placed concrete shall be covered and cured with membrane curing compound.
2. Curing compound shall be uniformly applied to the surfaces to be cured, in a single coat, continuous film, at the rate of one gallon to not more than 200 square feet, by a mechanical sprayer.
3. Curing compound shall not be applied during periods of rainfall. Curing compound shall not be applied to the inside faces of joints to be sealed. Should the film become damaged from any cause within the required curing period, the damaged portions shall be repaired immediately with additional compound. Upon removal of side forms the sides of the slabs exposed shall immediately be coated to provide a curing treatment equal to that provided for the surface.

H. Form Removal: After the concrete has sufficiently set a minimum of 12 hours, the Contractor shall remove the forms and shall backfill the space on each side. The earth shall be compacted and graded in a satisfactory manner without damage to the concrete work. Honeycombs shall be filled with sand cement mortar. Plastering will not be allowed on the face of the walk or curb. Rejected work shall be removed and replaced at the expense of the Contractor.

END OF SECTION

SECTION 02530
DEWATERING SYSTEM

Part 1.00 General

1.01 SCOPE OF WORK
A. In general, the work specified in this Section consists of supplying labor, materials and performing all work necessary to lower and control the groundwater levels and hydrostatic pressures to permit all excavations and construction specified under this Contract to be performed in the dry.

1.02 EXAMINATION OF THE SITE AND REFERENCE DOCUMENTS
A. The Contractor shall take all the steps that he considers necessary to familiarize himself with the site conditions, the ground conditions and the groundwater conditions.
B. The Contractor shall obtain permits as required by local, state, or other agencies having jurisdiction over dewatering activities.
C. The Contractor shall obtain the geotechnical report(s) pertaining to the site from the Owner.

Part 2.00 Products

Not used

Part 3.00 Execution

3.01 METHOD
A. The Contractor may use any dewatering method he deems feasible so long as it results in working in the dry and stable soil conditions.
B. The Contractor shall install the permanent site underdrain system during the early stages of construction to aid in controlling the groundwater during construction.
C. The Contractor shall conform and meet all conditions, obtain necessary permits and requirements of the regulatory agencies that have jurisdiction.
D. The exhaust system of gasoline and diesel engines for dewatering pumps shall be equipped with mufflers, subject to the approval of the Engineer, said mufflers so designed as to provide maximum noise suppression. In the event the Engineer considers the muffling of gasoline or diesel driven pumps unsatisfactory, the Contractor shall be required to use electrically driven dewatering pumps. If a portable generator is used, the exhaust gas system of said generator shall also be properly muffled and subject to the approval of the Engineer.

3.02 DEWATERING REQUIREMENTS
A. It is the intent of these specifications that an adequate dewatering system be installed to lower and control the groundwater in order to permit excavation, construction, grading and the placement of fill materials, all to be performed under dry conditions. The dewatering system shall be adequate to pre-drain the water-bearing strata above and below the bottom of the excavation.
B. The contractor shall be solely responsible for the arrangement, location and depths of the dewatering system necessary to accomplish the work described under this section of the specifications. The dewatering shall be accomplished in a manner that will reduce the hydrostatic head below any excavation to the extent that the water level in the construction area are a minimum of two (2) feet below the prevailing excavation surface and any surface to be compacted; will prevent the loss of fines, seepage, boils, quick conditions, or softening of the foundation strata; will maintain stability of the sides and bottom of the excavation; and will result in all construction operations being performed in the dry.
C. The Contractor shall promptly dispose of all water removed from the excavations in such a manner as will not endanger pubic health, damage public or private property, or affect adversely any portion of the work under construction or completed by him or any other Contractor. Contractor shall obtain written permission from the Owner for any property, involved before digging ditches or constructing watercourses for the removal of water.
D. The disposal of water from the dewatering system shall be coordinated with applicable portions of Section 02276 entitled Temporary Erosion and Sedimentation Control and the requirements of all regulatory agencies having jurisdiction.
E. If the dewatering requirements are not satisfied due to inadequacy or failure of the dewatering system, then loosening of the foundation strata, or instability of the slopes, or damage to the foundations or structures may occur. The supply of all labor and materials, and the performance of all work necessary to carry out additional work for reinstatement of the structures of foundation soil resulting from such inadequacy or failure shall be undertaken by the Contractor subject to the approval of the Engineer, and at no additional expense to the Owner.

END OF SECTION

SECTION 02577
PAVEMENT MARKING

Part 1.00 General

1.01 WORK INCLUDED
A. The work included in this Section consists of furnishing all labor, materials, transportation, equipment and incidentals required to provide painted reflectorized traffic stripes, including edge stripes and traffic guides as shown on the Drawings and specified herein.

1.02 SUBMITTAL
A. Certification of testing laboratory as to compliance with State DOT Standard Specifications for Highway and bridge Construction (latest edition).

Part 2.00 Products

2.01 MATERIALS
A. Traffic paint shall conform to the State DOT Standard Specifications for Highway and Bridge Construction (latest edition).
B. Thermoplastic traffic stripes and markings shall conform with the State DOT Standard Specifications for Highway and Bridge Construction (latest edition).
C. Glass spheres for reflective paint shall conform with the State DOT Standard Specifications for Highway and Bridge Construction (latest edition).

Part 3.00 Execution

3.01 APPLICATION
A. Equipment used, alignment, application and protection shall be in accordance with the State DOT Standard Specifications for Highway and Bridge Construction (latest edition).

END OF SECTION

SECTION 02640
VALVES AND APPURTENANCES

Part 1.00 General

1.01 SCOPE OF WORK
A. Furnish and install all valves and appurtenances as shown on the Drawings and as specified herein.
B. The equipment shall include, but not be limited to, the following:
   1. Gate valves
   2. Ball valves for PVC pipe
   3. Check valves
   4. Plug valves
   5. Air and vacuum valves
   6. Fire hydrants
   7. Corporation stops
   8. Expansion joints 9. Unions
   10. Compression couplings
   11. Hose bibbs
   12. Hydraulic cushioned check valves
   13. Pressure gauges

1.02 DESCRIPTION OF SYSTEMS
A. All of the equipment and materials specified herein are intended to be standard for use in controlling the flow of water, sewage, sludge, chemicals, etc., depending on the applications.
B. All materials and manufacturers of said materials shall meet the requirements of the utility agency that will maintain this system. Contractor shall obtain a copy of the requirements from the agency.

1.03 QUALIFICATIONS
A. All of the types of valves and appurtenances shall be a product of well-established reputable firms who are fully experienced and qualified in the manufacture of the particular equipment to be furnished. The equipment shall be designed, constructed and installed in accordance with the best practices and methods and shall comply with these specifications as applicable.
B. All materials and manufacturers of said materials shall meet the requirements of the utility agency that will maintain this system. Contractor shall obtain a copy of the requirements from the agency.

1.04 SUBMITTALS
A. Submit to the Engineer within 30 days after execution of the contract a list of materials to be furnished, the names of the suppliers and the date of delivery of materials to the site.
B. Complete shop drawings of all valves and appurtenances shall be submitted to the Engineer for approval.

1.05 TOOLS
A. Special tools required for normal operation and maintenance shall be supplied with the equipment.

Part 2.00 Products

2.01 MATERIALS AND EQUIPMENT
A. General:
   1. All valves and appurtenances shall be of the size shown on the Drawings, and whenever possible, all equipment of the same type shall be from one manufacturer.
   2. All valves and appurtenances shall have the name of the maker and the working pressure for which they are designed cast in raised letters upon some appropriate part of the body.

2.02 GATE VALVES
A. Gate valves for water shall meet the requirements of AWWA C509. Valves shall be rated for 150 psi working pressure and a minimum 300-psi test pressure. Valves shall be iron body, bronze-mounted, resilient seal double disc, parallel set, and non-rising stem type fitted with 0-Ring seals. The operating nuts shall be 2 inches square. All valves shall open counter clockwise. Stuffing boxes shall be the 0-Rings type. Gate valves shall be mechanical joint, ANSI/AWWW C111/A21.11, or flange joint, ANSI B16.1 Class 125, as shown on the Drawings or specified.
B. All buried valves shall be fitted with cast iron three-piece adjustable valve boxes. The barrel shall be two-piece, screw type, having a 5-1/4 inch shaft. The upper section shall be complete with cast iron cover. Covers shall have "WATER" for water valves and "RECLAIM" for reclaim valves cast into the top. Valve boxes shall be provided with a concrete base as shown on the Drawings. Pour tee-bandied valve wrenches of suitable length shall be furnished to operate all valves within valve boxes.
C. Exposed valves shall be equipped with handwheels or chainwheels as shown on the Drawings. Handwheels shall be of ample size and shall have an ARROW and the word "OPEN" cast thereon to indicate the direction of opening.
D. Valves 12 inches or larger shall be provided with bevel or spur gears depending on the position of the valve as indicated on the Drawings. The gears shall be housed in a grease case of the extended yoke type to permit repacking the stuffing box of the valve without disassembly. Valves 16 inches or larger designed to lie horizontally shall be equipped with rollers to carry the weight of the wedge throughout its travel.
E. Valve wrenches arid extension stems shall be provided by the manufacturer.

2.03 BALL VALVES FOR PVC PIPE
A. Ball valves for PVC pipe shall be of PVC Type 1 with union, socket, threaded or flanged ends as required. Ball valves shall be full port, full flow, all plastic construction, 150 psi rated with Teflon seat seals and T-handles.
B. All valves shall be mounted in such a position that valve position indicators are plainly visible when standing on the floor.

2.04 CHECK VALVES
A. Check valves for cast iron and ductile iron pipe shall be swing type and shall meet the material requirements of AWWA Specification C500. The valves shall be iron body, bronze mounted, single disc, 150 psi working water pressure, nonshock, and hydrostatically tested at 300 psi. Ends shall be 125 pound ANSI B16.1 flanges or 125 pound ANSI B2.1 threaded fittings depending upon location.
B. When there is no flow through the line, the disc shall hang lightly against its seat in practically a vertical position. When open, the disc shall swing clear of the waterway.
C. Check valves shall have bronze seat and body rings, stainless steel hinge pins and bronze nuts on the bolts of bolted covers.
D. Valves shall be so constructed that disc arid body seat may easily be removed and replaced without removing the valve from the line. Valves shall be fitted with an extended hinge arm with outside lever and spring or weight.
E. Check valves for small diameter PVC pipe shall be of PVC Type 1, Series BC with union, socket, threaded or flanged ends as required.

2.05 PLUG VALVES
A. Plug valves for sewer piping shall be non-lubricated eccentric plug type with semi-steel bodies, resilient faced plugs, and welded nickel seats. Port areas shall be at least 80 percent of full pipe area. Valves shall be capable of drip-tight shutoff at pressure differentials up to the full rating of. the valve with pressure in either direction. All exposed nuts, bolts, springs, and washers shall be zinc plated, except exposed hardware for submerged valves shall be stainless steel. Valve bodies shall be furnished with 125/150-pound ANSI standard flanged ends, or mechanical joints, as shown on the Drawings.
B. All valves 20 inches or larger shall be equipped with gear actuators. All gearing shall be enclosed, suitable for running in oil, with seals provided on all shafts to prevent entry of dirt and water into the actuator. All shaft bearings shall be furnished with permanently lubricated bronze bearing bushings. Actuator shall clearly indicate valve position and an adjustable stop shall be provided. Construction of actuator housing shall be semi-steel. Plug valves installed such that actuators are 6 feet or more above the floor, shall be provided with chainwheels and chains.
C. Where shown on the drawings, plug valves shall be installed with extended shafts and actuators. Actuators for extended shafts shall be mounted on floor stands where indicated on the Drawings or shall have removable handwheels where floor stands are not called for. Six-inch sleeves shall be provided for extended shafts in all floors, and covers shall be provided where necessary. Shafts shall be of adequate strength to operate the valve, and shall be 304 stainless steel where submerged and carbon steel elsewhere. Floor stands shall be equipped with valve position indicators and a lock for handwheel.
D. All buried valves shall be furnished with three-piece cast iron adjustable valve boxes. The barrel shall be two-piece, screw type, having a 5-1/4 inch shaft. The upper section shall be complete with cast iron cover. Covers shall have "SEWER" cast into the top. Valve boxes shall be provided with concrete base as shown on the Drawings
E. All plug valves shall be installed so that the direction of flow through the valve is in accordance with the manufacturer's recommendations.

2.06 AIR RELEASE VALVES – AIR AND VACUUM VALVES AND COMBINATION
A. The air release valves and air and vacuum release valves shall be suitable for sewage or water, rated for a minimum 150 psi working pressure, and shall have a cast iron body and cover, stainless steel float and trim, and Buna-N seat. The fittings shall be threaded. Valves shall be furnished with backwash accessories. Valves shall meet AWWA C-507. Valves used in potable water service shall be certified to NSF/ANSI 61 Drinking Water System Components. Valve body and cover shall be constructed of ASTM A126 Class B cast iron for working water pressure up to 300 psi.
B. Check assembly air and vacuum release valves shall be able to allow air or gas to escape during the liquid filling process and to permit air to enter when the system is drained, partially drained or flow is stopped, causing the system pressure to drop below atmospheric pressure. The valves shall be of the large orifice, floating ball type. The body shall be of flanged gray cast iron construction with integral case seat and ball retaining rails. The ball shall be a hollow steel sphere with a smooth covering of nitril rubber. The valve shall be suitable for 150 psi working pressure and a temperature of 185 degrees F. Flanged ends shall be integral with body casting, flat faced and drilled to ANSI B16.1, Class 125 cast iron standard.

2.07 FIRE HYDRANTS
A. Fire hydrants shall be 5-1/4 inch minimum valve opening and shall comply with the current AWWA Standard Specification C502-05 with fire hydrants for water works service. Each hydrant shall have 6-inch mechanical joint ends with strapping lugs and shall open by turning counterclockwise. Fire hydrants shall be of ample length for 3-1/2 foot depth of bury, and be furnished with a safety flange and compression type main valve. It shall be provided with two 2-1/2 inch hose nozzles and one 4-1/2 inch pumper nozzle, all having National Standard hose threads. Bronze nozzles shall have caps attached by chains. Operating nuts shall be AWWA Standard (pentagonal, measuring 1-/2 inch point to flat). Fire hydrants shall be equipped with self-oiling bonnet and "O-Ring" packing. Fire hydrants shall be painted in accordance with the specifications in a color to correspond to the present standard of the city having jurisdiction.
   1. Hydrants shall be installed plumb and in true alignment with the connection pipes to the water main. They shall be securely braced against the end of the trench (undisturbed soil) with concrete thrust blocks. The gravel or crushed stone for the drain sump, followed by backfilling, shall be carefully placed and compacted. Installed hydrants shall be painted lime-yellow (Dupont 7744D or equivalent) for the final coat. Hydrant placement shall not be at a distance greater than 18 feet from a paved stabilized area, which can withstand the weight of a Class A pumper. The center of the steamer port shall be 18 inches above final grade. Steamer port shall be correctly positioned for the proper connections as defined by the authority having jurisdication. Hydrant valve shall be permanently connected to the water main tee with "All Thread" rod locking retainer glands.

2.08 CORPORATION STOPS AND CURB STOPS
A. Corporation stops and curb stops shall be all brass and bronze suitable for 150 psi operating pressure, equipped with connections compatible with the connecting service pipe type, threaded in accordance with AWWA C800-05, and shall be of sizes required and/or noted on the Drawings.

2.09 EXPANSION JOINTS
A. Joints shall be of the arch type with the number of arches dependent on movement, as shown on Drawings. They shall be constructed of multiple plies of woven fabric, impregnated with viton and reinforced with welded steel rings imbedded in the body. They shall have flanges integral with the body of fabric-reinforced rubber, with ANSI 125 pound drilling, and a Hypalon coating applied at the factory for protection from ozone-and weathering. Each end flange shall be backed up with 3/8" thick galvanized steel retaining rings. Joints shall be installed in accordance with manufacturer's recommendations.
B. Control units (restraining rods) shall be installed if adequate anchoring is not practical, in accordance with the manufacturer's standard installation instructions. Rods and plates should be steel, and rubber grommets should be used to isolate the rods from the plates.

2.10 COMPRESSION COUPLINGS
A. Compression couplings and compression fittings for piping 2 inches in diameter and smaller shall conform to ASA specifications for 150 psi rated fittings. Coupling bodies shall be seamless steel, and fitting bodies shall be malleable iron. Retainer rings shall be steel. Fittings for copper tubing shall be constructed of brass. When pipe movement out of the coupling or fitting might occur, proper anchorage of the pipe must be provided.
B. Cast couplings shall be furnished for all piping greater than 2 inches in diameter, with middle rings constructed of cast iron and follower rings made from high-grade malleable iron. The gaskets shall be completely confined and held firmly in position during tightening for full sealing compression all around the pipe. Couplings shall be rated for 150 psi working pressure.

2.11 UNIONS
A. Unions shall be 150 psi rated constructed of zinc-coated malleable iron. Unions on water piping 2-1/2 inches in diameter and larger shall be furnished with 125-pound ANSI standard flanged ends. Gaskets for flanged unions shall be of the best quality fiber, plastic or leather. Unions shall not be concealed in walls, ceilings, or partitions.

2.12 HOSE BIBBS
A. Hose bibbs shall be bronze body with renewable composition disc, screw-in bonnet and threaded inlet. Potable water bibbs shall be 3/4 inch or 1 inch with vacuum breaker as noted on the Drawings.

2.13 HYDRAULIC CUSHIONED CHECK VALVES
A. Hydraulic controlled closing check valves shall meet AWWAC-508 and shall be constructed with a heavy cast iron body with a welded steel disc having a rubber seating face, a non-corrosive shaft for attachment of counterweight aim and lever, and a completely non-corrosive hydraulic cushioning chamber. It shall be designed for installation on the pump discharge to absolutely prevent the return of flow back through to the pump, and shall close at a controlled rate to minimize the normal closing surge. The hydraulic cushioning chamber shall be attached.to the side of the valve body externally and be-constructed with a piston operating in a chamber that will permit the valve to be operated without any metering action. The cushioning shall be by oil stored in an oil reservoir attached by piping, and fittings to the cushion chamber. The chamber shall be arranged to provide an adjustable closing speed to meet the service requirements.

2.14 PRESSURE GAUGES
A. Pressure gauges shall be direct mounted, cast aluminum case, with a 4-1/2 inch diameter dial and furnished with a clear glass crystal window, 1/4-inch shut-off valve, and a bronze pressure snubber. Provide diaphragm seals between shut-off valve and pressure gauge on all lines. All gauges shall be weatherproofed. The face dial shall be white finished aluminum with jet-black graduations and figures. The face dial shall indicate the units of pressure being measured (e.g., feet, inches, etc.) or be dual scale.

Part 3.00 Execution

3.01 INSTALLATION
A. All valves and appurtenances shall be installed in the locations shown, true to alignment and rigidly supported.
B. Fire hydrants shall be set at the locations designated by the Engineer and bedded on a firm foundation. Each hydrant shall be set in true vertical alignment and properly braced. Concrete thrust blocks shall be placed between the back of the hydrant inlet and undisturbed soil at the end of the trench. Minimum bearing area shall be as shown on the Drawings. Felt roofing paper shall be placed around the hydrant elbow before placing concrete. If directed, the hydrant shall be tied to the pipe with suitable rods or clamps, either galvanized, painted, or otherwise rustproof treated. Concrete used for backing shall not be leaner than 1 part cement, 2-1/2 parts sand, and 5-1/2 parts stone. Hydrant paint shall be touched up as required after installation.
C. Prior to installation of cast couplings, the pipe ends shall be cleaned thoroughly for a distance of 8 inches. Use pipe manufacturer pipe lubricant that does not support bacterial growth and is non-toxic, water soluble, imparts neither taste or odor to the conveyed water and is ANS/NSF 61 approved as a gasket lubricant. A follower and gasket, in that order, shall be slipped over each pipe to a distance of about 6 inches from the end, and the middle ring shall be placed on the already laid pipe end until it is properly centered over the joint. The other pipe end shall be inserted into the middle ring and brought to proper position in relation to the pipe already laid. The gaskets and followers shall then be pressed evenly and firmly in the middle ring flares. After the bolts have been inserted and all nuts have been made up finger-tight, diametrically opposite nuts shall be progressively and uniformly tightened all around the joint, preferably by use of a torque wrench of the appropriate site and torque for the bolts.

3.02 SHOP PAINTING
A. Ferrous surfaces of valves and appurtenances shall receive a coating of rust-inhibitive primer. All pipe connection openings shall be capped to prevent the entry of foreign matter prior to installation.

3.03 FIELD PAINTING

A. All metal valves and appurtenances specified herein and exposed to view will be painted as part of the work.

3.04 FIELD TESTING

A. After installation, all valves and appurtenances shall be tested at least 1 hour at the working pressure corresponding to the class of pipe, unless a different test pressure is specified. If any joint item proves to be defective, it shall be repaired or replaced to the satisfaction of the Engineer.

END OF SECTION

SECTION 02660
WATER DISTRIBUTION SYSTEM

Part 1.00 General

1.01 WORK INCLUDED
A. The work included under this Section consists of furnishing all material, equipment, transportation, tools and labor to install water mains, valves, fittings, specials, and other appurtenances, as shown on the Drawings or specified herein, including flushing, testing and sterilizing for a complete job ready to operate.

1.02 RELATED WORK
A. Section 02210 – Site Earthwork
B. Section 02221- Trenching, Backfilling and Compaction for Utility Systems
C. Section 02530 – Dewatering System
D. Section 02640 – Valves and Appurtenances
E. Section 03000 – Concrete

1.03 QUALITY ASSURANCE
A. Design Requirements:
   1. PVC water mains 4 inches and larger in diameter shall be constructed with cast or ductile iron fittings.
   2. PVC pipe shall not be used for water mains larger than 12 inches in diameter.
   3. Water mains 4 inches to 12 inches in diameter shall be PVC or ductile iron as shown on the Drawings.
   4. Water mains larger than 12 inches in diameter shall be ductile iron, unless otherwise noted on the Drawings.
B. Storage: All pipe shall be stored on level ground, preferably turf or sand, free of sharp objects which could damage the pipe. Stacking of pipe shall be limited to a height that will not cause excessive deformation of the bottom layers of pipes. Where necessary, due to ground conditions, the pipe shall be stored on wooden sleepers, spaced suitably and of such width as not to allow deformation of the pipe at the point of contact with the sleeper or between supports.
C. Pipe Inspection: The Contractor shall obtain from the pipe manufacturers a certificate of inspection to the effect that the pipe and fittings supplied have been inspected at the plant and that they meet the requirements of these Specifications. All pipe will be inspected upon delivery and that which does not conform to the requirements of these Specifications shall be rejected and must be immediately removed from the site by the Contractor.
D. All materials and manufacturers of said materials shall meet the requirements of the utility agency that will own and maintain this system. Contractor shall obtain a copy of the requirements form the agency.

1.04 SUBMITTALS
A. Shop Drawings: In general, six (6) copies of the following shop drawings shall be submitted to the Engineer for approval prior to construction:
   1. Mill test certificates and certified test reports on the pipe and fittings.
   2. Details of restrained and flexible joints
   3. Hydrants
   4. Meter vaults and boxes
   5. Valves and valve boxes
   6. Service connection assemblies
   7. Joint lubricant
   8. Restrained Joints

Part 2.00 Products

2.01 MATERIALS
A. Ductile Iron Pipe and Fittings:
   1. Ductile Iron Pipe: Ductile iron pipe shall conform to the requirements of ANSI Standard A21.51/ C151. A minimum of Class 50 pipe shall be supplied.
   2. Fittings:
      a. All ductile iron fittings shall be mechanical joint or single gasket push-on type with a minimum pressure rating of 350 psi and shall conform to the requirements of ANSI/AWWA A21.53/C153.
      b. Mechanical joint and/or single gasket push-on type fittings shall be cement lined, seal coated and outside coated as specified above for ductile iron pipe.
   3. Joints: Mechanical joints consisting of bell, socket, gland, gasket, bolts and nuts shall conform to ANSI/AWWA A21.11/C111. Bolts shall be high strength, annealed cast iron or low alloy steel, T-head type having hexagonal nuts. Bolts and nuts shall be machined true and nuts shall be tapped at right angles to a smooth bearing surface. Single seal gasket push on type joints shall conform to the requirements of ANSI A21.11. Flanged joints shall conform to ANSI Standard B16.1-125 LB.
   4. Restrained Joints: Restrained joints may be of the types fabricated by the various manufacturers, upon approval by the Engineer of details submitted by the Contractor. Restrained joints that require field welding will not be acceptable. The thickness of the pipe barrel remaining at grooves cut for restraint shall not be less than that required for the design wall thickness. Joints using set screws will not be acceptable. Restrained joints shall be furnished for 24 inches and larger pipe at changes in direction of the water main.
   5. Gaskets: Gaskets shall be of vulcanized crude rubber or polyvinyl chloride plastisol. Gaskets shall have plain tips unless otherwise specified. Gaskets shall meet ANSI/AWWA C111/A21.11.
B. Polyvinyl Chloride Pipe (PVC):
   1. Pipe:
      a. PVC Pipe (4 inches to 12 inches in diameter) shall be manufactured from polyvinyl chloride resin conforming to ASTM Designation D1784. Pipe of this material shall conform to AWWA C900. The pipe shall bear the National Sanitation Foundation (NSF) seal for potable water pipe. Pipe shall have a minimum dimension ratio number of 18 and shall be supplied-in standard lengths of 20 feet.
      b. PVC Pipe (14 inches to 36 inches in diameter) shall be manufactured from polyvinyl chloride resin conforming to ASTM Designation D1784. Pipe of this material shall conform to AWWA C905. The pipe shall bear the National Sanitation Foundation (NSF) seal for potable water pipe. Pipe shall have a dimension ratio number of 25 and a pressure class rating of 165. Pressure class 235 shall meet DR18 and shall be supplied in standard lengths of 20 feet.
   2. Joints:
      a. All joints for PVC pipe 2 inches and larger shall be push-on type-joints. Joints shall conform to the requirements of ASTM Designation D 3139 and provide for the pressure rating of the pipe.
      b. Joints in PVC pipe smaller than 2 inches shall be solvent welded in accordance with the recommendations of the pipe manufacturer.
C. Prestressed Concrete Pipe (PCP): Pipe, fittings and specials shall conform to AWWA Standard C301, "Prestressed Concrete Pressure Pipe, Steel Cylinder Type, for Water and Other Liquids." Fittings and specials shall be Type "B". The pipe interior shall receive a bituminous seal coat as specified in AWWA C104, unless other special protective linings are specified. Gaskets shall be of a material composition suitable for the specific service application. Pipe design shall be in accordance with AWWA C301, for the maximum operational internal pressure and external loading. The Contractor shall submit said design calculations from the manufacturer to the Engineer.
D. Copper Pipe: Copper pipe or tubing for underground installation shall be Type K and conform to the requirements of ASTM Designation B 251. Fittings shall be brass with approved compression or flare type connections.
E. Galvanized Steel Pipe:
   1. Pipe Material: Galvanized steel pipe shall be Schedule 40 and conform to the requirements of ASTM Designation A 120.
   2. Fittings: Fittings for galvanized steel pipe shall be galvanized malleable iron pipe, 150 pound, Type U, conforming to Federal Specification WW-P-521.
   3. Joints: Joints shall be standard screw thread type.
F. Polyethylene Tubing: Polyethylene tubing for service lines shall be municipal service copper tube sized and approved for potable water use by the National Sanitation Foundation. Tubing shall bear the NSF seal and conform to the requirements of AWWA C901/ASTM D 2737, and shall have a minimum pressure class of 160 with DR 9. Polyethylene materials shall be PE 3406 and shall conform, to ASTM D 3350.
G. Polyethylene Pressure Pipe: Polyethylene pressure pipe for service lines shall be iron pipe sized and approved for potable water use by the National Sanitation Foundation. Pipe shall bear the NSF seal and conform to the requirements of AWWA C901/ASTM D 2239, and shall have a minimum pressure class of 160 with IDR 7. Polyethylene materials shall be PE 3406 and shall conform to ASTM D 3350.

Part 3.00 Execution

3.01 PREPARATION
A. Clearing: The Contractor shall perform all necessary clearing operations for the installation of the water pipe and appurtenances as specified in Section 02221Trenching, Backfilling and Compaction for Utility Systems.
B. Cleanliness: The interior of the pipes shall be thoroughly cleaned of all foreign matter before being lowered into the trench and shall be kept clean during laying operations by means of plugs approved by the Engineer.

3.02 PERFORMANCE
A. The Contractor shall perform all necessary operations, such as excavation, dewatering, foundation preparation, pipe bedding, backfilling, backfill compaction, etc., for the proper installation of the water pipe as specified in Section 02221- Trenching, Backfilling and Compaction for Utility Systems.
B. Water in Excavation: Water shall not be allowed in the trenches while the pipes are being laid and/or tested. The Contractor shall not open more trench than the available pumping facilities are able to dewater. The Contractor shall assume responsibility for disposing of all water so as not to injure or interfere with the normal drainage of the territory, and so as to not cause damage to existing structures. In no case shall the pipelines being installed be used as drains for such water, and the ends of the pipe shall be kept properly and adequately blocked during construction by the use of stoppers approved by the Engineer. All necessary precautions shall be taken to prevent the entrance of mud, sand, or other obstructing matter into the pipelines.
C. Clean up: During the progress of work, the Contractor shall clean up the work area as each section of pipe is completed and tested. Upon completion of the work, all trash, debris and excess material must be hauled away and disposed of to the satisfaction of the Engineer. The completed work shall be cleared and graded to a condition at least equal to that existing before the start of construction.

3.03 INSTALLATION
A. Pipe:
   1. Gradient: Lines shall be laid straight and to grade, as indicated on the Drawings, with a minimum of 36 inches of cover or deeper if required by local frost depth, maintained with respect to finish grade.
   2. Pipe Joint Deflection: Whenever it is desirable to deflect pipe, the amount of deflection shall not exceed the maximum limits as shown in AWWA Standard C600 for ductile iron pipe and the maximum limits as established by the manufacturer of PVC pipe.
   3. Rejects: Any pipe found defective shall be immediately removed and replaced with sound pipe at the Contractor's expense.
   4. Anchors: Concrete thrust blocks shall be placed at all bends, tees, plugs and other fittings to provide lateral support, except when restrained joints are specified. Thrust blocks shall conform to the details shown on the Drawings and shall be of Class C concrete.
B. Ductile Iron Pipe Joints:
   1. Mechanical Joints: All types of mechanical joint pipes shall be laid and jointed in full conformance with manufacturer's recommendations, which shall be submitted to the Engineer for review and approval before work is begun,
   2. Push-On Joints: Push-on joints shall be made in strict, complete compliance with the manufacturer's recommendations. Lubricant, if required, shall be an inert, nontoxic, water-soluble compound incapable of harboring, supporting, or culturing bacterial life. Lubricant is as specified by ANSI/NSF61.
C. Concrete Encasement:
   1. Concrete encasement shall be constructed in accordance with details shown on the Drawings and shall be constructed of Class C concrete.
   2. The points of beginning and ending of pipe encasement shall be not more than 6 inches from a pipe joint to protect the pipe from cracking due to uneven settlement of its foundation or the effects of superimposed live loads.
D. Service Connections:
   1. Service connections of the size and type called for on the Drawings shall be provided per local utility standards.
   2. Connections to water mains 4 inches and larger shall be made by drilling the appropriate size holes and installing service saddles. Service to smaller pipe sizes shall be accomplished by in-line fittings.
   3. On curbed streets, the exact location for each service connection shall be marked by etching or cutting a "W" in the concrete curb. Where no curb exists or is planned, locations shall be marked by a method approved by the Engineer.
E. Roadway Crossing:
   1. Roadway crossings which require jacking and boring, as identified on the Drawings, shall use steel casing and jacking procedures conforming to the requirements of the State Department of Transportation having jurisdiction as outlined in Utility Accommodation Policy and any supplements thereto. Right-of-way property and surface conditions shall be restored at least equal to their original condition.
   2. The Contractor shall maintain traffic on the roadway and shall keep all workmen and equipment clear of the pavement during the work. All safety regulations of the Department of Transportation shall be complied with.
   3. The top of the casing shall maintain a minimum 30-inch clearance under the roadway surface. Plastic skids for sliding the carrier pipe through the casing shall be spaced per the manufacturer's recommendations and the skids shall be permanently banded to the carrier pipe. After the carrier pipe has been tested for leakage the ends shall be blocked with an 8-inch wall of brick masonry with a weep hole installed near the bottom of each wall. A vent shall be installed as indicated on the Drawings.
F. Connection to Existing System:
   1. All connections to existing mains shall be made after complete disinfection of the proposed system and shall be made under the direction of the owners of the existing system. Valves separating the mains being installed from existing mains shall be operated by or under the direction of said owner's representative. The cost of the work in making the connections shall be paid for by the Contractor.
   2. In the event any existing users will be without water while a connection is being made, the Contractor shall notify them when the water will be turned off and when he estimates service will be resumed. In some instances, these connections may have to be made at night. No user shall be without water service for more than two hours or as allowed by the local water utility.

3.04 FIELD QUALITY CONTROL
A. General: Written notice shall be given to the Engineer and to the agency that will operate the system, if different from the Owner, a minimum of 48 hours (excluding weekends) prior to any test for acceptance being run. A representative of the Engineer shall be present during all tests for acceptance. The Contractor should determine that the sections to be tested for acceptance will pass the required tests prior to giving the above notice to the Engineer. If any section fails to pass the tests for acceptance, the Contractor shall make all repairs needed for the section to pass and retest the section including notification as above. The Contractor shall bear all costs incurred by the Owner and/or the Engineer for the retests and repairs to the main and appurtenances as required.
B. Flushing: All water mains shall be flushed to remove all sand and other foreign matter. Flushing shall be terminated at the direction of the Engineer. The Contractor shall dispose of the flushing water without causing a nuisance or property damage.
C. Hydrostatic Tests:
   1. All components of the water distribution system, including fittings, hydrants, connections and valves of the water distribution system shall remain uncovered until tested and accepted; provided, however, that pipe trenches under traveled streets or roads or in unstable soil conditions may be backfilled with the permission of the Engineer. No testing shall be done until all concrete thrust blocking is in place and set. In testing, the part of the system under test shall be filled with water and subjected to a sustained pressure of 150 pounds per square inch. The piping shall be tested in sections between valves, thereby testing each valve for secure closure. While the piping is being filled with water, care shall be exercised to permit the escape of air from extremities of the test section with additional release cocks provided if required. The basic provisions of Section 13, AWWA C-600 for ductile iron pipe and AWWA C-605 and Manual Number M-23 for PVC pipe, where applicable, shall apply.
   2. Test pressure shall be maintained by pumping for at least 2 hours and until all sections under test have been checked for evidence of leakage. Rate of loss shall not exceed that specified hereinafter.
   3. The Contractor shall provide all labor, equipment and materials and shall conduct all testing required, under the direction of the Engineer. No separate payment will be made for this work and the cost for this work shall be included in the unit price quoted in the proposal for the applicable item of work. Test shall be conducted in the presence of representatives from the City, Owner and Project Engineer, with 48 hours advance notice provided.
   4. Water for testing and flushing shall be potable water provided by the Contractor from a source approved by the Engineer.
D. Allowable Limits For Leakage:
   1. The hydrostatic pressure tests shall be performed as herein above specified and no installation, or section thereof, will be acceptable until the leakage is less than the number of gallons per hour as determined by the formulas:

For PVC

$$L = \frac{ND \times (P)^{1/2}}{7400}$$

L = allowable leakage in gallons per hour
N = number of joints in the section tested
D = nominal diameter of the pipe in inches
P = average test pressure maintained during the leakage test in pounds per square inch gauge

For DIP

$$L = \frac{SD \times (P)^{1/2}}{133,200}$$

L = allowable leakage in gallons per hour
S = length of tested pipe in feet
D = nominal diameter of the pipe in inches

specified. The quantity used shall be measured by pumping from a calibrated container.

E. Correction of Work: Where leakage exceeds the allowable limit, as specified herein before, the defective pipe or joints shall be located and repaired. If the defective portions cannot be located, the Contractor shall remove and reconstruct as much of the work as is necessary in order to conform to the specified limits. Any visible leaks or any defective pipe or joint shall be repaired or replaced as directed by the Engineer even though the total leakage is within the specified allowable limits. No additional payment will be made for the correction of defective work or for damage to other parts of the work resulting from such corrective work.
F. Disinfection:
   1. Before any portion of water distribution system is to be placed in service it shall be disinfected in accordance with the requirements of AWWA Standard C651, 'Disinfecting Waiter Mains'.
   2. The disinfecting agent shall be free chlorine in aqueous solution, with sustained concentration for 24 hours or more of not less than 50 parts per million, except for the Slug Method with 100 ppm chlorine. Chlorine may be derived from chlorine gas, or 70 percent (high test) calcium hypochiorite (HTH or Perchloron, or equal). Administration may be by any of the several methods described in AWWA Standard C651 as proposed by the Contractor and approved by the Engineer. Proposals as to method must be made to the Engineer prior to commencement of the disinfection process.
   3. Care shall be taken to provide disinfection to the total system. Following contact with chlorine solution, the system shall be thoroughly flushed out. Samples shall then be taken using sterile containers obtained from the authority having jurisdiction. Samples shall be taken by the Contractor and delivered by him to the authority having jurisdiction or approved laboratory for analysis.
   4. If samples do not demonstrate satisfactory results, the disinfection procedure shall be repeated until two series of satisfactory samples are obtained; the period between such series of samples shall be a minimum of 24 hours.

END OF SECTION

SECTION 02720
STORM DRAINAGE STRUCTURES, PIPES AND FITTINGS

Part 1.00 General

1.01 WORK INCLUDED
A. The work included in this Section consists of furnishing all necessary labor, materials, equipment and transportation for the construction of culverts, storm sewers, inlets and other drainage structures as shown on the Drawings and specified herein.

1.02 RELATED WORK
A. Section 02210 – Site Earthwork.
B. Section 02220 – Structure Excavation and Backfill.
C. Section 02221 – Trenching, Backfilling and Compaction for Utility and Drainage Systems.
D. Section 02530 – Dewatering System.
E. Section 03000 – Concrete (Site Work).

1.03 SUBMITTALS
A. Shop Drawings: Shop drawings for the following items shall be submitted for approval.
   1. Grates and castings.
   2. Precast structures.
   3. Pipe and fittings.
B. Manufacturer's certification of conformance to ASTM requirements for grate castings, precast structures, and drainage pipe.

1.04 JOB CONDITIONS
A. Existing Drainage System: Should the work indicated on the Drawings require connection to an existing storm sewer system, the Contractor shall be responsible for maintaining said system in operational order. The Contractor shall also repair or replace any damaged portions of the existing storm sewer system to original or better condition.

Part 2.00 Products

2.01 MATERIALS
A. Concrete Pipe:
   1. Concrete pipe shall be reinforced concrete culvert pipe conforming to ASTM Designation C-76, Table III, except when otherwise indicated on the Drawings. Reinforced concrete horizontal elliptical pipe shall conform to the requirements of ASTM Designation C-507, Class HE III. All concrete pipe shall be furnished without lifting holes.
   2. Concrete pipe joints shall have a continuous O-ring rubber gasket which fits snugly in the annular space between the beveled surfaces of the tongue and groove ends of the pipe to form a flexible watertight joint under all conditions of service. There shall be not exposed metal in the joints. Elliptical concrete pipe joints shall be wrapped with Typar (Style 3401), or approved equal, with the material extending a minimum of two (2) feet on both sides of the joint and a two (2) foot overlap on the top. Pipe joints and rubber gaskets shall conform to the requirements of ASTM C443.
B. Zinc Coated Corrugated Iron or Steel Culvert Pipe: Zinc coated (galvanized) corrugated iron or steel culvert pipe, pipe arch and underdrain perforated pipe shall conform to the requirements of AASHTO Designation M-36. Bituminous coated pipe shall also be in conformance with the requirements of AASHTO Designation M-190, Type D (fully coated and fully paved).
C. Smooth Lined Polymer Coated Corrugated Metal Pipe. Smooth lined corrugated pipe shall be composed of a smooth liner and helically corrugated shell integrally attached at helical lock seams spaced not more than 30 inches apart and extending from end to end of each length of pipe and shall conform to the requirements of AASHTO Designation M-245. Metal sheets shall be precoated on both surfaces and conform to the requirements of AASHTO Designation M-246, except the color need not be black. The total metal thickness of the nonprecoated sheets for the shell and liner shall not be less than the gauge shown in the Drawings.
D. Smooth lined Corrugated Aluminum Pipe: Smooth lined corrugated aluminum pipe shall be composed of a smooth liner and helically corrugated shell integrally attached at helical lock seams spaced not more than 30 inches apart and extending from end to end of each length of pipe and shall conform to the requirements of AASHTO Designation M-196. The total metal thickness of the sheets for the shell and liner shall not be less than the gauges indicated in the Drawings for the respective sizes.
E. Corrugated Aluminum Alloy Culvert Pipe: Corrugated aluminum alloy culvert pipe, arch pipe and underdrain perforated pipe shall conform to the requirements of AASHTO Designation M-196.
F. Aluminum Coated Corrugated Steel Pipe and Pipe Arch: Aluminum coated corrugated steel pipe and pipe arch shall conform to the requirements of AASHTO Designation M-36 and shall be fabricated from sheet that conforms to AASHTO Designation M-274. Corrugations and pipe gauge shall be as indicated in the Drawings. On each end of pipe shall be two rolled annular corrugations to facilitate band connection. Connecting bands shall be minimum 16-gauge thickness.
G. Corrugated Pipe Watertight Coupling Bands:
   1. Smooth lined corrugated pipe shall be field jointed with a smooth locking band not less than 12 inches wide for culverts with diameters of 8 inches to 60 inches inclusive, and not less than 24 inches wide for culverts with diameters greater than 60 inches.
   2. Cellular rubber gaskets shall conform to ASTM Designation D-1056, sponge and expanded cellular rubber products, Grade No. SCE 41 and shall be 1 inch thick for 1/2 inch depth corrugations and 1-1/2 inches thick for 1 inch depth corrugations and shall be 5 inches wide for pipe 60 inches or less in diameter and 7 inches wide for pipe over 60 inches in diameter. The gasket shall be stretched not more than 20 percent of its original circumference when seated on the pipe prior to placing the band.
   3. Other corrugated pipe field joints shall be coupled with bands that conform to the requirements of AASHTO Designation M-36 for steel pipe and M-196 for aluminum pipe.
H. Brick: Brick for drainage structures shall be dense, hard burned, shale or clay brick conforming to ASTM Designation C-32, Grade MM or C-62, Grade MW, except that brick absorption shall be between five and twenty-five grams of water absorbed in one minute by dried brick, set flat face down, in 1/8 inch of water.
I. Cement Mortar: Cement mortar for manhole construction shall be one part cement and two parts clean sharp sand to which may be added lime in the amount of not over twenty-five percent volume of cement. It shall be mixed dry and then wetted to proper consistency for use. No mortars that have stood for more than one hour shall be used.

J. Concrete: Concrete shall conform to the requirements of Section 03000 – Concrete and unless otherwise specified, all concrete shall be Class B.
K. Precast Concrete Units: Precast concrete drainage structures shall be constructed in accordance with ASTM Designation C-478. The design and fabrication of precast units shall be as shown on the Drawings and specified herein.
L. Cast-In-Place Units: Cast-in-place concrete drainage inlets and other structures shall be constructed according to the Drawings and in conformance with the applicable requirements of Section 03000 – Concrete. Concrete for cast-in-place units shall be Class A.
M. Castings: Castings for inlets and other items shall conform to the ASTM Designation A, Class 25. Castings shall be true to pattern in form and dimensions and free of pouring faults and other defects in positions which would impair their strength or otherwise make them unfit for the service intended. No plugging or filling will be allowed. Casting patterns shall conform to those shown on the Drawings.
N. Corrugated Polyethylene pipe with smooth interior shall be that manufactured by ADVANCE DRAINAGE SYSTEMS (N-12) or equal. Pipe and joints shall be watertight and most ASTM D3212, AAHSTW M252, Type "S", and AAHSTO M294, Type "S".

Part 3.00 Execution

3.01 PREPARATION
A. Clearing: The Contractor shall perform all necessary clearing operations for the installation of the storm drainage structures, pipe and fittings as specified in Section 02210 – Site Earthwork, Section 02220 – Structure Excavation and Backfill, and Section 02221- Trenching, Backfilling and Compaction for Utility and Drainage Systems.

3.02 PERFORMANCE
A. The Contractor shall perform all necessary operations, such as excavation, dewatering, foundation preparation for structures, pipe bedding, backfilling, backfill compaction, etc., for the proper installation of the storm drainage structures, pipe and fittings as specified in Section 02220-Structure Excavation and Backfill, and Section 02221-Trenching, Backfilling, and Compaction for Utility and Drainage Systems.
B. Installation
   1. Laying Concrete Pipe:
      a. All pipe shall be carefully laid true to the line and grade shown on the Drawings. Any deviation from true alignment or grade which would result in a displacement from the normal position of the gasket of as much as 1/4 inch, or which would produce a gap exceeding 1/2 inch between sections or pipe for more than 1/3 of the circumference of the inside of the pipe, will not be acceptable and where such occurs, the pipe shall be relaid without additional compensation. No mortar, joint compound, or other filler which would tend to restrict the flexibility of the gasket joint shall be applied to the gap. Pipes having defects that have not caused their rejection are to be so laid that these defects will be in the upper half of the pipe.
      b. Before installation of the pipe gasket, the gasket and the surface of the pipe joint, including the gasket recess shall be clean and free from grit, dirt, or other foreign matter at the time the joints are made. In order to facilitate closure of the joint, application of an approved vegetable soap lubricant immediately prior to closing of the joint will be permitted.

FOR INFORMATIONAL PURPOSES ONLY

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KHA PROJECT # 047916134

Cheddar's SCRATCH KITCHEN

Issue Date: 02/15/23

REVISION INFORMATION

Restaurant #: 21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING

DARDEN CIVIL SPECIFICATIONS

CS3

Drawing name: K:\VRB_LDEV\047916 - Darden\134_CSK Riverview\CADD\PlanSheets\113-CS1 DARDEN CIVIL SPECIFICATIONS.dwg 115-CS3 DARDEN CIVIL SPECIFICATIONS May 08, 2023 1:01pm by: Liz.Meeks

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c. All pipes shall be laid with bells or grooves uphill. As the pipes are laid throughout the work, they must be thoroughly cleaned and protected from dirt and water. No length of pipe shall be laid until the two preceding lengths have been thoroughly embedded in place so as to prevent any movement or disturbance of the finished joint. No walking on or working over the pipes after they are laid, except as may be necessary in tamping earth and refilling, will be permitted until they are covered to a depth of one foot. Fill placed around the pipe shall be deposited on both sides simultaneously to approximately the same elevation and uniformly compacted. Whenever the pipe laying is discontinued, as at night, the unfinished end is to be securely protected from displacement due to caving of the banks or from other injury and a suitable stopper is to be inserted therein.

2. Laying Corrugated Pipe:
   a. All corrugated pipe shall be carefully laid, true to the line and grade shown on the Drawings. The pipe gasket and coupling band shall be. centered over the joint with the coupling bank bolts securely tightened without cutting the gasket.
   b. Fill placed around the pipe shall be deposited on both sides simultaneously to, approximately the same elevation and uniformly compacted. Whenever the pipe laying is discontinued, as at night, the unfinished end is to be securely protected from displacement due to caving of the banks or from other injury and a suitable stopper is to be inserted therein.
3. Drainage Structures:
   a. Concrete inlets or other structures shall be constructed in conformity with the Drawings. Forms shall be designed and constructed so that they may be removed without injury to the concrete and shall be left in place for at least 24 hours after concrete is poured. Concrete shall be thoroughly tamped and shall be cured for at least 5 days after removal of forms. Honeycomb places shall be thoroughly cleaned, saturated with water and pointed up with mortar.
   b. Precast inlets or other structures may be used in lieu of cast-in-place structures. Grates are to be set in place in mortar to the proper line and grade.

3.03 TESTING STRUCTURES

A. Leakage: The watertightness of manholes and inlets (except for bottomless types) may be tested, at the Engineer's option, at the time the structure is completed and backfilled. The test procedure is as follows:
   1. Fill the structures with water to an elevation 1 foot below the start of the cone section with a minimum depth of 4 feet and a maximum depth of 20 feet.
   2. Plug all inlets and outlets with approved stoppers or plugs.
   3. Record the water surface drop during a 15-minute period. The maximum allowable drop in water surface is 1/2 inch for each 15-minute period. If the leakage exceeds this rate, the Contractor shall repair or replace the structure so as to provide a structure which will meet the required watertightness standards.

END OF SECTION

SECTION 02730
SANITARY SEWAGE SYSTEM

Part 1.00 General

1.01 WORK INCLUDED

A. The work included in this Section consists of furnishing all labor, equipment and materials necessary for the construction of gravity sanitary sewer lines, manholes, laterals, sewer connections and appurtenances as shown on the Drawings and specified herein.

1.02 RELATED WORK

A. Section 02210 – Site Earthwork.
B. Section 02220 – Structure Excavation and Backfill.
C. Section 02221 – Trenching, Backfilling and Compaction.
D. Section 02530 – Dewatering System.
E. Section 03000 – Concrete (Site Work).

1.03 QUALITY ASSURANCE

A. Details and shop drawings of the manholes, proposed to be furnished for this work, are submitted to and approved by the Engineer prior to the manufacture of the units. Manholes which are not manufactured in strict compliance with the approved shop drawings and these specifications will be rejected.
B. The Contractor shall furnish shop drawings on all pipe, fittings and other appurtenances to show conformity with plans and specifications.
C. Tests: Certified records of the tests made by the manufacturer, or by a reliable commercial laboratory, or both, shall be submitted with each shipment of pipe. All pipe will be inspected upon delivery and that which does not conform to the requirements of these specifications shall be rejected and must be immediately removed by the Contractor. The Contractor shall furnish and provide samples of pipe for the performance of such additional tests, as the Owner may deem necessary.
D. Each length of pipe shall bear the name or trademark of the manufacturer, the location of the manufacturing plant, and the class or strength classification of the pipe. The markings shall be plainly visible on the pipe barrel. Pipe, which is not marked, clearly is subject to rejection. All rejected pipe shall be promptly removed from the project site by the Contractor.
E. For precast manhole structures, the date of manufacture and the name or trademark of the manufacturer shall be clearly marked on each precast section.
F. All materials and manufacturers of said materials shall meet the requirements of the utility agency that will maintain this system. Contractor shall obtain a copy of the requirements from the agency.

1.04 SUBMITTALS

A. Shop Drawings:
   1. Shop drawings shall be submitted to the Engineer for approval prior to construction. Where applicable, the following information shall be submitted:
      a. Precast manholes.
      b. Manufacturer's certification of conformance to ASTM requirements for precast structures.
      c. Manhole frames, covers and other castings.
      d. Manufacturer's certification of conformance to ASTM requirements for castings.
      e. Pipe joint and fittings.
      f. Mill Test Certificates on ductile iron pipe.
      g. Certified test records for polyvinyl chloride pipe.
      h. Pipe adapters.
B. Record Information: The Contractor shall submit to the Engineer the stations and left or right offsets of all services (terminal ends) as measured from the nearest downstream manhole along the centerline of the sewer, along with the elevations of the manhole covers and inverts of all pipes in the manholes.

Part 2.00 Products

2.01 MATERIALS

A. Pipe used in gravity sewer construction shall be polyvinyl chloride pipe (PVC) or ductile iron pipe (DIP).
B. Polyvinyl Chloride Pipe (PVC):
   1. PVC pipe and fittings for gravity sewer lines shall be manufactured from polyvinyl chloride resin conforming to ASTM Designation D-1784.
   2. PVC pipe and fittings, 4-inches to 15-inches in diameter, shall conform to the requirements of ASTM Designation D-3034, and shall have a Standard Dimension Ratio (SDR) of not more than thirty-five (35). PVC pipe and fittings, 18-inches to 27 inches in diameter, shall conform to the requirements of ASTM Designation F-679, and shall have a Standard Dimension Ratio (SDR) of not more than thirty-five (35).
   3. All PVC pipe shall bear the NSF-DW seal. The minimum standard length of pipe shall be 13 feet.
   4. PVC pipe joints shall be integral bell elastomeric gasket joints manufactured in accordance with ASTM D-3212 and ASTM F-477. Rubber sealing rings shall be factory installed.
   5. Minimum pipe stiffness (F/AY) at 5 percent deflection shall be 46 psi for all sizes tested in accordance with ASTM Method of Test D-2412.
   6. Polyvinyl chloride pipe shall be stored on level ground, preferably turf or sand, free of sharp objects which could damage the pipe. Stacking of the polyvinyl chloride pipe shall be limited to a height that will not cause excessive deformation of the bottom layers of pipes. Where necessary, due to ground conditions, the pipe shall be stored on wooden sleepers, spaced suitably and of such width as not to allow deformation of the pipe at the point of contact with the sleeper or between supports.
   7. All PVC pipe, fittings, and specials shall be manufactured by J-M Manufacturing Company, CertainTeed or approved equal.
C. Ductile Iron Pipe:
   1. Ductile iron pipe shall conform to the requirements of ANSI/AWWA A21.51/C151, with a class thickness in conformance with the requirements of ANSI/AWWA A21.50/C150. The pipe shall be furnished in minimum standard lengths of 18 feet.
   2. Fittings shall conform to ANSI Standard A21.10,150 psi minimum pressure rating. Fittings shall have the same lining as adjacent piping.
   3. Joints shall be mechanical type or "push-on" type conforming to ANSI Standard A21.11.
   4. Coatings and Linings: Interior and exterior of ductile iron pipe shall be polyethylene lined. The lining shall extend from the plain end of the pipe to the gasket set of the bell socket. Not less than five (5) percent of the pipe shall be checked from dry mil thickness, with compliance certification submitted to the Engineer.
      a. Bituminous exterior coating, when polyethylene lining is not required, shall have a dry thickness coating a minimum of 20 mils (0.02 inches) and shall be Koppers Bitumastic 300-M, or approved equal.
      b. Polyethylene interior lining shall comply with AWWA C116 and shall be compounded with enough carbon black during manufacture to resist ultraviolet rays during above ground storage. The polyethylene lining shall be fused to the interior of the pipe by heat, forming a tightly bonded lining, with minimum 40 mils dry thickness. The polyethylene lining system shall be "Polybond", as manufactured by the American Cast Iron Pipe Co., or approved equal.

D. Casing Pipe: Casing pipe shall be steel pipe that conforms to the requirements of ASTM Designation A-139 Grade B and have a yield strength of 35,000 psi. Joints for steel casing shall be single-butt weld and shall conform to AWWA Standard C-206. Casing pipe wall thickness for roadway crossings shall not be less than that listed in the following schedule:

Nominal Outside Diameter (inches)	*Nominal Thickness (inches)
18 or less	0.250
20	0.281
24	0.344
26	0.375
28 or 30	0.406

E. Pipe Adapters:
   1. Donut pipe adapters shall be manufactured from virgin polyvinyl chloride (PVC) or polyurethane adaptable to similar or dissimilar pipes of the same or different sizes. Donuts shall be as manufactured by Femco Joint Sealer Company, Dickey Company or approved equal.
   2. Flexible couplings shall be manufactured from virgin polyvinyl chloride (PVC) or polyurethane adaptable to similar or dissimilar pipes of the same or different sizes. The flexible coupling shall be as manufactured by Femco Joint Sealer Company, Can-Tex or approved equal and supplied with No. 304 stainless steel bands.
   3. Connection of gravity sewer lines to precast manholes and wetwells shall be made by using a watertight resilient connector conforming to the requirements of ASTM Designation C-923.
F. Pipe Fittings: Unless otherwise specified, wye branches shall be provided in the gravity sewer main for service lateral connections. Wyes shall be 6 inches inside diameter, unless otherwise indicated on the Drawings. All fittings shall be of the same material as the pipe. Plugs for stub-outs shall be of the same material as the pipe and gasketed with the same gasket material as the pipe joint. The plug shall be secured to withstand system test pressures.
G. Concrete and Reinforcing Steel: Concrete and reinforcing steel shall conform to the requirements of Section 03000 – Concrete (Site Work). Concrete classes for the various purposes shall be as follows:
   1. Manhole bottoms, Class A
   2. Precast manholes, Class B (minimum)
   3. Pipe and riser encasement, Class C
   4. Protective slabs, Class C
H. Castings: Gray iron castings for manhole frames, covers and other items shall conform to the ASTM Designation A-48, Class 30. Castings shall be true to pattern in form and dimensions and free of pouring faults and other defects in positions which would impair their strength or otherwise make them unfit for the service intended. The seating surfaces between frames and covers shall be machined to fit true. No plugging or filling will be allowed. Lifting or "pick" holes shall be provided, but shall not penetrate the cover. Casting patterns shall conform to those shown or indicated on the Drawings. The words SANITARY SEWER shall be cast in all manhole covers. All manhole frames and covers shall be traffic bearing to meet AASHTO H-20 loadings. Frames shall. be suitable for the future addition of a cast iron ring for upward adjustment of the top elevation.
I. Brick: Brick for manhole construction shall be dense, hard burned, shale or clay brick conforming toASTM Designation C-216, Grade SW, Size 31/2 inch (W) x 8 inches (L) X 21/4 inch (H).
J. Cement Mortar: Cement mortar for manhole construction shall comply with ASTM Designation C-270, Type M, except that the cement shall be Portland Type I or II only. No mortars that have stood for more than one hour shall be used.
K. Coal Tar Epoxy: Coal tar epoxy shall be Koppers Bitumastic No. 300M, Tnemec TnemeTar No. 46-413 or approved equal.
L. Joint Sealer: Joint sealer material for precast manhole structures shall be cold adhesive preformedflexible plastic gaskets conforming with FOOT Standard Specifications for Road and Bridge Construction (latest edition), Section 942-2. The joint sealer material shall be "Ram-Nek, as manufactured by, K.T. Snyder Co., Inc., or approved equal.
M. Non-Shrink Mortar: Non-shrink mortar for filling annular spaces between precast manhole walls and pipe coupling adapters shall be Embeco No. 167 Mortar or approved equal.

Part 3.00 Execution

3.01 PREPARATION

A. Bedding:
   1. Pipe Cradle: Upon satisfactory installation of the pipe bedding, as specified in Section 02221– Trenching, Backfilling and Compacting for Utility and Drainage Systems, a continuous trough for the pipe barrel shall be formed. Recesses for the pipe bells or couplings shall be excavated by hand digging. When the pipe is laid in the prepared trench, true to line and grade, the pipe barrel shall receive continuous uniform support and no pressure shall be exerted on the pipe joints from the trench bottom.
   2. Cleanliness: The interior of all pipe shall be thoroughly cleaned of all foreign material before being lowered in the trench and shall be kept clean during laying operations by means of plugs, or other approved methods. During suspension of work for any reason at any time, a suitable stopper shall be placed in the end of the pipe laid to prevent mud or other foreign material from entering the pipe.

3.02 INSTALLATION

A. Pipe:
   1. Pipe laying shall proceed upgrade with spigot ends pointing in the direction of flow. Before pipe is joined, gaskets shall be cleaned of all dirt and stones and other foreign material. The spigot ends of the pipe and/or pipe gaskets shall be lubricated lightly with a lubricant as specified by the pipe manufacturer and approved by the Engineer. Sufficient pressure shall be applied to the pipe so as to properly seat the socket into the bell of the pipe. All pipe shall be laid straight, true to the lines and grades shown on the Drawings. Variance from established line and grade, at any point along the length of the pipe, shall not be greater than 1/32 of an inch per inch of pipe diameter and not to exceed 1/2 inch, provided that any such variation does not result in a level or reverse sloping invert.
   2. Any pipe which is disturbed or found to be defective after laying shall be taken up and relaid or replaced at the Contractor's expense.
   3. Polyvinyl Chloride Pipe:
      a. Transportation: Care shall be taken during transportation of the pipe that it is not cut, kinked or otherwise damaged.
      b. Handling Pipe Lengths: Ropes, fabric or rubber protected slings and straps shall be used when handling pipes. Chains, cables or hooks inserted into the pipe ends shall not be used. Two slings spread apart shall be used for lifting each length of pipe. Pipe or fittings shall not be dropped onto rocky or unprepared ground.
      c. Handling Pipeline: The handling of the joined pipeline shall be in such a manner that the pipe is not damaged by dragging it over sharp and cutting objects. Sections of the pipes with deep cuts and gouges shall be removed.
      d. Lowering Pipe Into Trench: Care shall be exercised when lowering pipe into the trench to prevent damage to or twisting of the pipe.
      e. Special Precautions: Polyvinyl chloride pipe connected to heavy fittings, manholes and rigid structures shall be supported in such a manner that no subsequent relative movement between the pipe and the joint with the rigid structures is possible.
B. Service Connections:
   1. Service connections, of the size and type called for on the Drawings, shall be provided in accordance with the details therefore as shown or indicated on the Drawings.
   2. Sewer pipe shall be extended to the street right-of-way line and plugged with an approved removable plastic plug (unless otherwise indicated on the Drawings). All connections and changes of direction shall be made using standard fittings designed for the purpose.
   3. In order to provide and insure economic service connections where septic tanks are to be abandoned and the house or building sewer connected to the new collection system, the Contractor shall, with the Engineer or his representative, locate and determine the elevation of the septic tank influent line or house sewer before locating or installing the wye or other fitting in the street sewer. The Engineer or his representative shall approve all such wye or other fitting locations after giving due consideration to lengths, obstructions and such other conditions affecting the location.
   4. On curbed streets, the exact location for each service connection shall be marked by etching or cutting an 'S' in the concrete curb. Where no curb exists or is planned, locations shall be marked by a method approved by the Engineer.
C. Concrete Encasement:
   1. Class C concrete encasement shall be constructed so as to provide a minimum of 6 inches of concrete on all sides of the sewer pipe. Encasement shall be constructed where:
      a. The sewer or service pipe shall have less than 30 inches of cover between the top of the pipe and the final top of pavement or ground line.
      b. The PVC sewer or service pipe crosses over, or at a depth which provides less than 18 inches clear distance between pipes when crossing under water mains. Encasement shall extend a minimum of 10 feet on each side of the point of crossing.
      c. The lateral separation of the PVC sewer pipe and potable water piping is less than 10 feet.
      *The installation of pressure-tight joint ductile iron pipe for the same dimensions may be substituted for the concrete encasement.
      d. The Engineer shall order the line encased.
   2. If, through failure to provide suitable trench sheeting, or other causes, the maximum width for trench excavations, as specified elsewhere in these specifications, is exceeded, the Contractor shall construct concrete encasement around the pipe for the length of the excessive excavation. No payment will be made for the concrete encasement required due to excessive trench widths.
   3. The points of beginning and end of sewer or service pipe encasement shall not be more than 6 inches from a pipe joint to protect the pipe from cracking due to uneven settlement of its foundation or the effects of superimposed live loads.

D. Manholes/Concrete Structures:
   1. Structures shall be leak-tight and constructed of precast units conforming to the requirements of. ASTM Designation C-478 with reinforcement of Grade 40 bars and the following modifications thereto:
      a. The minimum shell thickness shall be 8 inches.
      b. Concrete to be used in precast manholes shall be Type II.
      c. Lift rings shall be provided for handling precast structure sections. Only non-penetrating lift holes shall be permitted. Such holes shall be filled with non\expndtw0 shrink grout after installation of the structure sections.
      d. The design of the structure shall include a precast base' of not less than 8 inches in thickness poured monolithically with the bottom section of the structure walls.
      e. All openings and joints shall be sealed watertight with rubber gaskets meeting ASTM C-443.
      f. The structure barrel, top and base sections shall have tongue and groove joints.
      g. Precast structure tops, if used, shall terminate at such elevations as will permit concrete grade rings set in bitumastic sealer under the structure frame to make allowance for future street grade adjustments.
      h. Drop connections, where required on precast structures, shall be manufactured with the structure elements at the casting yard. The manufacturer shall submit for approval the method of drop construction.
   2. The interior and exterior walls shall be coasted with two applications of .coal tar epoxy applied as recommended by the coating manufacturer. Interior surfaces shall be coated with a minimum dry mil thickness of 16 mils, and exterior surfaces shall be coated with a minimum dry mil thickness of 9 mils.
   3. Shallow structures may substitute an eight-inch precast reinforced slab on the top in lieu of the cone section. Slabs shall be laid in a full bed of mortar and pointed to form a dense joint.
   4. Structure top slabs or cone sections shall be set between 3 inches and 12 inches below bottom of structure cover frame. Where shown on the Drawings the Contractor shall provide a minimum of 3 inches to accommodate future grade changes without disturbing structure. Where distance between bottom of structure cover frame and top of cone is greater than 18 inches, riser units shall be sawed to bring top of cone to within limits specified. Precast leveling rings for setting cast iron frames over structures shall be a minimum of 2 inches thick and have one No. 2 continuous reinforcing steel bar. Leveling rings shall not be used for more than 18 inches of vertical adjustment.
   5. Structure castings shall be fully bedded in mortar with adjustment brick courses placed between the frame and structure. The top of structure castings located in pavement, shoulder areas, and sidewalks shall be set flush with grade. The top of structure castings located outside these areas shall be set 2 inches above grade unless otherwise shown on the Drawings.
   6. Precast structures that are installed in conjunction with PVC pipe shall utilize approved coupling adapters set in the concrete wall, as specified herein before and indicated on the Drawings.
   7. The invert channels shall be smooth and accurately shaped to a semicircular bottom conforming to the inside of the adjacent sewer section. Steep slopes outside the invert channels shall be avoided. Changes in size and grade shall be made gradually and evenly. Changes in the direction of the sewer or entering branch shall be a smooth curve with radius as long as practicable. Invert channels shall also be formed for pipe stub-outs.
   8. All annular spaces between structure or wetwell walls and pipe coupling adapters shall be thoroughly plugged with Embeco No. 167 Mortar or approved equal, nonshrink mortar, applied and cured in strict conformance with the manufacturer's recommendations so there will be no leakage around the pipe. The mortar shall be finished smooth and flush with the adjoining interior and exterior structure or wetwell wall surfaces.
E. Connections to Existing Structures and Sewers:
   1. Various sewer lines shall be connected to existing manholes and structures. Provisions have been made in some of the existing structures for future connections and may require only the removal of a plug and the connection of the proposed line, while other connections will require cutting into the existing structure. The Contractor shall exercise care in cutting into the existing structure and any damage done to the structure shall be repaired as required by the Engineer and at the Contractor's expense. Drop connections to existing manholes shall be installed as detailed on the Drawings for new construction.
   2. The drop connection for existing manhole shall be constructed of SDR 35 polyvinyl chloride (PVC) pipe. Anchor straps. shall be not less than 3/16 inch by 1 1/2 inches and constructed of ANSI 304 stainless steel. Wall anchor bolts shall not be less than 5/8 inch and constructed of corrosion resistant metal.
   3. Flows through existing lines shall be maintained during construction with existing structures.
   4. The invert channels of the existing structure shall be reshaped to accommodate the existing line and proposed line as specified herein before for manhole constructions.
F. Roadway Crossing:
   1. New gravity sewer lines to be installed under existing roadways shall be installed in a casing to be bored and jacked under the pavement orby open-cut as shown on the plans. The steel casing and jacking procedures shall conform to the requirements of the specifications and the local and state authority and any supplements thereto.
   2. The Contractor shall maintain traffic on the roadway and shall keep all workmen and equipment clear of the pavement during the work. All safety regulations of the Department of Transportation shall be complied with.
   3. The top of the casing shall maintain a minimum 30-inch clearance under the roadway surface. Wood skids for sliding the carrier pipe through the casing shall be pressure treated with creosote and the skids shall be permanently banded to the carrier pipe. After the carrier pipe has been tested for leakage the ends shall be blocked with an 8-inch wall of brick masonry with a weep hole installed near bottom of each wall. A vent shall be installed as indicated on the Drawings. The carrier pipe of the crossing shall be ductile iron.
   4. If installed by open-cut, the line shall be bedded and backfilled as shown on the plans. Existing pavement and base shall be replaced with the new pavement better than or equal to existing. Contractor is responsible for repairing any settlement. No extra compensation will be made for repairs.
G. Additional Work: Additional items of construction such as cleanouts, terminal lamp holes, special manholes and other items necessary for the complete installation of the system shall conform to specific details on the Drawings and shall be constructed of first-class materials conforming to the applicable portions of these specifications.

3.03 FIELD QUALITY CONTROL

A. Tests, Inspections and Acceptance of Materials and Workmanship:
   1. Workmanship: It is imperative that all sewers and appurtenances be built practically watertight and that the Contractor adheres rigidly to the specifications for materials and workmanship. Upon completion, the sewers, or sections thereof, will be tested and gauged and if leakage is above the allowable limits specified, the sewer will be rejected.
   2. Inspection:
      a. On completion of each block or section of sewer, or such other times as the Engineer may direct, the block or section of sewer shall be cleaned, tested and inspected. Each section of the sewer shall show, on examination from either end, a full circle of light between manholes.
      b. Each manhole or other appurtenance to the system shall be of the specified size and form, be watertight, neatly and substantially constructed, with the top set permanently to the position and grade indicated on the Drawings. All repairs shown necessary by the inspection shall be made at the Contractor's expense, broken or cracked pipe replaced; all deposits removed and the sewer left true to line and grade, entirely clean and ready for use.
      c. Written notice shall be given to the Engineer and to the agency that will operate the system, if different from the Owner, a minimum of 48 hours (excluding weekends) prior to any test for acceptance being run. A representative of the Engineer shall be present during all tests for acceptance. The Contractor should determine that the sections to be tested for acceptance will pass the required tests prior to giving the above notice to the Engineer. If any section fails to pass the tests for acceptance, the Contractor shall make all repairs needed for the section to pass and retest the section including notification as above. The Contractor shall bear all costs incurred by the Owner and/or the Engineer for the retests.
      d. All newly constructed manholes shall be cleaned of any accumulation of silt, debris, or foreign matter of any kind, and shall be free from such accumulations at the time of final inspection.
   3. Closed Circuit Television Inspection:
      a. Each sewer line 21 inches in diameter and smaller shall be inspected between manholes by a closed circuit television camera especially designed for and adapted for this purpose. The Contractor shall employ a reputable testing agency for this inspection, which shall be subject to the Engineer's approval. The type of equipment employed shall be sufficient to give adequate detail on the reviewing screen as may be determined by the Engineer. The Engineer will provide a representative to be present to view the screen when the inspection is in progress. The Contractor shall provide suitable methods of measuring and locating defects found in the lines and shall enter such data in a log. Lines found defective shall be corrected as directed by the Engineer and the repaired lines shall be reinspected with the television camera until found acceptable.
      b. The Contractor shall provide all labor, equipment and materials and shall conduct the closed circuit television inspection as required. No separate payment will be made for this work and the cost thereof shall be included in the unit prices listed in the proposal.
      c. Inspection of sewer lines over 21 inches in diameter will be made by the Engineer and the Contractor shall assist the Engineer in making these inspections, if necessary. Service connections need not be inspected by the television camera method.

B. Limits of Infiltration, Exfiltration and Testing:
   1. The allowable limits of infiltration, exfiltration or leakage for the entire system or any portion thereof, including house service lines, shall not exceed a rate of 0.1 gallon per foot of pipe per 24 hours for all sizes of pipe throughout the system. The allowable limits of infiltration or exfiltration of manholes shall not exceed a rate of four gallons pr manhole pr 24 hours.
   2. Infiltration, if taken between any two adjacent manholes, shall not exceed 0.1 gallon per 24 hours per foot of pipe for all sizes and all locations. This testing of lines between adjacent manholes will not be required except to localize the position of a leak in a portion of the system that exceeds the allowable leakage limit, or as directed by the Engineer.
   3. Any part or all of the system may be tested for infiltration or exfiltration, as directed by the Engineer. Prior to testing for infiltration, the system shall be pumped out so that normal infiltration conditions exist at the time of testing. The amounts of infiltration or exfiltration shall be determined by pumping into or out of calibrated drums, or by other approved methods.
   4. The exfiltration test will be conducted by filling the portion of the system being tested with water to a level which will provide: a minimum head on a service lateral connected to the test portion of 2 feet; or in the event there are no service laterals in the test portion, a minimum difference in elevation of 5 feet between the crown of the highest portion of the sewer and the test level.
   5. Tests shall be conducted on portions of the system not 'exceeding three manhole runs or more than 1,000 feet of main sewer, or as otherwise directed by the Engineer. Tests shall be run continuously for three hours. Where infiltration or exfiltration exceeds the allowable limits also specified herein, the defective pipe, joints, or other faulty construction shall be located and repaired by the Contractor. If the defective portions cannot be located, the Contractor shall remove and reconstruct as much of the work as is necessary in order to conform to the specified allowable limits. Testing shall be performed as the job progresses and shall be started after 2,000 feet of pipe are laid.
   6. The Contractor shall provide all labor, equipment and materials and shall conduct all testing required, under the direction of the Engineer. No separate payment will be made for this work and the cost for this work shall be included in the unit price quoted in the proposal for the applicable item of work.
   7. Specifications for Sanitary Sewer Main Low Pressure Air Test Revised March 2006
      a. Scope
         This specification governs the testing of sanitary sewer mains by the low pressure air test (time pressure drop method).
      b. General Requirements
         1. Sanitary sewer mains less than 18 inch diameter shall be low-pressure air tested for leaks upon the completion of the backfill and compaction operation. Sanitary sewer mains less than 8 inch and greater than 18 inch diameter will be tested for leaks per test method determined/specified by RWU.
         2. The sanitary sewer manholes must passed the manhole vacuum testing process and all sanitary sewer services must be complete with ends capped that are connected to said mains prior to the low-pressure air test.
         3. The low-pressure air test method shall be in accordance with ASTM F1417-92 (Reapproved 2005), except as specified otherwise herein.
         4. The Contractor shall remove all debris, soil and rocks from the sanitary sewer mains and manholes prior to the low-pressure air test by a cleaning ball, high velocity jet, cleaning mandrel or other means.
         5. The Contractor shall furnish all equipment and labor required, including necessary piping/hoses, pneumatic plugs, compression pump, pressure-regulator valve, 9 psi pressure-relief valve, control valves, pressure gauges and second timer or stop watch. The test pressure gauge shall have a maximum range of 0-10 pounds per square inch (psi) and the pressure gauge figure intervals shall be a maximum of 0.25 psi increments.
         6. The required low-pressure air test time shall be based upon the total length and diameter of sanitary sewer main from manhole to manhole (sewer service lines are not included). The minimum low-pressure air test period is 7 minutes and 34 seconds.
         7. The low-pressure air test shall be performed by the Contractor and witnessed by the Engineer and the RWU personnel. The Engineer shall furnish low-pressure air test reports of sanitary sewer mains to the Contractor and RWU.
         8. The low-pressure air test may be stopped (passed) if no pressure drop/loss has occurred during the first 50 percent of the test period as calculated from the 1.0 psi pressure drop table (not less than the minimum low-pressure air test period of 7 minutes and 34 seconds).
      c. Safety Precautions
         1. This low-pressure air test may be dangerous to personnel if, through lack of understanding or carelessness, a line is over pressurized or plugs/caps are installed or restrained improperly. The axial force on an 8 inch plug at the start of a properly conducted test is over 200 pounds. Restraint systems must be designed to handle these forces with adequate safety factors.
         2. No one shall be allowed in the manholes or near a capped pipe during testing. All gauges, piping manifolds and control valves shall be located above ground.
         3. When sanitary sewer mains are tested, it is mandatory that all caps and plugs be braced as an added safety factor.
         4. Do not over pressurize the sanitary sewer main. Do not exceed 9.0 psi.
      d. Test Procedures
         1. After cleaning the interior surface of the sanitary sewer main, the Contractor shall place and inflate pneumatic plugs in the sanitary sewer main pipe at both connecting manholes. One of the plugs must have an inlet tap, or other provision for connecting a hose to a portable air control source.
         2. Connect the air hose to the inlet tap and the portable air control source. The air equipment shall consist of necessary valves and pressure gauges to control an oil-free air source and the rate at which airflow into the test section.
         3. Add air slowly to the test section until the pressure inside the sewer pipe reaches 4.0 psi. After the pressure of 4.0 psi is obtained, regulate the air supply so that the pressure is maintained between 3.5 psi to 4.0 psi for at least two minutes to stabilize air/ground temperature conditions.
         4. Close the air supply valve; release the pressure in the pipe test section to 3.5 psi and the test period is started. Observe the time required for the pressure to drop from 3.5 psi to 2.5 psi. The minimum test time/period is determined from the following 1.0 psi pressure drop table.
         5. All pneumatic plugs shall be removed from both connecting manholes after the test.
      e. Failure of Low-Pressure Air Test
         Any sanitary sewer main/services that fails the low-pressure air test must be repaired. Upon completion of the repairs and the backfill/compaction operation, the sanitary sewer main shall be retested as described in the above test procedures. The Engineer must witness the sewer main repair and backfill operation. The cost of the repair and backfill is incidental to the cost of the project.
      f. Acceptance
         The sanitary sewer main shall have passed the low-pressure air test if the pipe test section does not drop below 2.5 psi during the specified test period.

MINIMUM SPECIFIED TIME REQUIRED FOR A 1.0 PSI PRESSURE DROP FOR SIZES AND LENGTH OF PIPE INDICATED FOR Q=0.0015

Specification Time for Length (L) Shown, Minutes:Seconds

Pipe Dia. (In.)	Minimum Time (Minutes)	Length For Minimum Time (Feet)	Time For Longer Length (Sec.)	100 Ft.	150 Ft.	200 Ft.	250 Ft.	300 Ft.	350 Ft.	400 Ft.	450 Ft.
8	7:34	298	1.520 L	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24
10	9:26	239	2.374 L	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	199	3.418 L	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	159	5.342 L	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04
16	15:10	149	6.282 L	15:10	15:42	20:56	26:10	31:25	36:39	41:53	47:07
18	17:00	133	7.692 L	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41

8. Vacuum Testing (ASTM C1244)
   a. Scope
      1. This test method covers procedures for testing precast concrete manhole sections when using the vacuum test method to demonstrate the integrity of the installed materials and the construction procedures. This test method is used for testing concrete manhole sections utilizing mortar or mastic joints.
      2. This test method is intended to be used as a preliminary test to enable the installer to demonstrate the condition of the concrete manholes prior to backfill. It may also be used to test manholes after backfilling; however, testing should be correlated with the connector supplier.
      3. This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.
      4. This test method is the companion to metric Test Method C 1244M; therefore, no SI equivalents are shown in this test method.
   b. References, ASTM Standards:
      1. C 822 Terminology Relating to Concrete Pipe and Related Products.
      2. C 924 Practice for Testing Concrete Pipe Sewer Lines by Low-Pressure Air Test Method.
      3. C 969 Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines.
   c. Terminology
      For definitions of terms relating to manholes, see Terminology C 822.
   d. Summary of Practice
      All lift holes and any pipes entering the manhole are to be plugged. A vacuum will be drawn and the vacuum drop over a specified time period is used to determine the acceptability of the manhole.
   e. Significance and Use
      This is not a routine test. The values recorded are applicable only to the manhole being tested and at the time of testing.
   f. Preparation of the Manhole
      1. All lift holes shall be plugged.
      2. All pipes entering the manhole shall be temporarily plugged, taking care to securely brace the pipes and plugs to prevent them from being drawn into the manhole.
   g. Procedure
      1. The test head shall be placed at the top of the manhole in accordance with the manufacturer's recommendations.
      2. A vacuum of 10 inches of mercury shall be drawn on the manhole, the valve the vacuum line of the test head closed, and the vacuum pump shut off. The time shall be measured for the vacuum to drop to 9 inches of mercury.
      3. The manhole shall pass if the time for the vacuum reading to drop from 10 inches of mercury to 9 inches of mercury meets or exceeds the values indicated in the table below.
      4. Vacuum test time shall be a minimum of one minute.

Minimum Test Times for Various Manhole Diameters

Depth (ft.)	Diameter (Inches) 30	33	36	42	48	54	60	66	72
1	1	2	2	2	2	3	3	4	4
2	3	3	4	4	5	6	7	7	8
3	4	5	5	6	7	9	10	11	12
4	6	6	7	9	10	12	13	15	16
5	7	8	9	11	12	14	16	18	20
6	8	10	11	13	15	17	20	22	24
7	10	11	12	15	17	20	23	26	28
8	11	12	14	17	20	23	26	29	33
10	14	15	18	21	25	29	33	36	41
12	17	18	21	25	30	35	39	43	49
14	20	21	25	30	35	41	46	51	57
16	22	24	28	34	40	46	52	58	67
18	25	27	32	38	45	52	59	65	73
20	28	30	35	42	50	58	65	72	81
22	31	33	39	46	55	64	72	79	89
24	33	36	42	51	59	69	78	87	97
26	36	39	46	55	64	75	85	94	105
28	39	42	49	59	69	81	91	101	113
30	42	45	53	63	74	87	98	108	121

      5. If the manhole fails the initial test, necessary repairs shall be made by an approved method. The manhole shall then be retested until a satisfactory test is obtained.
      6. Use or failure of this vacuum test shall not preclude acceptance by appropriate water infiltration or exfiltration testing, (see Practice C 969), or other means.
   h. Precision and Bias
      No justifiable statement can be made either on the precision or bias of this procedure, since the testsult merely states whether there is conformance to the criteria for the success specified.

END OF SECTION

SECTION 02751
UTILITY IDENTIFICATION AND MARKINGS

Part 1.00 General

1.01 SCOPE OF WORK

A. The work included in this Section consists of furnishing and installing identification electronic marker balls, tape over the centerline of buried potable water lines, sanitary force mains, and sanitary gravity sewers as shown on the Drawings and specified herein.

1.02 SUBMITTALS

A. Submit manufacturer's descriptive literature, illustrations, specifications and other pertinent data.

Part 2.00 Products

2.01 PRESSURE PIPE IDENTIFICATION

A. During the backfilling operation, the contractor shall place a pipe located tale one (1) foot directly above and parallel to the pipe run with the printed side up for visual identification. The taps shall be Lineguard as manufactured by Lineguard, Inc. Wheaton, IL consisting of a 2-inch minimum width plastic and metallized foil for detection by pipeline locating equipment. Tape shall be coded as follows:

PIPE	COLOR	PRINTING
Potable Water	Blue	"Caution Buried Water Line Below"
Reuse Water	Purple	"Reclaimed Water Buried Below"
Force Main	Brown	"Caution Buried Force Main Below"

In order to preclude possible domestic water tapping, all underground sanitary sewage force mains shall be marked with a continuous painted yellow stripe, 2-inch minimum width located within the top 90 degrees (90°) of the pipe. Reuse water mains will be painted with a 2-inch wide medium green stripe within the top 90 degrees (90°) of the pipe.

2.02 OTHER REQUIREMENTS

A. Water Service
   Water services will be marked with a 2-inch PVC pipe placed vertically in ground with the top 2 feet painted blue located behind the service.
B. Sewer Lateral
   The terminal end of the lateral will have a 2-inch by 4-inch wood stake or a 2-inch PVC pipe placed at its invert and extending a minimum of 2 feet above finished grade with the top 2 feet painted green.
C. Valve Boxes and Meter Boxes
   Covers are to be marked with permanently affixed, minimum 1-1/2-inch letters to identify as follows:
   "WATER" – Potable Water
   "N.P.W." – Reuse Water
   "SEWER" – Sanitary Force Main

END OF SECTION

SECTION 02847
TRAFFIC SIGNALS

Part 1.00 General

1.01 SCOPE OF WORK

A. The work included IN this Section consists of furnishing and erecting traffic signs as shown on the Drawings.

1.02 QUALITY ASSURANCE

A. The Contractor shall furnish manufacturer's certification that all signs furnished conform to these specifications and shall replace or repair, without additional cost to the Owner, all signs that fail to meet this requirement.

1.03 SUBMITTALS

A. Contractor shall submit the Manufacturer's certification that the signs furnished conform to these specifications.

Part 2.00 Products

2.01 GENERAL

A. Traffic regulating signs conforming to the colors, dimensions and requirements of the Manual on Uniform Traffic Control Devices for Streets and Highways and IDOT Standard Highway Signs Manual and displaying the lettering and symbols shown on the Drawings shall be furnished and installed at the locations and in the manner indicated and herein specified.
B. If not indicated on the Drawings, the Contractor shall provide the standard size sign as shown in the Standard Highway Signs Manual.

2.02 MATERIALS

A. Materials for traffic signs and the construction thereof shall be in accordance with State DOT Standard Specifications for Highway and bridge Construction (latest edition).

2.03 FABRICATION OF SIGNS

A. Preparation of sign blanks and fabrication of reflectorized sign faces shall conform to the applicable requirements of State DOT Standard Specifications for Highway and bridge Construction (latest edition).

Part 3.00 Execution

3.01 ERECTION OF SIGNS AND SIGN SUPPORTS

A. Signs and sign supports shall be erected in accordance with the details shown on the Drawings and shall be set plumb unless otherwise indicated. All structural support members shall conform to the dimensions indicated.

END OF SECTION

SECTION 03000
CONCRETE (SITE WORK)

Part 1.00 General

1.01 SCOPE OF WORK

A. The work included in this Section consists of furnishing all materials, forms, transportation and equipment, and performing all necessary labor to do all the plain and reinforced concrete work shown on the Drawings, or incidental to the proper execution of the work, or as herein specified.
B. Composition: Concrete shall be composed of cement, fine aggregate, coarse aggregate, and water, so proportioned and mixed as to produce a plastic workable mixture in accordance with all requirements under this Section suitable to the specific conditions of placement.

1.02 SUBMITTALS

A. All materials specified shall be certified by the producer or manufacturer that the furnished material meets the specific requirements of the specifications.

Part 2.00 Products

2.01 MATERIALS

A. Cement:
   1. Cement: Cement for all concrete shall be domestic Portland cement that conforms to the requirements of ASTM Designation C-150, Type I, Type II, unless noted otherwise on the structural drawings, or Type III cement, for high early strength concrete, shall be used only for special locations and only with the sewer manholes, wet wells and pump stations.
   2. Only one brand of cement shall be used in any individual structure unless approved by the engineer. Cement which has become damaged, partially set, lumpy or caked shall not be used, and the entire contents of the sack or container which contains such cement will be rejected for use. No salvaged or reclaimed cement shall be used.
B. Fine Aggregate: Fine aggregate shall conform to the requirements of ASTM C-33.
C. Coarse Aggregate: Coarse aggregate shall conform to the reqmts. of ASTM C-33.
D. Water: Water shall be taken from a potable water supply and shall be fresh, clean and free of oil, acid, alkali, organic matter, and other deleterious substances.
E. Admixtures: No admixtures shall be used except by specific approval of the Engineer. When approved admixtures shall met the following minimum standards.
   1. Air entraining agent: ASTM C-260.
   2. Water Reducing and Retarding Admixture: ASTM C-494, Type D and free of chlorides.
F. Membrane Curing Compound: Membrane curing compound shall conform to the requirements of ASSHTO Designation M-148, Type 1-clear, or Type 2-white pigmented.
G. Expansion Joint Filler:
   1. Preformed expansion joint filler shall be of the non-extruding and resilient bituminous type and shall conform to the requirements of AASHTO Designation M-213.
   2. Expansion joint filler shall be gray neoprene sponge rubber that conforms to AASHTO Designation M-153, Type I.
H. Separation Board: Separation board shall be closed cell, non-extruding, PVC foam Grade No. 327 as manufactured by AC Horn, Inc., with a 20 psi maximum compressive strength to compress to 75 percent of thickness.
I. Membrane: Membrane shall be a 6-mil polyethylene film.
J. Reinforcing Steel:
   1. Reinforcing steel shall conform to the requirements of ASTM Designation A-615, Deformed Grade 60, except where otherwise indicated.
      a. The name of the manufacturer of the reinforcing steel shall be called out in the shop drawings together with a sketch showing the pattern of the deformation, including the mill mark.
      b. Bar reinforcement shall be accurately fabricated in accordance with the test CRSI Manual of Standard Practice. The Contractor shall prepare and submit the necessary shop drawings and bar lists to the Engineer.
   2. Welded wire fabric for concrete reinforcement shall conform to the requirements of ASTM Designation A-185 and shall be formed with smooth cold-drawn wire.
   3. Cold-drawn wire for spirals shall be plain and shall conform to the requirements of ASTM Designation A-82 with a minimum yield strength of 70,000 psi.
   4. Bar supports:
      a. Bar supports for reinforcing steel shall conform to the requirements of CRSI Manual of Standard Practice, Chapter 3 and shall be of a eight to furnish the concrete cover called for on Drawings. High chairs shall be furnished for bent or top bars in solid slabs. Bar supports to be in contact with exterior surfaces of concrete shall be class C with plastic caps at least 1 inch in length on the leg tips, or Class E with stainless steel legs. Bar supports shall be spaced not more than 100 times the diameter of the bars to be supported, with not more than 1/4 spacing from the end of the supported bars to the first chair.
      b. Bar supports for slabs on grade shall be plain concrete blocks, 3 inches high by 4 inches square with tie wires embedded in support. Concrete strength shall be at 3,000 psi at time of use.
K. Forms: Forms shall be of wood, metal or other approved materials. The sheeting for all exposed surfaces shall be 5-ply plywood, unless otherwise specifically authorized. Forms of like character shall be used for concrete from 1 foot below finished exterior grade to top of structure shall be carefully fabricated so as to provide a smooth finish without defects. The type, size, shape, quality and strength of all materials of which the forms are made shall be subject to the approval of the engineer. If it is his opinion that the interior surfaces of the forms are too irregular to produce the specified finish, they shall be lined with smooth, dense, moisture resistant hardboard or other material of which he approves.
L. Nonshrink Grout: Nonshrink grout shall be nonmetallic, pre-mixed type and shall be Sauereisen F-100 Level fill, Master Builders Masterflow 713 Burke Non-Ferrous – Nonshrink Grout or approved equal.

2.02 CLASSIFICATION AND STRENGTH OF CONCRETE

A. Class and minimum strength requirements for concrete shall be as tabulated below. Unless otherwise specified, Class B concrete shall be used.

B. Strength Requirements: Concrete class and strength shall meet the minimum compressive strength requirements at the age of 7 and 28 days as shown in the following table. The compressive strengths shall be a determined by standard laboratory cylinder tests in accordance with the procedure set forth in ASTM Designation C-31 and C-39. (See article 3.03 of this Section for quantity and testing of cylinders.)

Comprehensive Strength in Pounds Per Square Inch

Class	For Design Purposes	3 Consecutive Cylinder Average 7 Days	3 Consecutive Cylinder Average 28 Days	Low Cylinder 7 Days	Low Cylinder 28 Days
A	4000	2950	4250	2600	3750
B	3000	2100	3200	1850	2800
C	2500	1800	2700	1550	2300

2.03 PROPERTIES AND DESIGN OF CONCRETE MIX

A. Tests and Design Mix:
   1. The Contractor, 30 days before the beginning of concrete work, shall advise the engineer of the proposed sources of the materials, or ready-mixed concrete, which the contractor intends to use in the work. A design mix which has been used by the concrete supplier before, may be submitted for approval provided the proportions and strengths meet the requirements of this specification.
   2. The source and manufacturer of material after once having been approved shall not be changed by the Contractor, except as approved by the Engineer, and additional laboratory tests may be required by the Engineer to prove conformance with specification requirements.
   3. If during the progress of the work, tests indicate that concrete is not being produced in accordance with these Specifications, the Engineer may order changes in the materials or the proportions so as to secure as specified.
B. Slump: Slumps shall be as low possible consistent with proper placing. Low slump concrete shall be used for footing and slabs on grade. Medium slump concrete shall be used for walls, columns and suspended slabs. Concrete shall conform to the limits specified in the following schedule:

Class of Concrete	Medium Slump	Low Slump
A	4 to 5 in.	2 to 3 in.
B	4 to 5 in.	2 to 3 in.
C	5 to 6 in.	3 to 4 in.

Part 3.00 Execution

3.01 PREPARATION

A Concrete Mixing:
   1. Equipment: The concrete shall be ready-mixed and the equipment shall conform to the applicable requirements of ASTM Designation C-94.
   2. Measurement: Equipment necessary to positively determine and control the actual amounts of all materials entering the concrete shall be provided by the Contractor or the concrete manufacturer. All materials shall be measured by weight, except that water may be measured by volume. A bag of cement weighs 94 pounds.

3.02 INSTALLATION

A. Forms:
   1. Construction:
      a. Forms shall be built true to line and grade, and shall be mortar tight and sufficiently rigid to prevent displacement or sagging between supports. The Contractor shall give particular attention to the adequacy of supports and shoring. The surfaces of forms used or permanently exposed surfaces shall be smooth and free from irregularities, dents, sags, or holes. Forms or surfaces to receive stucco finish shall be suitable for its application. Bolts and rods used for internal ties shall be so arranged that, when the forms are removed, all metal is at least 1 – 1/2 inch from any concrete surface. Form ties shall be removed immediately after removal of forms, and holes shall be thoroughly plugged with grout within 24 hours after form removal and kept damp for 4 days to prevent shrinking.

FOR INFORMATIONAL PURPOSES ONLY

ARCHITECTS PROJECT #: DCH22007

Kimley»Horn

445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
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REGISTRY NO. 696
KHA PROJECT # 047916134

Cheddar's SCRATCH KITCHEN

Issue Date: 02/15/23

REVISION INFORMATION

Restaurant #: 21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING

DARDEN CIVIL SPECIFICATIONS

CS4

Drawing name: K:\VRB_LDEV\047916 – Darden\134_CSK Riverview\CADD\PlanSheets\113-CS1 DARDEN CIVIL SPECIFICATIONS.dwg 116-CS4 DARDEN CIVIL SPECIFICATIONS May 08, 2023 1:01pm by: Liz.Meeks
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

b. Wire ties will not be permitted. All forms shall be so constructed that they can be removed without hammering or prying against the concrete. Unless otherwise indicated, suitable moldings shall be placed to bevel or round exposed edges at expansion joints or at any other corners that are to remain. Beams below grade shall have forms at both sides.

Part 3.00 Execution

3.01 PREPARATION

A. Concrete Mixing:
1. Equipment: The concrete shall be ready-mixed and the equipment shall conform to the applicable requirements of ASTM Designation C-94.
2. Measurement: Equipment necessary to positively determine and control the actual amounts of all materials entering the concrete shall be provided by the Contractor or the concrete manufacturer. All materials shall be measured by weight, except that water may be measured by volume. A bag of cement weighs 94 pounds.

3.02 INSTALLATION

A. Forms:
1. Construction:
a. Forms shall be built true to line and grade, and shall be mortar tight and sufficiently rigid to prevent displacement or sagging between supports. The Contractor shall give particular attention to the adequacy of supports and shoring. The surfaces of forms used or permanently exposed surfaces shall be smooth and free from irregularities, dents, sags, or holes. Forms or surfaces to receive stucco finish shall be suitable for is application. Bolts and rods used for internal ties shall be so arranged that, when the forms are removed, all metal is at least 1 - 1/2 inch from any concrete surface. Form ties shall be removed immediately after removal of forms, and holes shall be thoroughly plugged with grout within 24 hours after form removal and kept damp for 4 days to prevent shrinking.
b. Wire ties will not be permitted. All forms shall be so constructed that they can be removed without hammering or prying against the concrete. Unless otherwise indicated, suitable moldings shall be placed to bevel or round exposed edges at expansion joints or at any other corners that are to remain. Beams below grade shall have forms at both sides.
2. Coating: Prior to the placing of steel reinforcement or concrete, forms for exposed surfaces shall be coated with a non-staining paraffin base oil or mineral oil. Forms for unexposed surfaces may be thoroughly wetted in lieu of oiling, immediately before the placing of concrete.
3. Removal: Forms and/or form supports shall not be removed from any concrete until it has obtained sufficient strength to support itself and any live loads it may be subjected to.

B. Reinforcing Steel: When placed in the forms, reinforcement shall be clean and free of all rust, scale, dust, dirt, paint, oil or other foreign material and shall be accurately and securely positioned in the forms as shown on the Drawings before the placing of concrete. Reinforcing steel shall be wired or otherwise fastened at intersections and shall be supported by concrete or metal supports, spacers or hangers. Bar supports, where adjacent to the ground, shall be set on precast concrete pads compressed into the reinforcing steel at intersections by welding methods.
1. Splicing of reinforcement shall be held to a minimum and shall be placed at points of minimum stress. Bars shall be lapped splices a minimum of 36 bar diameters unless otherwise shown on the Drawings or directed by the Engineer, and shall be rigidly wired or clamped.
2. Wire fabric shall be straightened before placing and shall overlap one full space of mesh at ends and edges and shall be securely fastened. Fabric shall be supported so as to occupy its proper location in the concrete as shown on the Drawings. Fabric shall not cross any expansion joints.

C. Embedded Items: In addition to steel reinforcement, pipes, inserts and other metal objects as shown, specified or ordered shall be built into, set in, or attached to, the concrete. All necessary precautions shall be taken to prevent these objects from being displaced, broken or deformed. Before concrete is placed, care shall be taken to determine that all embedded parts are firmly and securely fastened in place as indicated. They shall be thoroughly clean and free from paint or other coating, rust, scale, oil, or any foreign matter. No wood shall be embedded in concrete. The concrete shall be packed tightly around pipes and other metal work to prevent leakage and to secure perfect adhesion. Drains shall be adequately protected from intrusion of concrete.

D. Concrete:
1. General: Reinforcement shall be secured in position, inspected and approved before placing concrete. Runways for transporting concrete shall not rest on reinforcing steel. Concrete not placed within 90 minutes from the time mixing is started will be rejected and shall be removed from the job by the Contractor. Concrete shall be deposited as nearly as practicable in final position. Concrete shall not be allowed to drop freely more than six feet. All concrete shall be placed in daylight and (excepting seal concrete) shall be placed in the dry unless otherwise authorized by the Engineer.
2. Slab Placed on Subgrade: Slab concrete placed on earth or fill subgrade shall be separated from direct contact with the subgrade by 6 mil polyethylene film or other approved material, unless noted otherwise on structural drawings. Sidewalks and walkways will not require a separation sheet. Polyethylene film shall be lapped 4 inches on sides and12 inches on ends.
3. Compaction: Concrete shall be compacted by internal vibrating equipment, supplemented by hand rodding and tamping as required. Vibrators shall in no case be used to move the concrete laterally inside the forms. Internal vibrators shall be used to maintain a speed of at least 5000 impulses per minute when submerged in concrete. (at least one spare vibrator, in working condition, shall be maintained at the site during concrete placing operations.) Duration of vibration shall be limited to the time necessary to produce satisfactory consolidation without causing segregation. Vibrator shall be moved constantly and placed in each specific spot only once.
4. Bonding: Before depositing new concrete on or against concrete that has set, the surfaces of the set concrete shall be thoroughly cleaned so as to expose the coarse aggregate and be free of coatings, foreign matter and loose particles. The cleaned surfaces shall be dampened, but not saturated, and then thoroughly covered with a coat of cement grout of similar proportions to the mortar in the concrete. The grout shall be as thick as possible on vertical surfaces and at least ½ inch thick on horizontal surfaces. The fresh concrete shall be placed before the grout has attained its initial set.
5. Protection: Rainwater shall not be allowed to increase the ratio of mixing water, nor to damage the surface finish. Concrete shall be protected from disfigurement, damage, vibration, internal fractures and construction overloads.

E. Curing:
1. All concrete, including gunite, shall be water cured by covering with a double thickness of clean burlap, cotton mats, or other approved material kept thoroughly saturated with water. The forms shall be kept wet until removed and upon removal, the curing specified herein shall be started immediately. Concrete shall be cured for a period of 7 days for normal Portland cement or 4 days for high early strength cement. Concrete poured in the dry shall not be submerged until it has attained sufficient strength to adequately sustain the stress involved, nor shall it be subjected to flowing water across its surface until it has cured 4 days. Curing of gunite shall be started as soon as possible without damaging surface and not later than 2 hours after placing.
2. In lieu of wet burlap or cotton mats as specified above, concrete slabs may be covered with wet sand and kept moist for the specified curing period. The initial curing period of not less than 24 hours shall consist of the wet burlap or cotton mat method, then the wet sand method may be utilized until the end of the curing period.
3. Concrete surfaces which will not be coated, painted, plastered, stuccoed, covered with tile or floor covering or requiring a bonding surface may be cured by means of a membrane curing compound in lieu of the wet cure method. The curing compound shall be applied immediately after a satisfactory surface finish has been completed or forms have been removed. The rate of application of membrane curing compound shall be at least one gallon to every 200 square feet of exposed surface to be cured. The membrane curing compound and impervious covering shall be continuous and without defects and shall retain the required moisture in the concrete. Membrane curing compound that becomes damaged by rain, foot traffic or other conditions within 5 days of application shall be reapplied.

F. Finishes:
1. As soon as forms can safely be removed, all irregular projections shall be chipped off flush with the concrete surfaces. All voids produced by spacers or any honeycombing shall be pointed up with grout and troweled flush with the concrete surface immediately after removal of forms and water cured to prevent shrinkage. Honeycombing shall be cut out to expose a sound concrete surface prior to pointing. The use of mortar pointing or patching shall be confined to the repair of small defects in relatively green concrete. Where in the opinion of the Engineer substantial repairs are required, the defective concrete shall be cut out to sound concrete and repaired with gunite or the concrete shall be removed and reconstructed as directed.
2. Floor slabs shall be brought to a true and even finish by power or hand floating in a manner that will not bring excess fines to the surface. The consistency of the concrete shall be such that water does not accumulate at the surface. Unless otherwise shown on the Drawings, the surface shall be floated with a wood float and shall be steel troweled to a smooth finish. Troweling shall be the minimum to obtain a smooth, dense surface and shall not be done until the mortar has hardened sufficiently to prevent excess fine material from being worked into the surface. If so directed, the surface shall be brushed lightly with a push broom so as to produce a non-slip surface.
3. Concrete surfaces that are not exposed in the completed work will require no special finish other than such pointing up and rubbing as is necessary to leave them smooth and impervious.
4. Other surfaces which will be exposed in the completed work shall be finished by being rubbed smooth and dense, without pits, irregularities, blow holes or bubbles.

G. Grout:
1. Grout for pointing and patching shall consist of cement and fine aggregate mixed in the proportions used in the concrete and a minimum amount of water to produce a workable grout.
2. Material for grouting manhole or drainage inlet openings, column base places, anchor bolts, reinforcing bars, pipe sleeves and pump base plates shall be of non-shrink type and shall be mixed and placed as recommended by the manufacturer. Machinery set on grout pads shall not be operated until the grout has cured for at least 24 hours.

3.03 FIELD QUALITY CONTROL

A. General: The quality of the concrete as to conformance to the specifications is the entire responsibility of the Contractor until it is accepted in place in the structure and verified by the final cylinder tests made by the laboratory. Arrangements for field testing shall be made by the Contractor with the laboratory as selected by the Owner.

B. Compressive Tests: Standard laboratory compressive test cylinders will be obtained by the laboratory when concrete is discharged from the mixer at the site of the work. A set of 6 cylinders will be obtained for each 60 cubic yards or fraction thereof placed each day, for each type of concrete. The cylinders will be cured under laboratory condition and will be tested in two groups of three at 7 and 28 days of age, respectively.

C. Slump Tests: The laboratory of the Owner or their representative will make slump tests of Class A and Class B concrete as it is discharged from the mixer at the site of the work. Slump tests may be made on any batch and failure to meet specified slump requirements will be sufficient cause for rejection of that batch.

D. Reports: Proper reports of all tests performed by the laboratory will be prepared by the laboratory and submitted promptly to the Engineer and Owner. Such reports shall be properly labeled so as to identify the portions of the project into which the materials have been placed.

END OF SECTION

SECTION 03100
CONCRETE FORMWORK

Part 1.00 General

1.01 SCOPE OF WORK

A. Furnish labor, materials, services, equipment and appliances required for concrete formwork indicated on the Drawings and specified herein.

1.02 REFERENCE STANDARDS

A. Material Standards:
American Society for Testing Materials (ASTM)

B. Concrete Standards:
American Concrete Institute (ACI)

Part 2.00 Products

2.01 MANUFACTURER

A. The Drawings were prepared and this Specification written on the basis of using the products of specific manufacturers. Such is intended to establish minimum quality standards, not to limit competitive bidding. Products with equal or superior characteristics by other manufacturers are acceptable under conditions of the Specifications.

2.02 FORM MATERIALS

A. Wood:
No. 2, or better, southern pine dressed lumber, white pine or Douglas fir, non-stress grades.

B. Plywood:
DFPA Plyform, Exterior B-B, edge sealed.

C. Plastic Fiber:
Special forms of molded fiber, if required.

D. Cardboard:
Beam void forms "VOIDCO" or equal, as required under pier supported grade beams.

E. Metal:
Commercial standard, or as noted on drawings.

2.03 FORM ACCESSORIES

A. Gateway, Superior or equal, catalog items selected for minimum 350 psf form loadings.

2.04 FORM OIL

A. Non-staining mineral oil of viscosity 250/100 F.

Part 3.00 Execution

3.01 FORM CONSTRUCTION

A. General:
Design, construct and maintain forms so as to insure that after removal, finished concrete members will have true surfaces, be free of waves or bulges, and conform accurately to indicated shapes, dimensions, lines and positions of concrete members shown. Place, align and fit forms in successive units to ensure smooth continuous completed surfaces free from form marks and irregularities. Provide temporary openings in forms as required to facilitate cleanings and inspection. Forms shall be readily removable without impact, shock or damage to concrete. Clean form surfaces before each use.

B. Deflection and Leakage:
Space waters, ties, bracing, etc. to prevent form deflection. Construct form joints sufficiently tight to prevent leakage of grout and cement paste during placing.

C. Exposed Surfaces:
Give special care to formwork, ties, bracing, etc. for retaining walls or other surfaces to be left exposed to permanent view. Waves, bulges, form marks, staining, joint marks or irregularities will not be acceptable.

3.02 CURING CONCRETE WITHIN FORMS

A. If surfaces are to be cured within forms, accomplish by keeping forms continuously wet. If forms are removed before end of curing period, continue curing as specified in CAST-IN-PLACE CONCRETE.

3.03 REMOVAL OF FORMS

A. Timing:
Remove forms after concrete has adequately hardened; not earlier than two days after concrete is placed.

B. Method:
Remove forms as a hand operation, take care to avoid damage to finished concrete and/or reinforcing passing through forms being removed.

3.04 CLEAN-UP

A. Upon completion of work of this Section, remove related debris from the premises.

END OF SECTION

SECTION 0300
CAST-IN-PLACE CONCRETE

Part 1.00 General

1.01 SCOPE OF WORK

A. Furnish labor, materials, services, equipment and appliances required for Cast-in-Place concrete work indicated on the Drawings and specified herein.

1.02 INTENT

A. Concrete shall be ready-mixed, or transit mixed, obtained from a plant; ASTM C94. Use job-mixed concrete only where and if authorized by Owner.

1.03 MILL TESTS

A. Submit certified copies of reports to Owner, if requested.

1.04 REFERENCE STANDARDS

A. American Society for Testing Materials (ASTM)
B. American Concrete Institute (ACI)
C. Federal Specifications (FS)

1.05 SUBMITTALS

A. Shop Drawings:
Submit drawings of reinforcement for acceptance prior to start of fabrication. List reinforcing and accessories quantities, sizes, bends, dimensions and notes required for fabrication and placement. Draw placing plans, elevations, details and sequence of placement. Member marks on shop drawings; same as on structural drawings.

B. Testing Laboratory Reports:
Submit three copies to Owner.

Part 2.00 Products

2.01 MANUFACTURER

A. The Drawings were prepared and this Specification written on the basis of using the products of specific manufactures. Such is intended to establish minimum quality standards, not to limit competitive bidding. Products with equal or superior characteristics by other manufacturers are acceptable under conditions of the Specifications.

2.02 BASIC MATERIALS

A. Concrete:
1. Portland Cement
ASTM C150, Type I, unless noted otherwise on structural drawings.
2. Aggregates
a. Fine Aggregates:
Washed sand; ASTM C33
b. Coarse Aggregates:
Crushed stone; ASTM C33
i. Members to 8 inches in section - Table II, Size 67.
ii. All other concrete - Table II, Size 467.
3. Water
Local tap water.

B. Reinforced Steel:
1. Bars
ASTM A615, grade 60 or as shown on the Drawings.
2. Wire Fabric
ASTM A185.

2.03 MISCELLANEOUS MATERIALS

A. Accessories:
ACI - 315, galvanized, chairs, stools, spacers, etc.

B. Expansion Joints:
3/4 inch diameter plain steel bars with sawn ends and expansion caps.

C. Underslab Vapor Barrier:
"Visqueen"; plastic sheeting, 6 mils thick, unless noted otherwise on structural drawings.

D. Floor Finishing:
1. Floor Leveling Compound Floor Leveling Compound
"DEX-O-TEX"; Crossfield Products Corporation, Compton, California.
2. Floor Sealing Compound
"Master Seal SL"; Master builders, Cleveland, Ohio.
NOTE: Concrete floors to receive adhesively applied finishes or grouted finishes are not to be sealed.

E. Curing:
1. Curing Compound
Master Builders Technologies, "Masterkure 200W" water based wax emulsion concrete curing compound.
2. Plastic Sheet Curing Membrane
"VISQUEEN"; 6 mils thick, with joint sealing tapes.
3. Burlap for Moist Curing
Standard grade burlap; FS CCC-C-467.

2.04 CONCRETE MIX DESIGN

A. Contractor employs and pays for services of an Owner-acceptable independent testing laboratory to determine concrete mix design based on compressive strengths of concrete shown on the structural Drawings. For design mix tests use aggregate, cement additive where specified, and water to be actually used in mixing concrete.

Part 3.00 Execution

3.01 DELIVERY AND TIME LIMITS

A. Concrete not placed within maximum time intervals, after adding mixing water, shall be rejected and removed.

Temperature, Mix or Air	Maximum Time Interval
Up to 75 Degrees F	90 min
75 to 89 Degrees F	60 min
Over 90 Degrees F	45 min.

3.02 VAPOR BARRIER INSTALLATION

A. Install in accord with manufacturer's instructions over prepared granular or non-expansive fill; seams lapped 6 inches minimum.

3.03 PLACING REINFORCING

A. General:
Place accurately and securely saddle-tie at intersection with 16 gage black, annealed wire. Support bars rigidly in place with chairs or spacers permitted by ACI-315. Inches of concrete protection at reinforcement shall be in accord with "ACI Building Code", unless shown otherwise on Drawings.

B. Shop Drawings and Splicing:
Place bars and wire fabric in accord with accepted shop drawings and schedules on structural Drawings. Splice wire fabric by lapping both directions not less than distance between wires, and tying two transverse wires. Splice bars as shown on Drawings.

C. Inspection Before Coverings:
Owner's acceptance of inserts and reinforcing in place is required before concrete is placed; do not conceal until inspected and authorized to proceed. Prior to Owner's inspection, remove water, clean, tighten forms, close openings and coat forms with form oil.

3.04 PLACING CONCRETE

A. General:
Deposit concrete as nearly as practical to final position to avoid segregation due to re-handling or flowing. Deposit concrete at rate that it stays plastic and flows readily into spaces between inserts and reinforcing and completely fills forms. Temperature of concrete at time of placing; between 50 and 90 Degrees F.

B. Discharge and Lowering:
Control concrete discharge so that concrete may be effectively placed in horizontal layers not more than 8 inches thick. Stacking or piling concrete in one place and then removing it any appreciable distance into position with hoes, rakes, shovels, and/or compactors is prohibited.

C. Tremies and Chutes:
Use tremies and or chutes when placing concrete in piers, high narrow retaining walls, etc., so that concrete will not vertical drop more than 3 feet.

D. Compacting:
Compact each layer of concrete using SPUD-type mechanical internal vibrators, supplemented with hand tampers. Maintain vibrator speed of not less than 5000 cycles while submerged in concrete. Maintain at least one spare vibrator at hand.

E. Bonding:
Before depositing fresh concrete on previously placed concrete which has partially or fully hardened, scrape surfaces of hardened concrete, hammer, or wire-brush while hosing with water under pressure, until large aggregate is exposed and scraping, laitance and dust removed. Tighten forms, wet concrete surfaces, slush with neat cement grout, and deposit new concrete before grout attains initial set. Slushing grout; not less than 1/8 inch in thickness.

F. Jointing:
Locate and make construction joints in accord with the Drawings. Construction joints will not be permitted at other locations without Owner's acceptance.

G. Anchor Bolts:
Set anchor bolts, furnished by and/or for the work of other trades, in freshly placed concrete. Set bolts plumb and true and in accord with accepted shop drawings and the Drawings.

3.05 FINISHING CONCRETE

A. Smooth Finish Slabs:
1. Tamping
While placing concrete, tamp to force coarse aggregate away from surface. Screed with straight edges to bring surface to finish level required.
2. Floating
Wood float to true plane with no coarse aggregate showing while concrete is still green but sufficiently hard to bear a man's weight without imprint. Float level or slope to drains as required. Use sufficient pressure while floating to bring moisture to surface.
3. Troweling
Steel trowel not less than two passes. Begin with power trowel as soon as little or no cement sticks to blades. Do not dust with dry cement or aggregate to absorb moisture or to stiffen mix. Hand steel trowel third pass to remove slight imperfections and produce smooth impervious face. Continue hand troweling until ringing sound is heard as trowel burnishes surface.
4. Tolerance
Slabs to receive applied finishes, special finishes, or to be sealed shall be level with tolerance of 1/8 inch in 10 feet, when tested with 10 foot straight edge at 3 foot intervals in both directions.

B. Depressed Slabs:
Finish depressed slabs, if shown on the Drawings, to receive waterproofing, topping, fill or mortar beds for tile, etc., as for smooth finish slabs but only through wood floating.

C. Surfaces Other Than Slabs:
1. Exposed Vertical Surfaces
Fill bolt and tie rod holes with same mix as placed concrete, except without course aggregate. Fill holes passing through concrete members from inside face. Stone rub to uniform finish.
2. Patching and Repairs
Remove honeycomb voids, cracks, and irregularities. Where repair is required, cut back defects not less than 1/2 inch with square edges, brush out, drench with water and fill with same mix as placed concrete, except without coarse aggregate. When cut-outs have been filled, trowel surface smooth, remove excess grout. After set, grind slightly to uniform color and appearance using neat Portland Cement applied with a power grinder wheel.
3. Topping and Fills
Screed, float and finish same as slabs.

3.06 CURING CONCRETE

A. Requirements:
Cure concrete not less than 7 days by protecting it against moisture loss, rapid temperature change, mechanical injury, and injury from weather, rain, or flowing water. Contractor's choice:
1. Compound
Apply in accord with manufacturer's instructions. Protect compound-formed membrane on slabs with 1 inch of sand. Compound must be completely removed once concrete has achieved specified set. Remove per manufacturer's written instructions with a mechanical scrubber and water soluble stripper.
2. Plastic Sheet
Cover surface with membrane, edges lapped 4 inches or more and sealed with tape.
3. Moisture
Keep surfaces continuously wet or moist during curing period, by covering surfaces with wet sand, wet burlap, or moist curing mats.
4. Surface Within Forms
Keep forms continuously wet. If forms are removed before end of curing period, continue for full curing period as for unformed surfaces.

3.07 SEALING CONCRETE

A. Where shown on the Drawings, apply to slab in accord with manufacturer's instructions. Apply during later stages of construction.

3.08 TESTING

A. Independent Testing Laboratory:
Contractor employs and pays for services of an Owner-acceptable independent testing laboratory to perform concrete cylinder testing. Test cylinders shall be taken and cured by Contractor and tested by laboratory for each different class of concrete placed in any one day. Take cylinders in accord with ASTM C31, and cure and test in accord with ASTM C39. One set of three cylinders is required for each 50 cu yd of concrete or less, placed in any one day. Test one cylinder at seven days, one at 28 days, and hold one as a spare from each set of three.

B. Contractor Tests:
1. Slump Tests
Contractor take slump tests when cylinders are taken; maximum slump 5 inches and minimum slump 3 inches.
2. Air Entrainment
Air content by volume: 3 to 5 percent based on measurements made in concrete mixtures at point of discharge at job site at time slump tests are made. Air content by volume; ASTM C231.

C. Special Testing:
1. Owner may direct core tests; ASTM C42, or load tests; Section 202 of ACI 318 be made of portions of structure under provisions of Article 7 of the GENERAL CONDITIONS.

3.09 CLEANING CONCRETE

A. At completion of concrete work, clean surfaces exposed to view with water and fiber bristle brushes. Completely strip all curing compounds before installation of floor finishes.

3.10 CLEAN-UP

A. Upon completion of work of this Section, remove related debris from premises.

END OF SECTION

FOR INFORMATIONAL PURPOSES ONLY

ARCHITECTS PROJECT #:
DCH22007

Kimley»Horn

445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
PH: (772) 794-4100
REGISTRY NO. 696
KHA PROJECT # 047916134

cheddar's SCRATCH KITCHEN

Issue Date:	02/15/23

REVISION INFORMATION

Restaurant #:	21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING

DARDEN CIVIL SPECIFICATIONS

CS5

Drawing name: K:\VRB_LDEV\047916 - Darden\134_CSK Riverview\CADD\PlanSheets\113-CS1 DARDEN CIVIL SPECIFICATIONS.dwg 117-CS5 DARDEN CIVIL SPECIFICATIONS May 08, 2023 1:01pm by: Liz.Meeks
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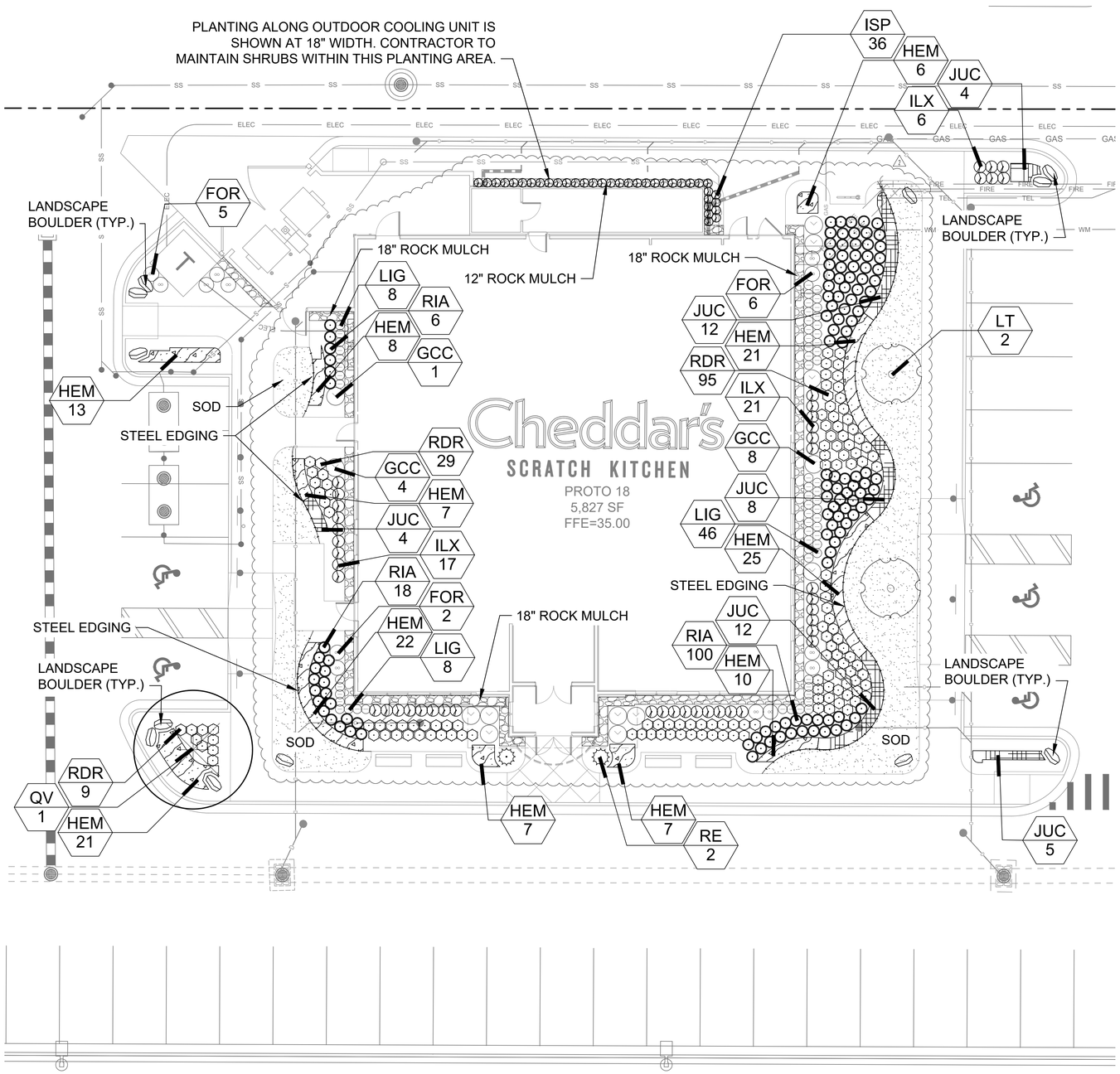

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL / COMMON NAME	SPECIFICATIONS	REMARKS
	QV	1	Quercus virginiana / Southern Live Oak	3" cal, 12'-14` ht	Full, Straight, Single Leader
UNDERSTORY TREES	**CODE**	**QTY**	**BOTANICAL / COMMON NAME**	**SPECIFICATIONS**	**REMARKS**
	LT	2	Lagerstroemia indica `Tuscarora` / Tuscarora Crape Myrtle	15 gal	3, 1" cal. Multi trunk
SHRUBS	**CODE**	**QTY**	**BOTANICAL / COMMON NAME**	**SPECIFICATIONS**	**REMARKS**
	FOR	13	Forestiera Segregata / Florida Privet	30" ht, 24" spr, 30" oc	Full
	GCC	13	Gardenia augusta / Common Gardenia	24" ht, 24" spr, 36" oc	Full
	ILX	44	Ilex cornuta 'Dwarf Burford' / Dwarf Burford Holly	24" x 24", 24" o.c.	Full
	ISP	36	Ilex crenata 'Sky Pencil' / Sky Pencil Holly	30" ht, 18" spr, 18"oc	Full
	LIG	62	Ligustrum recurvifolium / Recurve Ligustrum	36" ht, 20" spr, 20" oc	Full
	RDR	133	Rhododendron 'Duc de Rohan' / Duc de Rohan Azalea	16" ht, 16" spr, 24" oc	Full
	RE	2	Russelia equisetiformis / Firecracker Plant	24" x 24", 36" o.c.	Full
	RIA	124	Rhaphiolepis indica 'Alba' / White Indian Hawthorn	18" ht, 24" spr, 24" oc	Full
GROUND COVERS	**CODE**	**QTY**	**BOTANICAL / COMMON NAME**	**SPECIFICATIONS**	**REMARKS**
	HEM	147	Hemerocallis fulva / Daylily `Wilson`s yellow'	16" ht, 16" spr, 18" o.c.	1 gallon, 5 bib min.
	JUC	45	Juniperus conferta / Shore Juniper	4" x 10" x 24" o.c.	1 gal.
MISC	**CODE**	**QTY**	**BOTANICAL/COMMON**	**SPECIFICATIONS**	
	SOD	TBD	Stenotaphrum secundatum 'Floratam'	Solid sod, rolled tight with sand filled joints, 100% weed, disease, and pest free	
		TBD	Rock Mulch	1-3" dia. in warms colors to match building. Rock to be at edge of building per plans.	
	MULCH	TBD	Shredded Hardwood Mulch	3" depth	
	SE	TBD	Steel Edging	3/16" x 6" ; black	
	BOULDER	12	Landscape Boulder	4-5'(L) 1-2'(W) 15-24"(H) Bury ⅓ of stone for natural look	

NOTE: PLANT QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. IN THE CASE OF A DISCREPANCY, THE DRAWING SHALL TAKE PRECEDENCE.

NOTE: PLANTS ARE SPECIFIED BY HEIGHT AND SPREAD, NOT CONTAINER SIZE. ALL PLANTINGS ARE EXPECTED TO MEET ALL SPECIFICATIONS PROVIDED.

LANDSCAPE REQUIREMENTS:

HILLSBOROUGH COUNTY	REQUIRED:	PROVIDED:
BUFFER: 8 FT BUFFER BETWEEN R/W & PARKING LOT	YES	YES
STREET TREES: 1 TREE PER 40 LF OF FRONTAGE	YES	YES; MET WITH EXISTING TREES
SCREENING: SHRUBS, MOUNDS OR WALLS MUST BE CONSTRUCTED TO SCREEN PARKING FIELD & MUST BE A MINIMUM 3' TALL & SUPPLY 75% OPACITY WITHIN 2 YEARS.	YES	YES; MET WITH EXISTING LANDSCAPE
PARKING: 1 TREE PER EVERY 10 STALLS	YES	YES; MET WITH EXISTING TREES

PLANTING NOTES

1. ALL PLANT MATERIAL SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES AND SHALL MEET ALL STANDARDS AS STATED IN THE LATEST EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADVISE THE OWNER'S REPRESENTATIVE OF ANY CONDITION FOUND ON SITE WHICH PROHIBITS INSTALLATION AS SHOWN ON THESE PLANS.
3. NO SUBSTITUTIONS IN PLANT MATERIALS SHALL BE MADE WITHOUT WRITTEN AUTHORIZATION FROM OWNER OR LANDSCAPE ARCHITECT. IN THE EVENT OF DISCREPANCIES BETWEEN THE DRAWING AND THE PLANT LIST, THE DRAWING SHALL PREVAIL.
4. ALL PLANT MATERIAL IN SHOCK HAS TO BE REPLACED PRIOR TO A CO.
5. LOCATE ALL UTILITIES PRIOR TO ANY DIGGING OPERATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO EXISTING UTILITIES INCURRED BY HIS WORK.
6. ALL LANDSCAPED AREAS SHALL BE FULLY IRRIGATED WITH AN AUTOMATIC IRRIGATION SYSTEM.
7. STAKING AND GUYING ALTERNATIVES METHODS INDICATED IN DRAWING DETAILS ARE PREFERRED. CONTRACTOR MAY SUGGEST ALTERNATE METHODS, ASSUMING FULL RESPONSIBILITY FOR THEIR IMPLEMENTATION. CONTRACTOR SHALL REPLACE, PLANT, OR UPRIGHT ANY TREES BLOWN OVER OR DAMAGED DUE TO INADEQUATE STAKING AT NO ADDITIONAL COST TO THE OWNER.
8. PLANTS MASSED IN BEDS SHALL BE ARRANGED USING TRIANGULAR SPACING.
9. PROVIDE A METAL EDGE BETWEEN ALL PLANTING BEDS AND LAWN AREAS.
10. EXISTING SOIL SHALL BE REASONABLY FREE OF STONE, LUMPS OF CLAY, ROOTS AND OTHER FOREIGN MATTER. ACIDITY TO BE BETWEEN 5.0 AND 7.0 pH. CONTRACTOR TO VERIFY SOIL ACIDITY AND AMEND AS NECESSARY TO BRING SOIL WITHIN RANGE.
11. TREE PLANTING PITS SHALL BE BACKFILLED WITH TOP SOIL, AND CLEARED OF ALL ROCKS, LUMPS OF CLAY AND OTHER FOREIGN MATERIAL. PLACE 1" OF COMPOST AND 3" OF MULCH ON TOP OF ROOT BALL.
12. PROVIDE GRASS SEEDING OR LAY SOD FOR PROPOSED LAWN AREAS TO ALL EDGES OF PAVEMENT AND/ OR LIMITS OF DISTURBANCE OUTSIDE R.O.W. OR PROPOSED LANDSCAPE EASEMENT.
13. THE CONTRACTOR, SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPING FOR 90 DAYS AFTER FINAL ACCEPTANCE. ALL REQUIRED LANDSCAPING SHALL BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES. THE WORK SHALL INCLUDE, BUT NOT TO BE LIMITED TO, MOWING, EDGING, PRUNING, FERTILIZING, WATERING, WEEDING, AND OTHER SUCH ACTIVITIES COMMON TO THE MAINTENANCE OF LANDSCAPING. ALL PLANT MATERIALS SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AS IS APPROPRIATE FOR THE SEASON OF THE YEAR. PLANT MATERIAL THAT DIES SHALL BE REPLACED WITH THE PLANT MATERIAL OF SIMILAR SIZE AND VARIETY.
14. TREES OVERHANGING WALKS AND PARKING AREAS SHALL HAVE A CLEAR TRUNK HEIGHT OF 7 FEET FROM FINISH SURFACE GRADE.
15. TREES PLANTED ON SLOPES SHALL BE PLACED IN PLANTING PITS OF ADEQUATE DEPTH SUCH THAT THE SOIL STAIN AT THE BASE OF THE TRUNK MATCHES THAT OF THE AVERAGE GRADE OR SLOPE.
16. CONTRACTOR SHALL WARRANTY PLANT MATERIAL TO REMAIN ALIVE AND HEALTHY FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE. WARRANTY SHALL NOT INCLUDE DAMAGE FOR LOSS OF PLANT MATERIAL DUE TO NATURAL CAUSES, ACTS OF VANDALISM OR NEGLIGENCE ON THE PART OF THE OWNER.
17. EXISTING LANDSCAPE THAT IS DAMAGED, NOT SCHEDULED FOR REMOVAL, SHALL BE REPLACED TO EXISTING CONDITION.
18. ALL EXISTING TREES TO BE PRUNED/ CLEANED-UP BY A CERTIFIED ARBORIST.
19. ALL INVASIVE / EXOTIC SPECIES ONSITE TO BE REMOVED.
20. QUANTITIES ARE APPROXIMATE AND ARE PROVIDED ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR VERIFYING QUANTITIES AND PROVIDING SUFFICIENT QUANTITIES OF MATERIAL FOR COVERAGE BASED ON THE AREAS TO BE COVERED AND PLANT SPACING CALLED FOR.
21. ALL DISTURBED AREAS ON SITE NOT CALLED TO BE SODDED, SHALL BE REESTABLISHED WITH SEED OR HYDROMULCH.
22. ALL LANDSCAPE BED AREAS TO BE PREPARED USING LANDSCAPER'S BLEND BY SOIL BUILDING SOLUTIONS OR APPROVED EQUAL. CONTRACTOR TO MIX 4" LAYER OF SBS LANDSCAPER'S BLEND WITH NATIVE SOIL AND TILL TO A DEPTH OF 8". FINISHED GRADES OF PLANTING BEDS TO BE 2" BELOW FINISHED GRADE OF ADJACENT PAVING OR AS SHOWN ON GRADING PLAN.
23. AN AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED TO MAINTAIN ALL LANDSCAPE AREAS. OVER SPRAY ON STREETS AND WALKS IS PROHIBITED.
24. BEDS ADJACENT TO BUILDING PAD SHALL BE MULCHED WITH ROCK MULCH (APPROX. 2"-3" AGGREGATE) TO MATCH OR COMPLIMENT BUILDING VENEER (PROVIDE SAMPLE FOR ARCHITECT'S APPROVAL). ALL OTHER BED AREAS TO BE MULCHED WITH SHREDDED HARDWOOD MULCH AT 3" MIN.. DEPTH. (FLORA MULCH OR APPROVED EQUAL.)
25. NOTIFY LANDSCAPE ARCHITECT 772-794-4100 SHOULD AVAILABILITY ISSUE(S) ARISE.
26. MINIMUM 5 FOOT TREE SETBACK FROM ALL UTILITIES & 7.5' CLEARANCE AROUND FIRE HYDRANTS & FDC'S FROM LANDSCAPING.

NORTH

GRAPHIC SCALE IN FEET
0 5 10 20

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KHA PROJECT # 047916134

REGISTERED LANDSCAPE ARCHITECT LEAH MARIE CAMPBELL LA6667166 STATE OF FLORIDA

5/8/2023

Cheddar's SCRATCH KITCHEN

Issue Date:	2/15/2023
REVISION INFORMATION	
2	4/5/2023
COORDINATION COMMENTS	

Restaurant #: 21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING

LANDSCAPE PLANS

L1.1

Drawing name: K:\FRI_LA\047916 - Darden\047916134 - Cheddars Riverview\DESIGN\01 Permit-Code\Plansheet\150-L1.1 LANDSCAPE PLANS.dwg 150-L1.1 LANDSCAPE PLANS May 08, 2023 1:59pm by: Liz.Meeks
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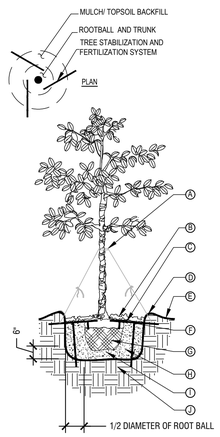

Ⓐ TREE WRAP

Ⓑ 4"-6" DIAMETER RIVER ROCK (INSIDE THE BUILDING PAD) OR 3" MINIMUM OF HARDWOOD BARK MULCH OR AS SPECIFIED (IN OUTLYING PLANT BEDS).

Ⓒ STAKE SIZE SHALL BE ONE SIZE HIGHER THAN REQUIRED FOR SIZE OF TREE. REFER TO SITEWORK SPECIFICATIONS FOR APPROVED MATERIALS AND INSTALLATION REQUIREMENTS.

Ⓓ 3" HIGH SOIL BERM TO HOLD WATER

Ⓔ FINISHED GRADE (SEE GRADING PLAN)

Ⓕ TOP OF ROOTBALL MIN. 1" ABOVE FINISHED GRADE

Ⓖ B & B OR CONTAINERIZED (SEE SPECIFICATIONS FOR ROOT BALL REQUIREMENTS).

Ⓗ PREPARED PLANTING SOIL AS SPECIFIED.

Ⓘ ROOTBALLS GREATER THAN 24" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING. ROOTBALLS SMALLER THAN 24" IN DIA. MAY SIT ON COMPACTED EARTH.

Ⓙ UNDISTURBED SUBSOIL

1. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
2. REMOVE BURLAP, WIRE AND STRAPS (ANYTHING THAT COULD GIRDLE TREE OR RESTRICT ROOT GROWTH).
3. SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.
4. PRUNE TREE AS DIRECTED BY LANDSCAPE ARCHITECT/OR OWNER.
5. BRANCHING HEIGHT TO ANSI STANDARDS.

1 TREE WRAP

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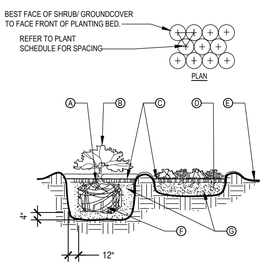


Ⓐ TOP OF SHRUB ROOTBALLS TO BE PLANTED 1" - 2" HIGH WITH SOIL MOUNDING UP TO THE TOP OF ROOTBALL.

Ⓑ WHEN USED IN MASSES- PRUNE ALL SHRUBS TO ACHIEVE A UNIFORM MASS/HEIGHT.

Ⓒ 4"-6" DIAMETER RIVER ROCK (INSIDE THE BUILDING PAD) OR 3" MINIMUM OF HARDWOOD BARK MULCH OR AS SPECIFIED (IN OUTLYING PLANT BEDS).

Ⓓ EXCAVATE ENTIRE BED SPECIFIED FOR GROUNDCOVER BED.

Ⓔ 4" MINIMUM OF TOPSOIL TO BRING TO FINISHED GRADE (SEE GRADING PLAN).

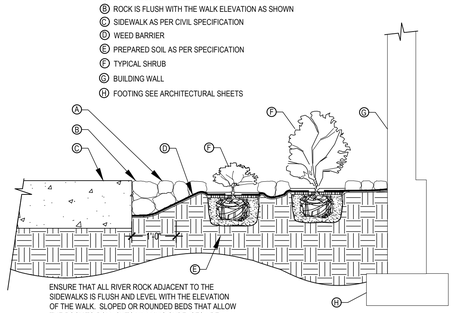
Ⓕ PREPARED PLANTING SOIL AS SPECIFIED. NOTE: WHEN GROUND- COVERS AND SHRUBS USED IN MASSES ENTIRE BED TO BE AMENDED WITH PLANTING SOIL MIX AS SPECIFIED.

Ⓖ SCARIFY ROOTBALL SIDES AND BOTTOM.

2 SHRUB AND GROUNDCOVER PLANTING

N.T.S.

Ⓐ ROCK MULCH SHALL BE 1"-3" DIAMETER RIVER ROCK.
Ⓑ ROCK IS FLUSH WITH THE WALK ELEVATION AS SHOWN
Ⓒ SIDEWALK AS PER CIVIL SPECIFICATION
Ⓓ WEED BARRIER
Ⓔ PREPARED SOIL AS PER SPECIFICATION
Ⓕ TYPICAL SHRUB
Ⓖ BUILDING WALL
Ⓗ FOOTING SEE ARCHITECTURAL SHEETS



ENSURE THAT ALL RIVER ROCK ADJACENT TO THE SIDEWALKS IS FLUSH AND LEVEL WITH THE ELEVATION OF THE WALK. SLOPED OR ROUNDED BEDS THAT ALLOW THE ROCK TO ROLL ONTO WALKING SURFACES ARE UNACCEPTABLE

3 ROCK MULCH INSTALLATION

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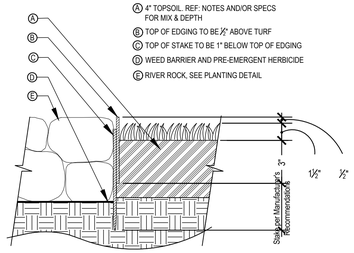

Ⓐ 4" TOPSOIL. REF: NOTES AND/OR SPECS FOR MIX & DEPTH

Ⓑ TOP OF EDGING TO BE ½" ABOVE TURF

Ⓒ TOP OF STAKE TO BE 1" BELOW TOP OF EDGING

Ⓓ WEED BARRIER AND PRE-EMERGENT HERBICIDE

Ⓔ RIVER ROCK, SEE PLANTING DETAIL

1. BED EDGE SHALL BE 5" BLACK COMMERCIAL ALUMINUM OR STEEL EDGING WITH 12" SPIKES AT 3' ON CENTER MAXIMUM.
2. INSTALL EDGING ONLY IN AREAS TO SEPARATE RIVER ROCK FROM MULCH OR TURF, EDGING SHALL NOT BE INSTALLED ADJACENT TO SIDEWALKS
3. WHERE EDGING TERMINATES AT A SIDEWALK, BEVEL OR RECESS ENDS TO PREVENT TRIP HAZARDS.

4 METAL EDGING

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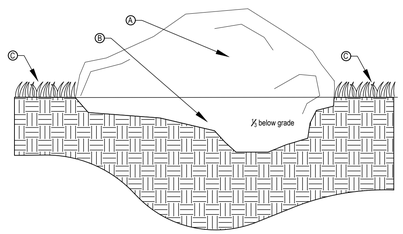

Ⓐ BOULDER TO BE SET ⅓ BELOW GRADE.

Ⓑ PLACE FLAT SIDE OF ROCK BELOW GRADE OR NATURAL FACE ABOVE GRADE

Ⓒ LAWN

ROCK TO APPEAR THAT IT HAS SETTLED OVER TIME INTO THE LANDSCAPE. BOULDERS TO APPEAR MORE WEATHERED AND ANGULAR IN APPEARANCE, RATHER THAN ROUNDED OR FLAT, AND SHALL BE FREE OF SHARP EDGES.

5 DECORATIVE LAWN BOULDER

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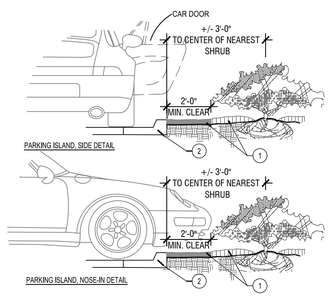
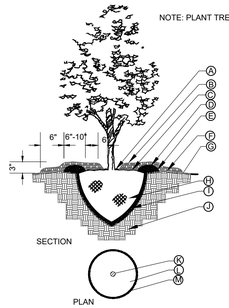


1. INSTALL CONTINUOUS ROCK MULCH BED ADJACENT TO PARKING SPACES AS SHOWN.

6 PARKING SPACE/CURB PLANTING

N.T.S.

NOTE: PLANT TREE 2"-4" ABOVE EXISTING GRADE



Ⓐ DO NOT PILE MULCH AGAINST TRUNK OF TREE

Ⓑ 3" LAYER HARDWOOD MULCH

Ⓒ TOP OF TREE BALL

Ⓓ COVER SAND RING WITH 1" OF MULCH
USE WATER TO WORK TOPSOIL INTO AIR POCKET AND INSTALL TOPSOIL RING, 4" HIGH 6"-10" WIDE TO CONTINUE TO FILL AIR POCKET.

Ⓔ EXISTING GRADE

Ⓕ EXTEND MULCH 6" BEYOUND RING EDGE

Ⓖ TREE SPADE ROOT BALL

Ⓗ WASH SAND OR TOPSOIL INTO AIR POCKETS

Ⓘ EXISTING SOIL

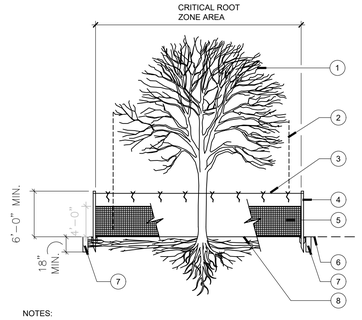
Ⓙ TREE TRUNK

Ⓚ TOP OF ROOT BALL

Ⓛ AIR POCKET BETWEEN TREE BALL AND EXISTING SOIL

7 PLANTING DETAIL FOR 90" MATCHLINE DUG TREES (14")

N.T.S.



1. EXISTING TREE(S) TO REMAIN.
2. DRIPLINE OF EXISTING TREE (TYP)
3. CONTINUOUS NYLON TIE STRING TIED TO STAKE TOPS W/ 2' TUNDRA WEIGHT ORANGE STREAMERS @ 3' O.C.
4. 8' METAL T-STAKES: 8' O.C. MIN., DRIVEN 2' INTO GROUND AT (OR OUTSIDE) TREE DRIPLINE
5. 4' MIN. HEIGHT ORANGE PLASTIC FENCING INSTALLED PER MANF. RECOMMENDATIONS (TYP). SUPPLEMENT W/ SILT FENCE FABRIC @ PRUNING TRENCH AS REQ'D.
6. EXISTING GRADE TO BE DISTURBED.
7. ROOT PRUNING TRENCH 12" OUTSIDE FENCE - SEE NOTES.
8. EXISTING GRADE TO REMAIN.

NOTES:

1. PERFORM ROOT PRUNING ON ALL EXISTING TREES TO REMAIN WHERE CONSTRUCTION ACTIVITY FALLS WITHIN DRIP LINE OF EXISTING TREES.
2. ROOT PRUNING METHOD: 2 MONTHS MIN. PRIOR TO EXCAVATION & CONSTRUCTION ACTIVITIES, HAND CUT ROOTS BY DIGGING A 18"-24" DEEP x 8" WIDE TRENCH ALONG THE OUTSIDE PERIMETER OF EXISTING TREE(S) ADJACENT TO CONSTRUCTION AREAS. MAXIMIZE PRUNING TRENCH DISTANCE FROM TRUNK TO THE FULLEST EXTENT POSSIBLE, W/ THE ROOT PRUNING LINE PLACED @ THE EDGE OF CONSTRUCTION LIMITS.

8 TREE PROTECTION DETAIL

N.T.S.

TREE PRESERVATION/ REMOVAL NOTES:

1. CONTRACTOR SHALL COORDINATE WITH ISA CERTIFIED ARBORIST AND PROPERTY OWNERS TO VERIFY OBJECTIVES PRIOR TO COMMENCING ANY PRUNING OR TREE REMOVAL ACTIVITIES.

2. ALL CREW MEMBERS SHOULD BE WEARING THE APPROPRIATE SAFETY GEAR: HARD HATS, EYE PROTECTION, APPROVED BOOTS, HEARING PROTECTION, CHAIN SAW CHAPS FOR GROUNDWORK.

3. ANY TREES REMOVED, AND ALL TREE MATERIALS REMOVED SHALL BE REMOVED FROM THE PROPERTY AT THE CONTRACTOR'S EXPENSE.

4. ALL TRASH AND DEBRIS FROM ANY CONSTRUCTION RELATED ACTIVITIES SHALL BE REMOVED FROM THE SITE AT THE CONTRACTOR'S EXPENSE, FOLLOWING COMPLETION OF THE PROJECT.

5. ANY DAMAGE TO THE EXISTING LANDSCAPE, PAVEMENT, BUILDING, OR ANY OTHER SITE FEATURES SHALL BE REPLACED BY THE CONTRACTOR AND/OR RESTORED TO PRE-CONSTRUCTION CONDITION.

6. CONTRACTOR SHALL PROVIDE REMOVAL, STORAGE, AND TRANSPLANTING OF 4 EXISTING TREES ON SITE. THE CONTRACTOR SHALL REMOVE EACH EXISTING TREE THROUGH THE USE OF HAND DIGGING, OR WITH THE USE OF AN APPROVED MECHANICAL DEVICE. TREES SHALL BE HARVESTED AS BALLED & BURLAPPED TREE SPECIMENS, PER ANSI Z60 STANDARDS, AND TRANSPORTED TO NEW LOCATION ON SITE, OR AT ALTERNATE SITE AS DIRECTED OR APPROVED BY THE OWNER. CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS NECESSARY TO PROVIDE FOR REMOVAL, PLACEMENT OF BURLAP, PLACEMENT OF WIRE BASKET OR OTHER APPROVED BALL-SUPPORTING DEVICE, TRANSPORT TO TEMPORARY STORAGE AREA, ONGOING MAINTENANCE AND WATERING DURING CONSTRUCTION, AND RE-PLANTING TO BE PERFORMED UPON COMPLETION OF MAJOR SITE WORK. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE GUIDELINES AND RECOMMENDATIONS SET FORTH IN THE AMERICAN STANDARDS FOR NURSERY STOCK.

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KHA PROJECT # 047916134

REGISTERED LANDSCAPE ARCHITECT
LEAH MARIE CAMPBELL
LA6667166
STATE OF FLORIDA
5/8/2023

Cheddar's
SCRATCH KITCHEN

Issue Date:	2/15/2023
REVISION INFORMATION	

Restaurant #: 21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING

LANDSCAPE DETAILS

L1.2

Drawing name: K:\FRI_LA\047916 - Darden\047916134 - Cheddars Riverview\DESIGN\01 Permit-Code\Plansheet\151-L1.2 LANDSCAPE DETAILS.dwg 151-L1.2 LANDSCAPE DETAILS May 08, 2023 1:59pm by: Liz.Meeks
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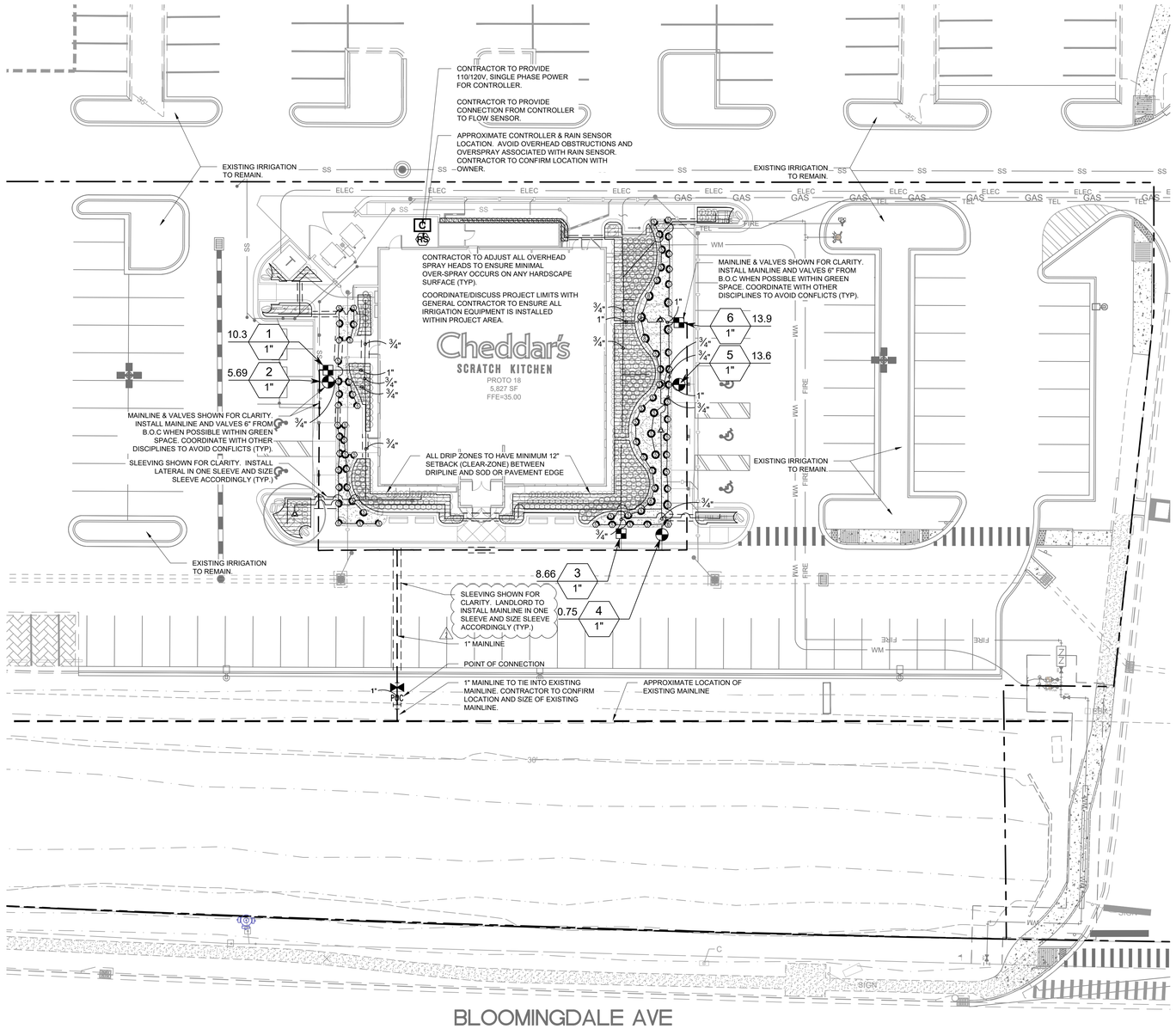

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
Q T H TT TQ F	Toro 570Z-4P 5 Series Turf Spray, 4" Pop-Up, with a Zero Flush Seal. 1/2" Female-Threaded Inlet. Ideal for small to medium landscape areas.	69
Q T H TT TQ F	Toro 570Z-4P 8 Series Turf Spray, 4" Pop-Up, with a Zero Flush Seal. 1/2" Female-Threaded Inlet. Ideal for small to medium landscape areas.	8
25 50 10 20	Toro 570Z-4-FB-PC .25 Pressure-Compensating Flood Bubbler Nozzle. 0.25 GPM.	3
SYMBOL	**MANUFACTURER/MODEL/DESCRIPTION**	**QTY**
	Toro DZK-700 Low Flow Drip Control Valve Kit. With 1" Irritrol 700 UltraFlow Inline Valve, Toro Y-Filter, Pressure Regulator and Fittings. .10 GPM-30 GPM. Regulated pressure at 40psi	3
	Area to Receive Dripline Toro PCB-412 Drip-In Pressure Compensating Landscape Dripline. 1.00 GPH emitters at 12" O.C. Dripline laterals spaced at 12" apart, with emitters offset for triangular pattern.	1,860 l.f.
SYMBOL	**MANUFACTURER/MODEL/DESCRIPTION**	**QTY**
	Toro 220-36-0 Brass 1", 1-1/4", 1-1/2", 2", 2-1/2", and 3" Electric Remote Control Valve. With Spike Guard Solenoid. 1"-2" have In-Line Globe Body Style, and 2-1/2" - 3" are Angle Valve Body Styles.	3
	Isolation Valve	1
C	Toro TMC-424E-ID with (01) TSM-8 12-Station Indoor Controller. 4-Base Station Model with one 8-station expansion module. Standard Surge.	1
RS	Toro TRS Wired Rain Sensor. Mount as noted or approved, use controller power or optional transformer. Adjust rain shutoff index. Normally-Open or Normally-Closed. Compatible with most controllers.	1
POC	Point of Connection 1"	1
	Irrigation Lateral Line: PVC Class 200 SDR 21	1,096 l.f.
	Irrigation Mainline: PVC Class 200 SDR 21	329.6 l.f.
	Pipe Sleeve: PVC Schedule 40 Typical pipe sleeve for irrigation pipe. Pipe sleeve size shall allow for irrigation piping and their related couplings to easily slide through sleeving material. Extend sleeves 18 inches beyond edges of paving or construction.	133.7 l.f.

Valve Callout
Valve Number
Valve Flow
Valve Size

THIS IRRIGATION PLAN IS DESIGNED TO THE FOLLOWING STATS: 65 PSI AND 37.5 GPM. IF WATER PRESSURE DOES NOT MEET DESIGN SPECIFICATIONS A BOOSTER PUMP WILL BE REQUIRED AT COST OF CONTRACTOR. CONTACT LANDSCAPE ARCHITECT PRIOR TO INSTALLATION IF SYSTEM HAS +/- 5 PSI THAN DESIGN PRESSURE.

ABOVE QUANTITIES PROVIDED FOR CONVENIENCE ONLY. CONTRACTOR TO CONFIRM ALL QUANTITIES PRIOR TO BIDDING.

REFERENCE MAXIMUM LATERAL DRIPLINE CHART TO DETERMINE MINIMUM NUMBER OF POINTS OF CONNECTION PER DRIP LINE ZONE.

WHERE LAYOUT FLEXIBILITY EXISTS CENTER FEED LAYOUTS MUST BE USED. THIS ALLOWS FOR EVEN FLOW OF WATER THROUGH THE ZONE.

HUNTER ECO-INDICATOR TO BE PLACED IN ALL DRIP AREAS AT THE FURTHEST POINT OF EACH DRIP RUN.

ZONES LOWER THAN THE CAPACITY OF THE FLOW SENSOR ARE TO BE WIRED IN THE CONTROLLER WITH ANOTHER ZONE SO THAT THE FLOW SENSOR READS BOTH ZONES AS ONE ZONE IN ORDER TO MEET THE FLOW SENSOR'S LOWEST GPM REQUIREMENT. DRIP ZONES REQUIRED TO REMAIN PIPED AS SEPARATE ZONES.

EXISTING IRRIGATION NOTES

1. CONTRACTOR TO CONFIRM EXISTING SYSTEM SOURCE AND BACKFLOW ARE FULLY OPERATIONAL.

2. CONTRACTOR TO CONFIRM EXISTING BACKFLOW IS TO SERVE IRRIGATION SYSTEM ONLY. EXISTING BACKFLOW MUST BE PLACED ON IRRIGATION SERVICE LINE TO PREVENT ANY POSSIBILITY OF BACKFLOW FROM BEING DIRECTED INTO THE BUILDING. IF THE EXISTING BACKFLOW IS NOT A DEDICATED IRRIGATION BACKFLOW, CONTRACTOR IS TO INSTALL A NEW BACKFLOW. SIZE ACCORDING TO METER SIZE.

3. CAP EXISTING LINES WHERE NECESSARY FOR CONSTRUCTION.

4. MAINLINE APPROXIMATE LOCATION AS SHOWN. CONTRACTOR TO LOCATE EXACT LOCATION AND UTILIZE. PROTECT MAINLINE IN PLACE DURING CONSTRUCTION. CAP EXISTING MAINLINE AND LEAVE IN PLACE WHERE NECESSARY.

5. DO NOT TRENCH UNDER EXISTING TREES. HAND TRENCH LATERALLY TO INSTALL HEADS, DRIP, ETC.

6. ALL PROPOSED IRRIGATION TO MATCH EXISTING PRECIPITATION RATES, IF ZONES ARE COMBINED WITH EXISTING ZONES, NO DRIP AND HEADS TO BE ON SAME ZONES.

7. ALL EXISTING IRRIGATION SHOWN TO REMAIN SHOULD BE PROTECTED DURING CONSTRUCTION. CONTRACTOR TO CONFIRM 100 PERCENT COVERAGE ON EXISTING AND MODIFY IF NEEDED.

8. MODIFY ZONES PER REVISED CHANGES. CAP LINES WHERE NECESSARY. ADD HEADS AS NEEDED, REPLACE HEADS/NOZZLES TO PROVIDE FULL COVERAGE.

9. DO NOT REMOVE EXISTING SLEEVED LINES UNDER PAVEMENT UNLESS SPECIFIED.

10. CONTRACTOR TO NUMBER EXISTING VALVES AND PROPOSED VALVES IN NUMERICAL ORDER STARTING FROM THE METER AND GOING IN A CLOCKWISE CIRCLE.

11. CONTRACTOR TO FIELD INVESTIGATE EXISTING CONDITIONS TO LOCATE EXISTING IRRIGATION LATERAL LINES AND RE-PURPOSE FOR NEW IRRIGATION IN THE LANDSCAPE ISLAND.

IRRIGATION NOTES:

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, EQUIPMENT QUANTITIES, AND UTILITY LOCATIONS PRIOR TO BEGINNING WORK.
2. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES IN PLANS OR SPECIFICATIONS PRIOR TO BEGINNING OR CONTINUING WORK.
3. THE CONTRACTOR SHALL MAKE NO SUBSTITUTIONS, DELETIONS, OR ADDITIONS TO THIS PLAN WITHOUT APPROVAL OF THE LANDSCAPE ARCHITECT.
4. ALL CONSTRUCTION SHALL CONFORM TO CITY, COUNTY, STATE, AND FEDERAL REQUIREMENTS. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO ENSURE THAT ALL IRRIGATION EQUIPMENT MEETS GOVERNMENT REGULATIONS. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS OR APPROVALS PRIOR TO COMMENCEMENT OF OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE OWNER/GENERAL CONTRACTOR.
5. THIS PLAN IS SCHEMATIC AND DUE TO THE NATURE OF CONSTRUCTION SLIGHT FIELD MODIFICATIONS MAY BE NECESSARY TO IMPLEMENT PLAN.
6. THIS IRRIGATION SYSTEM IS DESIGNED TO THE FOLLOWING STATS: 75 G.P.M. STATIC WATER PRESSURE IS 65 P.S.I.
7. CONTRACTOR TO VERIFY ACTUAL AVAILABLE WATER PRESSURE BEFORE BEGINNING INSTALLATION. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT IF AVAILABLE WATER PRESSURE EXCEEDS 5 PSI HIGHER OR LOWER THAN AVAILABLE WATER PRESSURE.
8. VERIFY CONTROLLER AND RAIN SENSOR LOCATION AND MAINLINE POINT OF CONNECTION AT PROJECT SITE WITH OWNER.
9. IRRIGATION SYSTEMS CONNECTED TO POTABLE WATER SUPPLY, SHALL HAVE A BACKFLOW PREVENTER INSTALLED.
10. WHERE APPLICABLE IRRIGATION HEADS ARE TO BE ADJUSTED FOR COMPLETE COVERAGE WITH MINIMUM OVER SPRAY BEYOND LANDSCAPE AREAS.
11. EXISTING TREES TO REMAIN ARE TO BE PROTECTED FROM DAMAGE. DO NOT TRENCH OR EXCAVATE WITHIN THE CRITICAL ROOT ZONE OF ANY TREE.
12. IRRIGATION LATERAL LINES, MAIN LINES AND EQUIPMENT MAY BE SHOWN OUTSIDE PROPERTY LINES ON THIS PLAN, ALL IRRIGATION LINES AND EQUIPMENT ARE TO BE WITHIN AND INSTALLED WITHIN THE LIMITS OF THE PROPERTY LINE.
13. ALL IRRIGATION SLEEVING TO BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR UNLESS OTHERWISE NOTED. ELECTRICAL WIRES FOR IRRIGATION VALVES AND IRRIGATION LINES ARE TO BE PLACED IN SEPARATE SLEEVES. SEE SLEEVING DETAIL. ALL PRESSURE MAINLINES UNDER ASPHALT PAVEMENT SHALL BE PLACED WITHIN SLEEVES AS NOTED.
14. SUPPLY LINE AND METER TO BE PROVIDED BY GENERAL CONTRACTOR. BACKFLOW PREVENTER TO BE PROVIDED BY IRRIGATION CONTRACTOR. IRRIGATION CONTRACTOR'S POINT OF CONNECTION TO BEGIN AFTER THE IRRIGATION WATER METER.
15. IRRIGATION CONTRACTOR SHALL REVIEW WINTERIZATION PROCEDURES FOR IRRIGATION SYSTEM WITH OWNERS REPRESENTATIVE.
16. ALL PLANT MATERIAL IN TREE HOLDING AREAS SHALL BE MANUALLY WATERED/IRRIGATED TO KEEP MOIST UNTIL PLANTED.
17. MAINLINE, VALVES, AND WIRING ARE SHOWN ON DRAWINGS FOR CLARITY, SHOULD BE LOCATED IN ACCESSIBLE GREEN SPACE. CONTRACTOR TO COORDINATE WITH ALL DISCIPLINES TO AVOID CONFLICTS WITH UTILITIES/ STRUCTURES, ETC.
18. CONTRACTOR RESPONSIBLE FOR PROVIDING 110 SINGLE PHASE POWER TO CONTROLLER.
19. INSTALLATION OF WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS IN SUCH A MANNER AS TO ALLOW FOR A SPEEDY AND ORDERLY COMPLETION OF ALL WORK ON THE SITE.
20. ALL 24 VAC WIRING SHALL BE OF DIRECT BURIAL COPPER WIRE AS FOLLOWS:
    - CONTROL WIRES - #14
    - COMMON WIRES - #12
21. LOCATE ALL VALVES A MINIMUM OF 24" FROM BACK OF CURB OR EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.
22. SET SPRAY HEADS 4" FROM BACK OF CURB OR 24" IF PAVEMENT HAS NO CURB.
23. CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS OF THE FINAL INSTALLATION TO OWNER AT SUBSTANTIAL COMPLETION BEFORE RECEIVING FINAL PAYMENT. "AS-BUILT" DRAWINGS TO BE COLOR CODED BY ZONE ON 8.5" X 11", LAMINATED, AND PLACED IN CONTROLLER.
24. THE SYSTEM HAS BEEN DESIGNED TO PROVIDE 100% COVERAGE. ANY CHANGES MADE IN THE LAYOUT DUE TO FIELD CONDITIONS SHALL BE IN ACCORDANCE WITH THESE STANDARDS. QUANTITIES IN SCHEDULE ARE ESTIMATED. PLAN SHALL TAKE PRECEDENCE.
25. IRRIGATION VALVES AND VALVE BOXES SHALL BE LOCATED IN LANDSCAPE BEDS OR GROUNDCOVER AREAS WHENEVER POSSIBLE. ALL REMOTE VALVE BOXES SHALL BE SET FLUSH WITH FINISHED GRADE AND CONTAIN ONE CUBIC FOOT OF CLEAN GRAVEL BENEATH VALVE. LABEL REMOTE BOXES WITH ONE-INCH ALPHA NUMERIC NOTATION CORRESPONDING TO THE APPLICABLE ALPHA CONTROLLER AND NUMERIC STATION.

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY LEAH M. CAMPBELL ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

DCH 22007

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PH: (772) 794-4100
REGISTRY NO. 696
KHA PROJECT # 047916134

REGISTERED LANDSCAPE ARCHITECT
LEAH MARIE CAMPBELL
LA6667166
STATE OF FLORIDA
5/8/2023

Cheddar's SCRATCH KITCHEN

Issue Date:	2/15/2023
REVISION INFORMATION	
2	4/5/2023
COORDINATION COMMENTS	

Restaurant #: 21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING
IRRIGATION PLAN

L2.1

Drawing name: K:\FRI_LA\047916 - Darden\047916134 - Cheddars Riverview\DESIGN\01 Permit-Code\Plansheet\152-L2.1 IRRIGATION PLAN.dwg 152-L2.1 IRRIGATION PLAN May 08, 2023 2:00pm by: Liz.Meeks
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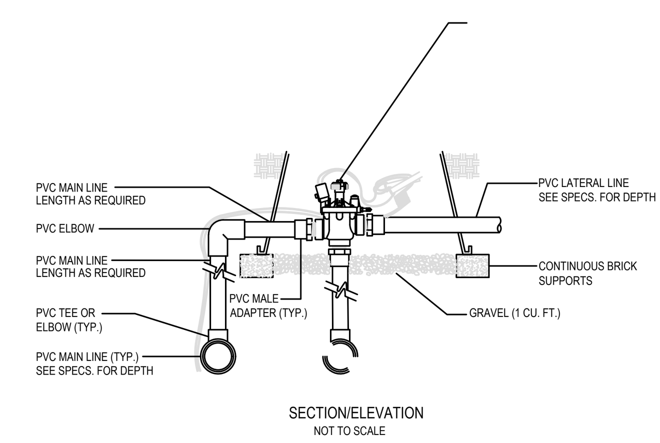

SECTION/ELEVATION
NOT TO SCALE

☑ SELECT DESIRED OPTION
☐ 1"
☐ 1-1/2"

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. SEE PLANS, LEGEND AND SPECIFICATIONS FOR ADDITIONAL INSTALLATION NOTES.
4. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 065-044.

VALVES: P-220 SERIES
1" & 1-1/2" PLASTIC VALVE, ELECTRIC

065-044
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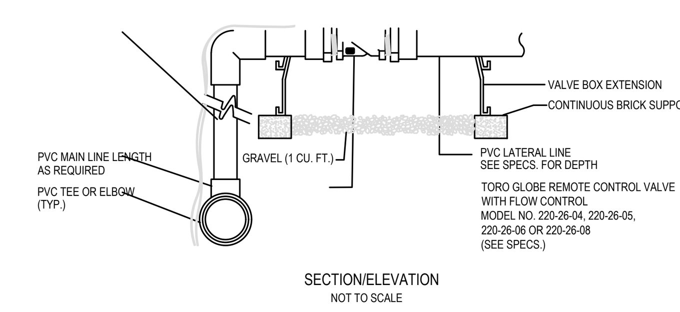

SECTION/ELEVATION
NOT TO SCALE

☑ SELECT DESIRED OPTION
☐ 1"
☐ 1-1/4"
☐ 1-1/2"
☐ 2"

NOTES:
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3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 065-048.

VALVES: 220 SERIES
1", 1-1/4", 1-1/2" & 2" BRASS VALVE, ELECTRIC

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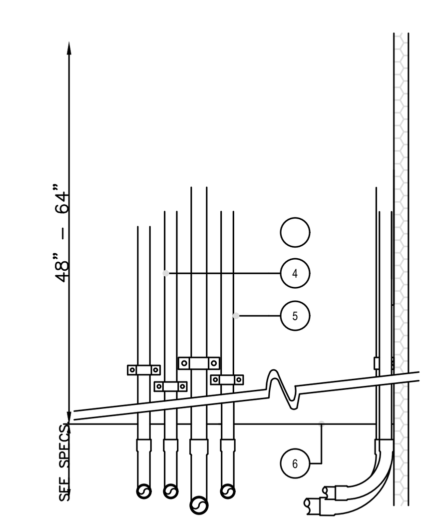
3. 3/4" FIELD OUTPUT WIRES
SECURE TO WALL WITH APPROPRIATE PIPE CLAMPS
4. 1/2" CONDUIT FOR SENSOR WIRES
SECURE TO WALL WITH APPROPRIATE PIPE CLAMPS
5. 1/2" CONDUIT REMOTE RECEIVER WIRES
6. FINISHED GRADE



FRONT SECTION/ELEVATION
NOT TO SCALE

RIGHT-SIDE SECTION/ELEVATION
NOT TO SCALE

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2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 065-252.

TMC-424 SERIES
EXTERIOR WALL MOUNT CONTROLLER (PLASTIC)

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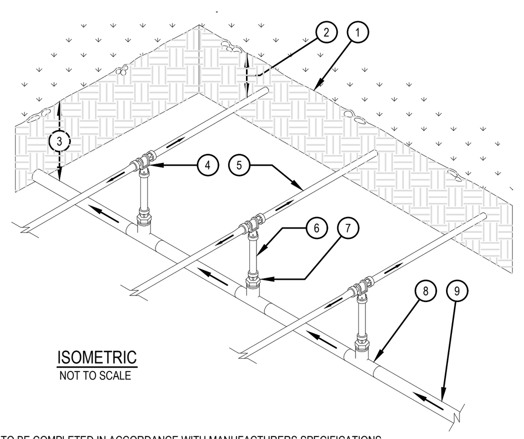
LEGEND

1. FINISH GRADE.
2. DEPTH OF TUBING PER SPECIFICATIONS (SEE TORO PUBLICATION #ALT111).
3. DEPTH OF PVC SUPPLY MANIFOLD PER SPECIFICATIONS.
4. TORO LOC-EZE TEE (FTT16).
5. TORO DL2000 DRIPLINE LATERAL (RGP-XXX-XX).
6. TORO BLUE STRIPE POLY TUBING (EHD1645-XXX), LENGTH AS NECESSARY.
7. TORO LOC-EZE X 1/2" MTP ADAPTER (FAM16).
8. PVC TEE (SxSxT) WITH 1/2" FPT OUTLET.
9. PVC SUPPLY MANIFOLD FROM DRIP ZONE KIT.



ISOMETRIC
NOT TO SCALE

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2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 065-188a.

DL2000®
MANIFOLD CENTER FEED

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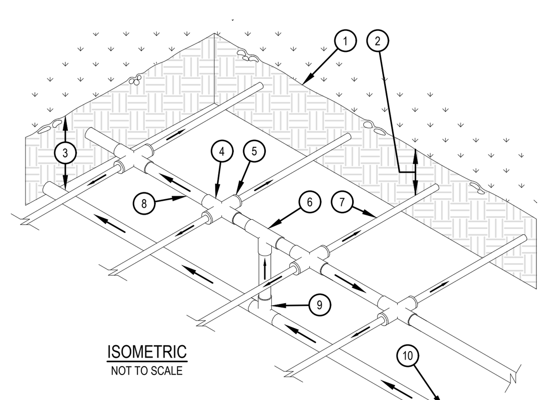
LEGEND

1. FINISH GRADE.
2. DEPTH OF TUBING PER SPECIFICATIONS (SEE TORO PUBLICATION #ALT111).
3. DEPTH OF PVC SUPPLY MANIFOLD PER SPECIFICATIONS.
4. PVC CROSS (SxSxSxS).
5. TORO DL2000 COMPRESSION ADAPTER (CA-710).
6. PVC TEE (SxSxS).
7. TORO DL2000 DRIPLINE LATERAL (RGP-XXX-XX).
8. PVC SUB-MANIFOLD.
9. PVC TEE (SxSxS).
10. PVC SUPPLY MANIFOLD FROM DRIP ZONE KIT.



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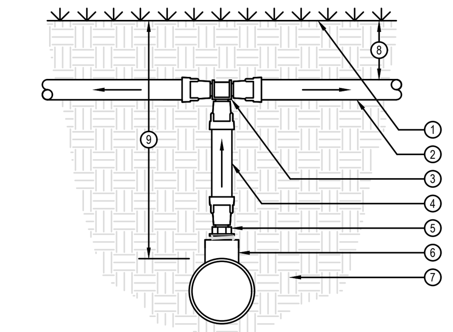
LEGEND

1. FINISH GRADE.
2. TORO DL2000 DRIPLINE LATERAL (RGP-XXX-XX).
3. TORO LOC-EZE TEE (FTT16).
4. TORO BLUE STRIPE POLY TUBING (EHD1645-XXX).
5. TORO LOC-EZE X 1/2" MPT ADAPTER (FAM16).
6. PVC TEE (SxSxT) WITH 1/2" FPT OUTLET.
7. NATIVE SOIL BACKFILL PER SPECIFICATIONS.
8. DEPTH OF TUBING PER SPECIFICATIONS (SEE TORO PUBLICATION #ALT111).
9. DEPTH OF PVC SUPPLY LINE PER SPECIFICATIONS.



SECTION/ELEVATION
NOT TO SCALE

NOTES:
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MANIFOLD-TEE CONNECTION

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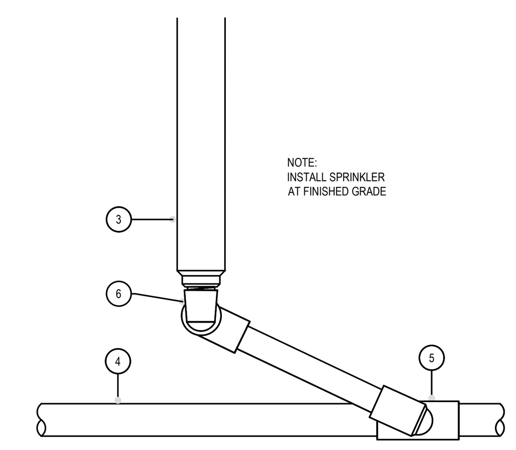

NOTE:
INSTALL SPRINKLER AT FINISHED GRADE

SECTION/ELEVATION
NOT TO SCALE

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3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 065-013a.

570Z PRX SERIES
6 INCH POP-UP, XX SPRINKLER (SWING JOINT)

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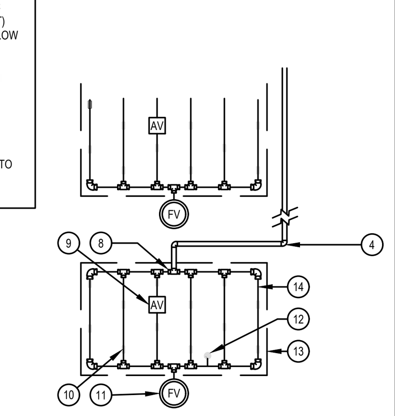
PVC LATERAL LINE FROM DRIP ZONE KIT.
PVC SUPPLY MANIFOLD.
PVC TEE (SxSxS).
PVC ELL (SxS).
TORO LOC-EZE ELL (FEE16).
TORO LOC-EZE TEE (FTT16).
TORO BLUE STRIPE POLY TUBING (EHD1645-XXX) AT SUPPLY AND FLUSH END OF EACH ISLAND.
8. TORO LOC-EZE TEE X 1/2" SLIP ADAPTER (FTV16).
TORO DL2000 AIR/VACUUM RELIEF VALVE (YD-500-34) PLUMBED TO TUBING AT HIGH POINT.
TORO DL2000 DRIPLINE LATERAL (RGP-XXX-XX).
TORO DL2000 AUTOMATIC FLUSH VALVE (FCH-H-FIPT) PLUMBED TO TUBING AT LOW POINT.
TORO DL2000 OPERATION INDICATOR (DL-MP9), OPTIONAL.
13. ISLAND PERIMETER.
14. PERIMETER LATERALS 2" TO 4" FROM EDGE.

NOTE:
THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE SHALL NOT EXCEED THE MAXIMUM RUN LENGTH. SEE TORO SUBSURFACE IRRIGATION DESIGN GUIDE (FORM #ALT111).



PLAN
NOT TO SCALE

NOTES:
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2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 065-188m.

DL2000®
ISLAND LAYOUT A

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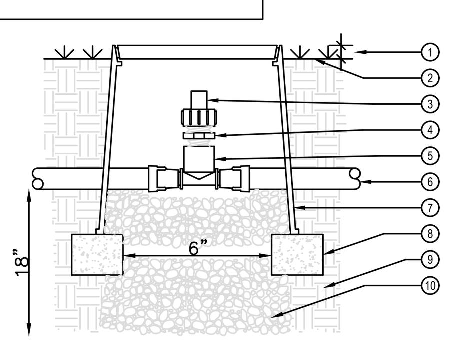
LEGEND

1. 1" ABOVE FINISH GRADE.
2. FINISH GRADE.
3. TORO DL2000 FLUSH VALVE (FCH-H-FIPT).
4. PVC SCH 40 REDUCING NIPPLE, 3/4"-1/2" (TxT).
5. TORO LOC-EZE X 1/2" FPT TEE (FTF16).
6. TORO DL2000 TUBING (RGP-XX-XXX) OR TORO BLANK POLY TUBING (EHD1645-XXX).
7. 6" ROUND PLASTIC VALVE BOX . HEAT BRAND "FV" ON LID IN 1" HIGH CHARACTERS.
8. BRICK SUPPORTS (2 COMMON BRICKS REQUIRED).
9. NATIVE SOIL PER SPECIFICATIONS.
10. PEA GRAVEL SUMP (6" x 18").

NOTE:
USE ONE FLUSH VALVE FOR EVERY 7 GPM PER ZONE. LOCATE AT LOW POINTS. FLUSH RATE IS 0.8 GPM. FLUSH PRESSURE IS 2 PSI. REFER TO TORO PUBLICATION #ALT111 FOR SPECIFICATIONS.



SECTION/ELEVATION
NOT TO SCALE

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 065-188t.

DL2000®
FLUSH VALVE ON TUBING

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TORO-IRRIGATION DIVISION
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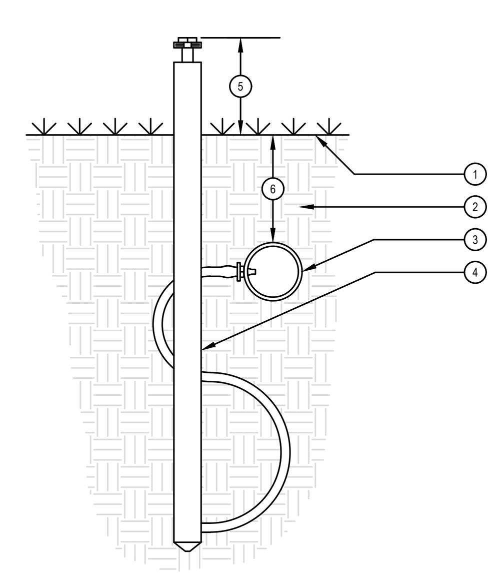
RIVERSIDE, CA 92504
TOLL FREE: 1-877-345-8676
PHONE: (951) 785-3152
FAX: (951) 359-1870
www.toro.com

LEGEND

1. FINISH GRADE.
2. NATIVE SOIL BACKFILL PER SPECIFICATIONS.
3. TORO DL2000 DRIPLINE (RGP-XXX-XX).
4. TORO DL2000 OPERATION INDICATOR (DL-MP9). USE ONE PER ZONE AND LOCATED AT FLUSH END OF ZONE.
5. 2"-3" ABOVE FINISH GRADE.
6. DEPTH OF TUBING PER SPECIFICATIONS (SEE TORO PUBLICATION #ALT111).



SECTION/ELEVATION
NOT TO SCALE

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2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 065-188y.

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OPERATION INDICATOR

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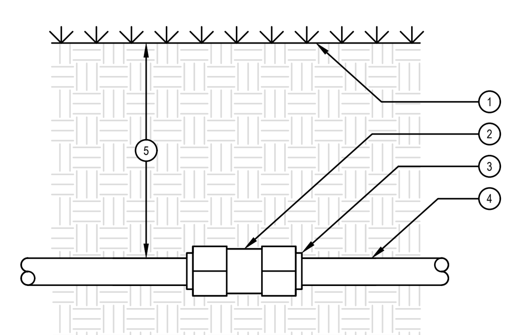
FAX: (951) 359-1870
www.toro.com

LEGEND

1. FINISH GRADE.
2. TORO DL2000 INLINE CHECK VALVE (JV0500-S2).
3. TORO DL2000 COMPRESSION ADAPTER (CA-710).
4. TORO DL2000 DRIPLINE (RGP-XXX-XX).
5. DEPTH OF TUBING PER SPECIFICATIONS (SEE TORO PUBLICATION #ALT111).



SECTION/ELEVATION
NOT TO SCALE

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 065-188z.

DL2000®
IN-LINE CHECK VALVE

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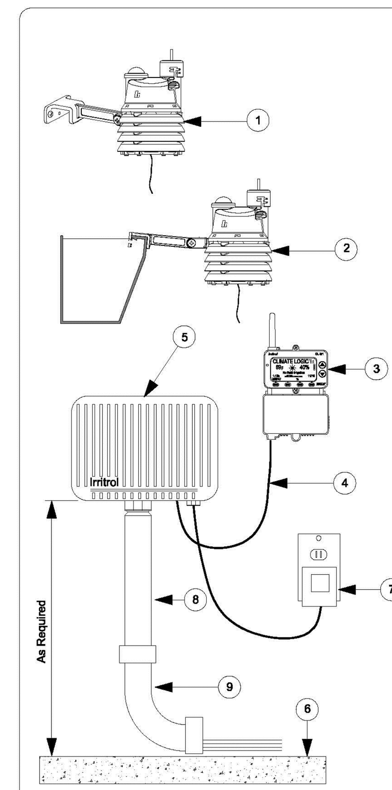

1. Climate Logic™ weather sensor mounted outdoors on flat surface using screws.
2. Climate Logic™ weather sensor mounted on a rain gutter using QuickClip™ guttermount.
3. Climate Logic™ receiver module mounted indoors near the compatible controller. Mount with screws at eye level or if in a secure area, mount on hook & loop type strips for dismounting and handheld programming utilizing the slack in the cord.
4. Single connection cord plugged into controllers remote port.
5. Irritrol automatic sprinkler controller (interior wall mount with external transformer).
6. Finish Surface of interior space where controller is located.
7. External plug-in transformer (provided with controller).
8. PVC schedule 40 control wire conduit (size as required).
9. PVC sweep ell (protecting low voltage control wires to the electric valves).

NOTE: All electrical work must conform to local codes. Refer to product literature for additional installation requirements.

This drawing is provided for reference only. Individual project requirements and local codes may dictate differences in installation procedures that are not identified here.

CLIMATE LOGIC™
weather-sensing system
connected to indoor controller

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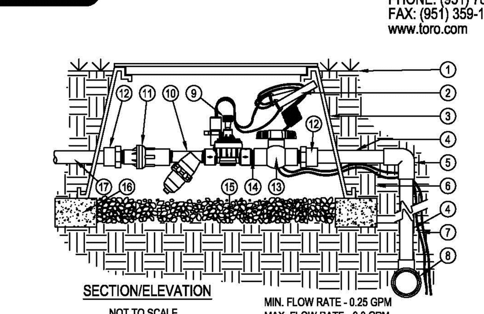

SECTION/ELEVATION
NOT TO SCALE

MIN. FLOW RATE - 0.25 GPM
MAX. FLOW RATE - 8.0 GPM

LEGEND

1. FINISH GRADE.
2. CONTROL WIRES WITH 36" SERVICE COIL AND WATER PROOF WIRE CONNECTIONS, DBY OR EQUAL.
3. RECTANGULAR PLASTIC VALVE BOX. HEAT BRAND STATION NUMBER ON LID IN 2" HIGH CHARACTERS.
4. PVC MAINLINE PER SPECIFICATIONS (LENGTH AS REQUIRED).
5. SCH 40 PVC ELL (SxS).
6. NATIVE SOIL PER SPECIFICATIONS.
7. CONTROL WIRES TO CONTROLLER.
8. PVC MAINLINE FITTING.
9. TORO TPVF100 INLINE VALVE (*).
10. TORO 150 MESH Y-FILTER (*).
11. TORO 25 PSI LOW FLOW PRESSURE REGULATOR (*).
12. SCH 40 PVC MALE ADAPTER.
13. SCH 40 PVC BALL VALVE (*).
14. SCH 80 PVC CLOSE NIPPLE (*).
15. PEA GRAVEL SUMP, MINIMUM 6" DEEP.
16. BRICK SUPPORTS (4 COMMON BRICKS REQUIRED).
17. LATERAL LINE TO DRIP SYSTEM.
(*) PARTS IN DRIP ZONE KIT.

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 065-190c.

TORO DRIP ZONE KIT
DZK-TPV-1-LF

065-190C
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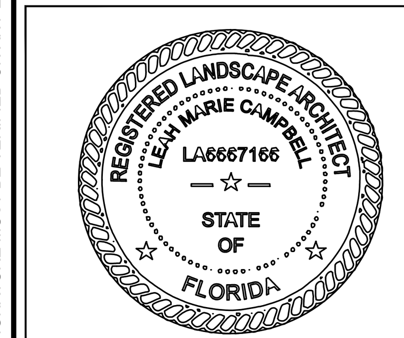
DCH 22007

Kimley»Horn
445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
PH: (772) 794-4100
REGISTRY NO. 696
KHA PROJECT # 047916134



5/8/2023

Cheddar's SCRATCH KITCHEN

Issue Date:	2/15/2023
REVISION INFORMATION	
Restaurant #:	21K0037

CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING
IRRIGATION DETAILS

L2.2

Drawing name: K:\FRI_LA\047916 - Darden\047916134 - Cheddars Riverview\DESIGN\01 Permit-Code\Plansheet\LS1 DARDEN LANDSCAPE AND IRRGATION SPECIFICATIONS.dwg LS1 DARDEN LANDSCAPE AND IRRGATION SPECIFICATIONS May 08, 2023 2:01pm by: Liz.Meeks

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SECTION 02700
IRRIGATION SYSTEM

Part 1.00 General

1.01 SCOPE OF WORK
A. This Section shall govern the furnishing of all labor, materials and equipment for a complete operating system for lawn irrigation as specified herein and shown on the applicable drawings.

1.02 SUBMITTALS
A. Material List: Submit list of all materials for irrigation system.
B. Maintenance Items: Provide the following:
1. Two sets of sprinkler wrenches for adjusting, cleaning or disassembling each type of sprinkler.
2. Two service manuals for all equipment installed. Manuals shall be loose leaf and show drawings or exploded views of equipment and catalog numbers and current prices.
3. Operating instructions for all equipment installed.
4. One set of quick coupling keys to operate the quick coupling valves.
C. Project Record Documents: Correct daily to indicate changes from Contract Documents.
1. Horizontally at 90 degree angles, dimension the location of the following items from two permanent points of reference; i.e. curb junctures, light standards, building corners, survey hub points, or coordinates with a tolerance of 12 inch maximum.
a. Sprinkler main lines routing.
b. Connections to the existing water supply lines.
c. Sprinkler control valves.
d. Gate valves.
e. Electrical control wire path diagrammatically.
2. Vertical dimensions shall be given for mains when site conditions require installation deeper than 24 inches.

1.03 PRODUCT HANDLING
A. Exercise care in handling, loading, unloading and storing irrigation system materials to avoid damage. Store under cover.

1.04 PRODUCT CONDITIONS
A. The Contractor shall make all temporary repairs as necessary to keep the irrigation system in operating condition. This exercise shall not affect the requirements to be performed under the Contract Documents.
B. Coordinate work with that of other trades, all underground improvements, the location and planting of specimen trees and all other planting. Location of all planting requiring excavations 24 inch in diameter and larger shall be verified with Owner prior to installation of main lines.

1.05 INSPECTION
A. Verify dimensions and grades at job site.

Part 2.00 Products

2.01 MATERIALS
A. Plastic pipe: Extruded from 100% Virgin Polyvinyl Chloride (PVC).
1. Plastic pipe installed on pressure side of valves: (PVC) ASTM D1785, Schedule 40, or (PVC) ASTM D2241 Class 200.
2. Plastic pipe installed on non-pressure side of valves: (PVC) ASTM D2241 Class 160.
B. Plastic fittings: (PVC) ASTM D1785, Type 2, IPS, Schedule 40, NSF.
C. Solvent & Cleaner: As recommended by pipe manufacturer.
D. Automatic Controller: Toro TMC 424, High Surge Expansion Modules
E. Weather Sensor: Irritrol Climate Logic Sensor CL-Wireless
F. Remote Control Valves: Toro P220 Series Plastic Valves
G. Sprinkler Heads: Sprays - Toro 570Z-XP PRX; Rotors - Toro T5PCK
H. Sprinkler Nozzles: Toro Precision Spray Nozzles
I. Drip: Toro Drip In PC Brown Dripline; Toro Drip Zone Valve Kit
J. Wire: Copper, UL approved direct burial wire. Minimum of 14 gauge or as specified on the drawings.
K. Remote Control Valve Boxes: Brooks #3 or Ametek VP-10. Box lids shall be marked 'R.C.V.'.
1. Valve boxes for gate valves 3' and smaller: Ametek.
2. Gate valve boxes shall be marked 'Irrigation' or 'Water'.
L. Conduit for Control Wires (if shown on drawings): (PVC) ASTM D1785, Schedule 40 in locations as indicated.
M. Miscellaneous Materials: As hereinafter specified and as necessary to complete this work and as shown on Drawings.

Part 3.00 Execution

3.01 EXCAVATION AND BACKFILLING
A. Trenching - General:
1. Dig trenches straight.
2. Provide continuous support of the pipe by the bottom of trench. Lay pipe to even grade. Bottom of trench shall be free from rocks or other sharp edge objects.
3. Trenching shall follow layout indicated.
4. Minimum cover: Pressure Lines: 24 inches.
Non-Pressure Lines: 12 inches.
5. All lines shall have a 6' minimum clearance from each other and from lines of other crafts. Do not install lines directly over another line.
6. Maintain 1' minimum between lines which cross at angles of 45 degrees to 50 degrees.
7. Exercise care in excavating, trenching and working near existing utilities.
B. Backfilling:
1. Compact to dry density equal to adjacent undisturbed soils.
2. Conform to adjacent grades without dips, sunken areas, humps or other irregularities.
3. Initial backfill on plastic lines shall be pulverized native soil no larger than 2' in diameter and free of foreign matter.
4. Restore grades and repair damage where settling occurs.
C. Routing of Piping:
1. Pressure and non-pressure piping lines are routed diagrammatically on Drawings.
2. Coordinate specimen trees and shrubs with routing of lines. Planting shall take precedence over sprinkler and piping location. Report any major deviation from routing indicated to landscape architect or owner prior to line installation.
3. Install lines in such manner as to conform with drawings without offsetting the various assemblies from the pressure supply line.

3.02 INSTALLATION
A. Water Supply: Refer to drawings.
B. Quick coupling valves: Installed at intervals so that not more than 150 feet of hose will be required to reach any plant or tree (if a pressurized main system is being used).
C. Assemblies:
1. No multiple assemblies shall be installed on pressure lines.
2. Provide each assembly with its own outlet.
D. Cathodic Protection: Provide in the piping systems where required by installing insulating couplings, flanges or unions between copper or brass pipe or tubing and steel or cast iron pipe.
E. Plastic Pipe: Install plastic pipe in accord with manufacturer's recommendations. Install sprinkler head on plastic pipe as indicated.
1. All welded joints shall be cleaned with manufacturer's cleaner prior to applying solvent.
a. Welded joints shall be given at least 15 minutes set-up curing time before moving or handling.
b. Pipe shall be partially center loaded to prevent arching and shifting under pressure.
c. No water shall be permitted in pipe until a period of at least four hours has elapsed for solvent weld setting or curing or as required by solvent manufacturer.
2. Backfilling shall be done when pipe is not in expanded condition due to heat.
Cooling of pipe can be accomplished by operating the system for a short time before backfill, or by backfilling in the early part of the morning before the heat of the day.
3. Curing: When the temperature is above 80 F. soluble weld joints shall be given at least 24 hours curing time before water is introduced under pressure.
F. Automatic Controller:
1. Contractor shall be responsible for making control wire and electric power connections to the automatic controller.
G. Remote Control Valves:
1. Install at sufficient depth to provide not more than 6' nor less than 4' cover from the top of the valve to finish grade.
2. Install valves in a plumb position with 24' minimum clearance from other equipment for proper maintenance.
3. All valves shall be installed in appropriate sized valve boxes with cover.
H. Wire Connections: All underground wire connections to electric remote control valves shall be made by using waterproof wire connectors as manufactured by King Technology Inc.
I. Gate Valves:
1. Line size and install where indicated and sufficient clearance from other materials for proper maintenance.
2. Equip valves, sizes 3' and smaller, with standard operating wheel for operation. Valve bonnet packing shall be checked and tightened before backfill. All valves shall be 150 psi rated.
3. All valves shall be installed in appropriate sized valve boxes with cover.
J. Sprinkler Heads:
1. Install in a plumb position at intervals not to exceed the maximum spacings indicated.
2. Heads in lawn or turf areas where grass has not been established shall be installed on temporary risers extending at least 2' above grades.
3. Where heads are installed along walks, roads, etc., they shall be permanently positioned.
K. Thrust Blocks: Install thrust blocks on all main irrigation lines 4' or larger at all changes of direction, as detailed in manufacturer's recommendations on pipe installation or as shown on the drawings.
L. Flushing of System:
1. Flush main and lateral systems to clean out all debris and sediment prior to installation of heads.
2. This does not relieve requirements of future adjustments of system or reflushing system.

3.03 ELECTRICAL
A. Be responsible for making wire connections from remote control valves to controllers. All wiring shall be in accord with applicable codes.

3.04 PRESSSURE TEST
A. Test all pressure lines under hydrostatic pressure of 100 lbs. per square inch and all non-pressure lines shall be tested under the existing static pressure and both be proven watertight.
B. Pressure shall be sustained in the lines for not less than four hours. If leaks develop, the joints shall be replaced and the test repeated until the entire system is proven watertight.
C. Perform tests prior to backfill.

3.05 LOWERING OF HEADS
A. All sprinklers installed in lawn areas unless otherwise noted shall be lowered to finish grade within ten days following notification by the owner.
B. At the time of lowering heads, completely check and adjust the entire system and make any repairs that are necessary to complete this work.

3.06 ADJUST AND CLEAN
A. Installations and Operations: Make such adjustments and repairs as requested as necessary for acceptance at no additional cost to the owner.

3.07 COMPLETE AND ACCEPTANCE
A. Completion of work shall mean the full and exact compliance and conformity with provisions expressed or implied in the drawings and specifications.
B. All work under this contract shall not be finally accepted until expiration of the guarantee period.
C. The irrigation contractor shall demonstrate and fully acquaint the owner and/or owner's representative with the entire system, proving that all remote control valves are properly balanced, that all heads are properly adjusted for radius and arc of coverage, and that the system is workable, clean and efficient. This shall be a requirement for acceptance of the work.
D. Contractor shall upon receipt for final payment, give owner a set on CD of as-built irrigation system with all valves, tees and heads indicated as installed.

3.08 GUARANTEE AND REPLACEMENT
A. The irrigation contractor shall furnish warranties in writing certifying that the quality and workmanship of all materials and installation furnished is in accordance with these specifications and in accordance with original manufacturer's warranties. Irrigation contractor shall further see to the fulfillment of all manufacturer's warranties. Irrigation contractor shall warrant the installation workmanship for a period of one (1) year from date of completion or acceptance of the job, or any accepted portion of the job.
B. Should the irrigation contractor be notified that work or replacements are warranted under these conditions, he shall provide the required service and/or replacements promptly within three (3) days.

END OF SECTION

SECTION 02800
LANDSCAPE

Part 1.00 General

1.01 SCOPE OF WORK
A. This section covers furnishing and installing all landscape plants and nonplant materials covered by the drawings and these specifications. The work shall include materials, labor, equipment and services as described herein and indicated on the drawings. Also, the work shall include the maintenance of all plants and planting areas until acceptance by the Owner, and the fulfillment of all guarantee provisions as herein specified.

1.02 PLANTING LAYOUT
A. Before beginning work, the contractor shall investigate and verify, in the field, the existence and location of all underground utilities and irrigation piping, and take precautions to prevent their disturbance. It shall be the responsibility of the contractor to obtain all such information as it is made available. Plans and specifications of related work may be obtained from the owner.
B. The contractor shall locate all general reference points, take precautions to prevent their disturbance, perform the layout work, be responsible for all lines, elevations and measurements of work executed under the contract, exercise proper precaution to verify figures on drawings before laying out work and be responsible for any error resulting from failure to exercise such precaution. The contractor shall make field measurements for his own work and be responsible for its accuracy.
C. Discrepancies between conditions existing on the site and conditions indicated on the drawings shall be called to the attention of the owner before or at the time plant locations are staked out.
D. In the event of a variation between the plant list and the actual number of plants shown on the plans, the plans shall control.

1.03 HORTICULTURAL STANDARDS
A. Unless otherwise noted, plant material, including collected materials, shall be grade No. 1 or better as outlined under Grades and Standards for Nursery Plants, and shall also conform to American Standard for Nursery Stock, ANSI (American National Standards Institute, Inc.) Z60.1-1996 as approved by the American Association of Nurserymen.
B. All plant names shall conform to the names given in Standardized Plant Names, 1942 Edition, prepared by the American Joint Committee on Horticultural Nomenclature. Names of varieties not included therein shall conform generally with names accepted in the nursery trade. All plant materials shall be true to botanical, common and variety names. Botanical name shall have precedence over common name.
C. The landscape architect shall have the right, at any stage of the operations, to reject any and all work and materials which, in his opinion, do not meet with the requirements of these specifications. Such rejected material shall be removed from the site and acceptable material substituted in its place.

1.04 CERTIFICATES OF INSPECTION
A. All plant material shall be inspected by the Department of Agriculture, as required by state law. Plants of a grade less than that specified in the article titled HORTICULTURE STANDARDS will not be accepted.

Part 2.00 Non-Plant Materials

2.01 SOIL BACKFILL
A. Soil for backfilling planting areas and plant pits shall be the existing surface soil, free from subsoil, objectionable weeds, litter, sods, stiff clay, stones, stumps, roots, trash, toxic substances, mortar, cement or any other material which may be harmful to plant growth or hinder planting operations. Poorly drained soil shall not be used.
B. Soil amendments shall be added to the soil in the amount and manner prescribed by soil analysis to obtain a pH of 5.5 to 6.5. Results from soil analysis and a list of the prescribed amendments shall be presented to the owner and verified by the landscape architect prior to being incorporated into the soil.
C. If additional soil is required; it shall be furnished by the contractor and shall be a natural, friable soil representative of productive, well-drained soils in the vicinity. It shall be obtained from well drained areas which have never been stripped before ± and shall be free of admixture of subsoil and foreign matter, stones, toxic substances and any material or substance that may be harmful to plant growth .
D. The contractor shall provide the following information on imported topsoil:
1. Specific location from which topsoil will be (or was) stripped.
2. Present owner of that property.
3. Approximate amount of topsoil available.
4. Test results showing topsoil composition and analysis.
E. Soil test shall be performed by a qualified soils laboratory, in accordance with "Methods of Soils Analysis - Agronomy '9' as published by the American Society of Agronomy and shall be performed at the Contractor's expenses.
F. Planting soil backfill for raised architectural planters, if applicable, shall consist of 40% potting soil, 40% coarse washed builders sand and 20% horticultural perlite.
G. Areas designated to be planted with flowering annuals, if applicable, shall be excavated to a depth of 87 and backfilled with a mixture consisting of 40% peat, 40% D.O.T. (coarse) sand, 10% pine bark (decomposed) and 10% cypress chips.
H. Planting soil backfill for tree wells, if applicable, shall be 2/3 approved topsoil and 1/3 coarse washed builder's sand.

2.02 FERTILIZER
A. Commercial fertilizer shall be 14-14-14 formulation of Osmocote brand, 3-4 month release of which 60% of the nitrogen is in urea-formaldehyde form and shall conform to the applicable state fertilizer laws. Fertilizer shall be uniform in composition, dry and free flowing.

2.03 DOLOMITIC LIMESTONE
A. Dolomitic limestone shall be a natural limestone, designated for agricultural use, shall contain not less than 85 % of total carbonates, and shall be ground so that 50% will pass a 100 mesh sieve and 50% will pass a 20 mesh sieve.

2.04 PRE-EMERGENCE WEED CONTROL
A. Weed control shall be Ronstar 2G as manufactured by Rhodia, Inc., Monmouth Junction, New Jersey 08852 or Princap (Simazine) as manufactured by Gelgy Agricultural Chemicals, Ardsley, New York 10502, or an approved equal.

2.05 WATER
A. Water will be available for use on site during the landscape installation at no cost to the contractor. Care shall be exercised to assure that water is kept free of harmful chemicals, acids, alkalis, or any substance, which might be harmful to plant growth.

2.06 ANTIDESICCANT
A. Antidesiccant shall be an emulsion type; film-forming agent designed to permit transpiration, but retard excessive loss of moisture from plants, such as Dowax by Dow Chemical Co., or Wilt-Pruf by Nursery Specialty Products, Inc., or an acceptable equal. The antidesiccant shall be delivered in the manufacturer's fully identified containers and shall be mixed in accordance with manufacturer's instructions.

2.07 BORICIDE
A. Boricide shall be Lindane as manufactured by Platt, or an approved equal.

2.08 MULCH
A. All mulch around building pad shall be stone, 3" deep. See plan for size, color and limits of stone mulch. Install a weed barrier under stone, and submit a stone sample to owner.

2.09 GUYING AND STAKING MATERIAL
A. Stakes for supporting trees shall be as detailed on the drawings. Wire for fastening trees to duckbill and turnbuckle shall be galvanized aircraft grade guying cable as specified in the detail. Wires in contact with trees shall be encased in two-ply reinforced garden hose. Material for wrapping tree trunks shall be burlap, heavy crepe paper, or other acceptable material in strips 6 to 10 inches wide.

2.10 DRAINAGE GRAVEL
A. Where indicated on the drawings, or where soil conditions deem it necessary, the contractor shall install gravel subdrains beneath trees and/or planting areas to aid in soil drainage and percolation. The subdrain shall be constructed as detailed on the drawings, or as directed by the landscape architect. Drainage gravel shall consist of washed, clean gravel 3/4 inch to 2 inches in size.

2.11 SOIL SEPARATION MATS
A. Soil separation mats, if indicated on the drawings, shall be Bidim (gray felt) as manufactured by Monsanto Co., 800 North Lindbergh Road, St. Louis, MO 63166 or approved equal. Mats shall be installed as indicated on the drawings, and edges overlapped a minimum of 4 inches. Care shall be taken to prevent tearing or excessive crushing during the installation process.

Part 3.00 Plant Material

3.01 QUALITY OF PLANT MATERIAL
A. During inspection, as set forth hereinafter, all plant material will be judged, and rejections shall be based upon these standards. All plants shall comply with federal and state law requiring inspection for plant diseases and infestations. Inspection certificates required by law shall be made available to the owner or owner's representative at his/her request.
B. In determining the quality of plant material, the following elements will be valued:
1. Root condition.
2. Plant size (above ground).
3. Insect and disease free condition.
4. General appearance (color, shape, pruning).
A deficiency in one or more of these areas will be sufficient reason to reject selectively or by lot.
C. The landscape architect shall have the right, at any stage of the operations, to reject any and all work and materials which, in his opinion, do not meet with the requirements of these specifications. Such rejected material shall be removed from the site and acceptable material substituted in its place.

3.02 SIZE AND MEASUREMENTS
A. Plants shall be measured when branches are in their normal position. Heights and spread dimensions specified refer to the main body of the plant and not to extreme branch tip to tip. The measurements specified are the minimum size acceptable and where pruning is required, these are measurements after pruning. When sizes are indicated as a range, the plant shall have the proper proportion as outlined in Department of Agriculture, Grades and Standards for Nursery Plants Part 1 and 11. Caliper of trees shall be taken 36 inches above the ground level and shall be the determining measurement for trees.
B. Plants, which have been headed back to conform to the size specified, will not be acceptable. Plants larger than specified may be used if approved by the owner; however, the use of such plants shall not increase the contract price.

3.03 LABEL
A. Plant materials shall have durable, legible labels stating, in weather resistant ink, the correct botanical and common names and size as indicated in the Plant List. Each plant, or sufficient representative samples of each delivered shipment, shall have labels securely attached in a fashion that will not interfere with normal plant growth. Plant materials which have (or will have) a seasonal bloom shall be tagged with labels indicating the specific variety of that species' botanical and common name.

3.04 BALLED , BURLAPPED, WIRE BALLED, BURLAPPED PLANTS
A. All ball sizes shall be of a diameter and depth to encompass the fibrous and feeding root system necessary for full recovery of the plant after planting. All balls shall be firm, shall not be broken or cracked and shall be wrapped and securely tied with heavy twine or wire. All trees shall be root pruned a minimum of 6 weeks before delivery. When the tree is root pruned, the tree crown shall be selectively thinned to reduce the volume of the crown. This shall consist of thinning and shaping only. Care shall be taken to assure that the plant form will not be distorted and will remain typical of the species growth characteristics.
B. Plants designated B B or WB B in the Plant List shall be adequately balled with firm, natural balls of soil in sizes at least equal to those set forth in ANSI Z60.1-1986. Balls shall be firmly wrapped with jute burlap or equivalent cloth capable of rotting in the round. No balled plant shall be planted if the ball is cracked, mushroomed or broken either before or during the process of planting. Trees grown in grow bags shall not be acceptable. Synthetic strings, straps, and burlap material shall be properly removed from the root ball. Synthetic burlap is to be totally removed from the root ball.

3.05 COLLECTED PLANTS
A. All plant material (except Wax Myrtles and Sabal Palms) shall be nursery grown. Collected plants shall have been grown under climatic conditions similar to those in the locality of the project. All collected plants shall meet the requirements as specified and shall meet all specified grades and standards, unless otherwise qualified in the Plant List or these specifications. Root balls shall be increased in size one third greater than nursery grown plants.

3.06 CONTAINERIZED PLANTS
A. All container grown plants shall be well rooted and established in the container in which they are delivered to the site. The plants shall have been in that container sufficiently long for the fibrous roots to hold the soil together when the plant is removed from the container. Plants designated to be container grown may be furnished with ball and burlap provided they conform to the size and quality required and that the requirements for balled and burlapped plants are met. Container grown plants found to be root-bound during planting will not be acceptable. Containerized trees have a tendency to dry out quickly. The contractor shall be responsible for hand watering the trees at time of delivery through the time of final acceptance at a rate consistent with the nursery watering schedule to assure that the tree does not go into shock.

3.07 SPECIMEN PLANTS
A. After receiving the Notice to Proceed, the contractor shall locate all plants specified as specimen. The contractor shall notify the owner so they may agree on a time to mutually inspect the selected plants. The owner will inspect and tag those plants, which are acceptable for use. Expenses incurred by the owner for any subsequent inspection of specimen plants, at any time, in addition to the mutually agreed time shall be the responsibility of the contractor.

3.08 PALMS (if required)
A. Palms, except cabbage palms and unless otherwise indicated, shall be burlapped. Buds of palms shall be tied and supported in an upright position in accordance with the guidelines of Department of Agriculture, Grades and Standards for Nursery Plants, Part 11, Palms and Trees.
B. Special care shall be applied to the handling and planting of palms. Unless otherwise indicated, palms shall have heavy straight trunks with full heads. Sabal palm root balls shall be dug with a minimum of 3' diameter ball 3' deep. The head shall be tied and supported during transport with a 2x4 tied parallel to the trunk extending up to the foliage. Avoid excessive pressure on the petioles when tying the head. Canary Island Date palm heads shall be tied using a 4x4 wood pole.

3.09 SUBSTITUTIONS
A. The use of materials differing in kind, quality or size from those specified will be allowed only after the owner is convinced that all means of obtaining the specified materials have been exhausted.
B. Where it is indicated that the contractor may furnish or use a substitute that is equal to the material or equipment specified and if the contractor is to furnish or use a proposed substitute, he shall, after the award of the contract, make written application to the owner for acceptance of such a substitute. The substituted product or method shall be equal or superior in all respects to the specified product or method, shall perform adequately the duties imposed by the general design, shall be compatible with all other elements of the job, and shall be sufficient to complete the job. The substitution shall not add cost to the contract. Should it be necessary to accept a substitute of a quality less than specified, the unit price shall be used to adjust the contract price downward accordingly. No substitution shall be ordered or installed without the written permission of the owner and governing municipality.

Part 4.00 Delivery, Storage and Handling

4.01 PLANT MATERIAL
A. The contractor shall exercise care in handling, loading and unloading, storage and transporting all plant material and allied materials to prevent damage. The contractor shall assume full responsibility for protection and safekeeping of products stored on the job.
B. The contractor shall dig and prepare B B and WB B plant material for shipment in a manner that will not damage roots, branches, shape and future development after planting.
C. Trees indicated on the plans as WB B and those where size, soil conditions and distance of transport to the site would warrant, shall be wireballed. Bottom wired baskets manufactured specifically for use in tree handling may be used.
D. The contractor shall handle all plants so that roots and branches are protected at all times from drying out, heating and from other injury. All plants shall be handled by the ball or container.
E. Before moving plants from the nursery or storage area to the site; they shall be thoroughly sprayed with a solution of antidesiccant. Antidesiccant shall be applied to all collected pines, oaks and myrtles. Two weeks after planting or as specified by the product manufacturer; the material shall be sprayed again with the antidesiccant. The antidesiccant shall be applied using power spray to provide an adequate film over trunks, branches, stems, twigs and foliage.
F. When transporting plants to and at the site, the contractor shall make provisions to protect plants from wind damage by avoiding high-speed highways, transporting in enclosed or partially enclosed vehicles, or covering the plants with burlap or other suitable material. Plants severely damaged by wind will be rejected.
G. Any plant with signs of insects, their eggs or larvae or disease will be rejected and shall be removed from the project site.
H. Only the nursery stock intended for planting on a particular day shall be delivered and stored on the site during the day unless otherwise acceptable to the owner. All plants shall be stored in one location as designated by the owner, protected from wind and kept moist. The roots of all plants that cannot be planted immediately in soil shall be covered with mulch and other suitable material. No plants shall be taken from the temporary storage area for planting on the project until after the tree pits or holes for the plants in the section to be planted have been properly excavated and prepared ready to receive the trees and shrubs.
I. Trees moved by winch or crane shall be thoroughly protected from chain marks, girdling or other bark slippage by means of burlap, wood battens or other acceptable method.

4.02 NONPLANT MATERIAL
A. Fertilizer shall be delivered to the site in original, unopened containers bearing manufacturer's guaranteed chemical analysis, name, trade name, trademark and conformance to state law. In lieu of containers and provided that it is to be applied at the time of delivery, fertilizer may be furnished in bulk and a certificate indicating the above information shall accompany each delivery.
B. Pesticide and herbicide materials shall be delivered to the site in the original, unopened containers. Containers that do not have a legible label that identifies the Environmental Protection Agency registration number and the manufacturer's registered uses will be rejected.
C. Storage of materials shall be in the area designated for use by the owner. All materials shall be kept in dry storage and away from contaminants.

Part 5.00 Installation

5.01 PREPARATION BEFORE PLANTING
A. The contractor shall verify that all final grades have been established prior to beginning planting operations. All unsatisfactory grading shall be reported to the owner, and the contractor shall not proceed with this work until the unsatisfactory conditions have been corrected. When conditions detrimental to plant growth are encountered, such as rubble, fill or adverse drainage conditions, the contractor shall notify the owner for directions.
B. Should undesirable existing vegetation be present on the site at the time of installation, the contractor shall prepare the site for planting by use of chemicals, when used as recommended by the manufacturer, and/or mechanical means acceptable to the owner. Care shall be exercised to avoid any misuse of chemicals, which would create detrimental residual conditions. Care must also be used not to alter final grades, which have been established or cause damage to previously established turf areas.

5.02 SITE PREARATION
A. If so called for by the owner, all plant locations and the areas of all planting beds shall be staked out on the ground, for acceptance by the owner, before planting operations begin. The contractor shall stake the location of the center of each tree and paint the outline of each shrub and groundcover bed. The stakes shall be oriented in a vertical manner so that they can be viewed and read from one direction. The contractor shall give the owner notice 24 hours prior to the completion staking described herein.
B. The contractor shall verify the location of underground utilities, and irrigation heads and valves, and provide markers or other suitable protection, where necessary, to prevent damage.

5.03 EVCAVATION OF PLANTING AREAS
A. No tree or shrub pit shall be dug or prepared until their location is acceptable to the owner. Reasonable care shall be exercised to have pits dug and soil prepared prior to moving plants to respective locations for planting to ensure that they will not be unnecessarily exposed to drying elements or to physical damage.
B. Circular pits with vertical sides shall be excavated for all plants. The depth of all plant pits shall be enough to accommodate the ball or roots and the prepared soil in the bottom of the pit. Diameter of pits for trees shall be at least 1 foot greater than the diameter of the ball.
C. Plant beds and pits shall be tested for proper drainage by filling with water twice succession. Conditions permitting the retention of more than 6 inches of water in 1 hour shall be brought to the attention of the owner. A written proposal and cost estimate for correction of such conditions shall be submitted to the owner for acceptance, before proceeding with the work.
D. All tree pits curbed planting islands, tree wells, or in areas, in which the soil has been compacted to an undesirable density, shall be excavated to a depth at least two feet greater than the measured depth and diameter of the ball. The minimum depth and diameter of excavation shall be four feet. Soil backfill in areas of densely compacted soil must meet specification 201-C unsuitable soil to an approved location.
E. In shrub and groundcover beds where soils have been compacted to a density, which is detrimental to plant growth, the contractor shall loosen soils to a depth of 18" minimum to allow root penetration beyond the planting pit.
F. If acceptable for use, existing topsoil in shrub and groundcover beds shall be treated with the specified soil amendments, at rates determined by soil tests. Amendments shall be incorporated into the soil to a depth of 12 inches. Where soil is not acceptable as determined by soil tests, the soil in the entire area shall be removed to a depth of 8 inches and replaced with the specified planting soil.

5.04 PLANTING
A. All plants, except as otherwise specified, shall be centered in their pits, faced for best effect and set plumb for backfilling.
B. Burlap on B&B and WB&B plants shall be removed from top one third of the ball. Burlap shall not be removed from under balls. If the ball is cracked or broken before or during planting process, the plant shall not be removed from the site. All synthetic strings, straps, and wire cages shall be removed from the top of third of the root ball. Synthetic burlap shall be removed completely.
C. Plants shall be removed from cans by cutting two sides of a container with an acceptable can cutter. Sides shall not be cut with a spade. Sides of knockout cans shall not be cut. Plastic containers with slanted sides shall not require cutting. Plants shall be removed from the container carefully, without injury or damage to the plant and root system.
D. Bottom of plant boxes shall be removed before planting. Sides of the box shall be removed, without damage to the root ball, after positioning the plant and partially backfilling around it. The contractor shall hand water-containerized trees from the time of delivery until the time of the final acceptance at a rate consistent with the nursery conditions from which the trees were obtained. Trees, which go into shock due to insufficient water, may be rejected.
E. Plants shall be set in the center of the pits and shall be plumb and straight and at such a level that after settlement the root crown will be level with the surrounding grade.
F. Plant holes shall be backfilled with the specified planting mixture placed in layers around the roots or ball. Each layer shall be carefully tamped in place in manner to avoid injury to the roots or ball or disturbing the position of the plant. When approximately two thirds of the plant hole has been backfilled, the hole shall be filled with water and the soil allowed to settle around the roots. Balled and burlapped plants shall have the burlap cut away or folded back from the top of the ball before applying water. After the water has been absorbed, the plant hole shall be filled and tamped lightly to grade. Any subsequent settlement shall be brought to grade.
G. Immediately after each tree pit is backfilled, a shallow basin slightly larger than the pit shall be formed with a ridge of topsoil to facilitate watering. This soil saucer shall be formed in a circle and tamped around each tree so that the saucer will retain water. Where curbing occurs around plant pits, the saucer shall be omitted.
H. The contractor shall include adding a water retentive additive Terra-Sorb AG for all shrubs, groundcovers, annuals and trees at the manufacturers suggested rates.
DFPA Plyform, Exterior B-B, edge sealed.
1. Plastic Fiber:
Special forms of molded fiber, if required.
2. Cardboard:
Beam void forms "VOIDCO" or equal, as required under pier supported grade beams.
3. Metal:
Commercial standard, or as noted on drawings.

5.05 FERTILIZING
A. Each tree and shrub shall be fertilized by placing the manufacturer's recommended amount around the base of the ball before backfilling.

5.06 STAKING, GUYING AND WRAPPING
A. Staking or guying and wrapping of trees shall be done immediately after they are planted. Each plant shall stand plumb after staking or guying has been completed. It shall be the Contractor's responsibility to ensure that all trees are plumb and secure after planting. Staking of trees of a 10 foot height or less shall be at the discretion of the Owner. All other trees shall be staked.
B. Immediately after planting, trees shall be staked and guyed for support. "Duck-bill" earth anchors as indicated shall be placed at sides of each tree, and shall be driven into undisturbed ground to a depth deep enough to sufficiently secure the tree. Care shall be taken when driving anchors to avoid damaging the tree roots. Except as otherwise indicated or directed, the tree shall be fastened to each anchor as indicated on the plans. The wires shall be encased in hose at the tree to prevent direct contact with the bark and shall be placed around the trunk in a single loop. Wires shall be tightened and kept taut by twisting the turnbuckle. A brightly colored flagging tape approximately 12" in length shall be securely tied to each guy wire immediately above the turnbuckles.
C. If planted while void of foliage, the trucks of all deciduous trees shall be wrapped spirally from bottom to top, and shall be securely tied with cord at top and bottom and at 2 foot intervals along the trunk. The wrapping shall overlap and entirely cover the trunk from the ground to the height of the second branches and shall be neat and snug. Overlap of wrapping material shall be approximately 2 inches. Trees shall be inspected for injury to trunks, evidence of insect infestation and improper pruning before wrapping.

5.07 MULCHING
A. Immediately after planting operations are completed, all tree and shrub saucers, and shrub and groundcover beds outside of the building pad shall be covered with a 2 to 2 ½ inch layer of shredded cypress bark. Limits of the mulch shall be as indicated on the drawings.

5.08 PRUNING
A. Each tree and shrub shall be pruned in accordance with standard horticultural practice to preserve the natural character of the plant and in the manner fitting its use in the landscape design. Pruning shall be done with clean, sharp tools and as indicated on the drawings.
B. Approximately one third of the growth of large deciduous trees (those with 2 inch caliper or larger) shall be pruned by removal of superfluous branches. Main leaders of trees shall not be cut back. Branches shall be thinned out and not merely cut back. Long side branches may be shortened. Shrubbery with extremely heavy tops shall have one fourth to one third of the weaker growth removed by thinning.

5.09 CLEANUP
A. During the course of planting, excess and waste materials shall be continuously and promptly removed daily, lawns kept clear, and all reasonable precautions taken to avoid damage to existing structures, plants and grass. After completion of the work, the entire site shall be cleared of excess soils, waste material, debris and all objects that may hinder maintenance and affect the visual appearance of the site.
The Contractor shall clean all roads and walks of dirt film and soil clods.
The Contractor shall also pressure clean and broom sweep all asphalt pavement prior to the final lift of asphalt to be laid.

5.10 DISTURBED AREAS
A. All areas outside of the limits of work that are disturbed by the Contractor's construction activities shall be repaired and replanted to its original condition.

Part 6.00 Guarantees

6.01 GUARANTEED PROVING PERIOD
A. There shall be a guarantee period of 1 year for trees and specimen material and 1 year for shrubs. This guarantee period shall start at the final acceptance date. Contractor shall replace any and all plant material, which die during this guarantee proving period. Replacement of plants necessary during the guarantee period shall be the responsibility of the Contractor, except for possible replacements of plants resulting from removal, vandalism, acts of neglect on the part of others, or acts of God. All replacement material shall have the same guarantee time (1 year from installation of replacement for trees and specimen material and 1 year for shrubs).
B. Planting maintenance shall include all necessary watering, cultivation, weeding, pruning and spraying, wrapping and mulching, straightening of plants which lean or sag and which develop more than a normal amount of settlement such adjustments to include excavating around and leveling or raising the ball when so directed and all other incidental work necessary for proper maintenance as directed by the Owner until substantial completion and written release.
C. Transplanted material (if applicable) shall not be guaranteed, however, good horticultural practices should be used before, during and after the material is transplanted. Good horticultural practices should include but not be limited to, all necessary watering, pruning and spraying, wrapping and mulching, fertilizing, moving, maintaining the same orientation and grade level from the original location, and all other incidental work necessary for proper transplanting.

6.02 FINAL INSPECTION AND ACCEPTANCE
A. The Contractor shall notify the Owner in writing when the work has been completed in accordance with this Contract and request an inspection. The Owner will make the inspection of the work and report findings as to acceptability and completeness. Any work remaining to be done shall be subject to reinspection before final acceptance. The Contractor will be notified in writing by the Owner of the final acceptance of the work.

6.03 CONTRACTOR'S RESPONSIBILITY AFTER ACCEPTANCE
A. The Owner may elect to assume maintenance of all work, at the time of acceptance, or may elect to contract for maintenance by others for a specified period. Should maintenance after final acceptance be the responsibility of those other than the Contractor, the Contractor shall monitor all work for which he is responsible by guarantee, to assure that maintenance being performed will not jeopardize the condition and quality of the work and materials guaranteed by the Contractor. Any inadequate or damaging maintenance practices shall be reported immediately in writing to the Owner so that appropriate measures may be taken to correct the condition. Failure to so notify the Owner will invalidate any later claim of negligence or malpractice in maintenance.

6.04 ACCEPTANCE AND REPLACEMENT OF PLANT MATERIAL
A. At the expiration of the proving period, an inspection of the plantings will be made by the Owner. Only those plants that are alive and normally healthy will be accepted. Unaccepted material shall be removed and replaced by the Contractor at his own expense, during the next planting season. Material and method of replacement planting shall be the same as specified for the original planting unless otherwise directed. The Contractor shall continue to make replacements until a plant shows vigorous and healthy growth for a period of 1 year from the date of acceptance by the Owner. All such replacements will be inspected for acceptance at the end of the proving period by the Owner.

6.05 REQUIRED MAINTENANCE
A. Landscape contractor shall be responsible for the maintenance and upkeep for 90 days past the final inspection. At that point contact the general manager of the store and determine if the landscape contractor will remain on. If yes, contractor will be responsible for the maintenance and warrantee of all landscaping for one full year. If no, the landscape contractor is to walk the site with the general manager, manager, the facilities manager and the new landscaper and they shall agree that all planting is in good shape prior to the new landscaper taking over.

END OF SECTION

FOR INFORMATIONAL
PURPOSES ONLY

DCH 22007

Kimley»Horn

445 24TH STREET, SUITE 200
VERO BEACH, FL 32960
PH: (772) 794-4100
REGISTRY NO. 696
KHA PROJECT # 047916134

THIS SHEET IS PROVIDED FOR REFERENCE ONLY.

CITY STANDARDS AND SPECIFICATIONS AS WELL AS NOTES PROVIDED IN THE CIVIL PLANS SUPERSEDE SPECIFICATIONS SHOWN HERE.

Cheddar's SCRATCH KITCHEN

Issue Date: 2/15/2023

REVISION INFORMATION

Restaurant #: 21K0037

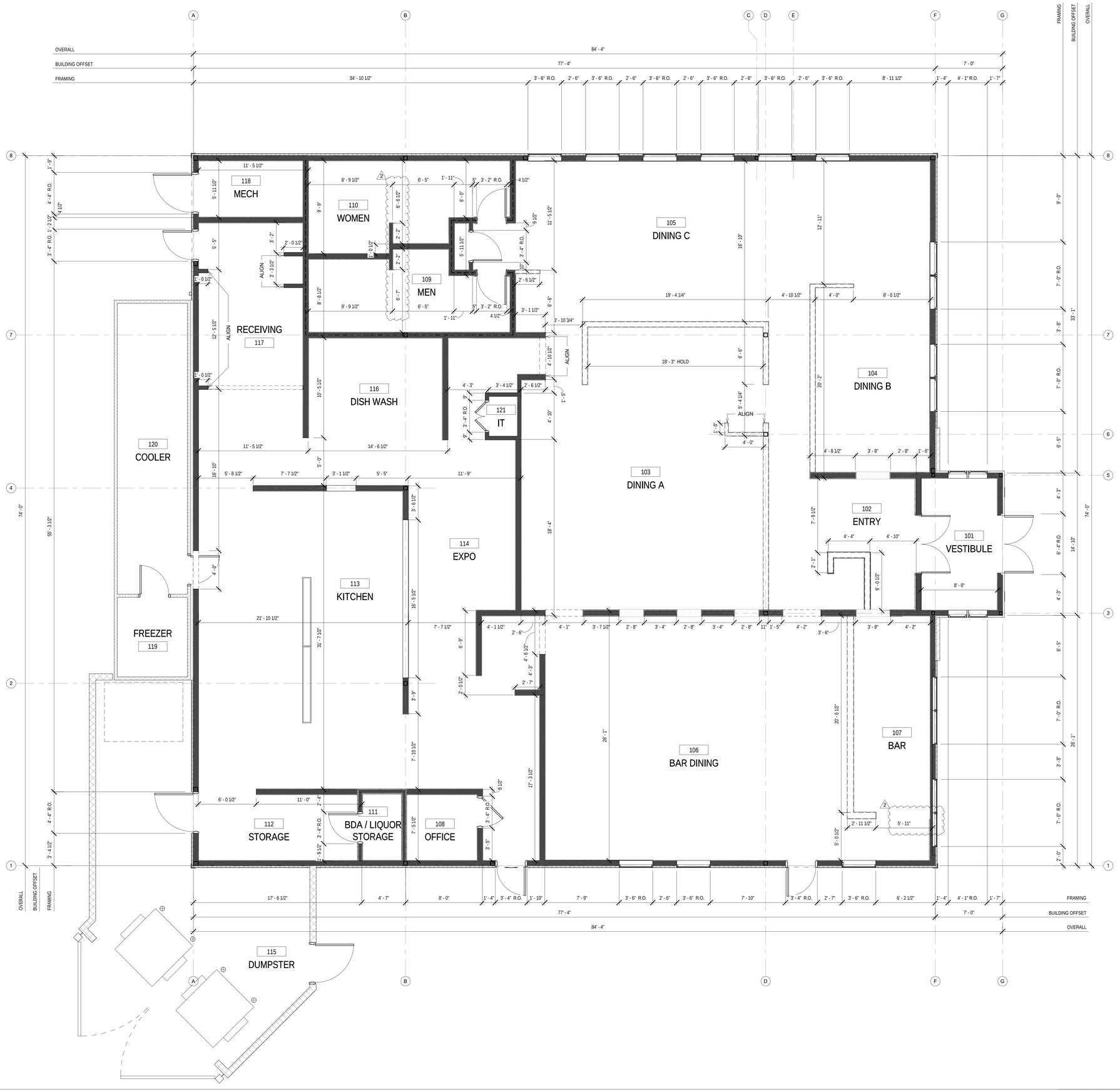
CHEDDAR'S SCRATCH KITCHEN RIVERVIEW

PROTOTYPE 18

HILLSBOROUGH CNTY FLORIDA

DRAWING
DARDEN LANDSCAPE AND IRRGATION SPECIFICATIONS

LS1



DIMENSIONED FLOOR PLAN 1

1/4" = 1'-0"

GENERAL NOTES - DIMENSIONED PLAN

A	ALL DIMENSIONS ARE SHOWN TO FACE OF STUD WALL UNLESS NOTED OTHERWISE.
B	REFER TO FINISH SCHEDULE AND DETAILS FOR APPLIED FINISHES.
C	WALLS TO STRUCTURAL DECK MUST BE THOROUGHLY SEALED AROUND PENETRATIONS.

WALL LEGEND PLAN VIEW

	FULL HEIGHT WALLS
	PARTIAL HEIGHT WALLS
	COOLER/FREEZER WALL, BY KEC
	FULL HEIGHT WALL WITH ACOUSTICAL BATT INSULATION. REFERENCE SPECIFICATIONS.

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT

REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

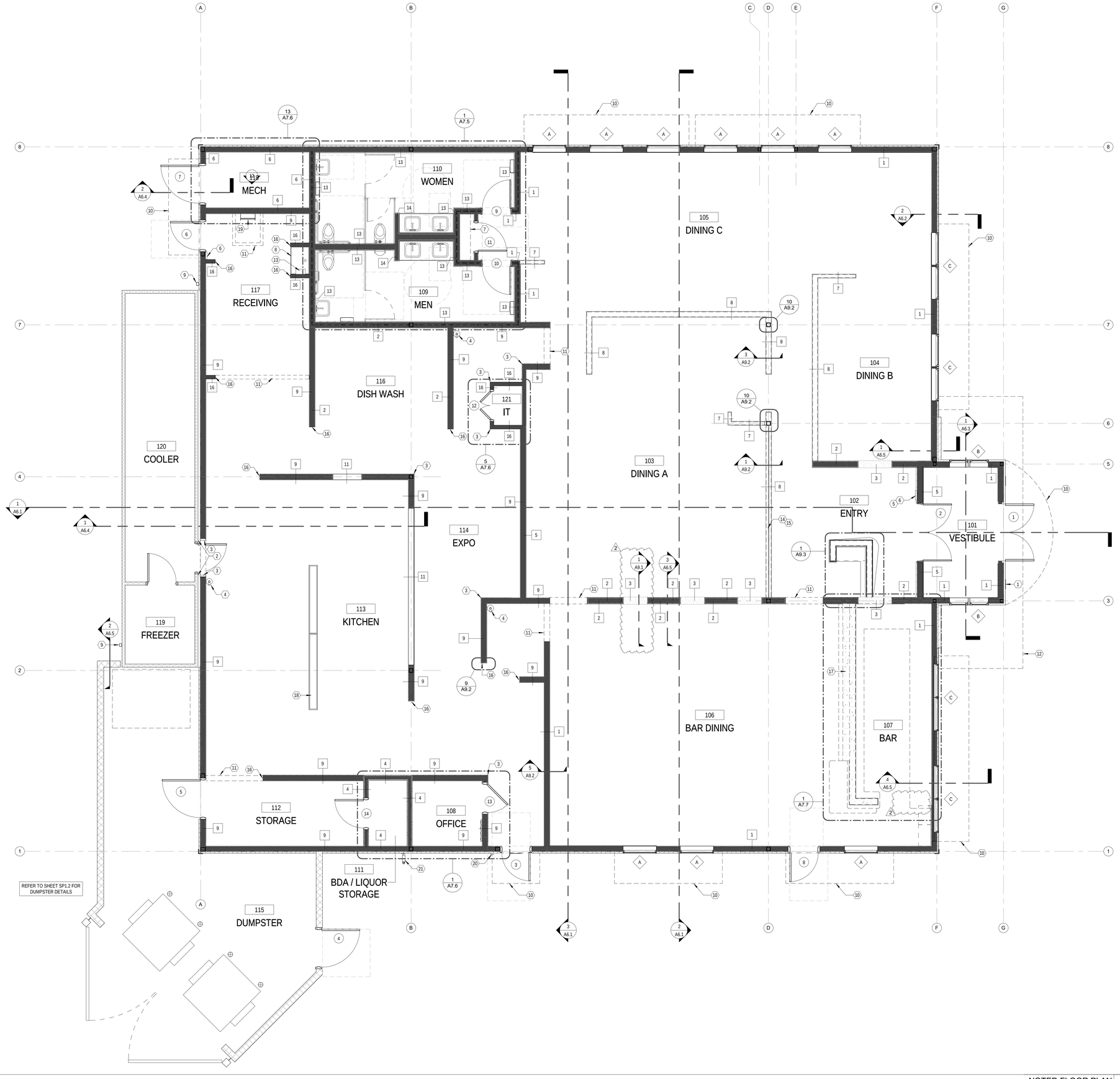
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:

DIMENSIONED FLOOR PLAN

A1.1



NOTED FLOOR PLAN
1/4" = 1'-0"
1

GENERAL NOTES - NOTED FLOOR PLAN

A	ALL DIMENSIONS ARE SHOWN TO FACE OF STUD WALL UNLESS NOTED OTHERWISE.
B	REFER TO FINISH SCHEDULE AND DETAILS FOR APPLIED FINISHES.
C	WALLS TO STRUCTURAL DECK MUST BE THOROUGHLY SEALED AROUND PENETRATIONS.
D	REFER TO MILLWORK DRAWINGS FOR LOCATION AND INFORMATION.
E	REFER TO WALL TYPE SCHEDULE IN THIS SHEET FOR ALL NEW WALLS.
F	ALL WALLS IN KITCHEN, STORAGE AND OFFICE TO RECEIVE FRP OVER DESIGNATED WALL TYPE. REFER TO WALL SCHEDULE IN THIS SHEET.
G	REFER TO SHEETS A7.1 - A7.5 FOR ALL INTERIOR ELEVATIONS AND TAGS.
H	REFER TO FS-3.10 SHEET FOR WALL BACKING LOCATIONS

KEYNOTES - A1.2

#	
1	KNOX BOX, MOUNT NO LOWER THAN 5'-0" AND NO HIGHER THAN 6'-0" A.F.F., VERIFY FINAL LOCATION WITH FIRE MARSHAL PRIOR TO INSTALL
2	STAINLESS STEEL CLOSURE STRIP TO SEAL COOLER/FREEZER TO WALL, RE: KITCHEN
3	STAINLESS STEEL CORNER GUARD BY KITCHEN EQUIPMENT SUPPLIER, G.C. TO COORDINATE INSTALLATION, RE: 9/A9.2
4	FIRE EXTINGUISHER, VERIFY FINAL LOCATION WITH FIRE MARSHAL PRIOR TO INSTALL. PROVIDE 6 ABC AND 6 K TYPE
5	OCCUPANCY LOAD SIGN, VERIFY LOCATION WITH FIRE MARSHAL PRIOR TO INSTALL
6	TACTILE 'EXIT ROUTE' SIGN, VERIFY FINAL LOCATION AND WORDING WITH FIRE MARSHAL PRIOR TO INSTALL
7	SHELVING, RE: 11/A9.2
8	MOP SINK, RE: 18/A9.4
9	3x5 PREFINISHED DOWNSPOUT, STRAIGHT TO UNDERGROUND, SMOOTH, NOT FLUTED, PROVIDE TRANSITION BOOT AT/BELOW WALKGRADE SURFACE.
10	LINE OF AWNING ABOVE
11	LINE OF HEADER ABOVE
12	LINE OF ROOF OVERHANG ABOVE
13	EYE WASH STATION
14	TEMPERED GLASS SET ON LOW WALL: RE: 1 / A9.2
15	INSTALL FRAME FOR FUTURE INSTALLATION OF GLAZING, RE: INTERIOR ELEVATIONS
16	STAINLESS STEEL WALL CAP, RE: 9 / A9.2
17	RAISED CONCRETE CURB, CHAMFER ALL OUTSIDE CORNERS TYPICAL, RE: STRUCTURAL FOR ADDITIONAL INFORMATION
18	PRE FAB KITCHEN CHASE, RE: FOOD SERVICE
19	ROOF ACCESS LADDER, RE: A7.6
20	CREDENTIAL READER, RE: SECURITY SHOP DRAWINGS
21	SURVEILLANCE CAMERA, RE: SECURITY SHOP DRAWINGS

WALL LEGEND PLAN VIEW

	FULL HEIGHT WALLS
	PARTIAL HEIGHT WALLS
	COOLER/FREEZER WALL, BY KEC
	FULL HEIGHT WALL WITH ACOUSTICAL BATT INSULATION. REFERENCE SPECIFICATIONS.

WALL TYPE SCHEDULE

	MATERIALS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FRAMING	2x4 METAL STUDS							•					•		•	•	•	
	2x6 METAL STUDS	•	•	•	•	•	•		•	•	•	•		•				
	2x8 METAL STUDS																	•
	LOW WALL			•				•	•			•						
SHEATHING	5/8" CEMENT BOARD TO 12" A.F.F.									•		•					•	
	5/8" CEMENT BOARD BEHIND TILE													•	•			
	5/8" CEMENT BOARD		•	•		•												
	5/8" GYPSUM BOARD	•														•		
	5/8" MOLD AND WATER RESIST. DRYWALL										•			•	•			
	5/8" PLYWOOD WAINSCOT	•				•										•		
	5/8" PLYWOOD						•	•	•	•		•	•				•	•
	2 LAYERS 5/8" TYPE X GYPSUM BOARD				•													
	2 LAYERS 5/8" TYPE X GYPSUM BOARD				•													

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REV 02: 04.18.2023

cheddar's SCRATCH KITCHEN

Issue Date: 02.15.2023

REVISION INFORMATION

1	CITY COMMENTS	04.04.2023
2	COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

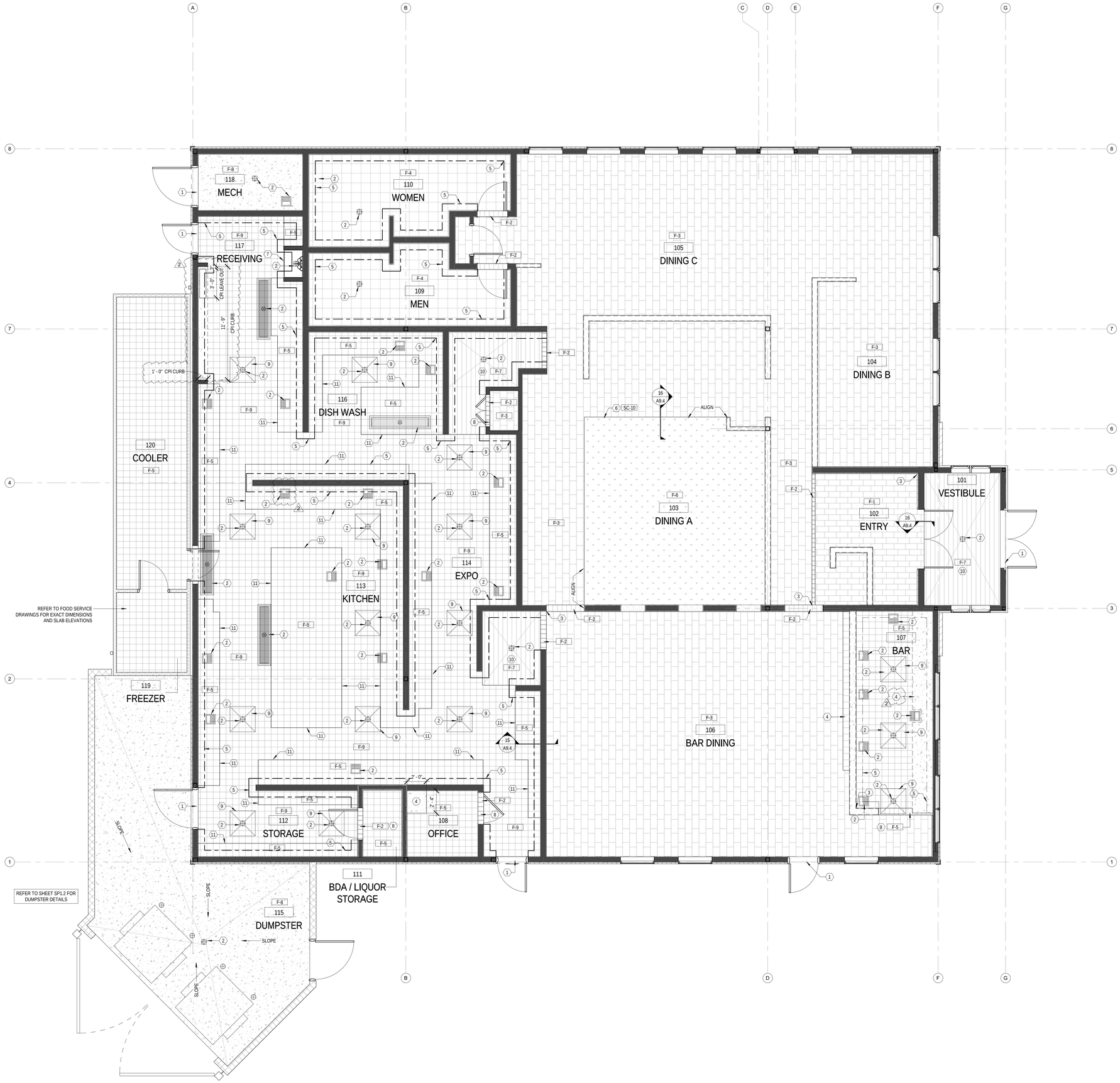
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
NOTED FLOOR PLAN

A1.2



FLOOR FINISH AND CURB PLAN
1/4" = 1'-0"
1

GENERAL NOTES

A	ALL DIMENSIONS ARE SHOWN TO FACE OF BLOCK OR STUD UNLESS NOTED OTHERWISE.
B	REFER TO FINISH SCHEDULE PLAN AND ELEVATIONS FOR APPLIED FINISHES.
C	WALLS TO STRUCTURAL DECK MUST BE THOROUGHLY SEALED AROUND PENETRATIONS.
D	REFER TO PLUMBING PLANS FOR ALL FLOOR DRAINS, FLOOR SINKS AND TRENCH DRAINS.
E	REFER TO STRUCTURAL FOR SLAB SLOPE PLAN

KEY NOTES:

1	ALUMINUM THRESHOLD, MAX. 1/2" TRANSITION, SET IN FULL BED MASTIC
2	TRENCH DRAIN, FLOOR SINK OR FLOOR DRAIN, RE: PLUMBING
3	START POINT FOR TILE PATTERN
4	RAISED CONCRETE CURB, RE: STRUCTURAL
5	WATERPROOF MEMBRANE, RE: 15/A9.4
6	T-MOLD TRANSITION STRIP
7	RECESSED MOP SINK, RE: 18/A9.4
8	BUMP TILE THRESHOLD, RE: 17/A9.4
9	PROVIDE SLOPE IN SLAB, RE: STRUCTURAL
10	ENTRY ROLL MAT
11	LINE INDICATES TILE TRANSITION FROM DOUBLE ABRASIVE TO SINGLE ABRASIVE

FLOOR FINISH LEGEND

	MINERAL CHROM BLACK (12x24) F-1
	MINERAL CHROM BLACK F-2
	RESIDE BLACK GRIP (12x24) F-3
	PIETRA ITALIA GREY GRIP (12x12) F-4
	SINGLE ABRASIVE QUARRY TILE (6x6) F-5
	CARPET FLOORING F-6
	ROLL MAT OVER EXPOSED CONCRETE F-7
	SEALED CONCRETE F-8
	DOUBLE ABRASIVE QUARRY TILE (6x6) F-9

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6201 CAMPUS CIRCLE DRIVE E
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TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT

REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023
Restaurant #:	21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

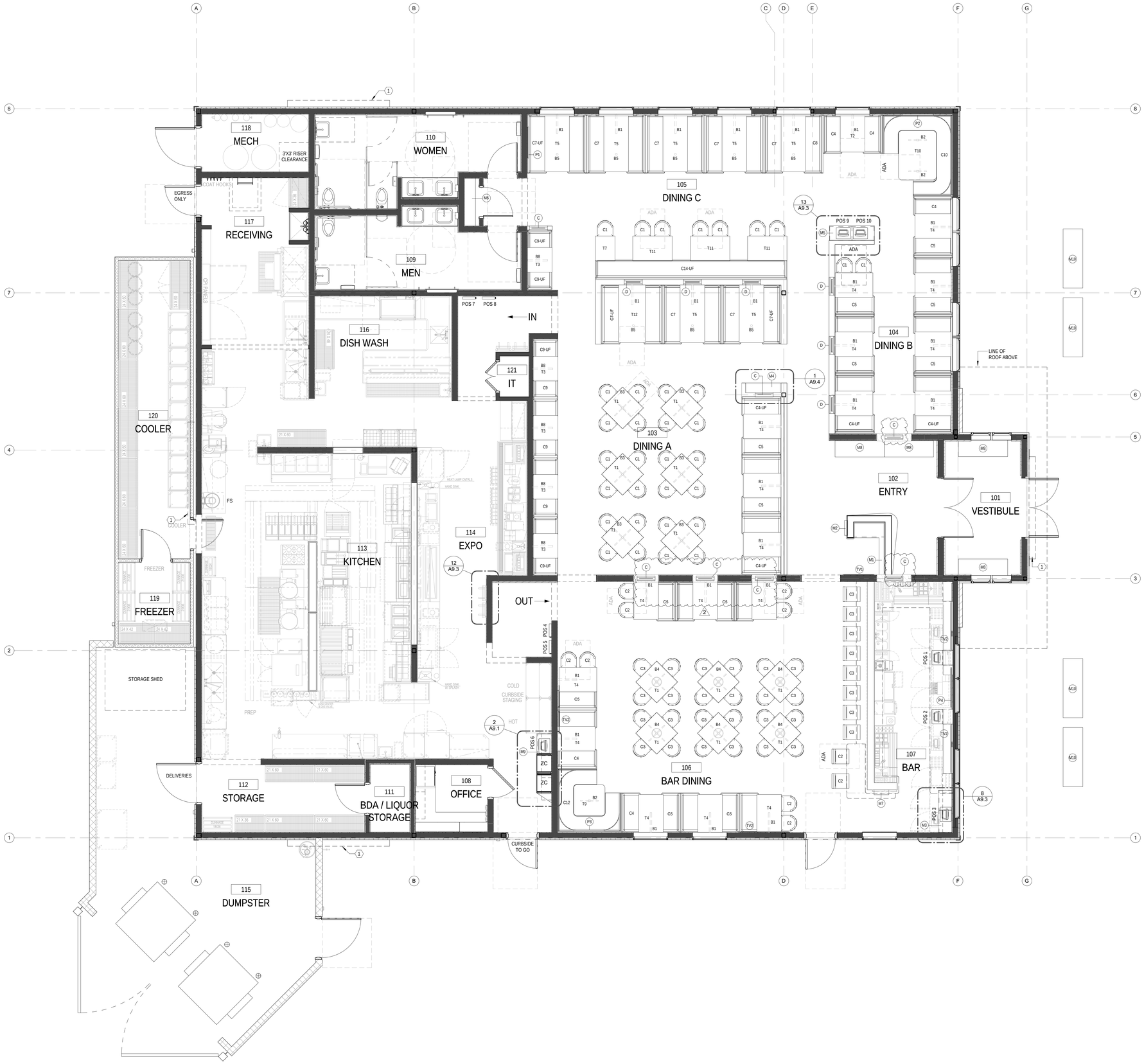
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
FLOOR FINISH AND CURB PLAN

A1.3



FURNISHING PLAN
1/4" = 1'-0"
1

BUILDING DATA

GROSS BUILDING AREA		5,827 SQ.FT.
COOLER / FREEZER		315 SQ.FT.
DUMPSTER ENCLOSURE		590 SQ.FT.
TOTAL		6,732 SQ.FT.

SEATING COUNT

TYPE	COUNT	TOTAL
2 TOP BOOTH x	5	10
4 TOP BOOTH x	19	76
6 TOP BOOTH x	8	48
6 TOP ROUND x	1	6
BARSTOOL CHAIRS x		10
8 TOP ROUND x	1	8
4 TOP TABLE x	12	48
4 TOP BANQUETTE x	3	12
2 TOP BANQUETTE x	1	2
TOTAL DINING:	50	220

GENERAL NOTES - FURNISHING

A	ALL DIMENSIONS ARE SHOWN TO FACE OF STUD WALL UNLESS NOTED OTHERWISE.
B	REFER TO FINISH SCHEDULE AND DETAILS FOR APPLIED FINISHES.
C	WALLS TO STRUCTURAL DECK MUST BE THOROUGHLY SEALED AROUND PENETRATIONS.
D	REFER TO MILLWORK DRAWINGS FOR LOCATION AND INFORMATION.
E	UNLOAD AND INSTALL TABLES AND CHAIRS
F	PROVIDE A DOOR STOP 18" AWAY FROM DOOR TO PROVIDE A 110° SWING. DOOR STOP TO MATCH ALL OTHER DOORS

FURNISHING NOTES

1	EXTERIOR SIGNAGE BY OWNER, G.C. TO COORDINATE FINAL LOCATIONS AND MOUNTING REQUIREMENTS WITH SIGNAGE VENDOR, RE: EXTERIOR ELEVATIONS FOR HEIGHTS

FURNITURE SCHEDULE

TAG	SIZE	DESCRIPTION
TABLE TOP		
T1	36X36	DINING TABLE
T2	33X50	DINING TABLE
T3	30X32	BOOTH TABLE
T4	30X50	BOOTH TABLE
T5	30X74	BOOTH TABLE
T7	24X30	DINING TABLE
T9	36X38	BOOTH TABLE
T10	46X60	DINING TABLE
T11	48X30	DINING TABLE
T12	33X74	BOOTH TABLE
SEATING		
B	LOOSE SEATING	BOOSTER SEAT
C1	LOOSE SEATING	DINING CHAIR
C2	LOOSE SEATING	BAR CHAIRS
C3	LOOSE SEATING	BAR STOOL
C4	48" LENGTH	SINGLE BOOTH-FINISHED BACK
C4-UF	48" LENGTH	SINGLE BOOTH-UNFINISHED BACK
C5	48" LENGTH	DOUBLE BOOTH
C7	72" LENGTH	DOUBLE BOOTH
C7-UF	72" LENGTH	SINGLE BOOTH-UNFINISHED BACK
C8	72" LENGTH	SINGLE BOOTH-FINISHED BACK
C9	30" LENGTH	DOUBLE BOOTH
C9-UF	30" LENGTH	SINGLE BOOTH-UNFINISHED BACK
C10	48"x96"x80"x54"	BOOTH
C11	48"x96"x72"x48"	BOOTH
C12	45"x72"x72"x45"	BOOTH
C14-UF	VARIOUS LENGTHS	CUSTOM BANQUETTE BOOTH - UNFINISHED BACK
H	LOOSE SEATING	HIGH CHAIR
BASES		
B1	36" LENGTH	CANTILEVERED BASE, RE: 4/A9.4
B2	BASE TABLE	COMMUNITY
B3	LO-TOP SPIDER	-- --
B4	HI-TOP SPIDER	-- --
B5	FIXED LEG	-- --
B6	48" LENGTH	RE: 4/A9.4
B7	TABLE SUPPORT	(2 PER TABLE)
B8	24" LENGTH	CANTILEVERED BASE, RE: 4/A9.4

MILLWORK SCHEDULE

M1	HOST STATION, RE: 1/A9.3
M2	HOST MENU HOLDER, RE: 7/A9.3
M3	POS STATION 3, RE: 8/A9.3
M4	STORAGE, RE: 1/A9.4
M5	POS STATION 9/10, RE: 12/A9.3
M6	SHELVING, RE: 11/A9.2
M7	BAR TRAY HOLDER, RE: 7/A7.9
M8	LOBBY BENCHES, BY OWNER
M9	POS STATION 6, RE: 13/A9.3
M10	EXTERIOR WOOD BENCHES, BY OWNER

MOOD MEDIA SCHEDULE

TV1	42" TELEVISION
TV2	65" TELEVISION

LDF SILK PLANTERS SCHEDULE

C	ITEM: CHEDO3; PLANTER SIZE: 8"H X 22"W X 6"D
D	ITEM: CHEO04; PLANTER SIZE: 8"H X 22"W X 6"D
E	ITEM: CHEO05; PLANTER SIZE: 14"H X 30"W X 12"D
F	ITEM: CHEO06; PLANTER SIZE: 14"H X 30"W X 12"D

PLANT POT NOTES

1	ALL POTS WILL BE PROVIDED BY OWNER AND INSTALLED BY GENERAL CONTRACTOR
2	POTS ARE TO BE PERMANENTLY SECURED WITH EPOXY CONSTRUCTION ADHESIVE, CENTERPIECES ON TABLES ARE NOT TO BE GLUED DOWN
4	ALL STICKERS AND TAGS ARE TO BE REMOVED FROM POTS AND PLANTS
5	EXTERIOR FILTER FABRIC IN DRAIN HOLE SECURE TO CONCRETE AND FILL WITH PLAY SAND FOR EXTERIOR POTS 508 (2 TOTAL)

PUBLIC IMAGERY SCHEDULE

P1	32x42 FRAMED US FLAG
P2	32x42 FRAMED STATE FLAG
P3	40x52 FRAMED POSTER
P4	48x42 MIRROR

EQUIPMENT SCHEDULE

FS	FLOOR SCRUBBER
ZC	ZIOSK CART

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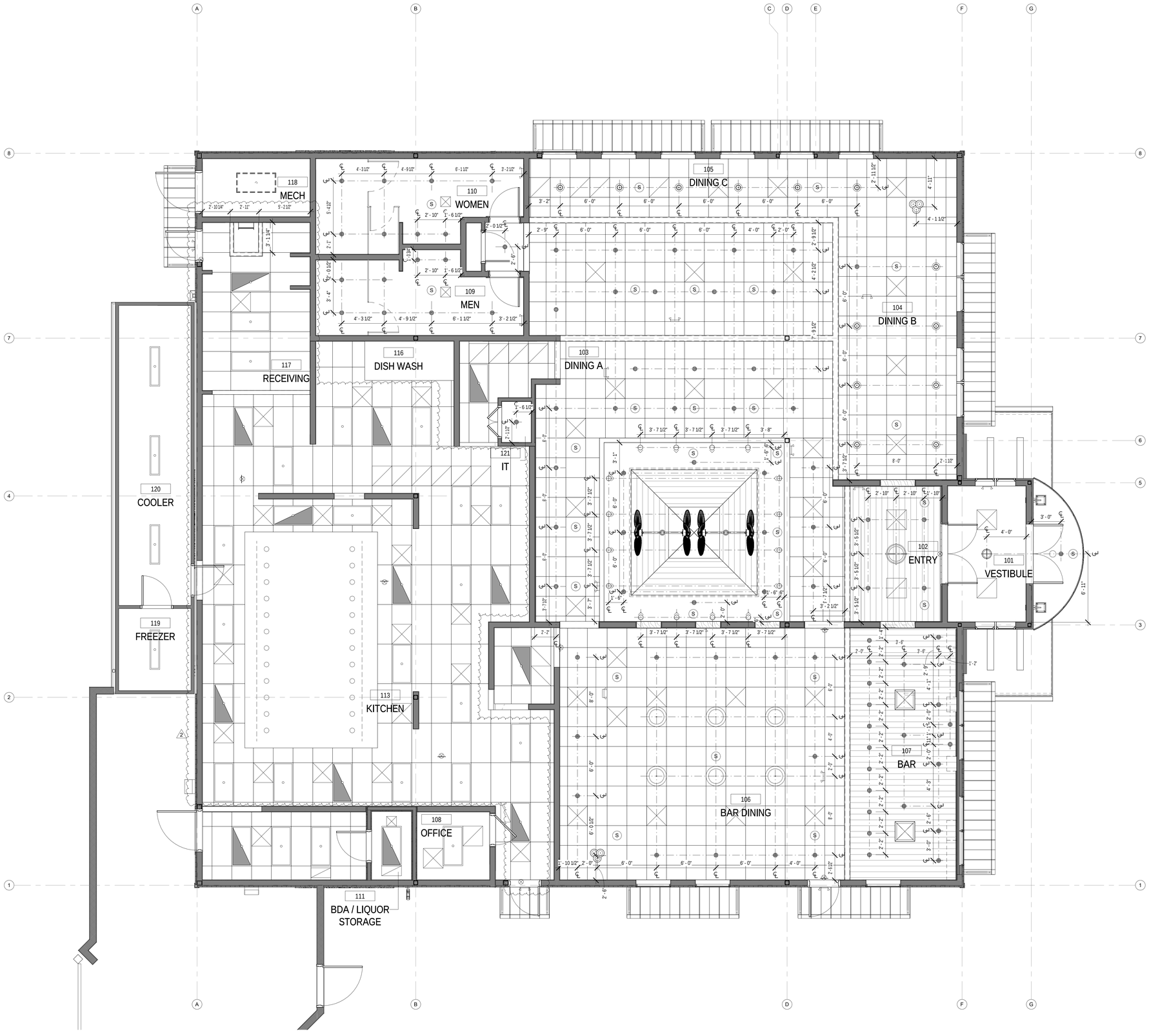
RIVERVIEW, FL

Drawing:

FURNISHING PLAN

A1.4



DIMENSIONED CEILING PLAN
1/4" = 1'-0"
1

LIGHT FIXTURE LEGEND

	2x4 LED FIXTURE
	2x4 LED EMERGENCY FIXTURE
	1x4 FLUORESCENT FIXTURE
	RECESSED CAN LIGHTS
	ADJUSTABLE LIGHTS
	WALL MOUNTED LIGHTS
	PENDANT LIGHTS
	PENDANT LIGHTS
	PENDANT LIGHTS
	PENDANT LIGHTS
	EXIT SIGN
	EMERGENCY LIGHT
	EMERGENCY LIGHT
	EMERGENCY LIGHT
	SUPPLY DIFFUSER
	RETURN GRILL
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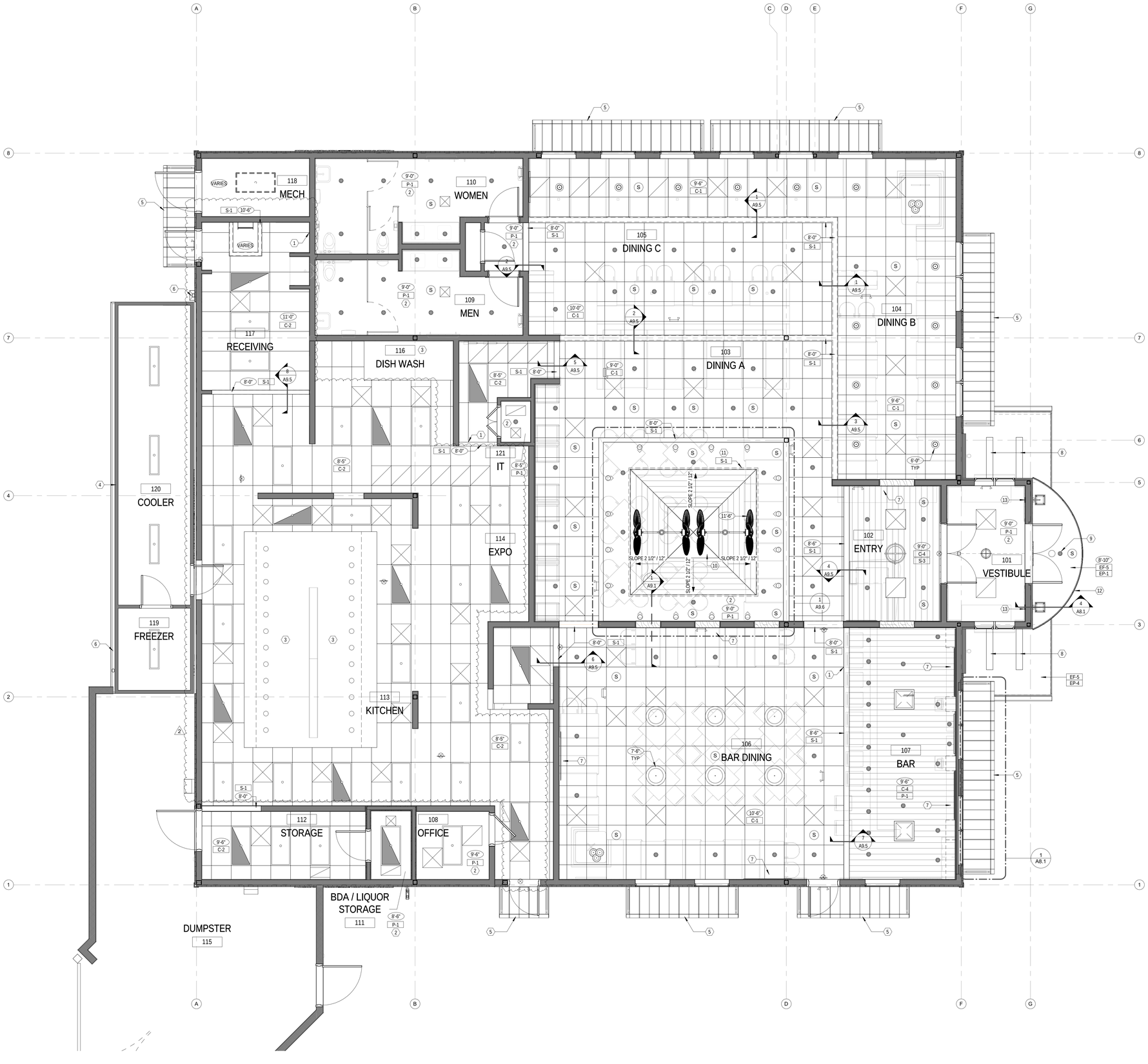
Drawing:

DIMENSIONED CEILING PLAN

A2.1



NOTED CEILING PLAN
1/4" = 1'-0"
1

GENERAL NOTES - CEILING PLAN

A	ALL DIMENSIONS ARE SHOWN TO FACE OF STUD WALL UNLESS NOTED OTHERWISE.
B	REFER TO FINISH SCHEDULE AND DETAILS FOR APPLIED FINISHES.
C	ALL EXTERIOR SURFACE MOUNTED EMERGENCY FIXTURES TO BE PAINTED TO MATCH ADJACENT WALL FINISHES.
D	RECESSED SPRINKLER HEADS IN DINING TO BE FLAT BLACK CONCEALED HEADS
E	REFER TO ELECTRICAL DRAWINGS FOR ALL ELECTRICAL FIXTURES.

KEYNOTES - CEILING PLAN

1	START CEILING GRID AT THIS LOCATION
2	PAINTED GYPSUM BOARD CEILING TO RECEIVE LEVEL 5 FINISH
3	EXHAUST HOOD. RE: MECHANICAL
4	COOLER AND FREEZER WALLS SHOWN DASHED BY OTHERS
5	EXTERIOR AWNING. RE: 2/A8.1
6	PREFINISHED GUTTER AND DOWNSPOUT
7	TELEVISION MOUNTED TO WALL. RE:14/A9.4
8	ANGLED WOOD BEAM. RE: STRUCTURAL
9	RECESSED DOWNLIGHT TO BE INSTALLED ON SOFFIT ABOVE CANOPY
10	ATRIUM SKYLIGHT
11	1X4 WOOD TRIM
12	EXTERIOR CANOPY
13	6"X6" ACCESS PANEL, RE: 4 / A8.1

FINISH SCHEDULE - INTERIOR

INTERIOR PAINT	
P-1	TAVERN TAUPE
P-2	IBIS WHITE
P-3	BLACK OF NIGHT
P-4	HALF CAFF
STAIN	
S-1	EBONY
S-2	CLEAR SEALER
S-3	FLAGSTONE
S-4	BRICK SEALER
WALL COVERING	
WC-1	VINYL FABRIC
WC-2	FRP-WHITE
WC-3	FRP-BLACK
WC-4	WOOD LAMINATE
WC-5	PLASTIC LAMINATE-WHITE
WC-6	PLASTIC LAMINATE-BLACK
WC-7	STONE
WC-8	PORCELAIN TILE-CREME
WC-9	PORCELAIN TILE-TORTORA
WC-10	PORCELAIN TILE-TIGERS EYE
WC-11	QUARRY TILE
WC-12	WOOD PLANKS
WC-13	STAINLESS STEEL PANEL
WC-14	THIN BRICK
WC-15	WOOD PANEL
GRANITE	
G-1	GRANITE-JUPARANA ST. CECILIA
G-2	GRANITE-BLACK
G-3	CORIAN-SAHARA
BASE	
B-1	PORCELAIN TILE-MINERAL CHROME
B-2	QUARRY TILE
B-3	PORCELAIN TILE-RESIDE
CEILING	
C-1	ACOUSTICAL CEILING-BLACK
C-2	ACOUSTICAL CEILING-WHITE
C-3	NOT USED
C-4	V-GROOVE PLANK

FINISH SCHEDULE - EXTERIOR

EXTERIOR PAINT	
EP-1	ANTIQUE WHITE
EP-2	MISSISSIPPI BRONZE ENAMEL
EP-3	IBIS WHITE
EP-4	CHARWOOD
STONE	
ST-1	STONE
EXTERIOR FINISH	
EF-1	MODULAR BRICK
EF-2	SPLIT-FACE CMU BLOCK - 8" THICK
EF-3	NOT USED
EF-4	HARDIE PLANK HORIZONTAL LAP SIDING - NAVAJO BEIGE
EF-5	PLYWOOD-ROUGH SAWN CEDAR
EF-6	HARDIE PLANK HORIZONTAL LAP SIDING - KHAKI BROWN
EF-7	STONE SILL
EF-8	4" HARDIE TRIM - ARCTIC WHITE
EF-9	6" HARDIE TRIM - ARCTIC WHITE
ROOFING	
R-1	SINGLE PLY ROOF
R-2	ARCHITECTURAL COMPOSITION SHINGLES
R-3	STANDING SEAM COPPER

LIGHT FIXTURE LEGEND

	2x4 LED FIXTURE
	2x4 LED EMERGENCY FIXTURE
	1x4 FLUORESCENT FIXTURE
	RECESSED CAN LIGHTS
	ADJUSTABLE LIGHTS
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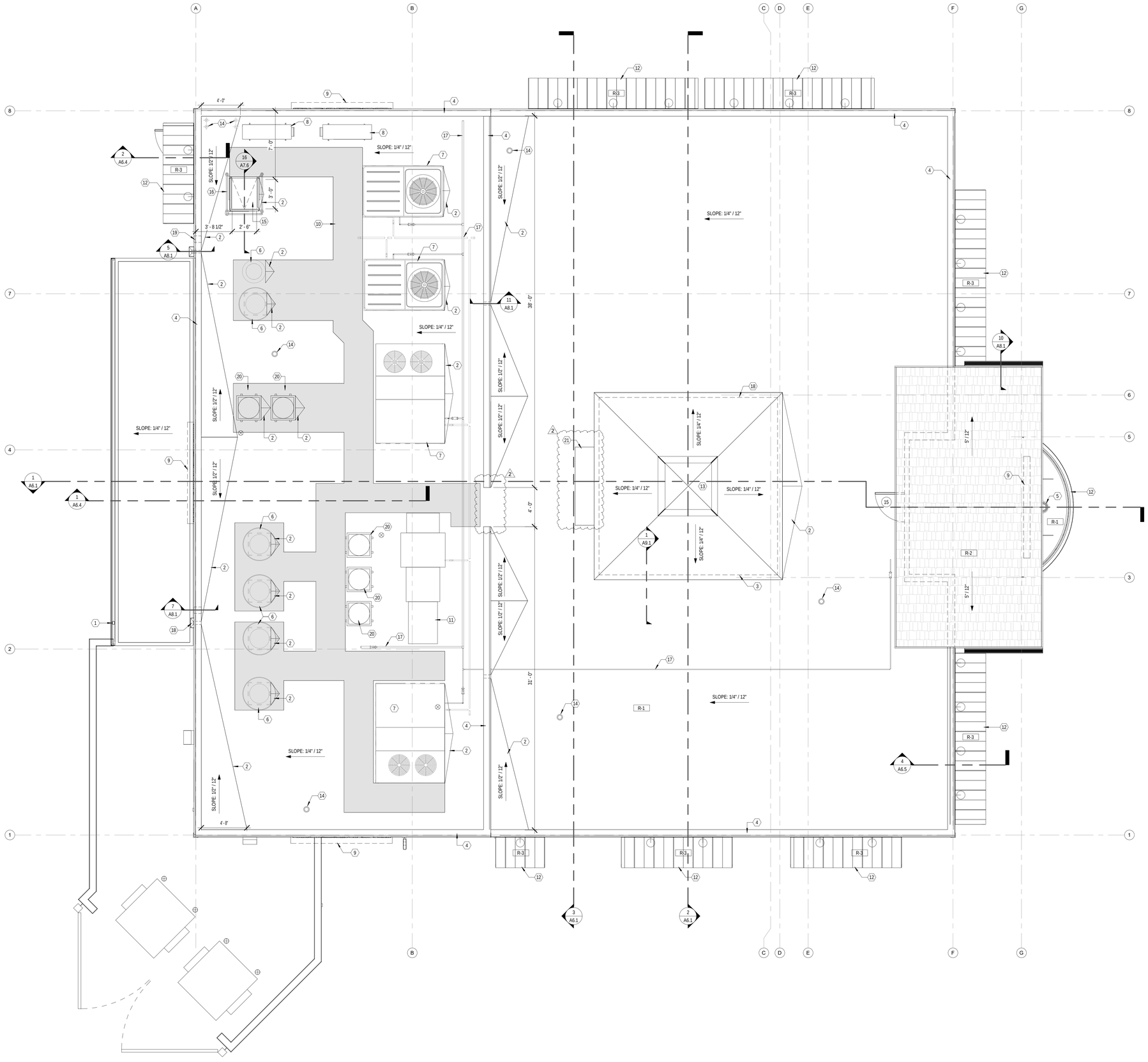
Drawing:
NOTED CEILING PLAN

A2.2



ROOF PLAN
1/4" = 1'-0"
1

GENERAL NOTES - ROOF PLAN

A	ALL DIMENSIONS ARE SHOWN TO FACE OF STUD WALL UNLESS NOTED OTHERWISE.
B	REFER TO FINISH SCHEDULE AND DETAILS FOR APPLIED FINISHES.
C	WALLS TO STRUCTURAL DECK MUST BE THOROUGHLY SEALED AROUND PENETRATIONS. WALLS TO STRUCTURAL DECK MUST BE THOROUGHLY SEALED AROUND PENETRATIONS.

KEYNOTES - ROOF PLAN

#	
1	PRE-FINISHED GUTTER AND DOWNSPOUT, RE: 5 AND 6/A8.2
2	CRICKET, MIN 1/2" SLOPE, TYPICAL
3	LINE OF WALL BELOW
4	PREFINISHED METAL SNAP CAP FLASHING TO MATCH EP-2
5	SLOPE TO DRAIN WITH TAPERED INSULATION
6	EXHAUST FAN, RE: MECHANICAL
7	FACTORY/ CURB MOUNTED AIR CONDITIONING UNITS ON 14" CURB, RE: MECHANICAL AND 1/A8.2
8	ROOF MOUNTED REFRIGERATION RACK, RE: FOOD SERVICE
9	SIGNAGE BELOW, RE: EXTERIOR ELEVATIONS
10	ROOF WALKWAY PAD, G.C. TO COORDINATE LOCATION WITH UNITS, RE: SPECIFICATIONS
11	MAKE UP AIR UNIT, RE: MECHANICAL
12	COPPER STANDING SEAM AWNING
13	SKYLIGHT
14	VENT THROUGH ROOF, RE: PLUMBING AND 7/A8.2
15	ROOF ACCESS HATCH, RE: 16/A7.6
16	ROOF ACCESS HATCH SAFETY RAIL, RE: 13/A7.6
17	GAS / DRAIN PIPING, RE: MEP
18	THROUGH WALL SCUPPER, COLLECTOR BOX AND 5" DOWNSPOUT, RE: 5 / A8.1
19	THROUGH WALL OVERFLOW SCUPPER, RE: 7 / A8.1
20	PREFABRICATED ALUMINUM STANDS BY ENGINEERING EXPRESS
21	PROVIDE KICKER FOR SPRINKLER TO BE RUN IN ATRIUM

FINISH SCHEDULE - EXTERIOR

EXTERIOR PAINT	
EP-1	ANTIQUE WHITE
EP-2	MISSISSIPPI BRONZE ENAMEL
EP-3	IBIS WHITE
EP-4	CHARWOOD
STONE	
ST-1	STONE
EXTERIOR FINISH	
EF-1	MODULAR BRICK
EF-2	SPLIT-FACE CMU BLOCK - 8" THICK
EF-3	NOT USED
EF-4	HARDIE PLANK HORIZONTAL LAP SIDING - NAVAJO BEIGE
EF-5	PLYWOOD-ROUGH SAWN CEDAR
EF-6	HARDIE PLANK HORIZONTAL LAP SIDING - KHAKI BROWN
EF-7	STONE SILL
EF-8	4" HARDIE TRIM - ARCTIC WHITE
EF-9	6" HARDIE TRIM - ARCTIC WHITE
ROOFING	
R-1	SINGLE PLY ROOF
R-2	ARCHITECTURAL COMPOSITION SHINGLES
R-3	STANDING SEAM COPPER

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RIVERVIEW, FL

Drawing:
ROOF PLAN

A3.1

SCHEDULE LEGEND

TAG	ITEM	MANUFACTURER/ SUPPLIER	MATERIAL SPECIFICATION	APPLICATION	LOCATION	REMARKS	PURCHASED BY:	INSTALLED BY:
INTERIOR PAINT								
P-1	TAVERN TAUPE	SHERWIN WILLIAMS	SHERWIN WILLIAMS COLOR: TAVERN TAUPE #SW7508 (EGGSHELL)	TOP COAT(S): TWO COATS MINIMUM, ENSURE FULL COVERAGE	ALL EXPOSED GYPSUM BOARD WALLS, ALL CEILINGS EXCEPT OFFICE	RE: INTERIOR ELEVATIONS AND RCP	GENERAL CONTRACTOR	GENERAL CONTRACTOR
P-2	IBIS WHITE	SHERWIN WILLIAMS	SHERWIN WILLIAMS COLOR: IBIS WHITE #SW7000 (SEMI-GLOSS)	TOP COAT(S): TWO COATS MINIMUM, ENSURE FULL COVERAGE	MECHANICAL ROOM, STORAGE CLOSET, OFFICE CEILING	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
P-3	BLACK OF NIGHT	SHERWIN WILLIAMS	SHERWIN WILLIAMS COLOR: BLACK OF NIGHT #SW6993 (FLAT)	TOP COAT(S): TWO COATS MINIMUM, ENSURE FULL COVERAGE	LIQUOR STORAGE CLOSET, UNDERSIDE OF GRANITE	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
P-4	HALF CAFF	SHERWIN WILLIAMS	SHERWIN WILLIAMS COLOR: HALF CAFF #SW9091 (EGGSHELL)	TOP COAT(S): TWO COATS MINIMUM, ENSURE FULL COVERAGE	BAR SOFFIT	RE: RCP	GENERAL CONTRACTOR	GENERAL CONTRACTOR
STAIN								
S-1	EBONY	SHERWIN WILLIAMS	SHERWIN WILLIAMS INTERIOR STAIN: SHERWOOD #S64B00054, COLOR: EBONY, PROVIDE SAMPLE OF FINISH WOOD STAIN FOR CM TO APPROVE	SEE STAIN NOTES THIS SHEET	INTERIOR WOOD	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
S-2	CLEAR SEALER	SHERWIN WILLIAMS	SHERWIN WILLIAMS COLOR: SHERWOOD #SWT67F6, FAST DRY VINYL SEALER, CLEAR	APPLY ONE (1) COAT AT A RATE OF 4.0-5.0 MILS WET TO ALL BACK SIDES OF SURFACES AND ENDS TWO TOP COATS: BOTH COATS TO BE APPLIED AT A RATE OF 4.0-6.0 MILS WET, MUST BE SPRAY APPLIED	INTERIOR WOOD	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
S-3	FLAGSTONE	SHERWIN WILLIAMS	SHERWIN WILLIAMS DARKSCAPES, COLOR: FLAGSTONE #SW3023,	TO BE APPLIES PRIOR TO INSTALLATION OF WOOD BEAM, HUNG, SPRAY AND WIPE WITH CLOTH	WOOD IN ATRIUM	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
S-4	BRICK SEALER	MASONRY DEFENDER	INTERIOR/EXTERIOR BRICK SEALER	APPLY TWO (2) COATS PER MANUFACTURER	BACK BAR ONLY	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
WALL COVERING								
WC-1	VINYL FABRIC	WALFAB FINA DONOFF PHONE: 800.329.0188 EMAIL: FINA@WALFAB.NET	MDC; LINE: ESQUIRE COLLECTION; COLOR: FRANCIS TOFFEE, PATTERN: MLF4115/4651, WALFAB PRODUCT CODE: 00206516, MLF-4115 FRANCIS TOFFEE	PER MANUFACTURER'S SPECIFICATIONS, ENSURE PATTERN IS RUN VERTICALLY AND ROLL INSTALLED 'RAILROADED', ALL OUTSIDE CORNERS TO BE WRAPPED, INSIDE CORNERS TO NOT HAVE A WRAP, PROVIDE SEAMS AT THESE LOCATIONS. START INSTALL OF WALL COVERING AT TOP OF CHAIR RAIL	DINING WALLS	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
WC-2	FRP-WHITE	KEMLITE OR APPROVED EQUAL	"GLASBOD-P" EMBOSSED FIBERGLAS PANEL, COLOR: WHITE	PER MANUFACTURER'S SPECIFICATIONS	KITCHEN AND OFFICE WALLS	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
WC-3	FRP-BLACK	KEMLITE OR EQUAL	"GLASBOD-P" EMBOSSED FIBERGLAS PANEL, COLOR: BLACK	PER MANUFACTURER'S SPECIFICATIONS	BAR	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
WC-4	WOOD LAMINATE	WILSONART	WILSONART PREMIUM LAMINATE, COLOR: #7945K-18 XANADU	PER MANUFACTURER'S SPECIFICATIONS, PATTERN RUN VERTICALLY	BAR FACE	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
WC-5	PLASTIC LAMINATE-WHITE	FORMICA	FORMICA PLASTIC LAMINATE, COLOR: WHITE #949-58 MATTE FINISH	PER MANUFACTURER'S SPECIFICATIONS	OFFICE MILLWORK	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
WC-6	PLASTIC LAMINATE-BLACK	FORMICA	FORMICA PLASTIC LAMINATE, COLOR: BLACK #909-58 MATTE FINISH	PER MANUFACTURER'S SPECIFICATIONS	BAR GLASS STORAGE	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
WC-7	STONE	TRINITY SURFACES DALE WILLIAMS/BRAD WEATHERLY EMAIL: STRATEGICACCOUNTS@TRINITYSURFACES.COM	MANUFACTURER: TRINITY SURFACES, SERIES: NATURAL STONE, COLOR: CREME IMPERIAL BEIGE, FINISH: SPLIT FACE, SIZE 1"X2" MOUNTED ON 12"X12" SHEET, PROVIDE MOCK UP FOR OWNER CONSTRUCTION MANAGER TO APPROVE	INSTALL TIGHT WITH NO GROUT	DINING AREAS	RE: INTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
WC-8	PORCELAIN TILE-CREME	ARIZONA TILE BETTY ANN YARBOROUGH PHONE: 972.456.0935	ARIZONA TILE, PORCELAIN TILE, PRODUCT: SHIBUSA, COLOR: CREMA, 12"X24", 3/16" GROUT LINES	MORTAR: LATICRETE LHT PLUS GREY, GROUT: LATICRETE PERMACOLOR SELECT #61 PARCHMENT	WOMEN'S RESTROOM/FAMILY RESTROOM	RE: INTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
WC-9	PORCELAIN TILE-TORTORA	ARIZONA TILE BETTY ANN YARBOROUGH PHONE: 972.456.0935	ARIZONA TILE, PORCELAIN TILE, PRODUCT: SHIBUSA, COLOR: TORTORA, 12"X24", 3/16" GROUT LINES	MORTAR: LATICRETE LHT PLUS GREY, GROUT: LATICRETE PERMACOLOR SELECT #61 PARCHMENT	MEN'S RESTROOM	RE: INTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
WC-10	PORCELAIN TILE-TIGERS EYE	ARIZONA TILE BETTY ANN YARBOROUGH PHONE: 972.456.0935	ARIZONA TILE, PORCELAIN TILE, PRODUCT: SHIMMER GLASS, COLOR: TIGERS EYE, 9/16"X9/16"	MORTAR: LATICRETE LHT PLUS GREY, GROUT: LATICRETE PERMACOLOR SELECT #2618 SAUTERN	BACK BAR COLUMNS	RE: INTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
WC-11	NOT USED							
WC-12	QUARRY TILE	ARIZONA TILE BETTY ANN YARBOROUGH PHONE: 972.456.0935	6"X6"X1/2" NON-ABRASIVE QUARRY TILE SERIES, COLOR: MAYFLOWER RED #31	MORTAR: LATICRETE 254 PLATINUM GREY, GROUT: LATICRETE SPECTRALOCK 2000 IG #22 MIDNIGHT BLACK	MOP SINK WALL	RE: INTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
WC-13	WOOD PLANKS	MOHAWK	MOHAWK, PRODUCT: COASTAL COUTURE, COLOR: SEASPRAY OAK	PER MANUFACTURER'S SPECIFICATIONS	WOOD LOOK WALLS	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
WC-14	STAINLESS STEEL PANEL	BY KITCHEN	BY KITCHEN	PER MANUFACTURER'S SPECIFICATIONS	KITCHEN WALLS	RE: INTERIOR ELEVATIONS	KITCHEN PROVIDER	KITCHEN PROVIDER
WC-15	THIN BRICK	TRINITY SURFACES DALE WILLIAMS/BRAD WEATHERLY EMAIL: STRATEGICACCOUNTS@TRINITYSURFACES.COM	MANUFACTURER: GENERAL SHALE, THIN BRICK: 1/2" X 2 1/4" X 7 5/8", COLOR: CHEDDARS BLEND, PROVIDE EXTERIOR CORNERS FROM MANUFACTURER, PROVIDE MOCKUP FOR OWNER CONSTRUCTION MANAGER TO APPROVE	MORTAR: AMERIMIX AMX475, POINTING MORTAR: AMX405, COLOR: ALABASTER, G.C. TO PROVIDE LIGHT MORTAR WASH WITH ANTIQUATED LOOK AND FULL MORTAR JOINT. CONTACT OWNER FOR CONTROL SAMPLE AND PHOTOS OF APPROVED LOOK.	DINING WALLS, ENTRY, BACK BAR	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
WC-16	WOOD PANEL	BY G.C.	1/4" OAK PANEL, GRAIN TO BE RUN VERTICALLY ON WAINSCOT, HORIZONTALLY ON HEADERS AND ABOVE WINDOWS	PER MANUFACTURER'S SPECIFICATIONS	DINING WALLS	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
GRANITE								
G-1	GRANITE-JUPARANA ST. CECILIA	ARIZONA TILE BETTY ANN YARBOROUGH PHONE: 972.456.0935	ARIZONA TILE, 3CM GRANITE SLAB, PRODUCT: JUPARANA ST. CECILIA, LEATHERED FINISH	PER MANUFACTURER'S SPECIFICATIONS	BAR TOP	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
G-2	GRANITE-BLACK	ARIZONA TILE BETTY ANN YARBOROUGH PHONE: 972.456.0935	INDIAN PREMIUM 2CM BLACK GRANITE	PER MANUFACTURER'S SPECIFICATIONS	ALL LOCATIONS IN DINING OTHER THAN BAR	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
G-3	SOLID SURFACE	CORIAN	COLOR: SAHARA	PER MANUFACTURER'S SPECIFICATIONS	RESTROOM COUNTERS	RE: INTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
CEILING FINISHES								
C-1	ACOUSTICAL CEILING-BLACK	USG CORPORATION	24"X24"X3/4" ACOUSTICAL CEILING TILE, USG, MODEL: FROST, CLIMAPLUS #FL-418, COLOR: FLAT BLACK #205, GRID TO BE BLACK	PER MANUFACTURER'S SPECIFICATIONS	DINING ROOM	RE: RCP FOR EXACT LOCATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
C-2	ACOUSTICAL CEILING-WHITE	USG CORPORATION	24"X48"X1/2" ACOUSTICAL CEILING TILE, MODEL: USG #3270 CLIMAPLUS, COLOR: WHITE, GRID TO MATCH TILE COLOR	PER MANUFACTURER'S SPECIFICATIONS	KITCHEN	RE: RCP FOR EXACT LOCATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
C-3	NOT USED							
C-4	V-GROOVE PLANK	BY G.C.	1"X6" V-GROOVE PLANKS	PER MANUFACTURER'S SPECIFICATIONS	DINING ROOM	RE: RCP FOR EXACT LOCATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
FLOOR FINISHES								
F-1	PORCELAIN TILE-MINERAL CHROME	ARIZONA TILE BETTY ANN YARBOROUGH PHONE: 972.456.0935	ARIZONA TILE, PORCELAIN TILE, PRODUCT: MINERAL CHROM, COLOR: MINERAL BLACK, 12"X24", 3/16" GROUT LINES, PROVIDE STAGGERED JOINT, OFFSET SHALL NOT EXCEED 33%	MORTAR: LATICRETE LHT PLUS GREY, GROUT: LATICRETE PERMACOLOR SELECT #2645 RAVEN	ENTRY, RESTROOM VESTIBULE AND ENTRY TO KITCHEN	RE: FLOOR FINISH PLAN	BY OWNER	GENERAL CONTRACTOR
F-2	PORCELAIN TILE-MINERAL CHROME	ARIZONA TILE BETTY ANN YARBOROUGH PHONE: 972.456.0935	ARIZONA TILE, PORCELAIN TILE, PRODUCT: MINERAL CHROM, COLOR: MINERAL BLACK, 12"X24", CUT TO 4" WIDE, 3/16" GROUT LINES	MORTAR: LATICRETE LHT PLUS GREY, GROUT: LATICRETE PERMACOLOR SELECT #2645 RAVEN	TILE TRANSITIONS	RE: FLOOR FINISH PLAN	BY OWNER	GENERAL CONTRACTOR
F-3	PORCELAIN TILE-RESIDE	ARIZONA TILE BETTY ANN YARBOROUGH PHONE: 972.456.0935	ARIZONA TILE, PORCELAIN TILE, PRODUCT: RESIDE, COLOR: BLACK, 12"X24", 3/16" GROUT LINES, PROVIDE STAGGERED JOINT, OFFSET SHALL NOT EXCEED 33%	MORTAR: LATICRETE LHT PLUS GREY, GROUT: LATICRETE PERMACOLOR SELECT #2645 RAVEN	DINING ROOMS	RE: FLOOR FINISH PLAN	BY OWNER	GENERAL CONTRACTOR
F-4	PORCELAIN TILE-PIETRA ITALIA	ARIZONA TILE BETTY ANN YARBOROUGH PHONE: 972.456.0935	ARIZONA TILE, PORCELAIN TILE, PRODUCT: PIETRA ITALIA, COLOR: GREY 12"X12", 3/16" GROUT LINES, PROVIDE STAGGERED JOINT, OFFSET SHALL NOT EXCEED 33%	MORTAR: LATICRETE LHT PLUS GREY, GROUT: LATICRETE PERMACOLOR SELECT #2645 RAVEN	RESTROOM	RE: FLOOR FINISH PLAN	BY OWNER	GENERAL CONTRACTOR
F-5	QUARRY TILE	ARIZONA TILE BETTY ANN YARBOROUGH PHONE: 972.456.0935	6"X6"X1/2" SINGLE ABRASIVE QUARRY TILE, COLOR: MAYFLOWER #31XA	MORTAR: LATICRETE 254 PLATINUM GREY, GROUT: LATICRETE SPECTRALOCK 2000 IG #22 MIDNIGHT BLACK	KITCHEN AND MOP SINK	RE: FLOOR FINISH PLAN	BY OWNER	GENERAL CONTRACTOR
F-6	CARPET	BY OWNER	ROLLED CARPET FLOORING	PER MANUFACTURER'S SPECIFICATIONS	DINING ROOMS AND ATRIUM	RE: FLOOR FINISH PLAN	BY OWNER	GENERAL CONTRACTOR
F-7	ENTRY ROLL MAT	BY OWNER	ROLL MAT	PER MANUFACTURER'S SPECIFICATIONS	VESTIBULE AND KITCHEN ALCOVES	RE: FLOOR FINISH PLAN	BY OWNER	GENERAL CONTRACTOR
F-8	SEALED CONCRETE	REFER TO SPECIFICATIONS	BY GENERAL CONTRACTOR	BY GENERAL CONTRACTOR	MECHANICAL ROOM AND DUMPSTER AREA	RE: FLOOR FINISH PLAN	GENERAL CONTRACTOR	GENERAL CONTRACTOR
F-9	QUARRY TILE	ARIZONA TILE BETTY ANN YARBOROUGH PHONE: 972.456.0935	6"X6"X1/2" DOUBLE ABRASIVE QUARRY TILE, COLOR: MAYFLOWER #31XA	MORTAR: LATICRETE 254 PLATINUM GREY, GROUT: LATICRETE SPECTRALOCK 2000 IG #22 MIDNIGHT BLACK	KITCHEN AND MOP SINK	RE: FLOOR FINISH PLAN	BY OWNER	GENERAL CONTRACTOR
BASE (COVE) FINISHES								
B-1	PORCELAIN TILE-MINERAL CHROME	ARIZONA TILE BETTY ANN YARBOROUGH PHONE: 972.456.0935	ARIZONA TILE, PORCELAIN TILE, PRODUCT: MINERAL CHROM, COLOR: MINERAL BLACK, 12"X24", CUT TO CREATE 6"X24" BASE	MORTAR: LATICRETE LHT PLUS GREY, GROUT: LATICRETE PERMACOLOR SELECT #2645 RAVEN	ENTRY, RESTROOM VESTIBULE, BAR AND ENTRY INTO THE KITCHEN	RE: FLOOR FINISH PLAN	BY OWNER	GENERAL CONTRACTOR
B-2	QUARRY TILE	ARIZONA TILE BETTY ANN YARBOROUGH PHONE: 972.456.0935	6"X6"X1/2" QUARRY TILE SERIES, COLOR: MAYFLOWER RED #31	MORTAR: LATICRETE 254 PLATINUM GREY, GROUT: LATICRETE SPECTRALOCK 2000 IG #22 MIDNIGHT BLACK	BAR, OFFICE, KITCHEN, COOLER, FREEZER	RE: INTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
B-3	PORCELAIN TILE-RESIDE	ARIZONA TILE BETTY ANN YARBOROUGH PHONE: 972.456.0935	ARIZONA TILE, PORCELAIN TILE, PRODUCT: RESIDE, COLOR: BLACK, 12"X24", CUT TO CREATE 6"X24" BASE	MORTAR: LATICRETE LHT PLUS GREY, GROUT: LATICRETE PERMACOLOR SELECT #2645 RAVEN	DINING ROOMS	RE: FLOOR FINISH PLAN	BY OWNER	GENERAL CONTRACTOR
SCHLUTER TRIMS								
SC-1	BASE COVE	SCHLUTER SYSTEMS BETTY ANN YARBOROUGH PHONE: 972.456.0935	DILEX AHK 1S 125 / AT SATIN NICKEL ANODIZED ALUMINUM	PER MANUFACTURER'S SPECIFICATIONS	COVE BASE IN RESTROOMS, KITCHEN ENTRY	RE: INTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
SC-2	CORNER EDGES AND TOP	SCHLUTER SYSTEMS BETTY ANN YARBOROUGH PHONE: 972.456.0935	RONDEC RO125 AT SATIN NICKEL ANODIZED ALUMINUM 1/2"	PER MANUFACTURER'S SPECIFICATIONS	CORNER EDGES IN RESTROOMS, WALL TILE EDGES VERTICAL AND HORIZONTAL	RE: INTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
SC-3	OUTSIDE COVE CORNER	SCHLUTER SYSTEMS BETTY ANN YARBOROUGH PHONE: 972.456.0935	DILEX E90/AHK1S 1/25 / AT SATIN NICKEL ANODIZED ALUMINUM 1/2"	PER MANUFACTURER'S SPECIFICATIONS	INSIDE COVE CORNER AT RESTROOM BASE	RE: INTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
SC-4	INSIDE COVE CORNER	SCHLUTER SYSTEMS BETTY ANN YARBOROUGH PHONE: 972.456.0935	DILEX I90/AHK1S 1/25 / AT SATIN NICKEL ANODIZED ALUMINUM 1/2"	PER MANUFACTURER'S SPECIFICATIONS	COVE INSIDE CORNERS IN RESTROOMS	RE: INTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
SC-5	OUTSIDE CORNERS IN BAR	SCHLUTER SYSTEMS BETTY ANN YARBOROUGH PHONE: 972.456.0935	RONDEC RO 125 EB BRUSHED STAINLESS STEEL 1/2"	PER MANUFACTURER'S SPECIFICATIONS	BAR STEP TILE EDGE	RE: INTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
SC-6	CORNER EDGES IN MAIN DINING	SCHLUTER SYSTEMS BETTY ANN YARBOROUGH PHONE: 972.456.0935	RONDEC RO 125 TSDA DARK ANTHRACITE, COLOR: COATED ALUMINUM 1/2"	PER MANUFACTURER'S SPECIFICATIONS	BASE CORNER EDGES MAIN DINING	RE: INTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
SC-7	CORNER EDGES IN BAR DINING	SCHLUTER SYSTEMS BETTY ANN YARBOROUGH PHONE: 972.456.0935	RONDEC RO 125 TSDA DARK ANTHRACITE, COLOR: COATED ALUMINUM 1/2"	PER MANUFACTURER'S SPECIFICATIONS	BAR AND RESTROOM VESTIBULE	RE: INTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
SC-8	CARRY OUT TILE CORNERS	SCHLUTER SYSTEMS BETTY ANN YARBOROUGH PHONE: 972.456.0935	RONDEC RO 125 ABGB BRUSHED ANTIQUE BRONZE ANODIZED ALUMINUM 1/2"	PER MANUFACTURER'S SPECIFICATIONS	OUTSIDE TILE CORNERS FOR WC-16 AND WC-18, WALL TILE TAKE-OUT AREA AND DINING WALLS	RE: INTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
SC-9	TILE EDGE AT WALK OFF MATS	SCHLUTER SYSTEMS BETTY ANN YARBOROUGH PHONE: 972.456.0935	SCHIENE A 125 AE STAIN ANODIZED ALUMINUM	PER MANUFACTURER'S SPECIFICATIONS	TILE EDGE AT WALK-OFF MATS	RE: FLOOR FINISH PLAN	BY OWNER	GENERAL CONTRACTOR
SC-10	TRANSITION STRIP AT CARPET/TILE	SCHLUTER SYSTEMS BETTY ANN YARBOROUGH PHONE: 972.456.0935	RENO AETK125, COLOR: ANODIZED ALUMINUM	PER MANUFACTURER'S SPECIFICATIONS	FRONT OF HOUSE DINING	RE: FLOOR FINISH PLAN	BY OWNER	GENERAL CONTRACTOR
SEALANT								
SE-1	CAULK	LATICRETE	SANDED CERAMIC TILE CAULK - #10 ANTIQUE WHITE	PER MANUFACTURER'S SPECIFICATIONS	STONE AND BRICK MORTAR REPLACEMENT	RE: SPECIFICATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
SE-2	TILE AND GROUT CAULK	LATICRETE	SILICONIZED ACRYLIC CAULK - SANDED - TO MATCH TILE. WALL TILE WC-6, WC-10, WC-11, & WC-18	PER MANUFACTURER'S SPECIFICATIONS	CERAMIC TILE	RE: SPECIFICATIONS	BY OWNER	GENERAL CONTRACTOR
SE-3	WINDOW AND DOOR SEALANT	PECORA	WINDOW AND DOOR INSTALLATION SEALANT - BROWN	PER MANUFACTURER'S SPECIFICATIONS	WINDOW AND DOOR TRIM	RE: SPECIFICATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
SE-4	EIFS SEALANT	SHERWIN WILLIAMS	POWER HOUSE - SANDED ACRYLIC LATEX SEALANT - ANTIQUE WHITE	PER MANUFACTURER'S SPECIFICATIONS	EXTERIOR EIFS JOINTS	RE: SPECIFICATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
SE-5	WINDOW AND DOOR SEALANT	PECORA	WINDOW AND DOOR INSTALLATION SEALANT - BLACK	PER MANUFACTURER'S SPECIFICATIONS	WOOD JOINTS	RE: SPECIFICATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR

GENERAL NOTES - FINISH SCHEDULE

1. ALL METAL EXPOSED TRIM AND ACCESSORIES IN THE VESTIBULE, WAITING, DINING, BAR, CORRIDOR AND RESTROOM AREAS TO BE BLACK.
2. ITEMS THAT ARE TO BE BLACK IN FRONT OF HOUSE:
   A. AIR CONDITIONING GRILLES AND REGISTERS
   B. SPEAKERS
   C. CAMERAS
   D. TELEVISIONS AND VISIBLE TRIM AND SUPPORTS
   E. LIGHT FIXTURES AND TRIM
   F. ELECTRICAL WALL OUTLETS AND SWITCHES
   G. ANY VISIBLE SWITCHES, CONTROLS OR ALARMS AND THEIR TRIM
3. ALL ADHESIVE USED FOR FINISHES MUST BE OF THE TYPE THAT DOES NOT HAVE FORMALDEHYDE AS PART OF ITS CHEMISTRY AND MUST BE SUITABLE FOR THE SPECIFIC PURPOSE INTENDED.
4. PRIOR TO APPLICATION OF NEW FINISHES, CLEAN EXISTING SURFACES THOROUGHLY SO NEW FINISHES WILL ADHERE PROPERLY.
5. ANY MISCELLANEOUS HARDWARE THAT IS FURNISHED BY OWNER IS TO BE RECEIVED, STORED, AND INSTALLED BY THE GENERAL CONTRACTOR.
6. GENERAL CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAINTING WALLS AND CEILINGS AFTER INSTALLATION OF DECOR.
7. REFER TO INTERIOR ELEVATIONS FOR FINISH LOCATIONS WHERE MULTIPLE FINISHES ARE SPECIFIED.
8. SEALANT (CAULK) SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS:
   A. METAL DOOR FRAMES
   B. EXT. WINDOW HEAD, JAMB AND SILLS
   C. CONDUIT AND PIPE PENETRATIONS AT WALL AND CEILINGS
   D. STAINLESS STEEL TO WALLS, UNWELDED SS TO SS CONNECTION
   E. BETWEEN GYPSUM PANELS AND CONC. FLOOR SLAB
   F. BETWEEN ALL DISSIMILAR MATERIALS
   G. BETWEEN ALL BASES AND FLOORS
9. ALL BLACK STEEL GAS PIPING SHALL BE PAINTED YELLOW.
10. ALL CABINET DOORS SHALL HAVE (2) FELT SILENCERS PER DOOR, TOP AND BOTTOM.
11. ALL TOPS AND BOTTOMS OF WOOD DOORS SHALL BE SEALED.
12. G.C. TO PROVIDE A 4'X4' MOCK UP OF BRICK AND STONE FOR CONSTRUCTION MANAGER APPROVED ON SITE
13. USE OIL BASE PAINT ON METAL SURFACES.
14. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING WORK AREAS AND MATERIALS FROM THEFT, VANDALISM, AND OTHER LOSSES.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING FROM PAINT ALL OTHER AREAS NOT TO RECEIVE PAINT.
16. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MISC. CLEANING OF WALLS, FIXTURES, AND LIGHTS. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PATCHING AND PAINTING TOUCH-UP, DEBRIS REMOVAL, AND ANY OTHER WORK REQUIRED TO LEAVE ALL WORK, INCLUDING WORK PERFORMED UNDER SEPARATE CONTRACTS, CLEAN AND READY FOR OCCUPANCY.
17. PAINT/STAIN CONTRACTOR MUST USE MANUFACTURER AND MODEL # OF PAINT/STAIN SPECIFIED. NO EXCEPTIONS.
18. REFER TO SPECIFICATIONS FOR APPROVED EQUAL MANUFACTURERS

EBONY STAIN NOTES

1. SURFACE PREPARATION.
   ALL FINISHING LUMBER AND FLOORING MUST BE STORED IN DRY, WARM ROOMS TO PREVENT ABSORPTION OF MOISTURE. SHRINKAGE AND ROUGHENING OF THE WOOD. ALL SURFACES MUST BE SANDED SMOOTH, WITH THE GRAIN, NEVER ACROSS IT. SURFACE BLEMISHES MUST BE CORRECTED AND THE AREA CLEANED OF DUST BEFORE COATING.
2. STAIN:
   SHERWIN WILLIAMS SHER-WOOD BAC WIPING STAIN EBONY (S64B00054)
   A. APPLY A FULL WET COAT OF STAIN USING NATURAL BRISTLE BRUSH, THEN WIPE CLEAN USING A LINT FREE CLOTH. ALLOW STAIN TO PENETRATE UP TO 10 MINUTES OR BEFORE STAIN FLASHES. FINISH BY REMOVING ALL EXCESS STAIN. IF WIPING BECOMES DIFFICULT DUE TO DRYNESS OF THE STAIN, REWET WITH A CLOTH DIPPED IN STAIN, THEN WIPE CLEAN AS DESCRIBED ABOVE. LET STAIN DRY AT LEAST 24 HOURS PRIOR TO MOVING ON.
   B. APPLY STAIN TO ALL EDGES, FACTORY CUT AND FIELD CUT ENDS OF WOOD PLANKS AND TRIM.
3. SECOND COAT:
   SHERWIN WILLIAMS FAST DRY VINYL SEALER CLEAR (T67F00006)
   A. PRODUCT MUST BE CATALYZED WITH V66V22. 1.5 OUNCES TO 1 GALLON WHICH EQUALS 7.5 OUNCES PER 5 GALLONS.
   B. SPRAY A FULL WET COAT. AIR DRY 30 MINUTES. SAND WITH 240 GRIT OR EQUIVALENT, REMOVE SANDING DUST.
4. THIRD COAT:
   SHERWIN WILLIAMS ACR CONV DRE (T77F00063)
   A. PRODUCT MUST BE CATALYZED WITH V66V26. 4 OUNCES PER GALLON WHICH EQUALS 20 OUNCES PER 5 GALLONS.
   B. SPRAY A FULL WET COAT OF ACRYLIC CONVERSION COATING AT 4.0-6.0 MILS WET. ALLOW TO DRY 1 HOUR BEFORE SCUFF SANDING AND REMOVING ANY EXCESS. REPEAT PROCESS. DO NOT EXCEED 4.0 MILS DFT FOR THE TOTAL SYSTEM.

PROVIDE PRODUCT SAMPLES OF FINISHED WOOD STAINED FOR CONSTRUCTION MANAGER TO APPROVE BEFORE PROCEEDING

MOCK UP'S REQUIRED FOR BRICK, STONE, AND EIFS INTERIOR AND EXTERIOR BEFORE PROCEEDING

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PROJECT NUMBER
DCH22007

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www.darden.com

STATE OF FLORIDA
RUSTY A. RIBBE
AR98116
LICENSED ARCHITECT

REV 02: 04.18.2023

Cheddars SCRATCH KITCHEN

Issue Date: 02.15.2023

REVISION INFORMATION
1 04.04.2023
CITY COMMENTS
2 04.05.2023
COORDINATION COMMENTS

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
INTERIOR FINISH SCHEDULES

A4.1

SCHEDULE LEGEND

TAG	ITEM	MANUFACTURER/ SUPPLIER	MATERIAL SPECIFICATION	APPLICATION	LOCATION	REMARKS	PURCHASED BY:	INSTALLED BY:
EXTERIOR PAINT/ STAINS								
EP-1	ANTIQUE WHITE	SHERWIN WILLIAMS	SHERWIN WILLIAMS COLOR: ANTIQUE WHITE #SW6119 (EGGSHELL)	PRIMER: EXTERIOR PRIMER (EXTERIOR SURFACES) TOP COAT(S): TWO COATS MINIMUM ENSURE FULL COVERAGE OF ALL PAINT				
EP-2	MISSISSIPPI BRONZE ENAMEL	SHERWIN WILLIAMS	SHERWIN WILLIAMS COLOR: MISSISSIPPI BRONZE ENAMEL #BRZ8 (EGGSHELL)	PRIMER: EXTERIOR PRIMER (EXTERIOR SURFACES) TOP COAT(S): TWO COATS MINIMUM ENSURE FULL COVERAGE OF ALL PAINT	METAL DOORS AND FRAMES, DUMPSTER GATES, POSTS AND BOLLARD AND ALL EXPOSED UTILITIES	RE: EXTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
EP-3	IBIS WHITE	SHERWIN WILLIAMS	SHERWIN WILLIAMS COLOR: IBIS WHITE #SW7000 (EPOXY SEMI-GLOSS)	PRIMER: EXTERIOR PRIMER (EXTERIOR SURFACES) TOP COAT(S): TWO COATS MINIMUM ENSURE FULL COVERAGE OF ALL PAINT	INTERIOR DUMPSTER WALLS / EXTERIOR WALL CAPS	RE: EXTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
EP-4	CHARWOOD	SHERWIN WILLIAMS	SHERWIN WILLIAMS COLOR: CHARWOOD #SW3542 WOOD STAIN	THREE APPLICATIONS: 1ST: SPRAY 1ST APPLICATION THEN WIPE OR ROLL 2ND COAT 2ND: SPRAY TO BLEND, NO WIPE	BOTTOM OF ALL AWNINGS AND MAIN BUILDING SOFFITS, ALL FASCIA BOARDS, AWNING FRAMES, DORMER SOFFITS AND ALL SHUTTERS	RE: EXTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
STONE								
ST-1	STONE	TRINITY SURFACES DALE WILLIAMS/BRAD WEATHERLY EMAIL: STRATEGICACCOUNTS@ TRINITYSURFACES.COM	MANUFACTURER: J&N STONE - PIONEER DIVISION, SERIES: ASHLAR, COLOR: CHEDDARS MIX, STONE SIZES RANDOM, THICKNESS 1 1/4" - 2 1/2", PROVIDE STONE CORNERS, PROVIDE MOCK UP FOR OWNER CONSTRUCTION MANAGER TO APPROVE	MORTAR: AMX475, POINTING MORTAR: AMX405, COLOR: ALABASTER	EXTERIOR AND INTERIOR WALLS	RE: EXTERIOR AND INTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
EXTERIOR MATERIALS								
EF-1	MODULAR BRICK	TRINITY SURFACES DALE WILLIAMS/BRAD WEATHERLY EMAIL: STRATEGICACCOUNTS@ TRINITYSURFACES.COM	MANUFACTURER: GENERAL SHALE, MODULAR BRICK, COLOR: CHEDDARS BLEND, PROVIDE MOCKUP FOR DARDEN CONSTRUCTION MANAGER TO APPROVE	MORTAR: AMX405, COLOR: ALABASTER, G.C. TO PROVIDE LIGHT MORTAR WASH WITH ANTIQUATED LOOK AND FULL MORTAR JOINT. CONTACT OWNER FOR CONTROL SAMPLE AND PHOTOS OF APPROVED LOOK.	EXTERIOR WALLS	RE: EXTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
EF-2	SPLIT FACE CMU BLOCK - 8" THICK	YORK BUILDING PRODUCTS	SPLIT FACE CMU BLOCK, COLOR BUFF, CODE: 8816H-SPF	PER MANUFACTURER'S SPECIFICATIONS	EXTERIOR WALLS	RE: EXTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
EF-3	NOT USED							
EF-4	HARDIE PLANK HORIZONTAL LAP SIDING	JAMES HARDIE	PLANK HORIZONTAL LAP SIDING; COLOR: NAVAJO BEIGE	PER MANUFACTURER'S SPECIFICATIONS	EXTERIOR WALLS	RE: EXTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
EF-5	PLYWOOD-ROUGH SAWN CEDAR	GENERAL CONTRACTOR	4'x8' ROUGH SAWN CEDAR PLYWOOD, SIZE: 1/2" THICK	PER MANUFACTURER'S SPECIFICATIONS	SOFFITS AT ALL EXTERIOR OVERHANGS	RE: WALL SECTIONS AND RCP	GENERAL CONTRACTOR	GENERAL CONTRACTOR
EF-6	HARDIE PLANK HORIZONTAL LAP SIDING	JAMES HARDIE	PLANK HORIZONTAL LAP SIDING; COLOR: KHAKI BROWN	PER MANUFACTURER'S SPECIFICATIONS	EXTERIOR WALLS	RE: EXTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
EF-7	STONE SILL	TRINITY SURFACES DALE WILLIAMS/BRAD WEATHERLY EMAIL: STRATEGICACCOUNTS@ TRINITYSURFACES.COM	MANUFACTURER: J&N STONE - PIONEER DIVISION, SERIES: ASHLAR, COLOR: CHEDDARS MIX, STONE SIZES RANDOM, THICKNESS 1 1/4" - 2 1/2", PROVIDE STONE CORNERS, PROVIDE MOCK UP FOR OWNER CONSTRUCTION MANAGER TO APPROVE	MORTAR: AMX475, POINTING MORTAR: AMX405, COLOR: ALABASTER	EXTERIOR WALLS	RE: EXTERIOR ELEVATIONS	BY OWNER	GENERAL CONTRACTOR
EF-8	4" HARDIE TRIM	JAMES HARDIE	HARDIE TRIM BOARDS, 5/4 BOARD, SMOOTH, 5/4"x4", COLOR: ARCTIC WHITE	PER MANUFACTURER'S SPECIFICATIONS	EXTERIOR WALLS			
EF-9	6" HARDIE TRIM	JAMES HARDIE	HARDIE TRIM BOARDS, 5/4 BOARD, SMOOTH, 5/4"x6", COLOR: ARCTIC WHITE	PER MANUFACTURER'S SPECIFICATIONS	EXTERIOR WALLS			
ROOFING								
R-1	SINGLE PLY ROOF	REFER TO SPECIFICATIONS	SURFACE COLOR TO BE WHITE, INSULATION AS REQUIRED FOR SELECTED ROOF MEMBRANE	PER MANUFACTURER'S SPECIFICATIONS	MAIN FLAT ROOF	RE: ROOF PLAN	GENERAL CONTRACTOR	GENERAL CONTRACTOR
R-2	ARCHITECTURAL COMPOSITION SHINGLES	GAF	GAF COMPOSITION SHINGLES, STYLE: GRAND CANYON, COLOR: BLACK OAK- ALT. EQUAL = CERTAIN TEED PRESIDENTIAL SHAKE (AUTUMN BLEND)	INSTALL OVER (1) LAYER OF 30# FELT AND ICE AND WATER SHIELD HT	MANSARD ROOF	RE: EXTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR
R-3	STANDING SEAM COPPER	BERRIDGE MANUFACTURING	BERRIDGE MANUFACTURING, TEE-PANEL STANDING SEAM METAL ROOF WITH KYNAR FINISH, COLOR: COPPER COTE	PER MANUFACTURER'S SPECIFICATIONS	AWNING ROOF	RE: EXTERIOR ELEVATIONS	GENERAL CONTRACTOR	GENERAL CONTRACTOR

GENERAL NOTES - FINISH SCHEDULE

1. ALL METAL EXPOSED TRIM AND ACCESSORIES IN THE VESTIBULE, WAITING, DINING, BAR, CORRIDOR AND RESTROOM AREAS TO BE BLACK.
2. ITEMS THAT ARE TO BE BLACK IN FRONT OF HOUSE:
   A. AIR CONDITIONING GRILLES AND REGISTERS
   B. SPEAKERS
   C. CAMERAS
   D. TELEVISIONS AND VISIBLE TRIM AND SUPPORTS
   E. LIGHT FIXTURES AND TRIM
   F. ELECTRICAL WALL OUTLETS AND SWITCHES
   G. ANY VISIBLE SWITCHES, CONTROLS OR ALARMS AND THEIR TRIM
3. ALL ADHESIVE USED FOR FINISHES MUST BE OF THE TYPE THAT DOES NOT HAVE FORMALDEHYDE AS PART OF ITS CHEMISTRY AND MUST BE SUITABLE FOR THE SPECIFIC PURPOSE INTENDED.
4. PRIOR TO APPLICATION OF NEW FINISHES, CLEAN EXISTING SURFACES THOROUGHLY SO NEW FINISHES WILL ADHERE PROPERLY.
5. ANY MISCELLANEOUS HARDWARE THAT IS FURNISHED BY OWNER IS TO BE RECEIVED, STORED, AND INSTALLED BY THE GENERAL CONTRACTOR.
6. GENERAL CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAINTING WALLS AND CEILINGS AFTER INSTALLATION OF DECOR.
7. REFER TO INTERIOR ELEVATIONS FOR FINISH LOCATIONS WHERE MULTIPLE FINISHES ARE SPECIFIED.
8. SEALANT (CAULK) SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS:
   A. METAL DOOR FRAMES
   B. EXT. WINDOW HEAD, JAMB AND SILLS
   C. CONDUIT AND PIPE PENETRATIONS AT WALL AND CEILINGS
   D. STAINLESS STEEL TO WALLS, UNWELDED SS TO SS CONNECTION
   E. BETWEEN GYPSUM PANELS AND CONC. FLOOR SLAB
   F. BETWEEN ALL DISSIMILAR MATERIALS
   G. BETWEEN ALL BASES AND FLOORS
9. ALL BLACK STEEL GAS PIPING SHALL BE PAINTED YELLOW.
10. ALL CABINET DOORS SHALL HAVE (2) FELT SILENCERS PER DOOR, TOP AND BOTTOM.
11. ALL TOPS AND BOTTOMS OF WOOD DOORS SHALL BE SEALED.
12. G.C. TO PROVIDE A 4'X4' MOCK UP OF BRICK AND STONE FOR CONSTRUCTION MANAGER APPROVED ON SITE
13. USE OIL BASE PAINT ON METAL SURFACES.
14. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING WORK AREAS AND MATERIALS FROM THEFT, VANDALISM, AND OTHER LOSSES.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING FROM PAINT ALL OTHER AREAS NOT TO RECEIVE PAINT.
16. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MISC. CLEANING OF WALLS, FIXTURES, AND LIGHTS. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PATCHING AND PAINTING TOUCH-UP, DEBRIS REMOVAL, AND ANY OTHER WORK REQUIRED TO LEAVE ALL WORK, INCLUDING WORK PERFORMED UNDER SEPARATE CONTRACTS, CLEAN AND READY FOR OCCUPANCY.
17. PAINT/STAIN CONTRACTOR MUST USE MANUFACTURER AND MODEL # OF PAINT/STAIN SPECIFIED. NO EXCEPTIONS.
18. REFER TO SPECIFICATIONS FOR APPROVED EQUAL MANUFACTURERS

EBONY STAIN NOTES

1. SURFACE PREPARATION:
   ALL FINISHING LUMBER AND FLOORING MUST BE STORED IN DRY, WARM ROOMS TO PREVENT ABSORPTION OF MOISTURE, SHRINKAGE AND ROUGHENING OF THE WOOD. ALL SURFACES MUST BE SANDED SMOOTH, WITH THE GRAIN, NEVER ACROSS IT. SURFACE BLEMISHES MUST BE CORRECTED AND THE AREA CLEANED OF DUST BEFORE COATING.
2. STAIN:
   SHERWIN WILLIAMS SHER-WOOD BAC WIPING STAIN EBONY (S64B00054)
   A. APPLY A FULL WET COAT OF STAIN USING NATURAL BRISTLE BRUSH, THEN WIPE CLEAN USING A LINT FREE CLOTH. ALLOW STAIN TO PENETRATE UP TO 10 MINUTES OR BEFORE STAIN FLASHES. FINISH BY REMOVING ALL EXCESS STAIN. IF WIPING BECOMES DIFFICULT DUE TO DRYNESS OF THE STAIN, REWET WITH A CLOTH DIPPED IN STAIN, THEN WIPE CLEAN AS DESCRIBED ABOVE. LET STAIN DRY AT LEAST 24 HOURS PRIOR TO MOVING ON.
   B. APPLY STAIN TO ALL EDGES, FACTORY CUT AND FIELD CUT ENDS OF WOOD PLANKS AND TRIM.
3. SECOND COAT:
   SHERWIN WILLIAMS FAST DRY VINYL SEALER CLEAR (T67F00006)
   A. PRODUCT MUST BE CATALYZED WITH V66V22. 1.5 OUNCES TO 1 GALLON WHICH EQUALS 7.5 OUNCES PER 5 GALLONS.
   B. SPRAY A FULL WET COAT. AIR DRY 30 MINUTES. SAND WITH 240 GRIT OR EQUIVALENT, REMOVE SANDING DUST.
4. THIRD COAT:
   SHERWIN WILLIAMS ACR CONV DRE (T77F00063)
   A. PRODUCT MUST BE CATALYZED WITH V66V26. 4 OUNCES PER GALLON WHICH EQUALS 20 OUNCES PER 5 GALLONS.
   B. SPRAY A FULL WET COAT OF ACRYLIC CONVERSION COATING AT 4.0-6.0 MILS WET. ALLOW TO DRY 1 HOUR BEFORE SCUFF SANDING AND REMOVING ANY EXCESS. REPEAT PROCESS. DO NOT EXCEED 4.0 MILS DFT FOR THE TOTAL SYSTEM.

PROVIDE PRODUCT SAMPLES OF FINISHED WOOD STAINED FOR CONSTRUCTION MANAGER TO APPROVE BEFORE PROCEEDING

MOCK UP'S REQUIRED FOR BRICK, STONE, AND EIFS INTERIOR AND EXTERIOR BEFORE PROCEEDING

idstudio4

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IRVING, TEXAS 75063
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WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIGGS
AR98116
LICENSED ARCHITECT

REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

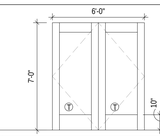
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:

EXTERIOR FINISH SCHEDULES

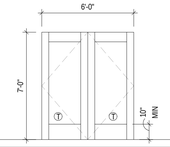
A4.2



DETAILS	
HEAD:	1/A4.4
JAMB:	1/A4.4
SILL:	1/A4.4

MANUFACTURER:	WDH-SOLUTIONS		
DOOR TYPE:	ALUMINUM CLAD WOOD	FRAME TYPE:	ALUMINUM CLAD WOOD
ALUMINUM FINISH:	FACTORY FINISH BY MFR. - PAINT DARK BRONZE		
WOOD FINISH:	FACTORY FINISH BY MFR. - STAIN "S-1" EBONY		
HARDWARE (BY WDH-SOLUTIONS)			
(4 PR.) HINGES (WITH DOOR)	BB1279 4 1/2"x4 1/2"	US10B	HA
(2 EA.) EXIT DEVICE	CD99EO PANIC	US10B	VD
(2 EA.) MORTISE CYLINDER	20-001 X 1 1/8" S123 KWY	US10B	SC
(1 EA.) RIM CYLINDER EXT	20-022 S123 KWY	US10B	SC
(2 EA.) PULL HANDLE	OFFSET MET PULL	DBZ	RO
(1 EA.) CENTER MULLION	4954 X 7'-2"	SP313	VD
(2 EA.) SURFACE CLOSER (PUSH SIDE)	4111 CUSH RH/LH	DBZ	LCN
(2 EA.) KICK PLATE	190S 8"X34"	US10B	HA
(1 EA.) WEATHER STRIP	726S 17"	CH	NG
(2 EA.) FLOOR STOP	483	US10B	RO
(2 EA.) FINGER GUARD	CUSTOM MID RAIL	DBZ	WDH
NOTE 1: FLOOR STOPS TO BE INSTALLED 18" AWAY FROM DOOR FRAME.			
NOTE 2: G.C. TO PROVIDE SIGNAGE ON DOOR FRAME "DOOR TO REMAIN UNLOCKED DURING BUSINESS HOURS".			

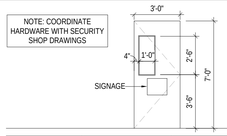
DOOR ELEVATION 1 — 1/4" = 1'-0"



DETAILS	
HEAD:	2/A4.4
JAMB:	2/A4.4
SILL:	2/A4.4

MANUFACTURER:	WDH-SOLUTIONS		
DOOR TYPE:	WOOD	FRAME TYPE:	WOOD
WOOD FINISH:	FACTORY FINISH BY MFR. - STAIN "S-1" EBONY		
HARDWARE (BY WDH-SOLUTIONS)			
(4 EA.) HINGES (WITH DOOR)	BB1279 4 1/2"x4 1/2"	US10B	HA
(2 EA.) SURFACE CLOSER (PUSH SIDE)	4111 CUSH RH/LH	DBZ	LCN
(2 EA.) PULL PLATE	1014-3-4 X 16	US10B	TR
(2 EA.) PUSH PLATE	1001-3-4 X 16	US10B	TR
(2 EA.) KICK PLATES	190S 8"X34"	US10B	HA
(2 EA.) FLOOR STOPS	483	US10B	RO
NOTE 1: FLOOR STOPS TO BE INSTALLED 18" AWAY FROM DOOR FRAME.			

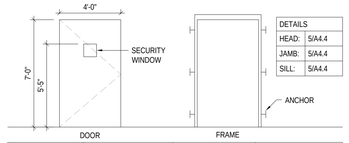
DOOR ELEVATION 2 — 1/4" = 1'-0"



DETAILS	
HEAD:	3/A4.4
JAMB:	3/A4.4
SILL:	3/A4.4

DOOR TYPE:	HOLLOW METAL	FRAME TYPE:	HOLLOW METAL
DOOR FINISH:	PAINT	FRAME FINISH:	PAINT
HARDWARE (BY GC)			
(1 EA.) CONTINUOUS HINGE	224HDx83"	DBZ	IV
(1 EA.) PANIC DEVICE	GUARD-X 2670-3216	US28	VD
(1 EA.) DOOR PULL	#112	US10B	RO
(1 EA.) DOOR CLOSER	4041XP x CUSHx TBSRT	DBZ	LCN
(1 EA.) THRESHOLD	327x36"	DBZ	NG
(1 EA.) WEATHERSTRIP	155x36"x84"	DBZ	NG
(1 EA.) DOOR SWEEP	200NBx36"	DBZ	NG
(1 EA.) DRIP CAP	16Ax40"	DBZ	NG
(1 EA.) DOOR STOP	#483	US10B	RO
NOTE 1: FLOOR STOPS TO BE INSTALLED 18" AWAY FROM DOOR FRAME.			
NOTE 2: G.C. TO PROVIDE SIGNAGE ON DOOR FRAME "DOOR TO REMAIN UNLOCKED DURING BUSINESS HOURS".			
NOTE 3: 56 PSF ALLOWABLE DESIGN PRESSURE.			
NOTE 4: DOOR SILENCERS SUPPLIED BY HM DOOR AND FRAME SUPPLIER			
NOTE 5: CURBSIDE ENTRANCE SIGNAGE-15.5"X12.9". TO BE INCLUDED IN OPERATIONS PRINT PACAKAGE. INSTALLED BY GC.			

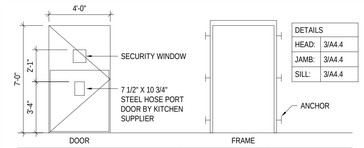
DOOR ELEVATION 3 — 1/4" = 1'-0"



DETAILS	
HEAD:	5/A4.4
JAMB:	5/A4.4
SILL:	5/A4.4

DOOR TYPE:	HOLLOW METAL	FRAME TYPE:	HOLLOW METAL
DOOR FINISH:	PAINT DARK BRONZE	FRAME FINISH:	PAINT DARK BRONZE
HARDWARE (BY G.C.)			
(1 EA.) CONTINUOUS HINGE	224HDx83"	DBZ	IV
(1 EA.) EXIT ALARM PANIC DEVICE	GUARD-X 2670-3216	US10B/313	VO
(1 EA.) DOOR PULL	#112	US10B	RO
(1 EA.) DOOR CLOSER	4041XPxCUSHxTBSRT	DBZ	LCN
(1 EA. INT. SIDE) DIAMOND ARMOR PLATE	34"x46"x32D		RO
(1 EA.) DOOR STOP	#483	US10B	RO
NOTE 1: FLOOR STOPS TO BE INSTALLED 18" AWAY FROM DOOR FRAME.			
NOTE 2: DOOR SILENCERS SUPPLIED BY HM DOOR AND FRAME SUPPLIER			

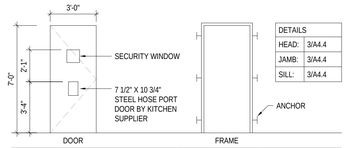
DOOR ELEVATION 4 — 1/4" = 1'-0"



DETAILS	
HEAD:	3/A4.4
JAMB:	3/A4.4
SILL:	3/A4.4

DOOR TYPE:	EXT. FRP FACED DOOR	FRAME TYPE:	HOLLOW METAL
DOOR FINISH:	FRP	FRAME FINISH:	PAINT DARK BRONZE
HARDWARE (BY GC)			
(1 EA.) CONTINUOUS HINGE	224HDx83"	DBZ	IV
(1 EA.) PANIC DEVICE	GUARD-X 2670-3216	US28	VD
(1 EA.) DOOR PULL	#112	US10B	RO
(1 EA.) LATCHGAURD	LG211SL	US10B	DO
(1 EA.) DOOR CLOSER	4041XPxCUSHxTBSRT	DKZ	LCN
(1 EA.) DIAMOND ARMOR PLATE	34"x46"x32D		RO
(1 EA.) DOOR STOP	#483	US10B	RO
(1 EA.) THRESHOLD	327 x 48"	DBZ	NG
(1 EA.) DOOR SWEEP	200NBx48"	DBZ	NG
(1 EA.) DRIP CAP	16Ax52"	DBZ	NG
NOTE 1: FLOOR STOPS TO BE INSTALLED 24" AWAY FROM DOOR FRAME.			
NOTE 2: PROVIDE 10"x10" SECURITY WINDOW WITH METAL FLAP AND LATCH			
NOTE 3: DOOR SILENCERS SUPPLIED BY HM DOOR AND FRAME SUPPLIER			
NOTE 4: PAINT INTERIOR DARK BRONZE			

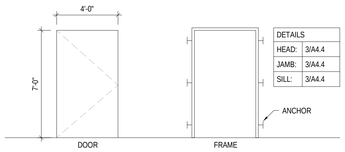
DOOR ELEVATION 5 — 1/4" = 1'-0"



DETAILS	
HEAD:	3/A4.4
JAMB:	3/A4.4
SILL:	3/A4.4

DOOR TYPE:	EXT. FRP FACED DOOR	FRAME TYPE:	HOLLOW METAL
DOOR FINISH:	FRP	FRAME FINISH:	PAINT DARK BRONZE
HARDWARE (BY GC)			
(1 EA.) CONTINUOUS HINGE	224HDx83"	DBZ	IV
(1 EA.) PANIC DEVICE	GUARD-X 2670-3216	US28	VD
(1 EA.) DOOR PULL	#112	US10B	RO
(1 EA.) DOOR CLOSER	4041XPxCUSHxTBSRT	DBX	LCN
(1 EA.) DIAMOND ARMOR PLATE	34"x34"x32D		RO
(1 EA.) DOOR STOP	#483	US10B	RO
(1 EA.) THRESHOLD	327 x 36"	DBZ	NG
(1 EA.) WEATHERSTRIP	155 x 36"x84"	DBZ	NG
(1 EA.) DOOR SWEEP	200NBx36"	DBZ	NG
(1 EA.) DRIP CAP	16Ax40"	DBZ	NG
NOTE 1: FLOOR STOPS TO BE INSTALLED 24" AWAY FROM DOOR FRAME.			
NOTE 2: PROVIDE 10"x10" SECURITY WINDOW WITH METAL FLAP AND LATCH			
NOTE 3: DOOR SILENCER SUPPLIED BY HM DOOR AND FRAME SUPPLIER			
NOTE 4: PAINT INTERIOR DARK BRONZE			

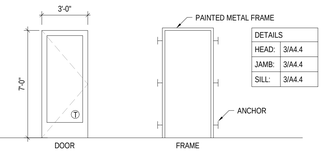
DOOR ELEVATION 6 — 1/4" = 1'-0"



DETAILS	
HEAD:	3/A4.4
JAMB:	3/A4.4
SILL:	3/A4.4

DOOR TYPE:	HOLLOW METAL	FRAME TYPE:	HOLLOW METAL
DOOR FINISH:	PAINT DARK BRONZE	FRAME FINISH:	PAINT DARK BRONZE
HARDWARE (BY GC)			
(1 EA.) CONTINUOUS HINGE	224HDx83"	DBZ	IV
(1 EA.) LEVER STOREROOM LOCKSET	ND80PDxRHODESx"C"KWY	US10B	SC
(1 EA.) LATCHGAURD	LG211SL	US10B	DO
(1 EA.) DOOR CLOSER	4041XPxCUSHxTBSRT	DBZ	LCN
(1 EA.) DIAMOND ARMOR PLATE	34"x46"x32D		RO
(1 EA.) DOOR STOP	#483	US10B	RO
(1 EA.) THRESHOLD	327 x 48"	DBZ	NG
(1 EA.) WEATHERSTRIP	155 x 48"x84"	DBZ	NG
(1 EA.) DOOR SWEEP	200NBx48"	DBZ	NG
(1 EA.) DRIP CAP	16Ax52"	DBZ	NG
NOTE 1.) FLOOR STOPS TO BE INSTALLED 18" AWAY FROM DOOR FRAME.			
NOTE 2: DOOR SILENCERS SUPPLIED BY HM DOOR AND FRAME SUPPLIER			

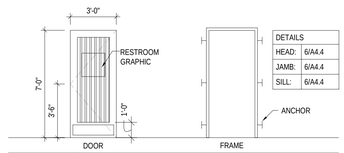
DOOR ELEVATION 7 — 1/4" = 1'-0"



DETAILS	
HEAD:	3/A4.4
JAMB:	3/A4.4
SILL:	3/A4.4

DOOR TYPE:	STOREFRONT	FRAME TYPE:	STOREFRONT
DOOR FINISH:	BRONZE ANODIZED	FRAME FINISH:	BRONZE ANODIZED
HARDWARE (BY WDH-SOLUTIONS)			
(1 EA.) CONTINUOUS HINGE	780-112 HD DKB 83"	US10B	HA
(1 EA.) CLOSER	PA4041	US10B	LCN
(1 EA.) THRESHOLD	327DKB-48"	US10B	NG
(1 EA.) WEATHERSTRIP	155VDKB-48 X 84"	US10B	NG
(1 EA.) DOOR SWEEP	100VBDKB 48"	US10B	NG
(1 EA.) FLOOR STOP	463	BLACK	RO
(1 EA.) EXIT ALARM	EAX500	BLACK	RO
(1 EA.) PANIC DEVICE	CD9927EO	US10B	VD
(1 EA.) MORTISE CYLINDER	20-001 613	US10B	SC
NOTE 1: FLOOR STOPS TO BE INSTALLED 24" AWAY FROM DOOR FRAME.			

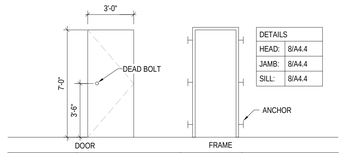
DOOR ELEVATION 8 — 1/4" = 1'-0"



DETAILS	
HEAD:	6/A4.4
JAMB:	6/A4.4
SILL:	6/A4.4

MANUFACTURER:	WDH-SOLUTIONS	HARDWARE:	WDH-SOLUTIONS
DOOR TYPE:	WOOD STILE AND RAIL	FRAME TYPE:	HOLLOW METAL
DOOR FINISH:	STAIN	FRAME FINISH:	PAINT - MATCH STAIN
HARDWARE (BY WDH-SOLUTIONS)			
(4 EA.) BUTTS (WITH DOOR	BB1279 4 1/2x4 1/2	US10B	HA
(1 EA.) SURFACE CLOSER (PULL SIDE)	4116 H-CUSH (HOLD OPEN)	DBZ	LCN
(1 EA.) PULL	111x70C 4"x16	US10B	RO
(1 EA.) KICK PLATE	190S 8x34	US10B	HA
(3 EA.) SILENCERS	Q146		ST
(1 EA.) WALL STOPS	409	US10BE	RO
(1 EA.) PUSH	70C 4"x16"	US10B	RO
NOTE: RIBBED GLASS WITH FROSTED PANE. RIBBED SIDE OF GLASS TO FACE INTO RESTROOM. RE: SPECIFICATION SECTION 08212, RED OAK DOOR			

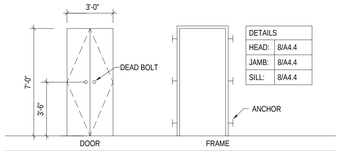
DOOR ELEVATION 9 — 1/4" = 1'-0"



DETAILS	
HEAD:	8/A4.4
JAMB:	8/A4.4
SILL:	8/A4.4

MANUFACTURER:	WDH-SOLUTIONS	HARDWARE:	WDH-SOLUTIONS
DOOR TYPE:	SC WOOD	FRAME TYPE:	HOLLOW METAL
DOOR FINISH:	STAIN	FRAME FINISH:	PAINT - MATCH STAIN
HARDWARE (BY WDH-SOLUTIONS)			
(4 EA.) HINGES (WITH DOOR)	BB1279 NRP 4 1/2x4 1/2	US10B	HA
(1 EA.) DEADBOLT	B661P x "C"KWY	US10B	SC
(1 EA.) DOOR PULL	#112	US10B	RO
(3 EA.) SILENCERS	Q146		IV
NOTE: SOLID CORE WOOD DOOR			

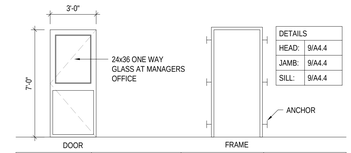
DOOR ELEVATION 11 — 1/4" = 1'-0"



DETAILS	
HEAD:	8/A4.4
JAMB:	8/A4.4
SILL:	8/A4.4

MANUFACTURER:	WDH-SOLUTIONS	HARDWARE:	WDH-SOLUTIONS
DOOR TYPE:	SC WOOD	FRAME TYPE:	HOLLOW METAL
DOOR FINISH:	STAIN	FRAME FINISH:	PAINT - MATCH STAIN
HARDWARE (BY GC)			
(4 EA.) HINGES (WITH DOOR)	BB1279 NRP 4 1/2x4 1/2	US10B	HA
(1 EA.) DEADBOLT	B661P x "C"KWY	US10B	SC
(1 EA.) DOOR PULL	#112	US10B	RO
(3 EA.) SILENCERS	Q146		IV
NOTE: SOLID CORE WOOD DOOR			

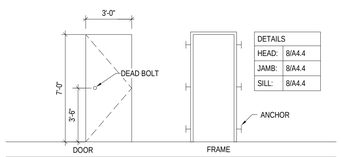
DOOR ELEVATION 12 — 1/4" = 1'-0"



DETAILS	
HEAD:	9/A4.4
JAMB:	9/A4.4
SILL:	9/A4.4

DOOR TYPE:	FRP PANELED DOOR	FRAME TYPE:	HOLLOW METAL
DOOR FINISH:	FRP	FRAME FINISH:	PAINT DARK BRONZE
HARDWARE (BY GC)			
(1 EA.) CONTINUOUS HINGE	224HDx83"	DBZ	IV
(1 EA.) LEVER STOREROOM LOCKSET	ND80PDxRHODESx"C"KWY	US10B	SC
(1 EA.) DOOR CLOSER	4041NPxCUSHxTBSRT	DBZ	LCN
(1 EA.) DIAMOND ARMOR PLATE	34"x34"x32D		RO
NOTE 1: DOOR SILENCERS SUPPLIED BY HM DOOR AND FRAME SUPPLIER			

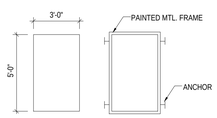
DOOR ELEVATION 13 — 1/4" = 1'-0"



DETAILS	
HEAD:	8/A4.4
JAMB:	8/A4.4
SILL:	8/A4.4

MANUFACTURER:	WDH-SOLUTIONS	HARDWARE:	WDH-SOLUTIONS
DOOR TYPE:	SC WOOD	FRAME TYPE:	HOLLOW METAL
DOOR FINISH:	STAIN	FRAME FINISH:	PAINT - MATCH STAIN
HARDWARE (BY GC)			
(4 EA.) HINGES (WITH DOOR)	BB1279 NRP 4 1/2x4 1/2	US10B	HA
(1 EA.) DEADBOLT	B661P x "C"KWY	US10B	SC
(1 EA.) DOOR PULL	#112	US10B	RO
(3 EA.) SILENCERS	Q146		IV
NOTE: SOLID CORE WOOD DOOR			
NOTE: 90-MINUTE RATED DOOR			

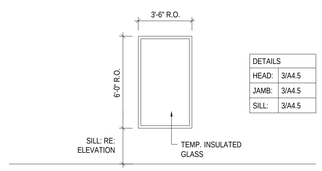
DOOR ELEVATION 14 — 1/4" = 1'-0"



DETAILS	
HEAD:	1/A4.5
JAMB:	1/A4.5
SILL:	1/A4.5

DOOR TYPE:	HOLLOW METAL	FRAME TYPE:	METAL
DOOR FINISH:	PAINT DARK BRONZE	FRAME FINISH:	PAINT DARK BRONZE
HARDWARE (BY WDH-SOLUTIONS)			
(1 EA.) CONT. GEAR HINGE	CFM 40"	US10B	PM
(1 EA.) DEADBOLT	B662P C KEYWAY	US10B	SC
(2 EA.) PULL	845	US10B	RO
(1 EA.) WEATHERSTRIP	155VDKB 36x40 (4-SIDED)	US10B	NG
(1 EA.) SWEEP	100VDKB 36"	US10B	NG
(1 EA.) WIND CHAIN	25-4858U25	US2C	TAY
(1 EA.) DRIP CAP	16A-40"	US10B	NG
NOTE: ROOF ACCESS DOOR			

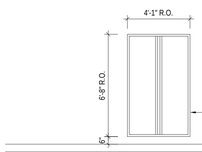
DOOR ELEVATION 15 — 1/4" = 1'-0" (2)



DETAILS	
HEAD:	3/A4.5
JAMB:	3/A4.5
SILL:	3/A4.5

MANUFACTURER:	WDH-SOLUTIONS
FRAME TYPE:	ALUMINUM CLAD WOOD
ALUMINUM FINISH:	FACTORY FINISH BY MFR. - PAINT DARK BRONZE
WOOD FINISH:	FACTORY FINISH BY MFR. - STAIN "S-1" EBONY

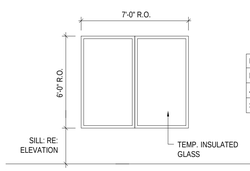
WINDOW ELEVATION A — 1/4" = 1'-0"



DETAILS	
HEAD:	4/A4.5
JAMB:	4/A4.5
SILL:	4/A4.5

MANUFACTURER:	WDH-SOLUTIONS
FRAME TYPE:	ALUMINUM CLAD WOOD
ALUMINUM FINISH:	FACTORY FINISH BY MFR. - PAINT DARK BRONZE
WOOD FINISH:	FACTORY FINISH BY MFR. - STAIN "S-1" EBONY

WINDOW ELEVATION B — 1/4" = 1'-0"



DETAILS	
HEAD:	3/A4.5
JAMB:	3/A4.5
SILL:	3/A4.5

MANUFACTURER:	WDH-SOLUTIONS
FRAME TYPE:	ALUMINUM CLAD WOOD
ALUMINUM FINISH:	FACTORY FINISH BY MFR. - PAINT DARK BRONZE
WOOD FINISH:	FACTORY FINISH BY MFR. - STAIN "S-1" EBONY

WINDOW ELEVATION C — 1/4" = 1'-0"

WDH-SOLUTIONS DOORS AND WINDOWS

A	DOORS AND WINDOWS NOTED AS BEING SUPPLIED BY WDH-SOLUTIONS ARE TO BE SUPPLIED EXCLUSIVELY BY WDH-SOLUTIONS, INC. LOCATED AT 23709 WAVERLY CIRCLE VENICE, FL 34293 (734-891-4046). ALL HARDWARE TO BE SUPPLIED BY WDH-SOLUTIONS.
B	WDH-SOLUTIONS CONTACT IS ART REEVES @ 248-826-4555 OR AREEVES@WDH-SOLUTIONS.COM
C	WINDOWS, DOORS AND HARDWARE MUST BE ORDERED WITH A COMPANY P.O. WITHIN THE FIRST WEEK OF RECEIVING YOUR CONTRACT FROM DARDEN TO ALLOW FOR MANUFACTURING AND DELIVERY TIME. (STANDARD LEAD TIME IS 7-8 WEEKS).
D	A DEPOSIT OF 50% OF THE CONTRACT AMOUNT PAYABLE TO WDH-SOLUTIONS (REMIT TO: WDH-SOLUTIONS, INC. PO BOX 1734 TROY, MI 48099-1734) IS DUE TO RELEASE THE ORDER FOR MANUFACTURING.
E	THE BALANCE OF THE CONTRACT AMOUNT IS DUE WITHIN 30 DAYS OF DELIVERY OF PRODUCTS TO THE JOBSITE.

GENERAL NOTES - DOOR/WINDOW SCHEDULE

A	ALL GLAZING TEMPERED AS REQUIRED BY CODE WHETHER INDICATED OR NOT.
B	ALL WOOD DOORS TO RECEIVE EBONY STAIN.
C	MAXIMUM OPENING FORCE FOR EXTERIOR DOORS SHALL BE 9.5 LBS
D	MAXIMUM OPENING FORCE FOR INTERIOR DOORS SHALL BE 5 LBS
E	DOOR CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MINIMUM

HARDWARE LEGEND

B	BOMMER INDUSTRIES
DE	DETEX CORPORATION
DO	DON-JO
FA	FALCON INGERSOLL RAND
HA	HAGAR COMPANIES
IV	IVES
LCN	LCN INGERSOLL RAND
NG	NATIONAL GUARD PRODUCTS
PM	PEMKO
RO	ROCKWOOD MANUFACTURING COMPANY
SC	SCHLAGE INGERSOLL RAND
ST	STEELCRAFT
TAY	TAYMOR
TR	TRIMCO HARDWARE
VD	VON DUPRIN INGERSOLL RAND
	COLOR LEGEND
DBZ	DARK BRONZE
SP313	DARK BRONZE PAINTED
US10B	ANTIQUE BRONZE, OILED
US28	SATIN ALUMINUM, CLEAR COATED
US32D	SATIN STAINLESS STEEL

idstudio

6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:
DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIGGS
AR98116
LICENSED ARCHITECT
REV 02: 04.18.2023

cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

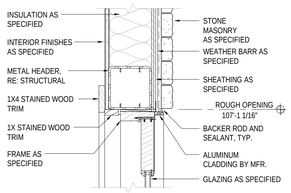
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
DOOR AND WINDOW SCHEDULE

A4.3



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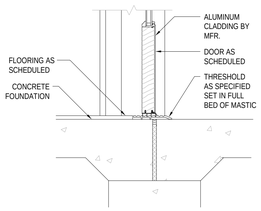

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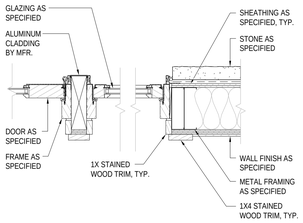
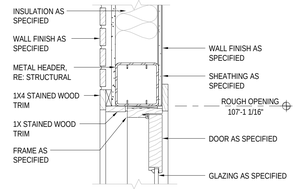


JAMB

FRAME DETAILS
1 1/2" = 1'-0"
1



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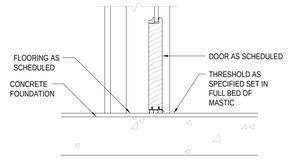

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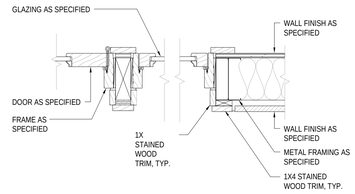
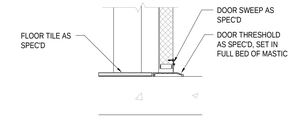


JAMB

FRAME DETAILS
1 1/2" = 1'-0"
2



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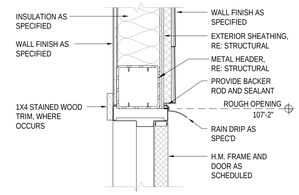

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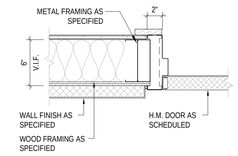
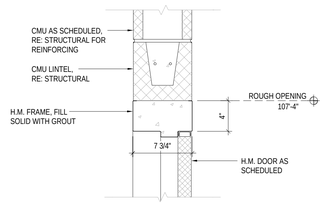


JAMB

FRAME DETAILS
1 1/2" = 1'-0"
3

OPEN
4



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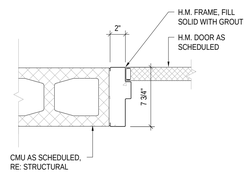
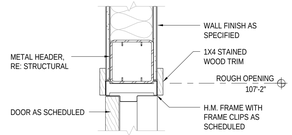


JAMB

FRAME DETAILS
1 1/2" = 1'-0"
5



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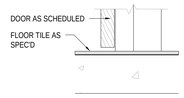

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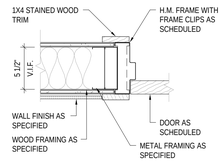
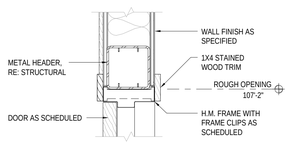


JAMB

FRAME DETAILS
1 1/2" = 1'-0"
6

OPEN
7



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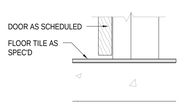

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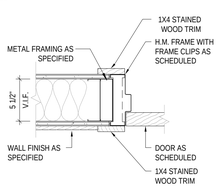
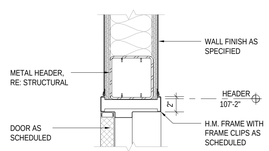


JAMB

FRAME DETAILS
1 1/2" = 1'-0"
8



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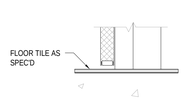

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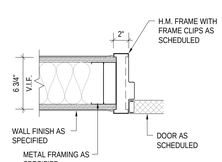


JAMB

FRAME DETAILS
1 1/2" = 1'-0"
9

idstudio4

6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT

REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

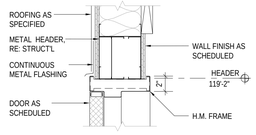
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
DOOR AND WINDOW DETAILS

A4.4



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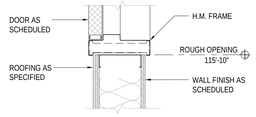

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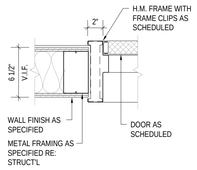
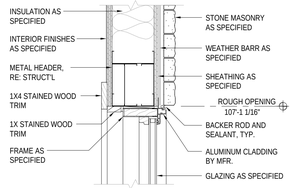


JAMB

FRAME DETAILS
1 1/2" = 1'-0" 1



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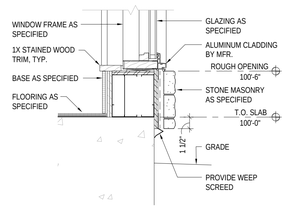

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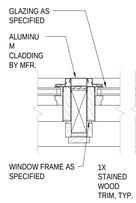
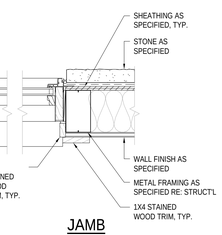
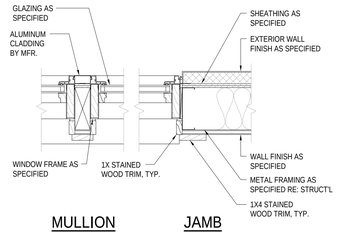


MULLION

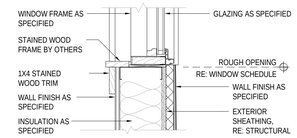


JAMB

FRAME DETAILS
1 1/2" = 1'-0" 2



MULLION JAMB



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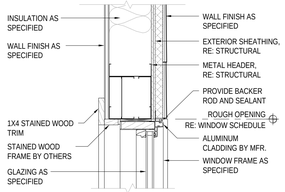

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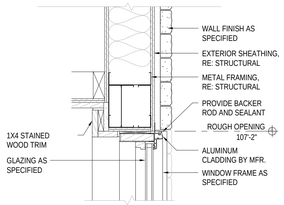
FRAME DETAILS
1 1/2" = 1'-0" 3



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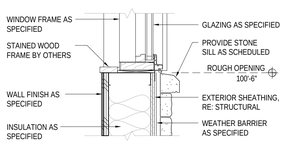

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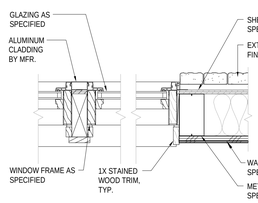

MULLION

JAMB

FRAME DETAILS
1 1/2" = 1'-0" 4

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT

02.15.2023

cheddar's SCRATCH KITCHEN

Issue Date: 02.15.2023

REVISION INFORMATION

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

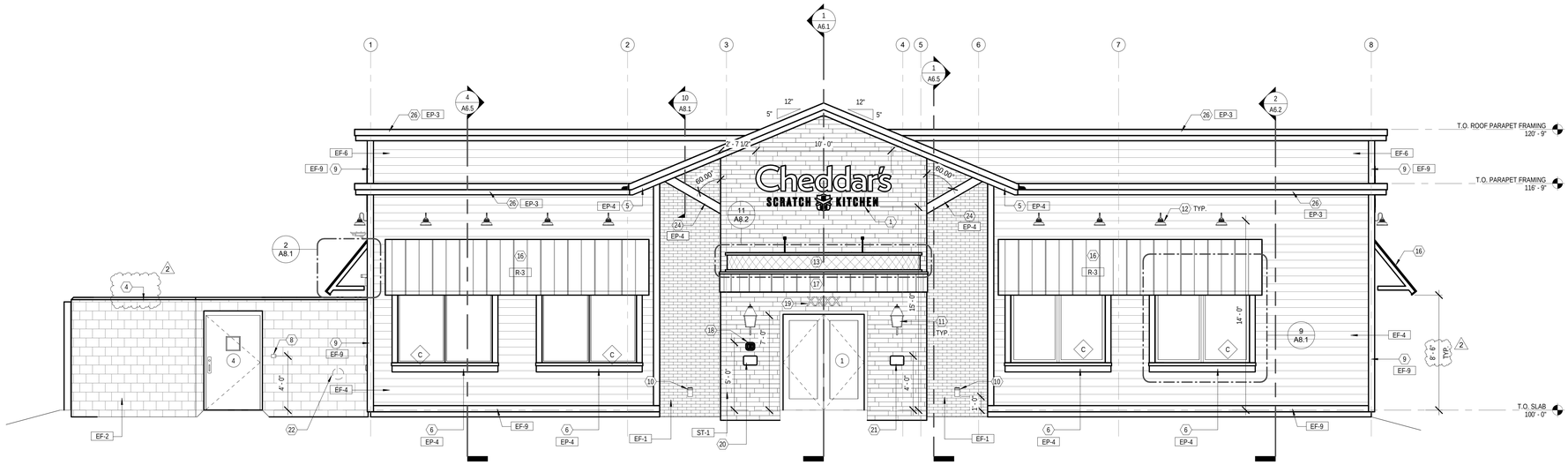
RIVERVIEW, FL 33578

RIVERVIEW, FL

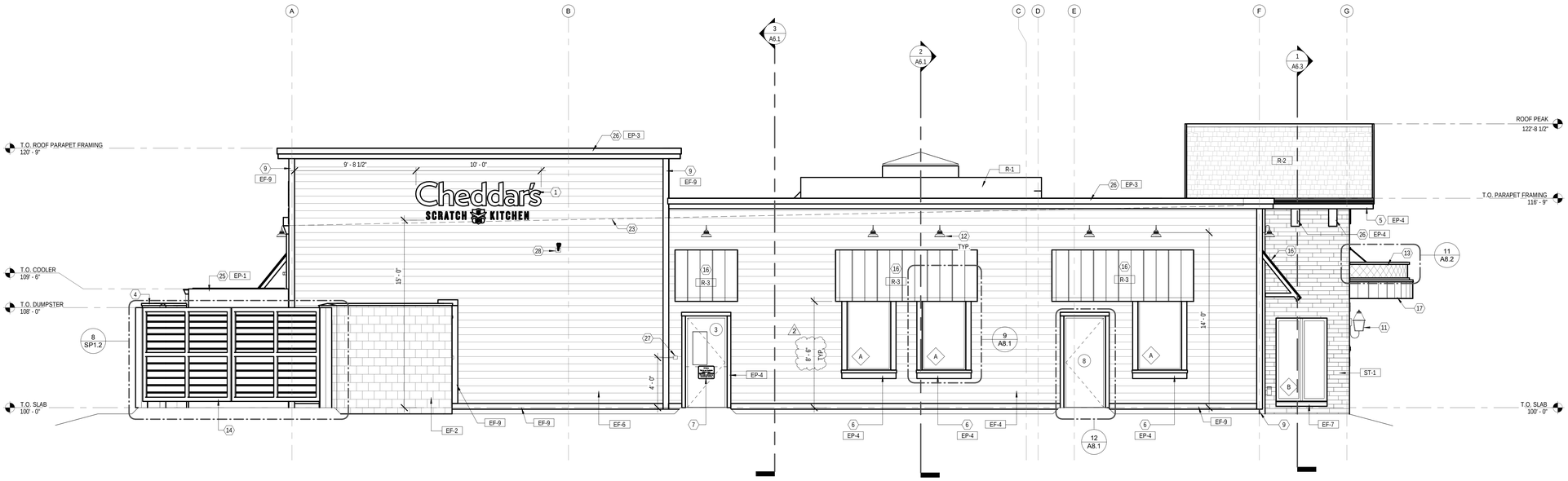
Drawing:

DOOR AND WINDOW DETAILS

A4.5



FRONT ELEVATION
1/4" = 1'-0"
1



LEFT ELEVATION
1/4" = 1'-0"
2

GENERAL NOTES - ELEVATIONS

A	ALL DIMENSIONS ARE SHOWN TO OUTSIDE FACE UNLESS NOTED OTHERWISE.
B	REFER TO FINISH SCHEDULE AND DETAILS FOR APPLIED FINISHES.

KEYNOTES - ELEVATION

#	
1	BUILDING SIGNAGE, FOR REVIEW UNDER SEPARATE PERMIT, RE: ELECTRICAL. GC TO PROVIDE POWER WIRING
2	PRE-FINISHED ALUMINUM SEAMLESS GUTTER AND DOWNSPOUT TO MATCH EP-2
3	PRE-FINISHED DOWNSPOUT, RE: 5/A8.2 / RE: CIVIL & PLUMBING FOR CONNECTION
4	MORTAR BUILD UP, SLOPE TO EACH SIDE TO SHED WATER. RE: 02 / A6.5
5	ROUGH SAWN STAINED CEDAR FASCIA
6	WINDOW TRIM, TYP. RE: 09 / A8.1
7	SIGN TO BE INCLUDED IN OPERATIONS PRINT PACKAGE. INSTALLED BY GC
8	DOOR BUZZER BY OWNER, RE: ELECTRICAL
9	1X6 CORNER TRIM, TYP.
10	WALL MOUNTED UP LIGHT, RE: ELECTRICAL
11	WALL MOUNTED GAS LANTERN
12	LIGHT FIXTURE, RE: ELECTRICAL
13	METAL SCREEN AND FRAME, RE: 11 / A8.2
14	DUMPSTER GATES RE: 08 / SP1.2
15	DELIVERY INFORMATION SIGN BY OWNER
16	COPPER STANDING SEAM AWNING, RE: 02 / A8.1
17	STANDING SEAM COPPER FASCIA
18	KNOX BOX, COORDINATE FINAL LOCATION WITH FIRE MARSHAL
19	6" ADDRESS LETTERING AFFIXED TO BUILDING
20	16"X8" MANAGING PARTNER SIGN AFFIXED TO BUILDING
21	16"X8" HOURS OF OPERATION SIGN AFFIXED TO BUILDING
22	G.C. TO COORDINATE LOCATION OF CO2 ACCESS WITH VENDOR
23	ROOF LINE BEYOND SHOWN DASHED
24	ANGLED WOOD BEAM, RE: STRUCTURAL
25	EXPOSED COOLER
26	WALL CAP PROFILE, RE: 09 / A8.1
27	CREDENTIAL READER, RE: SECURITY SHOP DRAWINGS
28	SURVEILLANCE CAMERA, RE: SECURITY SHOP DRAWINGS
29	THROUGH WALL SCUPPER, COLLECTOR BOX AND 5" DOWNSPOUT, RE: 5 / A8.1
30	THROUGH WALL OVERFLOW SCUPPER, RE: 7 / A8.1

FINISH SCHEDULE - EXTERIOR

EXTERIOR PAINT	
EP-1	ANTIQUE WHITE
EP-2	MISSISSIPPI BRONZE ENAMEL
EP-3	IBIS WHITE
EP-4	CHARWOOD
STONE	
ST-1	STONE
EXTERIOR FINISH	
EF-1	MODULAR BRICK
EF-2	SPLIT-FACE CMU BLOCK - 8" THICK
EF-3	NOT USED
EF-4	HARDIE PLANK HORIZONTAL LAP SIDING - NAVAJO BEIGE
EF-5	PLYWOOD-ROUGH SAWN CEDAR
EF-6	HARDIE PLANK HORIZONTAL LAP SIDING - KHAKI BROWN
EF-7	STONE SILL
EF-8	4" HARDIE TRIM - ARCTIC WHITE
EF-9	6" HARDIE TRIM - ARCTIC WHITE
ROOFING	
R-1	SINGLE PLY ROOF
R-2	ARCHITECTURAL COMPOSITION SHINGLES
R-3	STANDING SEAM COPPER

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STATE OF FLORIDA
RUSTY A. RIGGS
AR98116
REGISTERED ARCHITECT

REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

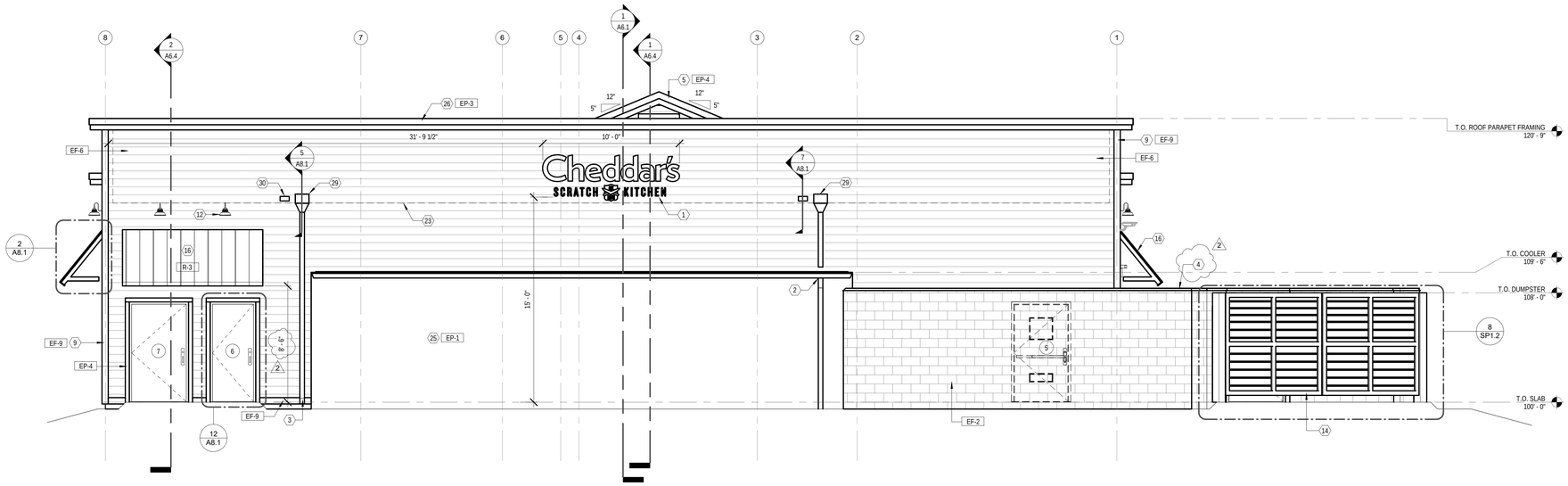
RIVERVIEW, FL 33578

RIVERVIEW, FL

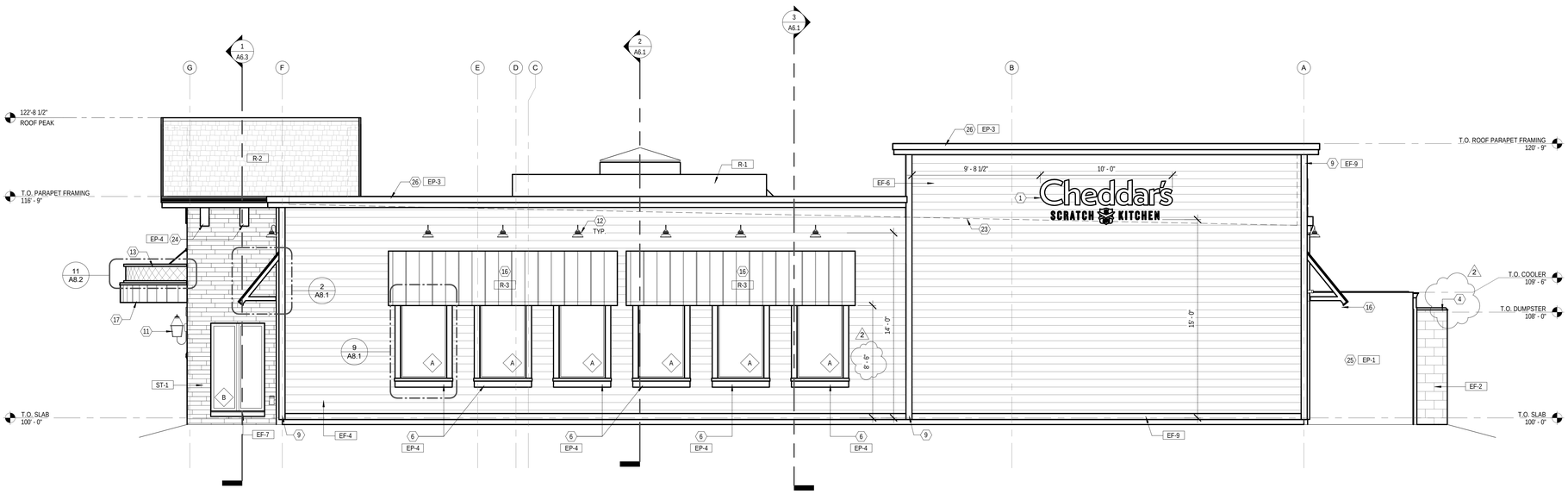
Drawing:

EXTERIOR ELEVATIONS

A5.1



REAR ELEVATION
1/4" = 1'-0"
1



RIGHT ELEVATION
1/4" = 1'-0"
2

GENERAL NOTES - ELEVATIONS

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KEYNOTES - ELEVATION

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FINISH SCHEDULE - EXTERIOR

EXTERIOR PAINT	
EP-1	ANTIQUE WHITE
EP-2	MISSISSIPPI BRONZE ENAMEL
EP-3	IBIS WHITE
EP-4	CHARWOOD
STONE	
ST-1	STONE
EXTERIOR FINISH	
EF-1	MODULAR BRICK
EF-2	SPLIT-FACE CMU BLOCK - 8" THICK
EF-3	NOT USED
EF-4	HARDIE PLANK HORIZONTAL LAP SIDING - NAVAJO BEIGE
EF-5	PLYWOOD-ROUGH SAWN CEDAR
EF-6	HARDIE PLANK HORIZONTAL LAP SIDING - KHAKI BROWN
EF-7	STONE SILL
EF-8	4" HARDIE TRIM - ARCTIC WHITE
EF-9	6" HARDIE TRIM - ARCTIC WHITE
ROOFING	
R-1	SINGLE PLY ROOF
R-2	ARCHITECTURAL COMPOSITION SHINGLES
R-3	STANDING SEAM COPPER

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STATE OF FLORIDA
RUSTY A. RIGGS
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REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

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Restaurant #:	21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

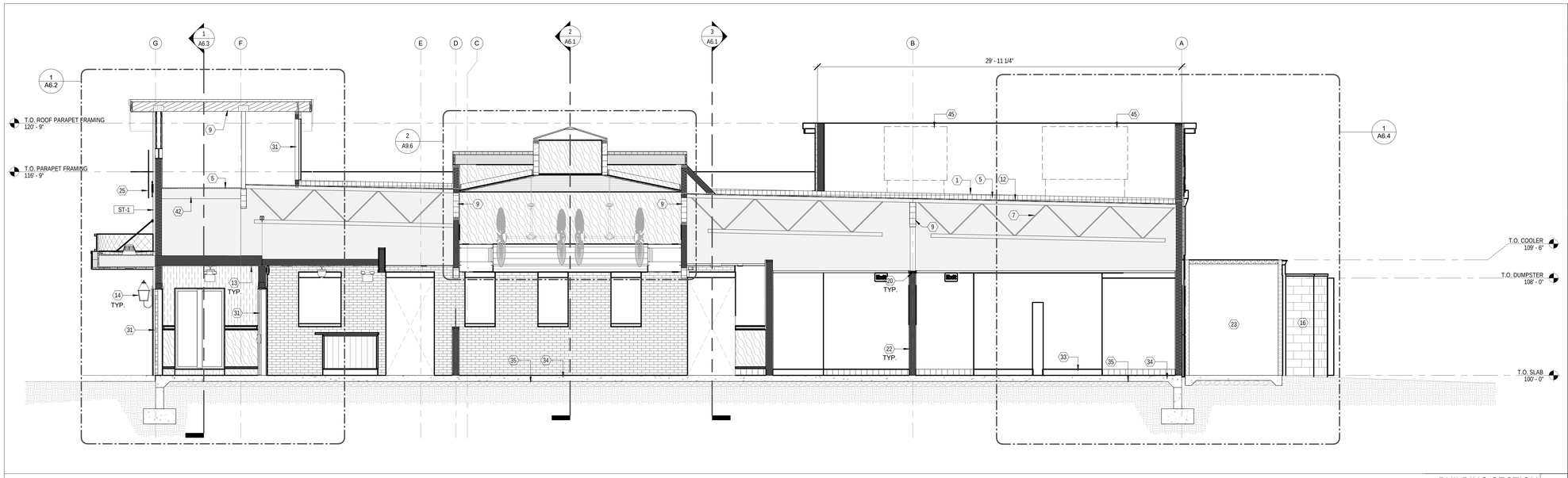
RIVERVIEW, FL 33578

RIVERVIEW, FL

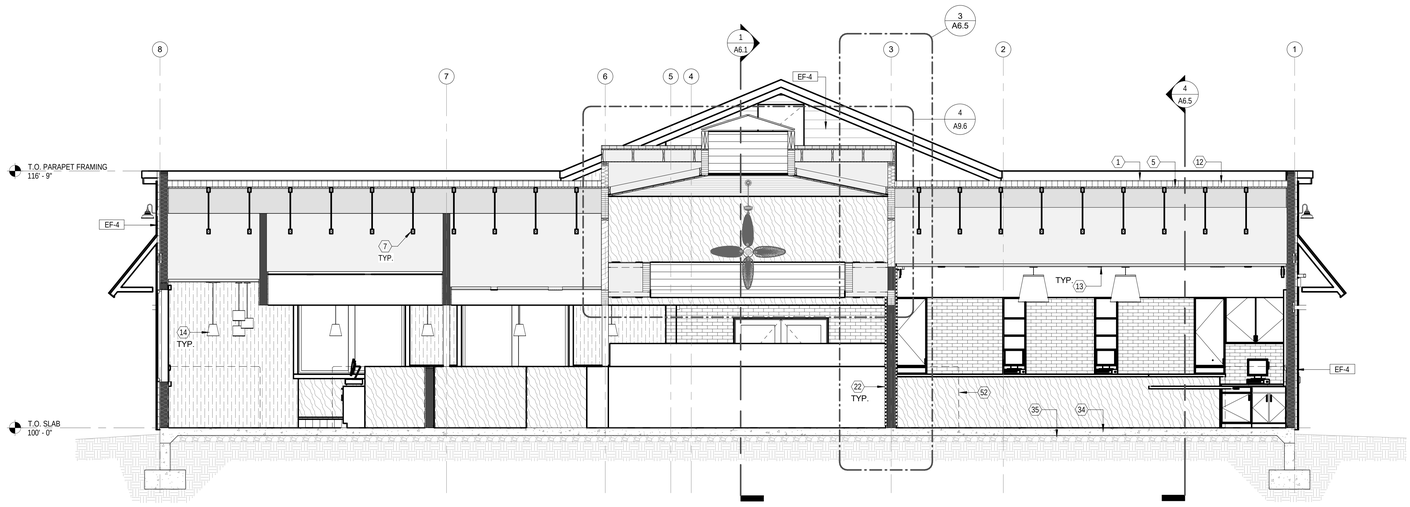
Drawing:

EXTERIOR ELEVATIONS

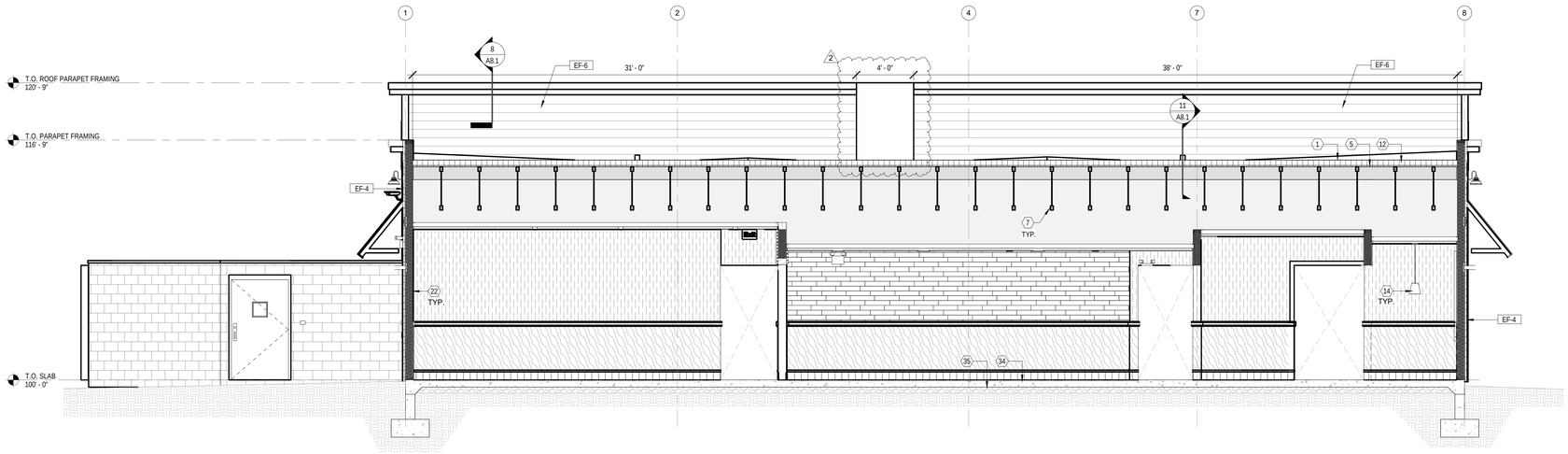
A5.2



BUILDING SECTION 1
1/4" = 1'-0"



BUILDING SECTION 2
1/4" = 1'-0"



BUILDING SECTION 3
1/4" = 1'-0"

GENERAL NOTES - BUILDING SECTION

A	ALL DIMENSIONS ARE SHOWN TO FACE OF STUD WALL UNLESS NOTED OTHERWISE.
B	REFER TO FINISH SCHEDULE AND DETAILS FOR APPLIED FINISHES.
C	WALLS TO STRUCTURAL DECK MUST BE THOROUGHLY SEALED AROUND PENETRATIONS.
D	ALIGN ALL STRUCTURAL MEMBERS TO COORDINATE WITH STRUCTURAL DRAWINGS

KEYNOTES - BUILDING SECTIONS

1	ROOFING AS SCHEDULED
2	ROOF DRAIN, RE: PLUMBING
3	ICE AND WATER SHIELD AS SPECIFIED
4	ROOF FELT AS SPECIFIED. OVERLAP ICE AND WATER SHIELD WHERE SHOWN
5	PLYWOOD DECKING, RE: STRUCTURAL
6	WOOD KICKER, RE: STRUCTURAL
7	ROOF TRUSSES, RE: STRUCTURAL
8	STEEL BEAM, RE: STRUCTURAL
9	WOOD BEAM, RE: STRUCTURAL
10	OWNER PROVIDED METAL FRAME AND WIRE MESH
11	TAPERED INSULATION AS SPECIFIED
12	RIGID ROOF INSULATION AS SPECIFIED
13	CEILING AS SCHEDULED
14	LIGHT FIXTURE, RE: ELECTRICAL AND REFLECTED CEILING PLAN
15	MASONRY TIES AT 16" O.C.E.W. AS SPECIFIED
16	CMU DUMPSTER SCREEN WALL, RE: STRUCTURAL
17	WEATHER BARRIER AS SCHEDULED
18	EXTERIOR SHEATHING, RE: STRUCTURAL
19	WALL FRAMING, RE: STRUCTURAL
20	FIRE BLOCKING
21	THRU-WALL METAL FLASHING WITH WEEP HOLES AT 32" O.C.
22	WALL FINISH AS SCHEDULED
23	COOLER AND FREEZER EQUIPMENT BY KITCHEN EQUIPMENT SUPPLIER
24	PREFINISHED ALUMINUM SEAMLESS GUTTER AND STEEL DOWNSPOUT, RE: 5 AND 6/A8.2
25	BUILDING SIGNAGE UNDER SEPARATE PEREMIT, RE: MEP FOR POWER
26	R-21 BATT INSULATION
27	R-38 BATT INSULATION
28	STEEL LADDER
29	CONTINUOUS METAL FLASHING
30	SOUND BATT INSULATION AS SPECIFIED
31	DOOR AS SPECIFIED
32	PROVIDE COLLAR JOINT WITH HIGH-SLUMP GROUT
33	BASE AS SCHEDULED
34	FOUNDATION, RE: STRUCTURAL
35	BELOW SLAB VAPOR BARRIER AS SPECIFIED
36	METAL HEADER, RE: STRUCTURAL
37	FLOOR DRAIN, RE: PLUMBING
38	OVERFLOW DOWNSPOUT NOZZLE, RE: PLUMBING
39	PRE-FINISHED METAL SNAP CAP FLASHING AS SPECIFIED
40	2X4 WOOD FRAMING
41	WOOD JOISTS, RE: STRUCTURAL
42	WOOD / METAL FRAMING, RE: STRUCTURAL
43	STAINED WOOD TRIM
44	1/2" PLYWOOD, PAINT
45	MECHANICAL DUCTWORK, DIFFUSERS AND EQUIPMENT, RE: MECHANICAL
46	CONTINUOUS FOUNDATION WEEP SCREED
47	ROOF HATCH AS SPECIFIED
48	PROVIDE CONTINUOUS REVEAL TRIM
49	STANDING SEAM COPPER FASCIA RETURN BACK TO PLYWOOD SOFFIT
50	2 LAYERS 1/4" EXTERIOR PLYWOOD AT RADIUS
51	TREATED 2X6 AT RADIUS CUT FROM 2X10 FOR 4'-0" LONG PIECE
52	BOOTH DIVIDERS, RE: ELEVATIONS
53	1" CONTINUOUS XPS FOAM INSULATION
54	ROOF OVERFLOW DRAIN, RE: PLUMBING
55	ROOF DRAIN CONNECT DRAIN PIPE TO STORM SEWER SHOWN DASHED, RE: CIVIL AND PLUMBING
56	WOOD BRACING, RE: STRUCTURAL
57	PROVIDE KICK BRACE AS REQUIRED
58	EXTEND ROOFING MEMBRANE UP PARAPET AND OVER TOP OF WALL TO SNAP CAP FLASHING
59	COLUMN, RE: STRUCTURAL
60	MORTAR BUILD UP, SLOPE TO EACH SIDE TO SHED WATER

FINISH SCHEDULE - EXTERIOR

EXTERIOR PAINT	
EP-1	ANTIQUE WHITE
EP-2	MISSISSIPPI BRONZE ENAMEL
EP-3	IBIS WHITE
EP-4	CHARWOOD
STONE	
ST-1	STONE
EXTERIOR FINISH	
EF-1	MODULAR BRICK
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ROOFING	
R-1	SINGLE PLY ROOF
R-2	ARCHITECTURAL COMPOSITION SHINGLES
R-3	STANDING SEAM COPPER

FINISH SCHEDULE - INTERIOR

INTERIOR PAINT	
P-1	TAVERN TAUPE
P-2	IBIS WHITE
P-3	BLACK OF NIGHT
P-4	HALF CAFF
STAIN	
S-1	EBONY
S-2	CLEAR SEALER
S-3	FLAGSTONE
S-4	BRICK SEALER
WALL COVERING	
WC-1	VINYL FABRIC
WC-2	FRP-WHITE
WC-3	FRP-BLACK
WC-4	WOOD LAMINATE
WC-5	PLASTIC LAMINATE-WHITE
WC-6	PLASTIC LAMINATE-BLACK
WC-7	STONE
WC-8	PORCELAIN TILE-CREME
WC-9	PORCELAIN TILE-TORTORA
WC-10	PORCELAIN TILE-TIGERS EYE
WC-11	QUARRY TILE
WC-12	WOOD PLANKS
WC-13	STAINLESS STEEL PANEL
WC-14	THIN BRICK
WC-15	WOOD PANEL
GRANITE	
G-1	GRANITE-JUPARANA ST. CECILIA
G-2	GRANITE-BLACK
G-3	CORIAN-SAHARA
BASE	
B-1	PORCELAIN TILE-MINERAL CHROME
B-2	QUARRY TILE
B-3	PORCELAIN TILE-RESIDE
CEILING	
C-1	ACOUSTICAL CEILING-BLACK
C-2	ACOUSTICAL CEILING-WHITE
C-3	NOT USED
C-4	V-GROOVE PLANK

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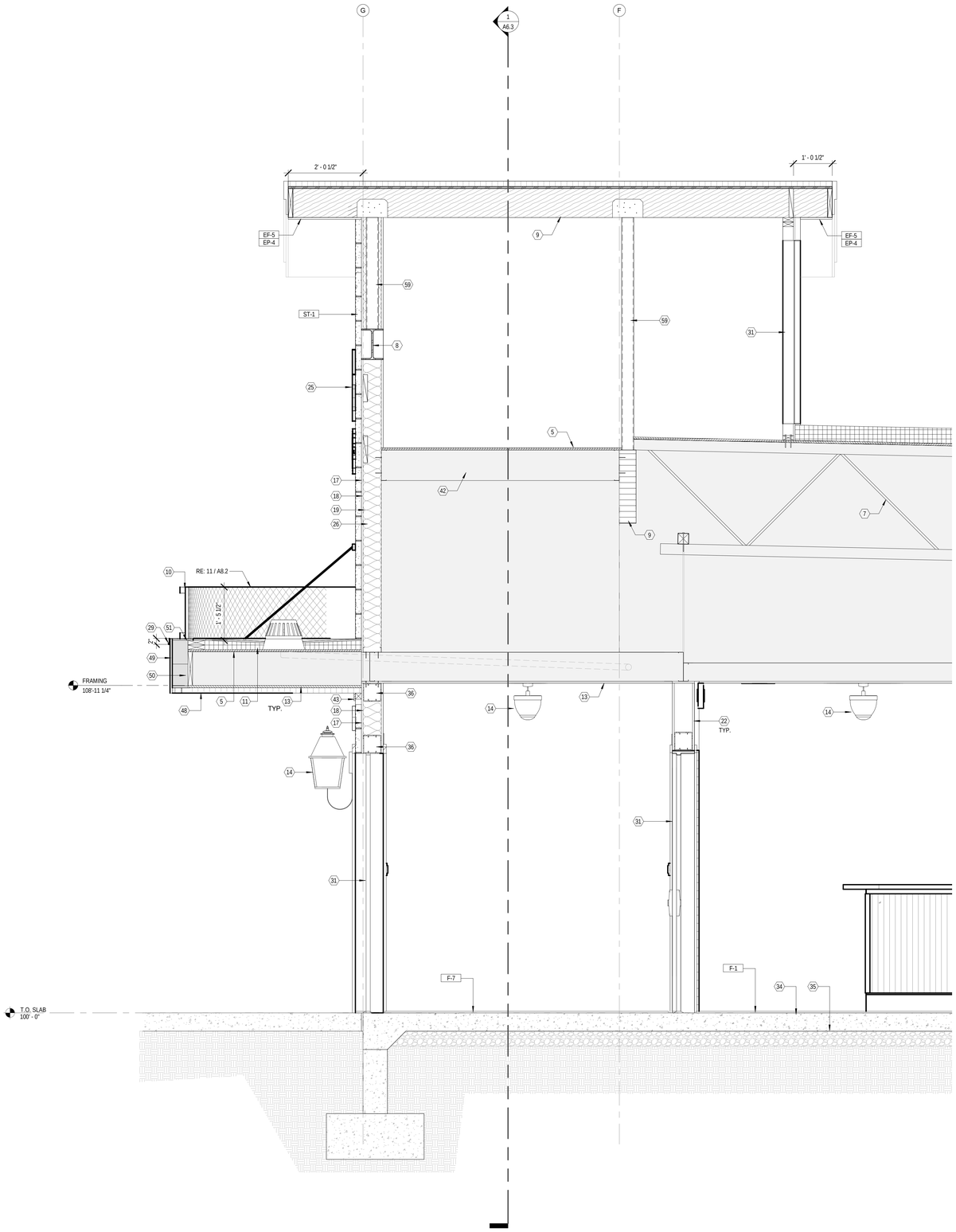
RIVERVIEW, FL 33578

RIVERVIEW, FL

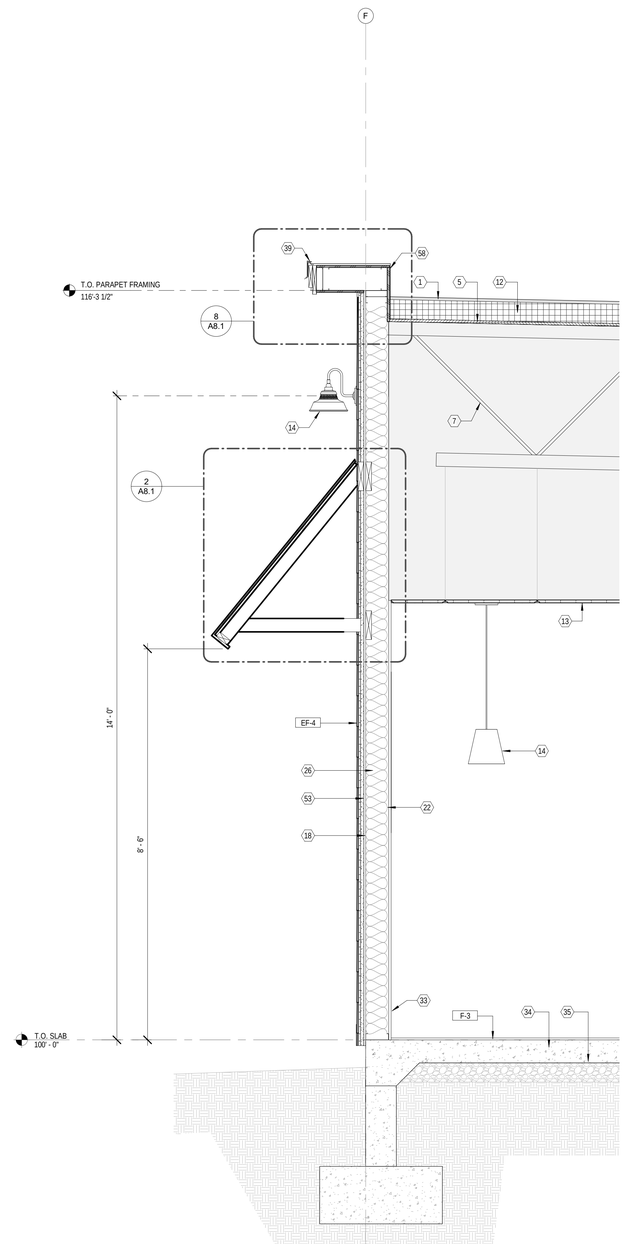
Drawing:

BUILDING SECTION

A6.1



WALL SECTION 1
3/4" = 1'-0"



WALL SECTION 2
3/4" = 1'-0"

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31	DOOR AS SPECIFIED
32	PROVIDE COLLAR JOINT WITH HIGH-SLUMP GROUT
33	BASE AS SCHEDULED
34	FOUNDATION, RE: STRUCTURAL
35	BELOW SLAB VAPOR BARRIER AS SPECIFIED
36	METAL HEADER, RE: STRUCTURAL
37	FLOOR DRAIN, RE: PLUMBING
38	OVERFLOW DOWNSPOUT NOZZLE, RE: PLUMBING
39	PRE-FINISHED METAL SNAP CAP FLASHING AS SPECIFIED
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41	WOOD JOISTS, RE: STRUCTURAL
42	WOOD / METAL FRAMING, RE: STRUCTURAL
43	STAINED WOOD TRIM
44	1/2" PLYWOOD, PAINT
45	MECHANICAL DUCTWORK, DIFFUSERS AND EQUIPMENT, RE: MECHANICAL
46	CONTINUOUS FOUNDATION WEEP SCREED
47	ROOF HATCH AS SPECIFIED
48	PROVIDE CONTINUOUS REVEAL TRIM
49	STANDING SEAM COPPER FASCIA RETURN BACK TO PLYWOOD SOFFIT
50	2 LAYERS 1/4" EXTERIOR PLYWOOD AT RADIUS
51	TREATED 2X6 AT RADIUS CUT FROM 2X10 FOR 4'-0" LONG PIECE
52	BOOTH DIVIDERS, RE: ELEVATIONS
53	1" CONTINUOUS XPS FOAM INSULATION
54	ROOF OVERFLOW DRAIN, RE: PLUMBING
55	ROOF DRAIN CONNECT DRAIN PIPE TO STORM SEWER SHOWN DASHED, RE: CIVIL AND PLUMBING
56	WOOD BRACING, RE: STRUCTURAL
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58	EXTEND ROOFING MEMBRANE UP PARAPET AND OVER TOP OF WALL TO SNAP CAP FLASHING
59	COLUMN, RE: STRUCTURAL
60	MORTAR BUILD UP, SLOPE TO EACH SIDE TO SHED WATER

FINISH SCHEDULE - EXTERIOR

EXTERIOR PAINT	
EP-1	ANTIQUE WHITE
EP-2	MISSISSIPPI BRONZE ENAMEL
EP-3	IBIS WHITE
EP-4	CHARWOOD
STONE	
ST-1	STONE
EXTERIOR FINISH	
EF-1	MODULAR BRICK
EF-2	SPLIT-FACE CMU BLOCK - 8" THICK
EF-3	NOT USED
EF-4	HARDIE PLANK HORIZONTAL LAP SIDING - NAVAJO BEIGE
EF-5	PLYWOOD-ROUGH SAWN CEDAR
EF-6	HARDIE PLANK HORIZONTAL LAP SIDING - KHAKI BROWN
EF-7	STONE SILL
EF-8	4" HARDIE TRIM - ARCTIC WHITE
EF-9	6" HARDIE TRIM - ARCTIC WHITE
ROOFING	
R-1	SINGLE PLY ROOF
R-2	ARCHITECTURAL COMPOSITION SHINGLES
R-3	STANDING SEAM COPPER

FINISH SCHEDULE - INTERIOR

INTERIOR PAINT	
P-1	TAVERN TAUPE
P-2	IBIS WHITE
P-3	BLACK OF NIGHT
P-4	HALF CAFF
STAIN	
S-1	EBONY
S-2	CLEAR SEALER
S-3	FLAGSTONE
S-4	BRICK SEALER
WALL COVERING	
WC-1	VINYL FABRIC
WC-2	FRP-WHITE
WC-3	FRP-BLACK
WC-4	WOOD LAMINATE
WC-5	PLASTIC LAMINATE-WHITE
WC-6	PLASTIC LAMINATE-BLACK
WC-7	STONE
WC-8	PORCELAIN TILE-CREME
WC-9	PORCELAIN TILE-TORTORA
WC-10	PORCELAIN TILE-TIGERS EYE
WC-11	QUARRY TILE
WC-12	WOOD PLANKS
WC-13	STAINLESS STEEL PANEL
WC-14	THIN BRICK
WC-15	WOOD PANEL
GRANITE	
G-1	GRANITE-JUPARANA ST. CECILIA
G-2	GRANITE-BLACK
G-3	CORIAN-SAHARA
BASE	
B-1	PORCELAIN TILE-MINERAL CHROME
B-2	QUARRY TILE
B-3	PORCELAIN TILE-RESIDE
CEILING	
C-1	ACOUSTICAL CEILING-BLACK
C-2	ACOUSTICAL CEILING-WHITE
C-3	NOT USED
C-4	V-GROOVE PLANK

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PROJECT NUMBER
DCH22007

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DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIGGS
AR98116
REGISTERED ARCHITECT

REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

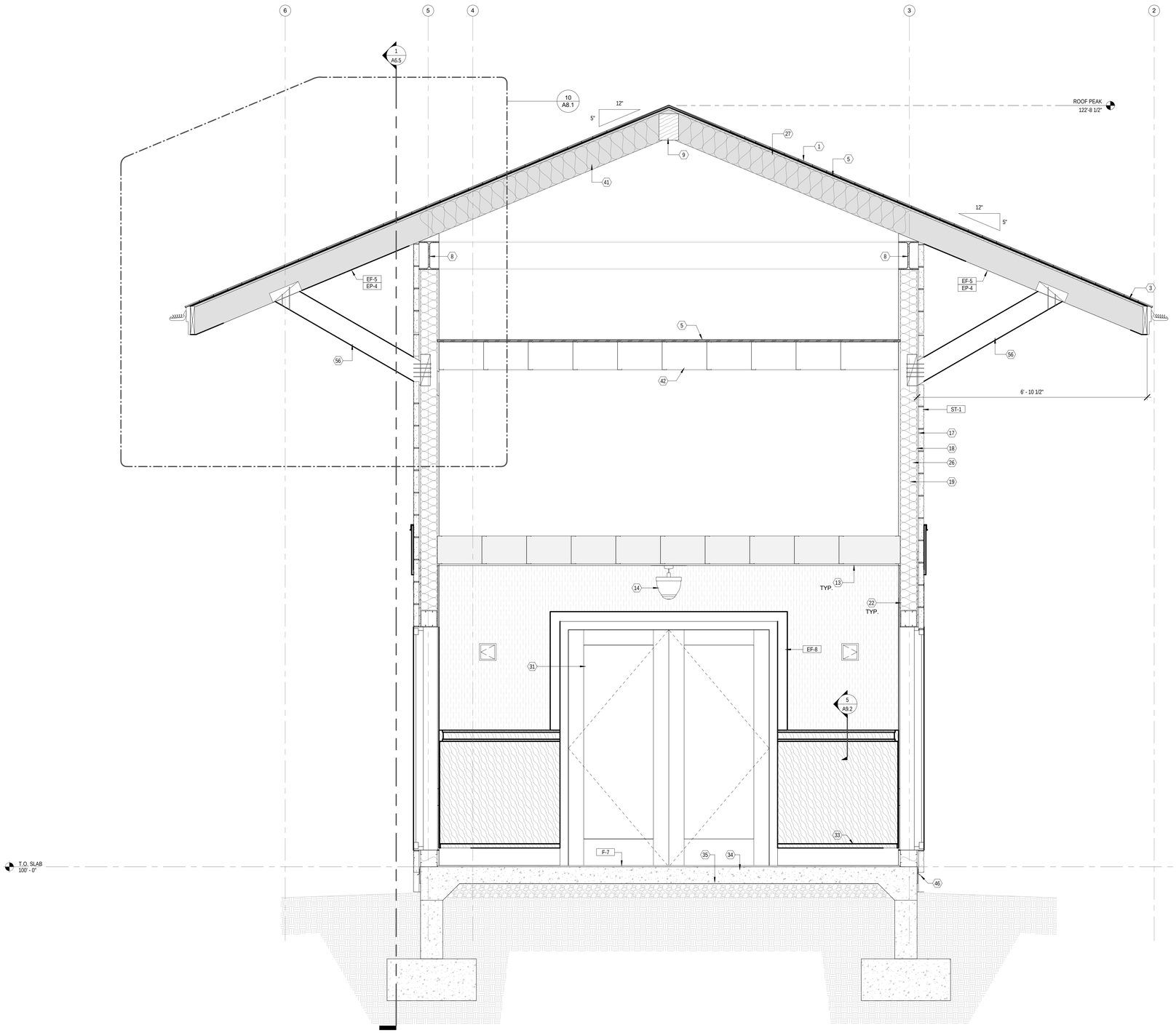
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:

WALL SECTIONS

A6.2



WALL SECTION 1
3/4" = 1'-0"

GENERAL NOTES - BUILDING SECTION

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B	REFER TO FINISH SCHEDULE AND DETAILS FOR APPLIED FINISHES.
C	WALLS TO STRUCTURAL DECK MUST BE THOROUGHLY SEALED AROUND PENETRATIONS.
D	ALIGN ALL STRUCTURAL MEMBERS TO COORDINATE WITH STRUCTURAL DRAWINGS

KEYNOTES - WALL SECTIONS

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3	ICE AND WATER SHIELD AS SPECIFIED
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Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023

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CITY COMMENTS	
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Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
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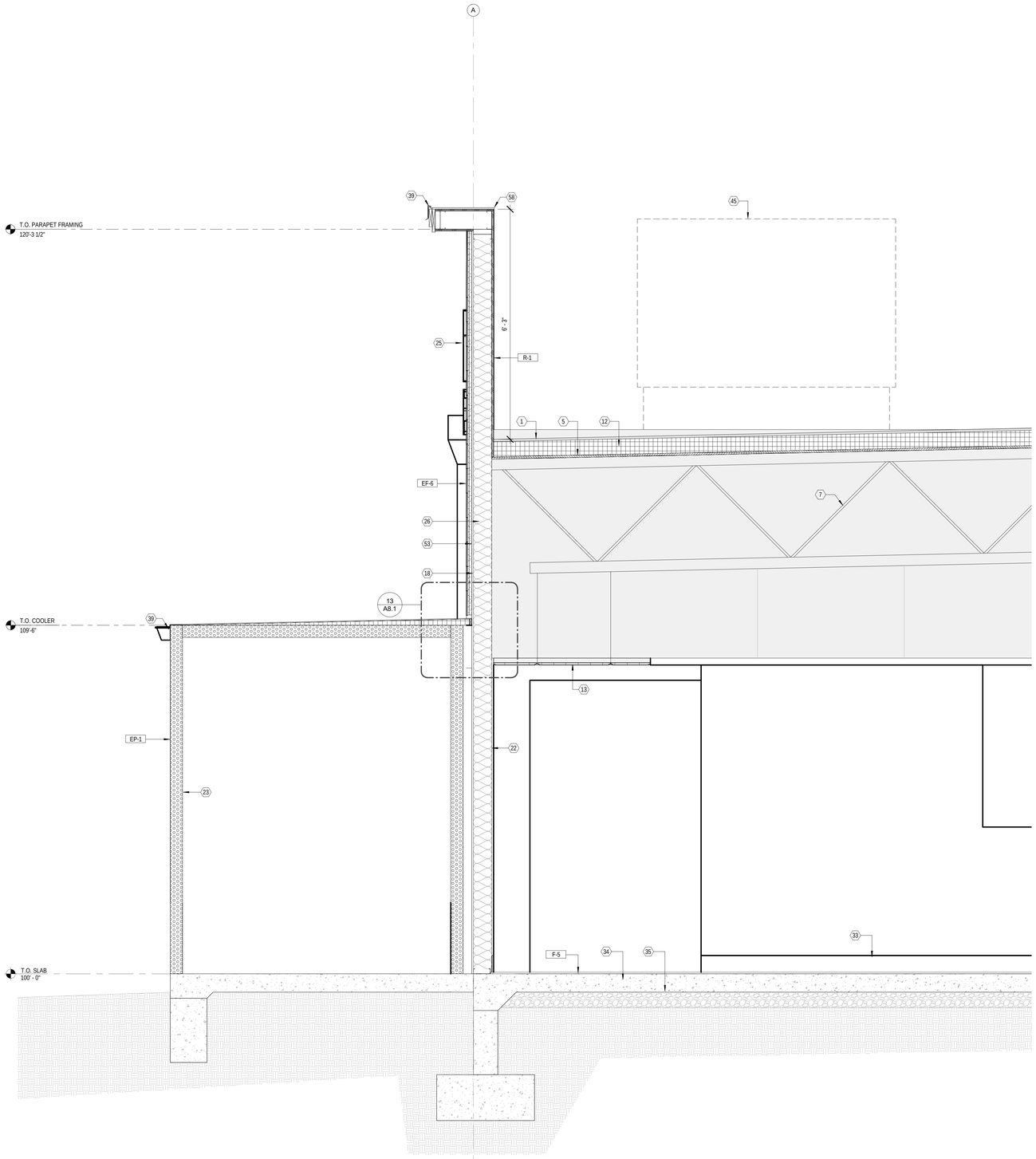
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
WALL SECTIONS

A6.3



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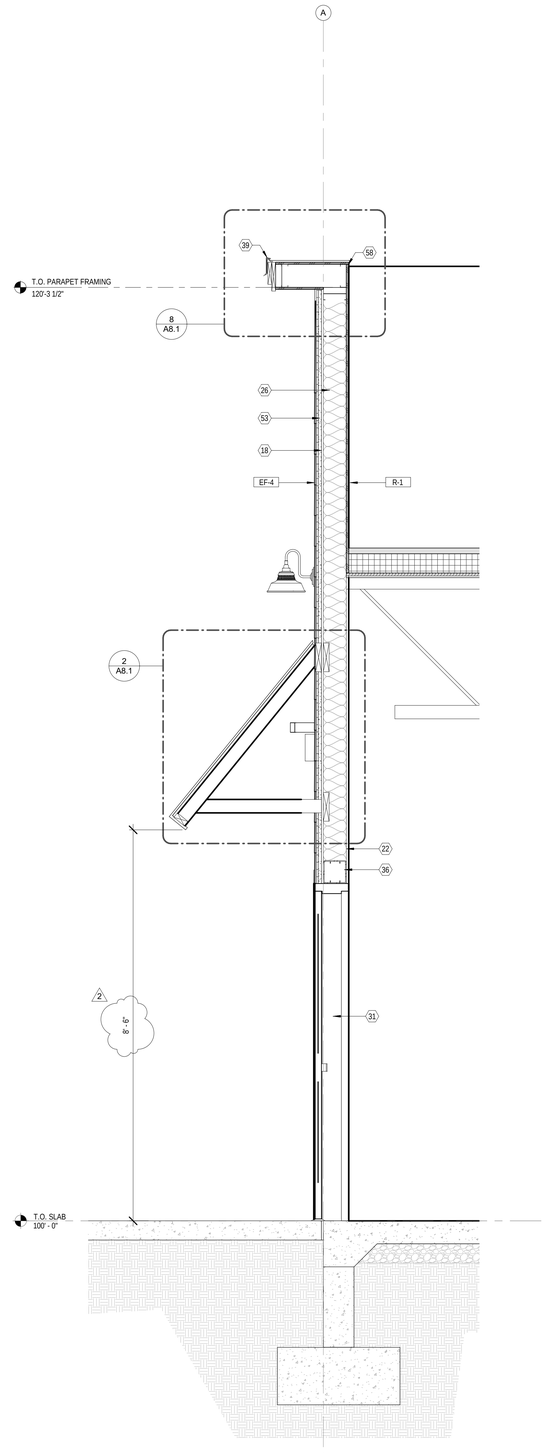
3/4" = 1'-0"



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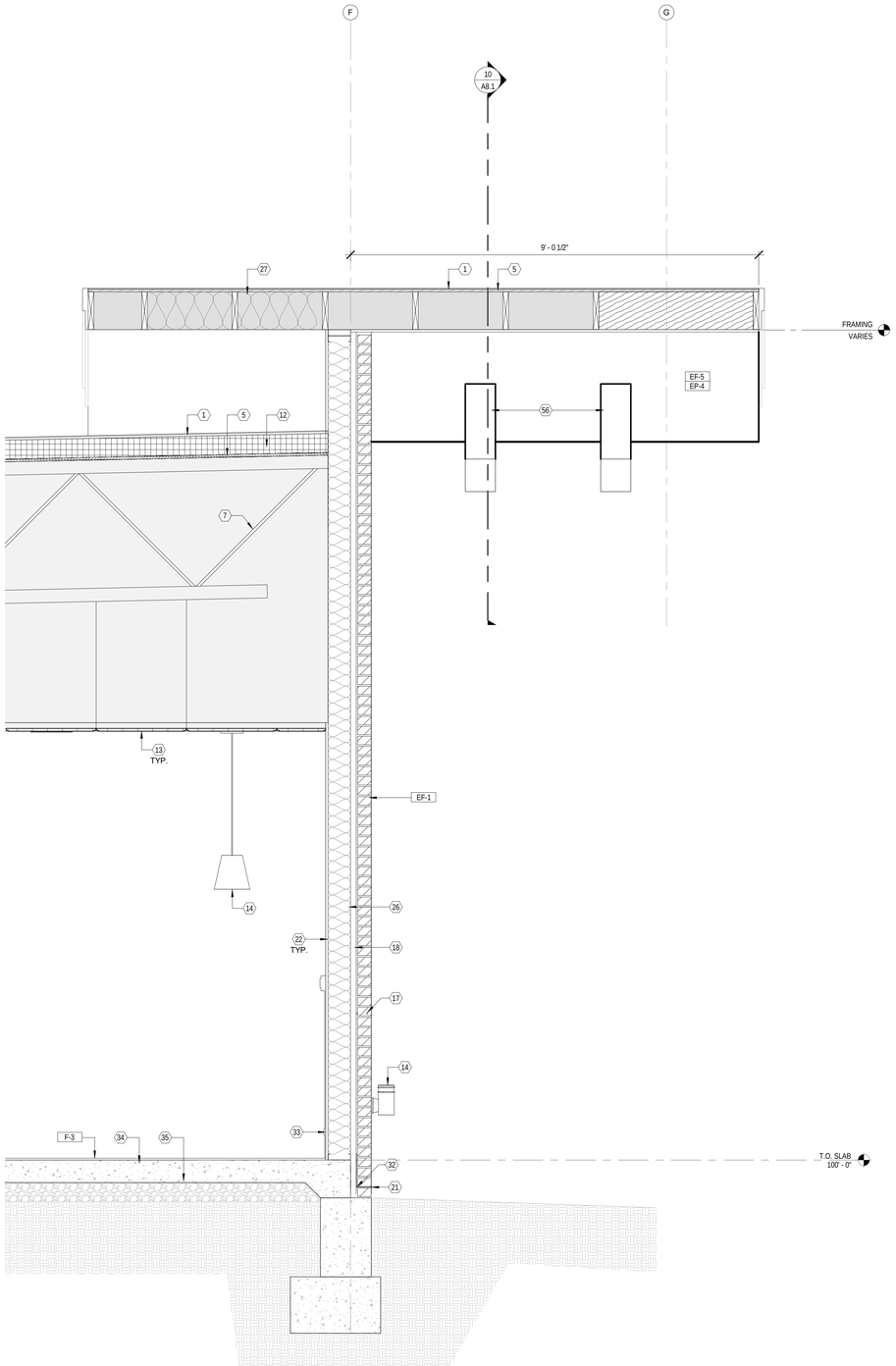
A6.4



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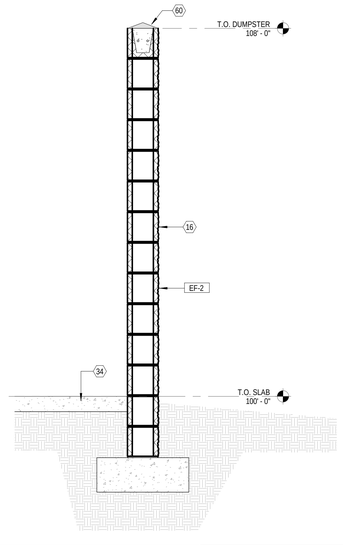

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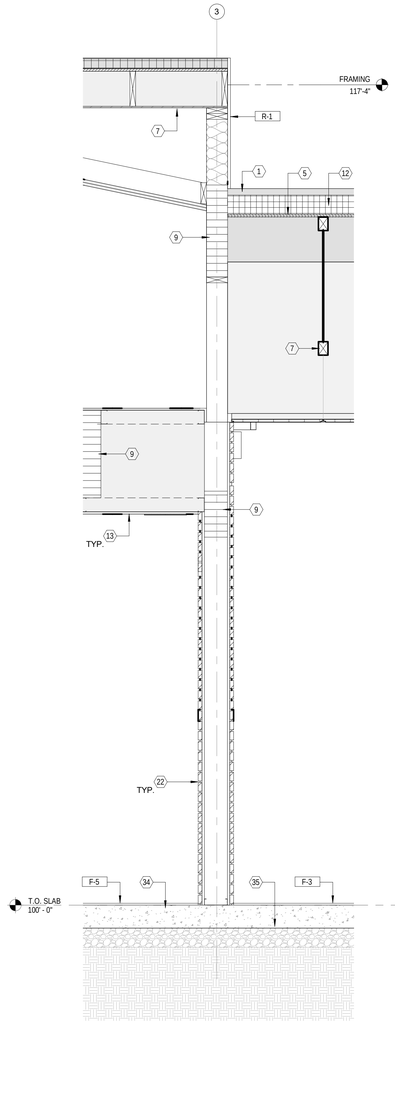

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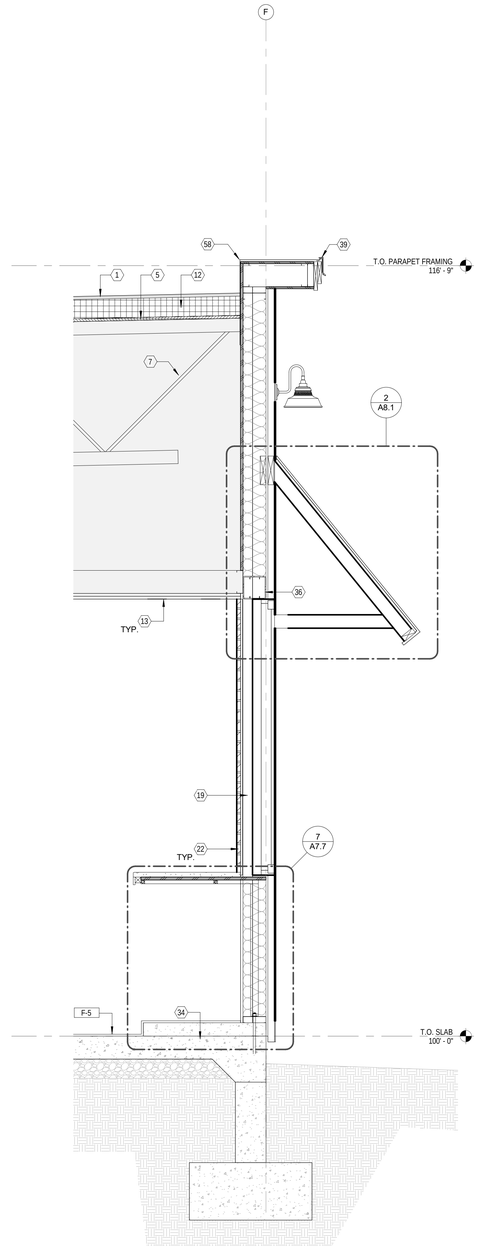

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43	STAINED WOOD TRIM
44	1/2" PLYWOOD, PAINT
45	MECHANICAL DUCTWORK, DIFFUSERS AND EQUIPMENT, RE: MECHANICAL
46	CONTINUOUS FOUNDATION WEEP SCREED
47	ROOF HATCH AS SPECIFIED
48	PROVIDE CONTINUOUS REVEAL TRIM
49	STANDING SEAM COPPER FASCIA RETURN BACK TO PLYWOOD SOFFIT
50	2 LAYERS 1/4" EXTERIOR PLYWOOD AT RADIUS
51	TREATED 2X6 AT RADIUS CUT FROM 2X10 FOR 4'-0" LONG PIECE
52	BOOTH DIVIDERS, RE: ELEVATIONS
53	1" CONTINUOUS XPS FOAM INSULATION
54	ROOF OVERFLOW DRAIN, RE: PLUMBING
55	ROOF DRAIN CONNECT DRAIN PIPE TO STORM SEWER SHOWN DASHED, RE: CIVIL AND PLUMBING
56	WOOD BRACING, RE: STRUCTURAL
57	PROVIDE KICK BRACE AS REQUIRED
58	EXTEND ROOFING MEMBRANE UP PARAPET AND OVER TOP OF WALL TO SNAP CAP FLASHING
59	COLUMN, RE: STRUCTURAL
60	MORTAR BUILD UP, SLOPE TO EACH SIDE TO SHED WATER

FINISH SCHEDULE - EXTERIOR

EXTERIOR PAINT	
EP-1	ANTIQUE WHITE
EP-2	MISSISSIPPI BRONZE ENAMEL
EP-3	IBIS WHITE
EP-4	CHARWOOD
STONE	
ST-1	STONE
EXTERIOR FINISH	
EF-1	MODULAR BRICK
EF-2	SPLIT-FACE CMU BLOCK - 8" THICK
EF-3	NOT USED
EF-4	HARDIE PLANK HORIZONTAL LAP SIDING - NAVAJO BEIGE
EF-5	PLYWOOD-ROUGH SAWN CEDAR
EF-6	HARDIE PLANK HORIZONTAL LAP SIDING - KHAKI BROWN
EF-7	STONE SILL
EF-8	4" HARDIE TRIM - ARCTIC WHITE
EF-9	6" HARDIE TRIM - ARCTIC WHITE
ROOFING	
R-1	SINGLE PLY ROOF
R-2	ARCHITECTURAL COMPOSITION SHINGLES
R-3	STANDING SEAM COPPER

FINISH SCHEDULE - INTERIOR

INTERIOR PAINT	
P-1	TAVERN TAUPE
P-2	IBIS WHITE
P-3	BLACK OF NIGHT
P-4	HALF CAFF
STAIN	
S-1	EBONY
S-2	CLEAR SEALER
S-3	FLAGSTONE
S-4	BRICK SEALER
WALL COVERING	
WC-1	VINYL FABRIC
WC-2	FRP-WHITE
WC-3	FRP-BLACK
WC-4	WOOD LAMINATE
WC-5	PLASTIC LAMINATE-WHITE
WC-6	PLASTIC LAMINATE-BLACK
WC-7	STONE
WC-8	PORCELAIN TILE-CREME
WC-9	PORCELAIN TILE-TORTORA
WC-10	PORCELAIN TILE-TIGERS EYE
WC-11	QUARRY TILE
WC-12	WOOD PLANKS
WC-13	STAINLESS STEEL PANEL
WC-14	THIN BRICK
WC-15	WOOD PANEL
GRANITE	
G-1	GRANITE-JUIPARANA ST. CECILIA
G-2	GRANITE-BLACK
G-3	CORIAN-SAHARA
BASE	
B-1	PORCELAIN TILE-MINERAL CHROME
B-2	QUARRY TILE
B-3	PORCELAIN TILE-RESIDE
CEILING	
C-1	ACOUSTICAL CEILING-BLACK
C-2	ACOUSTICAL CEILING-WHITE
C-3	NOT USED
C-4	V-GROOVE PLANK

idstudio4

6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT

REV 02: 04.18.2023

cheddar's SCRATCH KITCHEN

Issue Date: 02.15.2023

REVISION INFORMATION

1	04.04.2023
CITY COMMENTS	
2	04.05.2023
COORDINATION COMMENTS	

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

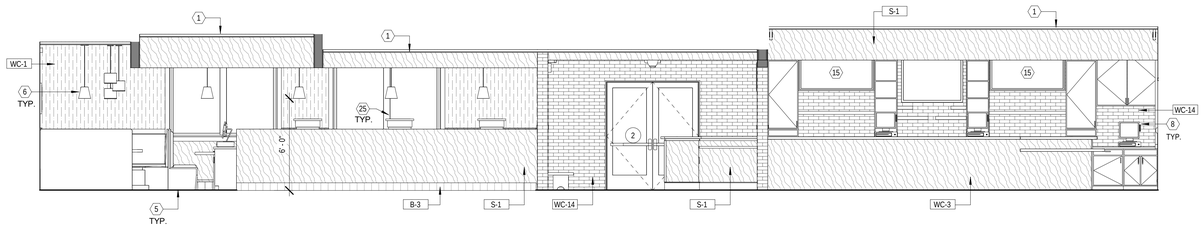
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

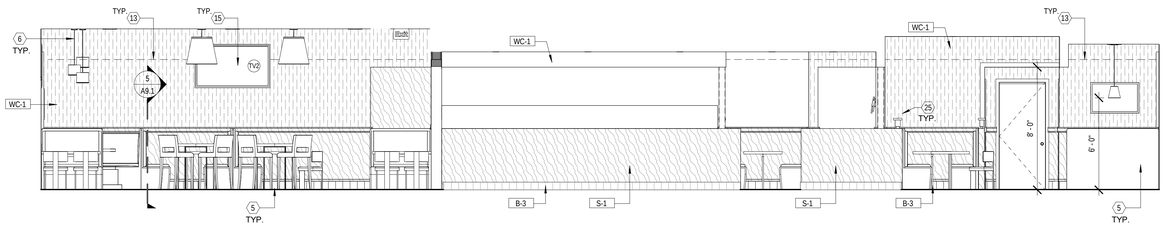
RIVERVIEW, FL

Drawing:
WALL SECTIONS

A6.5



INTERIOR ELEVATION 1
1/4" = 1'-0"



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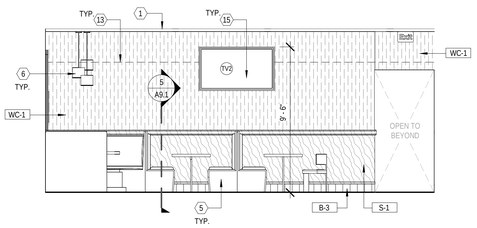

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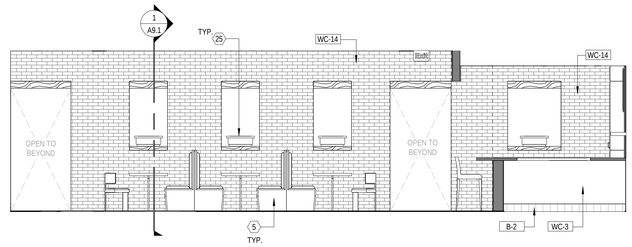
1/4" = 1'-0"



INTERIOR ELEVATION 4
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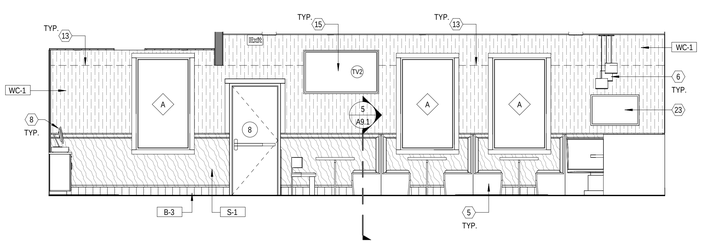

INTERIOR ELEVATION 5
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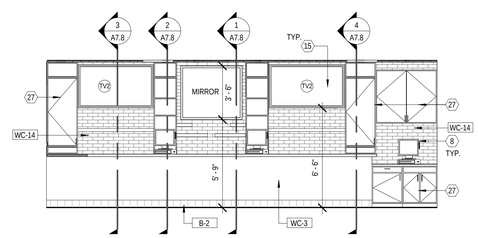
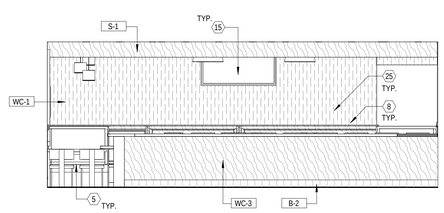


INTERIOR ELEVATION 6
1/4" = 1'-0"



INTERIOR ELEVATION 8
1/4" = 1'-0"

KEYNOTES - INTERIOR NOTES

#	
1	STAINED 1X2 TRIM
2	EMERGENCY STROBE FIXTURE, RE: ELECTRICAL
3	HORN ANNUNCIATOR, RE: ELECTRICAL
4	EMERGENCY PULL STATION
5	FURNITURE BY OWNER
6	LIGHT FIXTURE, RE: ELECTRICAL AND RCP
7	PAINTED GYPSUM BOARD
8	POS STATION AND PRINTER BY OWNER
9	TACTILE EXIT SIGN
10	OCCUPANCY LOAD SIGN
11	STAINLESS STEEL WALL CAPS, RE: FOOD SERVICE
12	ADA RESTROOM SIGNAGE
13	LINE OF WALL COVERING SEAM
14	6" TALL HOUSEKEEPING PAD FOR ELECTRICAL EQUIPMENT, RE: ELECTRICAL AND STRUCTURAL
15	TELEVISION, RE: ELECTRICAL
16	WALK-IN COOLER DOOR, RE: KITCHEN
17	MECHANICAL HOOD SHOWN DASHED, RE: MECHANICAL
18	AIR CURTAIN, RE: ELECTRICAL
19	BOOTH DIVIDER BY OWNER
20	WALL MOUNTED TRAY HOLDER BY OWNER
21	SERVICE SINK FAUCET, RE: PLUMBING
22	ELECTRICAL EQUIPMENT, RE: ELECTRICAL
23	ART WORK BY OWNER
24	RECESSED HEATER TO BE LOCATED ABOVE BASE, RE: MECHANICAL
25	PLANTER POT BY OWNER
26	COAT HOOKS - PETER PEPPER 2141-XL-AL COAT RACK-5 - ALUM. WALL MOUNT 15"
27	CABINET TO BE PROVIDED WITH LOCKS

FINISH SCHEDULE - INTERIOR

INTERIOR PAINT	
P-1	TAVERN TAUPE
P-2	IBIS WHITE
P-3	BLACK OF NIGHT
P-4	HALF CAFF
STAIN	
S-1	EBONY
S-2	CLEAR SEALER
S-3	FLAGSTONE
S-4	BRICK SEALER
WALL COVERING	
WC-1	VINYL FABRIC
WC-2	FRP-WHITE
WC-3	FRP-BLACK
WC-4	WOOD LAMINATE
WC-5	PLASTIC LAMINATE-WHITE
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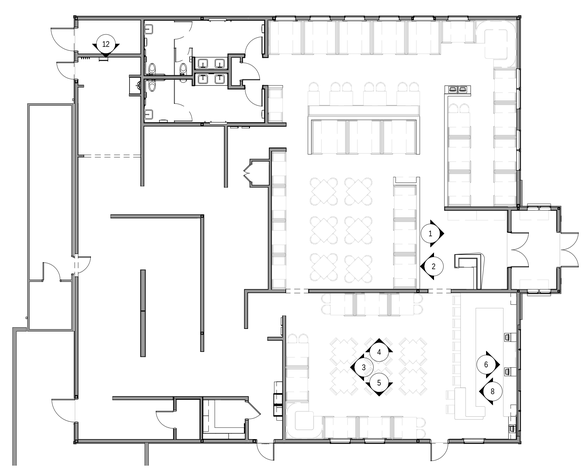
WC-13	STAINLESS STEEL PANEL
WC-14	THIN BRICK
WC-15	WOOD PANEL
GRANITE	
G-1	GRANITE-JUPARANA ST. CECILIA
G-2	GRANITE-BLACK
G-3	CORIAN-SAHARA
BASE	
B-1	PORCELAIN TILE-MINERAL CHROME
B-2	QUARRY TILE
B-3	PORCELAIN TILE-RESIDE
CEILING	
C-1	ACOUSTICAL CEILING-BLACK
C-2	ACOUSTICAL CEILING-WHITE
C-3	NOT USED
C-4	V-GROOVE PLANK

MOOD MEDIA SCHEDULE

TV1	42" TELEVISION
TV2	65" TELEVISION

KEY PLAN



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STATE OF FLORIDA
RUSTY A. RIDGE
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REGISTERED ARCHITECT

REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023

REVISION INFORMATION

1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

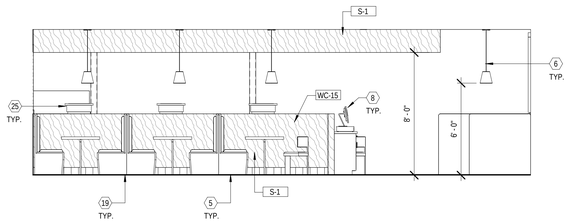
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

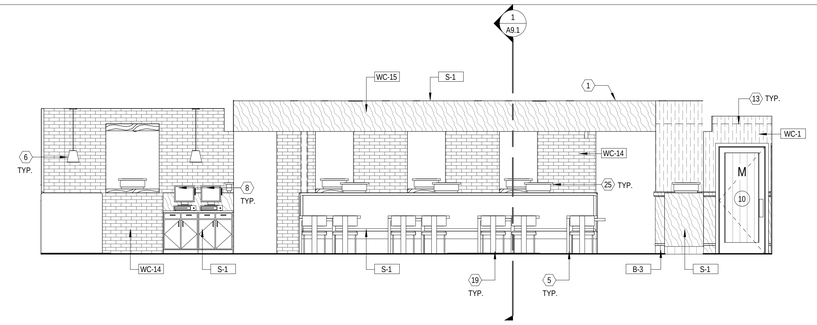
RIVERVIEW, FL

Drawing:
INTERIOR ELEVATION

A7.1



INTERIOR ELEVATION 9
1/4" = 1'-0"



INTERIOR ELEVATION 10
1/4" = 1'-0"

KEYNOTES - INTERIOR NOTES

#	
1	STAINED 1X2 TRIM
2	EMERGENCY STROBE FIXTURE, RE: ELECTRICAL
3	HORN ANNUNCIATOR, RE: ELECTRICAL
4	EMERGENCY PULL STATION
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25	PLANTER POT BY OWNER
26	COAT HOOKS - PETER PEPPER 2141-XL-AL COAT RACK-5 - ALUM. WALL MOUNT 15"
27	CABINET TO BE PROVIDED WITH LOCKS
28	HOST STAND, RE: 1 / A9.3

FINISH SCHEDULE - INTERIOR

INTERIOR PAINT	
P-1	TAVERN TAUPE
P-2	IBIS WHITE
P-3	BLACK OF NIGHT
P-4	HALF CAFF
STAIN	
S-1	EBONY
S-2	CLEAR SEALER
S-3	FLAGSTONE
S-4	BRICK SEALER
WALL COVERING	
WC-1	VINYL FABRIC
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WC-14	THIN BRICK
WC-15	WOOD PANEL
GRANITE	
G-1	GRANITE-JUPARANA ST. CECILIA
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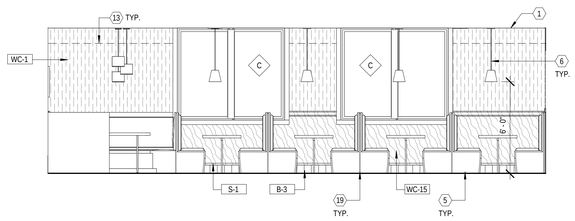
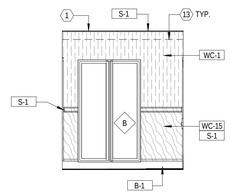
G-3	CORIAN-SAHARA
BASE	
B-1	PORCELAIN TILE-MINERAL CHROME
B-2	QUARRY TILE
B-3	PORCELAIN TILE-RESIDE
CEILING	
C-1	ACOUSTICAL CEILING-BLACK
C-2	ACOUSTICAL CEILING-WHITE
C-3	NOT USED
C-4	V-GROOVE PLANK

MOOD MEDIA SCHEDULE

TV1	42" TELEVISION
TV2	65" TELEVISION



INTERIOR ELEVATION 11
1/4" = 1'-0"



INTERIOR ELEVATION 12
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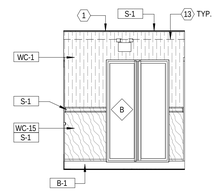
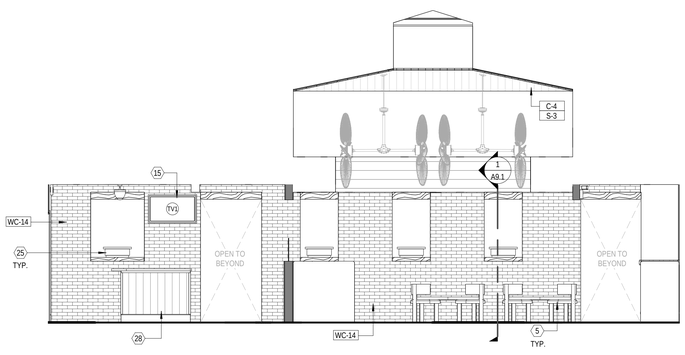


INTERIOR ELEVATION 13
1/4" = 1'-0"



INTERIOR ELEVATION 14
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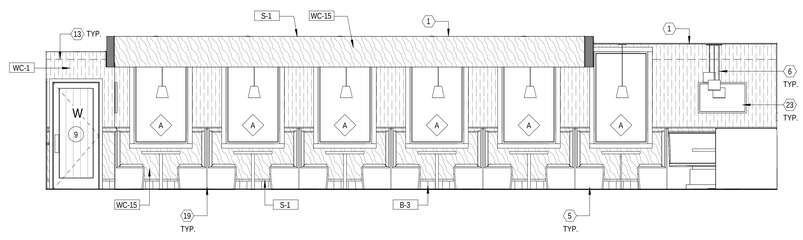

INTERIOR ELEVATION 15
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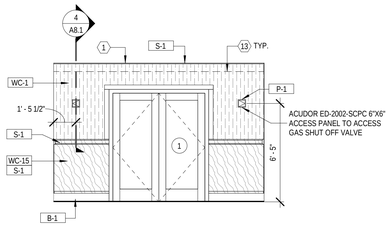

INTERIOR ELEVATION 16
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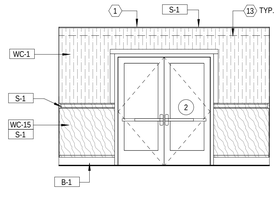

INTERIOR ELEVATION 17
1/4" = 1'-0"

KEY PLAN

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IRVING, TEXAS 75063
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CHEDDARS
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PROTO 18

10150 BLOOMINGDALE AVE

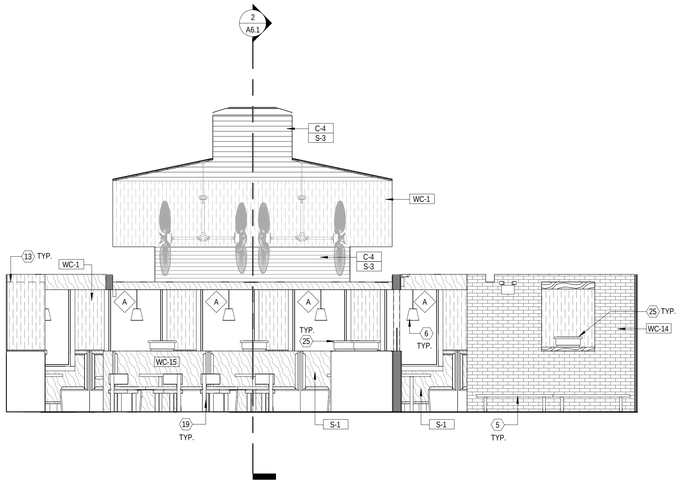
RIVERVIEW, FL 33578

RIVERVIEW, FL

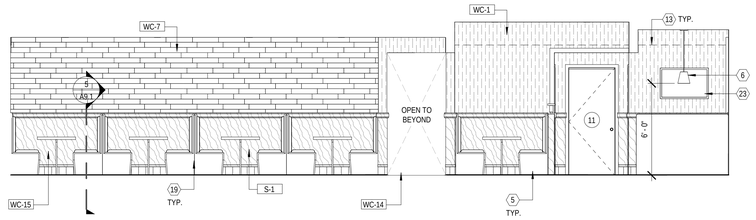
Drawing:

INTERIOR
ELEVATION

A7.2



INTERIOR ELEVATION 18
1/4" = 1'-0"



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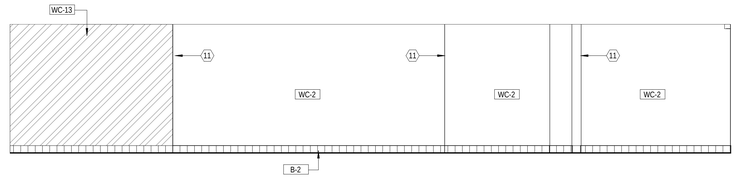
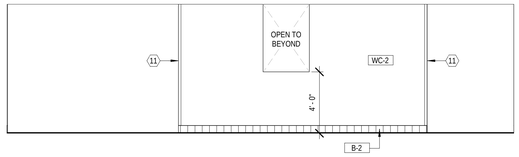
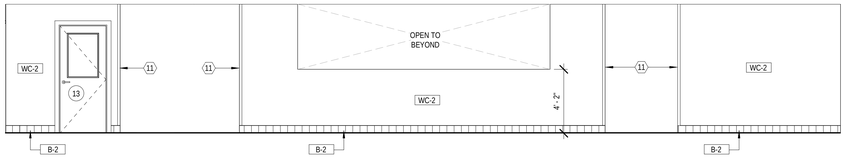


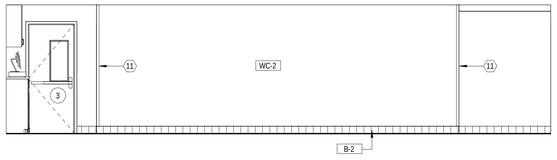
INTERIOR ELEVATION 20
1/4" = 1'-0"



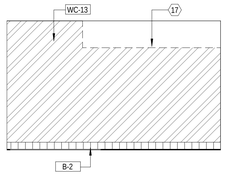
INTERIOR ELEVATION 21
1/4" = 1'-0"



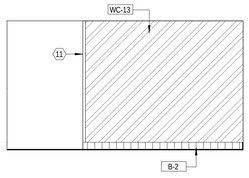
INTERIOR ELEVATION 22
1/4" = 1'-0"



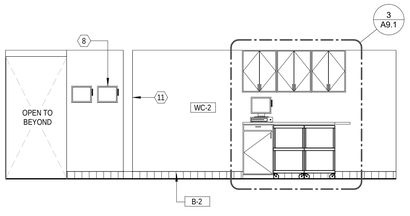
INTERIOR ELEVATION 23
1/4" = 1'-0"



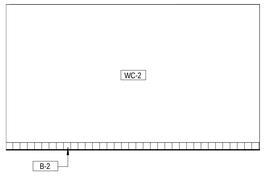
INTERIOR ELEVATION 24
1/4" = 1'-0"



INTERIOR ELEVATION 25
1/4" = 1'-0"



INTERIOR ELEVATION 26
1/4" = 1'-0"



INTERIOR ELEVATION 27
1/4" = 1'-0"

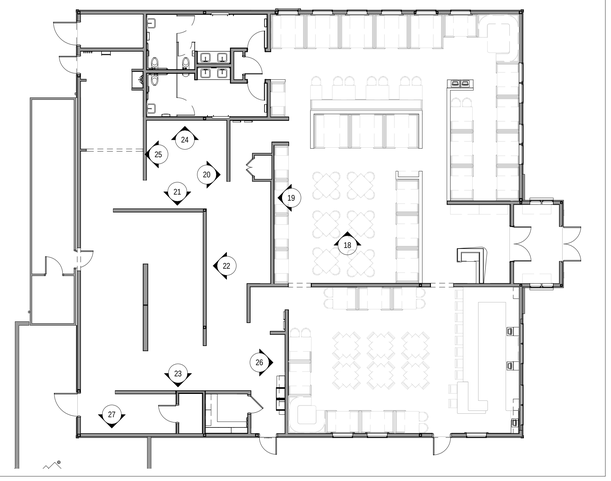
KEYNOTES - INTERIOR NOTES

#	
1	STAINED 1X2 TRIM
2	EMERGENCY STROBE FIXTURE, RE: ELECTRICAL
3	HORN ANNUNCIATOR, RE: ELECTRICAL
4	EMERGENCY PULL STATION
5	FURNITURE BY OWNER
6	LIGHT FIXTURE, RE: ELECTRICAL AND RCP
7	PAINTED GYPSUM BOARD
8	POS STATION AND PRINTER BY OWNER
9	TACTILE EXIT SIGN
10	OCCUPANCY LOAD SIGN
11	STAINLESS STEEL WALL CAPS, RE: FOOD SERVICE
12	ADA RESTROOM SIGNAGE
13	LINE OF WALL COVERING SEAM
14	6" TALL HOUSEKEEPING PAD FOR ELECTRICAL EQUIPMENT, RE: ELECTRICAL AND STRUCTURAL
15	TELEVISION, RE: ELECTRICAL
16	WALK-IN COOLER DOOR, RE: KITCHEN
17	MECHANICAL HOOD SHOWN DASHED, RE: MECHANICAL
18	AIR CURTAIN, RE: ELECTRICAL
19	BOOTH DIVIDER BY OWNER
20	WALL MOUNTED TRAY HOLDER BY OWNER
21	SERVICE SINK FAUCET, RE: PLUMBING
22	ELECTRICAL EQUIPMENT, RE: ELECTRICAL
23	ART WORK BY OWNER
24	RECESSED HEATER TO BE LOCATED ABOVE BASE, RE: MECHANICAL
25	PLANTER POT BY OWNER
26	COAT HOOKS - PETER PEPPER 2141-XL-AL COAT RACK-5 - ALUM. WALL MOUNT 15"

FINISH SCHEDULE - INTERIOR

INTERIOR PAINT	
P-1	TAVERN TAUPE
P-2	IBIS WHITE
P-3	BLACK OF NIGHT
P-4	HALF CAFF
STAIN	
S-1	EBONY
S-2	CLEAR SEALER
S-3	FLAGSTONE
S-4	BRICK SEALER
WALL COVERING	
WC-1	VINYL FABRIC
WC-2	FRP-WHITE
WC-3	FRP-BLACK
WC-4	WOOD LAMINATE
WC-5	PLASTIC LAMINATE-WHITE
WC-6	PLASTIC LAMINATE-BLACK
WC-7	STONE
WC-8	PORCELAIN TILE-CREME
WC-9	PORCELAIN TILE-TORTORA
WC-10	PORCELAIN TILE-TIGERS EYE
WC-11	QUARRY TILE
WC-12	WOOD PLANKS
WC-13	STAINLESS STEEL PANEL
WC-14	THIN BRICK
WC-15	WOOD PANEL
GRANITE	
G-1	GRANITE-JUPARANA ST. CECILIA
G-2	GRANITE-BLACK
G-3	CORIAN-SAHARA
BASE	
B-1	PORCELAIN TILE-MINERAL CHROME
B-2	QUARRY TILE
B-3	PORCELAIN TILE-RESIDE
CEILING	
C-1	ACOUSTICAL CEILING-BLACK
C-2	ACOUSTICAL CEILING-WHITE
C-3	NOT USED
C-4	V-GROOVE PLANK

KEY PLAN



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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT

REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

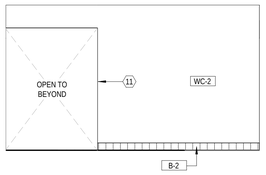
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

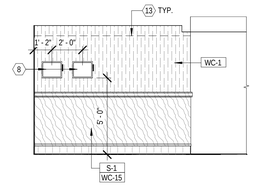
RIVERVIEW, FL

Drawing:
INTERIOR
ELEVATION

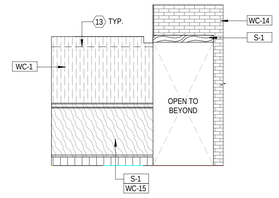
A7.3



INTERIOR ELEVATION 28
1/4" = 1'-0"



INTERIOR ELEVATION 29
1/4" = 1'-0"



INTERIOR ELEVATION 30
1/4" = 1'-0"

KEYNOTES - INTERIOR NOTES

#	
1	STAINED 1X2 TRIM
2	EMERGENCY STROBE FIXTURE, RE: ELECTRICAL
3	HORN ANNUNCIATOR, RE: ELECTRICAL
4	EMERGENCY PULL STATION
5	FURNITURE BY OWNER
6	LIGHT FIXTURE, RE: ELECTRICAL AND RCP
7	PAINTED GYPSUM BOARD
8	POS STATION AND PRINTER BY OWNER
9	TACTILE EXIT SIGN
10	OCCUPANCY LOAD SIGN
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13	LINE OF WALL COVERING SEAM
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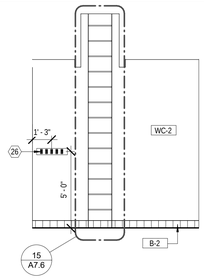
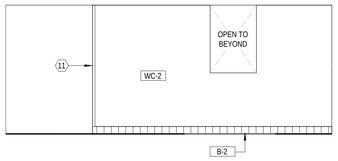
22	ELECTRICAL EQUIPMENT, RE: ELECTRICAL
23	ART WORK BY OWNER
24	RECESSED HEATER TO BE LOCATED ABOVE BASE, RE: MECHANICAL
25	PLANTER POT BY OWNER
26	COAT HOOKS - PETER PEPPER 2141-XL-AL COAT RACK-5 - ALUM. WALL MOUNT 15"
27	CABINET TO BE PROVIDED WITH LOCKS



INTERIOR ELEVATION 31
1/4" = 1'-0"



INTERIOR ELEVATION 32
1/4" = 1'-0"

FINISH SCHEDULE - INTERIOR

INTERIOR PAINT	
P-1	TAVERN TAUPE
P-2	IBIS WHITE
P-3	BLACK OF NIGHT
P-4	HALF CAFF
STAIN	
S-1	EBONY
S-2	CLEAR SEALER
S-3	FLAGSTONE
S-4	BRICK SEALER
WALL COVERING	
WC-1	VINYL FABRIC
WC-2	FRP-WHITE
WC-3	FRP-BLACK
WC-4	WOOD LAMINATE
WC-5	PLASTIC LAMINATE-WHITE
WC-6	PLASTIC LAMINATE-BLACK
WC-7	STONE
WC-8	PORCELAIN TILE-CREME
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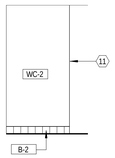
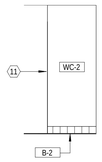
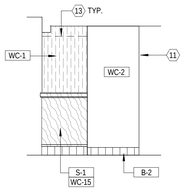
WC-10	PORCELAIN TILE-TIGERS EYE
WC-11	QUARRY TILE
WC-12	WOOD PLANKS
WC-13	STAINLESS STEEL PANEL
WC-14	THIN BRICK
WC-15	WOOD PANEL
GRANITE	
G-1	GRANITE-JUPARANA ST. CECILIA
G-2	GRANITE-BLACK
G-3	CORIAN-SAHARA
BASE	
B-1	PORCELAIN TILE-MINERAL CHROME
B-2	QUARRY TILE
B-3	PORCELAIN TILE-RESIDE
CEILING	
C-1	ACOUSTICAL CEILING-BLACK
C-2	ACOUSTICAL CEILING-WHITE
C-3	NOT USED
C-4	V-GROOVE PLANK



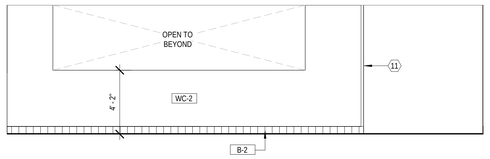
INTERIOR ELEVATION 33
1/4" = 1'-0"



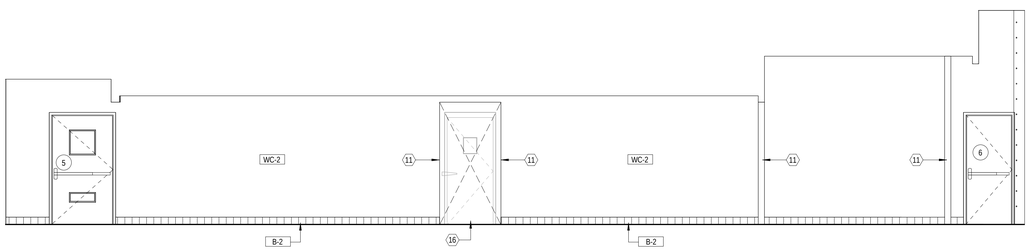
INTERIOR ELEVATION 34
1/4" = 1'-0"



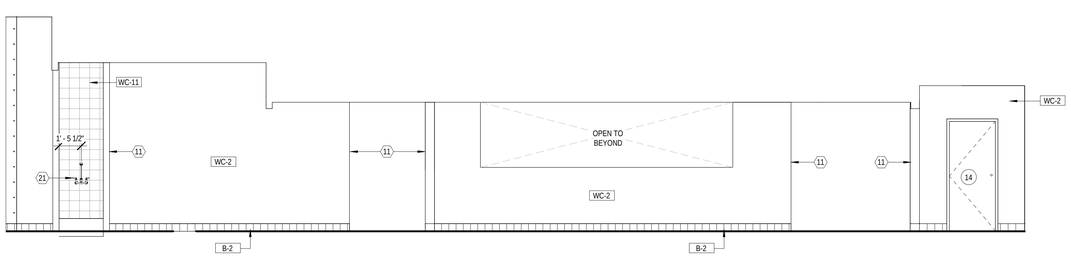
INTERIOR ELEVATION 35
1/4" = 1'-0"



INTERIOR ELEVATION 36
1/4" = 1'-0"

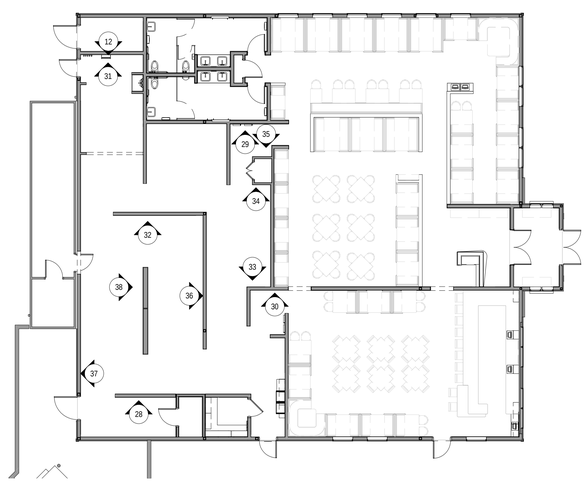


INTERIOR ELEVATION 37
1/4" = 1'-0"



INTERIOR ELEVATION 38
1/4" = 1'-0"

KEY PLAN



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DCH22007

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STATE OF FLORIDA
RUSTY A. RIGGS
AR98116
LICENSED ARCHITECT

REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

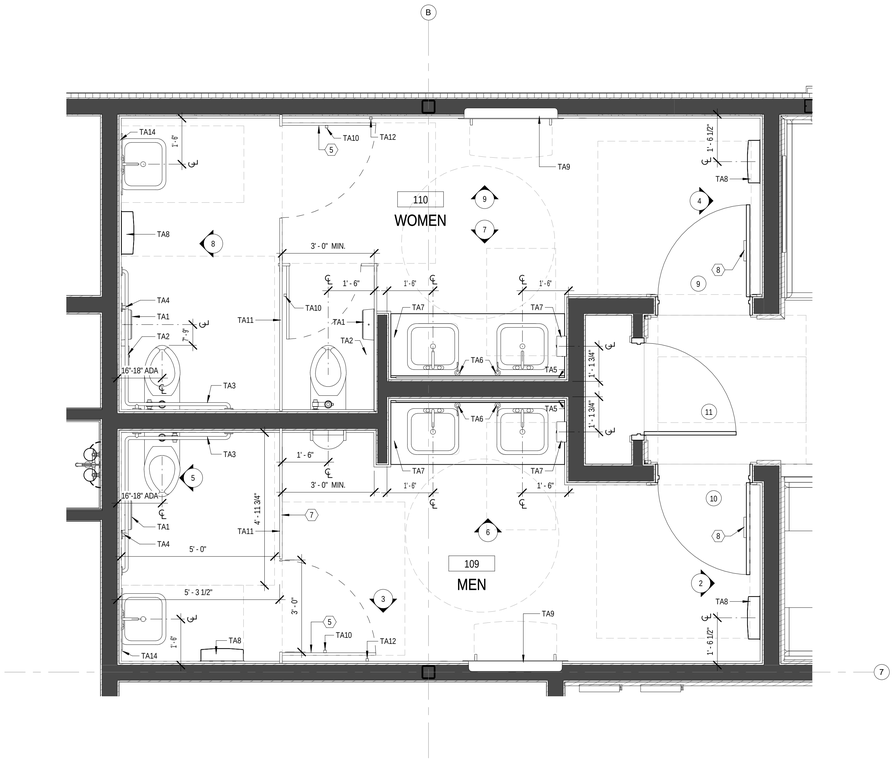
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

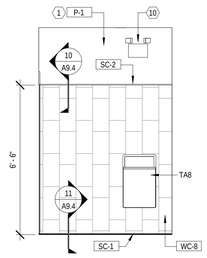
RIVERVIEW, FL

Drawing:
INTERIOR
ELEVATION

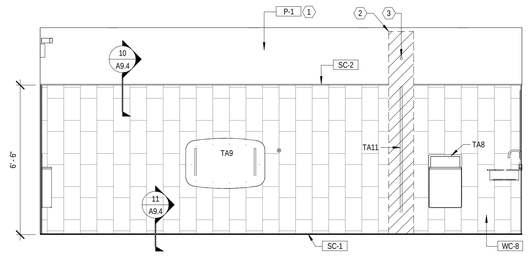
A7.4



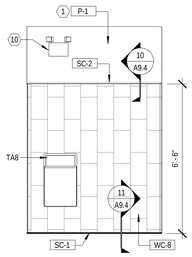
LARGE SCALE PLAN AT RESTROOM 1
1/2" = 1'-0"



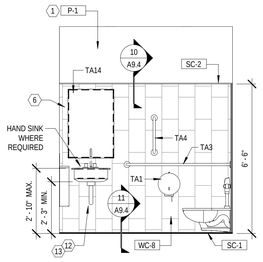
INTERIOR ELEVATION AT MEN 2
3/8" = 1'-0"



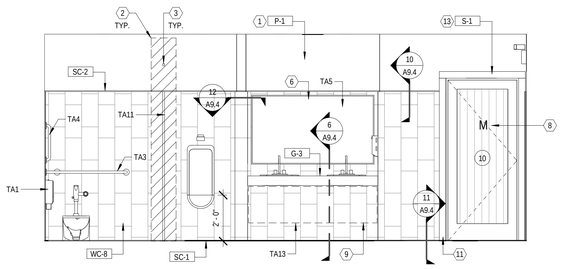
INTERIOR ELEVATION AT MEN 3
3/8" = 1'-0"



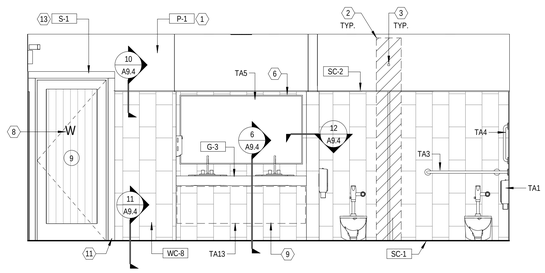
INTERIOR ELEVATION AT WOMEN 4
3/8" = 1'-0"



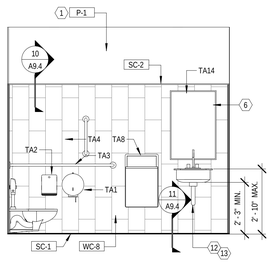
INTERIOR ELEVATION AT MEN 5
3/8" = 1'-0"



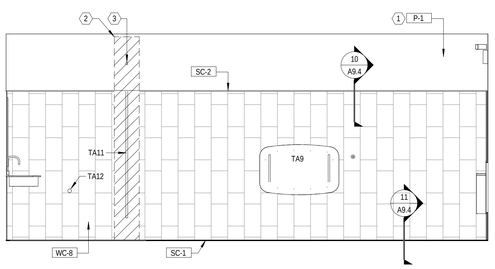
INTERIOR ELEVATION AT MEN 6
3/8" = 1'-0"



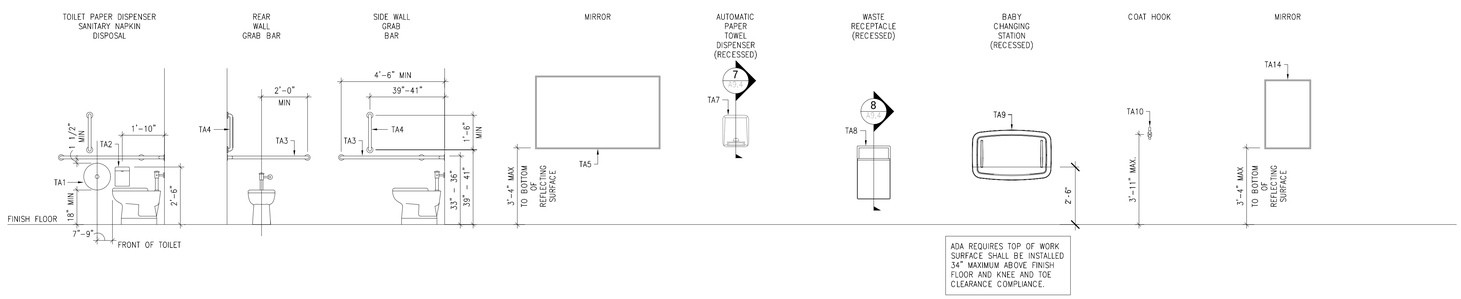
INTERIOR ELEVATION AT WOMEN 7
3/8" = 1'-0"



INTERIOR ELEVATION AT WOMEN 8
3/8" = 1'-0"



INTERIOR ELEVATION AT WOMEN 9
3/8" = 1'-0"



TOILET ACCESSORY MOUNTING HEIGHTS 10
3/8" = 1'-0"

GENERAL NOTES - RESTROOM

A	1/4" GAP MAX AT DOORS TO TOILET PARTITION.
B	PROVIDE METAL BACKING FOR ALL ACCESSORIES AND ANCHOR WITH TOGGLE BOLTS OR LAG SCREWS - NO PLASTIC EXPANSION SHIELDS.
C	REFER TO PLUMBING DRAWINGS FOR SPECS OF ALL WATER CLOSETS, LAVATORIES AND URINALS.
F	ALL WALLS IN KITCHEN, STORAGE AND OFFICE TO RECEIVE FRP OVER DESIGNATED WALL TYPE. REFER TO WALL SCHEDULE THIS SHEET.
G	REFER TO SHEETS A7.X FOR ALL INTERIOR ELEVATIONS AND TAGS.

KEYNOTES - RESTROOM

1	GYPSUM BOARD AS SCHEDULED
2	SHADED AREA INDICATES BLOCKING TO BE PROVIDED WITHIN THE WALLS BEHIND PARTITIONS
3	OVERHEAD TOILET PARTITION BRACING MOUNTED TO WALL
4	AUTOMATIC FLUSH VALVE SENSOR PER MANUFACTURER, RE: PLUMBING
5	ADA REQUIRES DOOR PULL ON BOTH SIDES OF DOOR NEAR LATCH IN ACCESSIBLE STALL
6	TILE TO BE RUN BEHIND MIRROR
7	PARTITION PILASTER TO BE RUN FLOOR TO CEILING
8	VINYL DOOR STICKERS ON EXTERIOR SIDE OF DOOR. ALIGN WITH ADJACENT ADA SIGNAGE, PROVIDED BY OWNER, INSTALLED BY G.C.
9	LINE OF MILLWORK PANEL SHOWN DASHED
10	EMERGENCY LIGHTS AS SCHEDULED, RE: ELECTRICAL
11	STAINED 1X4 TRIM
12	PROVIDE KNEE AND TOE CLEARANCE UNDER S/NK PER ADA REQUIREMENTS
13	LAVATORY DRAIN AND SUPPLY LINES SHALL BE INSULATED, RE: PLUMBING

TOILET ACCESSORY SCHEDULE

TA1	TOILET TISSUE DISPENSER	GEORGIA PACIFIC 59493, STAINLESS OWNER PROVIDED
TA2	FEMININE NAPKIN DISPOSAL (WOMEN ONLY)	BOBRICK B-270
TA3	GRAB BAR - CONTINUOUS	BOBRICK B-5897
TA4	GRAB BAR - VERTICAL	BOBRICK B-5806X18
TA5	MIRROR	64"X36" WITH BRONZE EDGE
TA6	SOAP DISPENSER	DELTA 44000 WITH CHROME FINISH
TA7	RECESSED AUTOMATED PAPER TOWEL DISPENSER	GEORGIA PACIFIC EnMOTION 59466 WITH POWER UNIT-OWNER PROVIDED
TA8	RECESSED WASTE RECEPTACLE	BOBRICK B-43644
TA9	RECESSED MOUNTED BABY CHANGING STATION	KOALA KARE KB310-SSRE
TA10	COAT HOOK	BOBRICK B-6717
TA11	TOILET PARTITIONS	FORMICA 5489-NT ESPRESSO PEAR
TA12	DOOR STOP	ROCKWOOD 400
TA13	LAVATORY CLIPS	HAFELE 262.49.310, NO FACE SCREWS
TA14	MIRROR	24"X36" WITH BRONZE EDGE
TA15	RECESSED WASTE RECEPTACLE AND AUTOMATIC PAPER TOWEL DISPENSER	GEORGIA PACIFIC 59401 HIGH CAPACITY TRASH RECEPTACLE FOR EnMOTION RECESSED AUTOMATED TOWEL DISPENSER

FINISH SCHEDULE - INTERIOR

INTERIOR PAINT	
P-1	TAVERN TAUPE
P-2	IBIS WHITE
P-3	BLACK OF NIGHT
P-4	HALF CAFF
STAIN	
S-1	EBONY
S-2	CLEAR SEALER
S-3	FLAGSTONE
S-4	BRICK SEALER
WALL COVERING	
WC-1	VINYL FABRIC
WC-2	FRP-WHITE
WC-3	FRP-BLACK
WC-4	WOOD LAMINATE
WC-5	PLASTIC LAMINATE-WHITE
WC-6	PLASTIC LAMINATE-BLACK
WC-7	STONE
WC-8	PORCELAIN TILE-CREME
WC-9	PORCELAIN TILE-TORTORA
WC-10	PORCELAIN TILE-TIGERS EYE
WC-11	QUARRY TILE
WC-12	WOOD PLANKS
WC-13	STAINLESS STEEL PANEL
WC-14	THIN BRICK
WC-15	WOOD PANEL
GRANITE	
G-1	GRANITE-JUPARANA ST. CECILIA
G-2	GRANITE-BLACK
G-3	CORIAN-SAHARA
BASE	
B-1	PORCELAIN TILE-MINERAL CHROME
B-2	QUARRY TILE
B-3	PORCELAIN TILE-RESIDE
CEILING	
C-1	ACOUSTICAL CEILING-BLACK
C-2	ACOUSTICAL CEILING-WHITE
C-3	NOT USED
C-4	V-GROOVE PLANK

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PROJECT NUMBER
DCH22007

CLIENT:
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1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
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STATE OF FLORIDA
RUSTY A. RIGGS
AR98116
REGISTERED ARCHITECT

REV 02: 04.18.2023

cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

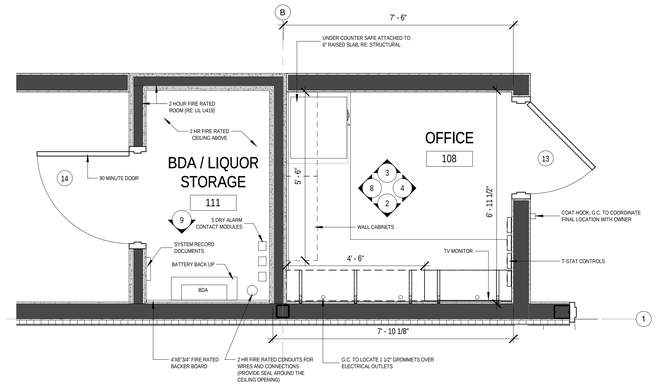
Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18
10150 BLOOMINGDALE AVE
RIVERVIEW, FL 33578

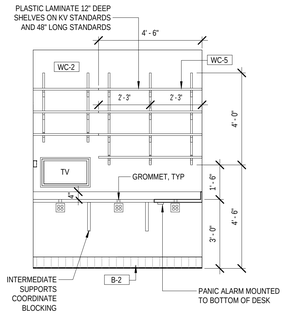
RIVERVIEW, FL

Drawing:
ENLARGED RESTROOM PLAN AND ELEVATIONS

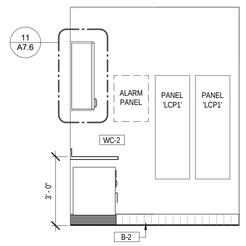
A7.5



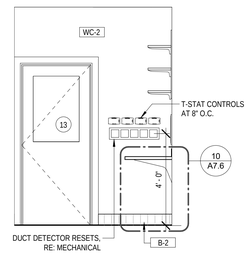
LARGE SCALE FLOOR PLAN AT OFFICE / BDA CLOSET 1
1/2" = 1'-0"



ELEVATION AT OFFICE 2
3/8" = 1'-0"

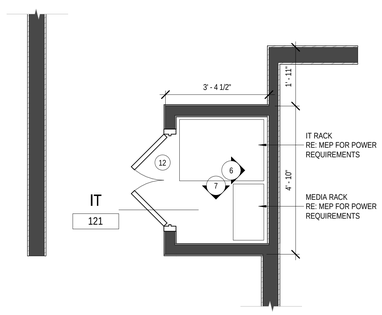


ELEVATION AT OFFICE 3
3/8" = 1'-0"

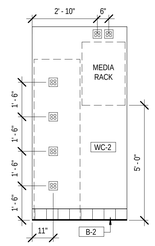


ELEVATION AT OFFICE 4
3/8" = 1'-0"

FINISH SCHEDULE - INTERIOR	
INTERIOR PAINT	
P-1	TAVERN TAUPE
P-2	IBIS WHITE
P-3	BLACK OF NIGHT
P-4	HALF CAFF
STAIN	
S-1	EBONY
S-2	CLEAR SEALER
S-3	FLAGSTONE
S-4	BRICK SEALER
WALL COVERING	
WC-1	VINYL FABRIC
WC-2	FRP-WHITE
WC-3	FRP-BLACK
WC-4	WOOD LAMINATE
WC-5	PLASTIC LAMINATE-WHITE
WC-6	PLASTIC LAMINATE-BLACK
WC-7	STONE
WC-8	PORCELAIN TILE-CREME
WC-9	PORCELAIN TILE-TORTORA
WC-10	PORCELAIN TILE-TIGERS EYE
WC-11	QUARRY TILE
WC-12	WOOD PLANKS
WC-13	STAINLESS STEEL PANEL
WC-14	THIN BRICK
WC-15	WOOD PANEL
GRANITE	
G-1	GRANITE-JUPARANA ST. CECILIA
G-2	GRANITE-BLACK
G-3	CORIAN-SAHARA
BASE	
B-1	PORCELAIN TILE-MINERAL CHROME
B-2	QUARRY TILE
B-3	PORCELAIN TILE-RESIDE
CEILING	
C-1	ACOUSTICAL CEILING-BLACK
C-2	ACOUSTICAL CEILING-WHITE
C-3	NOT USED
C-4	V-GROOVE PLANK

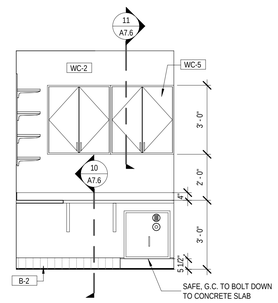


LARGE SCALE FLOOR PLAN AT IT CLOSET 5
1/2" = 1'-0"

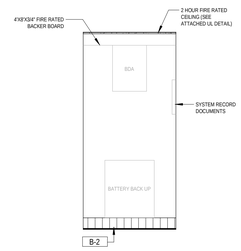


ELEVATION AT IT CLOSET 6
3/8" = 1'-0"

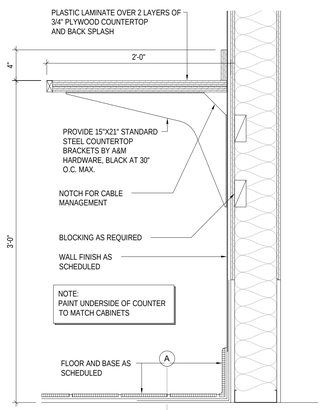
ELEVATION AT IT CLOSET 7
3/8" = 1'-0"



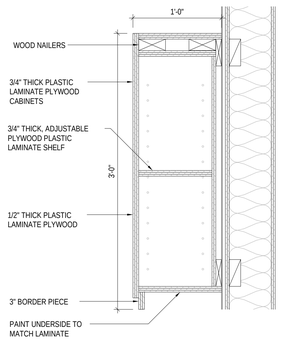
ELEVATION AT OFFICE 8
3/8" = 1'-0"



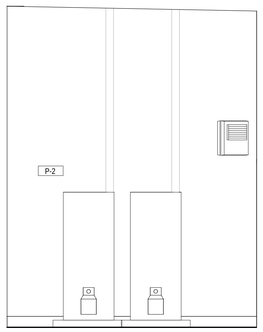
ELEVATION AT BDA CLOSET 9
3/8" = 1'-0"



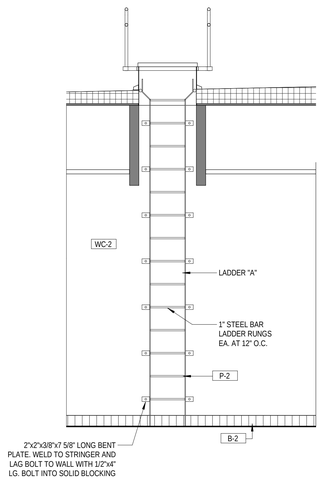
DETAIL AT OFFICE COUNTER 10
1 1/2" = 1'-0"



DETAIL AT OFFICE UPPER CABINET 11
1 1/2" = 1'-0"

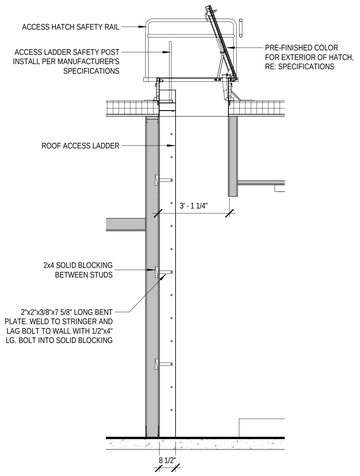


ELEVATION AT MECHANICAL 12
3/8" = 1'-0"



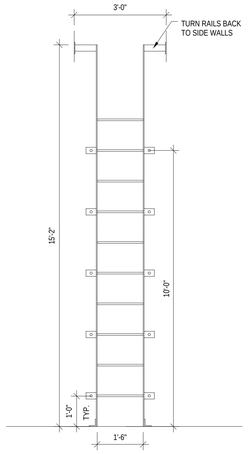
ELEVATION AT LADDER (MECH) 15
3/8" = 1'-0"

ROOF HATCH:	BILCO S-20
SAFETY POST:	LU-1 SAFETY POST
SAFETY RAIL:	BIL-GUARD RL2-S
LADDER:	ALACO 660



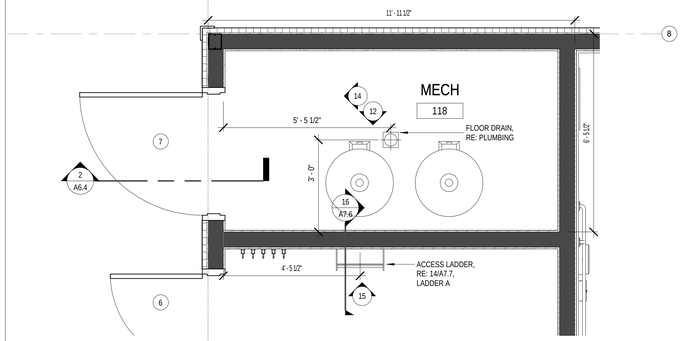
SECTION AT LADDER 16
3/8" = 1'-0"

STEEL LADDERS 2 1/2" x 3/8" FLAT STRINGERS WITH 5/16" DIAMETER RINGS. ATTACH TO WALL AND FLOOR WITH (2) 1/2" x 1/8" "L" SHAPED BAR BRACKETS. BOLT LADDER TO WOOD NAILER IN WALL.

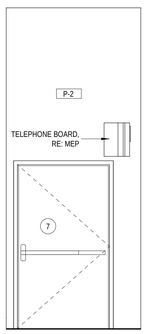


LADDER A

DETAIL AT LADDER 17
1/2" = 1'-0"



LARGE SCALE PLAN AT MECHANICAL 13
1/2" = 1'-0"



ELEVATION AT MECHANICAL 14
3/8" = 1'-0"

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6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIGGS
AR98116
REGISTERED ARCHITECT

REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

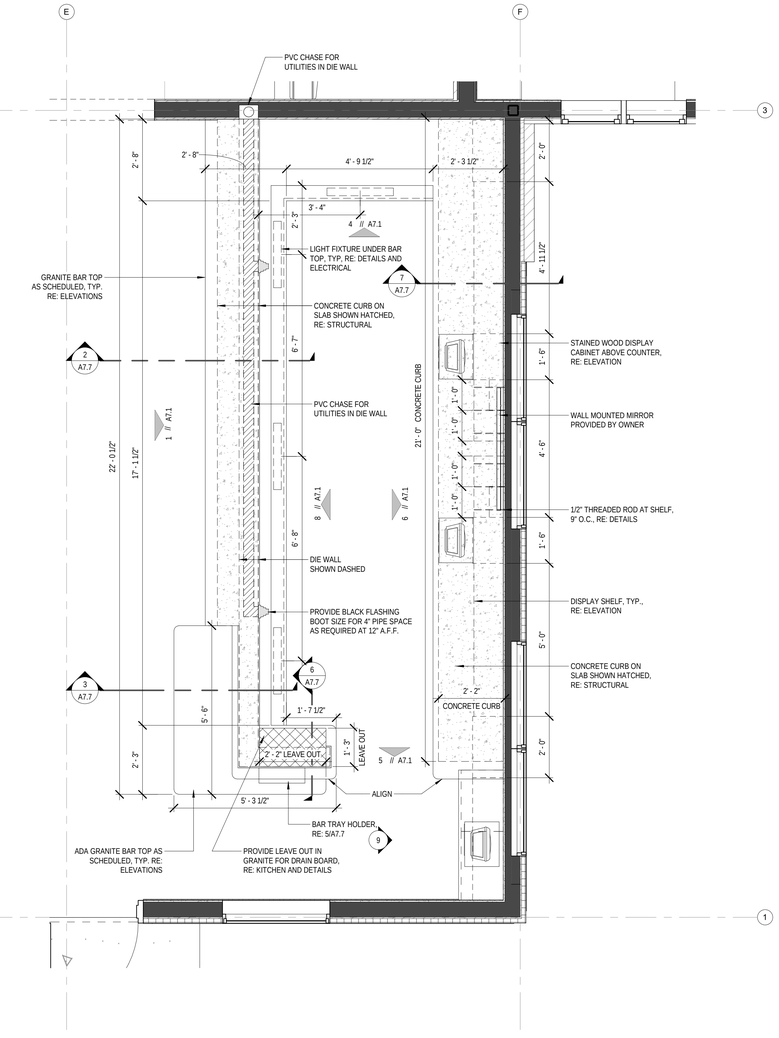
RIVERVIEW, FL 33578

RIVERVIEW, FL

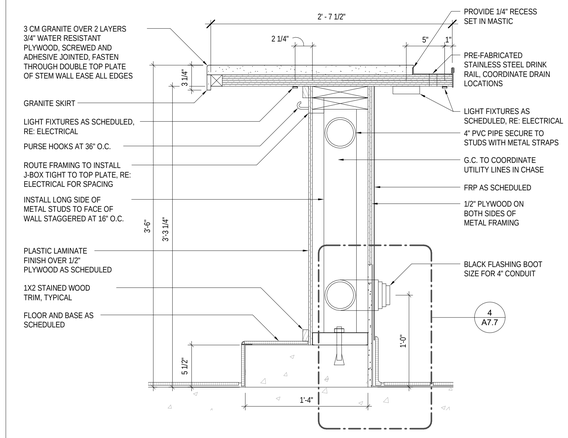
Drawing:

ENLARGED OFFICE / IT / MECH PLAN

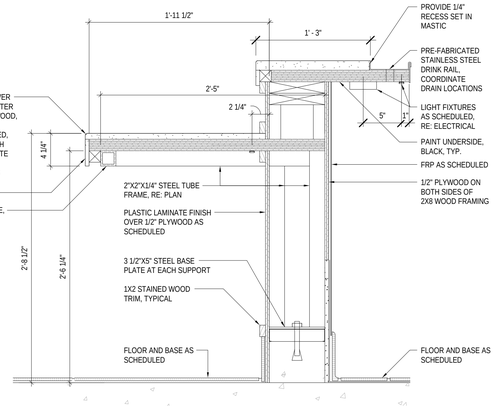
A7.6



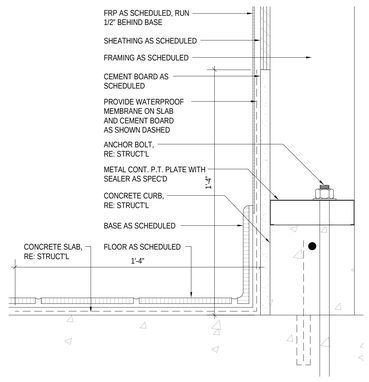
ENLARGED BAR PLAN 1
1/2" = 1'-0"



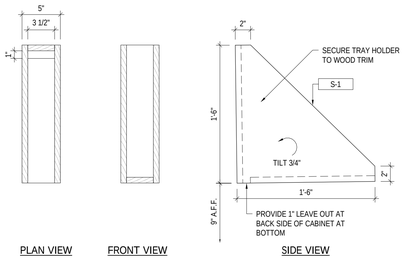
DETAIL AT TYPICAL BAR COUNTER 2
1 1/2" = 1'-0"



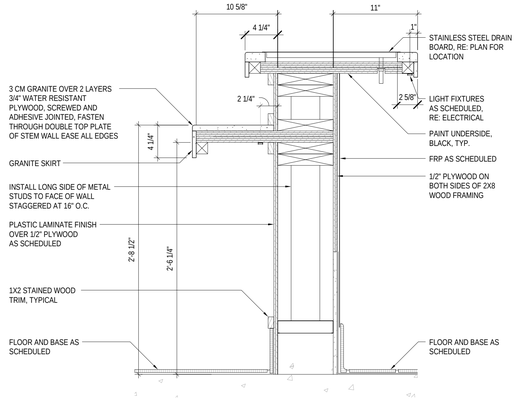
DETAIL AT BAR ADA COUNTER 3
1 1/2" = 1'-0"



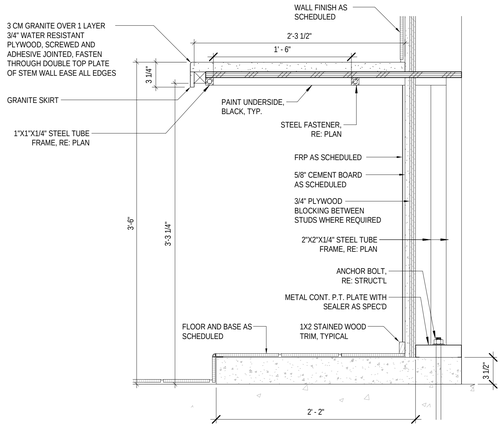
DETAIL AT BAR WATERPROOFING 4
3" = 1'-0"



DETAIL AT BAR TRAY HOLDER 5
1 1/2" = 1'-0"



DETAIL AT BAR DRAIN BOARD 6
1 1/2" = 1'-0"



DETAIL AT BACK BAR COUNTER 7
1 1/2" = 1'-0"

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IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

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Cheddar's SCRATCH KITCHEN

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Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

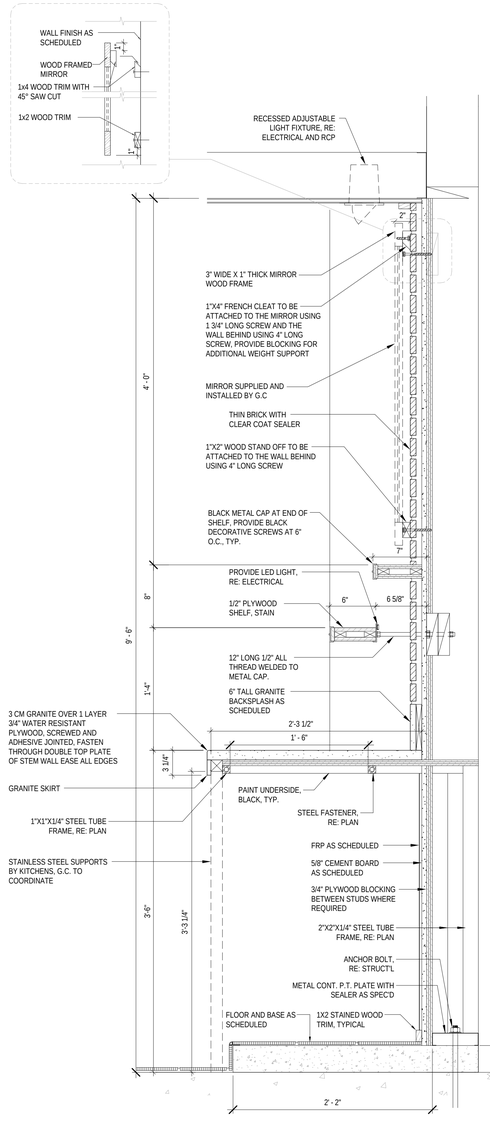
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

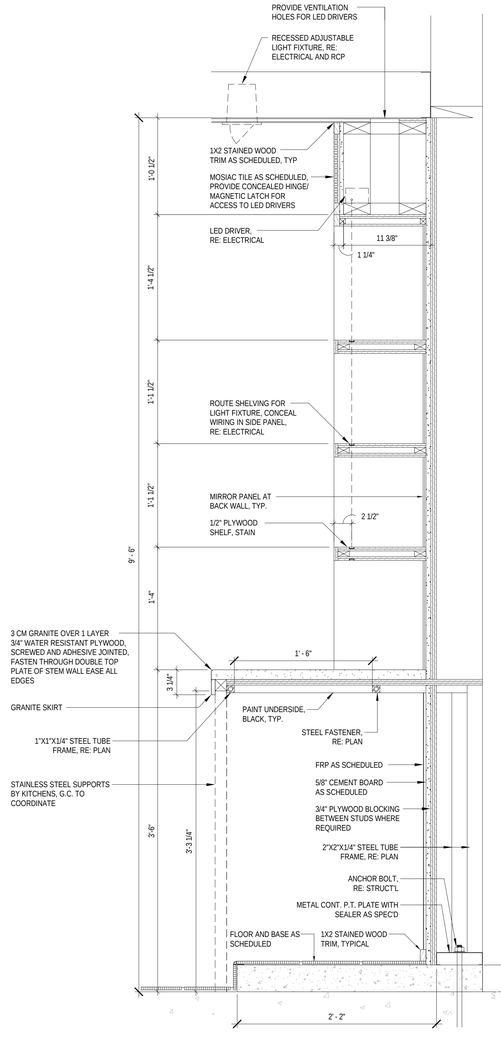
RIVERVIEW, FL

Drawing:
ENLARGED BAR AND ELEVATIONS

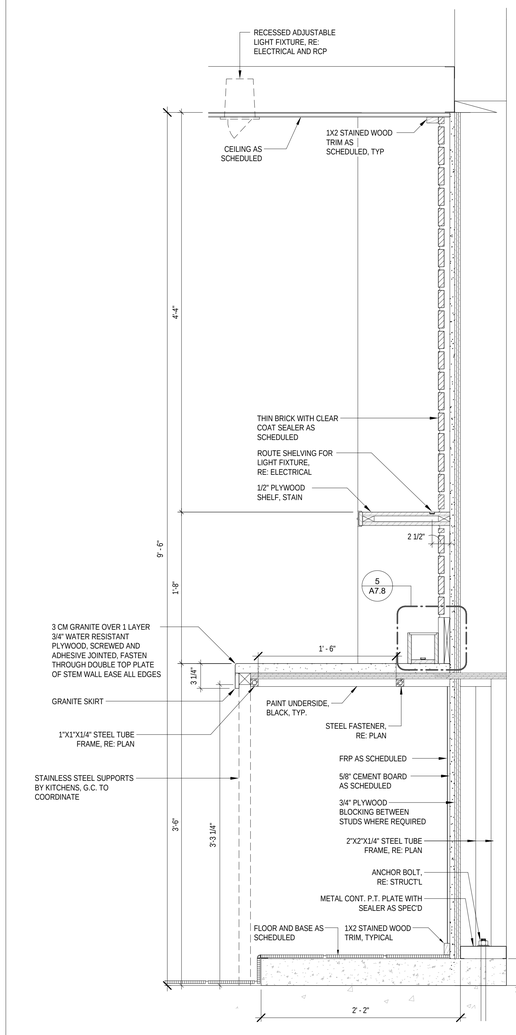
A7.7



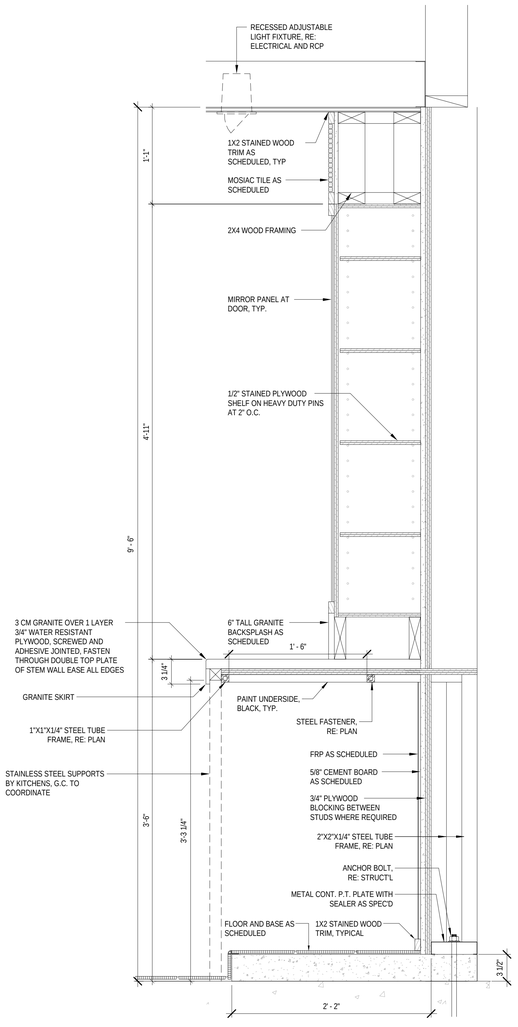
DETAIL AT BACK BAR COUNTER 1
1 1/2" = 1'-0"



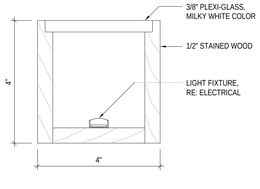
DETAIL AT BACK BAR COUNTER 2
1 1/2" = 1'-0"



DETAIL AT BACK BAR COUNTER 3
1 1/2" = 1'-0"



DETAIL AT BACK BAR COUNTER 4
1 1/2" = 1'-0"



DETAIL AT DISPLAY SHELF 5
6" = 1'-0"

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IRVING, TEXAS 75063
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CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

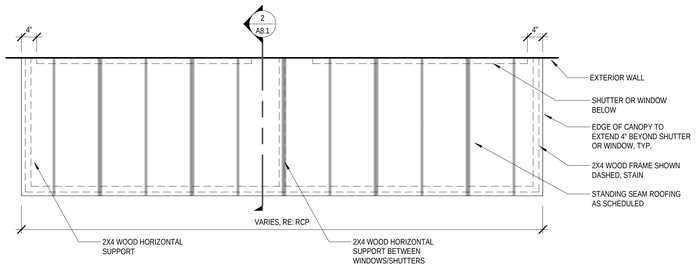
RIVERVIEW, FL 33578

RIVERVIEW, FL

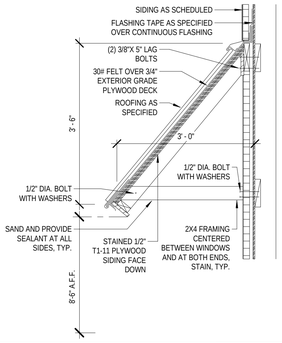
Drawing:

BAR DETAILS

A7.8

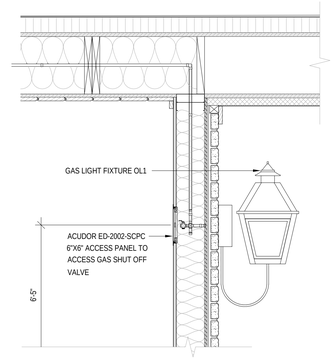


DETAIL AT AWNING 1
3/4" = 1'-0"



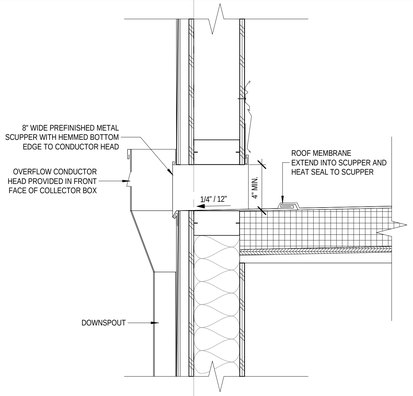
DETAIL AT AWNING 2
3/4" = 1'-0"

OPEN 3



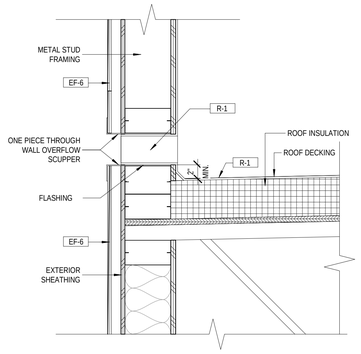
SECTION AT ACCESS PANEL 4
1" = 1'-0"

A



SCUPPER DETAIL 5
1 1/2" = 1'-0"

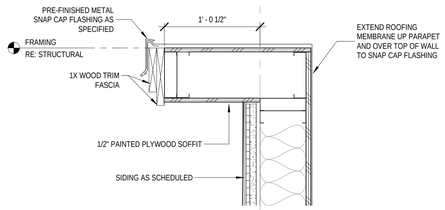
OPEN 6



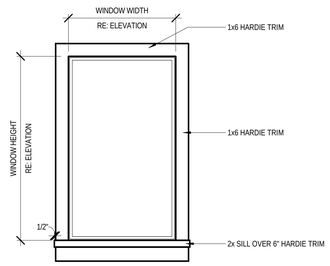
THROUGH WALL OVERFLOW SCUPPER DETAIL 7
1 1/2" = 1'-0"

F

NOTE:
REFER WALL SECTIONS FOR REMAINDER OF NOTES



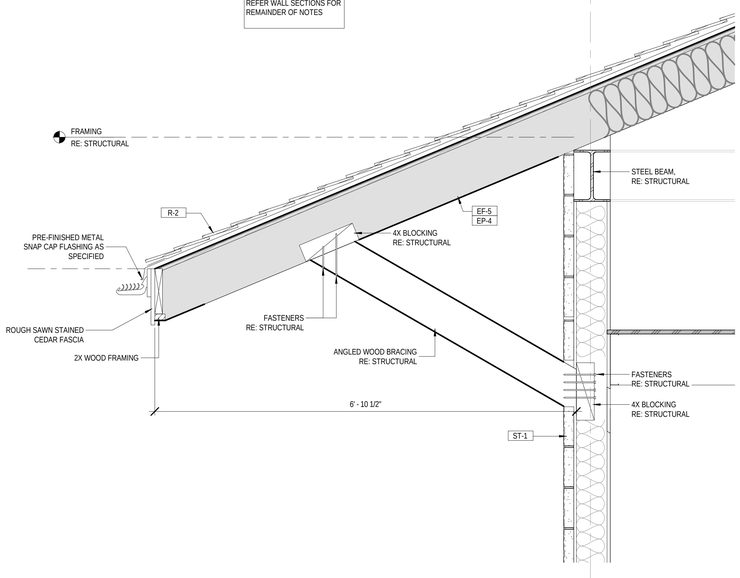
WALL CAP DETAIL 8
1 1/2" = 1'-0"



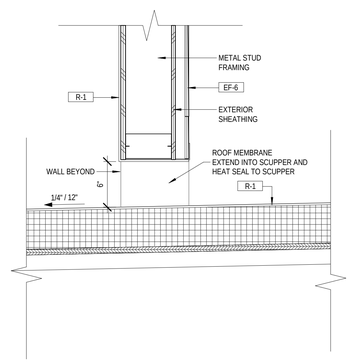
TYPICAL WINDOW TRIM DETAIL 9
1/2" = 1'-0"

5

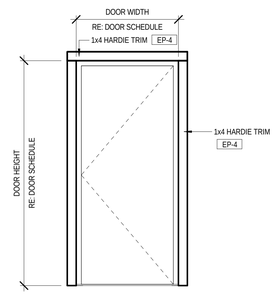
NOTE:
REFER WALL SECTIONS FOR REMAINDER OF NOTES



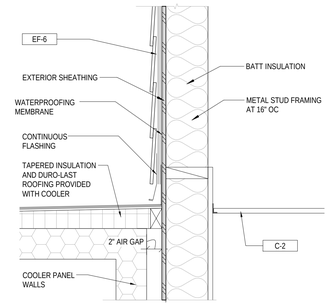
DETAIL AT ENTRY TOWER BRACING 10
1" = 1'-0"



THROUGH WALL SCUPPER DETAIL 11
1 1/2" = 1'-0"



TYPICAL DOOR TRIM DETAIL 12
1/2" = 1'-0"



COOLER CONNECTION TO BUILDING DETAIL 13
1 1/2" = 1'-0"

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2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

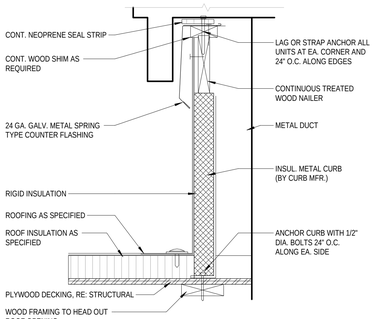
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:

EXTERIOR DETAILS

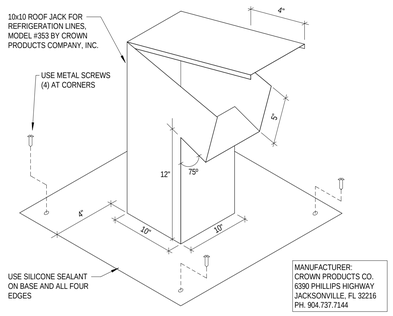
A8.1



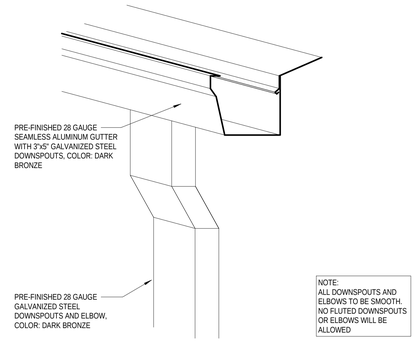
DETAIL AT RTU CURB 1
1 1/2" = 1'-0"

OPEN 2

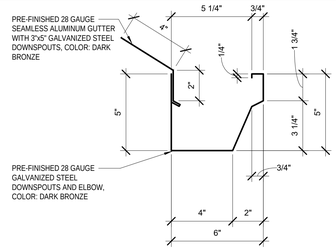
OPEN 3



DETAIL AT ROOF JACK 4
3" = 1'-0"

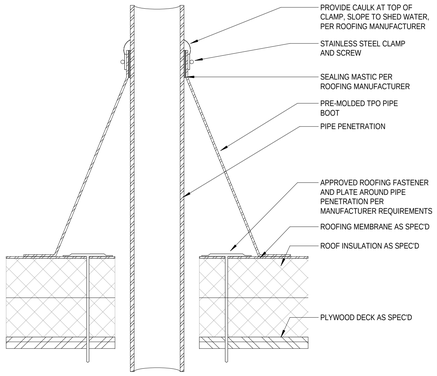


DETAIL AT TYPICAL DOWNSPOUT 5
3" = 1'-0"



1. PRE-FINISHED 28 GAUGE SEAMLESS GALVANIZED ALUMINUM RAIN GUTTERS. SUPPORT GUTTERS WITH STEEL HIDDEN GUTTER HANGERS.
2. SEAMLESS GUTTERS TO BE IN SMACNA SHAPE "I", COLOR: DARK BRONZE.
3. GALVANIZED STEEL PRE-FINISHED SMOOTH BOX DOWNSPOUTS AND ELBOWS ARE TO BE 3"x5" IN PRE-FABRICATED LENGTHS OF AT LEAST 8 FEET, COLOR: DARK BRONZE. FLUTED DOWNSPOUTS AND ELBOWS WILL NOT BE ALLOWED.
4. USE POP-RIVETS TO JOIN ALL GUTTER MITERS AND DOWNSPOUT SECTIONS.
5. GUTTER HANGERS TO BE SECURED WITH #9 OR #10 GALVANIZED WOOD SCREWS WITH NEOPRENE-COATED WASHERS.
6. DOWNSPOUT STRAPS FASTENED TO STONE OR BRICK MUST BE SECURED WITH 1.25" TAPCON FASTENERS.
7. GUTTERS ARE TO BE PLACED BEHIND METAL DRIP EDGE ROOF FLASHING.
8. HANGERS ARE TO BE PLACED NO MORE THAN 30" APART.
9. DOWNSPOUT JUNCTIONS ARE TO BE FASTENED WITH AT LEAST ONE RIVET.
10. ALL MITERS AND END CAPS ARE TO BE SEALED WITH SELF-LEVELING SEALER.

DETAIL AT TYPICAL GUTTER AND DRIP EDGE DETAIL 6
3" = 1'-0"

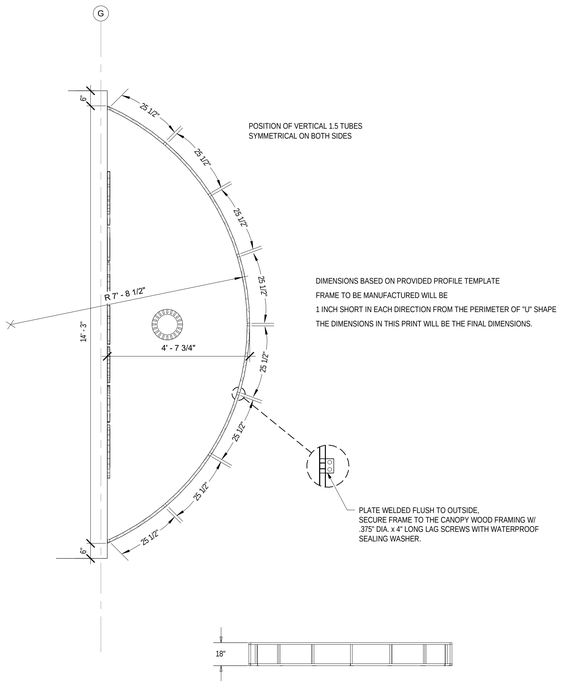


DETAIL AT PIPE PENETRATION 7
3" = 1'-0"

OPEN 8

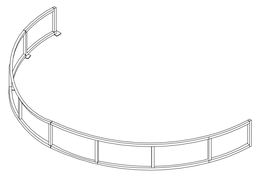
OPEN 9

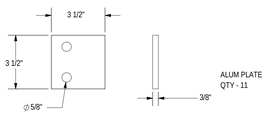
OPEN 10



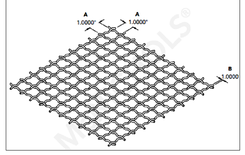
NOTE:
U-SHAPED RAILING FRAME TO BE PROVIDED AND INSTALLED BY SIGNAGE VENDOR

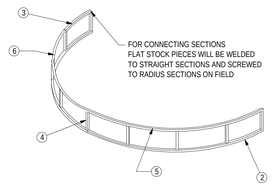
NO.	DESCRIPTION	QTY	LENGTH	ANGLE1	ANGLE2	
2	1.5x1.5x0.125 AL Tube	2	27 3/4"	0.81°	0°	COMBINE 1 & 2
3	1.5x1.5x0.125 AL Tube	2	27 3/4"	0°	0.91°	COMBINE 1 & 3
4	1.5x1.5x0.125 AL Tube	13	15"	0°	0°	
5	1.5x1.5x0.125 AL Tube	2	95 15/16"	0°	0.97°	
6	1.5x1.5x0.125 AL Tube	2	97 15/16"	0.97°	0°	

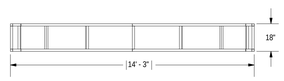




McNICHOLS WIRE MESH
Square, Aluminum, Alloy 1350-H19, Woven - Intercrimp Weave, I3/3 Crimp Style, 1.0000" x 1.0000" Opening (Square), 0.120" Thick (11 Gauge) Wire Diameter, 80% Open Area







"U" SHAPED RAILING FRAME DETAILS 11
12" = 1'-0"

idstudio4

6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:
DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT

REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date: 02.15.2023

REVISION INFORMATION
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Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

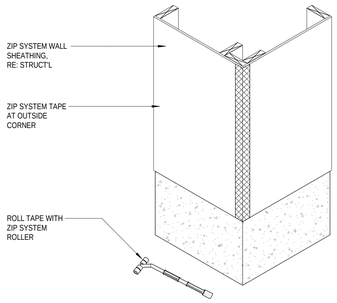
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

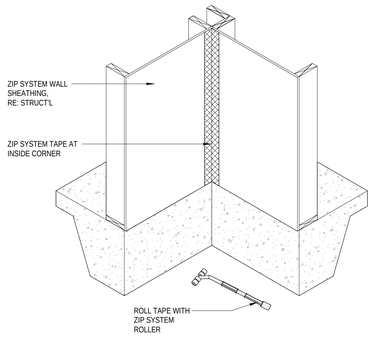
RIVERVIEW, FL

Drawing:
EXTERIOR DETAILS

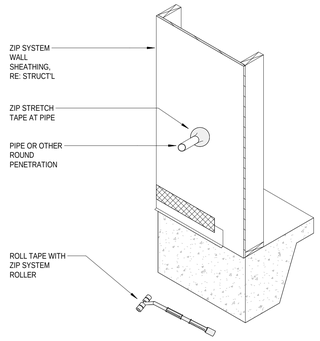
A8.2



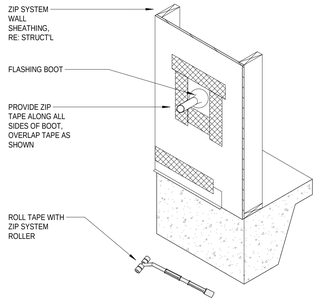
ZIP SYSTEM SHEATHING AT OUTSIDE CORNERS 1
3/4" = 1'-0"



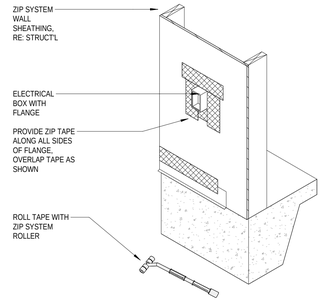
ZIP SYSTEM SHEATHING AT INSIDE CORNERS 2
3/4" = 1'-0"



ZIP SYSTEM SHEATHING AT ROUND PENETRATION 3
3/4" = 1'-0"



ZIP SYSTEM SHEATHING AT ROUND PENETRATION 4
3/4" = 1'-0"



ZIP SYSTEM SHEATHING AT ELECT'L PENETRATION 5
3/4" = 1'-0"

ZIP SHEATHING NOTES

ZIP SYSTEM SHEATHING INSTALLATION ON WALLS

OVERVIEW:

ZIP SYSTEM ROOF AND WALL SHEATHING IS COMPOSED OF ZIP SYSTEM PANELS AND ZIP SYSTEM SEAM SEALING TAPE. ZIP SYSTEM ROOF AND WALL SHEATHING PANELS SHOULD BE FULLY INSTALLED BEFORE THE SEAM SEALING TAPE IS APPLIED. THE FOLLOWING INSTALLATION STEPS ARE PRESENTED AS A GENERAL OUTLINE OF THE INSTALLATION PROCESS. THESE ARE MANUFACTURER INSTALLATION RECOMMENDATIONS - VISIT ZIPSYSTEM.COM FOR A LIBRARY OF FLASHING AND INSTALLATION DETAILS. YOU ARE FULLY AND SOLELY RESPONSIBLE FOR ALL SAFETY REQUIREMENTS. GOOD CONSTRUCTION AND SAFETY PRACTICES SHOULD BE FOLLOWED AT ALL TIMES.

STEP 1:

INSTALL ZIP SYSTEM ROOF AND WALL SHEATHING PANELS POSITIONED WITH THE WATER-RESISTIVE BARRIER FACING OUTSIDE. THE PANELS MAY BE INSTALLED WITH THE LONG SIDE OF THE PANEL ORIENTED EITHER HORIZONTALLY OR VERTICALLY TO THE FRAMING MEMBERS. WALLS THAT ARE DESIGNED TO RESIST LATERAL SHEAR FORCES AND SHEATHED WITH WOOD STRUCTURAL PANELS TYPICALLY REQUIRE SOLID FRAMING OR BLOCKING BEHIND ALL PANEL EDGES. IF ORIENTED HORIZONTALLY, BLOCK HORIZONTAL JOINTS IF WALL IS DESIGNED FOR BRACING OR AS A SHEAR WALL.

STEP 2:

FASTEN THE PANELS TO THE FRAMING MEMBERS WITH CODE APPROVED FASTENERS. SPACE FASTENERS 6" O.C. ALONG SUPPORTED EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS, UNLESS OTHERWISE SPECIFIED BY LOCAL CODE OR THE DESIGNER OF RECORD. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY PROPER FASTENER TYPE AND SPACING PRIOR TO INSTALLATION. APPLY THE FASTENERS 3/8" FROM THE ENDS AND CORNERS. AN IDEAL INSTALLATION WOULD BE WHERE FASTENER HEADS ARE FLUSH WITH THE PANEL SURFACE, HOWEVER, DUE TO VARIATIONS IN MATERIALS AND LIMITATIONS ON EQUIPMENT, THIS MAY BE DIFFICULT TO ACHIEVE IN SOME SITUATIONS. IT IS NOT REQUIRED TO TAPE OVER OVERDRIVEN FASTENERS UNLESS THE FASTENER HEAD CREATES A HOLE THROUGH THE ENTIRE PANEL THICKNESS. REFER TO THE TECHNICAL TI...

ZIP SYSTEM TAPE INSTALLATION - WALL PANEL SEAMS

APPLY ZIP SYSTEM TAPE AFTER ALL ZIP SYSTEM WALL SHEATHING PANELS ARE FULLY FASTENED TO WALL-FRAMING MEMBERS. ONLY ZIP SYSTEM TAPE SHOULD BE USED TO SEAL THE SEAMS OF ZIP SYSTEM PANELS. ENSURE THAT THE PANEL SURFACE IS DRY AND FREE OF SAWDUST AND DIRT PRIOR TO TAPING. ZIP SYSTEM TAPE IS A CONTACT TAPE THAT REQUIRES PRESSURE FOR AN ADEQUATE SEAL.

STEP 1:

TAPE ALL SEAMS USING ZIP SYSTEM TAPE AND BEGINNING AT THE BOTTOM OF THE WALL. ENSURE THAT THE TAPE IS CENTERED OVER THE SEAM WITHIN 1/4"/P12" TO PROVIDE ADEQUATE COVERAGE AND THAT WRINKLES IN TAPE ARE MINIMAL. USE THE ZIP SYSTEM TAPE GUN OR ROLLER TO APPLY PRESSURE TO THE TAPE AND SMOOTH OUT ANY...

STEP 2:

WHEREVER TAPE SPLICES OCCUR AT A HORIZONTAL OR VERTICAL SEAM, CREATE AN OVERLAPPING SPLICE OF AT LEAST 3". AT T-JOINTS, THE TAPE PIECES SHOULD OVERLAP BY AT LEAST 1". UPPER TAPE SHOULD ALWAYS LAP OVER LOWER TAPE. APPLY MODERATE PRESSURE ONTO THE SURFACE OF THE TAPE TO ENSURE A SECURE BOND BETWEEN THE PANEL AND THE TAPE. USE THE ZIP SYSTEM TAPE GUN OR ROLLER TO APPLY PRESSURE TO THE TAPE AND SMOOTH OUT ANY WRINKLES. TAKE SPECIAL CARE TO REMOVE ANY VOIDS...

STEP 3:

TAPE INSIDE AND OUTSIDE CORNER SEAMS.

8' PANEL EDGES

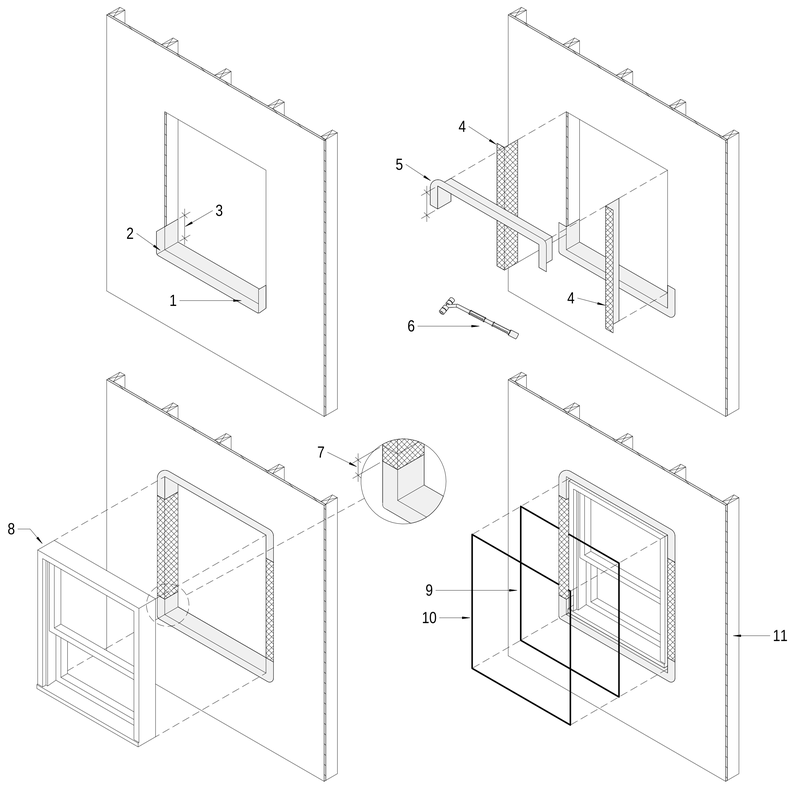
THE UNIQUE EDGE PROFILE IS DESIGNED TO ACCOMMODATE INCREMENTAL PANEL EXPANSION AND DOES NOT REQUIRE MANUAL GAPPING ALONG THE 8' EDGES.*

8' AND 4' PANEL EDGES

MAINTAIN 1/8" SPACE WHERE 8' PANEL EDGES MEET 4' PANEL EDGES. UNIQUE EDGE PROFILE DOES NOT PROVIDE THE FULL 1/8" RECOMMENDED SPACE FOR THIS CONDITION.

4' PANEL EDGES

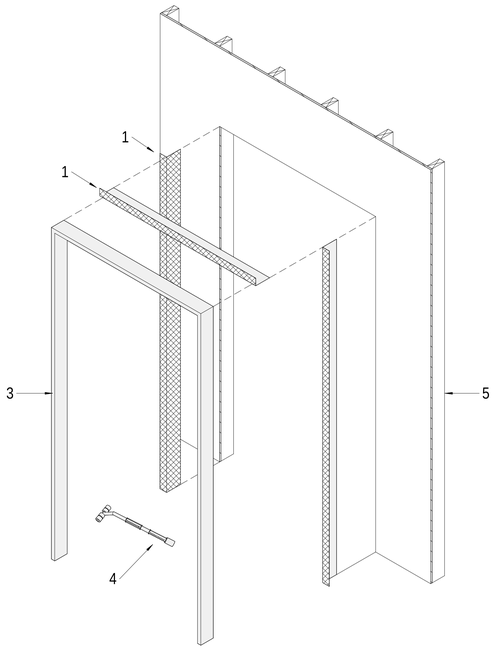
MAINTAIN 1/8" SPACE WHERE 4' EDGES MEET. UNIQUE EDGE PROFILE IS ON 8' EDGES ONLY.*



1. CENTER ZIP SYSTEM™ STRETCH TAPE ON WINDOW SILL AND PRESS FIRMLY FROM THE CENTER. TO THE CORNERS AND THEN UP THE JAMBS.
2. ENSURE ZIP SYSTEM ™ STRETCH TAPE FITS TIGHTLY INTO THE CORNERS.
3. ZIP SYSTEM™ STRETCH TAPE SHOULD EXTEND UP THE JAMB A MINIMUM OF 6 INCHES.
4. ZIP SYSTEM™ TAPE.
5. ZIP SYSTEM™ STRETCH TAPE.
6. ZIP SYSTEM™ ROLLER. ROLL ALL TAPE.
7. ZIP SYSTEM™ STRETCH TAPE SHOULD OVERLAP THE ZIP SYSTEM TAPE IN THE JAMBS A MINIMUM OF 1 INCHES.
8. NON-FLANGED WINDOW INSTALLED PER WINDOW MANUFACTURER'S INSTALLATION REQUIREMENTS.
9. BACKER ROD INSTALLED IN BETWEEN THE TAPED ROUGH OPENING AND THE NON-FLANGED (STORE FRONT) WINDOW.
10. INSTALLED SEALANT* PER WINDOW MANUFACTURER'S RECOMMENDATIONS.
11. FROM THE INTERIOR, INSTALL LOW PRESSURE POLYURETHANE FOAM BETWEEN WINDOW AND ROUGH OPENING TO MAINTAIN CONTINUITY OF THE AIR BARRIER. IF GAP IS TOO NARROW USE A COMPATIBLE CAULK SEALANT*.

*WHEN APPLYING A SEALANT TO ZIP SYSTEM TAPE, USE A BUTYL, 100% SILICONE OR POLYURETHANE BASED SEALANT.

ZIP SYSTEM SHEATHING AT TYPICAL WINDOW 6
3/4" = 1'-0"



1. 6-INCH ZIP SYSTEM TAPE
2. ZIP SYSTEM ROLLER. ROLL ALL TAPE.
3. INSTALL DOOR JAMB PER DOOR MANUFACTURER.
4. ZIP SYSTEM ROLLER. ROLL ALL TAPE.
5. FROM THE INTERIOR, INSTALL LOW PRESSURE POLYURETHANE FOAM BETWEEN DOOR AND ROUGH OPENING TO MAINTAIN CONTINUITY OF THE AIR BARRIER. IF GAP IS TOO NARROW USE A COMPATIBLE CAULK SEALANT*.

*WHEN APPLYING A SEALANT TO ZIP SYSTEM TAPE, USE A BUTYL, 100% SILICONE OR POLYURETHANE BASED SEALANT.

ZIP SYSTEM SHEATHING AT TYPICAL DOOR 7
3/4" = 1'-0"

OPEN 8

OPEN 9

OPEN 10

OPEN 11

OPEN 12

idstudio4

6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

02.15.2023

cheddar's SCRATCH KITCHEN

Issue Date: 02.15.2023

REVISION INFORMATION

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

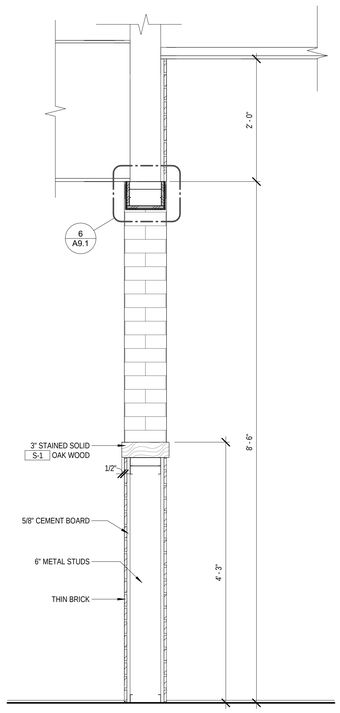
RIVERVIEW, FL 33578

RIVERVIEW, FL

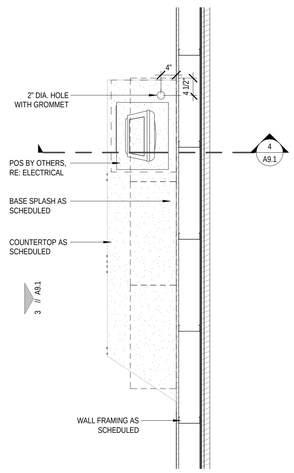
Drawing:

EXTERIOR DETAILS

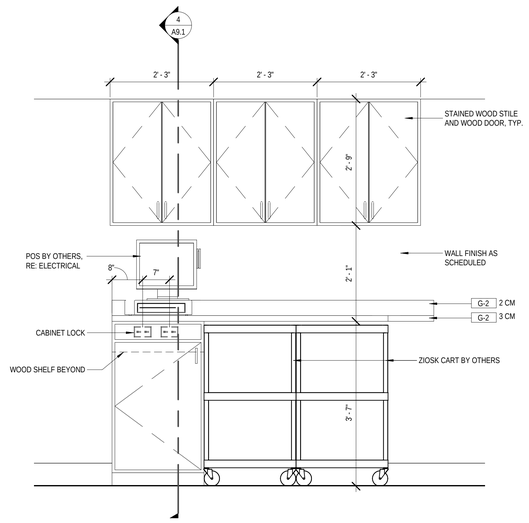
A8.3



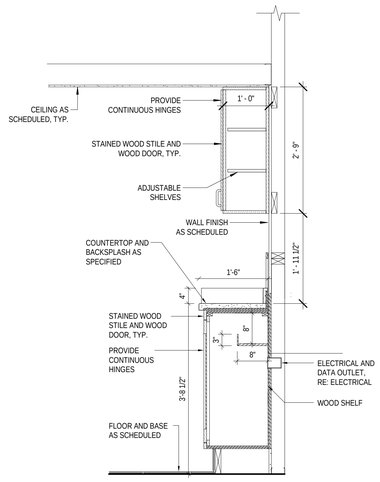
BRICK OPENING SECTION 1
1" = 1'-0"



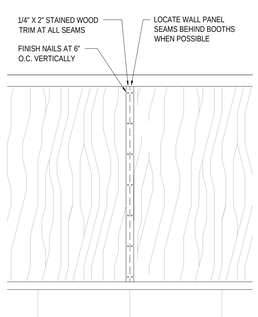
LARGE SCALE PLAN AT POS STATION 6 2
3/4" = 1'-0"



ELEVATION AT POS STATION 6 3
3/4" = 1'-0"

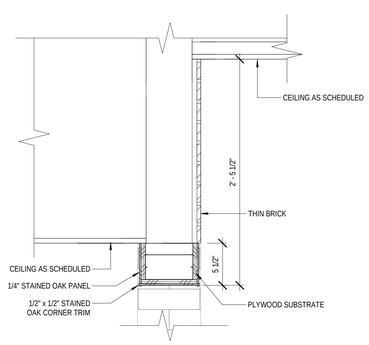


DETAIL AT POS STATION 6 4
3/4" = 1'-0"

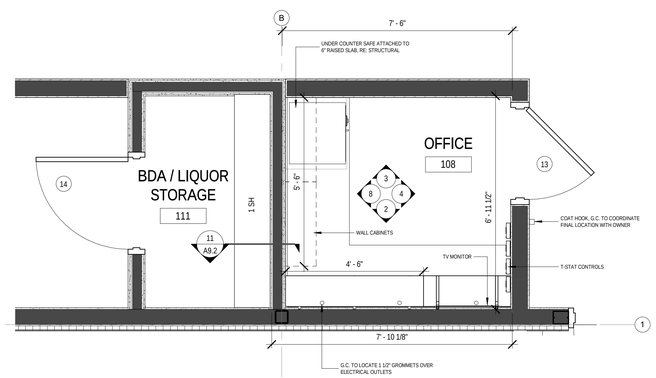


GC TO SECURE WALL PANELS UNTIL GLUE DRIES

DETAIL AT WALL VENEER SEAM 5
1" = 1'-0"



BULKHEAD DETAIL 6
1 1/2" = 1'-0"



LARGE SCALE FLOOR PLAN AT LIQUOR STORAGE (WHEN BDA NOT NEEDED) 7
1/2" = 1'-0"

OPEN 8

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6201 CAMPUS CIRCLE DRIVE E
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PROTO 18

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RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
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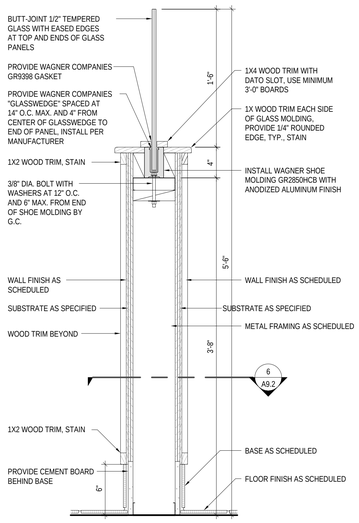
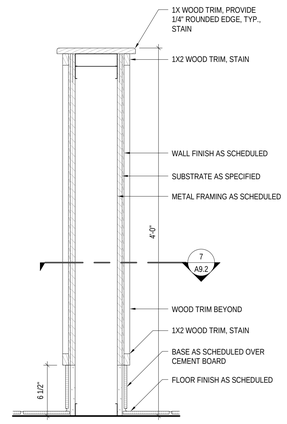
A9.1

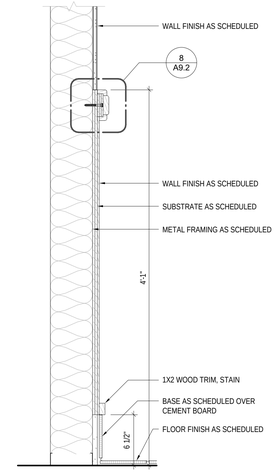


DETAIL AT LOW WALL 1
1 1/2" = 1'-0"

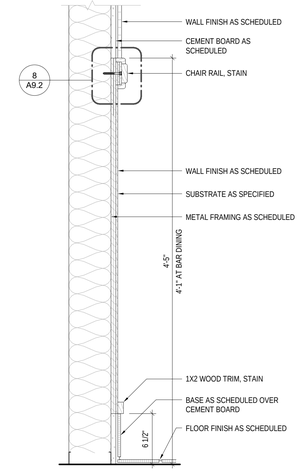
OPEN 2



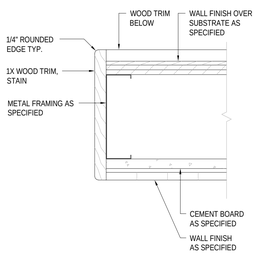
DETAIL AT LOW WALL 3
1 1/2" = 1'-0"



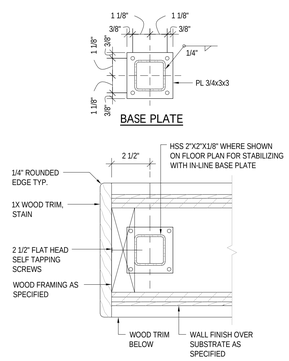
DETAIL AT WAINSCOT 4
1 1/2" = 1'-0"



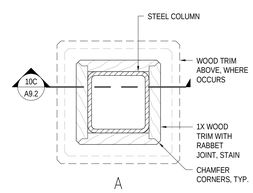
DETAIL AT WAINSCOT 5
1 1/2" = 1'-0"



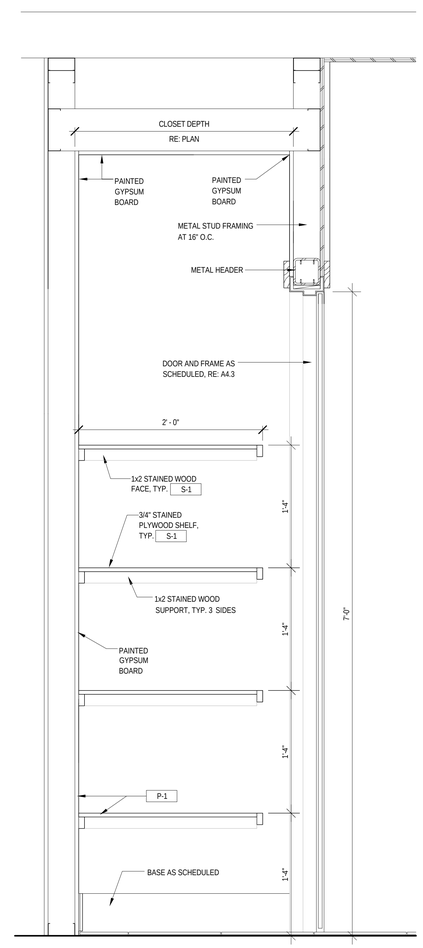
DETAIL AT LOW WALL SUPPORT 6
3" = 1'-0"



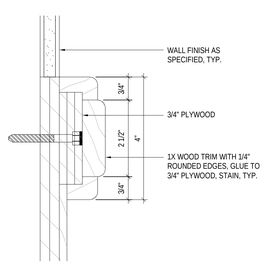
DETAIL AT LOW WALL END CONDITION 7
3" = 1'-0"



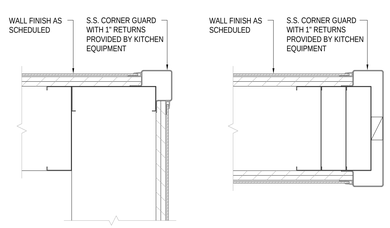
OPEN 11



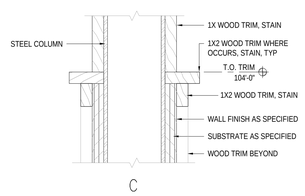
DETAIL AT LOW WALL SUPPORT 8
6" = 1'-0"



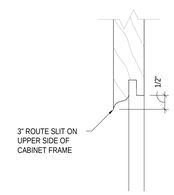
DETAIL AT WALL END & WALL CORNER 9
3" = 1'-0"



DETAIL AT LOW WALL SUPPORT 10
3" = 1'-0"



DETAIL AT CABINET PULL 12
6" = 1'-0"



CLOSET SECTION 13
1 1/2" = 1'-0"

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6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:
DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIGGS
AR98116
REGISTERED ARCHITECT
REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date: 02.15.2023

REVISION INFORMATION
1 04.04.2023
CITY COMMENTS
2 04.05.2023
COORDINATION COMMENTS

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

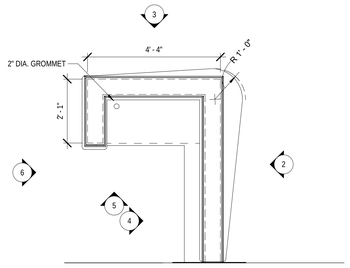
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

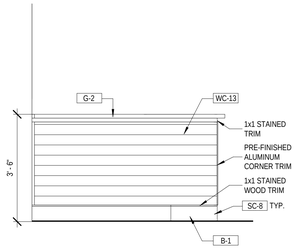
RIVERVIEW, FL

Drawing:
INTERIOR DETAILS

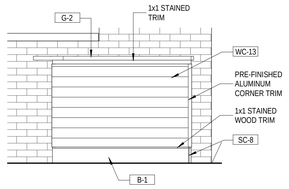
A9.2



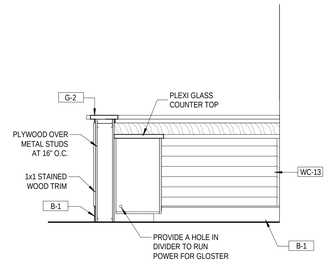
LARGE SCALE PLAN AT HOST 1
1/2" = 1'-0"



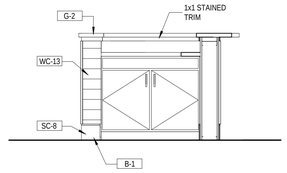
ELEVATION AT HOST 2
1/2" = 1'-0"



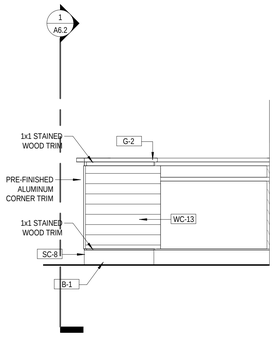
ELEVATION AT HOST 3
1/2" = 1'-0"



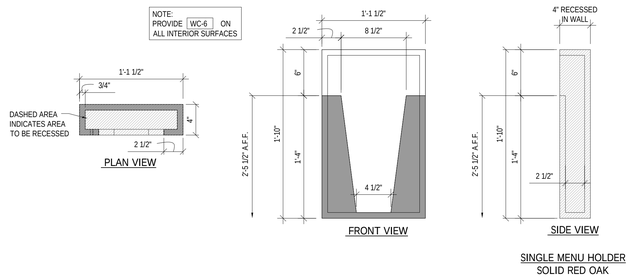
ELEVATION AT HOST 4
1/2" = 1'-0"



ELEVATION AT HOST 5
1/2" = 1'-0"

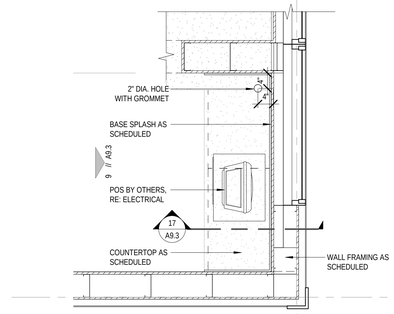


ELEVATION AT HOST 6
1/2" = 1'-0"

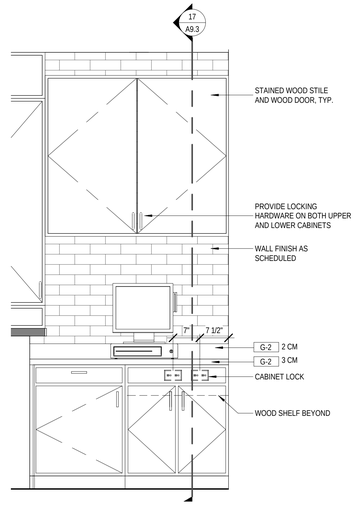


SINGLE MENU HOLDER
SOLID RED OAK

DETAIL AT HOST MENU HOLDER
1 1/2" = 1'-0" 7



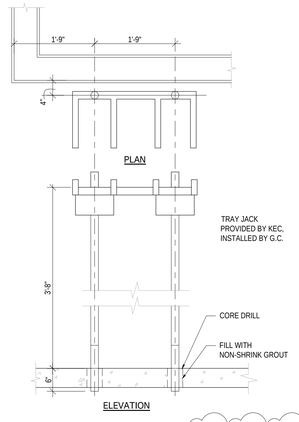
LARGE SCALE PLAN AT POS STATION 3
3/4" = 1'-0" 8



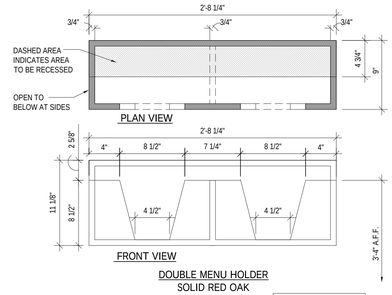
ELEVATION AT POS STATION 3
3/4" = 1'-0" 9

OPEN 10

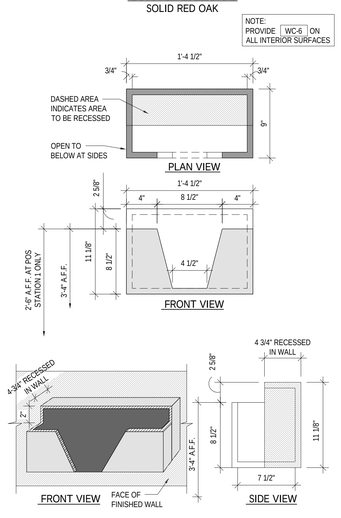
OPEN 11



DETAIL AT TRAYJACK
3/4" = 1'-0" 12

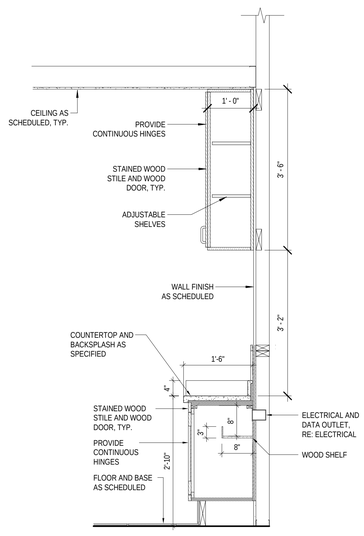


DOUBLE MENU HOLDER
SOLID RED OAK

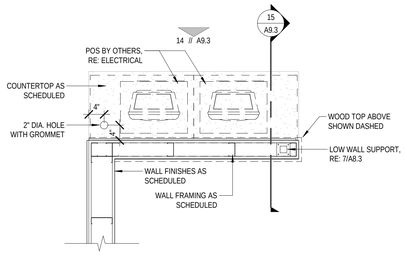


SINGLE MENU HOLDER
SOLID RED OAK

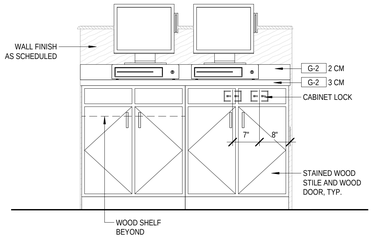
DETAIL AT HOST MENU HOLDER
1 1/2" = 1'-0" 16



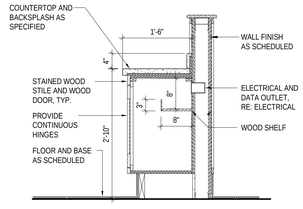
DETAIL AT POS STATION 3
3/4" = 1'-0" 17



LARGE SCALE PLAN AT POS STATION 9 / 10
3/4" = 1'-0" 13



ELEVATION AT POS STATION 9 / 10
3/4" = 1'-0" 14



DETAIL AT POS STATION 9 / 10
3/4" = 1'-0" 15

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PROJECT NUMBER
DCH22007

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STATE OF FLORIDA
RUSTY A. RIDGE
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REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
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Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
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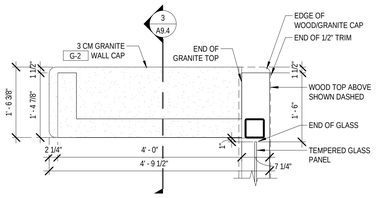
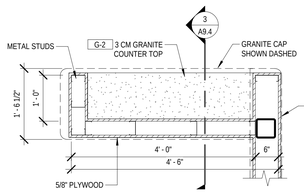
RIVERVIEW, FL

Drawing:
INTERIOR DETAILS

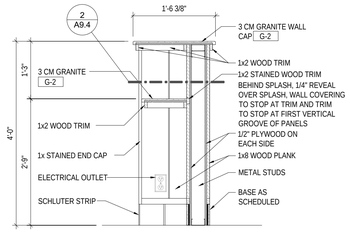
A9.3



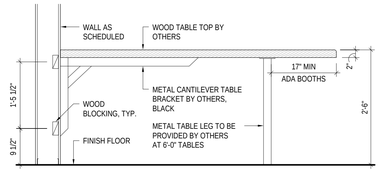
LARGE SCALE PLAN AT DINING SHELF 1
3/4" = 1'-0"



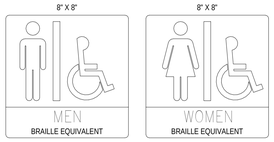
LARGE SCALE PLAN AT DINING SHELF 2
3/4" = 1'-0"



DETAIL AT DINING SHELF 3
3/4" = 1'-0"

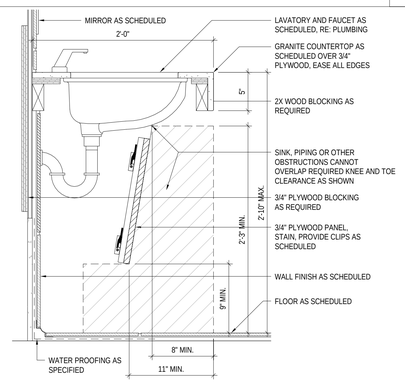


DETAIL AT TABLE SUPPPORT 4
3/4" = 1'-0"

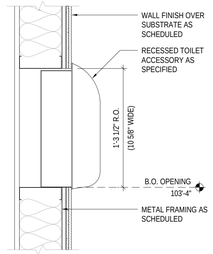


1. UPPER CASE CHARACTERS, HELVETICA
2. CHARACTERS RAISED 1/32" MINIMUM
3. GRADE 2 BRAILLE
4. CHARACTERS AT LEAST 5/8" IN HEIGHT BUT NO HIGHER THAN 2"
5. EQUIVALENT VERBAL DESCRIPTIONS PLACED BELOW EACH PICTOGRAM
6. PICTOGRAM AREA TO HAVE A FIELD HEIGHTS OF 6" MINIMUM
7. COLOR CONTRAST BETWEEN CHARACTERS AND BACKGROUND
8. MOUNT ON WALL ADJACENT TO LATCH SIDE OF DOOR
9. MOUNT 60" FROM FINISHED FLOOR TO CENTER OF SIGN ADJACENT TO DOOR
10. MOUNT 9" FROM EDGE OF DOOR TO CENTERLINE OF SIGN

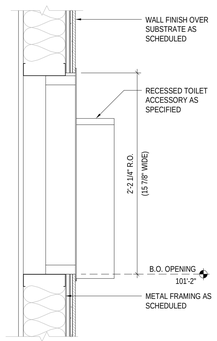
DETAIL AT TABLE SUPPPORT 5
3" = 1'-0"



MILLWORK AT LAVATORY 6
1 1/2" = 1'-0"

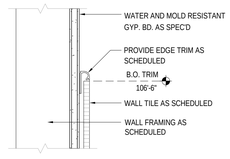


DETAIL AT RECESSED PAPER TOWEL DISPENSER 7
1 1/2" = 1'-0"

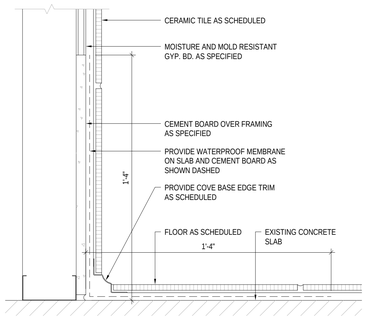


MILLWORK AT LAVATORY 8
1 1/2" = 1'-0"

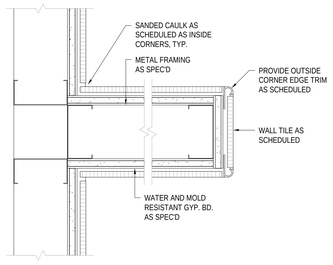
OPEN 9



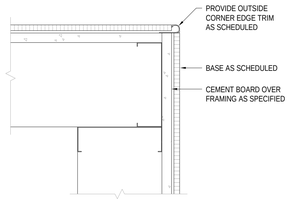
DETAIL AT TILE TRANSITION 10
3" = 1'-0"



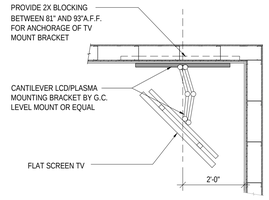
DETAIL AT TILE BASE 11
3" = 1'-0"



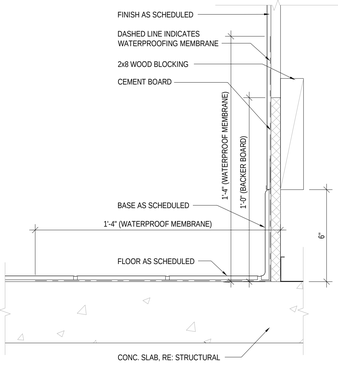
DETAIL AT TILE CORNERS 12
3" = 1'-0"



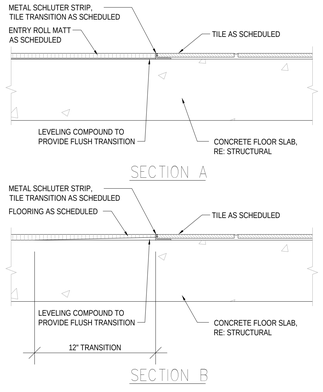
DETAIL AT BASE OUTSIDE WALL CORNERS 13
3" = 1'-0"



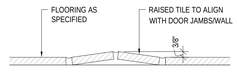
PLAN DETAIL AT TV MOUNT 14
1/2" = 1'-0"



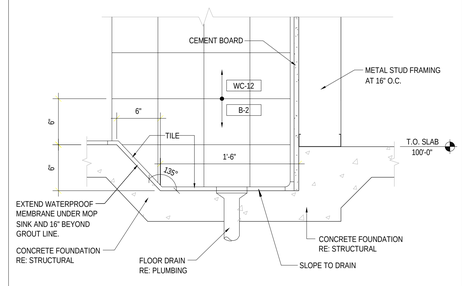
DETAIL WATERPROOF MEMBRANE 15
3" = 1'-0"



DETAIL WATERPROOF MEMBRANE 16
3" = 1'-0"



DETAIL WATERPROOF MEMBRANE 17
3" = 1'-0"



DETAIL WATERPROOF MEMBRANE 18
1 1/2" = 1'-0"

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TEL: 972.870.1288
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PROJECT NUMBER
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1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
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CHEDDARS
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RIVERVIEW, FL

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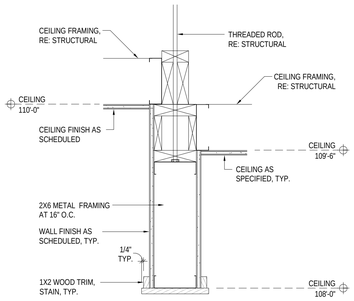
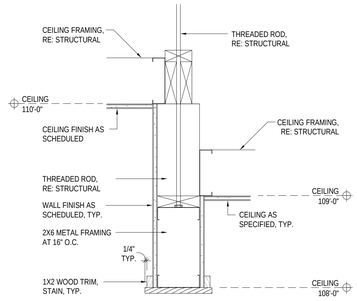
INTERIOR DETAILS

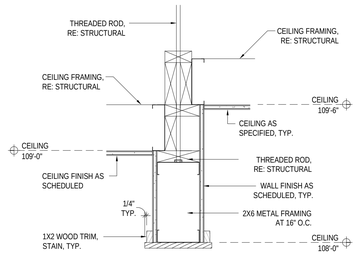
A9.4



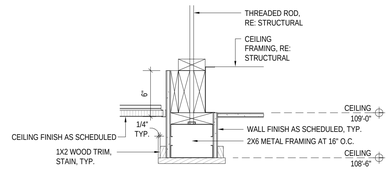
DETAIL AT DINING FURRDOWN 1
1 1/2" = 1'-0"



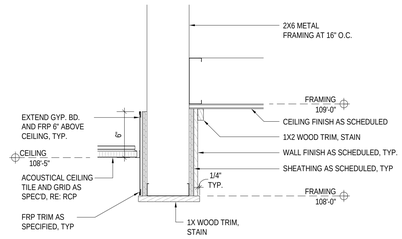
DETAIL AT DINING FURRDOWN 2
1 1/2" = 1'-0"



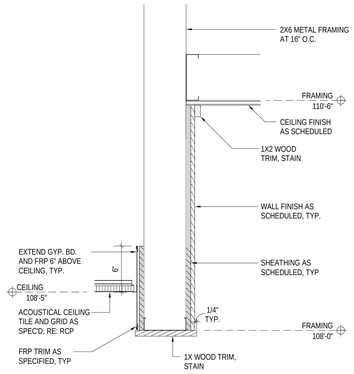
DETAIL AT DINING FURRDOWN 3
1 1/2" = 1'-0"



DETAIL AT ENTRY FURRDOWN 4
1 1/2" = 1'-0"



DETAIL AT KITCHEN FURRDOWN 5
1 1/2" = 1'-0"



DETAIL AT KITCHEN FURRDOWN 6
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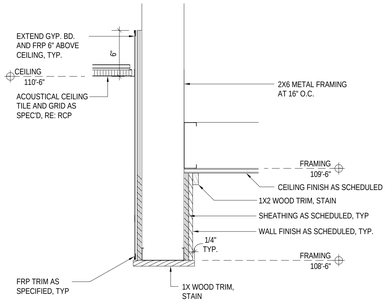

DETAIL AT BAR DINING FURRDOWN 7
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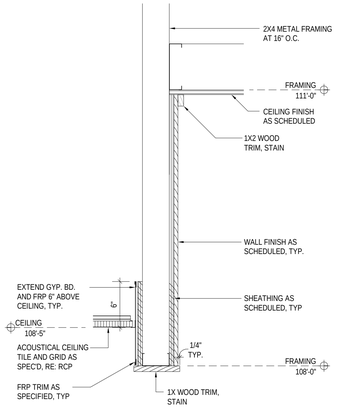


DETAIL AT KITCHEN FURRDOWN 8
1 1/2" = 1'-0"

OPEN 9

OPEN 10

OPEN 11

OPEN 12

OPEN 13

OPEN 14

OPEN 15

OPEN 16

OPEN 17

OPEN 18

OPEN 19

OPEN 20

idstudio

6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
LICENSED ARCHITECT

REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date: 02.15.2023

REVISION INFORMATION

1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

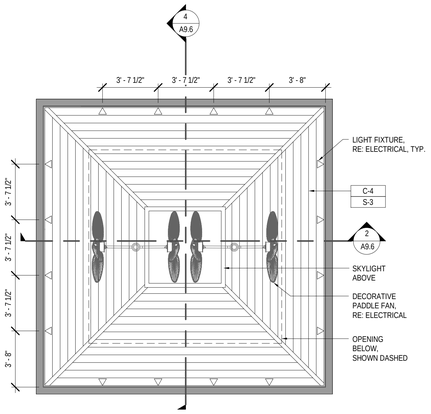
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

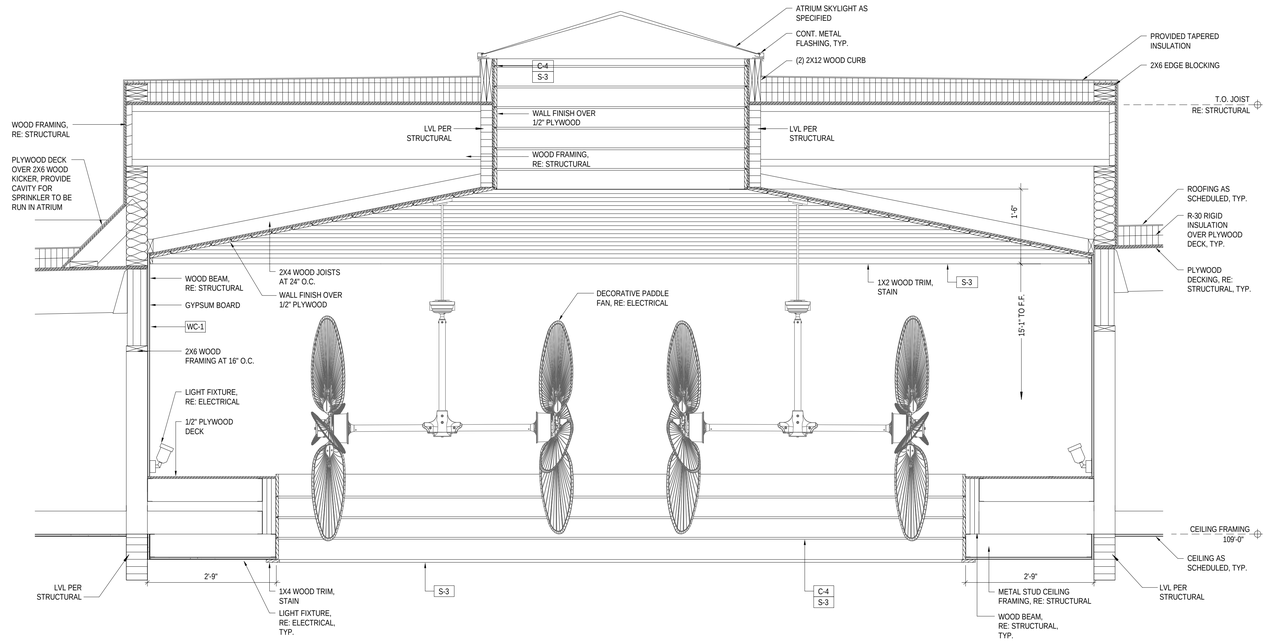
RIVERVIEW, FL

Drawing:
RCP DETAILS

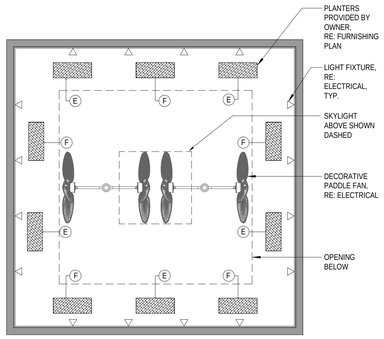
A9.5



PLAN AT ATRIUM SKYLIGHT 1
1/4" = 1'-0"



SECTION AT ATRIUM SKYLIGHT 2
3/4" = 1'-0"



PLAN AT ATRIUM SKYLIGHT 3
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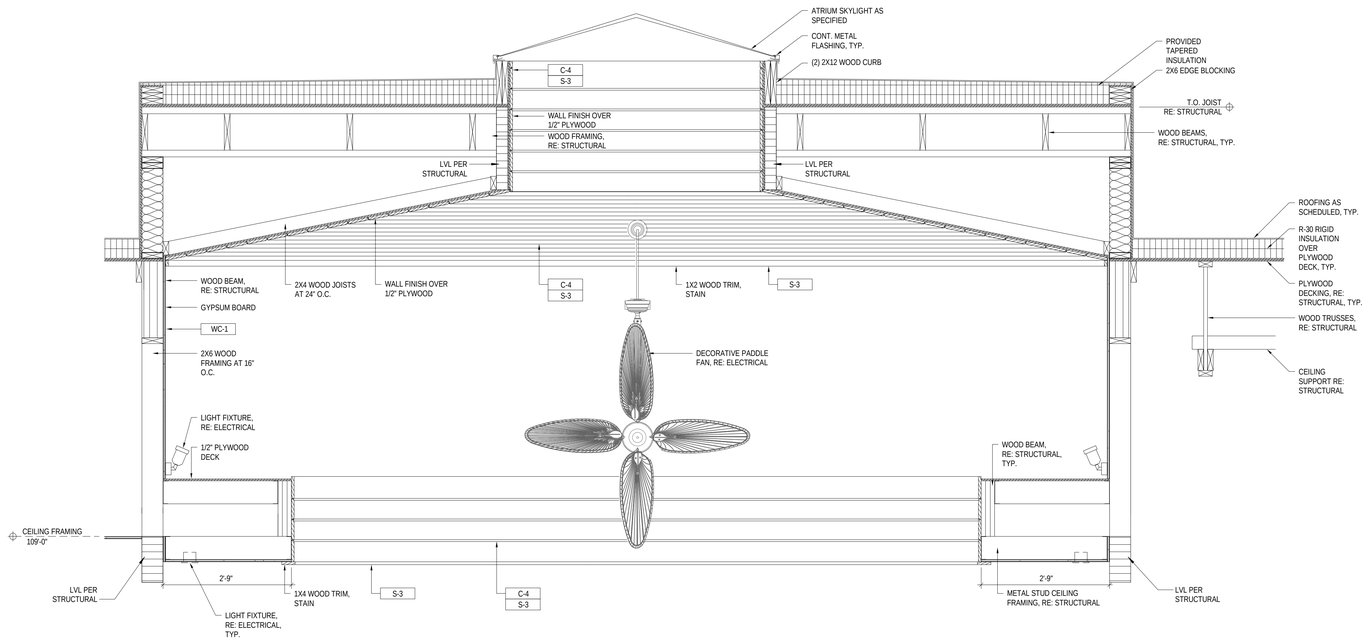

SECTION AT ATRIUM SKYLIGHT 4
3/4" = 1'-0"

FINISH SCHEDULE - INTERIOR

INTERIOR PAINT	
P-1	TAVERN TAUPE
P-2	IBIS WHITE
P-3	BLACK OF NIGHT
P-4	HALF CAFF
STAIN	
S-1	EBONY
S-2	CLEAR SEALER
S-3	FLAGSTONE
S-4	BRICK SEALER
WALL COVERING	
WC-1	VINYL FABRIC
WC-2	FRP-WHITE
WC-3	FRP-BLACK
WC-4	WOOD LAMINATE
WC-5	PLASTIC LAMINATE-WHITE
WC-6	PLASTIC LAMINATE-BLACK
WC-7	STONE
WC-8	PORCELAIN TILE-CREME
WC-9	PORCELAIN TILE-TORTORA
WC-10	PORCELAIN TILE-TIGERS EYE
WC-11	QUARRY TILE
WC-12	WOOD PLANKS
WC-13	STAINLESS STEEL PANEL
WC-14	THIN BRICK
WC-15	WOOD PANEL
GRANITE	
G-1	GRANITE-JUPARANA ST. CECILIA
G-2	GRANITE-BLACK
G-3	CORIAN-SAHARA
BASE	
B-1	PORCELAIN TILE-MINERAL CHROME
B-2	QUARRY TILE
B-3	PORCELAIN TILE-RESIDE
CEILING	
C-1	ACOUSTICAL CEILING-BLACK
C-2	ACOUSTICAL CEILING-WHITE
C-3	NOT USED
C-4	V-GROOVE PLANK

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PROJECT NUMBER
DCH22007

CLIENT:

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www.darden.com

STATE OF FLORIDA
RUSTY A. RIGGS
AR98116
REGISTERED ARCHITECT

REV 02: 04.18.2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
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Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:

RCP DETAILS

A9.6

CHEDDAR'S - RIVERVIEW, FL

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DIVISION 0 - CONTRACT AND BID INFORMATION

SECTION 00100 – INSTRUCTIONS TO BIDDERS

1. AIA Document A701, latest Edition, "Instructions to Bidders" are included as part of these specifications as if herein reprinted in full.
a. A copy of AIA A701, latest edition may be obtained from Owner, Architect, or directly from:
The American Institute of Architects
1735 New York Avenue,
N.W. Washington, D.C. 20006.

2. Contractor shall utilize the following documents, latest edition, in the negotiation and execution of the project:
a. AIA Document A701 – Instructions to Bidders
b. AIA Document G702 – Application and Certificate for Payment
c. AIA Document G703 – Continuation Sheet
d. AIA Document G701 – Change Order
e. AIA Document G705 – Certificates of Insurance
f. AIA Document G706 – Contractor's Affidavit of Payment of Debts and Claims
g. AIA Document A706 – Contractor's Affidavit of Release of Liens
h. Cheddar's – General Conditions of the Contract for Construction
i. Cheddar's – Owner Contractor Agreement Form – Stipulated Sum

SECTION 00120 – SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

The following supplements modify, change, delete from, or add to the Instructions to Bidders (AIA A701, latest Edition) Where any article of the instruction to Bidders is modified or any paragraph, sub-paragraph, or clause thereof is modified or deleted by these Supplemental Instructions the unaltered provisions of the article, paragraph, sub-paragraph, or clause shall remain in effect.

1. Article 1, Paragraph 1.8; add: Bidding is by invitation from the Owner, only.

2. Article 1, add Paragraph 1.10:
1.10 The term "Architect" as used herein, shall be construed to mean the "Owner", as the Owner will administer the bidding procedures.

3. Article 3, Paragraph 3.1.1 delete and insert the following:
Owner will provide each invited Bidder a complete set of electronic files (.pdf format) of the Bidding Documents. Bidding contractor will be responsible for printing and distribution.

4. Article 4, Paragraph 4.1.1 delete and insert the following:
4.1.1 Bids shall be submitted on forms Identical to the Bid Form provided by the Owner). Bids shall be transmitted via facsimile or e-mail and must be received by the prescribed deadline.

5. Article 4, Paragraph 4.2: Delete this paragraph in it's entirety, as no bid security will be required.

6. Article 4, Paragraph 4.4.1:
The stipulated time period shall be as noted on Owner's Invitation to Bid..

7. Article 6, Paragraph 6.2: Delete this paragraph in its entirety.

8. Article 7, Paragraph 7.1.1: Bond requirement will be an option reserved by the Owner.

9. Article 7, paragraph 7.2.2: Delete "unless otherwise provided," and substitute "unless otherwise acceptable to the Owner."

SECTION 00300 – BID FORM

1. The form of proposal will be furnished separately by the Owner.

SECTION 00700 – GENERAL CONDITIONS

1. "General Conditions of the Contract for Construction" is included as part of these specifications same as if herein reprinted in full.
a. A copy will be provided by Owner as part of the Bid Package.

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 00110 – SUMMARY OF WORK

1. PROJECT

A. Project Name: Cheddar's Scratch Kitchen - Prototype 18
B. Owner's Name: Darden Restaurant, Inc.

2. CONTRACT DESCRIPTION

A. Contract Type: A single prime contract based on a Stipulated Price as provided By Owner in Bid Package
B. Work Responsibility list below is not inclusive. Refer to Owner Provided chart on cover sheet of the drawings for additional information.

3. WORK RESPONSIBILITY

A. Not In Contract (NIC): Items shown or noted "(NIC)" on the drawings and/or in the specifications shall be furnished and installed by Owner under separate contract, except as described hereinafter. The Contractor shall receive, unload as required, store, coordinate and accommodate the Owner's contractors during the Work and be responsible to the extent of carrying necessary insurance to cover items in case of theft, fire, loss, malicious damage and other miscellaneous damage. Contractor shall provide all conduits, boxes, chases, etc. as indicated on the drawings for a complete installation. Included, but not inclusive, in this category are:
1. All custom fabricated stainless steel items.
2. Kitchen equipment
3. Bar equipment
4. Walk-in coolers and freezers
5. Stainless steel tables and shelves
6. Beer System: Contractor is responsible for pipe chases, plumbing and electrical services per plan.
7. CO2 Dispensing Unit.
8. All refrigeration unit lines and calibration.
9. Furnishings shown on architectural drawings as by Owner including booths and tables.
10. Illuminated Sign Package: Contractor shall be responsible for supplying individual electrical stub-ups at each site sign and/or each wall sign as required per plans and make final connection.
11. Pylon and/or Monument sign: Contractor shall be responsible for supplying individual electrical stub-ups at each site sign and/or each wall sign as required per plans and make final connection. GC shall construct foundation and base for Monument signs, as noted and detailed on Construction Documents.
12. Music/Intercom System: Contractor shall supply electrical service and wire chases with pull strings per plans and coordinate installation with Owner's Construction Manager. Contractor to provide adequate wood backing to install all necessary equipment.
13. Fire Alarm, Security and Burglar Alarm systems: Contractor shall supply electrical service and wire chases with pull strings per plans and coordinate installation with Owner's Construction Manager. Contractor to provide adequate wood backing to install all necessary equipment.
14. Point of Sale and Back Office Systems: All system equipment shall be provided by Owner, including computer cable. All equipment shall be installed by Owner's Construction Manager. All cable and wiring shall be installed in conduit installed by General Contractor as per plans.
15. Water Softener: Contractor shall install and plumb all soft water lines and stub-out for unit hook-up.
16. Soda System: Contractor is responsible for pipe chases, plumbing and electrical services per plan and coordinating installation.
17. Telephones: Owner's Construction Manager will supply and install permanent telephone and jacks. Contractor shall supply and install junction boxes with pull strings per plans for said installation and coordinate with Owner's Construction Manager.
18. Window Blinds.
19. Landscaping and Irrigation: GC to rough grade and fill all islands and medians within 2 inches of top of curb; other landscape areas to be fine graded with 6 inches of topsoil within 1 inch of grade set by Civil documents.
1. Landscaping and Irrigation Alternate Bid: GC to provide an alternate bid for installation of Landscape and Irrigation per documents provided. Owner may elect to accept GC bid or perform work under separate contract.

B. By Owner: Items shown or noted "By Owner" on the drawings and/or in the specifications shall be furnished by Owner to Contractor/subcontractor for installation by Contractor/subcontractor as part of the construction contract. Contractor shall furnish all labor, material, equipment, and tools required to receive, unload, store, protect, move from storage, uncrate, assemble, install, and level these items and shall carry necessary insurance to cover items in case of theft, fire, loss, malicious damage and other miscellaneous damage. Included, but not inclusive, in this category are:
1. Owner shall furnish exhaust hoods with integral fire suppression, associated exhaust fans, curbs, and MUA units.
i. All ductwork (type 1 and type 2 hoods), flue caps and duct wrap shall be provided and installed by the Contractor.
2. HVAC Units and Restroom Exhaust: Curbs included in Owner provided package.
3. Grease Recycling Unit.
4. Site Lighting; poles and fixtures: Contractor shall be responsible for construction of concrete base, installing fixtures, supplying individual electrical stub-ups at each light as required per plans and making final connection.
5. Chairs and Stools - unpacked and set up by GC.
6. Plasma Televisions.
7. Cable TV: Contractor to provide conduit to TV locations as shown on the plans and provide pull strings. Contractor shall also coordinate installation with Owner's Construction Manager.
8. Décor shown on architectural drawings as by Owner.
Note: All millwork items shown on architectural drawings including, but not limited to, cabinets, shelving and vanities shall be the responsibility of the Contractor. Contractor shall submit shop drawings of same for approval.
9. Office Furniture
10. Safe: Contractor to install.
11. Carpet.

4. OWNER FURNISHED ITEMS:

A. Receiving and unloading of Owner furnished items:
a. Prior to delivery and installation of the Owner's kitchen equipment, the following must be completed:
1) Tile must be set and clean; Fiberglass Reinforced Panels (FRP) and/or tile shall be hung and trimmed; acoustical ceiling grid complete with all light fixtures, ductwork and diffusers installed; acoustical ceiling tile shall be installed; and all gypsum wall board ceilings shall be finished.
2) Contractor shall provide motorized, hydraulic forklift at site to assist in the offloading of Owner provided kitchen equipment.
3) Contractor to provide copies of all delivery tickets, bills of lading, etc. certifying receipt of the Owner furnished items.
4) Inspection of all Owner furnished items upon delivery for evidence of damage is the responsibility of the Contractor. The Contractor shall repair or replace, at no cost to the Owner, any damaged equipment received at the job site and not noted on the bill of lading.
5) The Contractor is solely responsible for care of the Owner furnished items once received until completion of the contract. Any lost or damage during his possession will be repaired or replaced at no cost to the Owner.

B. Foodservice equipment installation:
a. The Kitchen Equipment Supplier (KES) shall off load, uncrate and store all food service equipment, set in place, level and scribe to walls, floor and base as required. Pull equipment tight and secure field joints and properly dispose of all packing material.
b. Properly anchor or fasten to walls, floor, ceiling, and base as per installation recommendations of the food service equipment manufacturer.
c. Provide silicone bead where equipment joins together or abuts wall surfaces. Color of silicone to be clear.
d. Assemble and secure in place all loose components such as, but not limited to, the following examples: tops of base units, shelves, legs, dispensers, etc.
e. Installation of all food service equipment shall comply with all applicable codes and standards required by the local health department.
f. The Contractor shall provide rough in water, drainage and other service piping adjacent to food service equipment requiring same, capping drain outlets with suitable plugs and terminating water and other service with shut-off valves and cocks. After installation of food service equipment, Contractor shall make all final connections.
g. The Contractor shall remove all plastic indirect drain hoses from all Food Service Equipment and replace with hard copper piping.
h. The Contractor shall provide rough-in electrical wiring terminated in outlet boxed adjacent to food service equipment and, after installation of equipment, shall make all final connections. This includes supplying devices, cord and plugs, etc, as required to complete installation.
i. Sealing of Penetrations:
1)Contractor shall adequately seal with escutcheons all utility and service piping and other required openings through walls and floors.
2)Contractor shall seal conduit/outlet penetrations with approved foam insulation and silicone caulking as required.
j. Workmanship:
1) Graining: Where two metal surfaces are butt welded, grain shall run in the same direction.
2) Cove all intersections of vertical and horizontal sheet metal on a 5/8" radius unless otherwise indicated.
k. Welding: All welding shall be per AWS standards by electric arc method with rod of same composition as parts welded. make welds complete, strong, and ductile with rubble ground off and joints finished smooth, polished, and re-grained. Welds shall not be visible on continuous appearance. All welding shall be of a non-toxic nature when used on surfaces exposed to unpackaged food.
l. Grinding, Polishing, and Finishing: Any material sunken or depressed by welding operation shall be hammered and peened flush with adjacent surfaces and, if necessary, ground again to eliminate low spots. Surfaces showing evidence of warpage and/or burn discoloration will not be accepted. in all cases, textures from rough grinding shall be removed by successive finer polishing operations until the grain of the entire surface is homogeneous.
m. Completion:
3) Contractor shall remove all protective coverings, tags, labels, and tape from equipment.
4) Contractor shall thoroughly clean and polish Owner furnished items.

5. OWNER OCCUPANCY

A. Owner intends to occupy the Project upon Substantial Completion. Contractor shall cooperate with Owner to minimize conflict and to facilitate Owner's operations and schedule the Work to accommodate Owner occupancy.
B. Owner reserves right to occupy and to place and install equipment as necessary in completed areas of building before Substantial Completion, provided such occupancy does not interfere with completion of Work. Such placing of equipment and partial occupancy shall not constitute acceptance of total Work.
C. Contractor shall obtain Certificate of Occupancy from local building officials before Owner occupancy
D. Mechanical and Electrical Systems:
1. Before partial Owner occupancy, mechanical and electrical systems shall be fully operational.
2. Required inspections and tests shall have been successfully completed.
3. On occupancy, Owner will provide operation and maintenance of mechanical and electrical systems in occupied portions of Building.

6. MISCELLANEOUS PROVISIONS

A. Accessibility Compliance:
1. Full compliance with Uniform Federal Accessibility Standards (UFAS), and Americans with Disabilities Act (ADA), prohibiting discrimination on basis of disability by public accommodations, is required for Work of this Project.
2. This Project has been designed to and requires full compliance with ADA regulations, whether or not specific references or notes to regulations are made on Drawings or in Specifications.

7. PROJECT GENERAL NOTES

A. Unless noted otherwise, all work in these drawings and specifications shall be performed by the Contractor.
B. The Contractor shall field verify all conditions and dimensions prior to any work and shall be responsible for all work and materials including those furnished by subcontractors. Contractor shall accept premises as found, Owner assumes no responsibility for the condition of the existing site or existing structures at the time of bidding or thereafter.
C. The Contractor is responsible for correcting any errors after the start of construction which has not been brought to the attention of the architect. The means of correcting any error shall first be approved by the Architect and Owner.
D. Dimensions take precedence over drawings. DO NOT SCALE DRAWINGS TO DETERMINE ANY LOCATIONS. The architect shall be notified if any discrepancy occurs prior to continuing with work.
E. All plan dimensions are from face of stud or face of masonry unless noted otherwise.
F. The Contractor shall report to the Owner and Architect any errors, inconsistencies, or omissions discovered.
G. All construction shall comply with the applicable building codes and local restrictions. The Contractor must comply with the Contractor registration requirements of all governing authorities.
H. The general building permits shall be paid for by the Owner. All other permits shall be secured and paid for by the subcontractor directly responsible. All required city, county, and/or state licenses shall be acquired and paid for by the individual subcontractor.
I. It shall be the responsibility of the Contractor to locate all existing utilities whether shown herein or not and to protect them from damage. The Contractor shall bear all expense of repair or replacement of utilities or other property damaged by operations in conjunction with the prosecution of the work.
J. The Contractor shall be responsible for and shall replace or remedy any faulty, improper, or inferior materials or workmanship which shall appear within one year or as otherwise specified for a specific component after the completion and acceptance of the work under this contract.
K. The Contractor is to provide blocking as required for mounting of booth tables, wall mounted shelves, cabinets, HC grab bars and partition braces, in addition to other requirements specified herein.

8. CONTRACTOR USE OF SITE AND PREMISES

A. Provide access to and from site as required by law and by Owner:
1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period.
2. Do not obstruct roadways, sidewalks, or other public ways without permit.
B. Utility Outages and Shutdown:
1. Prevent accidental disruption of utility services to other facilities.

SECTION 01110 – WORK COVERED BY CONTRACT DOCUMENTS

1. INTENT OF DRAWINGS AND SPECIFICATIONS

A. The Contractor shall complete all Work as provided for in Contract Documents including Drawings and Specifications. Anything mentioned in the Specifications and not shown on the Drawings or shown on the Drawings and not mentioned in the Project Manual, shall be furnished and installed as if shown and mentioned in both. The Contractor shall furnish all materials or labor required to complete Work shown on the Drawings and called out in the Project Manual, to include labor and material requirements reasonably inferable therefrom as being necessary to complete the work, whether each and every single item necessary to completion is specified or detailed or not.

2. CONTRACTOR RESPONSIBILITY FOR WORK REQUIRED

A. The organization of the Specifications into Divisions, Sections and Paragraphs and the arrangement of the Drawings are not intended to control the Contractor in dividing the Work among Subcontractors or to establish the limits and extent of work to be performed by a particular trade. The Contractor alone is responsible for the completion of the entire work as drawn and specified, complete in place and in functional or operating conditions. The division of the Project Manual into sections and paragraphs is for convenience only and not for the purpose of limiting or restricting the performance of any portion of the Work to any particular trade.

SECTION 01300 – ADMINISTRATIVE REQUIREMENTS

1. PROJECT COORDINATION

A. Cooperate with the Owner's Construction Manager regarding allocation of mobilization areas on site; for field offices and sheds, for worker access, traffic, parking facilities and use of temporary utilities and construction facilities.
B. Comply with Owner's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
C. Coordinate field engineering and layout work with Owner's Construction Manager.
D. Make the following types of submittals to Owner's Construction Manager:
1. Requests for interpretation.
2. Requests for substitution.
3. Shop drawings, product data, and samples.
E. Make the following types of submittals to Owner's Construction Manager:
1. Test and inspection reports.
2. Manufacturer's instructions and field reports.
3. Applications for payment and change order requests.
4. Progress schedules.
5. Coordination drawings.
6. Closeout submittals.

2. PROGRESS MEETINGS

A. Make arrangements for meetings, prepare agenda with copies for participants and preside at meetings.
B. Attendance Required: Job superintendent, major Subcontractors and suppliers, Owner, as appropriate to agenda topics for each meeting.
C. Agenda:
1. Review minutes of previous meetings.
2. Review of Work progress.
3. Field observations, problems, and decisions.
4. Identification of problems which impede planned progress.
5. Review of submittals schedule and status of submittals.
6. Maintenance of progress schedule.
7. Corrective measures to regain projected schedules.
8. Planned progress during succeeding work period.
9. Maintenance of quality and work standards.
10. Effect of proposed changes on progress schedule and coordination.
11. Other business relating to Work.
D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Owner, participants, and those affected by decisions made.

3. SITE MOBILIZATION MEETING

A. Owner may schedule a meeting at the Project site prior to, or shortly after, Contractor occupancy.
B. Attendance Required:
1. Contractor and Superintendent
2. Owner.
3. Major Subcontractors.
C. Agenda:
1. Use of premises by Owner and Contractor.
2. Owner's requirements and partial occupancy prior to completion.
3. Construction facilities and controls provided by Owner.
4. Survey and building layout.
5. Security and housekeeping procedures.
6. Schedules.
7. Application for payment procedures.
8. Procedures for testing.
9. Procedures for maintaining record documents.
10. Requirements for start-up of equipment.
11. Inspection and acceptance of equipment put into service during construction

4. PROGRESS MEETINGS

A. Make arrangements for meetings, prepare agenda with copies for participants and preside at meetings.
B. Attendance Required: Job superintendent, major Subcontractors and suppliers as required, Owner, as appropriate to agenda topics for each meeting.
C. Agenda:
1. Review of Work progress.
2. Field observations, problems, and decisions.
3. Identification of problems which impede planned progress.
4. Review of submittals schedule and status of submittals.
5. Maintenance of progress schedule.
6. Corrective measures to regain projected schedules.
7. Planned progress during succeeding work period.
8. Maintenance of quality and work standards.
9. Effect of proposed changes on progress schedule and coordination.
10.Other business relating to Work.

5. CONSTRUCTION PROGRESS SCHEDULE

A. Within 5 days after project award submit complete schedule, then within 10 days after joint review, submit final schedule.
B. Submit updated schedule with each Application for Payment.

6. PROGRESS PHOTOGRAPHS

A. Submit digital, electronic photograph files weekly with each project report to Owner's Construction Manager and Director of Development.
B. Maintain one set of all photographs at project site for reference; same copies as submitted, identified as such.
C. Provide photographs of site and construction throughout progress of Work.
D. In addition to periodic, recurring views, take photographs of each of the following events:
1. Completion of site clearing.
2. Excavations in progress.
3. Foundations in progress and upon completion.
4. Structural framing in progress and upon completion.
5. Enclosure of building, upon completion.
6. Photos of all Tower thru-wall flashing prior to cover up.
7. Final completion, minimum of ten (10) photos.
E. Views:
1. Provide non-aerial photographs from four cardinal views at each specified time, until Date of Substantial Completion.
2. Photographs of Building Exterior to be overall shots taken directly in front of each elevation.
2. Provide factual presentation.
F. Digital Photographs: Minimum resolution of 1024 by 768, in JPG format; provide files unaltered by photo editing software.
1. Delivery Medium: Via email and posting to Owner's website.

7. SUBMITTALS FOR REVIEW

A. When the following are specified in individual sections, submit them for review:
1. Product data.
2. Shop drawings.
3. Samples for selection.
B. Any item submitted that deviates for Plans and Specifications shall be noted as such in large blue writing.
C. Submit to Owner's Construction Manager for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
D. Samples will be reviewed only for aesthetic, color, or finish selection.
E. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES and for record documents purposes described in Section 01780 – CLOSEOUT SUBMITTALS.

8. SUBMITTALS FOR INFORMATION

A. When the following are specified in individual sections, submit them for information:
1. Design data.
2. Certificates.
3. Test reports.
4. Inspection reports.
5. Manufacturer's instructions.
6. Manufacturer's field reports.
7. Other types indicated.

9. SUBMITTALS FOR PROJECT CLOSEOUT

A. When the following are specified in individual sections, submit them at project closeout:
1. Project record documents.
2. Operation and maintenance data.
3. Warranties.
4. Bonds.
5. Other types as indicated.

10. NUMBER OF COPIES OF SUBMITTALS

A. Documents for Review:
1. Small Size Sheets, Not Larger Than 8-1/2 x 11 inches: Submit the number of copies which the Contractor requires, plus one copy which will be retained by the Owner.
2. Larger Sheets, Not Larger Than 30 x 42 inches: Submit the number of reproductions which Contractor requires, plus one copy which will be retained by Owner.
3. All submittals shall also be issued in electronic (PDF) format.
B. Documents for Information: Submit in electronic (PDF) format.
C. Documents for Project Closeout: Submit in electronic (PDF) format.
D. Samples: Submit the number specified in individual specification sections; one of which will be retained by Owner.
1. After review, produce duplicates.
2. Retained samples will not be returned to Contractor unless specifically so stated.

11. SUBMITTAL PROCEDURES

A. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
B. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.
C. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents. Contractor review and approval is required before submission to Owner/Architect.
D. For each submittal for review, allow 7 days excluding delivery time to and from the Contractor.
E. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
F. When revised for resubmission, identify all changes made since previous submission.
G. Do not make requests for deviations from contract documents via shop drawings, product data, or samples. Deviations will not be valid unless specifically approved under specified modification procedures.

SECTION 01320 – CHANGE ORDER PROCEDURES

1. GENERAL

A. General Conditions of the Contract for Construction, AIA Document A201, Article 7, governs the work of this Section.

2. CHANGE ORDER FORM

A. Change Orders will be issued on Architect's standard forms.

3. PRELIMINARY PROCEDURES

A. Proposal Request: If a change to the Work is considered by the Owner, the Architect will issue a formal request for Contractor's proposal for changes to the Contract. Request includes: Detailed description of change with supplementary or revised Drawings and Specifications, projected time for executing change, with a stipulation of any overtime work required, and period of time during which requested price will be considered valid.

B. Contractor Response: Respond with formal written proposal referencing Architect's request number, job name, date, specific items requested and indicate total amount of change imposed costs and construction time consideration for each request. Give each numbered request individual response. Do not lump two or more proposals on one response.

4. CONTRACT CHANGE METHODS

A. Work Directive Change: Architect may issue a directive, signed by Owner, instructing Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Directive will describe changes in the Work, and will designate method of determining any change in Contract Sum or Contract Time. Promptly execute the change in Work.

B. Lump Sum Change Order: Will be based on Proposal Request and Contractor's lump sum quotation.

C. Unit Price Change Order:
1. For pre-determined unit prices and quantities, Change Order will be executed on lump sum basis.
2. For unit costs or quantities of units of work which are not predetermined, execute Work under a work directive change. Changes in Contract Sum or Contract Time will be computed as specified for time and material Change Order.

D. Time and Material Change Order: Submit itemized account and supporting data with 10 working days after completion of change; Architect will determine change allowable in Contract Sum and Contract Time as provided in GENERAL CONDITIONS.

5. DOCUMENTATION OF CHANGE IN CONTRACT SUM AND TIME

A. General: Document each quotation for a change in cost or time with sufficient data to allow evaluation of quotation.

B. Time and Material Changes: Maintain detailed records of work done. Provide full information required for evaluation of proposed changes, and to substantiate costs of changes in the Work.
C. Additional Data: On request, provide additional data to support computations:
1. Quantities of products, labor, and equipment. Taxes, insurance and bonds.
2. Overhead and profit.
3. Justification for any change in Contract Time.
4. Credit for deletions for Contract, similarly documented.

D. Additional Costs Claims: Support each claim for additional costs, and for work done on a time and material basis, with additional information:
1. Origin and date of claim.
2. Dates and times work was performed, and by whom.
3. Time records and wage rates paid.
4. Invoices and receipts for products, equipment, and subcontracts, similarly documented.

6. EXECUTION OF CHANGE ORDERS

A. Architect will issue Change Orders for signatures of parties as provided in GENERAL CONDITIONS.

7. CORRELATION OF CONTRACTOR SUBMITTALS

A. Schedule of Values: Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum as shown on Change Order.

B. Progress Schedules: Promptly revise Progress Schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by change, and resubmit.

C. Project Record Documents: Promptly enter changes in Project Record Documents.

SECTION 01400 – QUALITY REQUIREMENTS

1. SUBMITTALS

A. Test and Reports: After each test/inspection, promptly submit electronic copy of report to Owner's Construction Manager and to Contractor.
1. Include:
a. Date issued.
b. Project title and number.
c. Name of inspector.
d. Date and time of sampling or inspection.
e. Identification of product and specifications section.
f. Location in the Project.
g. Type and Date of test/inspection.
h. Results of test/inspection.
i. Conformance with Contract Documents.
j. Provide interpretation of results.

2. Test reports are submitted for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

B. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or subcontractor, in quantities specified for Product Data.
1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

2. REFERENCES AND STANDARDS

A. For products and workmanship specified by reference to a document or documents not included in the Specifications, also referred to as reference standards, comply with requirements of the current standard, except when more rigid requirements are specified or are required by applicable codes.
B. Should specified reference standards conflict with Contract Documents, request clarification from Owner's Construction Manager before proceeding.

3. TESTING AND INSPECTION AGENCIES

A. Owner will employ services of an independent testing agency to perform specified testing. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

4. CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
B. Comply with manufacturers' instructions, including each step in sequence.
C. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
D. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

5. TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Owner's Construction Manager before proceeding. Owner standards will take precedence and, in most cases, will be significantly higher than industry standards.

6. TESTING AND INSPECTION

A. Testing Agency Duties:
1. Provide qualified personnel at site. Cooperate with Owner's Construction Manager and Contractor in performance of services.
2. Perform specified sampling and testing of products in accordance with specified standards.
3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
4. Promptly notify Owner's Construction Manager and Contractor of observed irregularities or non-conformance of Work or products.
5. Perform additional tests and inspections required by Owner's Construction Manager.
6. Submit reports of all tests/inspections specified in electronic (PDF) format.

B. Limits on Testing/Inspection Agency Authority:
1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
2. Agency may not approve or accept any portion of the Work, may not assume any duties of Contractor, and has no authority to stop the Work.
C. Contractor Responsibilities:
1. Deliver to agency at designated location, adequate samples of materials proposed to be used which require testing, along with proposed mix designs.
2. Cooperate with laboratory personnel and provide access to the Work and to manufacturers' facilities.
3. Provide incidental labor and facilities:
a. To obtain and handle samples at the site or at source of Products to be tested/inspected.
b. To facilitate tests/inspections.
c. To provide storage and curing of test samples.
4. Notify Owner's Construction Manager and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
D. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Owner's Construction Manager. Payment for retesting will be charged to the Contractor by deducting testing charges from the Contract Price.

7. DEFECT ASSESSMENT

A. Replace Work or portions of the Work not conforming to specified requirements.
B. If, in the opinion of Owner's Construction Manager, it is not practical to remove and replace the Work, Owner will direct an appropriate remedy or adjust payment.

SECTION 01500 – TEMPORARY FACILITIES AND CONTROLS

1. TEMPORARY UTILITIES

A. Provide and pay for all temporary electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.

2. TELEPHONE SERVICE

A. Provide, maintain, and pay for telephone and facsimile services to field office at time of project mobilization.

3. TEMPORARY SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization. Maintain daily in clean and sanitary condition.

4. BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

5. FENCING

A. Provide 6 foot high fence around construction site; equip with vehicular and pedestrian gates with locks if required by Owner's Construction Manager. GC to confirm with Owner's Construction Manager prior to submission of bid. Failure to request confirmation assumes Contractor has included fencing in base bid.

6. SECURITY

A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

7. VEHICULAR ACCESS AND PARKING

A. Coordinate access and haul routes with governing authorities and Owner.
B. Provide and maintain access to fire hydrants, free of obstructions.
C. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

8. WASTE REMOVAL

A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition. Provide containers with lids and remove trash from site.
B. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
C. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.
D. Waste removal facility, dumpster, to remain on site with pickup service, through building turnover plus one (1) week for Owner's vendor use.

9. PROJECT IDENTIFICATION

A. Provide and erect project identification sign, minimum 3 feet x 5 feet, design as directed by Owner.
B. No other signs are allowed without Owner permission except those required by law.

10. FIELD OFFICES

A. Office: Weather tight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture, drawing rack and drawing display table.
B. Provide space for Project meetings, with table and chairs to accommodate 6 persons.

11. REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary utilities, equipment, facilities, materials, prior to Substantial Completion inspection.
B. Remove underground installations to a minimum depth of 2 feet. Grade site as shown.
C. Clean and repair damage caused by installation or use of temporary work.
D. Restore existing facilities used during construction to original condition.

SECTION 01600 – PRODUCT REQUIREMENTS

1. SUBMITTALS

A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.
D. All submittals shall be in electronic (PDF) format.

2. NEW PRODUCTS

A. Provide new products unless specifically required or permitted by the Contract Documents.

3. PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named, clearly designated as a "Request for Substitution".

5. SUBSTITUTION PROCEDURES

A. Instructions to Bidders specify time restrictions for submitting requests for substitutions during the bidding period. Comply with requirements specified in this section.
B. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor. No other substitutions will be allowed.
C. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
D. A request for substitution constitutes a representation that the submitter:
1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
2. Will provide the same warranty for the substitution as for the specified product.
3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
4. Waives claims for additional costs or time extension which may subsequently become apparent.
E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

6. OWNER-SUPPLIED PRODUCTS

A. Contractor's Responsibilities:
1. Review Owner reviewed shop drawings, product data, and samples.
2. Receive and unload products at site; inspect for completeness or damage.
3. Handle, store, install and finish products.
4. Repair or replace items damaged after receipt.

7. TRANSPORTATION AND HANDLING

A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
B. Transport and handle products in accordance with manufacturer's instructions.
C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

8. STORAGE AND PROTECTION

A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
B. Store and protect products in accordance with manufacturers' instructions with labels intact and legible.
C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
D. For exterior storage of fabricated products, place on sloped supports above ground.
E. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
F. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

SECTION 01700 – EXECUTION REQUIREMENTS

1. EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
C. Verify that utility services are available, of the correct characteristics, and in the correct locations.
D. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

2. PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.
B. Seal cracks or openings of substrate prior to applying next material or substance.
C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3. LAYING OUT THE WORK

A. Verify locations of survey control points prior to starting work. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
B. Promptly report to Architect/Engineer the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
C. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
2. Grid or axis for structures.
3. Building foundation, column locations, ground floor elevations, and plumbing.
D. Maintain a complete and accurate log of control and survey work as it progresses.

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PROJECT NUMBER
DCH22007

CLIENT:
DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT
02.15.2023

Cheddar's SCRATCH KITCHEN EST 1979

Issue Date: 02.15.2023

REVISION INFORMATION

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
SPECIFICATIONS

AS1

4. CUTTING AND PATCHING

A. Execute cutting and patching including excavation and fill to complete the work, to uncover work in order to install improperly sequenced work, to remove and replace defective or non-conforming work, to remove samples of installed work for testing when requested, to provide openings in the work for penetration of mechanical and electrical work, to execute patching to complement adjacent work, and to fit products together to integrate with other work.
B. Execute work by methods to avoid damage to other work, and which will provide appropriate surfaces to receive patching and finishing.
C. Employ skilled and experienced installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
D. Cut rigid materials using appropriate saws or drills. Pneumatic tools not allowed without prior approval.
E. Restore work with new products in accordance with requirements of Contract Documents.
F. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
G. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material to full thickness of the penetrated element.
H. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

5. PROTECTION OF INSTALLED WORK

A. Protect installed work from damage by construction operations.
B. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
C. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

6. SYSTEMS STARTUP

A. Coordinate schedule for start-up of various equipment and systems.
B. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.
C. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
D. Verify that wiring and support components for equipment are complete and tested.
E. Execute start-up under supervision of applicable Contractor personnel and/or manufacturer's representative in accordance with manufacturers' instructions.
F. Use manufacturer's start up procedures as applicable and submit signed copy to Owner's Construction Manager.
G. Submit a written report that equipment or system has been properly installed and is functioning correctly.

7. DEMONSTRATION AND INSTRUCTION

A. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at equipment location.
B. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

8. CLEANING

A. Progress Cleaning:
1. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
2. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
3. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
4. Collect and remove waste materials, debris, and trash/rubbish from site weekly and dispose off-site; do not burn or bury.

B. Final Cleaning:
1. Use cleaning materials that are non-hazardous.
2. Clean interior and exterior glass, surfaces exposed to view; remove labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
3. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
4. Clean filters of operating equipment.
5. Clean debris from roofs, gutters, downspouts, and drainage systems.
6. Clean site; sweep paved areas, rake clean landscaped surfaces.
7. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.
8. Hospital Operating Room clean is considered minimum standard.

C. Cleaning Schedule:
1. In addition to the daily building and site cleaning noted above, the General Contractor is to include three complete cleanings. Cleanings are o be scheduled as possible:
a. 1st complete cleaning of building and site at time of punch list.
b. 2nd cleaning shall be a re-clean of the building and site prior to completion of punch list and turnover. Re-cleaning will be required until Owner's Construction Manager determines that the building has been properly cleaned.
c. 3rd cleaning shall consist of a complete top to bottom, inside and out, final cleaning at night during training at a date set by the Owner's construction Manager.
2. The Scheduled Cleanings shall consist of, but not be limited to, the following:
a. Site:
1. Landscaping: no labels or tags to remain on plants, shrubs, trees, etc… and all debris removed.
2. Paving: Power washed, clean, no tire or wheel marks, no stains or discolorations and no caulking runs.
3. Sidewalks: No power wash allowed for sidewalks; deck brush with cleaner only.
4. All traffic control signs and post have all labels removed.
b. Exterior:
1. No labels visible on the window blinds from the exterior.
2. Glass cleaned spotless.
3. Brick, Stone and EIFS/Stucco washed down.
4. Awnings clean, dust free and spot free.
5. Window sills and flashings cleaned of all mortar, etc.
c. Roof:
1. No fire rating tags or supply tags in roof shingles.
2. Metal and TPO Roofing materials washed with soft deck brush and Tide with bleach solution or equivalent.
1. Roof top equipment washed and dust free.
d. Interior:
1. Cleaning completed so that all surfaces, regardless if visible or not, are clean and dust free and the interior of the building is will remain clean and dust free for two days minimum.
2. Restroom fixtures sanitized.
3. Windows, mirrors and all glass spotless.
4. All stickers removed from plant pots, light fixtures, window blinds, TV's, equipment of any kind and all protective wrap removed of any kind.
5. Clean outs, floor drains and floor sinks polished.
6. Interiors of all cabinets, behind grills, undersides of shelving, top of ice machines, etc., clean and dust free,
7. Undersides of all table brackets dust free.

9. CLOSEOUT PROCEDURES

A. Accompany Owner on preliminary inspection to determine items to be listed for completion or correction in Contractor's Notice of Substantial Completion.
B. Notify Owner when work is considered ready for Substantial Completion.
C. Correct items of work listed in executed Certificates of Substantial Completion and comply with requirements for access to Owner-occupied areas.
D. Notify Owner when work is considered finally complete.

10. PROJECT SUPERVISION AFTER SUBSTANTIAL COMPLETION

A. Project superintendent shall remain on site through completion of punch list.
B. Project superintendent shall remain on site for one week after restaurant opening.

SECTION 01720 – CONSTRUCTION LAYOUT

1. SUMMARY

A. Section Includes:
1. Layout of work.
2. Land-survey work.

2. SUBMITTALS

A. Certificates: Submit a certificate signed by the land surveyor certifying the location and elevation of improvements.
B. Final Property Survey: Submit 5 copies of the final property survey along with electronic files; both AutoCAD and PDF formats.
C. Project Record Drawings: Submit a record of work performed and record survey data as required under provisions of Sections 01300 and 01780.

3. QUALITY ASSURANCE

A. Surveyor Qualifications: Engage a land surveyor registered in the state where the Project is located to perform required land-surveying services.
B. Do not begin construction until layout of work is reviewed by the land surveyor.

4. EXAMINATION

A. Identify existing control points and property line corner stakes.
B. Verify layout information shown on the Drawings, in relation to the property survey and existing benchmarks, before proceeding to lay out the Work. Locate and protect existing benchmarks and control points. Preserve permanent reference points during construction.
1. Do not change or relocate benchmarks or control points without prior written approval. Promptly report lost or destroyed reference points or requirements to relocate reference points because of necessary changes in grades or locations.
2. Promptly replace lost or destroyed Project control points. Base replacements on the original survey control points.
C. Establish and maintain a minimum of 2 permanent benchmarks on the site, referenced to data established by survey control points.
1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
D. Existing Utilities and Equipment: Before beginning site construction, investigate and verify the existence and location of underground utilities and other construction. Verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping.

5. PERFORMANCE

A. Work from lines and levels established by the property survey. Establish benchmarks and markers to set lines and levels as needed to locate each element of the Project. Do not scale Drawings to determine dimensions.
1. Advise sub-contractors of marked lines and levels provided for their use.
2. As construction proceeds, check each major element for line, level, and plumb.
B. Surveyor's Log: Maintain a surveyor's log of control and other survey work. Make this log available for reference.
1. Record deviations from required lines and levels, and advise the Owner when deviations that exceed indicated or recognized tolerances are detected. On Project Record Drawings, record deviations that are accepted and not corrected.
C. Building Lines and Levels: Locate and lay out batter boards for structures, building foundations, column grids and locations, floor levels, and control lines and levels required for mechanical and electrical work.
D. Site Improvements: Locate and lay out site improvements, including pavements, stakes for grading, fill and topsoil placement, utility slopes, and invert elevations.
E. Existing Utilities: Furnish information necessary to adjust, move, or relocate existing structures, utility poles, lines, services, or other appurtenances located in or affected by construction. Coordinate with local authorities having jurisdiction.
F. Final Property Survey: Prepare a final property survey showing significant features (real property) for the Project. Include on the survey a certification, signed by the surveyor, that principal metes, bounds, lines, and levels of the Project are accurately positioned as shown on the survey.

SECTION 01780 – CLOSEOUT SUBMITTALS

1. SUBMITTALS

A. Project Record Documents: Submit documents to Owner with claim for final Application for Payment.
B. Operation and Maintenance Data:
1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Owner's Construction Manager will review draft and return one copy with comments.
2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
3. Submit two sets of revised final documents in final form, both hard and electronic formats, within 10 days after final inspection.
C. Warranties and Bonds:
1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten days after acceptance.
2. Make other submittals within ten days after Date of Substantial Completion, prior to final Application for Payment.
3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within ten days after acceptance, listing the date of acceptance as the beginning of the warranty period.
4. All Warranties shall start as of restaurant "Opening Day".

2. PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:
1. Drawings.
2. Specifications.
3. Addenda.
4. Change Orders and other modifications to the Contract.
5. Reviewed shop drawings, product data, and samples.
6. Manufacturer's instruction for assembly, installation, and adjusting.
B. Ensure entries are complete and accurate, enabling future reference by Owner.
C. Store record documents separate from documents used for construction.
D. Record information concurrent with construction progress.
E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
1. Manufacturer's name and product model and number.
2. Product substitutions or alternates utilized.
3. Changes made by Addenda and modifications.
F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
1. Measured depths of foundations in relation to finish first floor datum.
2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
4. Field changes of dimension and detail.
5. Details not on original Contract drawings.

3. OPERATION AND MAINTENANCE DATA

A. For Each Product or System on forms provided by Owner: List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

4. OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

A. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.

5. OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

A. For Each Item of Equipment and Each System:
1. Description of unit or system, and component parts.
2. Identify function, normal operating characteristics, and limiting conditions.
3. Complete nomenclature and model number of replaceable parts.
B. Panel board Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.
C. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
D. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
E. Include manufacturer's printed operation and maintenance instructions.
F. Include sequence of operation by controls manufacturer.
G. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
H. Provide framed information as follows. All information shall be framed in black metal frames.
1. Subcontractor list and service company contact information (to be located in office)
2. Warranty procedure information (located in office)
3. Legend and locations of labels on valves and knobs in mechanical room (located in mechanical room)
4. Map of zones for irrigation system located with irrigation controls.

6. OPERATION AND MAINTENANCE MANUALS

A. Prepare instructions and data by personnel experienced in maintenance and operation of described products in the form of an instructional manual.
B. Binders: Commercial quality, 8-1/2 x 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
C. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
D. Provide tabbed dividers for each separate product and system, with typed description of product and major component parts of equipment.
E. Arrange content by systems under section numbers and sequence of Table of Contents of this Project Manual.
F. Contents: Prepare a Table of Contents for each volume, with each product or system description identified with tabbed dividers, in three parts as follows:
1. Part 1: Directory, listing names, addresses, and telephone numbers of Owner's Construction Manager, Contractor, Subcontractors, and major equipment suppliers.
2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
a. Significant design criteria.
b. List of equipment.
c. Parts list for each component.
d. Operating instructions.
e. Maintenance instructions for equipment and systems.
f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
3. Part 3: Project documents and certificates, including the following:
a. Shop drawings and product data.
b. Certificates.

7. WARRANTIES AND BONDS

A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work.
B. Verify that documents are in proper form, contain full information, and are notarized.
C. Co-execute submittals when required.
D. Manual: Bind in commercial quality 8-1/2 x 11 inch three D side ring binders with durable plastic covers.
E. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible company principal.
F. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.
G. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
H. At contractor's option, warranty and bond information can be provided electronically in PDF format on a Compact Disk.

DIVISION 02 - SITE WORK

SECTION 02010 – SUBSURFACE INVESTIGATION
1. SUBSURFACE INVESTIGATION
A. Geotechnical investigation (subsurface soil tests) for the project site has been performed and a report of that investigation has been completed. The consultant's report presents his conclusions on subsurface conditions, based on his interpretations of the data obtained in the investigation. The Contractor acknowledges that he has reviewed the consultant's report and any addenda thereto, and that his Bid for excavation operations, including all necessary rock removal, is based on subsurface condition as described in that report. It is recognized that a subsurface investigation may not disclose all conditions, as they actually exist between the time of a subsurface investigation and the time of excavation operations. In recognition of these facts, this clause is entered in the Contract to provide a means of equitable additional compensation for the Contractor if adverse unanticipated conditions are encountered, and to provide a means of rebate to the Owner if the conditions are more favorable than anticipated.
B. Requirements:
1. Contractor shall refer to all recommendation and findings as set forth in soils geotechnical report. The Owner and/or Architect accept no responsibility for the accuracy of the findings or for the final recommendations. Existing elevations and locations to be joined shall be verified by the contractor before construction. Contractor shall notify the Owner so that modifications can be made before proceeding with the work.
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2. At any point in time during excavation operations that the Contractor encounters conditions that are different than those anticipated by the foundation consultant's report, he shall immediately (within 24 hours) bring this fact to the Owners attention. Once a fact of unanticipated conditions has been brought to the attention of the Owner, and the consultant has concurred, immediate negotiations will be undertaken between the Owner and the Contractor to arrive at a change in contract price for additional work or reduction in work because of the unanticipated conditions. The Contractor agrees that his stated unit price would apply for additional or reduced work under the Contract.

SECTION 02060 – SELECTIVE DEMOLITION

1. SECTION INCLUDES
A. Demolish portions of designated structures.
B. Removal of designated foundations.
C. Disconnect, cap, and identify utilities.
D. Removal of underground piping.
E. Removal of existing construction indicated on Drawings and/or required by work specified in other Sections of these Specifications.
F. Protection of persons and property.

2. SUBMITTALS
A. Submit demolition and removal procedures and schedule per SUBMITTALS Sections.

3. COORDINATION
A. Contractor is solely responsible for coordination of work of this Section with work of subcontractors and Owner's staff for work of other Sections of these Specifications.
B. Conduct operations with minimum interference to public or private thoroughfares. Maintain egress and access at all times. Use of explosives is prohibited.

4. PREPARATION
A. General: Protect existing items which are not indicated to be altered. Prevent movement or settlement of adjacent structures. Erect and maintain weatherproof closures for exterior openings. Erect and maintain temporary partitions to prevent spread of dust, fumes, noise, and smoke. Protect existing items which are not indicated to be altered.
B. Existing Utilities: Disconnect, remove and cap designated utility services within demolition areas. Mark location of disconnected utilities. Identify and indicate capping locations on Project Record Documents.

5. PROTECTION
A. Persons: Erect and maintain fences, planking, bridges, bracing, shoring, sheath piling, lights, barricades, warning signs and guards required for protection of workmen and the public. Access to South entry of existing educational building and West entry to Family Life Center must be maintained on Sundays throughout construction duration.
B. Property: Use care and appropriate means to protect construction and property which is not part of Work of Contract. Repair, refinish and/or replace damaged construction and property at no additional cost to Owner.

6. EXECUTION
A. General: Demolish in orderly and careful manner with least possible disturbance to public and to adjacent property.
B. Ownership of Items Removed: Equipment and materials resulting from demolition work is property of Contractor, unless noted otherwise on the Drawings.
C. Existing Construction:
1. Demolish designated structures and appurtenances in an orderly and careful manner.
2. Keep work sprinkled to minimize dust. Provide hoses and water main or hydrant connections for this purpose.
3. Back-fill areas excavated caused as a result of demolition.
4. Rough grade and compact areas affected by demolition to maintain new site grades.

7. CLEANING AND DISPOSAL
A. Except where noted otherwise, immediately remove and dispose of demolished materials away from site. Do not burn or bury materials on site.

SECTION 02200 – EXCAVATION, BACKFILLING, COMPACTION, AND GRADING

The following are general guidelines for excavation, backfilling, compaction and grading. When not specifically addressed in the Civil construction documents, contractor shall comply with the provisions herein.

1. Excavate for footings; foundations structures, utilities, etc. to indicated depth. All excavation shall be assumed as earth.

A. Trim bottoms to leave solid, undisturbed base for concrete placement. See Soils Report for bearing capacity.
B. All foundation excavation shall be kept dry, and protected from freezing.
C. Correct unauthorized excavation in a manner acceptable to Owner.

2. Excess earth not required for backfill shall be removed from site. General Contractor responsible for topsoil placement and raking to grade.

3. Compact backfill to density of adjacent soil, as follows, whichever is greater: (Refer to Soils Report for other recommendations).

A. Compact soil to not less than the following percentages of maximum density for soils, which exhibit a well-defined moisture density relationship (cohesive soils) determined in accordance with ASTM D1557: and not less than the following percentages of relative density, determined in accordance with ASTM D2049, for soils which will not exhibit a well-defined moisture-density relationship (cohesionless soils).
B. Under Buildings and Paved Areas: Compact top 8 inches of existing surface and each layer of backfill of fill material to 95 percent maximum density (Standard Proctor) for cohesive soil or 98 percent relative density (Standard Proctor) for cohesionless soils.
C. Other Areas: Compact 8 inches of existing ground surface and each layer of backfill of fill material to 90 percent maximum density (Standard Proctor) for cohesive soils or 85 percent relative density (Standard Proctor) for cohesionless soils.
D. Where soil materials must be moisture conditioned before compaction, uniformly apply water to surface, Prevent free water from appearing on surface of soil materials during or subsequent to compaction operation.
E. Remove and replace, or scarify and air dry soil material that is too wet to permit compaction to specified density.

4. Backfill and fill materials

A. Sand or sand on gravel at engineered (clean) earth fill shall be used under floor slabs on-grade, to underside of crushed stone underlayment.
B. Earth materials taken from the excavation operations and stockpiled on site as acceptable fill material, capable of meeting the specified compaction requirements, shall (be used as fill material in areas outside the building.
1). Only 1-inch washed gravel, pea gravel or sand shall be used in utility trenches in paved areas, to top of subgrade.
C. Existing paving, organic material or existing soils shall not be used for filling under building slabs or for filling under pavement.
D. Granular fill under slabs on grade shall be No. 57, 6, or 67 crushed stone per ASTM D448.
E. Remove rock or gravel larger than 2 inches in any dimension, debris, waste, obstructions, and deleterious matter from ground surface prior to placement of fills.

SECTION 02361 – TERMITE CONTROL

1. SUMMARY
A. This Section includes the following:
Adjust list below to suit Project.
1. Soil treatment with termiticide.
2. REFERENCES

A. Title 7, United States Code, 136 through 136y – Federal Insecticide, Fungicide and Rodenticide Act; United States Code; 1947 (Revised 2001).

3. REGULATORY REQUIREMENTS

A. Conform to applicable code for requirements for application, and comply with EPA regulations.
B. Provide certificate of compliance from authority having jurisdiction indicating approval of toxicants.

4. SEQUENCING AND REPORTING

A. Apply toxicant immediately prior to installation of vapor barrier under slabs-on-grade.
B. Soil Treatment Application Report: Include the following:
1. Date and time of application.
2. Moisture content of soil before application.
3. Brand name and manufacturer of termiticide.
4. Quantity of undiluted termiticide used.
5. Dilutions, methods, volumes, and rates of application used.
6. Areas of application.
7. Water source for application.
5. WARRANTY

A. Provide five year installer's warranty against damage to building caused by termites.
1. Include coverage for repairs to building and to contents damaged due to building damage. Repair damage and, if required, re-treat.
2. Inspect annually and report in writing to Owner. Provide inspection service for three (3) years from Date of Substantial Completion.

6. MANUFACTURERS
A. Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Termiticides:
a. Aventis Environmental Science USA LP; Termidor.
b. Bayer Corporation; Premise 75.
c. Dow AgroSciences LLC; Dursban TC or Equity.
d. FMC Corporation, Agricultural Products Group; Talstar, Prevail FT, or Torpedo.
e. Syngenta; Demon TC.
7. MIXES

A. Toxicant Chemicals: EPA approved; synthetically color dyed to permit visual identification of soil treatment.
B. Diluent: Recommended by toxicant manufacturer.
C. Mix toxicant to manufacturer's instructions.

8. EXAMINATION

A. Verify that soil surfaces are unfrozen, sufficiently dry to absorb toxicant, and ready to receive treatment.
B. Verify final grading is complete.

9. SOIL TREATMENT
A. Termiticide: Provide an EPA-registered termiticide complying with requirements of authorities having jurisdiction, in an aqueous solution formulated to prevent termite infestation. Provide quantity required for application at the label volume and rate for the maximum termiticide concentration allowed for each specific use, according to product's EPA-Registered Label.
B. Preparation:
1. General: Remove all extraneous sources of wood cellulose and other edible materials such as wood debris, tree stumps and roots, stakes, formwork, and construction waste wood from soil within and around foundations.
Delete paragraph below if no soil treatment.
2. Soil Treatment Preparation: Loosen, rake, and level soil to be treated except previously compacted areas under slabs and footings. Termiticides may be applied before placing compacted fill under slabs if recommended in writing by termiticide manufacturer.

C. Application: Mix soil treatment termiticide solution to a uniform consistency. Provide quantity required for application at the label volume and rate for the maximum specified concentration of termiticide, according to manufacturer's EPA-Registered Label, to the following so that a continuous horizontal and vertical termiticidal barrier or treated zone is established around and under building construction. Distribute treatment evenly.
Revise five subparagraphs below to suit Project.
1. Slabs-on-Grade: Underground-supported slab construction, including footings, building slabs, and attached slabs as an overall treatment. Treat soil materials before concrete footings and slabs are placed.
2. Foundations: Adjacent soil including soil along the entire inside perimeter of foundation walls, along both sides of interior partition walls, around plumbing pipes and electric conduit penetrating the slab, and around interior column footers, piers, and chimney bases; also along the entire outside perimeter, from grade to bottom of footing. Avoid soil washout around footings.
3. Crawlspaces: Soil under and adjacent to foundations as previously indicated. Treat adjacent areas including around entrance platform, porches, and equipment bases. Apply overall treatment only where attached concrete platform and porches are on fill or ground.
Examples of masonry voids are the insides of hollow masonry units and behind masonry veneer.
4. Masonry: Treat voids.
5. Penetrations: At expansion joints, control joints, and areas where slabs will be penetrated.
D. Insert requirements here for crawlspaces used as plenum spaces only after seeing Evaluations for cautionary information.
B. Avoid disturbance of treated soil after application. Keep off treated areas until completely dry.
E. Protect termiticide solution, dispersed in treated soils and fills, from being diluted until ground-supported slabs are installed. Use waterproof barrier according to EPA-Registered Label instructions.
F. Post warning signs in areas of application.
G. Reapply soil treatment solution to areas disturbed by subsequent excavation, grading, landscaping, or other construction activities following application.
H. Apply extra treatment to structure penetration surfaces such as pipe or ducts, and soil penetrations such as grounding rods or posts.
I. Do not permit soil grading over treated work.

SECTION 02505 – CONCRETE PAVING, WALKS, CURBS, AND GUTTERS

1. SECTION INCLUDES

A. Concrete pedestrian traffic surfaces (walks, ramps, etc.)
B. Concrete vehicular traffic surfaces
C. Concrete curbs and gutters

2. REFERENCE PUBLICATIONS AND STANDARDS

A. Governing Authority: Applicable standards and regulations of state and municipal agencies having governing authority over the work specified in this section shall take priority over items specified herein and shown on the drawings unless the requirements set forth herein require a superior quality work.
B. Material Standards: American Society for Testing Materials (ASTM)
C. Concrete Standards: American Concrete Institute (ACI): ACI-617 "Standard Specifications for Concrete Pavement and Bases" ACI-395 "Manual of Standard Practice for Detailing Reinforced Concrete"

3. SUBMITTALS

A. Testing Laboratory Reports: Furnish electronic copies of the test reports to the Owner indicating results of the cylinder test.

4. BASIC MATERIALS

A. Concrete and Reinforcing Steel: As Specified in CAST-IN-PLACE CONCRETE

5. MISCELLANEOUS MATERIALS

A. Air Entraining Agent: ASTM C0260, Master Builders or equal.
B. Dispersing Admixture: ASTM C-494, Master Builders or equal.
C. Curing Compound: ASTM C-309, No. 40W by A. C. Horn Company or equal.
D. Joint Filler: ASTM D1751, pre-molded fiber filler, unless shown otherwise on the drawings.
E. Joint Sealer: ASTM D-1190, Code 2351.

6. CONCRETE MIX DESIGN

A. Contractor shall employ and pay for, as a part of the contract price, the services of an Owner approved independent testing laboratory to determine actual design mix to be used, based on the following: All concrete: Minimum 3000 psi at 28 days. Refer to Structrual and Civil documents for more restrictive requirements.

7. INSPECTION OF SUBGRADE

A. Inspect subgrades prepared as specified elsewhere in these Specifications and report any deficiencies to the Owner before beginning work. Commencement of work shall indicate acceptance of subgrades by this Contractor.

8. CONSTRUCTION

A. General: Deliver and place concrete as specified in CAST-IN-PLACE CONCRETE.
B. Curbs and Gutters:
1. Configurations: Construct to cross-sectional details shown on drawings and at indicated locations. Curbs may be fully formed or pulled and troweled to configurations shown on the drawings.
2. Reinforcement: Reinforce as indicated on the drawings with continuous reinforcing bars lapped 30 bar diameters and securely tied at all splices. Metal chairs shall be used to hold the reinforcing steel in the proper plane.
3. Expansion Joints: Construct ½" wide expansion joints with joint filler across lengths of curb at all tangent points and at not more than twenty foot intervals. Construct one inch wide expansion joints with joint filler between curbs and concrete paving. All fixed objects, such as buildings, poles, pipes, catch basins, etc., within or abutting the concrete shall be separated from the concrete by expansion joints.
4. Finishing: Finish surfaces with dense uniform texture equal to burlap drag and cross-score with 1/4" deep cross joints at ten foot intervals with edges smoothed 1/8".
5. Joints: Fill expansion joints with joint filler except for space 3/4" deep at surface. After concrete has set, clean the open joint above filler and fill with joint sealer in accordance with instructions of sealer manufacturer.
D. Walks:
1. Configurations: Construct to cross-sectional details shown on drawings and at indicated locations.
2. Sand Cushion: Concrete shall be placed over a sand cushion placed on the stabilized subgrade as shown on the drawings or a minimum of 4" thick if not shown on the drawings.
3. Reinforcing: Reinforce with 6 x 6 x W1.4, WWF, minimum reinforcing unless otherwise indicated or noted on the drawings.
4. Expansion Joints: Construct expansion joints as detailed in locations shown on the drawings.
5. Finishing: Finish surfaces not noted on the drawings to be finished otherwise to a "light broom" or "burlap drag" gritty surface. Tool all joints and all edges to provide a smooth border to each section or division of the walk. Finish all vertical surfaces in a manner that leaves the exposed surfaces free of "honeycombing" and form marks. Any damaged surfaces shall be repaired and stone-rubbed to match adjacent finished surfaces or replaced at Owner's Construction Manager's discretion.
6. CONCRETE MIX DESIGN

A. Contractor shall employ and pay for, as a part of the contract price, the services of an Owner approved independent testing laboratory to determine actual design mix to be used, based on the following: All concrete: Minimum 3000 psi at 28 days. Refer to Structrual and Civil documents for more restrictive requirements.

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8. CONSTRUCTION

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B. Curbs and Gutters:
1. Configurations: Construct to cross-sectional details shown on drawings and at indicated locations. Curbs may be fully formed or pulled and troweled to configurations shown on the drawings.
2. Reinforcement: Reinforce as indicated on the drawings with continuous reinforcing bars lapped 30 bar diameters and securely tied at all splices. Metal chairs shall be used to hold the reinforcing steel in the proper plane.
3. Expansion Joints: Construct ½" wide expansion joints with joint filler across lengths of curb at all tangent points and at not more than twenty foot intervals. Construct one inch wide expansion joints with joint filler between curbs and concrete paving. All fixed objects, such as buildings, poles, pipes, catch basins, etc., within or abutting the concrete shall be separated from the concrete by expansion joints.
4. Finishing: Finish surfaces with dense uniform texture equal to burlap drag and cross-score with 1/4" deep cross joints at ten foot intervals with edges smoothed 1/8".
5. Joints: Fill expansion joints with joint filler except for space 3/4" deep at surface. After concrete has set, clean the open joint above filler and fill with joint sealer in accordance with instructions of sealer manufacturer.
C. Traffic Surfaces:
1. Configuration: Construct to cross-sectional details shown on drawings and at indicated locations.
2. Reinforcement: Reinforce with #3 minimum size reinforcing bars 18 inches on center both ways, unless otherwise indicated or noted on the drawings.
3. Expansion and Construction Joints: At intentional points for stoppage of concrete placing, use expansion joints. At unintentional points of stoppage of concrete placing, use continuation of reinforcing through joints. Construct ½ inch wide expansion joints with joint filler at locations shown on the drawings or at not more than twenty foot intervals each way if not shown. Construct ½ inch wide expansion joints with joint filler between curbs and concrete paving. All fixed objects, such as buildings, poles, pipes, catch basins, etc., within or abutting the concrete shall be separated from the concrete by expansion joints.
4. Joint Filling and Sealing: Fill expansion joints with joint filler except for space 3/4" deep at surface. After concrete has set, clean the open joint above filler and fill with joint sealer in accordance with instructions of sealer manufacturer.
5. Finishing: Vibrate, screed and float concrete to level and test the surface, which shall not vary over 1/4" in ten feet when tested with ten foot straight edge. Finish surface to gritty texture with burlap drag or straight continuous strokes with a stiff bristle push broom. Finish all edges smooth with 1/8" or 1/4" radius.
D. Walks:
1. Configurations: Construct to cross-sectional details shown on drawings and at indicated locations.
2. Sand Cushion: Concrete shall be placed over a sand cushion placed on the stabilized subgrade as shown on the drawings or a minimum of 4" thick if not shown on the drawings.
3. Reinforcing: Reinforce with 6 x 6 x W1.4, WWF, minimum reinforcing unless otherwise indicated or noted on the drawings.
4. Expansion Joints: Construct expansion joints as detailed in locations shown on the drawings.
5. Finishing: Finish surfaces not noted on the drawings to be finished otherwise to a "light broom" or "burlap drag" gritty surface. Tool all joints and all edges to provide a smooth border to each section or division of the walk. Finish all vertical surfaces in a manner that leaves the exposed surfaces free of "honeycombing" and form marks. Any damaged surfaces shall be repaired and stone-rubbed to match adjacent finished surfaces or replaced at Owner's Construction Manager's discretion.

9. CURING CONCRETE
A. Apply a white-pigmented type curing compound at a uniform rate of approximately 200 sq. ft./ gallon, or as recommended by curing compound manufacturer as soon as the finishing operation has been completed and the concrete has lost its water sheen. The curing procedure must protect the concrete, including all exposed surfaces against loss of moisture and rapid temperature change for a period of not less than four days from the beginning of the curing operation and without damage to, or marking of the finished concrete surface. Traffic shall not be allowed on finished concrete for a minimum period of seven days.

10. TESTING
A. Independent Testing Laboratory: Owner shall employ and pay for the services of an independent testing laboratory to perform concrete cylinder testing. Test cylinders shall be taken and cured by the Contractor and tested by the testing laboratory for each different class of concrete poured in any one day. Cylinders shall be taken in accordance with ASTM C31, and cured and tested in accordance with ASTM C39. One set of three cylinders is required for each 50 cubic yards of concrete or less, placed in any one day. One cylinder shall be tested at 7 days, one cylinder shall be tested at 28 days and one cylinder shall be held as a spare from each set of three cylinders as specified above.
B. Laboratory Tests:
1. Slump Tests: Slump tests shall be taken by the Contractor when cylinders are taken, and shall show maximum slump 5" and minimum slump 3".
2. Air Entrainment: Air content by volume: 5% to 7% based on measurements made in concrete mixtures at point of discharge at job site at time slump tests are made. Air content by volume shall be determined in accord with ASTM C231.

11. CLEANING CONCRETE
A. Concrete approaches, sidewalks and related work shall be hosed down with water, scrubbed with fiber brushes and appropriate cleaner, allowed to dry and be left broom clean and in condition acceptable to the Owner. Do not power wash sidewalks.

SECTION 02511 – "ASPHALTIC" CONCRETE PAVING

1. SECTION INCLUDES

A. Paving base
B. Base Course and surface course

2. REFERENCE STANDARDS

A. American Association of State Highway Officials (AASHO)
B. American Society for Testing Materials (ASTM)
C. Governing Authority: Applicable publications of governing bodies having jurisdiction over the work

3. SUBMITTALS

A. Submit design mix test reports to Owner per SUBMITTAL requirements..

4. MATERIALS

A. Sub-Base: If required; as shown on the site plan (SP) drawings and specified in other sections of these specifications
B. Base Course (Binder): Unless otherwise shown on the drawings; uniform mix of coarse aggregate and asphalt as determined by "design mix"
C. Surface Course: Unless otherwise shown on the drawings; uniform mix of coarse aggregate and fine aggregate (pea gravel will not be acceptable), mineral filler and asphalt as determined by "design mix".
D. Design Mixes: Contractor employ and pay for the services of an Owner-approved independent testing laboratory to determine design mixes for base and surface courses; including asphalt bitumen content; ASTM D2172, latest edition, entitled, "Quantitative Extraction of Bitumen from Bituminous Paving Mixtures"

5. GRADE CONTROL

A. Establish and maintain lines and grades shown on drawings by means of line and grade stakes.

6. TRANSPORTATION

A. Transport paving mixes from approved mixing plant to site in tight vehicles with metal bottoms previously cleaned of foreign materials. Vehicles shall be suitably insulated to avoid heat losses. Cover each load to prevent cooling and loss of ingredients.

7. PLACING

A. General: Thickness shown on Civil drawings. Unless otherwise shown on the drawings, place asphaltic concrete in two courses; first a coarse graded base course, and second a fine graded surface course. Apply base course to prepared sub-base (when applicable) which has been primed with asphalt MC-1, application temperature 50 to 120 degrees F, at a rate of 0.15 to 0.40 gal/sq yd. Apply surface course to base course to which has been applied a tack coat of asphalt RC-2, application temperature 100 to 175 degrees F, at rate of 0.05 to 0.25 gal/sq yd. Place each course under temperature conditions of 40 to 90 degrees F.
B. Means: Dump and spread mixture on primed base with spreading and finishing machine, so that after compaction, surface will be smooth, of uniform density and meets requirements for typical cross-section shown. Other placing means may be proposed.
C. Time and Temperature: Place and initially roll during daylight hours. Mixture placing temperature; between 225 and 325 degrees F.
D. Protection of Curbs and Gutters: Prevent splattering of adjacent curbs, gutter, concrete paving and structures. Hand spreading may be employed where machine is impractical.
E. Finish Grades: Approximately 6 inches below adjacent concrete sidewalks, and/or curbs, except as specifically shown otherwise on the drawings; true to grades shown and straight within 1/4 inch in 10 feet when checked with a straight edge. No "bird baths" will be allowed.

8. ROLLING

A. General: After rolling with medium weight steel-wheeled roller, roll with pneumatic, three wheel, or tandem rollers longitudinally at sides and proceed toward center of pavement, overlapping on successive trips by at least half width of rear wheels. Alternate trips of roller shall be slightly different in length.
B. Compression and Roller Marks: Roll until no further compression can be obtained and roller marks are eliminated. If required, roll diagonally in each direction with tandem roller with second diagonal rolling crossing line of first rolling.
C. Prevention of Mixture Adhesion to Roller: Keep wheels moistened with water; excessive use of water will not be permitted. Do not permit rollers to stand on pavement which has not been fully compacted and which has not cooled to atmospheric temperature.
D. Displacement: Keep movement of roller slow enough to avoid displacement of mixture. Correct any displacement at once by use of rakes and addition of fresh mixture.
E. Precautions: Prevent dropping of oil, gasoline and grease on pavement.
F. Hand Operations: Thoroughly compact edges of pavement along curbs, headers, aprons, manholes, valve boxes and similar places not accessible to roller with lightly oiled hand-operated vibrating rollers or mechanical tampers.

9. SPECIAL TESTING

A. Extraction and Gradation Test: ASTM D2172 for each type.
B. Field-In-Place Density Test: ASTM D1188 for each type.
C. Thickness Test: Determine by test borings. Make one test for each 5,000 sq ft of paving surface. If average thickness is deficient by no more than 1/4 inch, and no individual thickness is deficient by more than 5/8 inch, installation will be held to meet requirements. If average thickness is deficient by more than 1/4 inch, or if any individual thickness determination is deficient by more than 5/8 inch, pavement thickness will be held to not meet requirements. Deficient areas shall be defined, removed and replaced, or adjusted to design thickness by methods acceptable to the Owner.

SECTION 02580 – PAVEMENT MARKING
1. GENERAL

A. Marking paint shall conform to AASHTO M248 (chlorinated rubber-alkyd), Type III. Apply as 4" wide stripes (or symbols as indicated) in one coat of 125 sq. ft. per gallon. Color shall be white. Handicapped details shall comply with the latest provisions of the Americans with Disabilities Act and local accessibility standards.
B. Dust, clay, silt, and excess sand shall be removed by sweeping from pavement to be marked prior to application of paint.

SECTION 02854 – PARKING BUMPERS (WHEEL STOPS)

1. SECTION INCLUDES

A. Parking bumper (wheel stop)

2. WHEEL STOPS

A. Precast concrete, semi-circular or beveled square in cross-section, 8'-0" long X 6" high X 8" wide, with holes for three dowels cast through each unit, and two 6 inch x 3/4 inch drainage slots.

3. DOWELS

A. Not less than 2 – 3/4" round X 12" long (minimum) steel dowels as recommended by wheel stop manufacturer.

4. GENERAL

A. Install wheel stops in locations and in accord with details shown on the drawings.

5. INSTALLATION

A. Countersink steel dowels to a point 1/2" to 3/4" below the top surface of the wheel stop and set in such a manner as to avoid chipping or cracking the concrete during installation, and seal reveal with silicone caulking flush.

6. CLEAN-UP

A. Upon completion of work of this section, remove related debris from premises.

DIVISION 03 - CONCRETE

SECTION 03300 – CAST-IN-PLACE CONCRETE

1. SCOPE

A. The Contractor shall furnish labor, materials and equipment necessary to install all items of cast-in-place concrete, and all necessary items as shown on the drawings, including anchor bolts for columns, items specified herein, and items required for a complete installation.

2. REFERENCES:

A. The ACI "Manual of Concrete Practice" and the CRSI "Manual of Standard Practice" shall apply unless modified herein.

3. MATERIALS

A. Cement: The cement used shall be Portland Cement, conforming to ASTM C 150, Type I. One brand shall be used for the complete project.
B. High early strength concrete may be used at General Contractor's discretion.
C. Aggregates:
1. Coarse aggregate shall conform to ASTM C-33 specifications with maximum size No. 57. The material shall consist of crushed stone, gravel, or other hard, strong, durable, uncoated pieces.
2. Fine aggregate shall conform to ASTM C-33, and may be natural sand or manufactured sand.

D. Admixtures:
1. Air entrainment agents conforming to ASTM C-260 shall be used in concrete exposed to weather, and may be used in all concrete on this project. Air entraining admixtures shall be used to produce 4% to 6% air by volume in the concrete.
2. High-range water reducing admixture (Super Plasticizer) meeting requirements of ASTM C 494 may be used at the discretion of the Contractor.

E. Concrete Sealers:
1. Materials:
a. Base Sealer: Micro Guard Concrete Clear Waterproofing Sealer, # AD702.
b. Surface Sealer: Micro Guard Hard Tile Clear Matte Finish Treatment, #AD708.
c. Admixture: Micro Grip Anti-Skid Floor Media Additive, # AD5-050.

F. Water: Water used for mixing of concrete shall be potable.

G. Reinforcing Bars: All reinforcing bars shall conform to ASTM A615 – Grade 60. All bars shall be free of loose and/or excessive rust or other materials which will prevent bond.

H. Expansion Joint Material: Expansion joint material shall conform to ASTM D1751.

I. Mill Tests: Reports may be required on any and all material at the Engineer's discretion and direction. Costs of these reports shall be borne by the Contractor.

J. No fly ash or calcium chloride shall be used on this project.

4. CONCRETE QUALITY

A. Strength: All cast-in-place concrete shall have a maximum weight of 150 pounds per cubic foot and minimum strength at 28 days (ultimate strength of 3,000 psi for Foundations and ultimate strength of 3,500 psi for Slab-on- Grade).

B. Proportioning of the Concrete Mixture:
1. The proportion of the aggregate to cement for any concrete shall be such as to forms and around reinforcement with the method of placing employed on the on the surface.
2. The materials used for the concrete shall be measured by weight. Maximum slump shall be 4".
3. Measure, batch, mix and deliver concrete with pigments, where noted, in accordance with manufacturer's written instructions.

C. Tests:
1. The Contractor shall assist Owner's testing laboratory to receive, mark, cure, and test cylinders in accordance with ASTM C-39. The test report by the laboratory shall identify the location of the concrete sampled, date, slump, air the reports to the Owner.
2. The Owner shall be responsible and pay for all tests. Equipment needed at the site shall be furnished by the Contractor.
3. Routine tests of concrete shall consist of:
a. Slump test for each load of ready-mixed concrete.
b. Compressive strength test for each day's pour and/or each 50 cubic yards of concrete poured. This test shall conform to ASTM C-31, and consist of 4 cylinders.

5. INSPECTIONS

A. Owner's Approval: The Contractor shall notify the Owner 48 hours prior to schedule placement of concrete. The forms, steel and other conditions must be approved prior to placement of concrete.

6. MIXING AND PLACING CONCRETE

A. All concrete for this project shall be from an approved central mixing plant. Mixing and delivery shall conform to ASTM C-94.
B. Concrete shall be conveyed from the mixer to the place of final deposit by methods which will prevent the separation or loss of materials.

C. Concrete shall be deposited as nearly as practicable in its final position to avoid segregation due to re-handling or flowing. When concreting is once started, it shall be carried on as a continuous operation until the placing of the panel or section is completed.

D. Concrete shall be maintained in a moist condition for seven (7) days after placing by one of the following methods:
a. Wet coverings
b. Spraying
c. Curing compound
1. Curing method shall be compatible with floor coatings or coverings.
2. Ashford formula may be used in lieu of curing compound (Part 3). This material shall be applied according to manufacturer's recommendations.

F. Adequate precautions shall be taken for cold weather or hot weather concreting. (ACI 306 or ACI 305).

7. FORM WORK AND CONSTRUCTION DETAILS

A. Forms
1. Forms shall conform to shapes, lines and dimensions of the members as called for on the plans, and shall be sufficiently tight to prevent the leakage of mortar. They shall be properly braced or tied together so as to maintain position and shape.
2. Form material shall be of:
a. Plywood: APA Plyform conforming to PS 174
b. Metal Forms
3. Before placing the concrete and reinforcing steel, the contact surfaces of all forms shall be thoroughly wetted with water or coated with approved form oil. The form oil shall be applied with a brush or spray so as to cover the form evenly without excess drip. Form coating material used to coat formwork to facilitate the removal thereof shall not cause softening or permanent staining of the concrete surface.

B. Removal of Forms: Forms not required for structural support may be removed as soon as concrete has hardened sufficiently to resist damage during removal of forms.

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT

02.15.2023

Cheddar's SCRATCH KITCHEN
EST 1979

Issue Date:	02.15.2023

REVISION INFORMATION

Restaurant #:	21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
SPECIFICATIONS

AS2

8. FINISHES

A. Steel trowel finish shall be applied to all floor slabs in the building, unless otherwise noted.

B. Light broom finish perpendicular to traffic shall be applied to all exterior walkways. A 3/4" transverse contraction joint shall be formed with a tool designed for that purpose at equal intervals not exceeding the width of the walkway. All edges adjoining the final ground line shall be rounded with a 1/4" edger. Expansion joints shall not exceed 20'.

C. Concrete Sealer:

1. Step One, Concrete Clear Sealer:
   a. Concrete to be sealed must have aged a minimum of 28 days prior to sealer installation.
   b. Immediately prior to applying concrete sealer, the concrete must be thoroughly cleaned. The surface should be swept then scrubbed using rotary floor machine. The surface must be rinsed after cleaning until the rinse water is completely clean. After drying, it should be inspected closely, and additional or spot cleaning should be performed if necessary.
   c. Surfaces must be properly prepared as prescribed in manufacturer's instructions. Surrounding areas and adjacent surfaces must be masked or protected from overspray, spills, tracking, and equipment contact. The work area should be roped off and closed to traffic.
   d. Immediately prior to use, the liquid material must be thoroughly power-mixed as described in manufacturer's instructions. Application must be made full strength (un-thinned) at the coverage rate recommended and with equipment recommended by manufacturer's instructions.
   e. Base sealer must be applied thinly and uniformly. A wet edge should be maintained, and overlap controlled. Material should not be over-applied or allowed to puddle or collect in joint indentations.
   f. Base sealer must be allowed to dry completely, normally a minimum of 12 to 48 hours, before it is subjected to temperatures below 42 degrees Fahrenheit or to water from any source.

2. Final Step, Clear Sealer:
   a. Immediately prior to use, the liquid material must be thoroughly power-mixed as described in manufacturer's instructions. Application must be made full strength (un-thinned) at the coverage rate recommended and with equipment recommended by manufacturer's instructions.
   b. Hard Tile Sealer shall be applied thinly and uniformly utilizing a conventional fine mist sprayer per manufacturers written instructions.
   c. While spraying clear sealer, broadcast Anti-Skid Floor Media additive using manufacturer's special application gun, with cover layer of hard tile sealer to coat surface.
   d. The final coat may be walked on the next day, but five days should elapse before the surface is subjected to heavy use or rough treatment.

D. Variation in concrete slabs shall not exceed 1/8" in ten feet from true grade.

E. All exposed concrete, except patio, walkways and floor slabs, shall have a rubbed finish, satisfactory to the Owner's Construction Manager. "White Washing" by use of separately mixed grout will not be permitted.

9. SHOP DRAWINGS

A. The Contractor shall prepare and submit for review shop drawings according to the requirements of the General conditions.

10. REINFORCEMENT

A. Reinforcement shall be accurately placed and securely supported on metal or plastic chairs.

DIVISION 04 - MASONRY

SECTION 04210 - BRICK MASONRY

1. SECTION INCLUDES

A. Brick masonry
B. Joint Reinforcing
C. Building in items furnished and located by other trades.

2. REFERENCE STANDARDS

A. American Society for Testing Materials (ASTM)
B. Brick Institute of America (BIA): "Technical notes on brick construction"

3. MOCK-UP

A. Construct brick masonry mock-up, 4 feet long by 4 feet wide, which includes masonry anchor accessories, sill flashings, and corner condition.
B. Locate where directed by Owner.
C. Mock-up may remain as part of the Work.

4. BRICK MASONRY UNITS

A. Face Brick to be used for the project shall be as noted on the Finish Schedule in the Drawings, modular size, of a consistent color range approved by Owner's Construction Manager. Masonry sub-contractor shall mix a minimum of three (3) full pallets of brick to create a thorough mix of color.
B. Common Brick: Contractor may, at his option, supply and install a common, modular size face brick where brick will be concealed upon project completion. All brick exposed to view must be as selected by Owner as noted above.

5. ACCESSORIES

A. Joint Reinforcing: Hohmann & Bernard Products, veneer anchors DW-10 with galvanized masonry wire ties, "Vee-Ties", lengths as required for 2½" minimum embedded tie.
B. Polyethylene tubing, ¼ inch diameter with internal screen.
C. Miscellaneous: As shown on the drawings or as required to provide masonry installations which are well tied.

6. MORTAR

A. Type: Minimum compressive strength of 1800 psi; ASTM C476, Type M or S. Masonry cement will not be allowed.
B. Materials:
   1. Portland Cement: ASTM C150, Type 1, one brand only.
   2. Hydrated Lime: ASTM C207, Type S
   3. Sand: Well screened, clean, hard, siliceous particles free from loam, alkali, salt, organic matter and other impurities; composed of grains of varying size which pass an 8-mesh screen, uniformly graded from coarse to fine.
   4. Water: City tap water.
C. Color: As noted otherwise on finish schedule on drawings.

7. GROUT

A. Type: Minimum compressive strength of 2500 psi; ASTM C476, Type M or S.

8. PRODUCT DELIVERY, STORAGE AND HANDLING

A. Store mortar materials on dunnage in a dry place. Masonry units stores above ground on level platforms. Cover and protect units and accessories as necessary from elements.

9. CONDITIONS

A. Hot-Weather Installation: Protect masonry, erected when ambient air temperature is more than 90° F, in shade, and relative humidity is less than 50%, from direct exposure to wind and sun for 48 hr after installation, and rain for 12 hours after installation.
B. Cold Weather Installation: Do not build upon frozen work. Before erecting masonry during temperatures below 40° F., submit a written statement and receive acceptance of methods proposed to heat masonry materials and protect masonry from freezing. Do not lay masonry at temperatures below 35° F. unless authorized in writing.

10. PREPARATION (MORTAR)

A. Accurately measure and mix mortar materials with water to produce wettest workable consistency possible. Place mortar in final position within 2-1/2 hr after mixing; discard mortar not used or that has started to set within this time.

11. SCAFFOLDING

A. Provide scaffolding necessary for masonry work and make same available to other trades required to execute work in conjunction with masonry work.
B. Design and engineering of formwork and scaffolding as well as its construction shall be the responsibility of the Contractor. Adequately shore block beams, and similar members to safely support all loads and lateral pressures liable to come on the construction. Provide clean-out openings at each vertical bar at bottom course or in foundation wall when wall is erected in more than 5-foot lifts.

12. MASONRY CONSTRUCTION

A. General: Do not lay units having water or frost film on surfaces. Lay plumb, true to line, with level courses accurately spaced. Keep bond pattern plumb throughout. Corners and reveals plumb and true. Shove vertical joints tight. Adjust each unit to final position while mortar is soft and plastic. Remove any unit disturbed after mortar has stiffened and relay with fresh mortar.
B. Laying Units: Wet in such manner that each unit is nearly saturated, surface dry when laid. Do not use brick that is cored, recessed, or has other major deformations where deformations will be exposed to view. Fill joints completely with mortar. Lay with better face of brick exposed. Lay in ½ running bond and special relief and patterns shown on the drawings. Joints not to exceed 3/8 inches. Install weep holes in head joints; but not more than 2'-0" o.c.
C. Cutting and Fitting: Use, wherever possible, full units of proper size in lieu of cut units. Cut edges clean, true, and sharp. Carefully cut, form, or otherwise neatly make openings for recessed items and for electrical, plumbing, or other mechanical installations so that wall plates, cover plates, or escutcheons will completely conceal openings and will have bottoms in alignment with lower edge of masonry joints.
D. Embedded Items: Point openings around flush-mounted electrical outlet boxes in wet locations flush with mortar including flush joint above box. Build in anchors, ties, wall plugs, accessories, flashings, pipe sleeves, and other items as the masonry work progresses. Anchors and ties fully embedded in mortar.
E. Unfinished Work: Step back for joining with continuing new work. Resort to toothing only when specifically accepted. Before laying new work, remove loose mortar, and clean exposed joints; dampen surfaces of brick after cleaning.
F. Jointing:
   1. Type: Unless noted otherwise on drawing finish schedule: Clipped joints; mortar thoroughly compacted and pressed against edges of units. Tool when mortar is thumbprint hard.
   2. Width: Equal to difference between actual and nominal dimensions of units in either height or length; average width of any three adjacent joints not less than 1/4 inch nor more than ½ inch. Vertical joints; same width except for inconspicuous variations required to maintain bond.

13. POINTING AND CLEANING

A. Completely remove mortar daubs or splashings from exposed masonry surfaces before setting. Clean masonry surfaces, other than removing excess surface mortar, only after mortar has hardened. Leave surfaces free of mortar daubs, dirt, stains and discoloration, including scum from cleaning operations. Do not use metal tools and metal brushes for cleaning. Before cleaning permanent construction, clean sample panel and examine for discoloration or stain. If the sample panel is discolored or stained, change method of cleaning to assure permanent masonry surfaces will not be adversely affected. Water-soak exposed surfaces and clean with "DEOX" or "SHURCLEAN," (proprietary masonry cleaning agents). Use cleaning agents in accord with manufacturer's instructions.

14. POINTING AND CLEANING

A. Wash masonry work with clean water.

15. PROTECTION OF WORK

A. Protect surfaces of masonry not being worked. When rain or snow is imminent, cover tops of exposed masonry with strong non-staining waterproof membrane, well secured in place, in a manner to prevent moisture from accumulating within unfinished wall. Make provisions to prevent damage by wind.

SECTION 04220 - CONCRETE UNIT MASONRY

1. SECTION INCLUDES

A. Concrete unit masonry
B. Horizontal masonry wall reinforcement.
C. Building in bolts, anchors, nailers, angles, inserts, conduits, piping, flashings, etc. furnished and located by other trades.

2. REFERENCE STANDARDS

A. American Society for Testing Materials (ASTM)
B. International Masonry Industry All-Weather Council (IMIAC)

3. MOCK-UP

A. Construct masonry mock-up, 4 feet long by 4 feet wide, and height which includes masonry anchor accessories, sill flashings, corners and all typical conditions.
B. Locate where directed by Owner.
C. Mock-up may remain as part of the Work.

4. MATERIALS

A. Masonry Units: High pressure steam cured (air dried units will NOT be acceptable), load bearing, hollow units conforming to ASTM C90, Type I, medium weight; load bearing solid units conforming to ASTM C90, Type 1, medium weight. Testing of lightweight aggregates for drying shrinkage shall be as stipulated in ASTM C331. Units shall be of dimensions that will lay up to 8-inch modules. Units shall include special finishes, shapes and sizes shown on the drawings and/or required to complete the work.
B. Masonry Unit Sizes: Standard 8 x 8 x 16 inch and 4 x 8 x 16-inch units as shown on the drawings.

5. ACCESSORIES

A. Joint Reinforcement: Hohmann & Bernard, Inc., Fort Worth, Texas, "Lox-All truss mesh", 3/16" side rods and galvanized No. 9 cross rods. Provide special shapes as required for intersections. Widths shall be 2" less than total masonry thickness.
B. Polyethylene tubing, ¼ inch diameter with internal screen.
C. Miscellaneous: As shown on the drawings or as required to provide masonry installations which are well tied (anchored) to building frame. Consult with Architect prior to bidding if clarification of this requirement is needed.

6. MORTAR

A. Type: ASTM C270 with minimum compressive strength of 1800 p.s.i., Type M or S; color - standard gray to match block. Masonry cement will not be allowed.
B. Materials:
   1. Portland Cement: ASTM C150, Type 1, one brand only.
   2. Hydrated Lime: ASTM C207, Type S
   3. Sand: Well screened, clean, hard, siliceous particles free from loam, alkali, salt, organic matter and other impurities and shall be composed of grains of varying sizes, all of which shall pass an eight mesh screen, and shall be uniformly graded from coarse to fine.
   4. Water: City tap water.

7. GROUT (if shown on the drawings)

A. Grout Mix for reinforced masonry: ASTM C476 with minimum compressive strength of 3,000 psi at 28 days. Provide coarse aggregate conforming to ASTM C404 (max. size 3/8") for coarse grout mix. Grout shall have slump of 10-1/2 to 11 inches at the time of placement.

8. PRODUCT DELIVERY, STORAGE AND HANDLING

A. Store mortar materials on dunnage in a dry place. Masonry units stores above ground on level platforms. Cover and protect units and accessories as necessary from elements.

9. CONDITIONS

A. Hot-Weather Installation: Masonry erected when the ambient air has a temperature of more than 90 F., in the shade, and has a relative humidity of less than 50 percent shall be protected from direct exposure to wind and sun for 48 hours after installation, and rain for 12 hours after installation. Masonry surfaces shall be kept moist with water gently spraying the surface, covering work with burlap which is kept wet, or by other approved means. Such protection shall be continued until mortar has set for 3 days or until lowering temperatures or increased humidity in the air make such protection unnecessary.
B. Cold-Weather Installation: No frozen work shall be built upon. Before erecting masonry during temperatures below 40° F., a written statement shall be submitted and approval received of the methods proposed to heat the masonry materials and protect the masonry from freezing as required below. No masonry shall be laid at temperatures below 35° F. unless authorized in writing. Cold-weather installation shall be in accordance with IMIAC recommended practices and guide specifications for masonry construction.

10. PREPARATION (MORTAR)

A. Mortar materials shall be accurately measured and mixed with as much water as may be necessary to produce the wettest workable consistency possible. Mortar shall be placed in final position within 2-1/2 hours after mixing. Mortar not used or that has started to set within this time interval shall be discarded. Mortar that has stiffened within the above time interval, because of evaporation of moisture from the mortar, shall be re-tempered to restore its workability.

11. SCAFFOLDING

A. Provide scaffolding necessary for masonry work and make same available to other trades required to execute work in conjunction with masonry work.
B. Design and engineering of formwork and scaffolding as well as its construction shall be the responsibility of the Contractor. Adequately shore block beams, and similar members to safely support all loads and lateral pressures liable to come on the construction. Provide clean-out openings at each vertical bar at bottom course or in foundation wall when wall is erected in more than 5-foot lifts.

12. MASONRY CONSTRUCTION

A. General: No unit having film of water or frost on its surfaces shall be laid. Masonry shall be laid plumb, true to line, with level courses accurately spaced. Bond pattern shall be kept plumb throughout. Corners and reveals shall be plumb and true. Vertical joints shall be shoved tight. Each unit shall be adjusted to final position while mortar is still soft and plastic. Any unit that is disturbed after mortar has stiffened shall be removed and re-laid with fresh mortar.
B. Laying Units: Do not wet before laying. Cut units with power masonry saws, either dry or wet cut. Lay units in a ½ running bond so that vertical joints between units will be located over the center of the units in the next course below and in alignment from bottom to top of wall. Units shall be full bedded in mortar under both face shells. Fill all head-joints solidly with mortar for a distance in from the face of the unit or wall not less than the thickness of the longitudinal face shell. No cells shall be left open in the face surfaces.
C. Grouting (if shown on the drawings): Where shown on the drawings, pour interior grout spaces, except those blocked out with wood in order to provide the openings through wall, full of grout. Grout lifts shall not exceed 4'-0". Slushing with mortar is not permitted. Grout shall be caused to flow into all voids and surround rebar. Puddle with sticks - not trowel blades. Except at finishing course, stop all grout pours approximately 1" below top of the last course. Where it is necessary, for construction purposes to stop a longitudinal run of masonry, stop by racking back according to bond. Provide a suitable dam to retain grout. After grout has set, remove wood blocking at openings.
D. Cutting and Fitting: Wherever possible, full units of the proper size shall be used in lieu of cut units. Cut edges shall be clean, true, and sharp. Openings shall be carefully cut, formed, or otherwise neatly made by masonry mechanic for recessed items and for electrical, plumbing, or other mechanical installations so that wall plates, cover plates, or escutcheons required by the installation will completely conceal the openings and will have bottoms in alignment with lower edge of masonry joints.
E. Reinforcement:
   1. All CMU walls shall be reinforced horizontally with reinforcing spaced 16" o.c. vertically, maximum. Lay reinforcing on wall and cover with mortar, then bed unit as herein specified. At corners, reinforcing is to be provided in every horizontal course, with inside rod cut and bent to form corner. Provide reinforcing one course above and below all openings. Reinforcement placed as to assure a 5/8" mortar cover measured from the outside face of the joint. Side rods shall be lapped at least 6" at splices.
   2. Intersecting and butting walls shall be bonded together by metal anchors spaced 2'-0" o.c. vertically. Interlocking of units not permitted.
F. Control Joints: Make adequate provisions throughout the masonry work for expansion and contraction. Install control joint filler as required, extending from top of bearing surface to top of wall, reinforcing shall not run through. Control joints shall be watertight at exterior joints.
G. Embedded Items: Openings around flush-mounted electrical outlet boxes in wet locations shall be pointed flush with mortar including flush joint above the box. Anchors, ties, wall plugs, accessories, flashings, pipe sleeves, and other items required to be built in shall be built in as the masonry work progresses. Anchors, ties and joint reinforcement shall be fully embedded in mortar.
H. Stopping and Resuming Work: Step back ½ masonry unit length in each course; DO NOT TOOTH. Clean exposed surfaces of set masonry and remove loose masonry units and mortar prior to laying fresh masonry.
I. Jointing:
   1. Type: Tool slightly concave; mortar thoroughly compacted and pressed against edges of units. Tool when mortar is thumbprint hard. Finish tooled joints to uniformly straight and true lines and surfaces, smooth and free of tool marks.
   2. Width: Equal to the difference between the actual and nominal dimensions of the units in either height or length, but in no case shall the average width of any the same width except for inconspicuous variations required to maintain bond.

13. POINTING AND CLEANING

A. Completely remove mortar daubs or splashings from masonry surfaces that will be exposed before setting or hardening. All defects in joints of masonry to be exposed shall be raked out as necessary, filled with mortar, and tooled concave. Masonry surfaces shall not be cleaned, other than removing excess surface mortar, until mortar in joints has hardened. Leave masonry surfaces clean, free of mortar daubs and dirt, and with tight mortar joints throughout.

14. PROTECTION OF WORK

A. Protect surfaces of masonry not being worked on at all times. When rain or snow is imminent, cover the tops of exposed masonry with a strong non-staining waterproof membrane well secured in place and in a manner that will prevent moisture from accumulating within the unfinished wall. Make adequate provisions during construction to prevent damage by wind.

SECTION 04451 - SYNTHETIC STONE VENEER

1. REFERENCE STANDARDS

A. American Society for Testing Materials (ASTM): ASTM C39, C91, C150, C207, and C270
B. Brick Institute of America (BIA): "Technical notes on brick construction"

2. INTENT

A. This specification generally outlines requirements for manufactured stone veneer installation. It is not intended to modify, amend, or otherwise change system manufacturer's specifications for uses intended; manufacturer's specifications govern.

3. WARRANTY

A. Provide manufacturer's standard lifetime warranty.

4. MANUFACTURER

A. The drawings were prepared, and portions of this specification written on the basis of using the products of various manufacturer's. It is not the intent to limit competitive bidding. Products with equal characteristics by other manufacturers are acceptable under the conditions of these specifications.

5. MANUFACTURED UNITS

A. Synthetic Stone - Manufacturer, patterns, blends, and colors as noted on drawings.
B. Provided manufacturer's standard corner units at all exterior corners.

6. MORTAR

A. Type: Minimum compressive strength of 1800 psi; ASTM C270, Type S, non-staining.
B. Materials:
   1. Masonry Cement: White masonry cement, one brand only.
   2. Hydrated Lime: ASTM C207, Type S
   3. Sand: Brown well screened, clean, hard, siliceous particles free from loam, alkali, salt, organic matter and other impurities; composed of grains of varying size which pass an 8 mesh screen, uniformly graded from coarse to fine.
   4. Water: City tap water.

7. METAL LATH

A. USG 2.5 pound, "Self-Furring Diamond Mesh," galvanized, Paper Backed - Grade D.

9. DELIVERY AND STORAGE

A. Deliver materials in original unopened packages and store in enclosed shelter providing protection from damage and exposure to the elements. Remove damaged or deteriorated materials from premises.

10. TEMPERATURE CONDITIONS

A. Do not apply mortar when ambient temperature is 50°F or lower, or when drop in temperature below 50°F is anticipated within 48 hours after application.

14. METAL LATH APPLICATION

A. Apply with long dimension across supports; true even surfaces over specified Air Barrier complying with ICC-ES Acceptance Criteria AC-38. Secure lath at support locations at intervals not exceeding 6 inches. Tie or otherwise secure side laps or junctions of sides of lath between supports at intervals not exceeding 9 inches.
B. Metal lath application is not required on Concrete Unit Masonry walls.

15. ACCESSORY APPLICATION

A. Set level and plumb to straight lines, securely locate on lath in manner common to trade to develop uniform thickness. Space fasteners not over 8 inches OC for single-flanged accessories; staggered on double-flanged accessories; no joints in straight runs.

16. PREPARATION (MORTAR)

A. Accurately measure and mix mortar materials, including integral color, with water to produce wettest workable consistency possible. Place mortar in final position within 2 hrs after mixing; discard mortar not used or that has started to set within this time.

18. INSTALLATION

A. General: Erect manufactured stone in accordance with supplier's written instructions. Do not lay units having water or frost film on surfaces. Arrange pattern to provide variable joint sizes throughout stonework. Set in full mortar setting bed to support stone over entire bearing surface. Adjust each unit to final position while mortar is soft and plastic. Remove any unit disturbed after mortar has stiffened and relay with fresh mortar. Fill dowel holes with mortar. Form weepholes with sash cord in head joints where shown; but not more than 2'-0" OC.
B. Mortar: Apply mortar with sufficient material and pressure to form full keys on lath and then crossrake. Bring surface out to grounds and finish to true even surface within limits established by trade practice. Cover a maximum of ten square feet at one time.
C. Manufactured Units: Press manufactured stone veneer units firmly into position in soft mortar bed. Apply equal pressure across unit; jiggle each piece slightly to bond firmly causing mortar to extrude slightly around edges of units. Minimum width of corner units is four inches.
D. Cutting and Fitting: Carefully cut, form, or otherwise neatly make openings for recessed items and for electrical, plumbing, or other mechanical installations so that wall plates, cover plates, or escutcheons will completely conceal openings and will have bottoms in alignment with lower edge of stone joints.
E. Embedded Items: Point openings around flush-mounted electrical outlet boxes in wet locations flush with mortar including flush joint above box. Build in anchors, ties, wall plugs, accessories, flashings, pipe sleeves, and other items as the stone work progresses. Anchors and ties fully embedded in mortar.

19. CLEANING AND CURING

A. Completely remove mortar daubs or splashings from exposed manufactured stone surfaces before setting. Clean manufactured stone surfaces, other than removing excess surface mortar, only after mortar has hardened. Leave surfaces clean, free of mortar daubs, dirt, stain, and discoloration, including scum from cleaning operations, and with tight joints. Do not use metal tools and metal brushes for cleaning.

20. PROTECTION OF WORK

A. Protect surfaces of manufactured stone not being worked. When rain or snow is imminent, cover tops of exposed walls with strong non-staining waterproof membrane, well secured in place, in a manner to prevent moisture from accumulating within unfinished wall. Make provisions to prevent damage by wind.

SECTION 04710 - THIN SET BRICK FACING TILE (INTERIOR)

1. SECTION INCLUDES

A. Interior Thin set brick facing tile and installation.

B. Fix adhesive mortar

2. REFERENCES

A. ASTM C 1088: Thin brick units made from clay or shale

B. ASTM C 216: Standard specification for modular face brick

3. SUBMITTALS

A. Submit product data samples and manufacturer's installation instructions under provisions of SUBMITTALS Section.

4. QUALITY ASSURANCE

A. Applicator: Company experienced in installation of simulated masonry units of type specified, with three years minimum experience

5. DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site under provisions of these specifications
   1. Store and protect products on site.
   2. Store mortar and other moisture-sensitive materials in protected enclosures; handle by methods which avoid exposure to moisture.

6. WARRANTY

A. Provide manufacturer's written warranty for a period of fifteen years from the date of Owner acceptance of the project against defects in materials and workmanship.

7. PROJECT CONDITIONS

A. Conform to manufacturer's printed specifications and instructions for each condition encountered on the job. In general, standard practice will be expected and accepted and poor or sloppy workmanship will be rejected.

B. Protect materials from rain, wind, moisture, and freezing temperatures prior to, during, and for 72 hours after completion of work.

8. MANUFACTURER

A. The drawings were prepared and portions of this specification written on the basis of using the products of specific manufacturers.

9. MATERIALS

A. Brick Facing Tiles: ASTM C1088 Grade Exterior, specific manufacturer, plant, product and blend as noted in finish schedule on the drawings. Provide manufacturer's standard corner units at all exterior corners.

B. Grout Components: Type and color as noted in finish schedule on the drawings.
1. Minimum compressive strength of 2500 psi; ASTM C476, Type M or S.

C. Setting Adhesives: Manufacturer recommended interior, solvent base, non-flammable adhesive.

10. DELIVERY AND STORAGE

A. Deliver materials in original unopened packages and store in enclosed shelter providing protection from damage and exposure to the elements. Remove damaged or deteriorated materials from premises.

12. TEMPERATURE CONDITIONS

A. Do not apply mortar when ambient temperature is 50°F or lower, or when drop in temperature below 50°F is anticipated within 48 hours after application.

13. ACCESSORY APPLICATION

A. Set level and plumb to straight lines, securely locate on lath in manner common to trade to develop uniform thickness. Space fasteners not over 8 inches OC for single-flanged accessories; staggered on double-flanged accessories; no joints in straight runs.

14. PREPARATION

A. General: Erect Brick Facing Tile in accordance with supplier's written instructions. Arrange pattern to provide consistent joint sizes throughout project. Set in adhesive setting bed to support tile over entire bearing surface. Adjust each unit to final position while setting bed is soft and plastic.

B. Manufactured Units: Press Brick Facing Tile units firmly into position in soft setting bed. Apply equal pressure across unit; jiggle each piece slightly to bond firmly. Minimum width of corner units is four inches.

D. Cutting and Fitting: Carefully cut, form, or otherwise neatly make openings for recessed items and for electrical, plumbing, or other mechanical installations so that wall plates, cover plates, or escutcheons will completely conceal openings and will have bottoms in alignment with lower edge of stone joints.

E. Embedded Items: Point openings around flush-mounted electrical outlet boxes in wet locations flush with mortar including flush joint above box. Build in anchors, ties, wall plugs, accessories, flashings, pipe sleeves, and other items as the stone work progresses. Anchors and ties fully embedded in mortar.

F. Jointing:
1. Type: Unless noted otherwise on drawing finish schedule: Concave joints; mortar thoroughly compacted and pressed against edges of units. Tool when mortar is thumbprint hard.
2. Width: Equal to difference between actual and nominal dimensions of units in either height or length; average width of any three adjacent joints not less than 1/4 inch nor more than ½ inch. Vertical joints; same width except for inconspicuous variations required to maintain bond.

15. CLEANING AND CURING

A. Completely remove grout daubs or splashings from exposed manufactured brick surfaces before setting. Clean Brick Facing Tile surfaces, other than removing excess surface grout, only after it has hardened. Leave surfaces clean, free of mortar daubs, dirt, stain, and discoloration, including scum from cleaning operations, and with tight joints. Do not use metal tools and metal brushes for cleaning.

DIVISION 05 - METALS

SECTION 05120 - STRUCTURAL STEEL

1. SUBMITTALS

A. Shop Drawings: Submit to Architect, indicate sizes, spacing, and locations of structural members, openings, connections, cambers, loads, and welded connections.
B. Provide setting drawings, templates, and directions for installation of anchor bolts and other anchorages to be installed as work of other sections.

2. REFERENCE STANDARDS

A. American Institute of Steel Construction (AISC) "Code of Standard Practice for Steel Buildings and Bridges."
B. AISC "Specifications for Structural Steel Buildings, "including "Commentary."
C. "Specifications for Structural Joints using ASTM A 325 or A 490 Bolts" approved by the Research Council on Structural Connections.
D. American Welding Society (AWS) D1.1 "Structural Welding Code - Steel."

3. QUALITY ASSURANCE

A. Perform design under direct supervision of a Professional Structural Engineer licensed in the State of the project.

4. DELIVERY, STORAGE, AND HANDLING

A. Store materials to permit easy access for inspection and identification. Keep steel members off ground by using pallets, platforms, or other supports. Protect steel members and packages materials from erosion and deterioration. If bolts and nuts become dry or rusty, clean and re-lubricate before use.

5. MATERIALS

A. Structural Steel Shapes, Plates, and Bars: ASTM A 36.
B. Structural Steel Tubing: ASTM A500, GRADE B.
C. Anchor Bolts: ASTM A36, non-headed type unless otherwise indicated.
D. Quenched and tempered medium-carbon steel bolts, nuts, and washers, complying with ASTM A 325.
E. Electrodes for Welding: E70XX, Comply with AWS Code.
F. Structural Steel Primer Paint: Tnemec 10-99 (or equal).
G. Nonmetallic Shrinkage-Resistant Grout: Premixed, nonmetallic, non-corrosive, non-staining product containing selected silica sands, Portland cement, shrinkage compensating agents, plastics and water-reducing agents, complying with CE-CRD-C621.

6. FABRICATION

A. Shop Fabrication and Assembly: Fabricate and assemble structural assemblies in shop to greatest extent possible.
B. Properly mark and match-mark materials for field assembly.
C. Connections: Weld or bolt shop connections, as indicated. Bolt field connections, except where welded connections or other connections are indicated.
D. High-Strength Bolted Construction: Install high-strength threaded fasteners in accordance with AISC "Specifications for Structural Joints using ASTM A 325 or A 490 Bolts."
E. Cut, drill, or punch holes perpendicular to metal surface. Do not flame-cut holes or enlarge holes by burning.
F. Shop Painting: Shop-paint all structural steel.
G. Immediately after surface preparation, apply structural steel primer paint in accordance with manufacturer's instructions and at a rate to provide dry film thickness of not less than 1.5 mils. Use painting methods that result in full coverage of joints, corners, edges, and exposed surfaces.

8. ERECTION

A. Temporary Shoring and Bracing: Provide temporary shoring and bracing members with connections of sufficient strength to bear imposed loads and as required by applicable laws and regulations.
B. Field Assembly: Set structural steel accurately to lines and elevations indicated. Align and adjust various members forming part of complete frame or structure before permanently fastening. Clean bearing surfaces and other surfaces that will be in permanent contact before assembly. Perform necessary adjustments to compensate for discrepancies in elevations and alignment. Level and plumb individual members of structure within specified AISC tolerances. Splice members only where indicated and accepted on shop drawings.

SECTION 05500 METAL FABRICATIONS

1. SUMMARY

A. Work of this Section consists of installing all materials furnished under this Section, including all equipment, labor, services, and incidental items required to complete Work as shown on Drawings and specified in this Section.
   1. Miscellaneous Framing and Supports for Work in other Sections to include applications where framing and supports are not specified in other Sections.
   2. Steel lintels, clip angles, etc.
   3. Steel Pipe Bollards.
   4. Chain Support.
   5. Gates at Dumpster Area.
   6. Metal Handrails.
   7. Steel Ladders

2. SUBMITTALS
A. Welder certificates signed by Contractor certifying welders comply with requirements of this Section.
B. Fabricator shall be responsible for design of connections not specifically shown on the drawings and for member dimensions and fit.

3. QUALITY ASSURANCE
A. Qualifications:
   1. Welding and Welders:
      a. Qualify welding processes and welding operators in accordance with AWS DI .1, Structural Welding Code - Steel; DI .3, Structural Welding Code Sheet Steel; and DI .2, Structural Welding Code - Aluminum.
      b. Certify each welder has satisfactorily passed AWS qualification tests for welding processes involved and if pertinent, has undergone recertification.

4. MATERIALS
A. Ferrous Metals:
   1. Metal Surfaces - General: For fabrication of miscellaneous metal work which will be exposed to view, use only materials which are smooth and free of surface blemishes including pitting, seam marks, roller marks, rolled trade names, and roughness.
   2. Steel Plates, Shapes and Bars: ASTM A36.
   3. Steel Tubing: Cold-formed, ASTM A500: Grade A, unless otherwise indicated or required for design loading.
   4. Steel Tubing: Hot-formed, ASTM A501 for exterior installations and where indicated, provide with hot-dip galvanized coating per ASTM A53.
   5. Brackets, Flanges and Anchors: Cast or formed metal of same type material and finish as supported rails, unless otherwise indicated.
   6. Steel Deck Panels at Service Yard Gates: ASTM A446 with G90 galvanized coating, steel ASTM A611, Grade C, Shop Primed.
   7. Concrete Inserts:
      a. Threaded or wedge-type; galvanized ferrous castings, either malleable iron, ASTM A47, or cast steel, ASTM ~7.
      b. Provide bolts, washers and shims as required, hot-dip galvanized, ASTM AI 53.
B. Chain: 3/4 in. proof coil chain.
C. Grout:
   1. Nonshrink Nonmetallic Grout:
      a. Premixed, factory packaged, non-staining, non-corrosive, non-gaseous grout complying with CE CRD-C621.
      b. Provide grout specifically recommended by manufacturer for interior and exterior applications of type specified in this Section.
D. Fasteners:
   1. General:
      a. Provide hot-dipped galvanized fasteners for exterior use or where built into exterior walls.
      b. Select fasteners for type, grade, and class required.
   2. Bolts and Nuts: Regular hexagon-head-type, ASTM A307, Grade A.
   3. Lag Bolts: Square-head-type, FS FF-B-561
   4. Machine Screws: Cadmium plated steel, FS FF-S-92.
   5. Wood Screws: Flat head carbon steel, FS FF-S-I 11.
   6. Plain Washers: Round, carbon steel, FS FF-W-92.
   7. Drilled-In Expansion Anchors: Comply with FS FF-S-325, Group III (anchors, expansion, non-drilling), Type I (internally threaded tubular expansion anchor); and machine bolts complying with FS FF-B-575, Grade 5.
   8. Toggle Bolts: Tumble-wing-type, FS FF-B-588, type, class, and style as required.
   9. Lock Washers: Helical-spring-type carbon steel, FS FF-W-84.

5. FABRICATION
A. General:
   1. Form metal fabrications from materials of size, thickness, and shapes indicated, but not less than that needed to comply with performance requirements indicated.
   2. Work to dimensions indicated or accepted on shop drawings, using proven details of fabrication and support.
   3. Use type of materials indicated or specified for various components of each metal fabrication
   4. Form exposed Work true to line and level with accurate angles and surfaces and straight sharp edges.
   5. Shear and punch metals cleanly and accurately; remove burrs.
   6. Ease exposed edges to radius of approximately 1/32 in.
   7. Form bent-metal comers to smallest radius possible without causing grain separation or otherwise impairing Work.
   8. Remove sharp or rough areas on exposed traffic surfaces.
   9. Welding:
      a. Weld corners and seams continuously, complying with AWS recommendations.
      b. Exposed Connections: Grind exposed welds smooth and flush to match and blend with adjoining surfaces.
   10. Anchorage:
      a. Provide for anchorage of type indicated, coordinated with supporting structure.
      b. Fabricate and space anchoring devices to provide adequate support for intended use.
B. Miscellaneous Framing and Supports:
   1. Provide miscellaneous steel framing and supports which are not part of structural steel framework, as required to complete Work.
   2. Fabricate miscellaneous units to sizes, shapes, and profiles indicated or, if not indicated, of required dimensions to receive adjacent other Work to be retained by framing.
   3. Except as otherwise indicated, fabricate from structural steel shapes. plates, and steel bars of welded construction using mitered joints for field connection.
   4. Cut, drill and tap units to receive hardware and similar items.
   5. Provide 3 x 3 x 1/4 angle frame for openings through roof larger than 6 inches, unless otherwise shown on the drawings
C. Pipe Bollards: Fabricate pipe bollards from Schedule 80 steel pipe.

D. Ladders:
   1. Fabricate ladders for the locations shown, with dimensions; spacing, details and anchorage as indicated. Comply with the requirements of ANSI A 14.3, except as otherwise indicated.
   2. Unless otherwise shown, provide 1/2' x 2-1/2" continuous structural steel flat bar side rails with eased edges, spaced 24" apart.
   3. Provide 3/4" diameter solid structural steel bar range, spaced 12"o.c.
      a. Fit rungs in centerline of side rails, plug weld and grind smooth on outer rail faces.
      b. Support each ladder at top and bottom and at intermediate points, spaced not more than 5'-0" o.c. Use welded or bolted steel brackets, designed for adequate support and anchorage, and to hold ladder clear of the wall surface with a minimum of 7" clearance wall to centerline of rungs. Return rails to wall or structure unless other secure handholds are provided.
      c. Provide non-slip surface on top of each rung, either by coating the rung with aluminum oxide granules set in epoxy resin adhesive, or by using a type of manufactured rung which is filled with aluminum oxide grout.

6. INSTALLATION
A. General:
   1. Fastening to In-Place Construction:
      a. Provide anchorage devices and fasteners where necessary for securing miscellaneous metal fabrications to in-place construction.
      b. Include threaded fasteners for concrete and masonry inserts, toggle bolts, through bolts, lag bolts, wood screws, and other connectors as required.
   2. Cutting, Fitting, and Placement:
      a. Perform as required for installation of miscellaneous metal fabrications.
      b. Set Work accurately in location, alignment, and elevation, level. true and free of rack. measured from established lines and levels.
      c. Provide temporary bracing or anchors in formwork for items which are to be built into concrete, masonry, or similar construction.
      d. Fit exposed connections accurately together to form tight hairline joints.
      e. Weld connections which are not to be left as exposed joints, but cannot be shop welded because of shipping size limitations.
      f. Grind exposed joints smooth and touchup shop paint coat.
      g. Do not weld, cut, or abrade surfaces of exterior units which have been hot-dip galvanized after fabrication and are intended for bolted or screwed field connections.
   3. Corrosion Protection: Coat concealed surfaces of aluminum that will come into contact with grout, concrete, masonry, wood, or dissimilar metals with heavy coat of bituminous paint or zinc chromate primer.
7. ADJUSTING AND CLEANING
A. Touch-Up Painting.
   1. Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with same material as used for shop painting.

DIVISION 06 - WOOD AND PLASTICS

SECTION 06100 - ROUGH CARPENTRY

1. SECTION INCLUDES
A. Structural wall, and roof framing and sheathing.
B. Preservative and Fire Retardant treatment of wood.
C. Miscellaneous framing and concealed wood blocking for support of toilet and bath accessories, wall cabinets, wood trim, and tables.

2. REFERENCES
A. AWPA C20 - Structural Lumber -- Fire Retardant Treatment by Pressure Processes; American Wood-Preservers' Association; 2002.
B. AWPA U1 - Use Category System: User Specification for Treated Wood; American Wood-Preservers' Association; 2005.
C. PS 1 - Construction and Industrial Plywood; National Institute of Standards and Technology (Department of Commerce); 1995.
D. PS 20 - American Softwood Lumber Standard; National Institute of Standards and Technology (Department of Commerce); 2005.
E. SPIB (GR) - Grading Rules; Southern Pine Inspection Bureau, Inc.; 2002.
F. WCLB (GR) - Standard Grading Rules for West Coast Lumber No. 17; West Coast Lumber Inspection Bureau; 2004.
G. WWPA G-5 - Western Lumber Grading Rules; Western Wood Products Association; 2005.
3. QUALITY ASSURANCE
A. Lumber: Comply with PS 20 and approved grading rules and inspection agencies.
B. Exposed-to-View Rough Carpentry: Submit manufacturer's certificate that products meet or exceed specified requirements, in lieu of grade stamping.
C. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.

5. DIMENSION LUMBER FOR CONCEALED APPLICATIONS
A. Sizes: Nominal sizes as indicated on drawings, S4S unless rough lumber is specifically indicated otherwise.
B. Moisture Content: S-dry or MC19.
C. Stud Framing (2 x 2 through 2 x 6):
1. Species: Douglas Fir, Southern, Western Cedars, or Sitka Spruce.
2. Grade: No. 2.
D. Joist, Rafter, and Small Beam Framing (2 x 6 through 4 x 16):
1. Species: Douglas Fir, Southern Pine, Spruce-Pine-Fir (south), Western Cedars, or Western Woods.
2. Grade: No. 2.
E. Miscellaneous Blocking, Furring, and Nailers:
1. Lumber: S4S, No. 2 or Standard Grade.

6. EXPOSED DIMENSION LUMBER
A. Sizes: Nominal sizes as indicated on drawings, S4S.
B. Moisture Content: S-dry or MC19.
C. Post, Ledger, Joist, Rafter, and Small Beam Framing (2 x 6 through 4 x 16),:
   1. Species: Southern Pine.
   2. Grade: No. 1.

7. CONSTRUCTION PANELS
A. Concealed Performance-Rated Structural Use Panels:
   1. General: where structural use panels are indicated for the following concealed types of applications, provide APA performance-rated panels complying with requirements designated under each application for grade, span rating, exposure-durability classifications, edge detail, where applicable.
   2. Wall Sheathing: Refer to specification Section 06160 - Sheathing (ZIP System).
   3. Roof Sheathing: APA RATED STRUCTURAL 1 RATED SHEATHING, exterior with span rating to suit rafter spacing.
B. Other Applications:
   1. Concealed Plywood: PS 1, C-C Plugged, exterior grade.
   2. Exposed Plywood: PS 1, A-D, interior grade.
   3. Electrical Component Mounting: APA rated sheathing, fire retardant treated.

8. ACCESSORIES
A. Fasteners and Anchors:
   1. Metal and Finish: Hot-dipped galvanized steel per ASTM A 153/A 153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
   2. Nails, Wire, Brads, and Staples: FS FF-N-105.
   3. Power Driven Fasteners: National Evaluation Report NER-272
   4. Wood Screws: ANSI B18.6.1.
   5. Lag Bolts: ANSI B18.2.1
   6. Bolts: Steel bolts complying with ASTM A307, Grade A; with ASTM A563 hex nuts and, where indicated, flat washers.
B. Joist Hangers: Hot dipped galvanized steel, sized to suit framing conditions.

9. FACTORY WOOD TREATMENT
A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
B. Fire Retardant Treatment: AWPA Treatment C20, Exterior Type, chemical treatment pressure impregnated; capable of providing a maximum flame spread/smoke development rating of 25 / 30 minute duration.
C. Preservative Pressure Treatment of Lumber Above Grade: AWPA Use Category UC3B, Commodity Specification A (Treatment C2) using waterborne preservative to 0.25 lb/cu ft retention.
   1. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
   2. Treat lumber in contact with roofing, flashing, or waterproofing.
   3. Treat lumber in contact with masonry or concrete.
D. Pressure Treatment of Lumber in Contact with Soil and Concrete: AWPA Treatment C2 using preservative to 0.4 lb/cu ft retention.
   1. Preservative for Field Application to Cut Surfaces: As recommended by manufacturer of factory treatment chemicals for brush-application in the field.
10. FRAMING INSTALLATION
A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
B. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent bracing.
C. Install structural members full length without splices unless otherwise specifically detailed.
D. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AFPA Wood Frame Construction Manual.
E. Construct double joist headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joists; use metal joist hangers unless otherwise detailed.
F. Frame openings with two or more studs at each jamb; support headers on cripple studs.

SECTION 06160 - SHEATHING (ZIP SYSTEM)

1. SUMMARY
A. Section Includes
   1. Wall sheathing with integral water-resistive barrier and air barrier.

2. REFERENCES
A. ASTM International (ASTM):
   1. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
   2. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials
   3. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials
4. ASTM E2357 - Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
B. International Code Council (ICC):
   1. ICC IBC - International Building Code
C. ICC Evaluation Service, Inc. (ICC-ES):
   1. AC38 - Acceptance Criteria for Weather Resistive Barriers
   2. ICC-ES AC116 - Acceptance Criteria for Nails and Spikes
   3. ICC-ES AC148 - Acceptance Criteria For Flexible Flashing Materials
   4. ICC-ES AC310 - Acceptance Criteria for Water-Resistive Membranes Factory-bonded to Wood-based Structural Sheathing, Used as Water-Resistive Barriers
   5. ICC-ES ESR-1539 - Power Driven Staples and Nails for Use in Engineered and Non-Engineered Connections
   6. ICC-ES NER-272 - Power Driven Staples and Nails for Use in All Types of Building Construction

3. SUBMITTALS
A. Product Data: For each type of sheathing product specified.
B. Evaluation Reports: From ICC-ES, for wood sheathing and seam tape.
C. Product Certifications: From manufacturer, indicating that sheathing products comply with ICC-ES AC310.
D. Florida Building Code Supplement: Submit documentation indicating that products comply with requirements of Florida Building Code for projects in that state.
E. Warranty: Executed copy of manufacturer special warranties.

4. QUALITY ASSURANCE
A. Provide wall sheathing products meeting requirements for water-resistive barrier in accordance with ICC-ES AC310.
B. Florida Building Code Compliance: Provide sheathing complying with Florida Building Code product and installation requirements for locations in Florida and outside of high velocity wind zone.

5. DELIVERY, STORAGE, AND HANDLING
A. Comply with manufacturer's written instructions for protection of sheathing products from weather prior to installation.

6. WARRANTY
A. Special Manufacturer's Warranty: Manufacturer's standard 30 year warranty following date of Substantial Completion.

7. MANUFACTURERS
A. Basis-of-Design Product: Provide sheathing products manufactured by Huber Engineered Woods LLC, Charlotte NC; Phone: (800) 933-9220; Website: HYPERLINK "http://www.zipsystem.com" www.zipsystem.com.

8. PERFORMANCE REQUIREMENTS
A. Fire-Test-Response Characteristics:
   1. Exterior Fire-Test Exposure: ASTM E108, Class A, when covered with approved Class A coverings.
   2. Fire-Resistance Ratings: Where indicated, provide assemblies tested for fire resistance per ASTM E119.
B. Air-Barrier Assembly Air Leakage: Less than 0.04 cfm/sq. ft. at 1.57 lbf/sq. ft. per ASTM E2375.
C. Water-Vapor Permeance, Facer: Minimum 12 perms, ASTM E96/E96M.
D. Weather Exposure: Manufacturer warranty applies for maximum allowable exposure period of 180 days.

9. WOOD PANEL PRODUCTS
A. Single Source Limitations: Provide wall sheathing by a single manufacturer.
B. Oriented Strand Board: DOC PS 2, made with binder containing no added urea formaldehyde.

10. WALL SHEATHING WITH INTEGRAL WATER-RESISTIVE BARRIER AND AIR BARRIER
A. Oriented-Strand-Board Wall Sheathing: Exposure 1 sheathing with factory-laminated water-resistive barrier facer with printed fastener location symbols.
   1. Basis-of-Design Product: Provide Huber Engineered Woods LLC; ZIP System Sheathing.
   2. Span Rating, Panel Grade and Performance Category: Not less than 32/16; Structural 1; 1/2 Performance Category.
   3. Edge Profile: Square edge.
   4. Facer: Medium-density, phenolic-impregnated sheet material qualifying as a Grade D weather-resistive barrier in accordance with ICC AC38.
      a. Provide fastener spacing symbols on facer for 16-inch and 24-inch on center spacing.

11. FASTENERS
A. Fasteners, General: Size and type complying with manufacturer's written instructions for Project conditions and requirements of authorities having jurisdiction.
B. Corrosion Resistance: Hot-dip zinc coating, ASTM A153/A153M.
C. Nails, Brads, and Staples: ICC AC116 and ICC AC201.
D. Power-Driven Fasteners: ICC-ES-1539 or NER-272.
E. Wood Screws: ASME B18.6.1.

12. SHEATHING JOINT-AND-PENETRATION TREATMENT MATERIAL
A. Self-Adhering Seam and Flashing Tape: Pressure-sensitive, self-adhering, cold-applied, seam tape consisting of polyolefin film with acrylic adhesive, meeting ICC-ES AC148, and tested as part of an assembly meeting performance requirements.
   1. Basis-of-Design Product: Provide Huber Engineered Woods; ZIP System Tape.
   2. Thickness: 0.012 inch.
B. Liquid-Applied Flashing Membrane: Gun-grade, cold-applied, silyl-terminated polyether (STPE) liquid flashing membrane compatible with sheathing/weather barrier and self-adhering seam and flashing tape, and tested as part of an assembly meeting performance requirements. Follow manufacturer's recommendation for integration with ZIP System Tape.
   1. Basis-of-Design Product: Provide Huber Engineered Woods; ZIP System Liquid Flash.
   2. Hardness, Shore A, ASTM C 661: 40 to 45.

13. EXAMINATION
Examine framing spacing and alignment to determine if work is ready to receive sheathing. Proceed with sheathing work once conditions meet requirements.

14. SHEATHING INSTALLATION
A. Install sheathing panels in accordance with manufacturer's written instructions, requirements of applicable Evaluation Reports, and requirements of authorities having jurisdiction.
B. Air and Moisture Barrier: Coordinate sheathing installation with flashing and joint sealant sequencing and installation and with adjacent building air and moisture barrier components to provide complete, continuous air- and moisture- barrier.
C. Do not bridge expansion joints; allow joint spacing equal to spacing of structural supports.
D. Install panels with laminated facer to exterior. Stagger end joints of adjacent panel runs. Support all panel edges. Space square-edged panels 0.125 inch (3 mm).
E. Attach sheathing panels securely to substrate with manufacturer-approved fasteners in compliance with the following:
   1. ICC-ES ESR-1539 or ICC-NES NER-272 for power-driven fasteners.
   2. IBC: Table 2304.9.1 Fastening Schedule.
   3. Structural General Notes and Wood Shear Wall Schedule.
F. Apply ZIP System Tape at all panel seams, penetrations, and facer defects or cracks to form continuous weathertight surface. Apply tape according to manufacturer's written instructions and requirements of ICC-ES applicable to tape application.
G. Apply liquid-applied flashing membrane at penetrations, gaps, and cracks to form continuous weather tight surface. Apply liquid membrane according to manufacturer's written instructions. Follow manufacturer's recommendation for integration with ZIP System Tape.

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PROJECT NUMBER
DCH22007

CLIENT:
DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT
02.15.2023

Cheddar's SCRATCH KITCHEN EST 1979

Issue Date: 02.15.2023

REVISION INFORMATION

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
SPECIFICATIONS

AS3

SECTION 06170 – LAMINATED VENEER STRUCTURAL TIMBER

1. SECTION INCLUDES

A. Laminated Veneer Lumber (LVL) framing members.
B. Hardware and connectors

2. QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer experienced in Laminated Veneer Structural Timber production, and capable of providing field service representation during construction.

3. REFERENCE STANDARDS

A. ASTM D2559 Standard Specification for Adhesives for Structural Laminated Wood Products for Use Under Exterior (Wet Use) Exposure Conditions.
B. ASTM D5456 Specification for Evaluation of Structural Composite Lumber Products.
C. National Design Specification for Wood Construction (NDS).
D. Materials shall comply with ESR Report #ESR-2993.

4. SUBMITTALS

A. Submit to Architect per SUBMITTALS Section for acceptance prior to start of fabrication. Show lumber combinations (AITC and AWPA combination symbols for identification), details, methods and sequences of assembly, erection diagrams and instructions for use in field.
   A. Manufacturer's Product and Material Safety Data Sheets, for all specified products.
   B. Shop Drawings: Submit data showing product components, including finish.

5. MATERIALS

A. Basis for Design: RedBuild RedLam Timber.
B. Douglas Fir, Larch or Hemlock, touch sanded, E = 2.0E6 psi, Fb = 2900 psi; sizes, shapes and profiles as indicated in Contract Documents.
C. Grade Stamps: All RedLam LVL materials shall comply with NES Report No. NER-481 or CCMC Report No. 11161-R.
D. Hardware: Furnish connections for joining members to each other and/or supports.

6. FABRICATION

A. LVL shall be manufactured in a plant listed in the above referenced reports under the supervision of an approved third-party inspection agency. It shall be manufactured in a continuous process with all grain parallel with the length of the members.
B. LVL shall be manufactured in a continuous process from wood fiber with all strands oriented to the length of the member and then fed into a press. All members are to be free of finger or scarf joints.
C. Adhesives shall be of waterproof type conforming to the requirements of ASTM D2559.
D. Preservative Treatment: Pressure treat members or portions of members in contact with concrete or exterior to conform to AWPA standard C-28; retention 0 .3 lb/cu ft. of wood.
E Protection: Individually wrap each member

7. STORAGE AND PROTECTION OF MATERIALS

A. Contractor receive, unload and store materials. Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.

8. ERECTION

A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.
B. General: Handle with non-marking slings. Erect in accord with accepted shop drawings.
   1. Minor Misfits: Correction of minor misfits by moderate use of drift pins, and moderate amount of reaming, chipping or cutting is considered part of erection. Immediately report errors which prevent proper assembly of parts by these measures to Architect for authorization of corrective measures prior to assembly.
C. Install per the Contract Documents and manufacturer's recommendations. Holes, cuts or notches not shown on the contract documents shall not be permitted.

9. PROTECTION OF COMPLETED WORK

A. Keep protective wrappings in place until members are enclosed within building. Gradually bring initial building heat or cooling to desired level. To minimize checking, do not reduce relative humidity of building rapidly.

SECTION 06192 - WOOD CHORD METAL TRUSSES

1. SECTION INCLUDES

A. Wood chord Metal Trusses
B. Bridging, bracing and anchorage
C. Framing for openings

2. QUALITY ASSURANCE

A. Manufacturer: Company specializing in manufacture of plywood web joists with 3 years minimum experience.

B. Design: Under direct supervision of Professional Engineer experienced in structural framing design. Verification of design of joists by complete calculations to be submitted as required herein.

C. These products shall be designed and manufactured to the standards set forth in the ICC ES Report No. ESR-1774.

1. SUBMITTALS:

A. Product Data: Submit fabricator's specifications and installation instructions for required work, covering lumber, metal plates, hardware, fabrication process, treatment (if any), handling and erection.
   1. Submit certification, signed by an officer of fabricating firm, indicating that trusses to be supplied for project comply with indicated requirements.
B. Shop Drawings: Submit shop drawings showing: species, sizes and stress grades of lumber to be used; span, camber configuration and spacing for each type of truss required; type, size, material, finish, design value and location of metal connector plates; and bearing and anchorage details.
   1. Fabricator shall submit design analysis indicating loading, section modulus, assumed allowable stress calculations, and similar information needed for analysis and to ensure that trusses comply with design requirements.
   2. Shop drawings shall be signed and stamped by a structural engineer licensed to practice in the state where trusses are to be erected.
C. The standards of the manufacturer for quality, engineering and fabrication shall govern the work of this section.

4. MANUFACTURER

A. The drawings were prepared and this specification written on the basis of using the products of the RedBuilt LLC, Boise, Idaho.

5. TRUSSES

A. Trusses shall be factory manufactured with steel webs, true pin connections and structural wood chords.
B. Top and Bottom Chords: Structural wood chord members shall be of machine stress rated lumber of approved grade and kiln dried to a maximum moisture content of 19%.
C. Web Members: Accurately die stamped from electrically welded, cold rolled steel tubing having a minimum yield strength of 45,000 psi.
D. Connecting Pins and Bearing Members: Material and size as required by design.
E. Refer to structural drawings for additional design requirements governing open web wood trusses.

6. HANDLING AND STORAGE

A. Protect trusses and accessories from damage when stored at the job site. Finished members shall be free of bends, twists or open joints. Replace warped, bowed or damaged trusses at no additional cost to the Owner.
B. Handle and Install in a manner to prevent bending, warping, twisting or other damage.
C. Store trusses in a vertical position and protect from weather.

7. INSTALLATION

A. Install joists in accord with manufacturer's instructions; true to line and level. Provide temporary bracing to position joists in place until permanently secured. Place permanent bridging, bracing and anchors to maintain joists straight and in correct position before installation of decking.

B. Any product specified elsewhere in these Specifications designed to be suspended by any means from plywood web joist shall be suspended from top flange of joist only, except those specifically designated and detailed in Structural drawings to be applied to bottom flange of joist.

8. PROTECTION OF WORK IN PROGRESS

A. Temporary construction loads which cause member stresses beyond design limits are not permitted.

SECTION 06200 – FINISH CARPENTRY

1. SECTION INCLUDES

A. Finish carpentry items.

2. REFERENCES

A. AWI/AWMAC (QSI) – Architectural Woodwork Quality Standards Illustrated; Architectural Woodwork Institute and Architectural Woodwork Manufacturers Association of Canada; 2006, 8th Ed., Version 2.0.
B. AWPA C2 – Lumber, Timber, Bridge Ties and Mine Ties -- Preservative Treatment by Pressure Processes; American Wood-Preservers' Association; 2002.

3. QUALITY ASSURANCE

A. Perform work in accordance with AWI Architectural Woodwork Quality Standards Illustrated, Custom grade.

4. DELIVERY, STORAGE, AND HANDLING

A. Protect work from moisture damage.

5. LUMBER MATERIALS

A. Softwood Lumber:
   1. Southern Yellow Pine #2, C&BTR
   2. Texture: Surfaced smooth, both sides.
B. Hardwood Lumber:
   1. Poplar or Red Oak as indicated on the drawings
   2. Texture: Surfaced smooth, both sides.

6. ADHESIVES

A. Adhesive: Type recommended by manufacturer to suit application.

7. FASTENERS

A. Hot dipped galvanized for exterior and high humidity locations, untreated steel elsewhere.
B. Concealed Joint Fasteners: Threaded steel.

8. FABRICATION

A. Shop assemble work for delivery to site, permitting passage through building openings.
B. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

9. INSTALLATION

A. Set and secure materials and components in place, plumb and level.
B. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim to conceal larger gaps.

10. ERECTION TOLERANCES

A. Maximum Variation from True Position: 1/16 inch.
B. Maximum Offset from True Alignment with Abutting Materials: 1/32 inch.

11. SCHEDULE

A. Exterior: Provide the following trim types and species unless noted otherwise on drawings.
   1. Standing and Running Trim:
      a. Species and Grade: Western Red Cedar; WWPA or WCLIB, B & Better – 1 & 2 Clear Vertical Grain.
      b. Texture: Surfaced.
B. Interior: Provide the following trim types and species unless noted otherwise on drawings.
   1. Standing and Running Trim and Rails – Transparent Finish:
      a. Quality Standard: Comply with AWI 300 Premium Grade
      b. Backs: Back out or groove backs of flat trim members, kerf backs of other wide flat members except for members with ends exposed in finished work.
      c. Casings: Assemble in plant except where limitation of access to place of installation requires field assembly.
      d. Moldings:
      1) Assemble in plant to maximum extent possible
      2) Miter corners in plant and prepare for field assembly with bolted fittings designed to pull connections together.
      e. Wood Species: Red Oak
   2. Standing and Running Trim and Rails – Opaque Finish:
      a. Quality Standard: Comply with AWI 300 Custom Grade
      b. Backs: Back out or groove backs of flat trim members, kerf backs of other wide, flat members except for members with ends exposed in finished work.
      c. Casings: Assemble in plant except where limitation of access to place of installation requires field assembly.
      d. Moldings:
      1) Assemble in plant to maximum extent possible.
      2) Miter corners in plant and prepare for field assembly with bolted fittings designed to pull connections together.
      e. Wood Species: Poplar
   3. Wood Shelves:
      a. Solid wood for Opaque Finish (lumber boards, edge-glued where required to produce widths indicated):
      1) Grade: AWI 300 Custom Grade
      2) Lumber Species: Poplar
      b. Panel product for Transparent Finish (wood veneer laminated over various cores):
      1) Grade: AWI 300 Premium Grade
      2) Lumber Species: Red Oak.
      3) Matching of adjacent veneer leaves: Book Match
      4) Veneer matching within panel face: Running Match
      5) Edge Treatment: Lumber matching wood veneer face for species and cut.
      6) Edge Treatment: Wood veneer matching veneer face for species and cut.
      c. Panel product for Opaque Finish (wood veneer laminated over various cores):
      1) Grade: AWI 300 Custom Grade
      2) Lumber Species: Poplar.
      3) Matching of adjacent veneer leaves: Book Match
      4) Veneer matching within panel face: Running Match
      5) Edge Treatment: Lumber matching wood veneer face for species and cut.
      6) Edge Treatment: Wood veneer matching veneer face for species and cut.

SECTION 06410 – CUSTOM CABINETS

1. SECTION INCLUDES

A. Specially fabricated cabinet units and hardware.
B. Countertops.

2. REFERENCES

A. ANSI A135.4 – American National Standard for Basic Hardboard; 2004.
B. AWI/AWMAC (QSI) – Architectural Woodwork Quality Standards Illustrated; Architectural Woodwork Institute and Architectural Woodwork Manufacturers Association of Canada; 2006, 8th Ed., Version 2.0.
C. NEMA LD 3 – High-Pressure Decorative Laminates; National Electrical Manufacturers Association; 2005.

3. QUALITY ASSURANCE

A. Perform work in accordance with AWI/AWMAC Architectural Woodwork Quality Standards Illustrated, Custom quality, unless other quality is indicated for specific items.

4. LUMBER MATERIALS

A. Hardwood Lumber: NHLA; Graded in accordance with AWI/AWMAC Architectural Woodwork Quality Standards Illustrated, Grade I/Premium; average moisture content of 5-10 percent; species as follows:
   1. Exposed Surfaces: Species – Red Oak.
   2. Semi-Exposed Surfaces: Species – Red Oak.
   3. Concealed Surfaces: Species poplar.

5. PANEL MATERIALS

A. Exposed Surfaces: NIST PS 1; APA A-A Grade, plain-sliced Red Oak face veneer, Interior rated adhesives, core of particleboard, medium density fiberboard, or engineered combination, thickness as indicated.
B. Hardboard: AHA A135.4; Pressed wood fiber with resin binder, Class 1 – Tempered, 1/4 inch thick, smooth two sides (S2S); use for drawer bottoms, dust panels, and other components indicated on drawings.

6. LAMINATE MATERIALS

A. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications and as indicated.

7. ACCESSORIES

A. Adhesive: Type recommended by fabricator to suit application.
B. Fasteners: Size and type to suit application.
C. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; galvanized or chrome-plated finish in concealed locations and stainless steel, or chrome-plated finish in exposed locations.
D. Concealed Joint Fasteners: Threaded steel.
E. Grommets: Standard plastic, painted metal, or rubber grommets for cut-outs, in color to match adjacent surface.

8. HARDWARE

A. Adjustable Shelf Supports: Standard side-mounted system using surface mounted metal shelf clips and shelf brackets, oil rubbed finish, with nominal 1 inch spacing adjustments.
B. Drawer and Door Pulls: Top Knobs M1165 Nouveau III Square Black Knobs.
C. Cabinet Locks: First Watch 1385-VB, Keyed cylinder, master keyed, steel with oil rubbed bronze finish.
D. Catches: L-EP592-P, 15 lb Double Magnetic Catch, Bronze.
E. Drawer Slides:
   1. Type: Standard extension.
   2. Static Load Capacity: Commercial grade.
   3. Mounting: Side mounted.
   4. Stops: Integral type.
F. Hinges: Wurth FE12-STB 1 ½" Piano Hinge, Statuary Bronze.

9. FABRICATION

A. Cabinet Style: Flush overlay.
B. Drawer Construction Technique: Dovetail joints.
C. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.
D. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.
E. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.

F. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises. Locate counter butt joints minimum 2 feet from sink cut-outs.
   1. Apply laminate backing sheet to reverse side of plastic laminate finished surfaces.
   2. Cap exposed plastic laminate finish edges with material of same finish and pattern.

G. Matching Wood Grain: Comply with requirements of quality standard for specified Grade and as follows:
   1. Provide center matched panels at each elevation.
   2. Provide sequence matching across each elevation.
   3. Carry figure of cabinet fronts to toe kicks.
H. Mechanically fasten back splash to countertops with steel brackets at 16 inches on center.

10. INSTALLATION

A. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.
B. Use fixture attachments in concealed locations for wall mounted components.
C. Use concealed joint fasteners to align and secure adjoining cabinet units and countertops.
D. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.
E. Secure cabinets to floor using appropriate angles and anchorages.
F. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.

11. ADJUSTING

A. Adjust installed work.
B. Adjust moving or operating parts to function smoothly and correctly.

SECTION 06620 – SOLID NON-POROUS SHEET AND SHAPE PRODUCTS

1. REFERENCE STANDARDS

A. American Society of Testing Materials (ASTM): ASTM E84

B. Underwriter's Laboratories (UL)

2. SUBMITTALS

A. Submit Shop Drawings to Architect, based on details shown on the Drawings. Show design load parameters, dimensions, adjacent construction, materials, thicknesses, fabrication details, required clearances, tolerances, colors, finishes, methods of support, integration of components, and anchorages. Detail to serve as installation drawings. Architect's acceptance is required prior to start of fabrication and/or shipment.

3. WARRANTY

A. Provide manufacturer's standard ten-year warranty against manufacturing defects.

5. PRODUCTS

A. Sheet Products (countertops): Manufacturer noted on finish schedule in drawings; 3/8 inch thick sheets, continuous length with bull-nose edge with integral back and side splash, and 3/4 inch exterior grade APA Fir plywood backing.

B. Patterns and Colors: As noted on finish schedule in drawings.

6. INSTALLATION

A. Contractor is responsible for dimensions, detailing, fabrication, fitting, and alignment of work of this section.

B. Protect components during shipping and delivery by appropriate boxing, crating, etc. Protect components from storage damage by retaining shipping protection in place until installation.

C. Verify that substrate is ready to receive work and dimensions are as indicated on the Drawings prior to fabrication. Beginning of fabrication means dimensions have been verified and acceptance of substrates.

D. Install fabrications in accord with accepted shop drawings and fabricator's instructions.

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

SECTION 07212 – BOARD AND BATT INSULATION

1. SECTION INCLUDES

A. Board insulation at cavity wall construction, perimeter foundation wall, and underside of floor slabs.
B. Batt insulation in exterior wall and ceiling construction.
C. Batt insulation for filling perimeter window and door shim spaces and crevices in exterior wall and roof.

2. REFERENCES

A. ASTM C 578 – Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2005a.
B. ASTM C 665 – Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2001.
C. ASTM C 1289 – Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2006.
D. ASTM D 2842 – Standard Test Method for Water Absorption of Rigid Cellular Plastics; 2001.
E. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials; 2005.
F. ASTM E 136 – Standard Test Method for Behavior of Materials in a Vertical Tube Furnace At 750 Degrees C; 2004.

3. BOARD INSULATION MATERIALS

A. Foundation Insulation: Expanded Polystyrene Board Insulation: ASTM C 578; with the following characteristics:
   1. Flame Spread Index: 75 or less, when tested in accordance with ASTM E 84.
   2. Smoke Developed Index: 450 or less, when tested in accordance with ASTM E 84.
   3. Board Size: 48 x 96 inch.
   4. Board Thickness: 1 inch.
   5. Water Absorption: 4 percent by volume, maximum, when tested In accordance with ASTM D 2842.
   6. Board Density: 0.7 lb/cu ft.
   7. Compressive Resistance: 5 psi.
   8. Thermal Conductivity (k factor) at 25 degrees F: 0.28.
   9. Approved manufacturers:
      a. AFM Corp: www.r-control.com.
      b. Diversifoam Products: www.diversifoam.com.
      c. Grace Construction Products: www.na.graceconstruction.com.

B. Under Slab Insulation: Styrofoam Brand Freezermate Extruded Polystyrene Board Insulation: Extruded Polystyrene foam, complying with ASTM C 578.
   1. Flame Spread Index: 15 when tested in accordance with ASTM E 84.
   2. Smoke Developed Index: 165, when tested in accordance with ASTM E 84.
   3. Compressive Strength: 30 psi
   4. Board Size: 48 x 96 inch.
   5. Thermal Resistance: R-value of 30, two (2) layers of 3 inch board.
   6. Approved manufacturers:
   a. b. Dow Chemical Co: www.dow.com.

4. BATT INSULATION MATERIALS

A. Batt Insulation: ASTM C 665; preformed batt; friction fit, conforming to the following:
   1. Combustibility: Non-combustible, when tested in accordance with ASTM E 136, except for facing, if any.
   2. Thermal Resistance: R of 19 in walls, 30 in roof.
   3. Facing: aluminum foil or kraft paper faced, one side.
   4. Approved manufacturers:
      a. CertainTeed Corporation: www.certainteed.com.
      b. Johns Manville Corporation: www.jm.com.
      c. Owens Corning Corp: www.owenscorning.com.

5. ACCESSORIES

A. Tape: Bright aluminum self-adhering type, mesh reinforced, 2 inch wide.
B. Insulation Fasteners: Impaling clip of unfinished steel with washer retainer and clips, to be adhered to surface to receive insulation, length to suit insulation thickness and substrate, capable of securely and rigidly fastening insulation in place.
C. Adhesive: Type recommended by insulation manufacturer for application.

6. BOARD INSTALLATION AT FOUNDATION PERIMETER

A. Install boards vertically on foundation perimeter.
B. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

7. BOARD INSTALLATION UNDER CONCRETE SLABS

A. Place insulation under slabs on grade after base for slab has been compacted.
B. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.
C. Prevent insulation from being displaced or damaged while placing vapor retarder and placing slab.

8. BATT INSTALLATION

A. Install insulation in accordance with manufacturer's instructions.
B. Install in exterior wall and roof spaces without gaps or voids. Do not compress insulation.
C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.
E. Install insulation in walls with faced side facing the building interior.
F. Tape insulation batts in place.
G. Tape seal butt ends, lapped flanges, and tears or cuts in membrane.

SECTION 07260 – WEATHER BARRIERS

1. SECTION INCLUDES

A. Vapor Barrier must have all of the following qualities:
   1. Permeance of less than 0.01 Perms [grains/(ft² *hr * in.Hg)] per ASTM F 1249 or ASTM E 96
   2. ASTM E 1745 Class A

B. Air Barriers: Materials to stop passage of air through exterior walls, joints between exterior walls and roof, and joints around frames of openings in exterior walls to comply with ICC-ES Acceptance Criteria AC-38.

2. SHEET SEAL MATERIALS

A. Vapor Retarder: Stego Wrap Vapor Barrier (15-mil) by Stego Industries LLC for underslab applications.
B. Air Barrier: Commercial Wrap as manufactured by Dupont Tyvek for vertical wall applications.
C. Moisture Barrier: 30 lb felt for horizontal applications.

3. ACCESSORIES

A. Vapor Retarder Seam Tape:
   1. Permeance less than 0.3 perms per ASTM F 1249 or ASTM E 96
   2. Stego Tape by Stego Industries LLC

B. Air Barrier Seam Tape:
   1. Permeance less than 0.3 perms per ASTM F 1249 or ASTM E 96
   2. Tyvek Seam Tape

C. Pipe Boots
   1. Construct pipe boots from vapor barrier material, pressure sensitive tape and/or mastic per manufacturer's instructions.

4. INSTALLATION

A. Install materials in accordance with manufacturer's instructions.

SECTION 07311 – ASPHALT SHINGLES

1. SECTION INCLUDES

A. Asphalt shingles and felt underlayment
B. Coordination of work of other trades
C. Guarantee and Warranty

2. SUBMITTALS

A. Submit manufacturer's standard sample board for final color selection by Owner per SUBMITTALS Section.

3. COORDINATION OF WORK

A. Flashing and Roof Sheet Metal: Flashing and sheet metal work in conjunction with roofing, specified in FLASHING AND SHEET METAL, shall be installed by the roofing contractor who applies the roofing or by a subcontractor approved in writing or employed by him. In the latter case, roofing contractor shall be responsible for adequate and expeditious performance of the sheet metal work and for coordinating its installation with roofing work and other contractors.

4. WARRANTY

A. Manufacturer's standard five-year warranty against wind damage and 25 years against manufacturing defects.

5. GUARANTEE

A. Contractor and roofing subcontractor shall jointly and unconditionally guarantee roofing for a period of two years from the date of acceptance of the project by the Owner against defective materials and workmanship, and against leaks (except leaks caused by abuse, lightning, hurricane, tornado, hail storm and other unusual climatic phenomena of the elements). During the guarantee period, the contractor and roofing subcontractor jointly agree that within 24 hours of receipt of notice from the Owner, the defects in the roofing, within the meaning of the guarantee, will be immediately repaired and within 10 working days after the receipt of notice from the Owner, the defective roofing will be restored to the standard of the original specifications without cost to the Owner, including all labor, materials and other costs incidental to the work.

6. MANUFACTURER

A. The Drawings were prepared and this Specification written on the basis of using the products of GAF Materials Corporation, Wayne, NJ. It is not the intent to limit competitive bidding. Products with equal characteristics by other manufacturers are acceptable under the conditions of these Specifications.

7. MATERIALS

A. Shingles: Refer to drawings for location, type, and extent of required shingles and colors. Shingles shall comply with ASTM D 3018, Type I and ASTM D 3462, bearing UL Class A external fire exposure label and UL wind resistant label.
B. Hip and Ridge Shingles: Factory precast units to match shingles.
C. Roofing Felt: No. 30 asphalt-saturated un-perforated organic roofing felt, complying with ASTM D 226, Type II, 36-inches wide, approximately net 26 pounds per square. No staples permitted. Use plastic washers with nails.
D. Nails: Aluminum or hot-dipped galvanized 11 or 12 gauge sharp pointed conventional roofing nails with barbed shanks, 3/8-inch (9mm) minimum diameter head, of sufficient length to penetrate 3/4-inch (19mm) minimum into solid decking or through plywood sheathing. Staples are not permitted.
E. Asphaltic Plastic Roof Cement: ASTM D 4586, asphaltic, asbestos free.
F. Metal Flashing and Trim: Aluminum flashing and drip edge: Provide .020 inch thick, aluminum flashings where exposed with paint grip finish. Fabricate sheet metal flashing and trip to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions and metal.

8. PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver materials with manufacturer's labels intact and legible.
B. Deliver materials in sealed packages with Underwriter's Laboratories, Inc. labels.
C. Store materials on raised platforms and protect with coverings at outdoor locations.
D. Do not stack bundles of shingles more than 4 foot high.
E. Store rolled goods on end.

9. INSPECTION

A. Roofing subcontractor shall examine all roof decks on which his roof is to be applied and shall notify the Owner in writing prior to starting work of any defects which he considers detrimental to the proper installation of his materials. Do not install underlayment or shingles on wet surfaces or when air temperature is below 40° F.

10. INSTALLATION

A. Install underlayment, shingles, flashing, and other accessories with instructions published by shingle manufacturer.
B. Felt Underlayment:
   1. Lay one layer of felt horizontally over entire roof insulation substrate, lapping each course over lower course 2 inch minimum at horizontal joints, and 4 inch side lap at end joints.
   2. Secure underlayment to deck with sufficient fasteners to hold in place until shingles are applied.
C. Flashings, Metal Drip Edge and Diverters:
   1. Eaves and Rake Flashing: Nail metal drip edge along the bottom edge (eaves) before felt is laid and to the sides (rakes) after the felt is laid.
   2. Diverters: Install diverters at all roof-mounted light fixtures.

D. Shingles:
   1. Use shingles with tabs cut off as starter strip.
   2. Starter strip and shingles shall overhang eaves and rake by ½ inch. Set shingles within 6 inch of eaves and rake conditions in solid coating of plastic cement. Nail starter strip using same spacing as for shingles, and locate nails 1 inch up from the bottom edge. Avoid nailing where cut-outs will occur on the first course of shingles.
   3. Snap chalk lines to guide application.
   4. Nailing shall be as recommended on bundle wraps and manufacturer's recommendations but not less than 6 nails per strip penetrating the deck.

SECTION 07460 – FIBER-CEMENT SIDING AND TRIM

1. SECTION INCLUDES

A. Fiber cement siding, trim, fascia and accessories.

2. ENGINEERING DESIGN

A. Subcontractor for the work of this Section shall be responsible for final design of installation systems and shall insure proper design for spacing of sub-framing and all attachments. Subcontractor must have not less than three (3) years successful experience in installation of similar cladding systems.

3. REFERENCE STANDARDS

A. American Society for Testing Materials (ASTM)

4. SUBMITTALS

A. Submit Shop Drawings per SUBMITTALS Section prior to fabrication, for Architect's approval. Drawings shall show finish, profiles, fastener types and locations, and flashing details.

B. Submit sample panel of proposed construction along with color samples on actual material for approval.

5. WARRANTY

A. Product Warranty: Limited product warranty against manufacturing defects.
B. HardieTrim, Hardie Siding and Hardie Fascia for 10 years.
C. Workmanship Warranty: Application warranty for 2 years.

6. COORDINATION

A. Contractor shall be responsible for dimensions, detailing, fabrication, fitting and alignment of the work of this Section.

7. MANUFACTURER

A. The Drawings were prepared and this Specification written on the basis of using the products of James Hardie Building Products, Inc., Mission Viejo, CA. www.jameshardiecommercial.com. Products with equal characteristics by other manu-facturers are acceptable under the conditions of these Specifications.

8. PRODUCTS

A. Fiber cement trim, fascia, siding, and accessories shall be composed of autoclaved, non-asbestos, fiber-cement complying with the provisions of ASTM C1186. Products shall provide the following minimum properties: Modulus of Rupture (equilibrium) >1450 psi, ASTM C1185; Density 80 pcf ASTM C1185; Flame Spread/Smoke Development 0/0 ASTM E84.
B. Refer to Finish Schedule on drawings for specific products, finish, sizes, etc... for all Fiber cement trim, fascia, and siding products used on project.
C. Factory Primer: Provide factory applied universal primer.
D. Texture: Smooth

9. FASTENERS

A. Concealed, galvanized, corrosion resistant, type and size required by design.

10. JOINT SEALANTS

A. As specified in SEALANTS AND CAULKING

11. HANDLING

A. Perform in a manner to prevent bending, warping, twisting or other damage. All material shall be clean and straight. Damaged or bent materials shall not be used.

12. STORAGE

A. Store units on raised support and protect from the weather.

13. WORKMANSHIP

A. Use only skilled and experienced personnel. All workmanship shall be equal to the best practice of modern siding installation.

14. ERECTION

A. Erect in complete accord with approved shop drawings and manufacturer's written instructions. Use full length panels whenever possible to minimize end joints.

SECTION 07530 – ELASTOMERIC MEMBRANE ROOFING

1. SECTION INCLUDES

A. Elastomeric roofing membrane: mechanically fastened conventional application.

B. Insulation, flat and tapered.

2. REFERENCES

A. ASTM C 1289 – Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2006.

B. NRCA ML104 – The NRCA Roofing and Waterproofing Manual; National Roofing Contractors Association; Fifth Edition, with interim updates.

C. UL (RMSD) – Roofing Materials and Systems Directory; Underwriters Laboratories Inc.; current edition.

3. QUALITY ASSURANCE

A. Perform work in accordance with NRCA Roofing and Waterproofing Manual and manufacturer's instructions.

4. ENVIRONMENTAL REQUIREMENTS

A. Do not apply roofing membrane during unsuitable weather.

B. Do not apply roofing membrane when ambient temperature is below 40 degrees F or above 110 degrees F.

C. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.

D. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

5. WARRANTY

A. Provide manufacturer's standard written full roofing system repair and/or replacement 15-year NDL warranty at no additional cost, covering materials and labor. Warranty shall include loss of consequential damages due to failure of the roof system and contain no exclusions for ponding water or biological growth. Upon warranty inspection and acceptance of the roof, the warranty shall be turned over to the Contractor on behalf of Owner by a Manufacturer's Quality Assurance Specialist.

6. APPROVED MANUFACTURERS

A. IB Roofing Systems, www.ibroof.com
B. Duro-Last Roofing, www.duro-last.com

7. ROOFING

A. Approved Elastomeric Membrane Roofing Systems:
   1. IB Roofing Systems, 60 mil PVC Single ply, PVC roofing system, to include manufacturer's decking and insulation preparation, base flashings, fasteners and flashing accessories.
   2. Duro-Last, 60 mil PVC Single ply, PVC roofing system, to include manufacturer's decking and insulation preparation, base flashings, fasteners and flashing accessories.

B. Roofing Assembly Requirements:
   1. Roof Covering External Fire-Resistance Classification: UL Class A.
   2. Insulation Thermal Value (R), minimum: R-30; provide insulation of thickness required.

C. Acceptable Insulation Types:
   1. 2 layers of 2-1/2 -inches polyisocyanurate board run perpendicular to minimize joint alignment.

8. ACCESSORIES

A. All roofing components used at roof penetrations shall be provided by approved manufacturer per their standards, written installation requirements and warranty requirements.

B. Insulation Fasteners: Appropriate for purpose intended and approved by roofing manufacturer.

C. Walkway Pads: Manufacturer's standard 30 x 60-inch and 60 x 60-inch membrane pads.

9. EXAMINATION

A. Verify that surfaces and site conditions are ready to receive work.

B. Verify deck is clean and smooth, flat, free of depressions, waves, or projections, properly sloped and suitable for installation of roof system.

C. Verify deck surfaces are dry and free of snow or ice.

D. Verify that roof openings, curbs, and penetrations through roof are solidly set.

10. INSULATION – UNDER MEMBRANE

A. Roof insulation shall be installed with approved fasteners and distribution plates placed according to the manufacturer's most recent published specifications for the use under the manufacturer's system and for issuance of the warranty.

B. Attachment of Insulation:
   1. Mechanically fasten insulation to deck in accordance with roofing manufacturer's instructions.

C. Stagger insulation boards 50% from row to row.

D. Lay boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof.

E. Do not apply more insulation than can be covered with membrane in same day.

11. MEMBRANE APPLICATION

A. Install the roofing system to comply with manufacturer's most recent published specifications.

B. Roll out membrane, free from wrinkles or tears. Place sheet into place without stretching.

C. Mechanical Attachment: Apply membrane and mechanical attachment devices in accordance with manufacturer's instructions.

D. On all parapet locations, wrap parapet with new pre-manufactured parapet flashings by manufacturer and terminate on exterior of wall.

E. Around roof penetrations, seal flanges and flashings with flexible flashing.

12. PROTECTION

A. Protect installed roofing and flashings from construction operations.

B. Where traffic must continue over finished roof membrane, protect surfaces using durable materials.

SECTION 07611 – SHEET METAL ROOFING

1. SECTION INCLUDES

A. Prefinished, prefabricated structural standing seam roof system with continuous interlocking seams with clips, fasteners, closures, and sealants as necessary to meet design criteria and ensure weathertight installation.
B. Color coordinated hip, gable, and valley flashings, ridge and peak caps, eave and shelf drips, and counterflashing's.

2. REFERENCES

A. SMACNA (ASMM) – Architectural Sheet Metal Manual; Sheet Metal and Air Conditioning Contractors' National Association; 2003.
B. AISC: "Steel Construction Manual" American Institute of Steel Construction.
C. AISI: "Cold Form Steel Design Manual" American Iron and Steel Institute
D. ASTM A792-89: Standard Specification for Steel Sheet, Aluminum-Zinc Alloy Coated by the Hot Dip Process, General Requirements
E. ASTM A527-90: Standard Specification for Steel Sheet, Zinc Coated (galvanized) by the Hot Dip Process, Lock-Forming Quality.
F. ASTM A526-90: Standard Specification for Steel Sheet, Zinc, Coated (galvanized) by the Hot Dip Process, Commercial Quality.
G. ASTM A446-9: Standard Specification for Steel Sheet, Zinc Coated (galvanized) by the Hot Dip Process, Structural (physical) Quality.

3. WARRANTY

A. Metal panel manufacturer, upon final acceptance for project, furnish a warranty covering bare metal against rupture, structural failure, and perforation due to normal atmospheric corrosion exposure for a period of 25 years.
B. Metal panel manufacturer, upon final acceptance for project, furnish a warranty covering panel finish against cracking, checking, blistering, peeling, flaking, chipping, chalking, and fading for a period of 25 years.

4. DESIGN REQUIREMENTS

A. Provide UL 90 rated roofing system that has been tested in accordance with UL 580 test procedure.
B. Provide factory preformed panel system that has been pretested and certified by manufacturer to comply with specified requirements under installed conditions.

5. ENVIRONMENTAL REQUIREMENTS

A. Resistance to air infiltration: 0.059 cfm per lineal foot of joint when tested in accordance with ASTM E283 at static test pressure differential of 6.24 psf.
B. Resistance to water infiltration: No leakage through panel joints when tested in accordance with ASTM E331 at static test pressure differential of 6.24 psf.

6. MANFACTURER

A. Berridge Manufacturing Company, Houston, Texas; Manufacturer's standard Tee-Panel.

7. SHEET MATERIALS

A. Panel Profile: 1" height rib x 12 3/4" on center seam spacing; 24-gauge hot dipped galvanized steel.
B. Panel Style: Standing seam
C. Texture: Smooth
D. Finish: Kynar 500 Flurocarbon coating with a minimum film thickness of 0.90 mil.
E. Color: As noted on Finish Schedule in the Drawings.
F. Underlayment: W.R. Grace Company, Ice and Water Shield HT

8. FABRICATION

A. Roll form panels in continuous lengths, full length of detailed runs.
B. Fabricate trim, flashing and accessories to detailed profiles.
C. Fabricate trim and flashing from same material as panel.

9. EXAMINATION

A. Verify deck is dry and free of snow or ice. Verify joints in wood deck are solidly supported and fastened.
B. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, reglets are in place, and nailing strips located.
C. Verify roofing termination and base flashings are in place, sealed, and secure.

10. INSTALLATION – ROOFING

A. Apply underlayment over entire roof area.
B. Apply slip sheet in one layer, laid loose.
C. Cleat and seam all joints.
D. Use plastic cement for joints between metal and bitumen and for joints between metal and felts.
E. Install panels so that they are weather tight, without waves, warps, buckles, fastening, stresses or distortion, allowing for expansion and contraction.
F. Install panels in accordance with manufacturer's installation instructions and shop drawings.
G. Provide concealed anchors at all panel attachment locations.
H. Install panels plumb, level, and straight with seams and ribs parallel.

11. INSTALLATION – FLASHINGS

A. Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted.
B. Cleat and seam all joints.
C. Apply plastic cement compound between metal flashings and felt flashings.
D. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
E. Seal metal joints watertight.

SECTION 07620 – SHEET METAL FLASHING AND TRIM

1. SECTION INCLUDES

A. Fabricated sheet metal items, including flashings, counter flashings, gutters, and downspouts.

2. REFERENCES

A. AAMA 611 – Voluntary Specification for Anodized Architectural Aluminum; American Architectural Manufacturers Association; 1998.
B. ASTM A 653/A 653M – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2005a.
C. ASTM B 209 – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2004.
D. ASTM B 209M – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate (Metric); 2004.
E. ASTM D 226 – Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 2005.
F. ASTM D 4586 – Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2000.
G. SMACNA (ASMM) – Architectural Sheet Metal Manual; Sheet Metal and Air Conditioning Contractors' National Association; 2003.

3. SHEET MATERIALS

A. Galvanized Steel: ASTM A 653/A 653M, with G90/Z275 zinc coating; minimum 0.02 inch thick base metal.

4. ACCESSORIES

A. Fasteners: Same material and finish as flashing metal, with soft neoprene washers.
B. Primer: Zinc chromate type.
C. Plastic Cement: ASTM D 4586, Type I.

5. FABRICATION

A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
B. Fabricate cleats of same material as sheet, minimum 4 inches wide, interlocking with sheet.
C. Form pieces in longest possible lengths.
D. Hem exposed edges on underside 1/2 inch; miter and seam corners.
E. Form material with flat lock seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
F. Fabricate corners from one piece with minimum 18 inch long legs; seam for rigidity, seal with sealant.
G. Fabricate vertical faces with bottom edge formed outward 1/4 inch (6 mm) and hemmed to form drip and at all exposed edges, no raw edges pemitted.

6. GUTTER AND DOWNSPOUT FABRICATION

A. Gutters: Profile as indicated.
B. Downspouts: Profile as indicated.
C. Gutters and Downspouts: Size for rainfall intensity determined by a storm occurrence of 1 in 5 years in accordance with SMACNA Architectural Sheet Metal Manual. All gutters and downspouts shall be seamless.
D. Twenty (20) gauge.
E. Accessories: Profiled to suit gutters and downspouts.
   1. Anchorage Devices: In accordance with SMACNA requirements.
   2. Gutter Supports: Brackets.
   3. Downspout Supports: Brackets.
F. Finish: Powder coated, pre-finished, Dark Bronze.
G. Seal metal joints.

7. INSTALLATION

A. Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted.
B. Apply plastic cement compound between metal flashings and felt flashings.
C. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
D. Secure gutters and downspouts in place using concealed fasteners.
E. Slope gutters 1/4 inch per foot minimum.

SECTION 07700 – MANUFACTURED ROOF SPECIALTIES

1. SECTION INCLUDES

A. Copings and Gravel Guards
B. Roof Hatch
C. Caged Roof Hatch Grab Bar and Gate

2. MANUFACTURERS

A. Copings and Gravel Guards:
   1. Architectural Products Co; Product Type AP Standard Coping: www.archprod.com.
   2. W.P. Hickman Co; Product Permasnap Coping: www.wph.com.
   3. MM Systems Corp; Product Snap-Lok Coping: www.mmsystemscorp.com.
   4. Substitutions: See Section 01600 – Product Requirements.
B. Roof Hatch: Bilco Co; www.bilco.com.
C. Roof Hatch Safety Grab Bars: LadderPort; www.ladder-port.com.

3. COMPONENTS

A. Copings: Formed aluminum, 0.050 thick with 6" wide concealed joint covers and continuous hold down clips. Paint grip finish.
   1. Color as scheduled on the drawings.

idstudio4

6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT
02.15.2023

Cheddar's SCRATCH KITCHEN EST 1979

Issue Date: 02.15.2023

REVISION INFORMATION

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
SPECIFICATIONS

AS4

B. Roof Hatches: Factory-assembled steel frame and cover, complete with operating and release hardware; for Ladder Access: Single leaf; 30 by 36 inches. (Note: No LU-1 Safety Post required when LadderPort cage and gate are provided at Roof Hatch).
1. Frames/Curbs: One-piece curb and frame with integral cap flashing to receive roof flashings; extended bottom flange to suit mounting.
a. Material: Galvanized steel, 14 gage, 0.0747 inch thick.
b. Finish: Factory prime paint.
c. Insulation: 1 inch rigid glass fiber, located on outside face of curb.
2. Metal Covers: Flush, insulated, hollow metal construction.
a. Capable of supporting 40 psf live load.
b. Material: Galvanized steel; outer cover 14 gage, 0.0747 inch thick, liner 22 gage, 0.03 inch thick.
c. Finish: Factory prime paint.
d. Insulation: 1-inch thick rigid glass fiber.
e. Gasket: Neoprene, continuous around cover perimeter.
3. Hardware: Steel, zinc coated and chromate sealed, unless otherwise indicated or required by manufacturer.
a. Lifting Mechanisms: Compression spring operator with shock absorbers that automatically opens upon release of latch; capable of lifting covers despite 10 psf load.
b. Hinges: Heavy duty pintle type.
c. Hold open arm with vinyl-coated handle for manual release.
d. Latch: Upon closing, engage latch automatically and reset manual release.
e. Manual Release: Pull handle on interior.
f. Locking: Padlock hasp on interior.
4. Roof Hatch Grab Bar and Gate: LadderPort Caged Roof Hatch Grab Bar and Gate.
a. Roof Hatch Safety Grab Bar kit shall be fabricated from welded heavy gauge tubular steel construction utilizing formed steel, laser cut side rails.
b. Main mounting bolts shall be stabilized by close tolerance heavy tube steel.
c. Hatch handles shall be of height and distance apart to meet OSHA specifications.
d. Hand stops on top of handrails shall be included.
e. Entire assembly shall be powder-coated safety yellow.
f. Hatch kit shall include fasteners, drills, and sealant for installation.
g. Handles shall be adjustable for all standard hatch widths 24" to 48".

4. INSTALLATION

A. Install components in accordance with manufacturer's instructions.

B. Provide blocking in walls as required. Adjust bracket lengths to accommodate different wall elevations as required.

SECTION 07712 – RAINWATER DISPERSAL SYSTEM

** NOTE TO SPECIFIER ** Rainhandler, Rain Dispersers.

This section is based on the products of Savetime Corporation, located at:
2710 North Ave. Bridgeport, CT 06604.
Tel: (800) 942-3004.
Fax: (800)606-2028.
Email: .
Web:

The RainhandleR gutter is a state-of-the-art rain dispersal system invented by an M.I.T. aeronautical engineer. Now improved with three more patents, it provides superior dispersal and strength.

For two decades thousands of American homeowners have replaced messy gutters, unsafe gutters and downspouts by installing the modern RainhandleR systems... the proven and practical system for rainwater dispersal.

. U.S. Patents 4646488, 5261195, 5261196.

Product availability, pricing, and further technical information are available directly from SAVETIME CORP or through local distributors/installers throughout the United States and Canada. For more information, call (800) 942-3004

1. SECTION INCLUDES

A. Rooftop Rain Water Dispersal System.
2. REFERENCES

A. NRCA Roofing and Waterproofing Manual.
B. ASTM B 209/B 209M – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2004.

3. SUBMITTALS

A. Submit under provisions of Section 01300.
B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods and product limitations.
C. Shop Drawings:
1. Provide large scale shop drawings for fabrication, installation and erection of all parts of the work.
2. Provide plan, elevation and section views of each product specified, and details of anchorages, connections and accessory items.
D. Test Reports: Provide test reports for rain dispersal rates, static load capabilities, and corrosion resistance.
** NOTE TO SPECIFIER ** Delete selection samples if colors have already been selected.
E. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

4. QUALITY ASSURANCE

A. Manufacturer Qualifications: Single manufacturer specializing in rain dispersal systems must provide all primary materials. Secondary or accessory materials must be acceptable to the manufacturer of primary materials and not conflict with warranty terms or conditions.
B. Installer Qualifications: Must be a licensed, insured contractor with demonstrated skills in roofing and related work. Must satisfy manufacturer as to complete understanding of the scope and details of project.

5. DELIVERY, STORAGE, AND HANDLING

A. Deliver materials and products in unopened, factory labeled packages. Store and handle in compliance with manufacturer's recommendations. Store under cover and protect from damage.
6. PROJECT CONDITIONS
A. Where applicable, maintain environmental conditions within limits recommended by manufacturer for satisfactory results. Do not install products under environmental conditions outside manufacturer's limits.
B. Substrates: Proceed with work only when roof, soffit and fascia construction is complete.
7. WARRANTY
A. At project closeout, provide to Owner or Owner's representative a copy of the manufacturer's standard warranty form outlining the terms and conditions of the 25-year limited warranty against manufacturing defects.
8. MANUFACTURERS
A. Acceptable Manufacturer: RainHandler, which is located at: 2710 North Ave. ; Bridgeport, CT 06604; Toll Free Tel: 800-942-3004; Tel: 203-382-2991; Web: www.rainhandler.com
** NOTE TO SPECIFIER ** Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.
9. RAIN WATER DISPERSAL SYSTEM
A. Rainhandler Roof Rain Water Dispersal System: Run-off water management system
1. Louvers: 0.032 inch (0.8mm) 3105 Alloy Aluminum, Temper H14, in 5-foot long sections, with six equally spaced cross spacers fabricated from 0.080 inch (2mm) 3105 alloy aluminum, temper H14, complying with ASTM B 209/B 209M.
2. Finish: Satin Black Baked Enamel
10. ACCESSORIES
A. Drip Edge Extender (DEE): For directing roof runoff to the center of the Rainhandler when the drip edge along the eave does not extend a minimum of 1 1/2 inches (38mm) from the fascia.
1. Material: 0.032 inch (0.8mm) 3105 Alloy Aluminum, Temper H14, complying with ASTM B 209/B 209M.
2. Mounting: Mount to fascia with provided screws as applicable to project needs and as shown on contract drawings.
3. Width: 2 inches (51mm).
4. Finish: Satin Black Baked Enamel.
B. Angled Fascia Adapters: For repositioning of the Rainhandler Bracket relative to the fascia and adjustment of the mounting plane to plumb in applications in which the fascia is perpendicular to the roof.
1. Pitch: 4:12.
2. Material: 0.050 inch (1.3mm) 3105 Alloy Aluminum, Temper H14, complying with ASTM B 209/B 209M.
3. Finish: Satin Black Baked Enamel
C. Mounting Brackets: Provide manufacturer's standard mounting brackets designed specifically for application of rain handling systems.
** NOTE TO SPECIFIER ** Select material. 0.080 inch for heavy winter conditions. Delete one of the next two paragraphs.
1. Material: 0.080 inch (2.0mm) 3105 Alloy Aluminum, Temper H14, complying with ASTM B 209/B 209M. Use where severe winter conditions exist.
** NOTE TO SPECIFIER ** Select FINISH to match. Delete two of the next three paragraphs.
2. Finish: Satin Black Baked Enamel
D. Screws: Aluminum hex head #2 Phillips drive sheet metal screws, heads painted to match system, as provided by the manufacturer.
1. 10-16 x 1/2 inch (13mm) screws for mounting to fascia.
2. 8-32 x 1/4 inch (6mm) self-tapping screws to attach components to each other.

11. INSTALLATION

A. Install in accordance with manufacturer's instructions except where more restrictive requirements are specified in this Section.
B. Install Rainhandler units plumb, level, in alignment and plane without warp or rack. Screw securely in place, but do not overtighten. Always mount at the bottom edge of the fascia. Must be a minimum of 3 1/2 inches (89mm) below drip edge.
C. Install Rainhandler brackets against plumb fascia. Bracket pitches a nominal 8 degrees down away from fascia. Aluminum shims or washers may be used to compensate for fascia out of plumb.
** NOTE TO SPECIFIER ** Delete the next paragraph if DOORBRELLA is not specified.
** NOTE TO SPECIFIER ** Delete the next paragraph if DRIP EDGE EXTENDER is not specified.
D. Snug drip edge extender tight against any projecting roof edge. Where no projections exist, align even with roof edge. Screw into fascia with 1/2 inch (13mm) screws (provided).
12. ADJUSTMENT AND PROTECTION
A. Adjust components where necessary to achieve correct operation.
B. Provide temporary protection at all times during the course of the work to ensure the work of this Section is not damaged in any way at time of final acceptance.
C. Inspect all work, and touch-up, repair or replace damaged products before Substantial Completion.

SECTION 07900 – JOINT SEALERS

1. SECTION INCLUDES

A. Sealants and joint backing.

2. ENVIRONMENTAL REQUIREMENTS

A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

3. SEALANTS

A. Sealants and Primers – General: Provide only products having lower volatile organic compound (VOC) content than required by the more stringent of the South Coast Air Quality Management District Rule No.1168.
B. General Purpose Exterior Sealant: Polyurethane; ASTM C 920, Grade NS, Class 25, Uses M, G, and A; single component.
1. Color: Standard colors matching finished surfaces.
2. Applications: Use for:
a. Control, expansion, and soft joints in masonry.
b. Joints between concrete and other materials.
c. Joints between metal frames and other materials.
d. Under exterior door sills.
e. Other exterior joints for which no other sealant is indicated.
C. General Purpose Interior Sealant: Acrylic emulsion latex; ASTM C 834, Type OP, Grade NF single component, paintable.
1. Color: Standard colors matching finished surfaces.
2. Applications: Use for:
a. Interior wall and ceiling control joints.
b. Joints between door and window frames and wall surfaces.
c. Other interior joints for which no other type of sealant is indicated.
D. Restroom/Tile Sealant: White silicone; ASTM C 920, Uses I, M and A; single component, mildew resistant.
1. Applications: Use for:
a. Joints between plumbing fixtures and floor and wall surfaces.
E. Interior Floor Joint Sealant: Polyurethane, self-leveling; ASTM C 920, Grade P, Class 25, Uses T, M and A; single component.
1. Color: Standard colors matching finished surfaces.
2. Applications: Use for:
a. Expansion joints in floors.
F. Silicone Sealant: ASTM C 920, Grade NS, Class 25, Uses NT, A, G, M, O; single component, solvent curing, non-sagging, non-staining, fungus resistant, non-bleeding.
1. Color: Clear.
2. Applications: Use for:
a. Equipment sealant in Food Service areas.

4. ACCESSORIES

A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
C. Joint Backing: Round foam rod compatible with sealant; ASTM D 1667, closed cell PVC; oversized 30 to 50 percent larger than joint width.
D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

5. PREPARATION

A. Remove loose materials and foreign matter which might impair adhesion of sealant.
B. Clean and prime joints in accordance with manufacturer's instructions.
C. Perform preparation in accordance with manufacturer's instructions and ASTM C 1193.
D. Protect elements surrounding the work of this section from damage or disfigurement.

6. INSTALLATION

A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
B. Perform installation in accordance with ASTM C 1193.
C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer.
D. Install bond breaker where joint backing is not used.
E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
G. Tool joints concave.

DIVISION 08 - DOORS AND WINDOWS

SECTION 08110 – STEEL DOORS AND FRAMES

1. SECTION INCLUDES

A. Steel doors and frames.
B. Steel frames for wood doors.
C. Thermally insulated steel doors.

2. REFERENCES
A. ANSI/ICC A117.1 – American National Standard for Accessible and Usable Buildings and Facilities; International Code Council; 2003.
B. ANSI A250.3 – Test Procedure and Acceptance Criteria for Factory-Applied Finish Painted Steel Surfaces for Steel Doors and Frames; 1999.
C. ANSI A250.8 – SDI-100 Recommended Specifications for Standard Steel Doors and Frames; 2003.
D. ASTM A 653/A 653M – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2005a
E. DHI A115 Series – Specifications for Steel Doors and Frame Preparation for Hardware; Door and Hardware Institute; 2000 (ANSI/DHI A115 Series).

3. SUBMITTALS

A. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and identifying location of different finishes, if any.

4. MANUFACTURERS

A. Steel Doors and Frames:
1. Asso Abloy Ceco: www.assoabloydss.com.
2. Steelcraft: www.steelcraft.com.

5. DOORS AND FRAMES
A. Requirements for All Doors and Frames:
1. Accessibility: Comply with ANSI/ICC A117.1.
2. Door Top Closures: Flush with top of faces and edges.
3. Door Edge Profile: Beveled on both edges.
4. Door Texture: Smooth faces.
5. Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings.
6. Hardware Preparation: In accordance with DHI A115 Series, with reinforcement welded in place, in addition to other requirements specified in door grade standard.
7. Finish: Factory primed, for field finishing.

6. STEEL DOORS

A. Exterior Doors:
1. Grade: ANSI A250.8 Level 3, physical performance Level A, Model 2, seamless.
2. Core: Polystyrene foam; Thermally Insulated: Minimum R-1.64 per ICCC for opaque doors in Zones 1 through 4.
3. Galvanizing: All components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A 653/A 653M, with manufacturer's standard coating thickness.
B. Interior Doors, Non-Fire-Rated:
1. Grade: ANSI A250.8 Level 2, physical performance Level B, Model 1, full flush.
2. Thickness: 1-3/4 inches.

7. STEEL FRAMES

A. General:
1. Comply with the requirements of grade specified for corresponding door.
a. Frames for Wood Doors: Comply with frame requirements specified in ANSI A250.8 for Level 1, 16 gage
2. Finish: Same as for door.
B. Exterior and Interior Door Frames: Fully welded.

8. FINISH MATERIALS

A. Primer: Rust-inhibiting, door manufacturer's standard.

9. INSTALLATION

A. Install in accordance with the requirements of the specified door grade standard and NAAMM HMMA 840.
B. Coordinate frame anchor placement with wall construction.
C. Coordinate installation of hardware.

SECTION 08120 – FRP DOORS

1. SECTION INCLUDES

A. Heavy duty, chemical resistant, Fiberglass Reinforced Polyester doors; flush configuration; non-rated and acoustical.

2. DELIVERY, STORAGE, AND HANDLING

A. Package, deliver and store doors in accordance with specified quality standard.

B. Accept doors on site in manufacturer's packaging. Inspect for damage.

C. Protect doors with resilient packaging. Do not store in damp or wet areas; or in areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer if stored more than one week. Break seal on site to permit ventilation.

3. WARRANTY

A. Provide manufacturer's warranty for the life of the installation.

B. Include coverage for delamination of FRP, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

5. MANUFACTURERS

A. Special-Lite or approved equal.
B. Color: Manufacturer's standard "Dark Bronze".
C. Type: SL-17 FRP Flush Door in sizes as noted on plans.

8. DOOR CONSTRUCTION

A. Fabricate doors in accordance with door quality standard specified.
B. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.
D. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.
1. Exception: Doors to be field finished.
E. Provide edge clearances to comply with AWI Quality Standards Illustrated Section 1700.

9. INSTALLATION

A. Install doors to comply with manufacturer's instructions and specified quality standard.
B. Use machine tools to cut or drill for hardware.
C. Coordinate installation of doors with installation of frames, hardware and glazing.

10. INSTALLATION TOLERANCES

A. Conform to specified quality standard for fit and clearance tolerances.
B. Conform to specified quality standard for maximum diagonal distortion.

SECTION 08211 – FLUSH WOOD DOORS

1. SECTION INCLUDES

A. Flush wood doors; flush configuration; non-rated and acoustical.

2. REFERENCES

A. AWI/AWMAC (QSI) – Architectural Woodwork Quality Standards Illustrated; Architectural Woodwork Institute and Architectural Woodwork Manufacturers Association of Canada; 2006, 8th Ed., Version 2.0.

3. DELIVERY, STORAGE, AND HANDLING

A. Package, deliver and store doors in accordance with specified quality standard.
B. Accept doors on site in manufacturer's packaging. Inspect for damage.
C. Protect doors with resilient packaging. Do not store in damp or wet areas; or in areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer if stored more than one week. Break seal on site to permit ventilation.

4. WARRANTY

A. Interior Doors: Provide manufacturer's warranty for the life of the installation.

B. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

5. MANUFACTURERS

A. Wood Veneer Faced Doors:
1. Assa Abloy Graham: www.grahamdoors.com.
2. Eggers Industries: www.eggersindustries.com.
3. Substitutions: See Section 01600 – Product Requirements.

6. DOORS AND PANELS

A. All Doors: See drawings for locations and additional requirements.
1. Quality Level: Premium Grade, in accordance with AWI/AWMAC Architectural Woodwork Quality Standards Illustrated, Section 1300.
2. Wood Veneer Faced Doors: Red Oak, plain-sliced, 5-ply unless indicated.

B. Interior Doors: 1-3/4 inches thick unless otherwise indicated; flush construction.
1. Provide solid core doors at all locations.

7. DOOR FACINGS

A. Wood Veneer Facing for Transparent Finish: Species as specified above, veneer grade as specified by quality standard, plain sliced, book veneer match, running assembly match; unless otherwise indicated.
1. Vertical Edges: Any option allowed by quality standard for grade.

8. DOOR CONSTRUCTION

A. Fabricate doors in accordance with door quality standard specified.
B. Fit door edge trim to edge of stiles after applying veneer facing.
C. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.
D. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.
1. Exception: Doors to be field finished.
E. Provide edge clearances to comply with AWI Quality Standards Illustrated Section 1700.

9. INSTALLATION

A. Install doors to comply with manufacturer's instructions and specified quality standard.
B. Use machine tools to cut or drill for hardware.
C. Coordinate installation of doors with installation of frames, hardware and glazing.

10. INSTALLATION TOLERANCES

A. Conform to specified quality standard for fit and clearance tolerances.
B. Conform to specified quality standard for maximum diagonal distortion.

SECTION 08212 – WOOD STILE AND RAIL DOORS

1. SECTION INCLUDES

A. Wood stile and rail paneled doors.
B. Wood stile and rail, glazed doors.

2. REFERENCES

A. AWI/AWMAC (QSI) – Architectural Woodwork Quality Standards Illustrated; Architectural Woodwork Institute and Architectural Woodwork Manufacturers Association of Canada; 2006, 8th Ed., Version 2.0.

3. DELIVERY, STORAGE, AND HANDLING

A. Package, deliver and store doors in accordance with AWI/AWMAC Quality Standards Illustrated, Section 1300.

4. PROJECT CONDITIONS

A. Coordinate the work with door opening construction, door frame and door hardware installation.

5. WARRANTY

A. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.
B. Term: Five (5) years.

6. MANUFACTURERS
A. Stile and Rail Wood Doors:
1. Eggers Industries: www.eggersindustries.com.
2. Algoma Hardwoods
3. Or Equal

7. DOOR TYPES

A. Interior Doors: 1-3/4 inches thick unless otherwise indicated; solid lumber construction; mortised and tenioned joints.
1. Species: Red Oak, plain-sliced.
2. Panel Configuration: As shown on Door Schedule, manufacturer's standard as referenced by NWDA standard for design group indicated.
3. Ribbed Glass: 3/16" Reeded Tempered glass with 1/8" Satin Tempered glass panel sandwiched in wood stop. Smooth side of Reeded glass smooth face and frosted face of Satin glass shall face outward. Reed panel to be on outside of restroom doors, satin on restroom side.

8. FABRICATION

A. Fabricate doors in accordance with AWI Quality Standards requirements.
B. Fabricate stiles, rails panels, glazing, panels and mouldings from solid stock to sizes and profiles shown or indicated on the drawings. Fabricate to size, prefit for openings and properly bevel.

9. INSTALLATION

A. Install doors in accordance with manufacturer's instructions and AWI Quality Standards requirements.
B. Trim door width by cutting equally on both jamb edges.
C. Trim door height by cutting bottom edges to a maximum of 3/4 inch.
D. Machine cut for hardware.
E. Coordinate installation of doors with installation of frames and hardware.

10. INSTALLATION TOLERANCES

A. Conform to AWI requirements for fit, clearance, and joinery tolerances.
B. Maximum Diagonal Distortion (Warp): 1/8 inch measured with straight edge or taut string, corner to corner, over an imaginary 36 x 84 inch surface area.
C. Maximum Vertical Distortion (Bow): 1/8 inch measured with straight edge or taut string, top to bottom, over an imaginary 36 x 84 inch surface area.
D. Maximum Width Distortion (Cup): 1/8 inch measured with straight edge or taut string, edge to edge, over an imaginary 36 x 84 inch surface area.

11. ADJUSTING

A. Adjust doors for smooth and balanced door movement.
B. Adjust closers for full closure.

SECTION 08213 – ALUMINUM CLAD WOOD STILE AND RAIL DOORS

1. SECTION INCLUDES

A. Products
1. Aluminum Clad Exterior / Wood Interior, Outswing Side-Hinged French Doors.
2. Components
3. Glazing
4. Hardware
5. Weather stripping

2. APPROVED MANUFACTURER

A. WDH Solutions, Inc., Venice, FL. 34293.

3. MATERIALS

A. Products
1. WDH Solutions Manufactured Units: Clad Outswing Door

B. Components
1. Frame:
a. Exterior frame members milled from Red Oak, kiln dried to a moisture content of 6-12% at the time of fabrication. Frame corners shall be rabbeted, butted, chemically and mechanically fastened. The frame includes solid one-piece head and side jambs.
b. Frame is clad with .055" [1.4mm] thick extruded aluminum, with an integral extruded nailing fin. Top corners shall be miter cut, chemically and mechanically fastened.
c. Interior frame materials to be milled from Red Oak, kiln dried to a moisture content of 6-12% at the time of fabrication.
d. Outswing door sill: ADA-compliant extruded aluminum sill anodized in a dark bronze matte finish; sill thickness ½" (13mm).
e. Side jamb thickness 1-1/4" [32mm]; head jamb thickness 1-1/4" [32mm].
f. Frame shall have standard jamb depth of 4-9/16" [116mm].
g. Frame provided with jamb extensions factory applied. Jamb extensions match interior frame finish.

2. Door panel:
a. Panel shall be composed of two materials, extruded aluminum exterior stiles chemically and mechanically bonded to the interior wood substrate. Aluminum components are 2" wide stiles .055" [1.4mm] thick, 5-1/4" wide stiles .063" [1.6mm] thick, 7-1/2" wide top rails .080" [2.0mm] thick, and 12" wide bottom rails .125" [3.2mm] thick. Interior door panel corners shall be chemically and mechanically fastened with hardwood dowels.
b. Interior door panel materials shall be milled from Red Oak veneer over wood substrate, kiln dried to a moisture content of 6-12% at the time of fabrication and treated.
c. Laminated stiles and block core rails shall be chemically and mechanically fastened at joints with hardwood dowels.
d. Top rail shall be 7-1/2" [191mm] high; bottom rail shall be 12" [305mm] high; stiles shall be 5-1/4" [133mm] wide; side lite stiles shall be 2" [51mm] wide
e. Door panel shall be 1-3/4" [44mm] thick.

3. Finish:
a. Exterior aluminum finish: Fluoropolymer-modified acrylic topcoat over Fluoropolymer primer meets AAMA 2605 requirements.
b. Interior frame finish: Ebony Stain and Clear Coat Red Oak.
c. Interior panel finish: Wood veneer on wood substrate: Ebony Stain and Clear Coat Red Oak.

C. Glazing:
1. Select quality complying with ASTM C1036. Insulating glass IGCC certified to performance level CBA when tested in accordance with ASTM E2190.
2. Glass type: Insulated glass consisting of one lite of multi-layered Low E coatings applied to the number two surface of tempered glass, and one lite of clear tempered glass with warm-edge spacer system and argon gas in airspace.
D. Hardware:
1. Hinges: ball bearing, non-removable pin 4-1/2" x 4-1/2" [114mm x 114 mm] hinge with oil rubbed bronze finish.
2. Balance of hardware by the General Contractor as noted on Hardware Schedule in the drawings, except as noted herein.
E. Weather stripping:
1. Bronze compression seal in frame rabbets.
2. Grey pile weather strip on sides and head of the door panels.
3. Bronze sweep on bottom rail of the door panel.
4. Adobe vinyl cap sweep on top rail of door panel.

4. INSTALLATION
A. Install doors according to manufacturer's instructions and reviewed shop drawings to ensure proper installation and operation.
B. Install door until plumb, level and square with no distortion of frame members.
C. Fill perimeter frame to wall opening cavity with batt insulation. Do not use expansive foam insulation.
D. Apply approved sealant in accordance with Section 07900 – Joint Protection.
E. Do not puncture aluminum cladding.

5. ADJUSTING AND CLEANING
A. Adjust operating panel and hardware to provide tight fit at contact points and at the weather stripping for smooth operation.
B. Remove excess sealant materials and visible labels from glass. Clean glass surfaces promptly after installation.
C. Initiate and maintain all protection and other precautions required to ensure doors are in acceptable condition at time of substantial completion.

SECTION 08306 – ACCESS PANELS

1. MANUFACTURER

A. The Drawings were prepared and this Specification written on the basis of using the products of J. L. Industries, Bloomington, Minnesota. It is not the intent to limit competitive bidding. Products with equal characteristics by other manufacturers are acceptable under the conditions of these Specifications.

2. PRODUCT

A. Ceiling Model "TM-24-24", flush mounted access panel, 24 x 24, completely assembled as follows:
1. Material:
a. Door: 14 gage steel
b. Frame: 16 gage steel with 1 inch flange
2. Hardware:
a. Hinges: Continuous concealed hinges open to 175.
b. Locks: Mortise cam latch.
3. Anchors: Manufacturer's standard for use intended.
4. Finish: Phosphate dipped steel with factory prime coat.

B. Wall Model "TMS-06-06", flush mounted access panel, 6 x 6, completely assembled as follows:
1. Material:
a. Door: 16 gage stainless steel
b. Frame: 16 gage stainless steel with 1 inch flange
2. Hardware:
a. Hinges: Continuous concealed hinges open to 175.
b. Locks: Mortise cam latch.
3. Anchors: Manufacturer's standard for use intended.
4. Finish: 304 stainless with #4 Satin Finish.

3. INSTALLATION

A. Protect access panels from damage. Protect work of other trades during installation. Install access panels in locations indicated, complete in all details, securely anchored in place, plumb, level and parallel with building lines. Finally installed access panels shall open and close freely.

SECTION 08310 – ACCESS DOORS AND FRAMES

1. SUMMARY

A. Section includes:
1. Exterior non-fire rated wall access doors.
2. Related hardware and attachments.
B. Related Sections:
1. Section 09900 – Paints and Coatings.
2. Section 07530 – Elastomeric Membrane Roofing.

2. SYSTEM DESCRIPTION

A. Design Requirements:
1. Verification: Obtain specific locations and sizes for required access doors and frames from trades, including mechanical and electrical, requiring access to concealed equipment and indicate on submittal schedule.

3. SUBMITTALS

A. Shop Drawings:
1. Door and panel units: Show types, elevations, thickness of metals, full size profiles of door members.
2. Hardware: Show materials, finishes, locations of fasteners, types of fasteners, locations and types of operating hardware, and details of installation.
3. General: Show connections of units and hardware to other Work. Include schedules showing location of each type and size of door and panel units.
B. Product Data: Manufacturer's technical data for each type of access door and panel assembly, including setting drawings, templates, fire-resistive characteristics, finish requirements, and details of anchorage devices.
1. Include complete schedule, types, locations, construction details, finishes, latching or locking provisions, and other pertinent data.
C. Manufacturer's Installation Instructions: Indicate installation requirements and rough-in dimensions.

4. QUALITY ASSURANCE

A. Comply with Section 01400.
B. Coordination: Provide inserts and anchoring devices that will be built into other Work for installation of access door assemblies. Coordinate delivery with other Work to avoid delay.

5. DELIVERY, STORAGE AND HANDLING

A. Package and ship per manufacturer's recommendations.
B. Store per manufacturer's instructions.
1. Store in dry area out of direct sunlight.

6. WARRANTY

A. Provide manufacturer's written warranty.
B. Warrant materials and workmanship against defects after completion and final acceptance of Work.
1. Repair defects, or replace with new materials, faulty materials or workmanship developed during the guarantee period at no expense to Owner.
2. Access Panel Warranty: 1 year from date of substantial completion.

7. MANUFACTURERS

A. Subject to compliance with requirements, provide products from the following manufacturer:
Nystrom Building Products
9300 73rd Avenue North
Minneapolis , MN 55428
Phone: 800-547-2635
HYPERLINK "http://www.nystrom.com/access-doors"nystrom.com/access doors

B. Specifications and Drawings are based on manufacturer's proprietary literature from Nystrom Building Products. Other manufacturers shall comply with minimum levels of material, color selection, and detailing indicated in Specifications or on Drawings.

8. ACCESS PANELS

A. Exterior insulated access panel, Nystrom XT series
1. Door: Fabricate from 24-gauge galvanealed steel, insulated cokepan type construction.
2. Hinge: Stainless steel continuous piano type.
3. Frame: Fabricate from 6063-T5 extruded aluminum.
4. Latching/Locking device: Dual acting handle.
5. Lockable handle from both exterior and interior.
6. Flange: 0.080 6063-T5 extruded aluminum 1.00 inch flange.
7. Finish: Paint grip galvaneal.
8. Insulation: Polyurethane Foam.
9. Gasket: High Performance Extruded EPDM.
Size: 24 inches wide x 36 inches tall.

9. FABRICATION

A. Manufacture each access panel assembly as an integral unit ready for installation.
B. Welded construction: Furnish with a sufficient quantity of 1/4 inch mounting holes to secure access panels to types of supports indicated.

10. EXAMINATION

A. Verify that rough openings for door and frame are correctly sized and located.

11. PREPARATION

A. Advise installers of work relating to access panel installation including rough opening dimensions, locations of supports, and anchoring methods. Coordinate delivery with other work to avoid delay.

12. INSTALLATION

A. Install access door and frame units per manufacturer's written instructions.
B. Install frames plumb and level in opening. Secure rigidly in place.
C. Position units to provide convenient access to concealed Work requiring access.

13. ADJUST AND CLEAN

A. Adjust panel after installation for proper operation.
B. Remove and replace panels or frames that are warped, bowed, or damaged.

SECTION 08512 – ALUMINUM CLAD WOOD WINDOWS

1. SECTION INCLUDES

A. Products
1. Aluminum Clad Exterior / Wood Interior Direct Set Windows.
2. Aluminum Clad Exterior / Wood Interior Awning Windows.
3. Aluminum Clad Exterior / Wood Interior Fixed Casement Windows Aluminum Clad Exterior / Wood Interior
B. Components
C. Glazing
D. Hardware
E. Weather stripping

2. APPROVED MANUFACTURER

A. WDH Solutions, Inc., Venice, FL. 34293.

3. MATERIALS

A. Products
1. WDH Solutions – Manufactured Units: Clad HP Direct Set Windows
2. WDH Solutions – Manufactured Units: Clad Awning Windows
3. WDH Solutions – Manufactured Units: Clad Picture Windows
B. Components
1. Frame
a. Wood frame members milled from Red Oak or pine; kiln dried to a moisture content of 6-12% at the time of fabrication. Frame corners shall be rabbeted, butted, chemically and mechanically fastened. The frame includes solid one-piece head and side jambs.
b. Frame is clad with .055" [1.4mm] thick extruded aluminum, with an integral extruded nailing fin. Corners shall be miter cut, chemically and mechanically fastened.
c. 350 Direct Set jamb thickness 1-1/8" [29mm].
d. 400 Awning/Picture jamb thickness ¾" [19mm].
e. Frame shall have standard jamb depth of 4-9/16" [116mm].
2. Awning/Picture sash:
a. Sash shall be composed of two materials, extruded aluminum exterior chemically and mechanically bonded to the interior wood substrate. Aluminum components are 2" wide stiles .055" [1.4mm] thick.
b. Interior sash materials shall be milled from Red Oak or pine, kiln dried to a moisture content of 6-12% at the time of fabrication.
c. Sash shall be 1-3/4" [44mm] thick.
3. Finish:
a. Exterior aluminum finish: Fluoropolymer-modified acrylic topcoat over Fluoropolymer primer meets AAMA 2605 requirements.
b. Interior frame and sash finish: Ebony Stain and Clear Coat Red Oak or pine, or primed pine.
C. Glazing:
1. Select quality complying with ASTM C1036. Insulating glass IGCC certified to performance level CBA when tested in accordance with ASTM E2190.
2. Glass type: Insulated glass consisting of one lite of multi-layered Low E coatings applied to the number two surface of tempered glass, and one lite of clear tempered glass with warm-edge spacer system and argon gas in airspace.
D. Hardware:
1. Hinges: ball bearing, non-removable pin 4-1/2" x 4-1/2" [114mm x 114 mm] hinge with oil rubbed bronze finish.
2. Balance of hardware by the General Contractor as noted on Hardware Schedule in the drawings, except as noted herein.
E. Weather stripping:
1. Bronze compression seal in frame rabbets.
2. Grey pile weather strip on sides and head of the door panels.
3. Bronze sweep on bottom rail of the door panel.
4. Adobe vinyl cap sweep on top rail of door panel.

4. INSTALLATION
A. Install doors according to manufacturer's instructions and reviewed shop drawings to ensure proper installation and operation.
B. Install door until plumb, level and square with no distortion of frame members.
C. Fill perimeter frame to wall opening cavity with batt insulation. Do not use expansive foam insulation.
D. Apply approved sealant in accordance with Section 07900 – Joint Protection.
E. Do not puncture aluminum cladding.

5. ADJUSTING AND CLEANING
A. Adjust operating panel and hardware to provide tight fit at contact points and at the weather stripping for smooth operation.
B. Remove excess sealant materials and visible labels from glass. Clean glass surfaces promptly after installation.
C. Initiate and maintain all protection and other precautions required to ensure doors are in acceptable condition at time of substantial completion.

SECTION 08710 – DOOR HARDWARE

1. SECTION INCLUDES

A. Hardware for wood and hollow steel doors.

2. REFERENCES

A. ANSI/ICC A117.1 – American National Standard for Accessible and Usable Buildings and Facilities; International Code Council; 2009.
B. BHMA A156.1 thru 156.21 – Builders Hardware Manufacturers Association, Inc.; 2006
C. DHI A115 Series – Specifications for Steel Doors and Frame Preparation for Hardware; Door and Hardware Institute; 2000.
D. DHI (LOCS) – Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames; Door and Hardware Institute; 2004.
E. DHI WDHS.3 – Recommended Locations for Architectural Hardware for Flush Wood Doors; Door and Hardware Institute; 1996.

3. SUBMITTALS

A. Shop Drawings:
1. Indicate locations and mounting heights of each type of hardware, schedules, catalog cuts, electrical characteristics and connection requirements.
2. Submit manufacturer's parts lists and templates.
B. Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
C. Keys: Deliver with identifying tags to Owner by security shipment direct from hardware supplier.
D. Warranty: Submit manufacturer's warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

4. COORDINATION

A. Coordinate the work with other directly affected sections involving manufacture or fabrication of internal reinforcement for door hardware.

5. GENERAL REQUIREMENTS FOR DOOR HARDWARE PRODUCTS

A. Provide products that comply with the following:
1. Applicable provisions of Federal, State, and local codes.
2. Provide products from the manufacturers and finish listed in the schedule located in the construction documents. No substitution allowed without written approval
B. Finishes: Identified in schedule located in the construction documents.

6. KEYING

A. Door Locks: Master keyed.
1. Include construction keying and control keying with removable core cylinders.
B. Supply keys in the following quantities:
1. 4 master keys.
a. Stamp all permanent master keys with a set number and "DO NOT DUP"
2. 4 construction keys.
3. 4 control keys and 4 extra cylinder cores.
4. 2 change keys for each lock.
5. Identify permanent keys in envelopes and deliver to the Owner.
6. Re-key entire building at building turnover.

7. EXAMINATION

A. Verify that doors and frames are ready to receive work and dimensions are as indicated on shop drawings.

8. INSTALLATION

A. Install hardware in accordance with manufacturer's instructions and applicable codes.
B. Use templates provided by hardware item manufacturer.
C. Mounting heights for hardware from finished floor to center line of hardware item:
1. For steel doors and frames:

SECTION 08800 – GLAZING

1. SECTION INCLUDES

A. Glass.
B. Glazing compounds and accessories.

2. REFERENCES

A. 16 CFR 1201 – Safety Standard for Architectural Glazing Materials; current edition.
B. ASTM C 864 – Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005.
C. ASTM C 920 – Standard Specification for Elastomeric Joint Sealants; 2005.
D. ASTM C 1036 – Standard Specification for Flat Glass; 2001.
E. ASTM C 1048 – Standard Specification for Heat-Treated Flat Glass--Kind HS, Kind FT Coated and Uncoated Glass; 2004.
F. ASTM C 1193 – Standard Guide for Use of Joint Sealants; 2005a.
G. ASTM E 2190 – Standard Specification for Insulating Glass Unit Performance and Evaluation; 2002.

3. PERFORMANCE REQUIREMENTS

A. Provide glass and glazing materials for continuity of building enclosure vapor retarder and air barrier:
   1. In conjunction with vapor retarder and joint sealer materials described in other sections.
   2. To maintain a continuous air barrier and vapor retarder throughout the glazed assembly from glass pane to heel bead of glazing sealant.

4. SUBMITTALS

A. Product Data on Glass Types: Provide structural, physical and environmental characteristics, size limitations, special handling or installation requirements.
B. Product Data on Glazing Compounds: Provide chemical, functional, and environmental characteristics, limitations, special application requirements. Identify available colors.
C. Certificates: Certify that products meet or exceed specified requirements.

5. QUALITY ASSURANCE

A. Perform Work in accordance with GANA Glazing Manual and FGMA Sealant Manual for glazing installation methods.

6. FLAT GLASS MATERIALS

A. Clear Float Glass: Clear, fully tempered.
   1. Comply with ASTM C 1036, Type I, transparent flat, Class 1 clear, Quality Q3 (glazing select).
   2. Comply with ASTM C 1048.
   3. 6 mm minimum thick.
B. Safety Glass: Clear; fully tempered with horizontal tempering.
   1. Comply with ASTM C 1036, Type I, transparent flat, Class 1 clear, Quality Q3 (glazing select) and ASTM C 1048.
   2. Comply with 16 CFR 1201 test requirements for Category II.
C. Wall Mirror:
   1. Plate glass, electroplated, painted and baked for corrosion resistance.
   2. Thickness: 1/4"
   3. Color: Clear
   4. Edge Treatment: Beveled
   5. Do not allow field cutting of mirror

7. SEALED INSULATING GLASS MATERIALS

A. Insulated Glass Units: Double pane with Low-E coating: Provide Solarban 90 (2) clear + clear; (VLT) 51% and (SHGC) 0.23; provide Low-E coating on glass to elastomer edge seal.
   1. Durability: Certified by an independent testing agency to comply with ASTM E 2190.
   2. Purge interpane space with dry hermetic air.
   3. Total unit thickness of 1-inch minimum (1/2-inch air space and two 1/4-inch lites).
B. Outer Pane design desired to be provided with laminated safety glass to meet Miami-Dade impact resistance requirements and Florida IECC requirements as stipulated.

8. GLAZING COMPOUNDS

A. Butyl Sealant: Single component; ASTM C 920, Grade NS, Class 12-1/2, Uses M and A; Shore A hardness of 10 to 20; black color; non-skinning.
B. Silicone Sealant: Single component; neutral curing; capable of water immersion without loss of properties; non-bleeding, non-staining; ASTM C 920, Type S, Grade NS, Class 25, Uses M, A, and G; cured Shore A hardness of 15 to 25; color as noted in Finish Schedule on Drawings.

9. GLAZING ACCESSORIES

A. Setting Blocks: Neoprene, 80 to 90 Shore A durometer hardness, ASTM C 864 Option I. Length of 0.1 inch for each square foot of glazing or minimum 4 inch x width of glazing rabbet space minus 1/16 inch x height to suit glazing method and pane weight and area.
B. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness, ASTM C 864 Option I. Minimum 3 inch long x one half the height of the glazing stop x thickness to suit application, self adhesive on one face.
C. Glazing Tape: Preformed butyl compound with integral resilient tube spacing device; 10 to 15 Shore A durometer hardness; coiled on release paper; size as recommended by glass manufacturer; black color.
   1. Manufacturers:
   a. Pecora Corporation: www.pecora.com.
   b. Tremco, Inc: www.tremcosealants.com.
   c. Substitutions: Refer to Section 01600 – Product Requirements.
D. Glazing Gaskets: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C 864 Option I; black color.
E. Glazing Clips: Manufacturer's standard type.

10. PREPARATION

A. Prime surfaces scheduled to receive sealant.
B. Install sealants in accordance with ASTM C 1193 and FGMA Sealant Manual.
C. Install sealant in accordance with manufacturer's instructions.

11. INSTALLATION – EXTERIOR WET/DRY METHOD (PREFORMED TAPE AND SEALANT)

A. Cut glazing tape to length and set against permanent stops, 3/16 inch below sight line. Seal corners by butting tape and dabbing with butyl sealant.
B. Apply heel bead of butyl sealant along intersection of permanent stop with frame ensuring full perimeter seal between glass and frame to complete the continuity of the air and vapor seal.
C. Place setting blocks at 1/4 points with edge block no more than 6 inches from corners.
D. Rest glazing on setting blocks and push against tape and heel bead of sealant with sufficient pressure to attain full contact at perimeter of pane or glass unit.
E. Install removable stops, with spacer strips inserted between glazing and applied stops, 1/4 inch below sight line. Place glazing tape on glazing pane or unit with tape flush with sight line.
F. Fill gap between glazing and stop with sealant to depth equal to bite of frame on glazing, but not more than 3/8 inch below sight line.
G. Apply cap bead of sealant along void between the stop and the glazing, to uniform line, flush with sight line. Tool or wipe sealant surface smooth.

12. INSTALLATION – INTERIOR DRY METHOD (TAPE AND TAPE)

A. Cut glazing tape to length and set against permanent stops, projecting 1/16 inch (1.6 mm) above sight line.
B. Place setting blocks at 1/4 points with edge block no more than 6 inches from corners.
C. Rest glazing on setting blocks and push against tape for full contact at perimeter of pane or unit.
D. Place glazing tape on free perimeter of glazing in same manner described above.
E. Install removable stop without displacement of tape. Exert pressure on tape for full continuous contact.
F. Knife trim protruding tape.

13. INSTALLATION – WALL MIRRORS

A. Install spots of adhesive, 4 spots per square foot, approximately 1/8 inch to 3/16 inch thick and 4 inches to 4 1/2 inches in diameter.
B. Provide bottom support for mirrors for 3 days until adhesive has set.
C. Install bedding tape or cusion strip under bottom edge of each mirror.
D. Tolerances:
   1. Offset in alignment of adjoining edges: Max 1/16 inch.
   2. Offset in face alignment over wall surface: Max 1/8 inch.
   3. No gap between adjacent members.

14. CLEANING

A. Remove glazing materials from finish surfaces.
B. Remove labels after Work is complete.
C. Clean glass and adjacent surfaces.

15. PROTECTION

A. After installation, mark pane with an 'X' by using removable plastic tape or paste; do not mark heat absorbing or reflective glass units.

DIVISION 09 - FINISHES

SECTION 09260 – GYPSUM BOARD ASSEMBLIES

1. SECTION INCLUDES
A. Fire rated walls.
B. Acoustic insulation.
C. Cementitious backer board.
D. Gypsum wallboard.
E. Joint treatment and accessories.
F. Metal Framing

2. REFERENCES
A. ANSI A108.11 – American National Standard for Interior Installation of Cementitious Backer Units; 1999 (R2005).
B. ANSI A118.9 – American National Standard Specifications for Test Methods and Specifications for Cementitious Backer Units; 1999 (R2005).
C. ASTM C 475/C 475M – Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2002.
D. ASTM C 840 – Standard Specification for Application and Finishing of Gypsum Board; 2005.
E. ASTM C 1396/C 1396M – Standard Specification for Gypsum Board; 2004.
F. ASTM E 72 – Standard Test Methods of Conducting Strength Tests of Panels for Building Construction; 2005.

3. GYPSUM BOARD MATERIALS
A. Manufacturers:
   1. BPB America Inc: www.bpb-na.com.
   2. G-P Gypsum Corporation: www.gp.com/gypsum.
   3. National Gypsum Company: www.nationalgypsum.com.
   4. USG: www.usg.com.
B. Gypsum Wallboard: ASTM C 1396/C 1396M. Sizes to minimize joints in place; ends square cut.
   1. Regular Type:
      a. Application: Use for vertical surfaces, unless otherwise indicated.
      b. Edges: Tapered.
   2. Fire Resistant Type: Complying with Type X requirements; UL or WH rated.
      a. At Assemblies Indicated with Fire-Rating: Use type required by indicated tested assembly.
      b. Thickness: 5/8 inch.
      c. Edges: Tapered.
   3. Ceiling Board: Special sag-resistant type.
      a. Application: Ceilings, unless otherwise indicated.
      b. Thickness: 1/2 inch.
      c. Edges: Tapered.
C. Water-Resistant Gypsum Backing Board: ASTM C 1396/C 1396M; ends square cut.
   1. Application: Vertical surfaces behind thinset tile, except in wet areas.
   2. Core Type: Regular and Type X, as indicated.
   3. Thickness: 5/8 inch.
   4. Edges: Tapered.

4. FIBERGLASS REINFORCED BOARD MATERIALS

A. Cementitious Backer Board: ANSI A118.9, aggregated portland cement panels with glass fiber mesh embedded in front and back surfaces, 5/8 inch thick.

5. METAL FRAMING

A. Metal Studs: Per ASTM C645, galvanized, size and gauges as noted on drawings. Track shall be one size heavier than studs.

6. ACCESSORIES

A. Acoustic Insulation: ASTM C 665; preformed glass fiber, friction fit type, unfaced.
B. Finishing Accessories: ASTM C 1047, galvanized steel, unless otherwise indicated.
   1. Types: As detailed or required for finished appearance.
C. Joint Materials: ASTM C 475 and as recommended by gypsum board manufacturer for project conditions.
   1. Tape: 2 inch wide, coated glass fiber tape for joints and corners, except as otherwise indicated.
   2. Tape: 2 inch wide, creased paper tape for joints and corners, except as otherwise indicated.
   3. Ready-mixed vinyl-based joint compound.
D. Fasteners: Screws, per ASTM 1002; 1-1/4' Type 'W' bugle head into wood framing, 1-1/8" Type 'S" bugle head into steel framing, and 3/8" Type "S-12" pan (or low profile) head for steel to steel framing connections.

7. EXAMINATION

A. Verify that project conditions are appropriate for work of this section to commence.

8. ACOUSTIC ACCESSORIES INSTALLATION

A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
B. Acoustic Sealant: Install in accordance with manufacturer's instructions.

9. METAL FRAMING

A. Metal Framing, Board Application and Finish Standards: GA216 and ASTM C754 and C840, Studding shall be 16" o.c. unless otherwise noted.
B. Install ceiling boards in the direction and manner which will minimize the number of end-butt joints, and which will avoid end joints in the central area of each ceiling, Stagger end joints at least 4'-0".
C. Install wall/partition boards vertically to avoid end-butt joints wherever possible.
D. Locate either edge or end joints over supports. Stagger joints over different studs on opposite sides of partitions.
E. Space fasteners in gypsum board in accordance with referenced standards and manufacturer's recommendations, except as otherwise indicated.
   1. Parallel Application: 12" o.c. in field; 8" o.c. along edges.
   2. Perpendicular Application: 12" o.c. in field; 12" o.c. along edges.

10. GYPSUM BOARD INSTALLATION

A. Comply with ASTM C 840 and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
C. Fire-Rated Construction: Install gypsum board in strict compliance with requirements of listing authority.
D. Cementitious Backing Board: Install over steel framing members where indicated, in accordance with ANSI A108.11 and manufacturer's instructions.
E. Installation on Metal Framing: Use screws for attachment of all gypsum board.
F. Moisture Protection: Treat cut edges and holes in moisture resistant gypsum board with sealant.
G. All gypsum board ceiling installations to have a Level 3 finish in all public areas. No lesser finish will be allowed.

11. INSTALLATION OF TRIM AND ACCESSORIES

A. Corner Beads: Install at external corners, using longest practical lengths.

12. JOINT TREATMENT

A. Finish all gypsum board in accordance with ASTM C 840 Level 4.
B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
   1. Feather coats of joint compound so that camber is maximum 1/32 inch.
   2. Taping, filling, and sanding is not required at surfaces behind adhesive applied ceramic tile and fixed cabinetry.

13. TOLERANCES

A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

SECTION 09300 – TILE

1. SECTION INCLUDES

A. Tile for floor applications.
B. Tile for wall applications.
C. Cementitious backer board as tile substrate.
D. Ceramic trim.
E. Waterproofing Sheet Membrane

2. REFERENCES

A. ANSI A108 Series/A118 Series/A136.1 – American National Standard Specifications for the Installation of Ceramic Tile (Compendium); 2005.
B. TCA (HB) – Handbook for Ceramic Tile Installation; Tile Council of North America, Inc.; 2006.

3. QUALITY ASSURANCE

A. Maintain one copy of TCA Handbook and ANSI A108 Series/A118 Series on site.
B. General contractor and Tile subcontractor must attend a pre-construction meeting with local Laticrete technical sales representative prior to commencing tile installation.
C. All installations shall be in compliance with manufacturer's printed instructions and the Darden short-form installation specification.
D. Tile installers must provide their Laticrete International's certificate of completion for Darden Restaurant's technical training prior to installation of any tile products.

4. DELIVERY, STORAGE, AND HANDLING

A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

5. EXTRA MATERIALS

A. Provide 10 sq. ft of each size, color, and surface finish of tile specified.

6. TILE

A. Refer to finish schedule on the construction documents for material selections.

7. TRIM AND ACCESSORIES

A. Trim: Matching bullnose, surface bullnose, cove base, and cove ceramic shapes as scheduled in sizes coordinated with field tile.
   1. Applications: Use in the following locations:
      a. Open Edges: Schluter outside edge as noted on drawings at all conditions.
      b. Inside Corners: Schluter inside edge as noted on drawings in Restrooms.
      c. Floor to Wall Joints: Schluter cove base as noted on drawings in Restrooms.
   2. Manufacturer: Schluter.
B. Tile Setting, Grouting Materials and Waterproofing membrane:
   1. Basis of Design: Laticrete International, Inc. (no alternates accepted).
C. Waterproofing Sheet Membrane: Hydro Ban as manufactured by Laticrete International, Bethany, CT.
   1. Composite sheet membrane of a thin, durable polyethylene core with a fused non-woven polypropylene exterior surface; 30 mil thickness.
   2. Complies with ANSI A118.10.

8. ADHESIVE MATERIALS

A. Organic Adhesive: Laticrete 254 Platinum, ANSI A136.1, thinset bond type; use Type I in areas subject to prolonged moisture exposure.
B. Epoxy Adhesive: Latapoxy 210 adhesive, ANSI A118.8, thinset bond type.

9. GROUT MATERIALS

A. Standard Grout: Laticrete Permacolor Select, ANSI A118.6 or A118.7; Colors as noted on drawings.
B. Epoxy Grout: Laticrete Spectralock 2000 IG, ANSI A118.5, modified epoxy emulsion grout ; Colors as noted on drawings.

10. EXAMINATION

A. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive tile.
B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive tile.
C. Verify that sub-floor surfaces are dust-free and free of substances which would impair bonding of setting materials to sub-floor surfaces.
D. Verify that concrete sub-floor surfaces are ready for tile installation by testing for moisture emission rate and alkalinity; obtain instructions if test results are not within limits recommended by tile manufacturer and setting materials manufacturer.

11. PREPARATION

A. Protect surrounding work from damage.
B. Vacuum clean surfaces and damp clean.
C. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.
D. Install cementitious backer board in accordance with ANSI A108.11 and board manufacturer's instructions. Tape joints and corners, cover with skim coat of dry-set mortar to a feather edge.
E. Prepare substrate surfaces for adhesive installation in accordance with adhesive manufacturer's instructions.

12. INSTALLATION – GENERAL

A. Install waterproofing membrane along wall base and up wall surface as detailed in construction documents.
B. Install waterproofing membrane, tile and grout in accordance with applicable requirements of ANSI A108.1 through A108.13, manufacturer's instructions, and TCA Handbook recommendations.
C. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.
D. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor joints.
E. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight, without voids, cracks, excess mortar, or excess grout.
F. Form internal angles square and external edge trims as scheduled.
G. Sound tile after setting. Replace hollow sounding units.
H. Keep expansion joints free of adhesive or grout. Apply sealant to joints.
I. Allow tile to set for a minimum of 48 hours prior to grouting.
j. Grout tile joints. Use standard grout unless otherwise indicated.
K. Apply sealant to junction of tile and dissimilar materials and junction of dissimilar planes.

13. INSTALLATION – FLOORS – THIN-SET METHODS

A. Over interior concrete substrates, install in accordance with TCA Handbook Method F113, dry-set or latex-portland cement bond coat, with standard grout, unless otherwise indicated.
   1. Where epoxy bond coat and grout are indicated, install in accordance with TCA Handbook Method F131.

14. INSTALLATION – WALL TILE

A. Over cementitious backer board, install in accordance with TCA Handbook Method W223, organic adhesive.

15. CLEANING

A. Clean tile and grout surfaces.

SECTION 09511 – SUSPENDED ACOUSTICAL CEILINGS

1. SECTION INCLUDES

A. Suspended metal grid ceiling system.
B. Suspended Wood-look acoustical planks.
C. Suspension accessories.

2. REFERENCES

A. ASTM C 635 – Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2008.
B. ASTM C 636 – Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels; 2008.
C. ASTM E 580 – Standard Practice for Application of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Requiring Seismic Restraint; 2002.
D. ASTM E 1264 – Standard Classification for Acoustical Ceiling Products; 1998 (Reapproved 2005).

3. EXTRA MATERIALS

A. See Section 01600 – Product Requirements, for additional provisions.
B. Provide five percent of total acoustical unit area of each type of acoustical unit for Owner's use in maintenance of project.

4. ACOUSTICAL UNITS

A. Kitchen: United States Gypsum, USG
   1. Manufacturers:
      a. USG: www.usg.com.
   2. Acoustical Units – General: ASTM E 1264, Class A.
      a. Product, model number and finish as scheduled in the construction documents.
B. Dining (2x2):
   1. Manufacturers: United States Gypsum, USG
      a. USG: www.usg.com.
   2. Acoustical Units – General: ASTM E 1264, Class A.
      a. Product, model number and finish as scheduled in the construction documents.
C. Dining (Planks):
   1. Manufacturers: Armstrong World Industries, Inc.
      a. Armstrong: www.armstrong.com.
   2. Acoustical Units – General: ASTM E 1264, Class A.
      a. Product, model number and finish as scheduled in the construction documents.

5. SUSPENSION SYSTEM(S)

A. Manufacturers:
   1. Kitchen – USG; "Donn AX", 15/16" Exposed Tee
   2. Dining (2x2) – USG; "Donn AX", 15/16" Exposed Tee
   2. Dining (Planks) - Armstrong; "EASY UP" tracks and Clips
B. Suspension Systems – General: ASTM C 635; All Aluminum, die cut and interlocking components, with stabilizer bars, clips, splices, perimeter moldings, and hold down clips as required. Pre-finished to match ceiling tile color or as noted above.

6. ACCESSORIES

A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
B. Perimeter Moldings: Same material and finish as grid.
   1. At Exposed Grid: Provide L-shaped molding for mounting at same elevation as face of grid.

7. INSTALLATION – SUSPENSION SYSTEM

A. Install suspension system in accordance with ASTM C 636, ASTM E 580, and manufacturer's instructions and as supplemented in this section.
B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
C. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.
D. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
E. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
F. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
G. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
H. Do not eccentrically load system or induce rotation of runners.
I. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
   1. Use longest practical lengths.
   2. Overlap and rivet corners.

8. INSTALLATION – ACOUSTICAL UNITS

A. Install acoustical units in accordance with manufacturer's instructions.
B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
C. Fit border trim neatly against abutting surfaces.
D. Install units after above-ceiling work is complete.
E. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
F. Cutting Acoustical Units:
   1. Make field cut edges of same profile as factory edges.

SECTION 09620 – GRANITE

1. SCOPE OF WORK

A. Furnish labor, materials, services, equipment and appliances required for complete installation of granite countertops as indicated on the Drawings and specified herein.

2. REFERENCE STANDARDS

B. American Society of Testing Materials (ASTM): ASTM C615 Granite building stone

3. SAMPLES

A. Submit two 12 inch x 12 inch samples to the Owner for acceptance.

4. GRANITE

A. Distributor, Color, Texture and Pattern as noted on Finish Schedule on the drawings.

5. ADHESIVES

A. Water resistive type as recommended by the Tile Council of America for particular condition in which the stone is being set.

6. CLEANING SOLUTION

A. Type recommended by stone manufacturer which will not harm stone, sealer, or adjacent surfaces.

7. ENVIRONMENTAL REQUIREMENTS

A. Maintain materials and surrounding air to a minimum 50 degrees F prior to, during, and 48 hours after completion of work.

8. PREPARATION

A. Use filler to patch cracks, small holes, and for minor leveling for substrate.
B. Apply conditioner/sealer to surfaces as recommended by adhesive manufacturer.

9. EXAMINATION

A. Verify that surfaces are ready to receive work of this section. Beginning of installation means acceptance of substrate.

10. INSTALLATION

A. Preparation: Establish lines, levels, and pattern; protect from disturbance.
B. Clean stone prior to installation. Lay in patterns and/or directions shown on Drawings. Fit neatly to vertical interruptions. Place units with 1/16 inch joints. Provide expansion space at walls and other obstructions. Remove excessive adhesive from surface as work progresses. Sound units after setting. Replace hollow sounding units. Joints must be free of any debris or foreign matter before grouting. Joints shall be thoroughly filled and wiped flush.

SECTION 09680 – CARPET

1. SECTION INCLUDES

A. Dining Carpeting - Provided By Owner
B. Kitchen Walk-off Carpeting - Provided General Contractor
C. Adhesives
D. Edge trim

2. SHOP DRAWINGS

A. Submit a plan layout of all areas to receive carpeting showing the direction of the run, seam layout and other pertinent data regarding the carpet laying for approval by the Architect.

3. COORDINATION

A. General Contractor, together with the carpet installation subcontractor, shall be responsible for all job measurements and shall see that all carpet fits properly. All drawings and specifications shall be checked to determine whether or not carpet extends under cabinets, walls, etc. The Floor Finish Plan on the drawings indicates spaces to receive carpeting. Floor plans shall be checked for shapes of rooms requiring carpeting, taking note of columns, cabinet and other items of construction affecting carpet cutting.

4. SUBCONTRACTORS QUALIFICATIONS

A. Subcontractor shall be able to offer proof of ability to accept and complete an installation of size and type specified herein.

5. MATERIALS

A. Dining Carpeting: Provided By Owner.
B. Kitchen Walk-off Carpeting: Refer to Finish Schedule on the drawings for manufacturer, product, color and locations.
C. Adhesive: Provided by Contractor, as recommended by carpet manufacturer. Adhesive shall be of a type that will work with a "release agent" to facilitate replacement.
D. Edge Trim: Metal Schluter strip as detailed in Construction Documents.

6. SCHEDULING AND CONDITIONS

A. After notification to proceed with the carpet laying, Carpet subcontractor shall inspect sub-floors and report any condition that would prevent him from making a satisfactory installation.

7. PREPARATION

A. Floors to which carpet is to be applied shall be thoroughly cleaned of all droppings, grease, oil, paint and any other foreign matter that would interfere with proper adhesion of the carpet backing. Floors shall be smooth and true. Rough spots shall be smoothed prior to installation. Sweep floors clean of all dust, etc.

8. INSTALLATION

A. Carpeting: Cement carpet to trowelled concrete floors with adhesive. Recommended procedures for installation furnished in each roll of carpet by the manufacturer shall be closely followed. Pay particular attention to recommendations for application of floor cement adhesives, seam cement and cross joining. Joints shall be butt-type using factory cut selvage edges. There shall be a minimum of seams in accord with the approved layout plan.
B. Defective Work: Carpeting not installed according to the plans and specifications shall be considered defective and shall be removed and replaced at no additional cost to the Owner.
C. Edge Trim: Install edge trim at the edge of all carpeting not against a wall, cabinet or other vertical surface.
D. Trim and use thread locker at all cuts and transitions to prevent fraying.

9. CLEANING AND PROTECTION

A. General: Any carpet soiled during or after installation shall be cleaned in accord with the recommendations of carpet manufacturer. Protect carpet in place with a layer of heavy approved building paper, taped at the seams. Damaged carpeting that cannot be repaired shall be replaced before the project will be accepted.
B. Maintenance: Instruct Owner's staff in proper maintenance procedures for carpeting finally installed.

SECTION 09720 – WALL COVERING

1. SECTION INCLUDES

A. Surface preparation and prime painting.
B. Wall covering.

2. QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section with minimum three years of documented experience.

3. ENVIRONMENTAL REQUIREMENTS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the adhesive or wall covering product manufacturer.
B. Maintain these conditions 24 hours before, during, and after installation of adhesive and wall covering.

4. EXTRA MATERIALS

A. Supply 25 linear feet of each color and pattern of wall covering; store where directed.
B. Package and label each roll by manufacturer, color and pattern, and destination room number.

5. MATERIALS

A. Refer to finish schedule on the drawings for manufacturer, product, and color.
B. Requirements for All Wall Coverings:
   1. Surface Burning Characteristics: Flame spread/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E 84.
C. Adhesive: Type recommended by wall covering manufacturer to suit application to substrate.
   1. Provide materials that are mildew-resistant and non-staining to wallcovering.
D. Release Coat:
   1. Sealer under-coater for new drywall substrates as recommended by wallcovering manufacturer.
   2. Provide undercoat for previously painted gypsum wallboard and other substrates as recommended by wallcovering manufacturer.
E. Substrate Filler: As recommended by adhesive and wall covering manufacturers; compatible with substrate.
F. Substrate Primer and Sealer: Alkyd enamel type.

6. EXAMINATION

A. Verify that substrate surfaces are prime painted and ready to receive work, and conform to requirements of the wall covering manufacturer.
B. Measure moisture content of surfaces using an electronic moisture meter. Do not apply wall coverings if moisture content of substrate exceeds level recommended by wall covering manufacturer.
C. Verify flatness tolerance of surfaces does not vary more than 1/8 inch in 10 feet nor vary at a rate greater than 1/16 inch/ft.

7. PREPARATION

A. Fill cracks in substrate and smooth irregularities with filler; sand smooth.
B. Wash impervious surfaces with tetra-sodium phosphate, rinse and neutralize; wipe dry.
C. Surface Appurtenances: Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.
D. Surfaces: Correct defects and clean surfaces that affect work of this section.
E. Marks: Seal with shellac those that may bleed through surface finishes.
F. Apply one coat of primer sealer to substrate surfaces. Allow to dry. Lightly sand smooth then clean surfaces free of loose particles.

8. INSTALLATION

A. Apply adhesive and wall covering in accordance with manufacturer's instructions.
B. Use wall covering in roll number sequence.
C. Razor trim edges on flat work table. Do not razor cut on gypsum board surfaces.
D. Apply wall covering smooth, without wrinkles, gaps or overlaps. Eliminate air pockets and ensure full bond to substrate surface. Butt edges tightly.
E. Horizontal seams are not acceptable.
F. Do not seam within 2 inches of internal corners or within 6 inches of external corners.
G. Install wall covering before installation of bases and items attached to or spaced slightly from wall surface.
H. Cover spaces above and below windows, above doors, in pattern sequence from roll.
I. Where wall covering tucks into reveals, or metal wallboard or plaster stops, apply with contact adhesive within 6 inches of wall covering termination. Ensure full contact bond.
J. Remove excess adhesive while wet from seam before proceeding to next wall covering sheet. Wipe clean with dry cloth.

SECTION 09771 – PREFINISHED PANELS

1. SECTION INCLUDES

A. Prefinished panel system for adhesive mounting.

2. APPROVED MANUFACTURERS

A. Kemlite
B. Marlite

3. FIBERGLASS REINFORCED PANEL (FRP)

A. Thickness: 3/32"
B. Finish: Pebble
C. Color: As scheduled on Construction Documents.
D. Moldings: Solid vinyl, wide profile and match the color of the panels.
E. Closures: Solid vinyl, wide profile an match the color of the panels.

4. SEALANT

A. One part Silicone Rubber, ASTM C920 and FS TT-S-001543A, FDA approved, or as recommended by FRP manufacturer.
B. Color: Clear to translucent

5. INSTALLATION

A. Install in accordance with manufacturer's instructions.
B. Use the adhesives recommended by the panel manufacturer unless prohibited by local regulations; obtain manufacturer's approval of alternative adhesives.
C. Avoid contamination of panel faces; clean as necessary and replace if not possible to repair to original condition.
D. Install panels over water resistant drywall in strict accordance with manufacturers recommendations, using non-flammable adhesive (100% coverage).
   1. Drywall must be installed (and all joints taped) floor to ceiling to provide a good bondable surface to accept installation of FRP panels.
E. Discard units of material which are unsound, warped, bowed, twisted, improperly treated, or too small to fabricate, work with minimum of joints or optimum jointing arrangements, or which are of defective manufacture with respect to surfaces, sizes, or patterns.
F. Scribe and cut work to fit adjoining work.
G. Caulk all joints and all rnouldings with silicone sealant.

SECTION 09900 – PAINTS AND COATINGS

1. SECTION INCLUDES

A. Surface preparation.
B. Field application of paints, stains, varnishes, and other coatings.

2. DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

3. ENVIRONMENTAL REQUIREMENTS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
B. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

4. SUBMITTALS

A. Prepare two (2) color/texture samples for each color for each type of substrate to be painted or stained per SUBMITTALS.
B. Make samples not less than twelve inches (12") square.
C. Submit manufacturer's printed literature on each coating system to be used.

5. EXTRA MATERIALS

A. Supply 1 gallon of each color; store where directed.
B. Label each container with color in addition to the manufacturer's label.

6. MANUFACTURERS

A. Paint and Coating manufactures shall be as scheduled herein and on the drawings.

7. PAINTS AND COATINGS – GENERAL

A. Paints and Coatings: Ready mixed, except field-catalyzed coatings. Prepare pigments to a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating.
B. Volatile Organic Compound (VOC) Content:
   1. Provide coatings that comply with the most stringent requirements specified in 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.

8. EXAMINATION

A. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
B. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
   1. Wood: 15 percent, measured in accordance with ASTM D 4442.

9. PREPARATION

A. Surfaces: Correct defects and clean surfaces which affect work of this section.
B. Marks: Seal with shellac those which may bleed through surface finishes.
C. Impervious Surfaces: Remove mildew by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
D. Gypsum Board Surfaces to be Painted: Fill minor defects with filler compound. Spot prime defects after repair. Gypsum ceiling surfaces in all Public areas are required to have a Level 5 finish surface; do not start painting until surface finish level is verified. Beginning of painting gypsum indicates acceptance of surface.
E. Aluminum Surfaces to be Painted: Remove surface contamination by steam or high pressure water. Remove oxidation with acid etch and solvent washing. Apply etching primer immediately following cleaning.
F. Galvanized Surfaces to be Painted: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.
G. Uncoated Steel and Iron Surfaces to be Painted: Remove grease, mill scale, weld splatter, dirt, and rust. Prime paint entire surface; spot prime after repairs.
H. Interior Wood Items to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Back prime concealed surfaces before installation.
I. Interior Wood Items to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats. Prime concealed surfaces with gloss varnish reduced 25 percent with thinner.
J. Wood Doors to be Field-Finished: Seal wood door top and bottom edge surfaces with clear sealer.
K. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

10. APPLICATION

A. Apply products in accordance with manufacturer's instructions.
B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
C. Apply each coat to uniform appearance. Apply each coat of paint slightly darker than preceding coat unless otherwise approved.
D. Sand wood and metal surfaces lightly between coats to achieve required finish.
E. Where clear finishes are required, tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.

11. FINISHING MECHANICAL AND ELECTRICAL EQUIPMENT

A. Painting mechanical and electrical work is limited to items exposed in occupied spaces unless noted otherwise.
B. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.

12. SCHEDULE – SURFACES TO BE FINISHED

A. Do Not Paint or Finish the Following Items:
   1. Items fully factory-finished unless specifically noted.
   2. Fire rating labels, equipment serial number and capacity labels.
B. Mechanical and Electrical: Use paint systems defined for the substrates to be finished.
   1. Paint all insulated and exposed pipes, conduit, boxes, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment occurring in finished areas, unless otherwise indicated.
   2. Paint shop-primed items occurring in finished areas.
   3. Paint interior surfaces of air ducts and convector and baseboard heating cabinets that are visible through grilles and louvers with one coat of flat black paint to visible surfaces.
   4. Paint dampers exposed behind louvers, grilles, and convector and baseboard cabinets to match face panels.
C. Paint both sides and edges of plywood backboards for electrical and telephone equipment before installing equipment.

13. TENTATIVE PAINT LIST: Where any particular application is not mentioned in this list, Contractor shall figure on application of manufacturer's specification for application which is consistent with types and qualities listed herein. Colors are indicated on drawings.

EXTERIOR SURFACES

Wood Trim (Paint)
1st coat: Sherwin Williams – A100 Exterior Latex Wood Primer, B2W41 (4 mils wet, 1.4 mils dry)
2nd coat: Sherwin Williams – A100 Exterior Latex Satin, A82 Series
3rd coat: Sherwin Williams – A100 Exterior Latex Satin, A82 Series (4 mils wet, 1.4 mils dry per coat)

Wood "Stained"
1st coat: Sherwin Williams Woodscapes Exterior Polyurethane Semi-transparent house stain.
2nd coat: Same as first coat.
3rd coat: Same as first coat.

Ferrous Metals and Exposed Gas Lines
1st coat: DTM Acrylic Primer/Finish, B66W1 (6 mils wet, 3 mils dry)
2nd coat: Sherwin Williams A100 Exterior Latex Satin, A82 Series
3rd coat: Sherwin Williams A100 Exterior Latex Satin, A82 Series (4 mils wet, 1.4 mils dry per coat)

Note: Omit first coat on materials already prime painted but touch up bare spots with Metal primer.

Stucco and EIFS:
1st coat: Sherwin Williams Loxon Conditioner (A24-100 Series)
2nd coat: Sherwin Williams A100 Exterior Latex Satin, A82 Series
3rd coat: Sherwin Williams A100 Exterior Latex Satin, A82 Series (4 mils wet, 1.4 mils dry per coat)

Prepainted Equipment (Rooftop Equipment, Transformers, Etc.)
1st coat: Sherwin Williams A100 Exterior Latex Satin, A82 Series
2nd coat: Same as first coat.

INTERIOR SURFACES

Wood Doors and Trim (Paint)
1st coat: Sherwin Williams PrepRite Classic Primer, B28W101 (4 mils wet, 1.6 mils dry)
2nd coat: Sherwin Williams ProMar 200 Latex Semi-Gloss B31W200 Series
3rd coat: Sherwin Williams ProMar 200 Latex Semi-Gloss B31W200 Series (4 mils wet, 1.5 mils dry per coat)

Wood Trim and Coffers "Stained"
Refer to Finish Schedule on the Drawings for detailed instructions for interior stain and sealing process.

Wood Doors "Stained"
Refer to Finish Schedule on the Drawings for detailed instructions for interior stain and sealing process.

Wood Vertical Wall and Ceiling Boards "Stained"
Refer to Finish Schedule on the Drawings for detailed instructions for interior stain and sealing process.

Woodwork Backpriming
One coat: Sherwin Williams ProMar Classic Interior Latex Primer, B28W100.

Gypsum Wallboard
1st coat: Sherwin Williams ProMar 400 Latex Semi-gloss Wall Paint, B31-400
2nd coat: Same as first coat.

Ferrous Metal and Gas Lines
First: Remove all dirt, grease, oil, and scaly material.
1st coat: DTM Acrylic Primer/Finish, B66W1 (6 mils wet, 3 mils dry)
2nd coat: Sherwin Williams ProMar 200 Latex Eg-Shel, B20W200 Series
3rd coat: Sherwin Williams ProMar 200 Latex Eg-Shel, B20W200 Series (4 mils wet, 1.5 mils dry per coat)

DIVISION 10 - SPECIALITIES

SECTION 10167 – LAMINATE TOILET COMPARTMENTS

1. SECTION INCLUDES

A. Toilet partitions, doors, panels and hardware.

2. SUBMITTALS

A. Prepare and submit shop drawings, per SUBMITTALS Section, for Architect's acceptance prior to ordering any material. Submittal shall contain complete data for fabrication, erection and color selection.

3. MANUFACTURER

A. The Drawings were prepared and this Specification written on the basis of using the products and the specifications of the Sanymetal Products Company. It is not the intent to limit competitive bidding. Products with equal characteristics by other manufacturers are acceptable under the conditions of these Specifications.

4. TOILET PARTITIONS

A. General: "Sanyplastic Academy", floor mounted, overhead braced, with high pressure laminate covered pilasters, doors and panels to provide the following thicknesses:
   1. Door - 1 inch finished thickness.
   2. Panels - 3/4 inch finished thickness.
   3. Pilasters – 1 1/4 inches finished thickness.

B. Doors and Panels: Finished surface shall consist of NEMA approved high pressure metal laminate, laminated to the faces of 45 lb. medium density particle board. All external edges shall be banded to match the facade surfaces.

C. Pilasters: Same construction, finish and performance as for doors. Pilasters shall be secured to floor by means of 1/4" thick anchor bar mechanism fastened to bottom of pilaster and shall be secured and leveled by using 7/16th bolts and nuts – tension/compression mounted. Pilasters shall be braced with extruded, anodized aluminum no-grip headrail and wall return.

D. Urinal Screens: Same construction, finish and performance as for pilasters except urinal screens shall be secured to floor and ceiling by means of a leveling bar mechanism fastened to bottom and top of unit and shall be secured and leveled by using threaded bolts and nuts - tension/compression mounted.

E. Hardware:
   1. Pilaster Bases and Head: 3 inch high, No. 304 stainless steel, polished finish to conceal floor and ceiling connections
   2. Panel and Pilaster Brackets: Heavy extruded aluminum, heat treated, anodized and polished.
   3. Hinge Brackets: Non-ferrous chrome plated stirrup type attached to the pilaster by means of through bolts. Top handle bracket #7361, bottom hinge bracket # 7360.
   4. Hinges:
   a. Top: #6101, recessed into door 2 inch from top of door with pin supported in door above and below the top hinge bracket.
   b. Bottom: #6100, controlled power bearing consisting of Zytel cams under spring tension, concealed within the door to provide an adjustable rest position.
   5. Door Keepers and Stops: #8861 chrome plated non-ferrous with rubber bumper locked in place.
   6. Door Latches: #6550, concealed within the door thickness with brass polished chrome plated escutcheon plate and knob. Door bolts shall be stainless steel bullet nosed.
   7. Coat Hooks: Non-ferrous cast alloy polished chrome-plated.

F. Color: Laminate as shown on drawings.

5. INSTALLATION

   A. Install partitions where indicated on the Drawings and in accord with the manufacturer's instructions, including installation and adjustment of hardware.

   B. All handicapped bathroom fixtures and toilet accessory installation dimensions shall comply with all ADA, state and local handicapped code requirements.

SECTION 10442 – ARCHITECTURAL SIGNAGE

1. DESIGN AND FABRICATION

A. All patterns for fabrication, regardless of production technique, method, or process specified, shall be approved by the Owner prior to production in order to ensure conformity to design with regard to letter form and height, wording, spelling, capitalization, punctuation, letter spacing, leading and layout or composition.

2. MANUFACTURER

A. Interior Signage: The drawings were prepared and this specification written on the basis of using the products of Kroy Sign Systems, Scottsdale, Arizona.
B. Street Address Signage: The drawings were prepared and this specification written on the basis of using the products of WestOn Letters, North Hollywood, CA.
C. It is not the intent to limit competitive bidding. Products with equal characteristics by other manufacturers are acceptable under the conditions of these specifications.

3. GENERAL

A. Regulatory signage series opaque acrylic, matte finish plaques, with front surface hot stamp graphics, in low profile frame. Configuration shown on drawings to conform with Americans with Disabilities Act requirements.

B. Provide one sign (unit) for each restroom door opening for public facilities.
C. Street Address Signage: Lettering to be a minimum 6-inches tall (or as required by governing jurisdiction), University Roman Bold, Color: Medium Bronze, 3/4 inch standoffs. Lettering to be ordered from: http://www.westonletters.com/index_23.php?catID=23&file=HN-Styles.htm

4. INSTALLATION

A. Installation shall be started at the time established by the General Contractor. However, no sign work shall be permitted in the building before the building is completely enclosed and all painting and work of other trades is finished, no exceptions.

B. Install signs in accord with approved shop drawings. Install true to line, plumb, level, square, in proper planes with other work and free from objectionable defects. Anchor to adequately resist all normally subjected stresses.

SECTION 10523 – FIRE EXTINGUISHERS AND ACCESSORIES

1. SECTION INCLUDES

A. Fire extinguishers
B. Accessories.

2. REFERENCES

A. NFPA 10 – Standard for Portable Fire Extinguishers; National Fire Protection Association; 2007.
B. UL (FPED) – Fire Protection Equipment Directory; Underwriters Laboratories Inc.; current edition.

3. MANUFACTURERS

A. Fire Extinguishers and Accessories:
   1. Larsen's Manufacturing Co: www.larsensmfg.com.

idstudio4

6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT
02.15.2023

Cheddar's SCRATCH KITCHEN
EST 1979

Issue Date: 02.15.2023

REVISION INFORMATION

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
SPECIFICATIONS

AS6

4. FIRE EXTINGUISHERS

A. Fire Extinguishers – General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.
   1. Provide extinguishers labeled by Underwriters Laboratories Inc. for the purpose specified and indicated.
B. Dry Chemical Type Fire Extinguishers: Stainless steel tank, with pressure gage.
   1. Class B:C.
   2. Size 10.
   3. Size and classification as scheduled.
   4. Model: MP10
   5. Bracket: B2
   6. Quantity: 5, locate first three (3) where noted on drawings, with additional extinguishers located per local Fire Official direction
C. Wet Chemical Type
   1. Class K
   2. Size 2.5 Gallon
   3. Model: WC 2 1/2
   4. Bracket: 864
   5. Quantity: 5, locate first three (3) where noted on drawings, with additional extinguishers located per local Fire Official direction.

5. ACCESSORIES

A. Extinguisher Brackets: Formed steel, chrome-plated.
B. Provide semi-recessed stainless steel cabinets in front-of-house if requested by Owner.

6. INSTALLATION

A. Install in accordance with manufacturer's instructions.
B. Secure rigidly in place.
C. Verify locations adhere to accessibility requirements.

SECTION 10800 – TOILET ACCESSORIES

1. SECTION INCLUDES

A. All toilet accessories to be furnished and installed by Contractor unless noted otherwise.
B. Coordinate rough-in, openings and wood blocking.

2. PRODUCTS

A. See Schedule on drawings for accessories and for locations.

3. INSTALLATION

A. Install fixtures, accessories and items in accordance with manufacturer's instructions, and where affected, at heights or locations for the handicapped as indicated or specified herein.
B. Install true, plumb and level, securely and rigidly anchored to substrate.

DIVISION 11 - EQUIPMENT

SECTION 11400 – FOOD SERVICE EQUIPMENT

1. SECTION INCLUDES

A. Installation of Owner provided food service equipment.
B. Equipment shall be furnished, assembled, and set in place under separate contract, with final utility connection by General Contractor.

2. RELATED SECTIONS

A. Mechanical and Electrical services and final connections to equipment.

3. OWNER / CONTRACTOR RESPONSIBILITIES

A. Owner will provide equipment manufacturer's installation instructions and Operation/Maintenance data for Contractor's use.
B. Coordinate size of access and route to place of installation.
C. Food Service Equipment (NIC):
   1. Equipment scheduled on the drawings as (NIC).
   2. Walk-in Coolers and Freezers with thermostats.
   3. Motor starters.
D. Food Service Equipment (By Owner):
   1. Equipment scheduled on the drawings as (B.O.).
   2. Mechanical refrigeration systems, including compressor units, condensers, evaporator coils, and control valves.
   3. Stainless steel trim strips, supports and connections, attachment devices, and accessories.
   4. Exhaust Hood and Ansul system.
F. Refrigerant System Installation (By KES):
   1. Refrigerant Lines: Type "L" hard copper tubing.
   2. Fittings: Wrought copper or brass designed for use with high temperature solder.
   3. Piping Joints: Made with silver solder (Sil-Fos).
   4. Piping: Properly suspended from an anchor to the structure with adjustable hangers 6' o.c. maximum.
   5. Suction Lines: Size to have maximum pressure drop of two pounds in medium temperature systems, one pound in low temperature system.
   6. Liquid Lines: Sized to give maximum pressure to prevent trapping of oil. Rigid insulation on all suction lines to be Armaflex insulation by Armstrong – 1" thick at medium temp., 1-1/2" thick at low temp. Refrigerant lines in PVC or EMT conduit to be sealed at both ends with Dow Corning 3-6548 silicone RTV foam.
   7. Evacuation and Charging: After completion of the pressure test, the system shall be evacuated using an approved auxiliary vacuum pump. Connections for evacuations to be in accordance with manufacturer's recommendations.

4. DELIVERY, HANDLING AND STORAGE

A. Delivery: Upon receiving equipment by Kitchen Equipment Supply vendor, check crates/cartons identification labels with receiving P.O.; assure correct item has been received.
B. Handling: Uncrate equipment in organized manner. Take care not to misplace loose parts, accessories, assembly and operating instructions, and warranty cars. Keep utility hookup notes and tags on equipment until after connections are made. Assemble in workmanship manner in accord with manufacturer's directions, taking care to make sure fasteners are tight and components are aligned and square.
C. Storage: Store equipment clear of floor in manner to prevent warping, twisting, or sagging.

5. INSTALLATION

A. Install items in accord with manufacturer's instructions and fabricator's shop drawings. Install in accord with local governing Health, Building, and Safety, and Fire Protection Codes and Regulations and NEMA, UL, AGA, ASME and NFPA.
B. Electrolysis: Insulate to prevent electrolysis between dissimilar metals. Provide sealant to achieve clean joint without crevices.
C. Equipment
   1. General: Set in place and position per kitchen equipment plan; ready for utility hook up. After utility hookups are made, level and secure dish tables to slope toward dishwasher. Completely close and seal gaps, joints and seams between fixtures/equipment and walls, ceilings and floors with stainless steel trim strips and/or clear silicone sealant. Do not use sealant in joints or seams over 3/16 inch wide.
2. Refrigerant Piping: Install copper tubing and fittings. Cut with pipe cutters and reshape with sizing tool. Expose piping to view as required by American Standard Safety Code for Mechanical Refrigeration. For exposed areas or accessible furred ceiling spaces, use hard copper tubing. Run exposed tubing in such manner as to prevent damage from activities in areas; otherwise run tubing in pipe or conduit.
   a. Suction Lines: Size to give max pressure drop from evaporator to machine of 2 lb. For high temp system and 1 lb. For freezer system, allowing gas velocities of not less than 750 rpm in horizontal runs and 1500 rpm in vertical risers. Size liquid lines to give max pressure drop of 3 lbs. from receiver to evaporator.
   b. Tubing Runs: Grade to prevent trapping of oil.
   c. Ties: Secure suction and liquid lines for each system together, except when run through conduit; provide a minimum 24 inch intervals with black plastic electrical tape.
   d. Insulation: Insulate refrigerant suction lines outside of refrigerated compartments back to compressors.
   e. Hangers and Supports: Provide adjustable hangers, anchors or straps required for proper support of piping not run in conduit. Space hangers not to exceed 10 feet o. c. and closer where required for proper support of small piping. Provide insulated refrigerant piping with approved type sleeves at hanger points.
3. Walk-In Cooler Freezer Boxes: Transit level floor screens prior to wall and ceiling panel erection. Seal wall and/or ceiling penetrations for electrical conduits and refrigeration lines, etc., to prevent frost and condensate build-up. Electrical conduits; on exterior of box.
4. Oil Separators: Provide low temperature operations of system, return line connected to top of crankcase above oil level. Provide exposed oil return lines with shut-off valves of packless stem type.
5. Evaporator Coils: Support by hangers utilizing fish plates on top of walk-in unit a full 4 inches clear from underside of ceiling panels.

DIVISION 15 - MECHANICAL

SECTION 15100 – GENERAL MECHANICAL REQUIREMENTS

1. Scope of Work:

a. The work to be accomplished under this Section of Specifications includes the furnishing of all labor, materials, supervision and equipment for the complete installation of air conditioning, heating, ventilating, plumbing, fire protection together with all the necessary auxiliaries and appurtenances. Generally, the work shall consist of, but is not limited to, items listed in the following paragraphs.
b. Air Conditioning and Heating: Factory built air conditioning and heating units of the single zone type as noted in the construction documents, filters, fans, motors, drives, hoods, etc.
c. Air Distribution System: Sheet metal ductwork, volume dampers, splitter dampers, turning vanes, air control devices, grilles, registers, diffusers, flexible duct, install per SMACNA Standards. Fiberglass duct board is not an acceptable alternative.
d. Plumbing: Soil, waste and vent piping, domestic hot and cold water distribution, hot water generators, fixtures, grease traps, vents, condensate lines of HVAC and miscellaneous equipment, underfloor or overhead soda and beer sleeves, refrigerant line conduit and/or roof leaders.
e. Miscellaneous Supply and exhaust fans, make-up air units, temperature controls, thermal insulation, apparatus foundations and supports, pipe hangers and supports and all necessary tools, accessories and appliances as required to make all systems complete and operative.

2. Products and Execution:

a. Electrical Provisions for Mechanical Work: Except for such items as are normally wired up at their point of manufacture and so delivered, and unless specifically noted to the contrary herein, the Electrical Subcontractor will do all electric wiring of every character' for power supply. Control wiring shall be furnished and Installed by the Electrical Subcontractor. This Subcontractor shall erect all motors in place ready for connection. Except for such items as are normally supplied with starters installed (HVAC units, dishwashers, etc) at their point of manufacture. All other starters not furnished with equipment to be furnished and installed by Electrical Contractor. The Electrical Subcontractor will mount all such starters, as directed, furnishing supporting structures where necessary. The Client and other Contractors shall furnish with each item requiring electrical connections, the necessary instructions and wiring diagrams to the Electrical Subcontractor. The Electrical Subcontractor shall refer to the specifications to determine the scope of the work
b. Chases and Openings: Various divisions, however, the locations of all inserts and openings shall be determined and coordinated with other divisions in ample time to avoid cutting new construction.
c. Roof Flashing of Ducts and Curbs: Division 7, however, plumbing vent flashing and counter flashing shall be provided under this Division and per roof manufacturer recommendations.
d. Openings in Roof Deck: Where piping, ducts, vents or any other mechanical apparatus penetrates roof deck and opening is not specifically shown on structural drawings, obtain Architect's approval of location and size. Have roof deck installer do cutting and pay installer cost of cutting opening.

3. Permits, Fees and Code Regulations:

a. Permits: Obtain all permits required to do this work and pay any fees required to such permits.
b. Regulations: Conform to all State and Local Ordinances and Rulings applicable to this work and in effect at the time the work is performed. Approval of various insuring and inspection authorities shall be obtained. When requested, competent evidence of compliance, with applicable codes, shall be furnished.
c. Conflicts: If a conflict exists between the drawings and/or specifications and any above mentioned authority, the Contractor shall advise the Architect/Engineer in writing five (5) business days prior to presenting Proposal or stand any cost required to meet regulations.

4. Structural and Space Condition:

a. The specifications and accompanying drawings are intended to encompass a system that will not interfere with the structural, electrical and architectural design of the building, and which will fit into the several available spaces. As it is not within the scope of the drawings to show all necessary offsets and obstructions of structural conditions, it shall be the responsibility of the Contractor to install his work in such a manner that it will conform to the structure, avoid obstructions and interferences with other trades, preserve headroom, and keep openings and passageways clear.
b. Do not run piping or ductwork, or locate equipment (with respect to switchboards, panelboards, power panels, motor control centers or dry type transformers) within 42" in front of equipment, over equipment or within 36" horizontally of same space.

5. Drawings:

a. The drawings as prepared are diagrammatic but shall be followed as closely as actual construction of the project and the work of the trades will permit. Changes from the drawings necessary to fit the work of various trades, to conform to equipment actually being installed, or to conform to the rules of authorities having jurisdiction shall be made without additional cost to the Client.

6. As-built Drawings:

a. Provide and keep up-to-date, a complete record set of hardcopy prints which shall be corrected daily with dated notations, and shall show every change from the original Contract drawings. This set of prints shall be kept on the job site and shall be used only as a record set.

7. Protection of Materials:

a. Take such precautions as are necessary to protect all equipment and materials from damage.

8. Workmanship:

a. Labor shall be performed in a workmanlike manner by mechanics skilled in their particular trades.

9. Materials and Equipment:

a. All materials shall be new and of the best quality. Where manufacturer's names and model numbers are mentioned in the specifications, it is intended to set a standard of quality and shall not be construed to limit competition unless specifically stated in drawings or to discriminate against "equal" products of other manufacturer. The words "or approved equal" are to follow each material specification where a substitution will be considered. Any proposed substitution must be submitted for comparison and it is understood that the Engineer shall be the sole Judge in the matter.

10. Vibrations and Noise:

a. Each of the various pieces of equipment shall operate without objectionable vibration or noise. All rotating equipment shall be in static and dynamic balance and shall be mounted, supported and fastened so that no equipment vibration will be transmitted to the building. The specific size of vibration isolation shall be in accordance with manufacturer's recommendation and shall be submitted to the Architect for approval. If, in the opinion of the Architect, objectionable vibration or transmission thereof to the building occurs, the Contractor shall execute remedial measures as may be necessary to eliminate such unsatisfactory operating conditions at the Contractor's expense.

11. Operating Instructions:

a. Brochures: Written instructions, assembled and bound in brochures, shall be furnished in triplicate for operating and maintaining all equipment furnished under this Division of the Specifications. Instructions shall include all normal adjustments, a list of lubricating points with the type and frequency of lubrication required. Parts lists shall be furnished.
b. Demonstration: Upon completion and acceptance of work by the Client's Representative, the Contractor shall be provided to instruct the operating personnel in the operation of the entire installation. Two sessions shall be held, one for summer operation and one for winter operation, both in the respective seasons.
c. Equipment location and Use: Provide, in triplicate, suitably bound operating book containing all equipment, its location, use and description, and building schematics. Submit to Architect for approval before printing in final form.
d. Contractor shall instruct manager on the programming of all thermostats. This shall be a hands-on explanation. Contactor shall also provide manager with booklet showing programming instructions.

12. Final Inspections:

a. Schedule: Upon completion of Contract, there shall be a final inspection of the completed installation. Prior to this inspection, all work under this Division shall have been completed, tested, balanced, and adjusted and in final operating condition.
b. Personnel: A qualified person representing the Contractor must be present at this final inspection to demonstrate the system and prove the performance of the equipment.

13. Cutting and Patching:

a. Where cutting and patching becomes necessary to permit the installation of any work under this Contract, or should it become necessary to repair any defects that may appear in patching up to the expiration of the guarantee, such cutting shall be done under the supervision of the Client's Representative by the trade of Subcontractor whose work is to be disturbed. After the necessary work has been completed, the trade of Subcontractor whose work has been disturbed shall repair damage. The cost of all cutting and patching shall be paid by the trade of Subcontractor requiring it to be done.

14. Excavations and Backfilling:

a. Provide necessary excavating and backfilling for the installation of work specified in this Division. Trenches for underground piping and conduits shall be excavated to required depths with bell holes provided as necessary to ensure uniform bearing. Care should be taken to excavate below depth, and any excavation below depth shall be refilled with sand or gravel firmly compacted. Where rock or hard objects are encountered, they shall be excavated to a grade size inches (6") below as specified. After the pipe has been installed, tested and approved, the trenches shall be backfilled to grade with approved material, well-tamped or paddled compactly in place. Do not proceed with backfill operations until piping has been inspected by the Client's Representative or by the local inspector of the municipality in which the work is being performed. Do not perform backfilling operations except in the presence of the Client's Representative or inspector. All piping outside the building shall be installed below the frost line. Where streets, sidewalks, etc. are disturbed, cut or damaged by this work, the expense of repairing same in a manner approved by the Client's Representative shall be of part of this Contract.

15. Guarantee:

a. The guarantee provision of this specification requires prompt replacement of all d efective workmanship and materials occurring within one year of job acceptance. This includes all work required to remove and replace the defective item and to make all necessary adjustments to restore the entire Installation to its original specified operating condition and finish at the time of acceptance.

SECTION 15400 – PLUMBING

1. Scope of Work:

a. Furnishing of all labor, materials, tools, transportation services, etc. necessary to complete the installation of the plumbing system and as described in these specifications, as illustrated on the accompanying drawings, or as directed by the Architect.
b. All hot and cold water systems with complete connections from the water meter to all plumbing fixtures and equipment requiring water connections. These systems will be complete with controls, valves, equipment, devices and insulation.
c. All soil, waste, and vent systems outside and inside the building and sewer connections to Municipal system as indicated on drawings.
d. Furnish and set plumbing fixtures, including all the required trim and supports.
e. Trenching, pipe bedding and backfilling.
f. All rough-in and final connection to equipment in the Kitchen, Bar and Service areas, if indicated on the drawings, including necessary traps and miscellaneous items as required. Coordinate w/ Owner and K.E.C.
g. Furnish all final plumbing connections to heating and air conditioning equipment, and kitchen bar equipment including condensate drains, indirect waste and gas piping. See Food Service drawings for requirements.

h. Meters and Utility Connections:
   1. Water: Coordinate work with the Developer and the local water company. Furnish all labor and/or material (not furnished by the water company), which is required to connect to existing line and/or set meter. Install all permanent water supply lines from the point of connection and complete the work as shown, all in accordance with the requirements of the local water utility. Owner shall pay tap fees. (If required) Plumbing Contractor shall pay all work-related inspection fees by authority having jurisdiction.
   2. Sewer Connections: Coordinate work with the Developer and/or local utility company. All work and materials shall be in strict accordance with the requirements of the local governing authority. Tap fees shall be paid by Owner (if required). Plumbing Contractor shall pay all work-related inspection fees by
   3. Gas: Coordinate work with local utility and furnish all labor and/or materials (not furnished by utility) which is required to provide a working utility for Owner, inclusive of meter and/or regulator. Furnish system from tapping point to and in the building as required and shown on drawings. Owner shall pay tap fees. Plumbing Contractor shall pay all work-related inspection fees.
      a. Gas piping to heating, ventilating and air conditioning equipment, water heaters and cookline appliances.

2. Shop Drawings:

a. Within 15 days after award of Contract, and before any plumbing materials are delivered to the job site, submit to the Owner complete digital shop drawings in accordance with the provisions of Section 01300 of these specifications, including all plumbing fixtures, trim, drains, cleanouts, piping, valves, insulation, hangers, supports, equipment and devices proposed to be furnished and installed. Shop drawings shall not be reviewed unless they bear the review stamp of the General Contractor.

3. Product Handling:

a. In the event of damage, immediately make all repairs and replacements necessary to the approval of, and at no additional cost to the Owner.

4. Examination of the Site:

a. All Contractors submitting proposals for this work shall first examine the site and all conditions, including Local rules and regulations, thereon and /or therein. All proposals shall have taken into consideration all conditions that may affect the work under this Contract. Lack of this information will not be considered as justification for extra cost or allowances to the Contract price.

5. Guarantee:

a. All work performed under this section shall be guaranteed to be free of defective materials and workmanship for a period of one year after final acceptance of the work by the Owner.
b. Upon notice received from the Owner, Architect or Engineer, of failure of any part of the guaranteed equipment during the guaranty periods, the Contractor, at no additional cost to the Owner, shall promptly replace the affected part or parts with new parts. All labor required to perform guaranteed shall be included as part of the complete warranty.

6. Products:

a. Description

   1. Soil, Waste and Vent Piping: See plans for specifications.

   2. Beer Sleeves: See plans for specifications.

   3. Soda Sleeves: See plans for specifications.

   4. Hot and Cold Water Piping: See plans for specifications.

   6. Condensate Drain Piping:
      a. See plans for specifications.
      b. Contractor shall furnish and-install 3/4" or 1" condensate drains on cooler/freezer evaporator coils; with trap assembly and 2" air gap above drain as shown on the drawings. Freezer condensate piping shall be wrapped with heat tape with a minimum rating of 10 watts per lineal foot for its entire length within the freezer compartment.

   7. Direct and Indirect Waste Piping: See plans for specifications.

   8. Gas Piping:
   a. Gas piping including tap and service shall be included. Coordinate meter location with local authority.
   b. Underground gas piping shall be Schedule 40 black steel pipe with long radius steel welding fittings. Protect pipe and fittings with premanufactured wrapping tape applied in accordance with the manufacturer's recommendation. Installation of gas service piping and material shall meet with local gas company's approval.
   c. Gas piping above ground: See plans for specifications.
   d. Gas piping shall supply HVAC units and kitchen equipment if indicated on drawings by this Contractor.
   e. Moisture traps shall be installed on each piping drop for HVAC units, water heater and kitchen equipment.

   9. Insulation
   a. All Water Pipes, Rain Leaders and etc, shall be insulated. Piping shall be insulated to prevent excessive heat loss and to prevent condensation and sweating.
   b. See plans for specifications.
   c. As much of the insulation as possible shall be slipped on to the piping as the piping is being connected in order to avoid cutting the insulation. All butt ends and any necessary longitudinal joints shall be sealed with rubber based adhesive.

7. Fixtures:

a. See plans for specifications.

8. Flashings:

a. All piping and vents passing through roof shall be flashed watertight with six pound to the square foot lead using sleeve flashing with base extending at least 12 inches in each direction beyond the outside diaphragm of the pipe. Turn sleeve down a minimum of 1-1/2" into top of vent pipe with lead fitting snugly Inside of pipe. All gas vent caps shall be fitted with lead fitting snugly inside of pipe. All vent caps shall be vandal proof. Verify approved flashing material and methods with roofing contractor to ensure a complete job. See details on architectural sheets.

9. Cleanouts:

a. See plans for specifications.

10. Equipment:

a. Water Heater, Furnished and installed as specified in the plans:
   1. Size, capacity, type and manufacturer as indicated by drawings. Water heater(s) shall be as specified in the plans.
   2. The water heater shall be provided with all temperature and safety controls including ASME and ANSI Z21.22 rated temperature and pressure relief valve, gas pressure regulator (if required), drain valve, expansion tank, etc.
   3. Plumber shall make water, gas and relief line connections with cutoff valves and dielectric unions in water and gas lines.
b. Valves, Cocks and Faucets:
   1. Unless specifically indicated elsewhere, the valves shall be designed for not less than 126 lbs. working pressure. The valves shall have suitable valve body patterns for connection to the pipe for which they will operate. All valves with rising stems shall have back seats for packing under pressure.
   2. Cutoff valves underneath lavatories, tank type water closets, sanitary sinks and water coolers shall be chrome plated angle stop valves with soft annealed chrome plated copper connection pipes and chrome plated escutcheon plates.
   3. Gas Cocks for all Equipment: See drawings for requirements.
   4. Water cutoff valve shall be bronze solder joint, 125 lb. WOG with rising stems.
   5. Exterior hose cocks and valve fixtures to be non-freeze type, supply shut-off valves if indicated on plans.

11. Execution:

a. Piping:
   1. All piping shall be run concealed except where shown otherwise on drawings.
   2. Valves, traps, cleanouts and other apparatus shall be installed in an inconspicuous location.
   3. Soil, waste and vent offsets and house drains shall be installed with a minimum, uniform grade of 1/4" to the foot, unless otherwise indicated or required by local codes.
   4. Hot and cold water lines shall be at least 6" apart where piping is parallel.
   5. All water lines shall be run overhead and down partition walls unless no wall is provided; then run lines under slab to point of termination. All lines shall be concealed unless noted otherwise on plans.
b. Hangers and Supports:
   1. PEX piping shall be supported at intervals not to exceed 6'-0" and at each change in horizontal or vertical direction. Hanger attachment to structure shall be as required by the manufacturer.
   2. Copper piping shall be supported at intervals not to exceed 7'-0" and at each change in horizontal or vertical direction. Hanger attachment to structure shall be as required.
   3. Gas piping shall be supported at intervals not to exceed 8'-0" and at each change in horizontal or vertical direction. Attachment to structure to be as required.
   4. Hanger rods shall be standard bolt steel with machine screw threads, 3/8" diameter minimum.
   5. All piping underground shall be firmly bedded on the body of the pipe, and bell holes provided at each bell. All piping shall be installed in graded trench. Excavate, backfill and support piping as herein before specified.
c. Plumbing Fixtures:
   1. Furnish and install all plumbing fixtures complete with all equipment fittings, trimmings and accessories, as specified.
   2. All fixtures shall be Grade A. The name or trade mark of the manufacturer shall be printed or pressed on all closets and lavatories, and a label, which cannot be removed without destroying it, containing the manufacturer's name or trademark and the quality or class of the fixtures, shall be affixed to oil fixtures and not removed until after the work has been accepted.
   3. Exposed piping to fixtures shall be a product of the fixture manufacturer or approved equal and shall be:
      a. Water: Chromium plated iron pipe size red brass.
      b. Waste: Chromium plated tubing, except waste connections to kitchen or scullery sinks.

d. Tests:
   1. The plumbing system and associated system shall be subject to constant inspection and final approval of the code authorities having jurisdiction. Tests, in addition to these included in this section, required to show code compliance, shall be performed as directed.
   2. The soil, waste and vent lines of the sanitary systems shall be subjected to a water pressure test of not less than 10 feet of water head pressure or 54 pounds of air pressure for a duration of not less than 2 hours. During the pressure tests each joint shall be inspected for leaks. The lines shall be tested as an entire system, but all the underground and concealed lines shall be given the above test and approved before the lines are covered.
   3. The domestic water piping system shall be subjected to a water pressure test of not less than 150 PSI for duration of not less than 2 hours. The water piping shall be tested as an entire system, but all underground and concealed lines shall be given the above test and approved before the lines are covered.
   4. The gas system, from the meter connection and throughout the new work, shall be subjected to an air pressure test of not less than 50 PSI for a duration of not less than 4 hours and at the same time each joint and connection shall be tested by applying soap suds to each joint. The gas piping shall be tested as an entire system, but all underground and concealed lines shall be given the above test and approved before being covered. Further, each exposed joint shall be tested with soapsuds after the gas has been admitted into the system.
   5. Should the Contractor refuse or neglect to make any tests necessary to satisfy the Owner, his representative or coding officials, that he has carried out the true intent and meaning of the specifications, the Owner may take such tests and charge the expense thereof to the Contractor.

e. Cleaning and Protection:
   1. The Contractor shall remove from the job site all debris and leftover materials for which he is responsible, clean all fixtures and equipment and repair any blemishes in the finish. The Contractor shall be held responsible for replacing fixtures where damage results from failure to provide protection during installation.
   2. Flush Out Pipes: After the plumbing piping has been installed, inspected and approved, the piping system shall be flushed to remove any foreign matter from the pipes with chlorine or HTH solution to sanitize the new piping or as required by the local authorities.
f. Maintenance:
   1. The Contractor, throughout the guarantee period, shall maintain all parts of the plumbing fixtures and associated equipment. One month after final acceptance of the building by the Owner, the Contractor shall go over all the fixtures and test all working parts end put everything in good working order. All fixtures, including traps, shall be thoroughly cleaned and all parts put in good working order.

SECTION 15550 – SPRINKLER SYSTEM

1. SCOPE OF WORK

A. Work included under this Section consists of providing labor, materials, appliances, equipment, tools, transportation, superintendence and services required to construct and install a sprinkler system as specified, indicated and elsewhere required.
B. The sprinkler system specified herein is required to meet the Local Building Code.
C. Refer to Section 15400, PLUMBING, for piping and check valves.

2. PRODUCTS

A. HANGERS
   1. Hangers must meet NFPA approved type for construction used.

   B. SPRINKLERS
      1. Sprinklers shall be approved automatic spray sprinklers to comply with NFPA 13. Sprinklers shall be of operating temperature as required by NFPA and the Fire Marshal's Office. Provide approved metal cabinet with number of replacement heads of various types and quantities as required by Insuring Agency.
         a. Refer to plans for proposed fire sprinkler head types.

C. WATER FLOW INDICATOR
   1. If not already existing, provide an electric water flow Indicator where indicated and/or required by the authorities having jurisdiction. Water flow indicator shall be provided with time delay mechanism, which absorbs fluctuation caused by water surges. Switches shall be wired compatible with solenoid valve installed in the fire service water line.

3. EXECUTION

A. INSTALLATION
   1. Drawings were prepared with intent that all lines clear obstructions as pipes, beams, lights, hangers and similar items. Examine building and plans confirming dimensions before pipe is cut, fabricated and/or installed, to determine if offsets are necessary. Where required, offsets shall be made without additional cost to Tenant.
   2. Following general scheme shall be employed when locating sprinkler heads unless restricted by Rules and regulating bodies.
   3. Unless otherwise indicated, conceal piping in finished portions of building and expose elsewhere. Locate concealed piping in furrings, pipe spaces, chases and above suspended ceilings. Install exposed piping parallel or perpendicular to walls.
   4. Lines at or above ceilings shall be held as high as possible and be run to ovoid conflicts. Include fittings and material required to accomplish this result.
   5. Provide sleeves for piping passing through floors, ceilings and masonry of concrete walls. Locate, set and anchor sleeves.
   6. Provide lintels required to properly complete sprinkler installation.
   7. Provide plates on lines passing through floors, ceiling or walls.
   8. Hangers must be properly spaced and secured to building structure to adequately support lines. Support from suspended ceilings and/or similar construction will not be accepted.
   9. Devices shall be in accordance with Rules and Regulations of NFPA and Insuring Agency and shall bear their label of approval.
   10. Reducing bushings are not permitted in more thon one outlet of any tee or any two outlets of any cross. Bushings are not permitted in any elbows or when the reduction in size of the outlet no less than 1/2".
   11. Install check valve where indicated on plans.

B. TESTING

   1. Test systems under normal operating conditions and demonstrate that parts are functioning properly. Conduct tests and secure final certificates of approval. Deliver copies of Certificates to Architect/Engineer & Landlord.
   2. Test shall include but not be limited to the following:
      a) Two hour, 200 pound hydrostatic test aboveground system.
      b) Include cost and run such tests as may be necessary to demonstrate that equipment equals or exceeds capacities specified upon request.
      c) Notify Architect/Engineer twenty-four hours before testing.

SECTION 15700 – HEATING, VENTILATING AND AIR CONDITIONING

1. Work Included:

A. Heating, ventilating and air conditioning work required, including hoisting of equipment to the specified locations and setting it in place, includes, but not necessarily limited to:
   1. Package heating, ventilating and air conditioning units.
   2. Split system heating, ventilating and air conditioning units.
   3. Installation of Owner furnished kitchen exhaust hood(s).
   4. All HVAC & hood exhaust ducts, dampers, grills, registers and diffusers.
   5. Insulation of ducts and piping.
   6. Installation of exhaust fans, make-up air fans and gravity vents (Owner furnished & installed by Contractor, or as specified in the plans).
   7. HVAC controls and remote temperature sensors.

B. Gas Connections (if required see drawings): Plumbing Contractor will bring Gas to heating, ventilating and air conditioning and final tie-in to HVAC by Plumbing Contractor.

2. Intent of Drawings:

A. The drawings are diagrammatic to the extent that they do not indicate offsets, bends, special fittings and exact locations.

B. Piping, ductwork, apparatus and equipment shall be installed to avoid obstructions, preserve headroom, keep openings and passageways clear, and make all operating equipment accessible for maintenance.

C. Governing Codes and Standards:
   1. Install all work in accordance with the rules and regulations of the Standards of Safety, adopted and approved by the Insurance Underwriters and the latest standards recognized by ASHRAE and SMACNA and in accordance with local code.
   2. In case of conflict between said codes and the drawings, the codes shall govern in all cases; however, notify Owner, before making such change.

3. Examinations of Drawings and Site:

A. Before commencing the work, the Contractor shall carefully study the drawings, specifications and site. He shall definitely determine in advance the methods of installing and connecting the apparatus, the means for getting the equipment into place, and shall make himself similar with all of the requirements of the Contract. Equipment shall physically fit the area allocated with ample access for service.

B. The Contractor shall refer any discrepancies to the Architect for decision before proceeding with the work

4. Submittals:

A. Materials List: The Contractor shall submit, at his expense, digital submittal copies of equipment brochures in index form within fifteen (15) days after contract is signed. All equipment and material submittals shall be submitted at one time. The submittal shall bear the stamp of approval of the Contractor as evidence that the drawings have been checked by the Contractor and comply with the requirements of the Contract drawings and specifications.

5. Guarantee:

A. Furnish written certified guarantee, in acceptable form, to the Owner, against defective workmanship, materials, and operating equipment; further, guarantee to rebalance and adjust entire system or any part thereof, as required for perfect operation for a period of at least one (1) year after acceptance, including cost of refrigerant charge. Repair, replace and make satisfactorily operative any and all defective items and, work holding Owner free from any cost and liability in connection therewith for the term of guarantee. The manufacturer shall provide a warranty on his unit compressors for a period of five (5) years.

6. Coordination of Other Trades:

A. The work under this section shall be coordinated with other trades to maintain a rapid and smooth construction progress with a minimum of interference.

7. Painting:

A. Apply one (1) coat of Zinc Chromate, or Rustoleum to bare metal surfaces of supports, etc. color to match unit's color or as directed by Architect or Owner.

8. Clean-up:

A. All equipment and exposed surfaces shall be left smooth and clean. All plate work shall be polished and the entire premises shall be cleaned of unused materials, rubbish, and debris and grease spots.

9. Products:

A. General
   1. All Equipment shall be the capacity and type shown on the Equipment Schedule on the drawings and shall as manufactured by one of the manufacturers designated on that schedule or shall be an equal approved in advance by the Architect.

B. Sheetmetal Work
   1. Sheetmetal: Prime steel sheets, hot dipped galvanized of the following gauges:
      (a) Up to 12" wide or diameter, #26
      (b) 13" to 30" wide or diameter, #24
      (c) 31" to 60" wide or diameter, #22
      (d) Partitions forming plenum or suction chambers, #18 gauge with 1-1/2" x 1-1/2" x 3/16" galvanized iron angle and rivets for seam connection and stiffening.
      (e) Exposed round duct shall be dual wall insulated pipe manufactured of spiral lock seams, with minimum gage per the appropriate SMACNA Tables and per manufacturer's recommendations.
   2. Duct Construction:
      (a) Longitudinal Joints: Pittsburgh corner seams or snap lock.
      (b) Transverse Joints: Government locks riveted at corners, constructed of metal one gauge heavier than that jointing duct sections. Ducts under 20" may be jointed with transverse capstrips.
      (c) Supports: Except as otherwise specified, all duct hangers shall be constructed of 3/4" No. 16 galvanized strap, spacing not to exceed eight foot intervals. Where duct hangers exceed six feet in length, provide adequate sway bracing. All vertical ducts shall be supported on angle iron brackets.
      (d) Elbows: Made for an easy flow of air for minimum friction, inside radius equal to width of duct. Provide elbows with approved duct turns where indicated on plans or where space does not permit required radius.
      (e) Flexible Connection: At all fans, connections shall be Neoprene coated glass fiber cloth ends which are to be turned into abutting ends of sheetmetal or angle iron frames so as to form a gasket to form an air tight joint.
   3. Workmanship and construction shall meet and exceed the standards as set forth by SMACNA

C. Grilles, Registers and Diffusers:
   1. Sizes: As indicated on drawings.
   2. Supply diffusers: As indicated on drawings.
   3. Return Air Registers: As indicated on drawings.

D. Duct Insulation:
   1. Insulate all supply, make-up air and return air ducts with foil-faced blanket, see plans for additional Information. (Not required for Spiral, Round duct).
   2. Maximum 25 flame spread 50 smoke developed.

10. Execution:

A. Installation of Equipment:
   4. General:
      (a) Install all equipment where indicated on the approved Contract drawings.
      (b) Avoid interference with structure and the work of other trades: do not cut into load carrying members without the specific approval of the Architect.
      (c) Temperature control system shall be as shown on the drawings.

B. Acceptance:
   1. The system shall not be considered for acceptance until the Mechanical Subcontractor has completed work and demonstrated to the representative of the Owner, proper operation of the system and strict compliance with the specifications, particularly in reference to the following articles of' these specifications,
      (a) Testing
      (b) Cleaning
      (c) Instructions and Operating Manuals
      (d) Training of Operating Personnel
      (e) As-Built Drawings
      (f) Guarantee Certificates
      (g) Start up and Test Document
      (h) Independent Air Balance Report

C. Air Conditioning Unit Start-up and Test:
   1. All air conditioning equipment shall be started and checked by the manufacturer's factory service personnel. The installing contractor shall correct any problems arising with the equipment as recommended by the manufacturer. The manufacturer shall provide a commissioning report on the operation of the equipment, which shall be forwarded to the Architect/ Engineer.

D. Guarantee:
   1. The guarantee provision of this specification requires prompt replacement of all defective workmanship and materials occurring within one year of job acceptance. This includes all work required to remove and replace the defective item and to make all necessary adjustments to restore the entire installation to its original specified operating condition and finish at the time of acceptance.

11. Exhaust Hood and Fan System:

A. Kitchen hoods and fans complete with roof mounting curbs; collars and dampers will be furnished, to the job site by the Owner. Kitchen supply, exhaust and toilet exhaust fans, all complete with roof mounting curbs; collars and dampers will be furnished with the hood package and installed as part of the General Contract (or as specified in the plans). The Contractor will hang the hoods, set fan curbs and fans, and furnish and install all interconnecting sheet metal ductwork as, required by code and per hood manufacturer's cut sheets.

12. Testing, Adjusting and Balancing:

A. The testing, adjusting and balancing of the air conditioning and hood system will be performed by an independent technical firm employed directly by the Owner Contractor and shall not be part of the Mechanical Contractor's scope of work. The Air Conditioning Contractor shall provide and coordinate the services of qualified responsible mechanics and other personnel as required to correct, repair or replace all deficient items or conditions found during the testing and balancing period.

DIVISION 16 - ELECTRICAL

SECTION 16050 – BASIC METHODS AND REQUIREMENT

1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 specification sections, apply to work of this section.
B. Furnish and install all electrical wiring, systems, equipment and accessories in accordance with the specifications and drawings. Capacities and ratings of motors, cable, panelboards, etc., and arrangement for specified items in general are shown on drawings.
C. All ampacities herein specified or indicated on the drawings are based on copper conductors, with the conduit and raceways accordingly sized. Aluminum conductors are not permitted.

2. MINIMUM REQUIREMENTS

A. References to the National Electrical Code (NEC), Underwriters Laboratories, Inc. (UL), and National Fire Protection Association (NFPA) are a minimum installation requirement standard. Design drawings and other specification sections shall govern in those instances where requirements are greater than those specified in NEC.
B. The rules and regulations of the Federal, State, local, civil authorities and utility companies in force at the time of execution of the contract shall become a part of this specification. Work shall be in accordance with the requirements of applicable building codes noted on the title sheet of the drawing set.
C. No work shall be done unless the Superintendent of the Contractor is on the job site. Work shall be properly protected, all rubbish removed promptly, and exposed work shall be carefully cleaned prior to final acceptance.
D. The term "provide" shall include labor, materials, and equipment necessary to furnish and install, complete and operable, the item or system indicated.
E. In decisions arising from discrepancies, interpretation of Drawings and Specifications, substitutes, and other pertinent matters, the decision of the Owner's representative's approval shall be final.

3. SPECIFICATIONS AND DRAWINGS

A. Plans show location of fixtures and equipment and are intended to depict the general intent of the work in scope, layout and quality of workmanship. They are not intended to show in minute detail every or all accessories intended for the purpose of executing the work, but it is understood that such details are a part of this work.
B. Where Drawings and Specifications conflict, it shall be the responsibility of this Contractor to bring such conflict to the attention of the Architect/Engineer for clarification. In general, the Architectural Drawings shall take precedence over the Electrical Drawings with reference to building construction. All changes from the Drawings necessary to make the work conform with the building as constructed and to fit the work of other trades or to conform to the rules of authorities having jurisdiction, shall be made by the Contractor at his own expense.

4. STANDARDS
A. All material and equipment shall be listed, labeled or certified by Underwriters Laboratories, Inc., where such standards have been established. Equipment and material which are not covered by UL Standards will be accepted provided equipment and material is listed, labeled, certified or otherwise determined to meet safety requirements of a nationally recognized testing laboratory. Equipment of a class which no nationally recognized testing laboratory accepts, certifies, lists, labels, or determines to be safe, will be considered if inspected or tested in accordance with national industrial standards, such as NEMA, or ANSI. Evidence of compliance shall include certified test reports and definitive shop drawings.
B. Definitions:
   1. Listed: Equipment is "listed" if of a kind mentioned in a list which:
   a. Is published by a nationally recognized laboratory which makes periodic inspection of production of such equipment.
   b. States that such equipment meets nationally recognized standards or has been tested and found safe for use in a specified manner.
   2. Labeled: Equipment is labeled if:
   a. It embodies a valid label, symbol, or other identifying mark of a nationally recognized testing laboratory such as Underwriters Laboratories, Inc.
   b. The laboratory makes periodic inspections of the production of such equipment.
   c. The labeling indicates compliance with nationally recognized standards or tests to determine safe use in a specified manner.

   3. Certified: Equipment is "certified" if:
      a. Equipment has been tested and found by a nationally recognized testing laboratory to meet nationally recognized standards or to be safe for use in a specified manner.
      b. Production is periodically inspected by a nationally recognized testing laboratory.
      c. It bears a label, tag, or other record of certification.
   4. Nationally recognized Testing Laboratory: A testing laboratory which is approved, in accordance with OSHA regulations, by the Secretary of Labor.

5. QUALIFICATIONS (PRODUCTS AND SERVICES)

A. Manufacturers Qualifications: The manufacturer shall regularly and presently produce, as one of the manufacturer's principal products, the equipment and material specified for this project, and shall have manufactured the item for at least five years, unless otherwise noted elsewhere in the specifications or on the drawings.
B. Product Qualification:
   1. Manufacturer's product shall have been in satisfactory operation on three installations of similar size and type, as this project, for approximately three years.
   2. The Owner reserves the right to require the contractor to submit a list of installations where the products have been in operation before approval of said products.
C. Service Qualifications: There shall be a permanent service organization maintained or trained by the manufacturer which will render satisfactory service to this installation within four hours of receipt of notification that service is needed. Submit name and address of service organizations.

6. MANUFACTURED PRODUCTS

A. Materials and equipment furnished shall be of current production by manufacturers regularly engaged in the manufacture of such items, for which replacement parts should be available. Items not meeting this requirement, but which otherwise meet technical specifications, and merits of which can be established through reliable test reports or physical examination of representative samples, will be considered.
B. When more than one unit of the same class of equipment is required, such units shall be the product of a single manufacturer.
C. Equipment Assemblies and Components:
   1. All components of an assembled unit need not be products of the same manufacturer, however, the assembled unit shall be the responsibility of a single manufacturer and warranted as such.
   2. Manufacturers of equipment assemblies, which include components made by others, shall assume complete responsibility for the final assembled unit.
   3. Components shall be compatible with each other and with the total assembly for the intended service.
   4. Constituent parts which are similar shall be the product of a single manufacturer.
D. All factory wiring shall be identified on the equipment being furnished and on all wiring diagrams.

7. EQUIPMENT REQUIREMENTS

A. Equipment voltage ratings shall be in accordance with the requirements indicated on the drawings or as specified.
B. Prior to bid, written approval shall be obtained by the Contractor for any equipment that differs from those specified on the drawings and specifications. The Contractor shall be prepared to submit samples of the equipment when requested at no cost to the Owner.
   1. The Contractor shall furnish drawings showing all installation details, shop drawings, technical data and other pertinent information as required to determine that the equipment is equivalent in quality and function to the equipment specified.
   2. Approval by the Owner's construction manager of the equal equipment does not relieve the Contractor of the responsibility of furnishing and installing the equipment at no additional cost to the Owner.
   3. Any other items required for the satisfactory installation of the equal equipment shall be furnished and installed at no additional cost to the Owner. This includes but shall not be limited to additions or changes to branch circuits, circuit protective devices, conduits, wire, feeders, controls, panels and correlation with other work, subject to the jurisdiction and approval of the Architect/Engineer.
C. Catalogue numbers, where given, are intended to give a basis for design, quality and function. Any other incidental equipment needed for a complete and functional installation shall be provided at no additional cost.
D. EQUIPMENT PROTECTION: Equipment and material shall be protected during shipment and storage against physical damage, dirt, moisture, cold and rain.
E. During installation, equipment, controls, controllers, circuit protective devices, etc., shall be protected against entry of foreign matter; and be vacuum cleaned both inside and outside before testing, operating and painting.
F. Damaged equipment shall be, as determined by the Owner's construction manager, placed in first class operating condition or be returned to the source of supply for repair or replacement or replaced at owner discretion.
G. Painted surfaces shall be protected with factory installed removable heavy kraft paper, sheet vinyl or equal.
H. Damaged paint on equipment and materials shall be refinished with the same quality of paint and workmanship as used by the manufacturer so repaired areas are not obvious or replaced at owner discretion.

8. WORK PERFORMANCE

A. Arrange, phase and perform work to assure electrical service for other buildings at all times.
B. New work shall be installed and connected to existing work neatly and carefully. Disturbed or damaged work shall be replaced or repaired to its prior conditions.
C. Coordinate location of equipment and conduit with other trades to minimize interferences.
D. Obtain and pay for all required installation inspections and deliver certificates approving installations to the Owner unless directed otherwise.

9. EQUIPMENT INSTALLATION AND REQUIREMENTS

A. Equipment location shall be as close as practical to locations shown on the drawings. Where architectural features govern location of work, refer to architectural drawings.
B. Working spaces shall not be less than specified in the National Electrical Code for all voltages specified.
C. Inaccessible Equipment:
   1. Where the Owner/Architect/Engineer determines that the Contractor has installed equipment not conveniently accessible for operation and maintenance, equipment shall be removed and reinstalled as directed at no additional cost to the Owner.
   2."Conveniently accessibility" is defined as being capable of being reached without the use of ladders, or without climbing or crawling under or over obstacles such as motors, pumps, belt guards, transformers, piping, and duct work.
D. Equipment and Material:
   1. New equipment and material shall be installed, unless otherwise specified.
   2. Equipment and material shall be designed to assure satisfactory operation and operating life for environmental conditions where being installed. NEC and other code requirements shall apply to the installation in areas requiring special protection such as explosion-proof, watertight and weatherproof construction.
E. Utility Services:
1. Determine utility connection requirements and include in the base bid all costs to the Owner for utility service.
2. Include all costs for temporary service, temporary routing of service or any other requirements of a temporary nature associated with the utility service.
F. Continuity of Service:
1. No service shall be interrupted or changed without permission from the Architect and the Owner. Written permission shall be obtained before any work is started.
2. When interruption of services is required, all persons concerned shall be notified and a prearranged time agreed upon.
G. Concrete Work:
1. Provide all cast-in-place concrete shown on the documents unless noted otherwise. Concrete work shall conform to all applicable Division 2 and 3 specification sections.
2. Provide all anchor bolts, metal shapes and templates required to be cast in concrete or used to form concrete for support of electrical equipment.

10. EQUIPMENT IDENTIFICATION

A. In addition to the requirements of the National Electrical Code, install an identification nameplate which will clearly indicate information required for use and maintenance of items such as switchboard, panelboards, cabinets, safety switches, separately enclosed circuit breakers, motor starters, communications systems cabinets, control devices and other significant equipment.
B. Nameplates shall be laminated white phenolic resin with a black core with engraved lettering, a minimum of 3/16-inch high. Nameplates that are furnished by manufacturer as a standard catalog item, or where other method of identification is herein specified, are exceptions. Hand written marker is not acceptable.

11. SHOP AND ERECTION DRAWINGS AND SAMPLES

A. The Architect/Engineer's approval shall be obtained for all equipment and material before delivery to the job site. Delivery, storage or installation of equipment or material which has not had prior approval will not be permitted at the job site. Submittals shall be made for all equipment and systems as indicated in the respective specification section.
B. All submittals shall include adequate descriptive literature, catalog cuts, shop drawings and other data necessary for the Architect/Engineer to ascertain that the proposed equipment and materials comply with specification and drawing requirements. Catalog cuts submitted for approval shall be legible and clearly identify equipment being submitted.
C. Shop and erection drawing submittals shall conform to the requirements of the General Conditions and Division-1 specifications except as modified herein.
D. Submit required and/or requested shop and erection drawings, for review by Architect/Engineer before ordering or installing any equipment or material. Equipment or material ordered or installed before Architect/Engineer review may not be accepted and may have to be removed from the project if deemed unacceptable.
E. Shop drawings shall consist of manufacturer's scale drawings, cuts or catalogs, including descriptive literature which shall clearly indicate the construction, material, physical dimensions, wiring diagrams and complete operating data clearly marked for each item. Data of general nature will not be accepted.
F. Shop drawings shall be submitted with a minimum of (2) sets. One set will be retained by the engineer and one will be returned to the contractor. All drawings are to be submitted no later than 30 days after the contract has been awarded.
   1. Coordination drawings shall show major elements, components, and systems of mechanical equipment and materials in relationship with other building components. Prepare drawings to an accurate scale of 1/4"=1'-0" or larger. Indicate the locations of all equipment and materials, including clearances for installing and maintaining insulation, servicing and maintaining equipment, valve stem movement, and similar requirements. Indicate movement and positioning of large equipment into the building during construction.
G. Submittals for individual systems and equipment assemblies which consist of more than one item or component shall be made for the system or assembly as a whole. Partial submittals will not be considered for approval. Submittals shall be submitted for all applicable products and materials specified in each individual section of these specifications.

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT
02.15.2023

Cheddar's SCRATCH KITCHEN

Issue Date: 02.15.2023

REVISION INFORMATION

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
SPECIFICATIONS

AS7

H. Make submittals for the equipment and materials in accordance with the following:
1. Mark the submittals, "SUBMITTED UNDER SECTION_______".
2. Submittals shall be marked to show specification reference including the section and paragraph numbers.
3. The submittals shall include the following:
a. Information that confirms compliance with contract requirements. Include the manufacturer's name, model or catalog numbers, catalog information, technical data sheets, shop drawings, pictures, nameplate data and test reports as required. Provide any additional information specifically requested in the individual specification section or on the drawings.
b. Elementary and interconnection wiring diagrams for fire alarm, sound system, TV system and other communication systems and equipment assemblies. All terminal points and wiring shall be identified on wiring diagrams.
c. Parts list which shall include those replacement parts recommended by the equipment manufacturer, quantity of parts, current price and availability of each part.
I. Shop drawings on paper 11"X17" or smaller in size shall be submitted in tabbed and indexed three ring binder. The binder shall not exceed 11-5/8" height. Partial submittals are unacceptable. The index shall indicate the related specification section number.
J. A Fee will be charged for Engineering review of drawings received after the time allotted as described in "D" above or for plans that have been rejected two or more times due to non-compliance or incompleteness. The fee will be determined by the Architect/Engineer and will accompany the re-submittal in the form of a cashiers check or money order made payable to the Engineer.
K. The General Contractor will certify that all electrical shop drawings are in conformance with the plans and specifications. Deviations from the plans and specifications shall be noted, and the specific area of the deviation clouded and in contrasting color (green) with a complete explanation for the reasons for the deviation. Any redesign of the system shall be Certified by a Professional Engineer, and will be accompanied by the fees as described in "F" above.
L. Carefully examine all shop drawings and mark-up as necessary before submitting to the Architect/Engineer for review. The consultant will only consider shop drawings bearing the contractor's stamp of approval.
M. The engineer's review shall not relieve the contractor from the responsibility for deviations from drawings and specifications. The engineer's review shall be construed to apply only to general arrangement and shall not relieve the contractor from the responsibility for the correctness of details and dimensions and provision of the correct equipment.
N. The contractor shall retain copies of all reviewed shop drawings on the job site for reference.
O. In addition to the requirement of SUBMITTALS, the Owner reserves the right to request the manufacturer to arrange for the Owner's representative(s) to see typical active systems in operation, when there has been no prior experience with the manufacturer or the type of equipment being submitted.

12. CUTTING, PATCHING, EXCAVATION, BACKFILL, AND LAYOUT

A. Provide openings and excavation required for the installation of the electrical work. Patch work and backfill as required. Finished work shall match the existing adjoining work.
B. Verify all conditions affecting the work to be performed under this contract.
C. Carefully verify measurements at the site, determine the exact location of chases and openings required. Provide sleeves, inserts, and hangers as required. No columns, beams, joists, building foundations nor any other structural building component shall be cut, drilled or disturbed in any way. Conflicts shall immediately be brought to the attention of the Architect/Engineer.
D. All excavation on sites containing existing buildings and existing services, shall be done with hand shovel to avoid damage to existing services. Where hand shovel is not practical extreme caution shall be taken when performing excavation. The contractor will be resposible for locating any existing utilities. Any damage incurred by the Contractor shall be repaired by the Contractor in a manner approved by the Owner's construction manager at no cost and with no extension of time limitation.

13. EXPERIENCE

A. The Contractor performing this work shall be a licensed, reputable firm, regularly performing the type of work incorporated in this project and who also maintains, as part of the firm, a service department with qualified personnel who regularly perform this type of work. The Contractor shall, upon request, show evidence of at least three jobs of similar character and size installed within the preceding two years.

14. ELECTRICAL WORK FOR MECHANICAL SYSTEMS

A. Factory installed starters, controllers, and control equipment mounted in manufactured mechanical equipment necessary for mechanical equipment operation shall be furnished under Division 15 Mechanical.
B. Power wiring for motors and installation of starters shall be under Division 16 Electrical.
C. Temperature, humidity, pressure and similar controls essential to the operation of mechanical systems, and wiring and conduit thereof, including interlock wiring, shall be under Division 15 of Specifications, installed in accordance with requirements of Division 16.
D. Motors shall be furnished under Division 15 Mechanical of capacity required to operate equipment specified, but shall not be less than that specified.
E. All low voltage (120V and under) temperature control wiring for Division 15 equipment shall be provided under by Division 15, installed in accordance with requirements of Division 16.
F. Division 15 shall provide conduit when required for control wiring, installed in accordance with Division 16 requirements.

15. MOTORS

A. All motors shall be furnished and installed under Division 15 Mechanical and shall be wired under Division 16 Electrical.

16. REMOVAL OF RUBBISH

A. Contractor shall keep premises free from accumulations of waste material or rubbish caused by his employees or work. At completion of work, he shall remove all his tools, scaffolding, surplus materials, and rubbish from building and site. He shall leave premises and his work in a clean orderly condition acceptable to the Owner.

17. QUIET OPERATION AND VIBRATION

A. All equipment provided under this section shall operate under all conditions of load free of objectionable sound and vibration. Sound and vibration conditions considered objectionable shall be corrected in an approved manner.
B. Vibration and sound control shall be by means of approved vibration eliminators or sound attenuators in a manner as specified and as recommended by the manufacturer.

18. CLEANING AND ADJUSTMENTS

A. Upon completion of the work, Contractor shall clean and re-lamp all light fixtures, clean and identify all equipment, adjust and test all equipment and apparatus which he has installed and make certain such apparatus and mechanisms are in proper working order and ready to test.
B. During construction protect all conduit and equipment from damage and dirt. Cap the open ends of all conduit and equipment.

19. STORAGE OF MATERIALS

A. All materials stored on site shall be properly protected from injury or deterioration. Materials shall not be stored in contact with ground or floor.
B. Do not remove manufacturer's packing materials until ready to install. Materials showing signs of corrosion, improper handling or storage shall be replaced at no cost to the Owner.
C. Provide continuous protection for all equipment already installed.

20. WATERPROOFING

A. Where any work pierces waterproofing including waterproof concrete, the method of installation shall be as approved by the Owner before the work is done.
B. Provide all necessary sleeves, caulking and flashing required to make openings absolutely watertight. Waterproof flashing materials shall be compatible with base materials.

21. TESTS

A. Contractor shall make all tests required to establish the adequacy, quality, safety, completed status and satisfactory operation of all systems to the satisfaction of the Owner's construction manager. Provide all instruments, labor and services necessary to conduct tests.

22. INSTRUCTIONS

A. Fully instruct Owner's personnel in the care and operation of electrical systems, including all communications, sound and fire alarm systems and furnish a letter to the Owner advising the particular person(s) who have received such instruction.

23. GUARANTEE

A. Equipment shall be started, tested, adjusted, and placed in satisfactory operating condition. Furnish a letter addressed to the Owner advising that the completed systems have been installed in accordance with the Plans and Specifications and that they are in proper operating condition. The Owner shall receive a written guarantee covering all defects in workmanship and material for a period of one year from date of final acceptance. Any defects appearing within this year period shall be repaired without additional cost to the Owner.

24. ACCEPTANCE

A. Before requesting final inspection:
1. Complete all work required. If any items are held in abeyance as incomplete for final inspection, list such items together with explanation for delay.
2. Submit statement that equipment is properly installed, adjusted, tested and operation is satisfactory.
3. Certify in writing to the Architect/Engineer that the Owner's representative has been instructed as to the care and operation of the system and that catalog service and maintenance information has been turned over to the Architect/Engineer.
4. Submit copy of written guarantee.
5. Submit copy of other data as may be outlined in these specifications.
B. Copies of the above data shall be submitted to the Architect/Engineer prior to requesting final inspection.

25. SINGULAR NUMBER

A. Where any device or part of equipment is referred to in these specifications in the singular number (such as "the switch"), such reference shall be deemed to apply to as many such devices as are required to complete the installation as shown on the drawings.

SECTION 16110 – RACEWAYS

1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 specification sections, apply to work of this section.
B. This section is a Division-16 Basic Electrical Materials and Methods section, and is part of each Division-16 section making reference to electrical raceways specified herein.

2. DESCRIPTION OF WORK

A. Extent of raceway work is indicated by drawings and schedules. Types of raceways specified in this section include the following:
1. Electrical metallic tubing (EMT).
2. Liquid tight flexible metal conduit.
3. Rigid metal conduit.
4. Flexible metal conduit.
5. Rigid non-metallic conduit.

3. QUALITY ASSURANCE

A. Manufacturers: Firms regularly engaged in manufacture of raceway systems of types and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.
B. Installer's Qualifications: Firm with at least 3 years of successful installation experience on projects with electrical raceway work similar to that required for this project.
C. Codes and Standards:
1. NEMA Compliance: Comply with applicable requirements of NEMA Standards Publications pertaining to raceways.
2. UL Compliance and Labeling: Comply with applicable requirements of UL safety standards pertaining to electrical raceway systems. Provide raceway products and components which have been UL-listed and labeled.
3. NEC Compliance: Comply with applicable requirements of NEC pertaining to construction and installation of raceway systems.

4. SUBMITTALS

A. Product Data: Submit manufacturer's technical product data, including specifications and installation instructions, for each type of raceway system required. Include data substantiating that materials comply with requirements.

5. METAL CONDUIT AND TUBING

A. General: Provide metal conduit, tubing, and fittings of types, grades, sizes, and weights (wall thicknesses) for each service indicated.
B. Rigid Steel Conduit: Provide rigid steel, zinc-coated, threaded type conforming to FS WW-C-581, ANSI C80.1 and UL 6.
C. Rigid Metal Conduit Fittings: Cast malleable iron, galvanized or cadmium plated, conforming to FS W-F-408, ANSI C80.4.
1. Use compression type fittings for connections.
2. Use compression type fittings for other miscellaneous connections.
D. Electrical Metallic Tubing (EMT): FS WW-C-563, ANSI C80.3 and UL 797.
E. EMT Fittings: FS W-F-408, ANSI C80.4. Die cast or malleable iron.
1. Use compression fittings for raintight connections.
2. Use compression type for concrete type connections.
3. Use compression type fittings for miscellaneous connections.
F. Liquid-Tight Flexible Metal Conduit: Provide liquid-tight flexible metal conduit; construct of single strip, flexible, continuous, interlocked, and double-wrapped steel; galvanized inside and outside; coat with liquid-tight jacket of flexible polyvinyl chloride (PVC). Shall be Sealtite or equal.
G. Liquid-Tight Flexible Metal Conduit Fittings: FS W-F-406, Type 1, Class 3, Style G. Provide cadmium plated, malleable iron fittings with compression type steel ferrule and neoprene gasket sealing rings, with insulated, or non-insulated throat.
H. Flexible Metal Conduit: FS WW-C-566 and UL 1. Formed from continuous length of spiral wound, interlocked zinc-coated strip steel.
I. Flexible Metal Conduit Fittings: Provide conduit fittings for use with flexible steel conduit of threadless hinged clamp type.
1. Straight Terminal Connectors: One piece body, female end with clamp and deep slotted machine screw for securing conduit, and male threaded end provided with locknut.
2. 45o or 90o Terminal Angle Connectors: Two-piece body construction with removable upper section, female end with clamp and deep slotted machine screw for securing conduit, and male threaded end provided with locknut.

6. NONMETALLIC CONDUIT

A. General: Provide nonmetallic conduit, ducts, and fittings of types, sizes, and weights for each service indicated. Where types and grades are not indicated, provide proper selection determined by Installer to fulfill wiring requirements which comply with provisions of NEC for raceways.
B. Electrical Plastic Conduit:
1. Heavy Wall Conduit: Schedule 40, 90 C, UL-rated, construct of polyvinyl chloride and conforming to NEMA TC-2, for direct burial, or normal above ground use, UL-listed and in conformity with NEC Article 347, ANSI C33.91.
C. PVC Conduit and Tubing Fittings: NEMA TC 3, mate and match to conduit or tubing type and material.

7. MANUFACTURERS

A. Subject to compliance with requirements, provide conduit bodies of one of the following:
1. Appleton Electric; Div of Emerson Electric Co.
2. Arrow-Hart Div; Crouse-Hinds Co.
3. Bell Electric Div; Square D Co.
4. Gould, Inc.
5. Killark Electric Mfg. Co.
6. O-Z/Gedney Div; General Signal Co.
7. Spring City Electrical Mfg. Co., or equivalent.

8. INSPECTION

A. Examine areas and conditions under which raceways are to be installed, and substrate which will support raceways. Notify Contractor in writing of conditions detrimental to proper completion of the work. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Installer.

9. INSTALLATION OF RACEWAYS

A. General: Install raceways as indicated; in accordance with manufacturer's written installation instructions, and in compliance with NEC, and NECA's "Standards of Installation". Install units plumb and level, and maintain manufacturer's recommended clearances.
B. Coordinate with other work including wires/cables, boxes, and panel work, as necessary to interface installation of electrical raceways and components with other work.

10. INSTALLATION OF CONDUITS

A. General: Install concealed conduits in new construction work, either in walls, slabs, or above hung ceilings. Run conduits concealed in existing work where practical or specifically indicated on the drawings.
1. Mechanically fasten together metal conduits, enclosures, and raceways for conductors to form continuous electrical conductor. Connect to electrical boxes, fittings, and cabinets to provide electrical continuity and firm mechanical assembly.
2. Avoid use of dissimilar metals throughout system to eliminate possibility of electrolysis. Where dissimilar metals are in contact, coat surfaces with corrosion inhibiting compound before assembling.
3. Install miscellaneous fittings such as reducers, chase nipples, 3-piece unions, split couplings, and plugs that have been specifically designed and manufactured for their particular application. Install expansion fittings in raceways every 200' linear run or wherever structural expansion joints are crossed.
B. Conduit Installation: Follow minimum requirements in all areas as follows:
1. Use rigid steel galvanized conduit in service splines, where exposed to weather or subject to saturation with liquids, or subject to possible physical damage from vehicles or heavy machinery.
2. Use steel EMT above hung ceilings in offices, corridors, toilets, and lab areas, and in spaces with exposed ceilings.
3. Use rigid steel conduit or PVC heavy wall (Schedule 40) when raceways run below grade, under floors on grade or in concrete. All bends and elbows greater than 45 degrees shall be galvanized rigid steel conduit or schedule 40 pvc. All risers to cabinets and boxes when conduit is to be exposed shall be rigid steel conduit.
4. Conduit in walls to recessed panels and boxes shall be in accordance with NEC. PVC up to first point of termination with 4'-0" maximum in wall and EMT above 4'-0".
5. Use flexible conduit in movable partitions and from outlet boxes to lighting fixtures, and final 24" of connection to motors, control items or any equipment subject to movement or vibration, and in cells of precast concrete panels.
6. Use liquid-tight flexible conduit where subjected to one or more of the following conditions:
a. Exterior location.
b. Moist or humid atmosphere where condensate can be expected to accumulate.
c. Corrosive atmosphere.
d. Subjected to water spray or dripping oil, water, or grease, including kitchen areas.
7. Use hot-dipped galvanized conduit where conduit is routed outdoors or in anyway exposed to weather.
8. Electrical contractor will be responsible for the following for all underground conduits:
a. Trenching and Excavation
b. Backfill
c. Compaction
9. MC cable may be used only where approved for use by the owner in advance of install, approved by the local authority having jurisdiction and approved by the Engineer. Where used, MC cable shall be concealed and supported in accordance with NEC.
C. Cut conduits straight, properly ream, and cut threads for heavy wall conduit deep and clean.
D. Field bend conduit with benders designed for purpose so as not to distort nor vary internal diameter.
E. Minimum conduit size shall be 1/2" unless noted otherwise. Homeruns shall be a minimum 3/4".
F. Fasten conduit terminations in sheet metal enclosures by two (2) locknuts, and terminate with bushings. Install locknuts inside and out side enclosure.
G. Conduits are not to cross pipe shafts, or ventilating duct openings.
H. Keep conduits a minimum distance of 6" from parallel runs of flues, hot water pipes or other sources of heat. Wherever possible, install horizontal raceway runs above water and steam piping.I. Use of running threads at conduit joints and terminations is prohibited. Where required, use 3-piece union or split coupling.
J. Complete installation of electrical raceways before starting installation of cables/wires within raceways.
K. Install conduits so as not to damage or run through structural members. Avoid horizontal or cross runs in building partitions or side walls.
L. Exposed Conduits:
1. In no case shall conduit be exposed to view in areas accessible to the public nor in any kitchen or other food services areas. The contractor shall be responsible for obtaining written approval for all and any exposed conduit routing prior to installation. Any non-approved exposed conduit will be subject to removal and re-routing by the contractor at no additional expense to the owner. The contractor shall be responsible for coordinating all conduit installation with structural members, finishes, sprinkler piping, ductwork, lighting, etc.
2. Install any approved exposed conduits and extensions from concealed conduit systems neatly, parallel with, or at right angles to walls of building.
3. Install exposed conduit work as not to interfere with ceiling inserts, lights or ventilation ducts or outlets.
4. Support all conduits by use of hangers, clamps, or clips. Support conduits on each side of bends and on spacing not to exceed following: up to 1": 6'-0"; 1-1/4" and over: 8'-0". All conduits shall be adequately supported to prevent any noticable deflection, vibration or rattle.
M. Conduit Fittings:
1. Construct locknuts for securing conduit to metal enclosure with sharp edge for digging into metal, and ridged outside circumference for proper fastening.
2. Bushings for terminating conduits smaller than 1- 1/4" are to have flared bottom and ribbed sides, with smooth upper edges to prevent injury to cable insulation.
3. Install insulated type bushings for terminating conduits 1-1/4" and larger. Bushings are to have flared bottom and ribbed sides. Upper edge to have phenolic insulating ring molded into bushing.
4. All bushings of standard or insulated type to have screw type grounding terminal.
5. Miscellaneous fittings such as reducers, chase nipples, 3-piece unions, split couplings, and plugs to be specifically designed for their particular application.
N. Concealed Conduits:
1. Metallic raceways installed underground or in floors below grade, or outside are to have conduit threads painted with corrosion inhibiting compound before couplings are assembled. Draw up coupling and conduit sufficiently tight to ensure watertightness.
2. Conduit in concrete slabs: Separate conduits by not less than diameter of largest conduit to ensure proper concrete bond. Conduits must have a minimum of three-quarter inch (3/4") concrete cover.
3. Embedded conduit diameter is not to exceed one-third (1/3) of slab thickness. Conduit shall not be run in slabs less than 3 inches thick.
O. Underground Duct Banks and Underground Conduits: All underground conduits shall be installed per the National Electrical Code, in accordance with standard industry practices and in accordance with other sections of these specifications. Conduits in duct banks shall be neatly and securely installed in straight lines with manufactured elbows used for all turns and bends. Provide all required trenching, excavation, backfill, compaction, supports, manholes, etc. for a complete installation. Trenching, excavation, backfill and compaction shall be performed in accordance with applicable Division 2 and Division 3 sections of these specifications.
P. Low Voltage Control:
1. Mechanical contractor (Division 15) to provide and install all necessary wire and raceway (EMT conduit) for low voltage control such as thermostats, timers etc., unless specifically shown otherwise on the drawings. Raceways shall be installed in accordance with Division 16 sections. Final wire connections shall be by mechanical contractor.

11. INSTALLATION OF RACEWAYS AND WIREWAYS

A. General: Mechanically assemble metal enclosures, and raceways for conductors to form continuous electrical conductor, and connect to electrical boxes, fittings and cabinets as to provide effective electrical continuity and rigid mechanical assembly.
1. Avoid use of dissimilar metals throughout system to eliminate possibility of electrolysis. Where dissimilar metals are in contact, coat all surfaces with corrosion inhibiting compound before assembling.
2. Install expansion fittings in all raceways wherever structural expansion joints are crossed.
3. Make changes in direction of raceway run with proper fittings, supplied by raceway manufacturer. No field bends of raceway sections will be permitted.
4. Properly support and anchor raceways for their entire length by structural materials. Raceways are not to span any space unsupported. Supporting conduits from ceiling grid, other conduits, ductwork or other non-structural members will not be permitted.
5. Use boxes as supplied by raceway manufacturer wherever junction, pull or devices boxes are required. Standard electrical "handy" boxes, etc. shall not be permitted for use with surface raceway installations.

12. COMMUNICATIONS SYSTEMS RACEWAY

A. Communications systems raceways shall be provided for each telephone, data, security, sound, ITV, and fire alarm outlet or device indicated on the drawings. Conduit with pull string shall be as indicated on the drawings and as required for each system.

SECTION 16120 – WIRES AND CABLES

1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
B. This section is a Division-16 Basic Electrical Materials and Methods section, and is part of each Division-15 and -16 section making reference to electrical wires and cables specified herein.

2. DESCRIPTION OF WORK

A. Extent of electrical wire and cable work is indicated by drawings and schedules.
B. Types of electrical wire, cable, and connectors specified in this section include the following:
1. Copper conductors.
2. Fixture wires.
3. Flexible cords and cables.
4. Wirenut connectors.
C. Applications of electrical wire, cable, and connectors required for project are as follows:
1. For motor-branch circuits.
2. For power distribution circuits
3. For lighting circuits
4. For appliance and equipment circuits

3. QUALITY ASSURANCE

A. Manufacturers: Firms regularly engaged in manufacture of electrical wire and cable products of types, sizes, and ratings required, whose products have been in satisfactory use in similar service for not less than 5 years.
B. Installer's Qualifications: Firm with at least 3 years of successful installation experience with projects utilizing electrical wiring and cabling work similar to that required for this project.
C. NEC Compliance: Comply with NEC requirements as applicable to construction, installation and color coding of electrical wires and cables.
D. UL Compliance: Comply with applicable requirements of UL Std 83, "Thermoplastic-Insulated Wires and Cables", and Std 486A, "Wire Connectors and Soldering Lugs for Use with Copper Conductors".
E. UL Compliance: Provide wiring/cabling and connector products which are UL-listed and labeled.
F. NEMA/ICEA Compliance: Comply with NEMA/ICEA Std Pub/ No.'s WC 5, "Thermoplastic-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy", and WC-30, "Color Coding of Wires and Cables", pertaining to electrical power type wires and cables.
G. IEEE Compliance: Comply with applicable requirements of IEEE Stds 82, "Test Procedures for Impulse Voltage Tests on Insulated Conductors", and Std 241, "IEEE Recommended Practice for Electric Power Systems in Commercial Buildings" pertaining to wiring systems.
H. ASTM Compliance: Comply with applicable requirements of ASTM B1, 2, 3, 8, and D-753. Provide copper conductors with conductivity of not less than 98% at 20oC (68oF).

4. AVAILABLE MANUFACTURERS

A. Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:
1. Wire and Cable:
a. American Wire and Cable Co.
b. Anaconda-Ericsson Inc; Wire and Cable Div.
c. Belden Div; Cooper Industries
2. Connectors:
a. AMP, Inc.
b. Appleton Electric Co.
c. Burndy Corporation
d. Thomas and Betts Corp.

5. WIRES, CABLES, AND CONNECTORS

A. General: Provide electrical wires, cables, and connectors of manufacturer's standard materials, as indicated by published product information; designed and constructed as recommended by manufacturer, for a complete installation, and for application indicated. Except as otherwise indicated, provide copper conductors with conductivity of not less than 98% at 20oC (68oF).
B. Building Wires: Provide factory-fabricated wires of sizes, ampacity ratings, and materials for applications and services indicated. Where not indicated, provide proper wire selection as determined by Installer to comply with project's installation requirements, NEC and NEMA standards. Select from the following UL types, those wires with construction features which fulfill project requirements:
1. Type THW, THHN, THWN, THHW, THHN/THWN: Unless otherwise indicated, all conductors for dry locations requiring a conductor temperature rating 75oC (167oF) or less. Insulation shall be flame retardant, moisture and heat resistant, thermoplastic. Conductor shall be annealed copper.
2. Type THWN, THHW, THHN/THWN: Unless otherwise indicated, all conductors for wet or dry locations requiring a conductor temperature rating of 75oC (167oF) or less. Insulation shall be flame retardant, moisture and heat resistant thermoplastic. Conductor shall be annealed copper.
3. Type THHN, THHW: Unless otherwise indicated, all conductors for dry locations requiring a conductor temperature rating of 90oC (194oF) or less. Insulation shall be flame retardant, moisture and heat resistant thermoplastic. Conductor shall be annealed copper.
4. Conductors for use at 600 volts or below shall be 600 volt rated. Wire No. 12 and smaller may be solid or stranded and wire No. 10 and larger shall be stranded only. Stranded conductors shall terminate in crimp type lugs.
5. Motor circuit branch wiring and associated control wiring: Provide type THHN insulation in dry and damp locations. Provide type THHW insulation in wet locations. All motor wiring to be stranded copper.
6. Wiring in fluorescent fixture channels: Provide conductors with a 90°C temperature rating, type THHN or TFFN insulation.
C. Cables: Provide UL-type factory-fabricated cables of sizes, ampacity ratings, and materials and jacketing/sheathing as indicated for services indicated. Where not indicated, provide proper selection as determined by Installer to comply with installation requirements, NEC and NEMA standards.
D. Connectors:
1. General: Provide UL-type factory-fabricated, metal connectors of sizes, ampacity ratings, materials, types and classes for applications and for services indicated. Where not indicated, provide proper selection as determined by Installer to comply with project's installation requirements, NEC and NEMA standards. Select from the following, those types, classes, kinds, and styles of connectors to fulfill project requirements:
a. Type: Pressure.
b. Class: Insulated.
c. Kind: Copper (for Cu to Cu connection).
d. Style: Butt connection.
e. Style: Elbow connection.
f. Style: Combined "T" and straight connection.
g. Style: "T" connection.
h. Style: Split-bolt parallel connection.
i. Style: Tap connection.
j. Style: Pigtail connection.
k. Style: Wirenut connection.
2. All connectors shall be rated 75°c.

6. INSTALLATION OF WIRES AND CABLES

A. General: Install electrical cables, wires, and wiring connectors as indicated, in compliance with applicable requirements of NEC, NEMA, Ul, and NECA's "Standard of Installation", and in accordance with recognized industry practices.
B. Coordinate wire/cable installation work including electrical raceway and equipment installation work, as necessary to properly interface installation of wires/cables with other work.
C. Pull conductors simultaneously where more than one conductor is being installed in the same raceway.
D. Use pulling compound or lubricant, where necessary; compound used must not deteriorate conductor or insulation.
E. Use pulling means including, fish tape, cable, rope and basket weave or wire/cable grips which will not damage cables or raceway. Any cable damaged during installation shall be completely replaced.
F. Keep conductor splices to minimum. No joints shall be made in conductor except at outlet boxes or splice boxes. Newly installed conductors shall not be spliced unless specifically noted on the drawings.
G. Install splices and tapes which possess equivalent-or-better mechanical strength and insulation ratings than conductors being spliced.
H. Use splice and tap connectors which are compatible with conductor material.
I. Tighten electrical connectors and terminals, including screws and bolts, in accordance with manufacturer's published torque tightening values. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL Std 486A and B.
J. At least eight inches (8") of slack wire shall be left in every outlet box whether it be in use, or left for future use.
K. Color code wiring as follows:
1. 120/208 volt, 3 phase, 4 wire: phase A-black, phase B-red, phase C-blue, neutral-white; ground conductor-green.
L. Wire and cable boxes and reels shall bear the date of manufacture and must not bear dates by more than one year preceeding contract date.
M. Minimum conductor sizes, except as specifically identified on the drawings, shall be as follows:
1. No. 12 - Branch circuits of any kind, except as specified otherwise below.
2. No. 14 - Signal systems, fire alarm system, unless specifically noted otherwise.
3. No. 10 - Exit light circuits, emergency circuits, security lighting, security systems circuits and exterior light circuits.

7. FIELD QUALITY CONTROL

A. Prior to energization, test wires and cables for electrical continuity and for short-circuits.

SECTION 16135 – ELECTRICAL BOXES AND FITTINGS

1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
B. This section is a Division-16 Basic Electrical Materials and Methods section, and is a part of each Division-16 section making reference to electrical wiring boxes and fittings specified herein.

2. DESCRIPTION OF WORK

A. Extent of electrical box and associated fitting work is indicated by drawings and schedules.
B. Types of electrical boxes and fittings specified in this section include the following:
1. Outlet boxes
2. Junction boxes
3. Pull boxes
4. Floor boxes
5. Bushings
6. Locknuts
7. Knockout closures
8. Manholes and handholes

3. QUALITY ASSURANCE

A. Manufacturers: Firms regularly engaged in manufacture of electrical boxes and fittings, of types, sizes, and capacities required, whose products have been in satisfactory use in similar service for not less than 3 years.
B. Installer's Qualifications: Firm with at least 3 years of successful installation experience on projects utilizing electrical boxes and fittings similar to those required for this project.
C. NEC Compliance: Comply with NEC as applicable to construction and installation of electrical wiring boxes and fittings.
D. UL Compliance: Comply with applicable requirements UL 50, UL 514-Series, and UL 886 pertaining to electrical boxes and fittings. Provide electrical boxes and fittings which are UL-listed and labeled.
E. NEMA Compliance: Comply with applicable requirements of NEMA Stds/Pub No.'s OS1, OS2, and Pub 250 pertaining to outlet and device boxes, covers, and box supports.

4. FABRICATED MATERIALS

A. Outlet Boxes: Provide galvanized coated flat rolled sheet-steel outlet wiring boxes, of shapes, cubic inch capacities, and sizes, including box depths as indicated, suitable for installation at respective locations. Construct outlet boxes with mounting holes, and with cable and conduit-size knockout openings in bottom and sides. Provide boxes with threaded screw holes, with corrosion-resistant cover and grounding screws for fastening surface and device type box covers, and for equipment type grounding.
1. Outlet Box Accessories: Provide outlet box accessories as required for each installation, including box supports, mounting ears and brackets, wallboard hangers, box extension rings, fixture studs, cableclamps and metal straps for supporting outlet boxes, which are compatible with outlet boxes being used to fulfill installation requirements for individual wiring situations. Choice of accessories is Installer's code-compliance option.
B. Device Boxes: Provide galvanized coated flat rolled sheet-steel non-gangable device boxes, of shapes, cubic inch capacities, and sizes, including box depths as indicated, suitable for installation at respective locations. Construct device boxes for flush mounting with mounting holes, and with cable-size knockout openings in bottom and ends, and with threaded screw holes in end plates for fastening devices. Provide cable clamps and corrosion-resistant screws for fastening cable clamps, and for equipment type grounding.
1. Device Box Accessories: Provide device box accessories as required for each installation, including mounting brackets, device box extensions, switch box supports, plaster ears, and plaster board expandable grip fasteners, which are compatible with device boxes being utilized to fulfill installation requirements for individual wiring situations. Choice of accessories is Installer's code-compliance option.
C. Available Manufacturers: Subject to compliance with requirements, manufacturers offering outlet boxes which may be incorporated in the work include, but are not limited to, the following:
1. Appleton Electric;
2. Bell Electric;
3. Eagle Electric Mfg. Co.; Inc.
4. Midland-Ross Corp.
5. OZ/Gedney; General Signal Co.
6. Pass and Seymour, Inc.
7. RACO Div.; Harvey Hubbell Inc.
8. Thomas & Betts Co.
D. Raintight Outlet Boxes: Provide corrosion-resistant cast-metal raintight outlet wiring boxes, of types, shapes and sizes, including depth of boxes, with threaded conduit holes for fastening electrical conduit, cast-metal face plates with spring hinged watertight caps suitably configured for each application, including face plate gaskets and corrosion-resistant plugs and fasteners.
E. Available Manufacturers: Subject to compliance with requirements, manufacturers offering raintight outlet boxes which may be incorporated in the work include, but are not limited to, the following:
1. Appleton Electric;
2. Crouse-Hinds Co.
3. Bell Electric;
4. Harvey Hubbell, Inc.
5. OZ/Gedney; General Signal Co.
6. RACO Div.
F. Junction and Pull Boxes: Provide galvanized code-gage sheet steel junction and pull boxes; with screw-on covers; of types, shapes and sizes, to suit each respective location and installation; with welded seams and equipped with stainless steel nuts, bolts, screws, and washers.
G. Available Manufacturers: Subject to compliance with requirements, manufacturers offering junction and pull boxes which may be incorporated in the work include, but are not limited to, the following:
1. Appleton Electric; Emerson Electric Co.
2. Arrow-Hart Div.; Crouse-Hinds Co.
3. Bell Electric; Square D Company
4. OZ/Gedney; General Signal Co.
5. Spring City Electrical Mfg. Co.
H. Available Manufacturers: Subject to compliance with requirements, manufacturers offering floor boxes which may be incorporated in the work include, but are not limited to, the following:
1. Arrow-Hart Div.; Crouse-Hinds Co.
2. Harvey Hubbell, Inc.
3. Midland-Ross Corp.
4. Spring City Electrical Mfg. Co.
I. Bushings, Knockout Closures, and Locknuts: Provide corrosion-resistant box knockout closures, conduit locknuts and malleable iron conduit bushings, offset connections, of types and sizes, to suit respective installation requirements and applications.
J. Available Manufacturers: Subject to compliance with requirements, manufacturers offering bushings, knockout closures, locknuts, and connectors which may be incorporated in the work include, but are not limited to, the following:
1. Arrow-Hart Div.; Crouse-Hinds Co.
2. Appleton Electric Co.; Emerson Electric Co.
3. Bell Electric; Square D Co.
4. Midland-Ross Corp.
5. OZ/Gedney Co.; General Signal Co.
K. Manholes and Handholes: Manholes and handholes for exterior use shall be pre-cast concrete with steel traffic rated covers, as manufactured by Brooks or equal. Manholes and handholes shall be the size necessary for the number of conduits and conductors indicated on the drawings which will enter the enclosure, plus the necessary capacity for the spare conduits and the associated estimated conductor fill. Provide manholes with the appropriate drainage and knockouts for conduits and other necessary access. Traffic covers shall be engraved with the appropriate identification, such as "ELECTRIC".

5. INSTALLATION OF ELECTRICAL BOXES AND FITTINGS

A. General: Install electrical boxes and fittings as indicated, in accordance with manufacturer's written instructions, applicable requirements of NEC and NECA's "Standard of Installation", and in accordance with recognized industry practices to fulfill project requirements.
B. Coordinate installation of electrical boxes and fittings with wire/cable, wiring devices, and raceway installation work.
C. Provide weathertight boxes and fittings for interior and exterior locations exposed to weather or moisture.
D. Provide knockout closures to cap unused knockout holes where blanks have been removed.
E. Install electrical boxes in those locations which ensure ready accessibility to enclosed electrical wiring.
F. Avoid installing boxes back-to-back in walls. Provide not less than 24" (600 mm) separation.
G. Position recessed outlet boxes accurately to allow for surface finish thickness.
H. Fasten electrical boxes firmly and rigidly to substrates, or structural surfaces to which attached, or solidly embed electrical boxes in concrete or masonry.
I. Each circuit in pull box shall be marked with a tag guide denoting panels which they connect to.
J. Manholes and handholes shall be installed for all underground conduit installations. The minimum number of manholes and handholes shall be as indicated on the drawings. The contractor shall provide any additional handholes or manholes necessary for ease of installation, code compliance or due to voluntary or required re-routing of the underground conduits at no additional cost to the Owner.

SECTION 16142 – ELECTRICAL CONNECTIONS FOR EQUIPMENT

1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
B. This section is a Division-16 Basic Electrical Materials and Methods section, and is part of each Division-15 and 16 section making reference to electrical connections for equipment specified herein.

2. DESCRIPTION OF WORK

A. Extent of electrical connections for equipment is indicated by drawings and schedules. Electrical connections are hereby defined to include connections used for providing electrical power to equipment.
B. Applications of electrical power connections specified in this section include the following:
1. From electrical source to motor starters.
2. From motor starters to motors.
3. To lighting fixtures.
4. To grounds including earthing connections.
5. To equipment of communication, CCTV and alarm systems.
C. Electrical connections for equipment, not furnished as integral part of equipment, are specified in Division-15 and other Division-16 sections, and are work of this section.
D. Motor starters and controllers, not furnished as integral part of equipment, are specified in applicable Division-16 sections, and are work of this section.
E. Refer to Division-15 specification sections and drawings for motor starters and controllers furnished integrally with equipment; not work of this section. Connections to this equipment is work of this section.
F. Junction boxes and disconnect switches required for connecting motors and other electrical units of equipment are specified in applicable Division-16 sections, and are work of this section.
G. Raceways and wires/cables required for connecting motors and other electrical units of equipment are specified in applicable Division-16 sections, and are work of this section.
H. Refer to other Division-16 and Division-15 sections for low voltage control system wiring; not work of this section.

3. QUALITY ASSURANCE

A. Manufacturers: Firms regularly engaged in manufacture of electrical connectors and terminals, of types and ratings required, and ancillary connection materials, including electrical insulating tape, soldering fluxes, and cable ties, whose products have been in satisfactory use in similar service for not less than 5 years.
B. Installer's Qualifications: Firm with at least 2 years of successful installation experience with projects utilizing electrical connections for equipment similar to that required for this project.
C. NEC Compliance: Comply with applicable requirements of NEC as to type products used and installation of electrical power connections (terminals and splices), for junction boxes, motor starters, and disconnect switches.
D. IEEE Compliance: Comply with Std 241, "IEEE Recommended Practice for Electric Power Systems in Commercial Buildings" pertaining to connections and terminations.
E. ANSI Compliance: Comply with applicable requirements of ANSI/NEMA and ANSI/EIA standards pertaining to products and installation of electrical connections for equipment.
F. UL Compliance: Comply with UL Std 486A, "Wire Connectors and Soldering Lugs for Use with Copper Conductors", including, but not limited to, tightening of electrical connectors to torque values indicated. Provide electrical connection products and materials which are UL-listed and labeled.
G. ETL Compliance: Provide electrical connection products and materials which are ETL-listed and labeled.

4. ACCEPTABLE MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:
1. AMP Incorporated
2. Appleton Electric Co.
3. Arrow-Hart Div., Crouse-Hinds Co.
4. Burndy Corporation
5. General Electric Co.
6. Gould, Inc.
7. Harvey Hubbell Inc.
8. Square D Company
9. Thomas and Betts Corp.

5. MATERIALS AND COMPONENTS

A. General: For each electrical connection indicated, provide complete assembly of materials, including but not necessarily limited to, pressure connectors, terminals (lugs), electrical insulating tape, electrical solder, electrical soldering flux, heat-shrinkable insulating tubing, cable ties, solderless wirenuts, and other items and accessories as needed to complete splices and terminations of types indicated.
B. Metal Conduit, Tubing, and Fittings:
1. General: Provide metal conduit, tubing, and fit tings of types, grades, sizes, and weights (wall thicknesses) indicated for each type service. Where types and grades are not indicated, provide proper selection as determined by Installer to fulfill wiring requirements and comply with NEC requirements for raceways. Provide products complying with Division-16 basic electrical materials and methods section "Raceways", and in accordance with the following listing of metal conduit, tubing, and fittings:
a. Rigid steel conduit.
b. Rigid metal conduit fittings.
c. Electrical metallic tubing.
d. EMT fittings.
e. Liquid-tight flexible metal conduit.
f. Liquid-tight flexible metal conduit fittings.
g. Flexible metal conduit.
h. Flexible metal conduit fittings.
C. Wires, Cables, and Connectors:
1. General: Provide wires, cables, and connectors complying with Division-16 basic electrical materials and methods section "Wires and Cables".
2. Wires/Cables: Unless otherwise indicated, provide wires/cables (conductors) for electrical connections which match, including sizes and ratings, of wires/cables which are supplying electrical power. Provide copper conductors with conductivity of not less than 98% at 20oC (68oF).
3. Connectors and Terminals: Provide electrical con nectors and terminals which mate and match, including sizes and ratings, with equipment terminals and are recommended by equipment manufacturer for intended applications.

6. INSPECTION

A. Inspect area and conditions under which electrical connections for equipment are to be installed and notify Contractor in writing of conditions detrimental to proper completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

7. INSTALLATION OF ELECTRICAL CONNECTIONS

A. Install electrical connections as indicated; in accordance with equipment manufacturer's written instructions and with recognized industry practices, and complying with applicable requirements of UL, NEC, and NECA's "Standard of Installation", to ensure that products fulfill requirements.
B. Coordinate with other work, including wires/cables, raceway and equipment installation, as necessary to properly interface installation of electrical connections for equipment with other work.
C. Connect electrical power supply conductors to equipment conductors in accordance with equipment manufacturer's written instructions and wiring diagrams. Mate and match conductors of electrical connections for proper interface between electrical power supplies and installed equipment.
D. Provide the following electrical work as work of this section, complying with requirements of Division 15 sections:
1. Power supply wiring from power source to power connection on chiller, fans, air handling units, pumps, duct heaters, water heaters, air compressor, air dryer, and unit control panels. Include starters, disconnects, time clocks, receptacles and required electrical devices, except where specified as furnished, or factory-installed, by manufacturer. Make all final electrical connections.
E. Maintain existing electrical service and feeders to occupied areas and operational facilities, unless otherwise indicated, or when authorized otherwise in writing by Owner, or Architect/Engineer. Provide temporary service during interruptions to existing facilities. When necessary, schedule momentary outages for replacing existing wiring systems with new wiring systems. When that "cutting-over" has been successfully accomplished, remove, relocate, or abandon existing wiring as indicated.
F. Cover splices with electrical insulating material equivalent to, or of greater insulation resistivity rating, than electrical insulation rating of those conductors being spliced. No new conductors shall be spliced unless specifically noted on the drawings.
G. Prepare cables and wires, by cutting and stripping covering armor, jacket, and insulation properly to ensure uniform and neat appearance where cables and wires are terminated. Exercise care to avoid cutting through tapes which will remain on conductors. Also avoid "ringing" copper conductors while skinning wire.
H. Trim cables and wires as short as practicable and arrange routing to facilitate inspection, testing, and maintenance.
I. Tighten connectors and terminals, including screws and bolts, in accordance with equipment manufacturers published torque tightening values for equipment connectors. Accomplish tightening by utilizing proper torquing tools, including torque screwdriver, beam-type torque wrench, and ratchet wrench with adjustable torque settings. Where manufacturer's torquing requirements are not available, tighten connectors and terminals to comply with torquing values contained in UL's 486A.
J. Provide flexible conduit for motor connections, and other electrical equipment connections, where subject to movement and vibration.
K. Provide liquid-tight flexible conduit for connection of motors and other electrical equipment where subject to movement and vibration, and also where connections are subjected to one or more of the following conditions:
1. Exterior location.
2. Moist or humid atmosphere where condensate can be expected to accumulate.
3. Corrosive atmosphere.
4. Water spray.
5. Dripping oil, grease, or water, including kitchen areas.

8. FIELD QUALITY CONTROL

A. Upon completion of installation of electrical connections, and after circuitry has been energized with rated power source, test connections to demonstrate capability and compliance with requirements. Ensure that direction of rotation of each motor fulfills requirement. Correct malfunctioning units at site, then retest to demonstrate compliance.

SECTION 16143 – WIRING DEVICES

1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
B. This section is a Division-16 Basic Electrical Materials and Methods section, and is part of each Division-16 section making reference to wiring devices specified herein.

2. DESCRIPTION OF WORK

A. The extent of wiring device work is indicated by drawings and schedules. Wiring devices are defined as single discrete units of electrical distribution systems which are intended to carry but not utilize electric energy.
B. Types of electrical wiring devices in this section include the following:
1. Receptacles, including surge suppression type if applicable.
2. Ground-fault circuit interrupters
3. Switches
4. Wallplates
5. Plugs and connectors
6. Time Switches / Time Clocks

3. QUALITY ASSURANCE

A. Installer's Qualifications: Firm with at least 2 years of successful installation experience on projects utilizing wiring devices similar to those required for this project.
B. NEC Compliance: Comply with NEC as applicable to installation and wiring of electrical wiring devices.
C. UL Compliance: Comply with applicable requirements of UL 20, 486A, 498, and 943 pertaining to installation of wiring devices. Provide wiring devices which are UL-listed and labeled.
D. IEEE Compliance: Comply with applicable requirements of IEEE Std 241, "Recommended Practice for Electric Power Systems in Comercial Buildings", pertaining to electrical wiring systems.
E. NEMA Compliance: Comply with applicable portions of NEMA Stds Pub/No. WD 1, "General-Purpose Wiring Devices", WD 2, "Semiconductor Dimmers for Incandescent Lamps", and WD 5, "Specific,-Purpose Wiring Devices".
F. FS Compliance: Comply FS W-C-596 (Series) and FS W-S-896 (Series) pertaining to electrical power connectors and toggle switches.

4. SUBMITTALS

A. Product Data: Submit manufacturer's data on electrical wiring devices to Architect.

5. ACCEPTABLE MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide wiring devices of one of the following (for each type and rating of wiring device):
1. Hubbell
2. Arrow-Hart Div.
3. General Electric Co.
4. Eagle Electric Co.
5. Leviton
6. Pass - Seymour
7. Time Switches: Tork, Intermatic or Paragon

6. FABRICATED WIRING DEVICES

A. General: Provide factory-fabricated wiring devices, in types, colors, and electrical ratings for applications indicated and which comply with NEMA Stds Pub/No. WD 1. Provide bone color devices and bone colored nylon, impact resistant coverplates, except as other wise indicated; color selection shall be verified prior to ordering by Contractor with Architect/Engineer.
B. Receptacles:
1. Heavy-Duty Duplex: Provide specification grade duplex receptacles, 2-pole, 3-wire, grounding, 20-amperes, 125-volts, with metal plaster ears, design for side and back wiring with spring loaded, screw activated pressure plate, with NEMA configuration 5-20R unless otherwise indicated. Hubbell or equal. 15 amp rated receptacles may be used on circuits with two or more receptacles in accordance with NEC.
2. Ground-Fault Interrupters: Provide "feed-thru" type ground-fault circuit interrupters, with heavy-duty duplex receptacles, capable of protecting connecting downstream receptacles on single circuit, and of being installed in a 2-3/4" deep outlet box without adapter, grounding type UL-rated Class A, Group 1, rated 20 amperes, 120-volts, 60 Hz; with solid-state ground-fault sensing and indication; with 5 milliamperes ground-fault trip level; equip with NEMA configuration 5-20R. Device must have a positive trip identification and reset. Provide bone color device.
3. Special Receptacles: Special configuration receptacles shall be standard NEMA plug configuration as specified on the drawings or as required. Provide heavy duty, specification grade receptacles, with black nylon face and brushed satin stainless steel cover plate.
C. Switches:
1. Snap: Provide general-duty flush single-pole, quiet type toggle switches, 20-amperes, 120-277 volts AC, with mounting yoke insulated from mechanism, equip with plaster ears, switch handle, and side-wired screw terminals.
2. 2-way: Provide general-duty flush double-pole AC quiet switches, 20-amperes, 120-277 volts AC, with mounting yoke insulated from mechanism, equip with plaster ears, switch handles, side-wired screw terminals, with break-off tab features, which allows wiring with separate or common feed.
3. Three-way: Provide general-duty flush 3-way AC quiet type switches, 20-amperes, 120-277 volts AC, with mounting yoke insulated from mechanism, equip with plaster ears, lock type switch handles, sidewired screw terminals, with break-off tab features, which allows wiring with separate or common feed.
4. Four-way: Provide general-duty flush 4-way AC quiet switches, 20-amperes, 120-277 volts AC, with mounting yoke insulated from mechanism, equip with plaster ears, switch handles, side-wired screw terminals, with break-off tab features, which allows wiring with separate or common feed.
5. Touch Snap: Provide soft-touch snap switches, capable of effortless-fingertip operation; single-pole AC quiet, with lighted rocker switch hangles; sidewired screw terminals for connecting copper-clad aluminum wire, 20-amperes, 120-277 volts rating. Equip with plaster ears.
6. Switches to be bone color with bone colored nylon, impact resistant coverplate, black on millwork / all front of house.
D. Combination Devices: Provide general-duty 3-way quiet switch, 20-amperes, 120-277 volts AC, with toggle switch handle, and 3-wire grounding receptacle, 20 amperes, 120-volts, equip with plaster ears, and with break-off tab feature which allows wiring with separate or common feed, with NEMA configuration 5-20R.
E. Dimmers: Provide Lutron dimming system.
F. Time Switches, Time Clocks: Unless otherwise specifically noted on the drawings provide electro-mechanical 24 hour dial type time switch with day omitting capability and 24 hour reserve timing motor. Provide with a positive manual on-off switch, voltage as required or specified on the drawings, minimum 40 amps per pole, minimum double pole, double throw. Provide additional poles as required or specified on the drawings. Time switches shall be Tork or equal by Intermatic or Paragon.

7. WIRING DEVICE ACCESSORIES

A. Wallplates: Provide wallplates for single and combination wiring devices, of types, sizes, and with ganging and cutouts as required. Select plates which mate and match wiring devices to which attached. Construct with metal screws for securing plates to devices; screw heads colored to match finish of plates. Provide plates possessing the following additional construction features:
Material and Finish: Bone colored nylon, impact resistant, black on millwork / all front of house
B. Floor Service Outlets: Provide flush type floor service receptacle outlets and fittings of types and ratings indicated. Construct of die cast aluminum, satin finish and of the size necessary for the slab thickness provided. Provide one or two gang box as indicated on the drawings with 20-ampere, 125-volt, duplex receptacle, NEMA configuration 5-20R for power, unless indicated otherwise. Provide data or telephone outlets as indicated with a 3/4" diameter bushed hole for data and a standard telephone outlet for telephone. Boxes shall be sized as required for the number of outlets and number of conductors to enter and leave the box. Provide brass cover plate with snap cover which shall be a protective cover which will prevent breakage of the installed wiring devices. Provide brass tile or carpet flange as required.

8. TELEPHONE/DATA OUTLETS

A. Provide blank bone colored nylon, impact resistant wallplate for all indicated unused telephone/data outlets, black on millwork / all front of house.

9. INSTALLATION OF WIRING DEVICES

A. Install wiring devices as indicated, in accordance with manufacturer's written instructions, applicable requirements of NEC and NECA's "Standard of Installation", and in accordance with recognized industry practices to fulfill project requirements.
B. Coordinate with other work, including painting, electrical boxes and wiring work, as necessary to interface installation of wiring devices with other work.
C. Install wiring devices only in electrical boxes which are clean; free from excess building materials, dirt, and debris.
D. Install galvanized steel wallplates on any exposed surface mounted devices.
E. Install wallplates after painting work is completed.
F. Tighten connectors and terminals, including screws and bolts, in accordance with equipment manufacturer's published torque tightening values for wiring devices. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL Stds 486A and B. Use properly scaled torque indicating hand tool.
G. Contractor to provide ground fault protective type receptacles for any location within 2'-0" of sinks or other source of water. Feed through protection from one ground fault protected receptacle on a circuit is not acceptable.
H. Mounting height of boxes for devices as shown on legend, unless otherwise noted on the plan. Refer to architectural drawings to avoid interferences with millwork. Where two or more devices are shown at the same location, use gang box and one face plate. Verify all device locations with Owner prior to rough-in. Exact device locations may be adjusted by the Owner to avoid interferences or for general convenience at no additional cost to the Owner.
I. Floor boxes shall be installed flush with the slab and shall strictly follow manufacturer's installation instructions. Boxes shall be installed at right angles to the building lines and multiple boxes shall be in-line straight and even. Boxes observed to be installed crooked shall be removed and reinstalled.

10. PROTECTION OF WALLPLATES AND RECEPTACLES

A. Upon installation of wallplates and receptacles, advise Contractor regarding proper and cautious use of convenience outlets. At time of Substantial Completion, replace those items which have been damaged, including those burned and scored by faulty plugs.

11. GROUNDING

A. Provide equipment grounding connections for wiring devices, unless otherwise indicated. Tighten connections to comply with tightening torques specified in UL Std 486 A to assure permanent and effective grounds.

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT
02.15.2023

Cheddar's SCRATCH KITCHEN

Issue Date: 02.15.2023

REVISION INFORMATION

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
SPECIFICATIONS

AS8

12. TESTING

A. Prior to circuitry, test wiring for electrical continuity, for short-circuits and for grounding. Ensure proper polarity of connections is maintained. Subsequent to energization, test wiring devices to demonstrate compliance with requirements.

13. WARRANTY

A. All wiring devices, including any dimmers or dimming systems, shall have a minimum one year parts and labor warranty.

SECTION 16150 – MOTOR CONTROLLERS AND CONTACTORS

1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract including General and Division 1 Specification Sections, apply to work of this section.

2. SCOPE

A. The work, apparatus and materials which shall be furnished under these specifications and accompanying drawings shall include all items specified hereinafter and shown on the drawings. All other materials necessary for the complete installation shall be furnished and installed by the Contractor to provide complete electrical systems as indicated on the drawings and as specified herein.
B. Coordinate all required interlocks with Division 15. Motor starters shall contain the necessary auxiliary contacts and control coil voltage to interface with the HVAC temperature control system and fire alarm control system.

3. DESCRIPTION OF WORK

A. Extent of motor controller work is indicated by drawings and schedules. Types of motor controllers specified in this section include the following:
   1. Manual motor starters.
   2. Combination disconnect/FVNR motor starters.

4. QUALITY ASSURANCE

A. Manufacturers: General Electric, Square D, Allen Bradley.
B. Installer's Qualifications: Firm with at least 3 years of successful installation experience on projects with electrical motor controller work similar to that required for this project.
C. Codes and Standards:
   1. NEMA Compliance: Comply with applicable requirements of NEMA Standards Publications pertaining to motor controllers.
   2. UL Compliance and Labeling: Comply with applicable requirements of UL safety standards pertaining to motor controllers. Provide motor controllers and components which have been UL-listed and labeled.
   3. NEC Compliance: Comply with applicable requirements of NEC pertaining to construction and installation of motor controllers.

5. SUBMITTALS

A. Product Data: Submit manufacturer's technical product data, including specifications and installation instructions, for each type of motor controller required. Include data substantiating that materials comply with requirements to Architect.

6. INDIVIDUAL MOTOR CONTROLLERS

A. Manual motor starters for 115 volts, single phase motors one horsepower and smaller, shall be single pole, horsepower rated switches with thermal overload units and heaters. Starters shall be Allen-Bradley Bulletin 609, General Electric CR-101 or Square D Class 2510 with stainless steel cover plates.
B. Magnetic full voltage starters for three phase motors shall be three pole, horsepower rated, magnetically operated with three thermal overload units and heaters. Starters shall be Allen-Bradley Bulletin 509, General Electric CR-306 or Square D Class 8536. Provide Hand-Off-Auto selector switch, pilot lights to indicate starter's position (Amber – Red – Green), a minimum of two normally open and two normally closed auxiliary contacts, control power transformer fused on primary and secondary, control coil, and three overload heaters with reset button. Provide control power and coil voltage as required for interlock with the HVAC temperature control system and fire alarm system. Starters shall be the Nema size indicated on the drawings but shall be a minimum size one.
C. Combination magnetic, full voltage starters for three phase motors shall be three pole horsepower rated, magnetically operated contacts, with three thermal overload units and heaters. A three pole horsepower rated, fusible disconnect switch shall also be included integral within the enclosure. Provide fuses sized as recommended by the motor manufacturer. Starters shall be Allen-Bradley Bulletin 512, General Electric CR-308 or Square D Class 8538. Provide Hand-Off-Auto selector switch, pilot lights to indicate starter's position (Amber – Red – Green), a minimum of two normally open and two normally closed auxiliary contacts, control power transformer fused on primary and secondary, control coil, and three overload heaters with reset button. Provide control power and coil voltage as required for interlock with the HVAC temperature control system and fire alarm system. Starters shall be the Nema size indicated on the drawings but shall be a minimum size one.
D. Provide enclosure type suitable for the environment in which it is installed. Enclosure shall be interlocked so the door cannot be opened without turning the unit off. This interlock shall be capable of being defeated by properly trained personnel.

7. MOTOR CONTROLLERS, CONTACTORS AND ASSOCIATED CONTROLS

A. Unless otherwise indicated, motor controllers shown on the drawings shall be furnished and installed under this section. The full load current and starting characteristics of each motor shall be verified for proper selection of motor over load devices. The Contractor shall furnish and install all steel shapes, etc., necessary for a support of all motor controllers.
B. Unless otherwise indicated, all control devices, such as thermostats, firestats, etc., shall be installed in place and wired under other sections of the specifications. Coordinate required starter auxiliary contacts and coil voltages for a properly operational system.
C. Motor controllers shall be installed in accordance with all applicable NEC installation requirements.

8. IDENTIFICATION OF EQUIPMENT

A. Identification shall be provided for all motor controllers installed by the Contractor. Identification shall consist of white laminated plastic plates with black engraved letters.

SECTION 16170 – CIRCUIT AND MOTOR DISCONNECTS

1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
B. Division-16 Basic Electrical Materials and Methods section, apply to work of this section.

2. DESCRIPTION OF WORK

A. Extent of circuit and motor disconnect switch work is indicated by drawings and schedules.
B. Types of circuit and motor disconnect switches in this section include the following:
   1. Equipment disconnects.
   2. Appliance disconnects.
   3. Motor-circuit disconnects.
C. Wires/cables, raceways, and electrical boxes and fittings required in connection with circuit and motor disconnect work are specified in other Division-16 Basic Electrical Materials and Methods sections.

3. QUALITY ASSURANCE

A. Manufacturers: Firms regularly engaged in manufacture of circuit and motor disconnect switches of types and capacities required whose products have been in satisfactory use in similar service for not less than 3 years.
B. Installer's Qualifications: Firm with at least 3 years of successful installation experience with projects utilizing circuit and motor disconnect work similar to that required for this project.
C. NEC Compliance: Comply with NEC requirements pertaining to construction and installation of electrical circuit and motor disconnect devices.
D. UL Compliance: Comply with requirements of UL 98, "Enclosed and Dead-Front Switches". Provide circuit and motor disconnect switches which have been UL-listed and labeled.
E. NEMA Compliance: Comply with applicable requirements of NEMA Stds Pub No. KS 1, "Enclosed Switches" and 250, "Enclosures for Electrical Equipment (1000 Volts Maximum)".

4. SUBMITTALS

A. Product Data: Submit manufacturer's data on circuit and motor disconnect switches.
B. Wiring Diagrams: Submit power and control wiring diagrams for circuit and motor disconnects including connections to power and control panels, and feeders.

5. ACCEPTABLE MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering circuit and motor disconnects which may be incorporated in the work include the following:
   1. General Electric Co.
   2. Square D Company
   3. ITE/Seimens

6. FABRICATED SWITCHES

A. Heavy-Duty Safety Switches: Provide surface-mounted, heavy-duty type, sheet-steel enclosed safety switches, of types, sizes and electrical characteristics indicated; fusible or non-fusible type as indicated, amperes as indicated, 60 Hz, 3-blades, 4-poles, solid neutral; and incorporating quick-make, quick-break type switches; construct so that switch blades are visible in OFF position with door open. Equip with operating handle which is integral part of enclosure base and whose operating position is easily recognizable, and is padlockable in OFF position; construct current carrying parts of high-conductivity copper, with silver-tungsten type switch contacts, and positive pressure type reinforced fuse clips. Provide NEMA Type 3R enclosures, where applicable. Provide grounding kit. Provide 240 volt rated switches for 208Y/120 volt systems.
   1. Fuses: Provide fuses for safety switches, as recommended by the manufacturer of the equipment to be protected, of classes, types, and ratings needed to fulfill electrical requirements for service indicated. Provide R-clips for all fuse holders.

7. INSTALLATION OF CIRCUIT AND MOTOR DISCONNECT SWITCHES

A. Install circuit and motor disconnect switches as indicated, complying with manufacturer's written instructions, applicable requirements of NEC, NEMA, and NECA's "Standard of Installation", and in accordance with recognized industry practices.
B. Coordinate circuit and motor disconnect switch installation work with electrical raceway and cable work, as necessary for proper interface.
C. Install disconnect switches for use with motor-driven appliances, and motors and controllers within sight of controller position unless otherwise indicated.
D. Provide a nameplate indicating the equipment served and protected.

8. GROUNDING

A. Provide equipment grounding connections, sufficiently tight to assure a permanent and effective ground, for electrical disconnect switches where indicated.

9. FIELD QUALITY CONTROL

A. Subsequent to completion of installation of electrical disconnect switches, energize circuitry and demonstrate capability and compliance with requirements. Where possible, correct malfunctioning units at project site, then retest to demonstrate compliance; otherwise remove and replace with new units and retest.
B. Painting: repair all scratches to factory painted and primed finish with factory supplied touch-up paint.

SECTION 16180 – OVERCURRENT PROTECTIVE DEVICES

1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
B. This section is a Division-16 Basic Electrical Materials and Methods section, and is part of each Division-16 section making reference to overcurrent protective devices specified herein.

2. DESCRIPTION OF WORK

A. Extent of overcurrent protective device work is indicated by drawings and schedules.
B. Types of overcurrent protective devices in this section include the following:
1. Circuit Breakers:
   a. Air, molded-case, for installation in panels.
   b. Air, molded-case, for individual, separately enclosed mounting.
   c. For installation in existing panels.
2. Fuses:
   a. Class RK5, dual-element time-delay.
C. Refer to other Division-16 sections for cable/wire and connector work required in conjunction with overcurrent protective devices; not work of this section.

3. QUALITY ASSURANCE

A. Manufacturers: Firms regularly engaged in manufacture of overcurrent protective devices, of types, sizes, and ratings required, whose products have been in satisfactory use in similar service for not less than 5 years.
B. Installer: Qualified with at least 5 years of successful installation experience on projects with electrical installation work similar to that required for project.
C. NEC Compliance: Comply with NEC requirements as applicable to construction and installation of overcurrent protective devices.
D. UL Compliance: Comply with applicable requirements of UL 489, "Molded-Case Circuit Breakers and Circuit-Breaker Enclosures", and UL 198D, "High-Interrupting-Capacity Class K Fuses". Provide overcurrent protective devices which have been UL-listed and labeled.
E. NEMA Compliance: Comply with applicable requirements of NEMA Std Pub Nos. AB 1, AB 2, and SG 3 pertaining to molded-case and low-voltage power type circuit breakers.
F. FS Compliance: Comply with Federal Specification W-C-375B/GEN pertaining to molded-case circuit breakers.

4. SUBMITTALS

A. Product Data: Submit manufacturer's data on overcurrent protective devices, including: amperes, voltages and current ratings, interrupting ratings, current limitations, internal inductive and non-inductive loads, time-current trip characteristics curves, and mounting requirements.
B. Maintenance Stock, Fuses: For types and ratings required, furnish additional fuses, amounting to one unit for every 5 installed units, but not less than one unit of each.

5. ACCEPTABLE MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:
   1. Circuit Breakers: Square D Co.
   2. Fuses:Bussmann Div.; McGraw-Edison Co., Gould, Inc., Cefco

6. CIRCUIT BREAKERS

A. General: Except as otherwise indicated, provide circuit breakers and ancillary components, of types, sizes, ratings, and electrical characteristics indicated, which comply with manufacturer's standard design, materials, components, and construction in accordance with published product information, and as required for a complete installation.
B. Molded-Case Circuit Breakers: Provide factory assembled, molded-case circuit breakers of frame size indicated; rated 600 volts or 240 volts as required, 60 Hz, 3-poles with interrupting ratings as shown on drawings. Provide breakers with permanent thermal and instantaneous magnetic trips in each pole, and with fault-current limiting protection, ampere ratings as indicated. Construct with overcenter, trip-free, toggle-type operating mechanisms with quick-make, quick-break action and positive handle trip indication. Handle ties are not permitted. Provide push-to-trip button on cover for mechanical tripping circuit breakers. Construct breakers for mounting and operating in any physical position and operating in an ambient temperature of 40oC. Provide breakers with mechanical screw type removable connector lugs, AL/CU rated. Circuit breakers shall have the short circuit interrupting rated indicated on the drawings or as required for the short circuit current available.
C. Molded-Case Circuit Breakers for Installation in Panelboards: Shall meet the same specifications as in Part B above. Shall be manufactured by the same manufacturer as the panelboard.
D. Provide all accesories indicated on the drawings, including accesories indicated on the panel schedules, such as shunt trips, ground fault protection, undervoltage trips, etc. Accessories shall be manufactured by the same manufacturer as the circuit breaker.
E. All circuit breakers used to protect heating, ventilation or air conditioning circuits shall be listed HACR type.
F. Smart Circuit Breakers for Installation in Panelboards: Shall meet the same specifications as in Part B above. Shall be manufactured by the same manufacturer as the panelboard.

7. FUSES

A. General: Except as otherwise indicated, provide fuses of types, sizes, ratings, and average time/current and peak let-through current characteristics indicated, which comply with manufacturer's standard design, materials, and construction in accordance with published product information, and with industry standards and configurations.
B. Class RK5 Dual-Element Time-Delay Fuses: Provide UL Class RK-5 dual element time-delay fuses rated 600 V, 60 Hz, amperes as required by the manufacturer of the equipment being protected, with 200,000 RMS symmetrical interrupting current rating for protecting motors.

8. INSTALLATION OF OVERCURRENT PROTECTIVE DEVICES

A. Install overcurrent protective devices as indicated, in accordance with manufacturer's written instructions and with recognized industry practices to ensure that protective devices comply with requirements. Comply with NEC and NEMA standards for installation of overcurrent protective devices.
B. Coordinate with other work, including electrical wiring work, as necessary to interface installation of overcurrent protective devices with other work.
C. Fasten circuit breakers without causing mechaincal stresses, twisting or misalignment being exerted by clamps, supports, or cabling.
D. Set field-adjustable circuit breakers for trip settings as indicated, subsequent to installation of units.
E. Install fuses, if any, in fused circuit breakers.

9. ADJUST AND CLEAN

A. Inspect circuit-breaker operating mechanisms for malfunctioning and, where necessary, adjust units for free mechanical movement.

10. FIELD QUALITY CONTROL

A. Prior to energization of overcurrent protective devices, test devices for continuity of circuitry and for short-circuits. Correct malfunctioning units, and then demonstrate compliance with requirements.

SECTION 16190 – SUPPORTING DEVICES

1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
B. This section is a Division-16 Basic Electrical Materials and Methods section, and is a part of each Division-16 section making reference to electrical supporting devices specified herein.

2. DESCRIPTION OF WORK

A. Extent of supports, anchors, sleeves, and seals is indicated by drawings and schedules and/or specified in other Division-16 sections.
B. Types of supports, anchors, sleeves, and seals specified in this section include the following:
   1. Clevis hangers
   2. C-clamps
   3. I-beam clamps
   4. One-hole conduit straps
   5. Round steel rods
   6. Lead expansion anchors
   7. Toggle bolts
   8. Wall and floor seals
C. Supports, anchors, sleeves, and seals furnished as part of factory-fabricated equipment, are specified as part of that equipment assembly in other Division-16 sections.

3. QUALITY ASSURANCE

A. Manufacturers: Firms regularly engaged in manufacture of supporting devices, of types, sizes, and ratings required, whose products have been in satisfactory use in similar service for not less than 3 years.
B. NEC Compliance: Comply with NEC requirements as applicable to construction and installation of electrical supporting devices.

4. MANUFACTURED SUPPORTING DEVICES

A. General: Provide supporting devices which comply with manufacturer's standard materials, design and construction in accordance with published product information, and as required for complete installation; and as herein specified. Where more than one type of supporting device meets indicated requirements, selection is Installer's option.
B. Supports: Provide supporting devices of types, sizes, and materials indicated; and having the following construction features:
   1. Clevis Hangers: For supporting 2" rigid metal conduit; galvanized steel; with 1/2" dia. hole for round steel rod; approximately 54 pounds per 100 units.
   2. Reducing Couplings: Steel rod reducing coupling, 1/2" x 5/8"; black steel; approximately 16 pounds per 100 units.
   3. C-Clamps: Black malleable iron; 1/2" rod size; approximately 70 pounds per 100 units.
   4. I-Beam Clamps: Black steel, 1-1/4" x 3/16" stock; 3/8" cross bolt; flange width 2"; approximately 52 pounds per 100 units.
   5. One-Hole Conduit Straps: For supporting 3/4" rigid metal conduit; galvanized steel; approximately 7 pounds per 100 units.
   6. Hexagon Nuts: For 1/2" rod size; galvanized steel; approximately 4 pounds per 100 units.
   7. Round Steel Rod: Black steel; 1/2" dia.; approximately 67 pounds per 100 feet.
   8. Offset Conduit Clamps: For supporting 2" rigid metal conduit; black steel; approximately 200 pounds per 100 units.

C. Anchors: Provide anchors of types, sizes, and materials indicated, with the following construciton features:
   1. Lead Expansion Anchors: 1/2", approximately 38 pounds per 100 units.
   2. Toggle Bolts: Springhead; 3/16" x 4", approximately 5 pounds per 100 units.
D. Available Manufacturers: Subject to compliance with requirements, manufacturers offering anchors which may be incorporated in the work include, but are not limited to, the following:
   1. Abbeon Cal Inc.
   2. Ackerman Johnson Fastening Systems, Inc.
   3. Elcen Metal Products Co.
   4. Ideal Industries, Inc.
   5. Joslyn Mfg. and Supply Co.
   6. McGraw Edison Co.
   7. Rawlplug Co., Inc.
   8. Star Expansion Co.
   9. Expansion Bolt Co.
E. Sleeves and Seals: Provide sleeves and seals, of types, sizes, and materials indicated, with the following construction features:
   1. Wall and Floor Seals: Provide factory-assembled watertight wall and floor seals, of types and sizes indicated; suitable for sealing around conduit, pipe, or buting passing through concrete floors and walls. Construct seals with steel sleeves, malleable iron body, neoprene sealing grommets and rings, metal pressure rings, pressure clamps, and cap screws.
F. U-Channel Strut Systems: Provide U-channel strut system for supporting electrical equipment, 12-gage hot-dip galvanized steel, of types and sizes indicated; construct with 9/16" dia. holes, 8" o.c. on top surface, with standard finish, and with the following fittings which mate and match U-channel.
   1. Fixture hangers
   2. Channel hangers
   3. Thinwall conduit clamps
   4. Rigid conduit clamps
   5. Conduit hangers
   6. U-bolts
G. Available Manufacturers: Subject to compliance with requirements, manufacturers offering channel systems which may be incorporated in the work include, but are not limited to, the following:
   1. Greenfield Mfg. Co.; Inc.
   2. Midland-Ross Corp.
   3. OZ/Gedney Div.; General Signal Corp.
   4. Power-Strut Div.; Van Huffel Tube Corp.
   5. Unistrut Div.; GTE Products Corp.
H. Pipe Sleeves: Provide pipe sleeves of one of the following:
   1. Sheet Metal: Fabricate from galvanized sheet metal; round tube closed with snaplock joint, welded spiral seams, or welded longitudinal joint. Fabricate sleeves from the following gage metal: 3" and smaller, 20-gage; 4" to 6", 16-gage; over 6", 14-gage.
   2. Steel Pipe: Fabricate from Schedule 40 galvanized steel pipe; remove burrs.
   3. Iron Pipe: Fabricate from cast-iron or ductile-iron pipe; remove burrs.
   4. Plastic Pipe: Fabricate from Schedule 40 PVC plas tic pipe; remove burrs.
I. Sleeve Seals: Provide sleeves for piping which penetrates foundation walls below grade, or exterior walls. Calk between sleeve and pipe with non-toxic, UL-classified calking material to ensure watertight seal.

5. INSTALLATION OF SUPPORTING DEVICES

A. Install hangers, anchors, sleeves, and seals as indicated, in accordance with manufacturer's written instructions and with recognized industry practices to insure supporting devices comply with requirements. Comply with requirements of NECA and NEC for installation of supporting devices.
B. Coordinate with other electrical work, including raceway and wiring work, as necessary to interface installation of supporting devices with other work. Coordinate support locations with other structural and mechanical trades. Supports shall not be attached to mechanical or electrical piping, conduit, ductwork, ceiling grid system or any other non-structural member.
C. Install hangers, supports, clamps, and attachments to support piping properly from building structure. Arrange for grouping of parallel runs of horizontal conduits to be supported together on trapeze type hangers where possible. Install supports with spacings indicated and in compliance with NEC requirements.

SECTION 16195 – ELECTRICAL IDENTIFICATION

1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
B. Division-16 Basic Electrical Materials and Methods section apply to work specified in this section.

2. DESCRIPTION OF WORK

A. Extent of electrical identification work is indicated by drawings and schedules.
B. Types of electrical identification work specified in this section include the following:
   1. Electrical power, control, and communication conductors.
   2. Operational instructions and warnings.
   3. Equipment/system identification signs.

3. QUALITY ASSURANCE

A. Manufacturers: Firms regularly engaged in manufacture of electrical identification products of types required, whose products have been in satisfactory use in similar service for not less than 3 years.
B. NEC Compliance: Comply with NEC as applicable to installation of identifying labels and markers for wiring and equipment.
C. UL Compliance: Comply with applicable requirements of UL Std 969, "Marking and Labeling Systems", pertaining to electrical identification systems.

4. ACCEPTABLE MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering electrical identification products which may be incorporated in the work include, but are not limited to, the following:
   1. Brady, W.H. Co.

5. ELECTRICAL IDENTIFICATION MATERIALS
A. General: Except as otherwise indicated, provide manufacturer's standard products of categories and types required for each application. Where more than single type is specified for an application, selection is Installer's option, but provide single selection for each application.

6. ENGRAVED PLASTIC-LAMINATE SIGNS

A. General: Provide engraving stock melamine plastic laminate, complying with FS L-P-387, in sizes and thicknesses indicated, engraved with engraver's standard letter style of sizes and wording indicated, white face and black core plies (letter color) except as otherwise indicated, punched for mechanical fastening except where adhesive mounting is necessary because of substrate.
   1. Thickness: 1/8", except as otherwise indicated.
   2. Fasteners: Self-tapping stainless steel screws, except contact-type permanent adhesive where screws cannot or should not penetrate substrate.

7. LETTERING AND GRAPHICS

A. General: Coordinate names, abbreviations and other designations used in electrical identification work, with corresponding designations shown, specified or scheduled. Provide numbers, lettering, and wording as indicated or, if not otherwise indicated, as recommended by manufacturer or as required for proper identification and operation/maintenance of electrical systems and equipment.

8. APPLICATION AND INSTALLATION

A. General Installation Requirements:
   1. Install electrical identification products as indicated, in accordance with manufacturer's written instructions and requirements of NEC.
   2. Coordination: Where identification is to be applied to surfaces which require finish, install identification after completion of painting.
   3. Regulations: Comply with governing regulations and requests of governing authorities for identification of electrical work.

9. OPERATIONAL IDENTIFICATION AND WARNINGS

A. General: Wherever reasonably required to ensure safe and efficient operation and maintenance of electrical systems, and electrically connected mechanical systems and general systems and equipment, including prevention of misuse of electrical facilities by unauthorized personnel, install self-adhesive plastic signs or similar equivalent identification, instruction or warnings on switches, outlets and other controls, devices and doors of electrical enclosures. Where detailed instructions or explanations are needed, provide plasticized tags with clearly written messages adequate for intended purposes.

10. EQUIPMENT/SYSTEM IDENTIFICATION

A. General: Install engraved plastic-laminate sign on each major unit of electrical equipment in building; including central or master unit of each electrical system including communication/ control/signal systems, unless unit is specified with its own self-explanatory identification or signal system. Except as otherwise indicated, provide single line of text, 1/2" high lettering, on 1-1/2" high sign (2" high where 2 lines are required), black lettering in white field. Provide text matching terminology and numbering of the contract documents and shop drawings. Provide signs for each unit of the following categories of electrical work:
   1. Switchboard, panelboards, electrical cabinets, disconnect switches and enclosures
   2. Access panel/doors to electrical facilities
   3. Transformers
   4. Intercom system master station
   5. TV/audio monitoring master station
   6. Fire alarm master station
   7. Each switch in main switchboard
   8. Communications systems terminal cabinets; sound, CCTV, clock, telephone, etc.
B. Install signs at locations indicated or, where not otherwise indicated, at location for best convenience of viewing without interference with operation and maintenance of equipment. Secure to substrate with fasteners, except use adhesive where fasteners should not or cannot penetrate substrate.

SECTION 16450 – GROUNDING

1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
B. Division-16 Basic Electrical Materials and Methods section apply to work of this section.

2. DESCRIPTION OF WORK

A. Extent of grounding work is indicated by drawings and schedules.
B. Types of grounding specified in this section include the following:
   1. Solid grounding
C. Applications of grounding work in this section including the following:
   1. Underground metal water piping
   2. Metal building frames
   3. Grounding electrodes
   4. Grounding rods
   5. Service equipment
   6. Enclosures
   7. Equipment

3. QUALITY ASSURANCE

A. Manufacturers: Firms regularly engaged in manufacture of electrical connectors, terminals and fittings, of types and ratings required, and ancillary grounding materials, including stranded cable, copper braid and bus, ground rods and plate electrodes, whose products have been in satisfactory use in similar service for not less than 3 years.
B. Installer: Qualified with at least 3 years of successful installation experience on projects with electrical grounding work similar to that required for project.
C. NEC Compliance: Comply with NEC requirements as applicable to materials and installation of electrical grounding systems, associated equipment and wiring. Provide grounding products which are UL-listed and labeled.
D. UL Compliance: Comply with applicable requirements of UL Standards Nos. 467 and 869 pertaining to electrical grounding and bonding.
E. IEEE Compliance: Comply with applicable requirements of IEEE Standard 142 and 241 pertaining to electrical grounding.

4. SUBMITTALS

A. Product Data: Submit manufacturer's data on grounding systems and and accessories.
B. Shop Drawings: Submit layout drawings of grounding systems and accessories including, but not limited to, ground wiring, copper braid and bus, ground rods, and plate electrodes.

5. ACCEPTABLE MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering grounding products which may be incorporated in the work include, but not limited to, the following:
   1. Burndy Corp.
   2. Crouse-Hinds Co.
   3. Electrical Components Div.; Gould Inc.
   4. Thomas and Betts Corp.

6. GROUNDING SYSTEMS

A. Materials and Components:
   1. General: Except as otherwise indicated, provide electrical grounding systems indicated; with assembly of materials, including, but not limited to, cables/wires, connectors, terminals (solderless lugs), grounding rods/electrodes and plate electrodes, bonding jumper braid, surge arresters, and additional accessories needed for complete installation. Where more than one type unit meets indicated requirements, selection is Installer's option. Where materials or components are not indicated, provide products complying with NEC, UL, IEEE, and established industry standards for applications indicated.
B. Conductors: Unless otherwise indicated, provide electrical grounding conductors for grounding connections matching power supply wiring materials and sized according to NEC.
C. Ground Rods: Solid copper or copper clad steel, minimum 3/4" dia. x 10'. Provide longer rods if necessary for required resistivity.
D. Electrical Grounding Connection Accessories: Provide electrical insulating tape, heat-shrinkable insulating tubing, welding materials, bonding straps, as recommended by accessories manufacturers for type services indicated.

7. INSPECTION

A. Installer must examine areas and conditions under which electrical grounding connections are to be made and notify Contractor in writing of conditions detrimental to proper completion of work. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

8. INSTALLATION OF ELECTRICAL GROUNDING

A. General: Install electrical grounding systems where shown, in accordance with applicable portions of NEC, with NECA's "Standard of Installation", and in accordance with recognized industry practices, to ensure that products comply with requirements and serve intended functions.
B. Coordinate with other electrical work as necessary to interface installation of electrical grounding system work with other work.
C. Install clamp-on connectors only on thoroughly cleaned metal contact surfaces, to ensure electrical conductivity and circuit integrity.
D. All ground connections to water service entrance shall be installed to be exposed and visible for inspection at all times. Insulation shall not be installed over ground connections.
E. A water pipe, by itself, is not an adequate grounding electrode and must be supplemented by dual grounding electrodes, a minimum of 8 feet apart, and effectively bonded together. The supplemental ground shall be per Code with the "Footing type electrode" taking precedence when possible.
F. All ground connections shall be made on surfaces which have been cleaned of all paint, dirt, oil, etc., so that connections are bare metal to bare metal contact. All ground connections shall be tight and shall be made with U.L. listed grounding devices, fittings, bushings, etc.
G. Duplex receptacles of any amperage shall be grounding type and shall have a separate grounding contact. A separate jumper shall be installed between the grounding terminal on the device and the metallic box. The Contractor may provide U.L. listed self-grounding receptacles in lieu of providing the separate jumper.
H. Single and duplex receptacles shall have all grounded metal mechanically bonded together. Pressure bonding only is not acceptable.
I. Single and duplex receptacles will be installed with the grounding contacts down.
J. Hospital grade or high abuse type which will be installed with the ground contacts up.
   1. Shop equipment receptacles shall be installed with the ground contacts up.
K. In all cases where flexible metallic conduit, nonmetallic rigid conduit or liquid tight flexible conduit is used, a green wire ground conductor shall be used to provide ground continuity between the equipment of device and the conduit raceway system.
L. Provide a separate green wire ground conductor for each branch circuit originating from each panelboard. This ground shall be used to ground the device or load fed, and shall be bonded to components of the raceway system, such as junction boxes, starter or disconnect switch enclosures, equipment cases, etc. The green wire ground conductor shall terminate in the panelboard at the green wire ground bus. Ground conductors for branch circuits shall be of size indicated in NEC, except minimum size ground conductor shall be No. 12 AWG.
M. Each branch feeder originating at the switchboard(s) shall have a green wire ground conductor originating at the ground bus in the switchboard and terminating at the green wire ground bus in the panelboard. This green wire ground conductor shall be of size indicated in NEC except in no instance smaller than No. 8 AWG.
N. The green wire ground conductor is in addition to the neutral conductor and in no case shall the neutral conductor serve as the grounding means.
O. Multiple conductors in a single lug not permitted. Each grounding conductor shall terminate in its own terminal lug.

SECTION 16470 – UNITIZED SWITCHBOARD

1. OVERVIEW

A. The *Control & Power Integration System* is a U.L. Listed method of integrating all building electrical switchgear, electrical controls and, when applicable, energy management systems into a unitized package. For the remainder of this section, this unitized package may also be referred to as the CPI System or Unitized Switchgear.

2. SUMMARY

A. The CPI System shall be as manufactured by Carolina Products, Inc.
B. The Unitized Switchgear shall incorporate:
   1. All applicable switchgear consisting of Distribution Panelboard(s), Sub-Panelboard(s), neutral bars and ground bars.
   2. All applicable electrical controls components and associated wiring.
   3. All applicable sub-panel feeders, control wiring and branch circuit wiring. All wiring shall be copper conductors with a minimum insulation rating of 75ºC.
C. Unitized Switchgear will include the various component's specification sheets and operation manuals. Carolina Products Inc. will supply two (2) copies of as built drawings to be shipped with the equipment. The above-mentioned materials shall constitute a CPI System Manual. If additional manuals are required, they may be purchased through Carolina Products Inc. (704) 364-9029.
D. The CPI System shall meet U.L. 508 and U.L. 891 and listed as a complete assembly.

3. ENCLOSURE CONSTRUCTION

A. Enclosures shall be constructed of 1/8" thick aluminum and shall have a natural brushed finish.
B. Each enclosure shall be 84" tall by 10" deep by a maximum of 47" wide.
C. Each enclosure bottom shall have a minimum of 1 1/8" flange on all sides for stability. Remaining area shall be open for conduit entry.
D. Each enclosure shall have a 1/8" thick hinged aluminum door with a raised 1" flange on all sides. This will make the enclosure with its door a total of 11" deep.
E. Each enclosure door shall be hinged so that it can be easily removed when necessary, such as during installation. (Exception: If components mounted on the door require wiring interface, this door shall be mounted so that it can not be removed to prevent accidental damage of components and wiring.) The removal of the enclosure door shall not require the hinge system to be disassembled.
F. Each enclosure door shall be held closed by 1 of 2 methods.
   1. Bolted along the edge opposite of the hinge.
   2. A three-point locking handle which consists of extension rods with rollers. This assembly shall be of high quality and ensure the ease of door operation. All locking handles shall be keyed alike.
G. Each enclosure shall have all applicable cut-outs to expose all circuit breakers.
H. An enclosure and the enclosure door shall constitute a cabinet section.
I. These cabinet sections shall be bolted together as needed to form a U.L. Listed complete assembly.
J. Each cabinet section shall be labeled as a Type 1 Enclosure.
K. Each cabinet section shall bear the appropriate U.L. Label on the outside of the enclosure door in plain sight.
L. Each cabinet section will have a metal plate mounted on the outside of the cabinet door and have the following information stamped onto the metal plate.
   1. Carolina Products Inc. Project Number for project tracking
   2. Section number X of X total sections
   3. Section Voltage & type of system (ex. 120/208V 3 phase 4 wire)
   4. Section FLA (Full Load Amps)
   5. Section Neutral FLA
   6. Section Fault Current Rating (ex. 10K AIC)

4. SWITCHGEAR

A. All switchgear supplied by Carolina Products Inc. shall be industrial grade manufactured by Square "D".
B. Unless specified in writing to Carolina Products Inc. from bodies having authority, Carolina Products Inc. reserves the right to choose one of the switchgear manufacturers listed above.
C. For the remainder of this section, the terms switchgear, service panelboard(s) or panelboard(s) shall include and apply to all manufacturers.

5. SERVICE PANELBOARD(S) SHALL MEET THE FOLLOWING CRITERIA:

A. U.L. Listed equipment
B. Rated for a maximum 600 VAC.
C. Rated and labeled for use as Service Entrance Equipment.
D. Copper Bus rated for 1000A PSI (per square inch).
E. Meet all requirements as specified on drawings unless otherwise approved.
F. Rated equal to or greater than the maximum available Fault Current.
G. Include all branch circuit breakers as specified on drawings unless otherwise approved.
H. All lugs, including branch circuit breakers, shall be rated for a minimum of 75ºC.
I. When surge suppression is required, a Liebert AccuVar Surge Suppression System shall be factory installed and wired by Carolina Products Inc.

6. PANELBOARD(S) RATED AT 240 VAC OR LESS SHALL MEET THE FOLLOWING CRITERIA:

A. U.L. Listed equipment.
B. Meet all requirements as specified on drawings unless otherwise approved.
C. Rated equal to or greater than 10,000 AIC
D. Include all branch circuit breakers as specified on drawings unless otherwise approved.
E. All branch breakers shall be bolt-on type circuit breakers.
F. All lugs, including branch circuit breakers, shall be rated for a minimum of 75ºC.
G. When surge suppression is required, a Liebert AccuVar Surge Suppression System shall be factory installed and wired by Carolina Products Inc.

7. FACTORY ASSEMBLED SPECIFICATIONS

A. Switchgear
   1. Service panelboard(s) and sub-panelboard(s) shall be mounted so that their deadfronts are flush with the enclosure doors. Also, branch circuit breakers shall be accessible without opening the enclosure door.
   2. All panelboard(s) provided by Carolina Products Inc.that are specified as remote mounted will be shipped as loose items including panelboard, breakers, can and cover.
   3. All panelboard(s) shall be clearly labeled with a red plastic label with white engraved lettering. These labels shall be pop riveted in place.
   4. Panelboard(s) shall be provided with a computer generated circuit directory card that will be placed in a metal frame with a plexi-glass cover and pop riveted in place.
   5. All ground bars and neutral bars shall be provided and mounted by Carolina Products Inc.
   6. All feeder and branch circuit wiring shall be copper conductors with a minimum insulation rating of 75ºC.

B. Electric Controls
   1. Typical control components may consist of but not limited to relays, transformers, contactors, pilot lights, switches, terminal strips, CPI System 1000 or other owner specified building management system.
   2. Components will vary depending upon application and additional components other than those mentioned above may be required.
   3. All components shall be factory mounted and wired by Carolina Products Inc. unless otherwise specified.
   4. All component wiring shall be copper conductors with a minimum insulation rating of 75ºC.

C. Testing & Quality Control
   1. Complete System shall pass a test per U.L. 508 standards.
   2. Complete System shall be reviewed for proper assembly.
   3. All components and associated wiring shall be tested for defects and proper operation.

8. INSTALLATION

A. When the unitized switchgear is required to ship in multiple sections, the electrical contractor shall assemble these sections according to the accompanying drawings.
B. Contractor shall install all bolts, which are provided by Carolina Products Inc., required to join the cabinet sections.
C. When necessary, the electrical contractor shall reconnect all wiring plugs or terminate all wires between cabinets as marked by Carolina Products Inc.
D. Electrical contractor shall terminate all field wiring, such as non-controlled branch circuit wiring, as specified on the drawings provided with the CPI system.
E. Electrical contractor shall conduct all work associated with the CPI system in a neat and professional manner.

9. PRICING , ORDERING & TECHNICAL INFORMATION

Carolina Products Inc.
1132 ProAm Drive
Charlotte, NC 28211
(704) 364-9029

SECTION 16510 – INTERIOR BUILDING LIGHTING

1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
B. Division-16 Basic Electrical Materials and Methods section apply to work specified in this section.

2. DESCRIPTION OF WORK

A. Extent of interior lighting fixture work is indicated by drawings and schedules.
B. Types of interior lighting fixtures in this section include the following:
   1. Fluorescent
   2. Incandescent
   3. High Intensity Discharge
   4. LED Lighting
C. Applications of interior lighting fixtures required for project including the following:
   1. General lighting
   2. Supplementary lighting
   3. Task lighting
   4. Emergency lighting

3. QUALITY ASSURANCE

A. Manufacturers: Firms regularly engaged in manufacture of interior lighting fixtures of types and ratings required, whose products have been in satisfactory use in similar service for not less than 5 years.
B. Installer: Qualified with at least 3 years of successful installation experience on projects with interior lighting fixture work similar to that required for project.
C. NEC Compliance: Comply with NEC as applicable to installation and construction of interior building lighting fixtures.
D. NEMA Compliance: Comply with applicable requirements of NEMA Std Pub Nos. LE 1 and LE 2 pertaining to lighting equipment.
E. ANSI/IES Compliance: Comply with ANSI 132.1 pertaining to interior lighting fixtures.
F. ANSI/UL Compliance: Comply with ANSI/UL standards pertaining to interior lighting fixtures for hazardous locations.
G. UL Compliance: Provide interior lighting fixtures which have been UL-listed and labeled.
H. CBM Labels: Provide fluorescent-lamp ballasts which comply with Certified Ballast Manufacturers Association standards and carry the CBM label.

4. SUBMITTALS

A. Product Data: Submit manufacturer's data on interior building lighting fixtures, lamps and ballasts to Architect. Lighting fixtures shall be in strict accordance with the fixture schedule. Substitutions will not be accepted without formal written prior approval. Requests for review of substitutions shall be submit a minimum of 10 days prior to bid. Any other requests will be rejected.
B. Shop Drawings: Submit fixture shop drawings in booklet form with separate sheet for each fixture, assembled in luminaire "type" alphabetical order, with proposed fixture and accessories clearly indicated on each sheet to Architect.

5. ACCEPTABLE MANUFACTURERS

A. Manufacturers/Catalog Numbers: Subject to compliance with requirements, provide fixtures manufactured by manufacturers as indicated on the fixture schedule. Catalog numbers given on the fixture schedule are intended to provide the general description of the required fixture and its quality. Additional accessories, mounting hardware, options, etc., not specifically described by the catalog number but required for a properly operating and installed fixture or as described by additional notation on the drawings or in the specifications, shall be provided.

6. INTERIOR LIGHTING FIXTURES
A. General: Provide lighting fixtures, of sizes, types, and ratings indicated; complete with, but not necessarily limited to, housings, lamps, lamp holders, reflectors, ballasts, starters and wiring.
   1. Fluorescent-Lamp Ballasts: Provide energy saving high frequency electronic fluorescent-lamp ballasts, capable of operating 32 watt, octic, T-8 lamp types; with high power factor, rapid-start, and low-noise features; Type 1; Class P; sound-rated A, and with internal thermal protection. All flourescent fixture ballasts shall be of the same manufacturer and type. Ballasts shall also meet the following requirements:
   2. Operate lamps at 20 KHZ or higher with no detectable flicker.
   3. Ballast manufacturer shall have been producing electronic ballasts in the U.S. for more than five years with a low failure rate.
   4. Ballasts shall be approved and listed by UL.
   5. Ballasts shall comply with all applicable state and federal efficiency standards.
   6. Ballasts shall comply with FCC and NEMA limits governing electromagnetic and radio frequency interference and shall not interfere with operation of other normal electrical equipment.
   7. Ballasts shall meet all applicable ANSI and IEEE standards regarding harmonic distortion and surge protection, but in no case shall have total harmonic distortion exceeding 20%.
   8. Ballasts shall not be affected by lamp failure and shall yield normal published expected lamp life.
   9. Lamp current crest factor shall not exceed 1.7.
   10. Ballasts shall operate at an input frequency of 60 HZ and an input voltage of that indicated on the drawings for the fixture voltage.
   11. Ballasts shall have a power factor above 0.95.
   12. Ballasts shall operate as a parallel circuit allowing remaining lamps to maintain full output if companion lamps fail.
   13. Ballasts shall carry a minimum three year warranty, including labor allowance.
   14. Ballasts shall be manufactured by Magnetek, Motorola or approved equal.

C. Fusing all fluorescent ballasts shall be fused. Fuses may be deleted if the ballast is supplied with automatically resetting thermal overloads internal to the ballast.
D. H.I.D. Lamp Ballasts: Provide energy saving ballasts, capable of operating lamp types indicated; with high power factor, fixture to have quartz restrike where indicated and low-noise feature and with internal thermal protection, class H insulation. H.I.D. ballasts shall be manufactured by Advanced, Valmont, Magnetek or approved equal.
E. Lamps: Provide lamps of the wattage and types specified on the drawings. Coordinate lamp type with ballast for a complete operational, energy saving lighting system which will operate for the expected lamp and ballast life. Lamps shall be as manufactured by General Electric, Phillips, or Osram/Sylvania.
   1. Fluorescent lamps shall be rapid start, T-8, medium bi-pin, 32 watt, 3500°K, 85 CRI, 3,000 lumens, 20,000 average rated hours.
   2. Lamp and ballast combinations shall have no noticeable flicker or delayed starting. Lamps shall start instantaneously and illuminate immediately. Any delay in starting will not be acceptable and the lamp and/or ballast shall be replaced.
   All lamp types and color shall be verified with the lighting consultant prior to ordering.
F. LED Fixtures:
   1. Refer to Lighting Fixture Schedule for manufacturer, type, wattage, lamp, kelvin temperature rating and CRI.
   2. Label shall comply with U. L. 1598. Include recommended lamps. Locate label where they are readily visible to service personnel, but not seen from normal viewing angles when lamp is in place.
      a. Label shall include "USE ONLY" and include specific lamp type.
   3. Listed for use of installation location.
   4. Provide LED Driver.

7. INSTALLATION OF INTERIOR LIGHTING FIXTURES
A. Install interior lighting fixtures at locations and heights as indicated, in accordance with fixture manufacturer's written instructions, applicable requirements of NEC, NECA's "Standard of Installation", NEMA standards, and with recognized industry practices to ensure that lighting fixtures fulfill requirements.
B. Coordinate with other electrical work as appropriate to properly interface installation of interior lighting fixtures with other work.
C. Fasten fixtures securely to building structural support; and ensure that pendant fixtures are plumb and level. Provide all required mounting hardware and steel channel to supplement structural support where necessary. Fixtures shall not be supported from ductwork, piping, conduits, ceiling grid or any other non-structural building member.
D. Coordinate fixture installation with mechanical duct work, diffusers, return grilles, communication systems devices, etc., to avoid any interferences.

8. ADJUST AND CLEAN

A. Clean interior lighting fixtures of dirt and debris upon completion of installation
B. Protect installed fixtures from damage during remainder of construction period.

9. FIELD QUALITY CONTROL

A. Upon completion of installation of interior lighting fixtures, and after building circuitry has been energized, apply electrical energy to demonstrate capability and compliance with requirements. where possible, correct malfunctioning units at site, then retest to demonstrate compliance; otherwise, remove and replace with new units, and proceed with retesting.
B. At the time of Substantial Completion, replace lamps in interior lighting fixtures which are observed to be noticeably dimmed after Contractor's use and testing, as judged by Owner.
C. Refer to Division-1 sections for the replacement/restoration of lamps in interior lighting fixtures, where used for temporary lighting prior to time of Substantial Completion.

10. GROUNDING

A. Provide tight equipment grounding connections for each interior lighting fixture installation.

SECTION 16520 – EXTERIOR BUILDING LIGHTING

1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
B. Division-16 Basic Electrical Materials and Methods section apply to work specified in this section.

2. DESCRIPTION OF WORK

A. Extent of exterior lighting fixture work is indicated by drawings and schedules.
B. Types of exterior lighting fixtures in this section include the following:
   1. LED
   2. High Intensity Discharge
   3. Fluorescent
C. Applications of exterior lighting fixtures required for project including the following:
   1. Outdoor supplementary lighting

3. QUALITY ASSURANCE

A. Manufacturers: Firms regularly engaged in manufacture of exterior lighting fixtures of types and ratings required, whose products have been in satisfactory use in similar service for not less than 5 years.
B. Installer: Qualified with at least 3 years of successful installation experience on projects with exterior lighting fixture work similar to that required for project.
C. NEC Compliance: Comply with NEC as applicable to installation and construction of exterior building lighting fixtures.
G. UL Compliance: Provide exterior lighting fixtures which are UL-listed and labeled.
H. CBM Labels: Provide ballasts which comply with Certified Ballast Manufacturers Association standards and carry the CBM label.

4. SUBMITTALS

A. Product Data: Submit manufacturer's data on exterior lighting fixtures, lamps, and ballasts to Architect.
B. Shop Drawings: Submit dimensioned drawings of exterior lighting fixture. Submit fixture shop drawings in booklet form with separate sheet for each fixture, assembled in luminaire "type" alphabetical order, with proposed fixture and accessories clearly indicated on each sheet to Architect. Provide photometric data for each fixture type. Clearly indicate fixture lamp and ballast type and manufacturer.

5. ACCEPTABLE MANUFACTURERS

A. Manufacturers/Catalog Numbers: Subject to compliance with requirements, provide fixtures manufactured by manufacturers as indicated on the fixture schedule. Catalog numbers given on the fixture schedule are intended to provide the general description of the required fixture and its quality. Additional accessories, mounting hardware, options, etc., not specifically described by the catalog number but required for a properly operating and installed fixture or as described by additional notation on the drawings or in the specifications, shall be provided.

6. EXTERIOR LIGHTING FIXTURES

A. General: Provide lighting fixtures, of sizes, types, and ratings indicated; complete with, but not necessarily limited to, housings, lamps, lamp holders, reflectors, ballasts, starters and wiring.
B. H.I.D-Lamp Ballasts: Provide energy saving high intensity discharge lamp type ballasts, capable of operating the associated lamp type for its rated life; with high power factor, and low-noise features; Type 1; Class P; sound-rated A, and with internal thermal protection. All HID fixture ballasts shall be of the same manufacturer and type. Provide quartz restrike feature where indicated on the drawings. Ballasts shall operate the lamp at full brightness and shall be suitable for the exterior environment, including the appropriate temperature rating.
C. LED: Provide internal driver, lamps dimmable from 100% to 0%, Refer to Light Fixture Schedule for distribution types, and voltage.
D. Emergency Lighting: Provide emergency battery pack with minimum 90 minutes and wired ahead of lighting controls.

7. INSTALLATION OF EXTERIOR LIGHTING FIXTURES

A. Install exterior lighting fixtures at locations and heights as indicated, in accordance with fixture manufacturer's written instructions, applicable requirements of NEC, NECA's "Standard of Installation", NEMA standards, and with recognized industry practices to ensure that lighting fixtures fulfill requirements.
B. Coordinate with other electrical work as appropriate to properly interface installation of exterior lighting fixtures with other work.
C. Fasten fixtures securely to required structural supports; and check to ensure that solid pendant fixtures are plumb.

8. ADJUST AND CLEAN

A. Clean exterior lighting fixtures of dirt and debris upon completion of installation.
B. Protect installed fixtures from damage during remainder of construction period.

9. FIELD QUALITY CONTROL

A. Upon completion of installation of exterior lighting fixtures, and after building circuitry, apply electrical energy to lighting fixtures to demonstrate capability and compliance with requirements. Where possible, correct malfunctioning units at site, then retest to demonstrate compliance; otherwise, remove and replace with new units, and proceed with retesting.
B. At the time of Substantial Completion, replace lamps in exterior lighting fixtures which are observed to be noticeably dimmed after Contractor's use and testing, as judged by Owner. Furnish stock or replacement lamps amounting to 15% (but not less than one lamp in each case) of each type and size lamp used in each type fixture. Deliver replacement stock as directed to Owner's storage space.
C. Refer to Division-1 sections for the replacement/restoration of lamps in exterior lighting fixtures, where used for temporary lighting prior to time of Substantial Completion.
D. Inspect each installed luminaire for damage. Replace damaged luminaires and components.

10. GROUNDING

A. Provide tight equipment grounding connections for each exterior lighting fixture installation.
B Ground steel poles per NEC 250.

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIDGE
AR98116
REGISTERED ARCHITECT

02.15.2023

Cheddar's SCRATCH KITCHEN EST 1979

Issue Date: 02.15.2023

REVISION INFORMATION

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
SPECIFICATIONS

AS9

SECTION 16721 – FIRE ALARM AND SMOKE DETECTION SYSTEMS

1. SECTION INCLUDES

A. A combination addressable and hard wired fire alarm and smoke detection system.

2. REFERENCES.

A. NFPA 70 – National Electrical Code - Adopted edition
B. NFPA 72 – National Fire Alarm Code - Adopted edition
D. NFPA 101 – Life Safety Code - Adopted edition
E. ANSI A117.1-1986 American National Standard for Buildings and Facilities Providing Accessibility and Usability for Physically Handicapped People.
F. American With Disabilities Act of 1990 and applicable sections of the Uniform Federal Accessibility Standard.

3. REGULATORY REQUIREMENTS

A. System: UL listed.
B. Conform to requirements of NFPA 101 and the Local Fire Marshall.

4. DESCRIPTION OF SYSTEM

A. The system shall be an addressable, microprocessor based fire alarm control system with transient protection on each circuit and walk-through test capability. The system shall have the capability to control and supervise all the addressable devices and non-addressable appliance and auxiliary control circuits. Each component of the system shall be UL listed for its use. The system shall have a Dynamic LCD display and be located in a constantly attended location while the building is occupied.

5. QUALIFICATIONS

A. Manufacturer: Company specializing in smoke detection and fire alarm systems with five (5) years documented experience.
B. Installer: Company specializing in smoke detection and fire alarm systems with five (5) years documented experience with projects of equivalent scope of work and size and certified by the Florida State Licensing Board as fire alarm installing contractor. The actual installer shall be liscensed to install fire alarm systems and shall be certified by the system manufacturer to install the system. Proof of certification and liscensure shall be provided upon request.

6. SUBMITTALS

A. Submit six (6) copies shop drawings and product data.
B. Provide complete point to point wiring diagrams, data sheets, and equipment ratings, layout, dimensions, and finishes. Indicate the location of surge protection devices.
C. Submit manufacturer's installation instructions.
D. Submit manufacturer's certificate that the system meets or exceeds specified requirements – certification per NFPA 72.
E. Submit copy of Contractor's license before work begins.
F. Submit battery calculations indicating the required battery, including the specified spare capacity.
G. Submit voltage drop calculations.
H. Provide training for four (4) people on the operation, maintenance, and repair of the system at the Contractor's expense. Training shall be certified by the manufacturer and be at different times for each person. Include transportation, room and board where needed.

7. PROJECT RECORD DRAWINGS

A. Contractor shall provide (2) plus Electrical sets of as-built drawings to the Owner upon completion of project.
B. As-builts shall include the location of end-of-line devices, surge protection devices and exact conduit and wire routing. Numbers and types or conductors shall be indicated for each circuit.

8. OPERATION AND MAINTENANCE DATA

A. Provide (2) plus Electrical copies of operation and maintenance data prior at the completion of construction for all point devices, CPUs, and all other equipment.
B. Include operating instructions, and maintenance and repair procedures.
C. Provide manufacturer representative's letter stating that the system is operational.
D. Maintain system for a minimum of one (1) year, after complete acceptance by the Owner, in accordance with NFPA 72 and 72E.
E. Provide, at the end of the first year after construction completion, a yearly certification as outlined by the State Fire Marshal's Rule 4A-48.

9. DELIVERY, STORAGE, AND HANDLING

A. Products shall be delivered to job site in manufacturers original shipping packages.
B. Provide storage and protection of products, as needed.

10. MANUFACTURERS

A. Notifier System AFP300.
B. Equal by EST.
C. Equal by ADT
NOTE : Approval of manufacturer's equipment does not any way relieve the Contractor from meeting the performance criteria as outlined in the Plans and Specifications.

11. FIRE ALARM CONTROL PANEL (FACP)

A. Control panel construction shall be modular with solid state, microprocessor based electronics and shall conform to all requirements made necessary by the Local Fire Marshall. It shall display only those primary controls and displays essential to operation during a fire alarm condition. Keyboards or keypads shall not be required to operate the system during fire alarm conditions. A local audible device shall sound during alarm, trouble or supervisory conditions. This audible device shall sound differently during each condition to distinguish one (1) condition from another without having to view the panel. This audible device shall also sound during each keypress to provide an audible feedback to ensure that the key has been pressed properly. The panel shall be complete with all required cards for the points necessary for all the devices indicated, plus capability for expansion to 30% more points, minimum. Provide the necessary hard wired circuits for all the indicating appliance and auxiliary control devices. Provide a two spare indicating appliance circuits in addition to the required indicating appliance circuits to serve the appliances shown on the drawings.
1. Provide Voice Evacuation System as required by Local Codes or jurisdiction. Provide microphone, pre-recorded voice message and amplifier and other required devices for a voice annunciated system. Pre-recorded message shall be capable of being revised and re-recored. Confirm exact message required by the local fire marshal prior to installation.
A. The following primary controls shall be visible through a front access panel:
1. Eighty character liquid crystal display. Individual red system alarm LED.
2. Individual yellow supervisory service LED. Individual yellow trouble LED.
3. Green "power on" LED.
4. Alarm acknowledge key.
5. Supervisory acknowledge key.
6. Trouble acknowledge key.
7. Alarm silence key.
8. System reset key.
B. The control shall provide the following:
1. Setting of time and date.
2. LED testing. Alarm, trouble, and abnormal condition listing.
3. Enabling and disabling of each monitor point separately.
4. Activation and deactivation of each control point separately.
5. Changing operator access levels.
6. Walk test enable.
7. Running diagnostic functions.
8. Displaying software revision level.
9. Displaying historical logs.
10. Displaying card status.
11. Point listing.
12. Speaker silence switch.
D. For maintenance purposes, the following lists shall be available from the point lists menu.
1. All points listed by address.
2. Monitor point list.
3. Signal/speaker list.
4. Auxiliary control list.
5. Feedback point list.
6. Pseudo point list.
7. LED/switch status list.

12. DEVICES AND ACCESSORIES

A. Manual Station: Semi-flush mounted, supervised, normally open single action manual station. Manual stations shall be single action and shall be constructed of cast metal or lexan with raised white lettering and a smooth high gloss finish. The station shall have a hinged front with key lock. stations which utilize screwdrivers, Allen wrenches, or other commonly available tools shall not be accepted. Stations shall be keyed alike with the fire alarm control panel. When the station is operated, the handle shall lock in a protruding manner to facilitate quick visual identification of the activated station. Stations shall be the addressable type.
B. Heat Detector: Easy installation, low profile with wide base to cover mounting plate and box. Detectors shall be white and have a dangling disk to indicate element operation. Detectors will be fixed temperature with thermostats rated at 135 degrees F, except when the plans call for a 194 or 200 degrees F rating. The detector shall be the addressable type for use with an addressable system and shall be UL listed for this purpose.
1. Heat detectors installed in hazardous environments shall be the explosion proof type.
C. Smoke Detectors: NFPA 72E; photoelectric type with plug-in base, supervised visual indication of detector actuation, suitable for mounting on four inch (4") outlet box.
1. Detectors shall be listed to U.L. Standard 268 and shall be documented compatible with the control equipment to which it is connected. Detectors shall be listed for this purpose by Underwriters Laboratories, Inc. The detectors shall obtain their operating power from the fire alarm panel supervised detection loop. The operating voltage shall be 24 VDC (nominal). Removal of the detector head shall interrupt the supervisory circuit of the fire alarm detection loop and cause a trouble signal to be generated at the control panel. Detectors shall be the addressable type for use on an addressable type system.
2. Each detector shall have a flashing status indicating LED for visual supervision. When the detector is actuated, the flashing LED will latch on steady and at full brilliance. The detector may be reset by actuating the control panel reset switch.
3. To minimize nuisance alarms, voltage and RF transient suppression techniques shall be employed as-well-as a smoke verification circuit and an insect screen. The detector design shall provide full solid-state construction and compatibility with other normally open fire alarm detection loop devices (heat detectors, pull stations, etc.). The detector head shall be easily disassembled to facilitate cleaning.
D. Horns/Speakers: Moisture repellent, fire retardant speaker or horn designed for smooth frequency response with minimal distortion. Horn/Speakers shall be listed and approved for use as a fire alarm indicating appliance. Horn/Speakers shall all sound the same general alarm sound. Outdoor speakers shall be weatherproof and listed for use as an outdoor fire alarm indicationg appliance.
1. Sound Level: 87 dB at 10 feet not to exceed 120 dbA.
E. Visual Flashing Lamps (Xenon Strobe): Visual indicating appliances shall be comprised of xenon flashtube and be entirely solid state. These devices shall be UL listed and be capable of either ceiling or wall mounting. The lexan lens shall be pyramidal in shape to allow better visibility. Separate alarm indicating circuits shall be provided for strobes. The maximum strobe pulse duration shall be 0.2 seconds with a maximum duty cycle of 40 percent. The intensity shall be a minimum 100 candela and the f lash rate shall be at least 1 Hz but not to exceed 3 Hz. Strobe must meet current ADA requirements.
F. Audio/Visual Alarm Indicating Appliance: Audio/Visual units shall provide a common enclosure for the fire alarm audible and visual alarm devices. The housing shall be designed to accommodate either horns, bells, chimes, or speakers. The unit shall be complete with a tamper resistant, pyramidal shaped lexan lens with "Fire" lettering visible from a 180 degree field of view. The front panel or bezel which is constructed of cast metal maybe inverted so that the lens is below the audible device. The lamp assembly shall incorporate a built-in reflector for more efficient light propagation and a special shock-mounting arrangement to resist "Bulb failure due to vibration. Lamp shall be provided with a 4 wire connection to insure properly supervised in/out system connection. Unit shall be complete with all mounting hardware including backbox. Audio/Visual unit shall be UL Listed for its intended purpose. The visual flashing lamps shall meet the specification indicated above in Part E.
1. Minimum dB: 87 dB at 10 feet per UL 464.
G. Duct Smoke Detectors: Duct smoke detectors shall be of the solid state photoelectric type and shall operate on the light scattering photodiode principle. The detectors shall be designed to ignore invisible airborne particles or smoke densities that are below the factory set alarm point. No radioactive materials shall be used. Detectors shall be the addressable type for use on an addressable type system. Detectors shall be provided with the capability of performing automatic fan shutdown either directly from the detector or via the main control panel. All required wiring and supervision shall be provided for all required fan shutdown. Provide all relays and supervise relays as required.
H. Provide all required auxiliary control circuits for hood fire suppression system supervision, appliance shutdown, door release, hood supply fan shutdown, gas shutdown, dampers, valve closure and other required control functions indicated on the drawings or otherwise specified. All auxiliary control circuits shall be indicated on the annunciator as a separate zone or shall be addressable so the device can be identified quickly and accurately.
I. Provide wall mounted, magnetic door holder/automatic door release devices. Door holder shall have a minimum 25 lbs. holding force.

13. BATTERY BACK-UP

A. The system shall be battery back-up for 24 hours with five (5) minutes of alarm capabilities (per NFPA 72) with all system indicating appliances operating, including strobes. Provide battery with 30% spare capacity for the potential addition of indicating appliances.

14. LIGHTNING PROTECTION

A. Provide surge protection on all circuits.
B. Provide lightning protection at all points entering and leaving the building (including walkways) and at the FACP location shown on the drawings. The 120 volt power circuit shall be provided with lightning protection.
C. Surge protection shall be manufactured and listed for use with the fire alarm system.

15. ENTIRE BUILDING

A. All pull stations, heat detectors, and smoke detectors shall, when placed in an alarm mode, sound the building general alarm, flash strobe lights, shutdown AHUs, release door holders, and annunciate the address of the initiating device or the zone of any of the existing hard wired devices to the FACP.
B. All pull stations, heat detectors, smoke detectors, and duct smoke detectors shall, when placed in a trouble mode, indicate the address of the device or zone of any existing device experiencing trouble to the FACP.
C. Duct smoke detectors shall be hardwired interlocked to shutdown their respective units on alarm or detection of smoke. Duct smoke detectors shall sound a supervisory signal to the FACP and shall not sound the general alarm.
D. The system shall be fully programmed and completely operational prior to acceptance. The FACP and CPU shall have the capability to be fully programmable by Owner's personnel.
E. The Manufacturer shall provide the necessary documentation and training to allow the Owner's personnel to maintain and change software.
F. Program data shall be stored in non-volatile memory with battery back-up. Program data shall not be lost due to temporary outages, surges, dips, etc.

16. INSTALLATION OF FIRE ALARM AND DETECTION SYSTEMS

A. Install fire alarm and detection systems as indicated, in accordance with equipment manufacturer's written instructions and complying with applicable portions of NEC and NECAs "Standard of Installation" and NFPA-72E.
B. Wiring Systems and Materials
1. Wiring shall be in accordance with requirements of the National Electrical Code and NFPA Regulation 72. The fire alarm system, including components, conduit, boxes and wiring shall be completely installed and wiring and conduit shall be properly tagged and color coded. The Electrical Contractor shall make final connections as shown and required by the equipment manufacturer's wiring instructions.
2. Color Code – The color codes of the fire alarm cabling shall conform with the following:
a. Speaker – Red (+) and Black (–).
b. Pull Station/Heat/Smoke Detector – Blue and Yellow.
c. Fan shut-down – White.
d. Visual Flashing Lamps (Xenon Strobes) – Purple and Orange.
e. Spare wires – Any different color, must be same throughout the building.
3. All wiring to be installed in conduit with continuous ground.
4. All junction box covers shall be painted red. All lengths of conduits shall have at least one red stripe.
5. AHU shutdown relays and equipment control relays shall be mounted within three (3) feet of controlled device. AHU shutdown relays shall be wired on a separate circuit
6. Visual flashing lamps and horn/speakers shall be wired on alternate circuits to provide coverage in the event of the failure of one circuit. Provide the required number of circuits for the indicated number of alarm indicating devices.
C. Provide conduit, wire and circuit breakers to connect fire alarm control panels to emergency circuit. The fire alarm circuit breaker shall be accessible to authorized personnel only and shall be marked FIRE ALARM CIRCUIT CONTROL. Provide handle lock for circuit breaker handle.
D. Provide a disable switch for system speakers at the Fire Alarm Control Panel. Label switch 'ALARM SILENCE SWITCH'. (If the switch is left in the disable position during normal system operation, a trouble signal shall sound at the control panel.).

17. QUALITY ASSURANCE

A. NEC Compliance comply with NEC as applicable to construction and installation of fire alarm and detection system components and accessories.
B. UL Compliance and Labeling – Provide fire alarm and detection system components which are UL listed and labeled. Installation is to be by a UL listed installer.
C. Misc. compliance – The fire alarm system is to be installed in accordance with the equipment manufacturer's written instructions and comply with all applicable portions of the NECAs "Standard Installation" and all local codes and ordinances.

18. FIELD QUALITY CONTROL

A. Inspect relays and signals for malfunctioning, and where necessary adjust units for proper operation to fulfill project requirements. Any fine adjustment shall be performed by specially trained personnel in direct employ of manufacturer of the fire alarm detection system equipment. The Manufacturer's representative shall perform a quality inspection off the final installation and, in the presence of the Electrical Contractor, Architect/Engineer, and Owner's Representatives, shall perform a complete functional test of the system. A system certification verifying the proper system operation shall be required prior to acceptance by the Owner.

A. 19. SYSTEM GUARANTEE

A. All components, parts, and assemblies supplied by the Manufacturer shall be guaranteed against defects in materials and workmanship for a period of twelve (12) months commencing the date of substantial completion. Warranty service shall be provided by a qualified factory trained representative of the equipment manufacturer. Service response time shall be a maximum of four (4) hours before arrival to site.
B. Testing: The Contractor shall perform all electrical and mechanical tests required by the equipment manufacturer's form and National Fire Protection Association – 72H. All test and report costs shall be in the contract price. A checkout report shall be prepared by the installation technicians and submitted in triplicate, one (1) copy of which will be registered with the equipment manufacturer. The report shall include, but not be limited to:
1. A complete list of equipment installed and wired.
2. Indication that all equipment is properly installed and functions and conforms with these specifications.
3. Test result of individual initiating devices and indicating appliances.
4. Serial numbers, locations by zone and model number for each installed detector.
5. Response time on thermostats and flame detectors (if used).
6. Technician's name, certificate number and date.
C. Documentation: After completion of the tests and adjustments listed above, the Contractor shall submit the following information to the Owner.
1. A copy of the test report described in this specification and a Certificate of Compliance prepared as per National Fire Protection Association Standard 72A Chapter 2, Section 2-2.4, and State Fire Marshal's Rule 4A-48 to be complete at final test.
2. Affixed to FACP a standard service tag, as described in rule 4A-48 for fire alarm contractors by the Office of the State Fire Marshal.
3. Final tests and inspection shall be held in presence of the Owners' representatives and to their satisfaction. The Contractor shall supply personnel and required auxiliary equipment for this test without additional cost to the Owner.
4. To assure that wire size, power supply, number of devices on a circuit, etc. are suitable to support 100% of devices being in alarm or operated simultaneously, this test shall include the following:
a. Place all sensors and monitor modules in alarm. Each shall display it's address and alarm condition. At least the first ten (10) devices on each circuit shall also have their alarm LEDs lighted.
b. Operate all control modules for the alarm or operated condition. Each module shall display it's address and condition.
c. Reset all alarmed and operated devices. The panel shall display the address or zone of any off-normal devices.
d. Test a representative number of sensors for alarm verification by momentarily testing for alarm. The sensor shall not initiate an alarm. Then, test by placing the sensor in alarm such that it remains in alarm for the selected verification time. The sensor shall initiate an alarm.
e. Acceptance of the system shall also require a demonstration of the stability of the system. This shall be adequately demonstrated if the system operates for a ninety (90) day test period without any unwarranted alarms. Should unwarranted alarm(s) occur, the Contractor shall readjust or replace the detector(s) and begin another ninety (90) day test period. As required by the Engineer the Contractor shall recheck the detectors using the fire test after each readjustment or replacement of detectors. This test shall not start until the Owner has obtained beneficial use of the building under tests.
f. If the requirements provided in the paragraph above are not completed within thirty (30) days after beginning the tests described therein, the Contractor shall replace the system with another acceptable manufacturer and the process repeated until acceptance of the equipment by the Owner.
g. Before final acceptance of work; the Contractor shall deliver (2) plus Electrical copies of a composite "Operating and Shop Maintenance Manual." Each manual shall contain, but not be limited to:
h. A statement of guarantee including date of termination and name and phone number of the person to be called in the event of equipment failure.
i. Individual factory issued manuals containing all technical information on each piece of equipment installed. In the event that such manuals are not obtainable from the factory, it shall be the responsibility of the Contractor to compile and include them. Advertising brochures or operational instructions shall not be used in lieu of the required technical manuals.
j. One (1) copy of all approved shop drawings, instruction sheets, operating instructions, and spare parts bulletins.
k. A training session, for personnel selected by the Owner, shall be presented by a fully qualified, trained representative of the equipment manufacturer who is thoroughly knowledgeable of the specific installation.
l. Provide a written description of standard control panel functions and user instructions at each FACP. These instructions shall be written in standard laymen's English so that an unfamiliar operator can accomplish basic functions such as reset.
D. Warranty : All equipment and systems shall be warranted by the Contractor for a period of one (1) year following the date of final acceptance. The warranty shall include parts, labor, prompt field service, pick-up, and delivery.
1. Provide one (1) year of testing as per National Fire Protection Association 72, which shall consist of:
2. At the end of the one year warranty period provide a Test and Written report which certify that all initiating devices have been tested and which indicate the result of the inspection as required by the Owner. Provide the required certification tag. Problems discovered during this testing and inspection shall be covered under the warranty. It is the contractor's responsibilty to perform this testing prior to the end of the one year warranty or provide an extended warranty if the test is performed after the warranty period was scheduled to expire.

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PROJECT NUMBER
DCH22007

CLIENT:
DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA
RUSTY A. RIGGS
AR98116
LICENSED ARCHITECT
02.15.2023

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
Restaurant #:	21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
SPECIFICATIONS

AS10

1 DESIGN CRITERIA

2

A. CRITERIA
1. DESIGNED USING 2020 FLORIDA BUILDING CODE 7TH EDITION
   NOTE: DESIGN COMPLIES WITH 2018 INTERNATIONAL BUILDING CODE (IBC) & ASCE 7-16.
2. RISK CATEGORY TYPE = II

B. ROOF LOADS
1. ROOF LIVE LOAD = 20 PSF
2. ROOF DEAD LOAD = 25 PSF
3. RAIN LOAD (15 MIN. PRECIPITATION INTENSITY: = 7.56 IN./HR.
4. RAIN LOAD (60 MIN. PRECIPITATION INTENSITY: = 4.05 IN./HR.
5. SUSPENDED CEILING LOAD: = 10 PSF
6. ROOF DEFLECTIONS TL = L/240
7. ROOF DEFLECTIONS LL = L/360

C. SEISMIC LOADS
1. MAPPED SPECTRAL RESPONSE ACC. FOR SHORT PERIOD, SS = 0.054 G
2. MAPPED SPECTRAL RESPONSE ACC. FOR 1-SEC PERIOD, S1 = 0.03 G
3. DESIGN SPECTRAL RESPONSE ACC. COEFF. AT SHORT PERIOD, SDS = 0.058 G
4. DESIGN SPECTRAL RESPONSE ACC. COEFF. AT 1-SEC PERIOD, SD1 = 0.048 G
5. BUILDING SITE CLASS = D
6. SEISMIC DESIGN CATEGORY = A
7. SEISMIC IMPORTANCE FACTOR, IE = 1.00
8. SEISMIC COEFFICIENT FORCE FACTOR, CS (ALLOWABLE) = 0.01
9. RESPONSE MODIFICATION FACTOR, R = 6.50
10. BASIC SEISMIC-FORCE -RESISTING SYSTEM = BEARING WALL SYSTEM: LIGHT-FRAMED (COLD-FORMED STEEL) WALL SHEATHED w/ WOOD
STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE
11. ANALYSIS PROCEDURE USED = EQUIVALENT LATERAL FORCE PROCEDURE

D. WIND LOADS
1. WIND IMPORTANCE FACTOR, IW = 1.0
2. WIND EXPOSURE = C
3. ULTIMATE DESIGN WIND SPEED (VULT) = 140 MPH

E. GEOTECHNICAL/SOILS CRITERIA
1. ALLOWABLE SOIL BEARING PRESSURE = 2,500 PSF
2. MINIMUM FROST DEPTH = 24 IN.
3. GEOTECHNICAL REPORT BY = NOVA ENGINEERING & ENVIRONMENTAL, LLC (NOVA)
4. GEOTECHNICAL REPORT NUMBER = 10106-2020001

2 FOUNDATIONS AND SLABS

A. ALL FOOTING AND FOUNDATION DESIGNS ARE BASED ON AN ALLOWABLE SOIL BEARING CAPACITY LISTED ABOVE. ALL BUILDING SHALLOW SPREAD AND CONTINUOUS FOUNDATIONS SYSTEMS SHALL BEAR ON COMPETENT NATIVE SOIL OR STRUCTURAL FILL PLACED PER GEOTECHNICAL RECOMMENDATIONS. IF THE SITE HAS A LOWER BEARING CAPACITY THAN LISTED, THEN FOUNDATION PLAN WILL NEED TO BE REDESIGNED.
B. THE MINIMUM FROST DEPTH LISTED ABOVE IS FROM LOWEST ADJACENT FINISH GRADE TO BOTTOM OF FOOTING AND SHALL BE MAINTAINED FOR ALL EXTERIOR FOOTINGS, CONTRACTOR SHALL COORDINATE AND VERIFY.
C. IT IS RECOMMENDED THAT ALL GRADING, EXCAVATION, PLACEMENT OF STRUCTURAL FILL AND INSTALLATION OF FOUNDATIONS BE PERFORMED UNDER THE INSPECTION AND TESTING OF A QUALIFIED GEOTECHNICAL CONSULTANT DURING THE CRITICAL STAGES OF CONSTRUCTION.
D. ALL CONCRETE SLABS SHALL HAVE REINFORCING & CONTROL JOINTS AS LISTED ON PLANS AND SHALL BE FOUNDED ON MATERIALS COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY A STANDARD PROCTOR AT OPTIMUM MOISTURE AND PLACED IN 8" LIFTS OR PER GEOTECHNICAL SPECIFICATIONS.
E. SLAB SAWN CONTROL AND CONSTRUCTION JOINTS SHALL BE MADE AS SOON AS POSSIBLE WITHOUT DAMAGE TO THE SURFACE. FILLING OF SAWN JOINTS WHERE REQUIRED SHALL BE DELAYED AS LONG AS POSSIBLE TO ALLOW MAXIMUM SHRINKAGE TO OCCUR IN SLABS.
F. ALL STRUCTURAL FILL BELOW FOOTINGS SHALL EXTEND OUT PAST FOOTINGS AS A SLOPE OF 1 HORIZONTAL TO 2 VERTICAL TO COMPETENT SOILS OR PER GEOTECHNICAL SPECIFICATIONS.
G. PROVIDE ADEQUATE DRAINAGE BEHIND ALL WALLS TO ALLEVIATE ANY STANDING WATER.
H. MINIMUM CONCRETE SLAB THICKNESS IS 5".
I. BLOCK-OUT ALL STEM WALLS @ ENTRIES AS REQUIRED.

3 REINFORCING STEEL

A. ALL ARRANGEMENT AND DETAILING OF REINFORCING STEEL, INCLUDING BAR SUPPORTS AND SPACERS, SHALL BE IN ACCORDANCE WITH THE LATEST ACI 315 DETAILING MANUAL.
B. ASTM A615, GRADE 40 (#3 REBAR OR SMALLER), ASTM A615, GRADE 60 (#4 REBAR OR LARGER), ASTM A185, GRADE 65 (WELDED WIRE FABRIC SHEETS). BARS TO BE WELDED SHALL BE ASTM A706, GRADE 60.
C. DIMENSIONS OF REINFORCING ARE TO BAR CENTERLINES U.N.O. IN DRAWINGS.
D. MINIMUM CLEAR PROTECTION FOR REINFORCEMENT SHALL BE AS FOLLOWS:
   1. CONCRETE PLACED DIRECTLY AGAINST EARTH: = 3"
   2. FORMED SURFACES AND EXPOSED TO EXTERIOR (#5 BARS OR SMALLER): = 2"
   3. INTERIOR FACE OF WALLS: = 1 1/2"
   4. STRUCTURAL SLABS: = 1"
   5. ELEVATED SLABS, BEAMS & COLUMNS: = 1 1/2"
E. MINIMUM REINFORCING LAP SPLICES/DEVELOPMENT LENGTHS (F'C = 3,000 PSI):

BAR SIZE	HOOK LENGTH (IN)	DEVL./SPLICE LENGTH (IN)
3	6	21
4	8	28
5	10	36
6	12	43

F. STAGGER SPLICES IN WALLS SO THAT NO TWO ADJACENT BARS ARE SPLICED IN THE SAME LOCATION.
G. REINFORCING SHALL BE CONTINUOUS THROUGH ALL COLD JOINTS.
H. PROVIDE CORNER BARS w/ 18" LEGS AT CORNERS AND INTERSECTING WALLS AND FOOTINGS, SIZE AND PLACEMENT TO MATCH HORIZONTAL REINFORCEMENT.
I. ALL REINFORCEMENT SHALL BE COLD BENT, UNLESS OTHERWISE PERMITTED BY THE BUILDING OFFICIAL AND ENGINEER OF RECORD. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE OR MASONRY SHALL NOT BE FIELD BENT, UNLESS PERMITTED BY THE BUILDING OFFICIAL AND ENGINEER OF RECORD.
J. PROVIDE FOUNDATION HOLDOWNS AT ALL SHEAR WALL LOCATIONS PER PLAN, IF APPLICABLE, RE: SHEARWALL PLAN.
K. WET SETTING OF REINFORCING BARS IN FOOTINGS AND WALLS IS NOT ALLOWED.

4 STRUCTURAL WELDS

A. ALL WELDS ON MEMBERS SHALL EMPLOY WELD FILLER METALS CLASSIFIED FOR NOMINAL 70 KSI TENSILE STRENGTH, REFERRED TO AS E70 ELECTRODES, MEETING THE FOLLOWING MINIMUM MECHANICAL PROPERTY REQUIREMENTS:
   1. CVN TOUGHNESS OF 20 FT-LB AT 0°F, USING AWS A5 CLASSIFICATION TEST METHODS.
   2. CVN TOUGHNESS OF 40 FT-LB AT 70°F, USING THE TEST PROCEDURES PRESCRIBED IN APPENDIX A.
   3. YIELD STRENGTH: 58 KSI MINIMUM, USING BOTH THE AWS A5 CLASSIFICATION TEST (FOR E70 CLASSIFICATION ELECTRODES) AND THE TEST PROCEDURES PRESCRIBED IN APPENDIX A.
   4. TENSILE STRENGTH: 70 KSI MINIMUM, USING BOTH THE AWS A5 CLASSIFICATION TEST (FOR E70 CLASSIFICATION ELECTRODES) AND THE TEST PROCEDURES PRESCRIBED IN APPENDIX A.
   5. ELONGATION: 22% MINIMUM, USING BOTH THE AWS A5 CLASSIFICATION TEST AND THE TEST PROCEDURES PRESCRIBED IN APPENDIX A.

5 STRUCTURAL STEEL

A. ALL STEEL CONSTRUCTION SHALL CONFORM TO REQUIREMENTS SET FORTH IN THE LATEST EDITIONS OF AISC, " AMERICAN INSTITUTE OF STEEL CONSTRUCTION", AISC 341-16, " SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS, INCLUDING SUPPLEMENT NO. 1, DATED 2015" AND AISC 360-16, "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS".
B. STEEL DESIGNATIONS:
   1. WIDE FLANGE SHAPES (BEAMS & COLUMNS) = ASTM A992 (GRADE 50)
   2. ROUND PIPE COLUMNS = ASTM A53, GRADE 'B'
   3. RECTANGULAR STRUCTURAL HSS TUBING = ASTM A500, GRADE 'B' 46 KSI
   4. OTHER ROLLED SHAPES & PLATE = ASTM A36 (U.N.O.)
C. ALL ANCHOR BOLTS, BOLTS AND LAGS IN WOOD SHALL CONFORM TO ASTM A307 STEEL U.N.O. AND SHALL HAVE STEEL WASHERS BENEATH ALL NUTS AND BOLT HEADS. IF A CERTAIN SITUATION IS NOT DETAILED USE A SIMILAR DETAIL. ALL STRUCTURAL BOLTS SHALL CONFORM TO ASTM A325-N. CONNECTIONS SHALL GENERALLY FOLLOW THE TYPES SHOWN IN AISC MANUAL OF STEEL CONSTRUCTION.
D. STEEL FABRICATOR SHALL ALSO INCLUDE AND COORDINATE ALL STRUCTURAL STEEL SHOWN ON ARCHITECTURAL SHEETS WITH THAT OF THE STRUCTURAL SHEETS, COORDINATE ANY STEEL NOT SHOWN ON STRUCTURAL DRAWINGS, CONTRACTOR TO VERIFY.
E. ALL BEAMS ELEVATIONS FOR JOISTS, BEAMS, AND COLUMN HEIGHTS SHALL BE COORDINATED AND VERIFIED BY THE CONTRACTOR. cw/ ARCH. ALL ELEVATIONS MUST BE APPROVED BY ENGINEER AND ARCHITECT OF RECORD IN THE SHOP DRAWING REVIEW PROCESS.
F. ALL STEEL WELDING SHALL CONFORM TO AWS D1.1 WITH E70XX ELECTRODES.
G. PROVIDE HIGH STRENGTH GROUT UNDER ALL STEEL BASE PLATES, F'c = 5,000 PSI, MIN.

6 CONCRETE

A. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO REQUIREMENTS SET FORTH IN ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", AND ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE".
B. CAST-IN-PLACE AND PRECAST CONSTRUCTION TOLERANCES FOR MEMBER SIZE AND LOCATION SHALL BE IN CONFORMANCE WITH ACI 117 AND ACI ITG-7, RESPECTIVELY.
C. NORMAL WEIGHT CONCRETE SHALL BE IN CONFORMANCE WITH ASTM C33 WITH A NOMINAL MAXIMUM AGGREGATE SIZE OF ¾".
D. LIGHTWEIGHT CONCRETE SHALL BE IN CONFORMANCE WITH ASTM C330 AND RESULTS OF ASTM C330 SHALL BE SUBMITTED TO E.O.R. FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT. THE VOLUMETRIC FRACTIONS OF THE AGGREGATE SHALL ALSO BE SUBMITTED TO E.O.R. FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT.
E. PORTLAND CEMENT SHALL BE TYPE I/II IN CONFORMANCE WITH ASTM C150.
F. OTHER CEMENTITIOUS MATERIALS SHALL CONFORM TO THE FOLLOWING:
   1. BLENDED HYDRAULIC CEMENTS: ASTM C595
   2. EXPANSIVE HYDRAULIC CEMENT: ASTM C845
   3. HYDRAULIC CEMENT: ASTM C1157
   4. FLY ASH AND NATURAL POZZOLAN: ASTM C618
   5. SLAG CEMENT: ASTM C989
   6. SILICA FUME: ASTM C1240
G. MIXING WATER SHALL CONFORM TO ASTM C1602.
H. ADMIXTURES MAY BE USED TO INCREASE WORKABILITY OF THE CONCRETE UPON WRITTEN APPROVAL OF THE CONCRETE MANUFACTURER OR THE PROJECT TESTING LABORATORY. TESTING ON CONCRETE SHALL BE DONE PRIOR TO THE ADDITION OF ADMIXTURES.
I. ADMIXTURES SHALL CONFORM TO THE FOLLOWING:
   1. WATER REDUCTION AND SETTING TIME MODIFICATION: ASTM C494
   2. PRODUCING FLOWING CONCRETE: ASTM C1017
   3. AIR ENTRAINMENT: ASTM C260
   4. INHIBITING CHLORIDE-INDUCED CORROSION: ASTM C1528
J. CONCRETE MIXTURE PROPORTIONS SHALL CONFORM WITH ARTICLE 4.2.3 OF ACI 301 AND ESTABLISHED SO CONCRETE CAN BE PLACED READILY WITHOUT SEGREGATION INTO FORMS AND AROUND REINFORCEMENT.
K. DOCUMENTATION OF CONCRETE MIXTURE CHARACTERISTICS SHALL BE SUBMITTED TO E.O.R. FOR REVIEW AND APPROVAL PRIOR TO USING THE MIXTURE AND PRIOR TO MAKING CHANGES TO MIXTURES ALREADY IN USE.
L. ALL CONCRETE MIXING AND TRANSPORTATION OF CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ATM C94 AND ASTM C685.
M. STAIN AND TEXTURE OF EXPOSED CONCRETE SURFACES PER OWNER'S DIRECTION, IF APPLICABLE.
N. THE SLUMP OF THE CONCRETE SHALL BE BETWEEN:
   1. BEAMS/COLUMNS: 3" ± 1"
   2. WALLS/FOUNDATIONS: 5" ± 1"
   3. SLABS-ON-GRADE: 4" ± 1"
O. THE CONCRETE SHALL MEET THE MOST STRINGENT REQUIREMENTS FROM THE FOLLOWING EXPOSURE CLASSES:
   1. ALL FOOTINGS, FOUNDATIONS, AND STEM WALLS: F2, S0, W0, C0
   2. INTERIOR SLABS-ON-GRADE: F2, S0, W0, C0
   3. EXTERIOR SLABS-ON-GRADE: F2, S0, W0, C0
P. CONCRETE EXPOSURE CLASSES AND REQUIREMENTS:

EXPOSURE CATEGORY: F

EXPOSURE CLASS	MAXIMUM w/cm	MINIMUM f_c' (psi)	AIR CONTENT (%)	LIMITS ON MAXIMUM PERCENT OF TOTAL CEMENTITIOUS MATERIALS BY MASS				
F0	N/A	2500	N/A	N/A				
F1	0.55	3500	5	N/A				
F2	0.45	4500	6	N/A				
F3	0.40	5000	6	ASTM C618	ASTM C989	ASTM C1240	TOTAL OF ASTM C618 & ASTM C1240	TOTAL OF ASTM C618 & ASTM C989 & ASTM C1240
				25%	50%	10%	35%	50%

EXPOSURE CATEGORY: S

EXPOSURE CLASS	MAXIMUM w/cm	MINIMUM f_c' (psi)	CEMENTITIOUS MATERIALS			
			ASTM C150	ASTM C595	ASTM C1157	CALCIUM CHLORIDE ADMIXTURE
S0	N/A	2500	N/A	N/A	N/A	N/A
S1	0.50*	4000	II	IP(MS), IS(MS), OR IT(MS)	MS	N/A
S2	0.45	4500	V	IP(HS), IS(HS), OR IT(HS)	HS	NOT PERMITTED
S3	0.45	4500	V + POZZOLAN OR SLAG CEMENT	IP(HS), IS(HS), OR IT(HS) + POZZOLAN OR SLAG CEMENT	HS + POZZOLAN OR SLAG CEMENT	NOT PERMITTED

EXPOSURE CATEGORY: W

EXPOSURE CLASS	MAXIMUM w/cm	MINIMUM f_c' (psi)
W0	N/A	2500
W1	0.50	4000

EXPOSURE CATEGORY: C

EXPOSURE CLASS	MAXIMUM w/cm	MINIMUM f_c' (psi)	MAXIMUM WATER-SOLUBLE CHLORIDE ION (Cl^{-1}) CONTENT IN NONPRESTRESSED CONCRETE, PERCENT BY WEIGHT OF CEMENT
C0	N/A	2500	1.00
C1	N/A	2500	0.30
C2	0.40	5000	0.15

*FOR SEAWATER EXPOSURE THE MAXIMUM w/cm RATIO SHALL BE 0.40.

Q. TEMPERATURE REQUIREMENTS:
   1. CONCRETE SHALL BE MAINTAINED AT A TEMPERATURE MINIMUM OF 50°F AND IN A MOIST CONDITION FOR AT LEAST THE FIRST 7 DAYS AFTER PLACEMENT.
   2. ADEQUATE EQUIPMENT SHALL BE PROVIDED FOR HEATING CONCRETE MATERIALS AND PROTECTING CONCRETE DURING FREEZING OR NEAR-FREEZING WEATHER.
   3. FROZEN MATERIALS OR MATERIALS CONTAINING ICE SHALL NOT BE USED.
   4. FORMS, FILLERS, AND GROUND WITH WHICH CONCRETE IS TO COME IN CONTACT SHALL BE FREE FROM FROST AND ICE.
   5. CONCRETE SHALL NOT EXCEED A TEMPERATURE MAXIMUM OF 95°F AT THE TIME OF PLACEMENT.
   6. HANDLING, PLACING, PROTECTION, AND CURING PROCEDURES SHALL LIMIT CONCRETE TEMPERATURES OR WATER EVAPORATION THAT COULD REDUCE STRENGTH SERVICEABILITY, AND DURABILITY OF THE MEMBER OR STRUCTURE.
   7. HOT WEATHER AND COLD WEATHER CONCRETING SHALL BE DONE IN COMPLIANCE WITH THE LATEST EDITION OF ACI 305.1 AND ACI 306.1, RESPECTIVELY.
   8. CONCRETE MATERIALS AND PRODUCTION METHODS SHALL BE SELECTED SO THAT THE CONCRETE TEMPERATURE AT DELIVERY COMPLIES WITHIN THE SPECIFIED TEMPERATURE LIMITS.
R. THESE PROVISIONS DO NOT PROTECT CONCRETE AGAINST CHEMICALLY AGGRESSIVE SOLUTIONS, CONTACT E.O.R. IF SUCH CONDITIONS APPLY.
S. STEGO WRAP TO BE USED AS VAPOR BARRIER
T. CONCRETE PLACEMENT:
   1. STANDING WATER SHALL BE REMOVED FROM PLACE OF DEPOSIT BEFORE CONCRETE IS PLACED UNLESS A TREMIE IS USED.
   2. MASONRY FILLER UNITS THAT WILL BE IN CONTACT WITH CONCRETE SHALL BE PRE-WETTED PRIOR TO PLACING CONCRETE.
   3. CONCRETE SHALL NOT BE CONVEYED WITH PIPES, TREMIES, OR CHUTES MADE OF ALUMINUM OR ALUMINUM ALLOYS.
   4. CONCRETE SHALL BE PLACED:
      a. AT A RATE SO CONCRETE AT ALL TIMES HAS SUFFICIENT WORKABILITY TO BE CONSOLIDATED APPROPRIATELY.
      b. WITHOUT SEGREGATION OR LOSS OF MATERIALS.
      c. WITHOUT INTERRUPTIONS TO MAINTAIN WORKABILITY BETWEEN SUCCESSIVE PLACEMENTS TO PREVENT AN UNINTENTIONAL COLD JOINT.
      d. DEPOSITED AS NEAR TO ITS FINAL LOCATION AS PRACTICABLE TO AVOID SEGREGATION DUE TO REHANDLING OR FLOWING.
   5. CONCRETE THAT HAS BEEN CONTAMINATED OR HAS LOST ITS INITIAL WORKABILITY TO THE EXTENT THAT IT CAN NO LONGER BE CONSOLIDATED APPROPRIATELY SHALL NOT BE USED.
   6. RETEMPERING CONCRETE IN ACCORDANCE WITH ASTM C94 SHALL BE PERMITTED AS LONG AS THE LIMITS ON MAXIMUM MIXING TIME AND w/cm ARE NOT VIOLATED.
   7. AFTER STARTING, CONCRETING SHALL BE A CONTINUOUS OPERATION UNTIL THE COMPLETION OF A PANEL OR SECTION, AS DEFINED BY ITS BOUNDARIES OR PREDETERMINED JOINTS.
   8. CONCRETE SHALL BE CONSOLIDATED APPROPRIATELY DURING PLACEMENT AND SHALL BE WORKED AROUND REINFORCEMENT AND EMBEDMENTS AND INTO CORNERS OF FORMS.
   9. TOP SURFACES OF VERTICALLY FORMED LIFTS SHALL BE GENERALLY LEVEL.
   10. JOINT LOCATIONS OR JOINT DETAILS NOT SHOWN OR THAT DIFFER FROM THOSE INDICATED IN THE CONSTRUCTION DOCUMENTS SHALL BE SUBMITTED FOR REVIEW BY THE E.O.R.
   11. CONSTRUCTION JOINTS SHALL BE CLEANED AND LAITANCE REMOVED BEFORE NEW CONCRETE IS PLACED.
   12. SURFACE OF CONCRETE CONSTRUCTION JOINTS SHALL BE INTENTIONALLY ROUGHENED.
   13. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, CONSTRUCTION JOINTS SHALL BE PRE-WETTED AND STANDING WATER REMOVED.
   14. BEAMS, GIRDERS, OR SLABS SUPPORTED BY COLUMNS OR WALLS SHALL NOT BE CAST UNTIL CONCRETE IN THE VERTICAL SUPPORT MEMBERS IS NO LONGER WORKABLE AND SOFT.
   15. BEAMS, GIRDERS, HAUNCHES, DROP PANELS, SHEAR CAPS, AND CAPITALS SHALL BE PLACED MONOLITHICALLY AS PART OF A SLAB SYSTEM, U.N.O.
   16. SAW CUTTING IN SLABS-ON-GRADE IDENTIFIED IN THE CONSTRUCTION DOCUMENTS AS STRUCTURAL DIAPHRAGMS OR PART OF THE SEISMIC-FORCE-RESISTING SYSTEM SHALL NOT BE PERMITTED U.N.O.
   17. ALUMINUM EMBEDMENTS SHALL BE COATED OR COVERED TO PREVENT ALUMINUM-CONCRETE REACTION AND ELECTROLYTIC ACTION BETWEEN ALUMINUM AND STEEL.
   18. IN SOLID SLABS, PIPING, EXCEPT FOR RADIANT HEATING OR SNOW MELTING, SHALL BE PLACED BETWEEN TOP AND BOTTOM REINFORCEMENT.
   19. CONDUIT AND PIPING SHALL BE FABRICATED AND INSTALLED SO THAT CUTTING, BENDING, OR DISPLACEMENT OF REINFORCEMENT FROM ITS SPECIFIED LOCATION IS NOT REQUIRED.
U. FORMWORK:
   1. FORMWORK SHALL BE DESIGNED, FABRICATED, INSTALLED, AND REMOVED BY CONTRACTOR.
   2. DESIGN OF FORMWORK SHALL TAKE INTO CONSIDERATION:
      a. METHOD OF CONCRETE PLACEMENT.
      b. RATE OF CONCRETE PLACEMENT.
      c. CONSTRUCTION LOADS, INCLUDING VERTICAL, HORIZONTAL, AND IMPACT.
      d. AVOIDANCE OF DAMAGE TO PREVIOUSLY CONSTRUCTED MEMBERS.
   3. FORMWORK FABRICATION AND INSTALLATION SHALL RESULT IN A FINAL STRUCTURE THAT CONFORMS TO SHAPES, LINES, AND DIMENSIONS OF THE MEMBERS AS REQUIRED BY THE CONSTRUCTION DOCUMENTS.
   4. FORMWORK SHALL BE SUFFICIENTLY TIGHT TO INHIBIT LEAKAGE OF PASTE OR MORTAR.
   5. FORMWORK SHALL BE BRACED OR TIED TOGETHER TO MAINTAIN POSITION AND SHAPE.
   6. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL DEVELOP A PROCEDURE AND SCHEDULE FOR REMOVAL OF FORMWORK AND INSTALLATION OF RESHORES AND SHALL CALCULATE THE LOADS TRANSFERRED TO THE STRUCTURE DURING THIS PROCESS.
   7. STRUCTURAL ANALYSIS AND CONCRETE STRENGTH REQUIREMENTS USED IN PLANNING AND IMPLEMENTING THE FORMWORK REMOVAL AND RESHORE INSTALLATION SHALL BE GIVEN BY THE CONTRACTOR TO THE E.O.R. AND TO THE BUILDING OFFICIAL, WHEN REQUESTED.
   8. NO CONSTRUCTION LOADS SHALL BE PLACED ON, NOR ANY FORMWORK REMOVED FROM, ANY PART OF THE STRUCTURE UNDER CONSTRUCTION EXCEPT WHEN THAT PORTION OF THE STRUCTURE IN COMBINATION WITH REMAINING FORMWORK HAS SUFFICIENT STRENGTH TO SUPPORT ITS WEIGHT AND LOADS PLACED ON IT SAFELY AND WITHOUT IMPAIRING SERVICEABILITY.
   9. NO CONSTRUCTION LOADS EXCEEDING THE COMBINATION OF SUPERIMPOSED DEAD LOAD PLUS LIVE LOAD INCLUDING REDUCTION SHALL BE PLACED ON ANY UNSHORED PORTION OF THE STRUCTURE UNDER CONSTRUCTION, UNLESS ANALYSIS INDICATES ADEQUATE STRENGTH TO SUPPORT SUCH ADDITIONAL LOADS AND WITHOUT IMPAIRING SERVICEABILITY.

7 PRE-MANUFACTURED TRUSSES

A. MANUFACTURED JOISTS SHALL BE BY REDBUILT, LLC (NO SUBSTITUTIONS ARE ALLOWED).
B. ALL ROOF OPEN WEB PRE-MANUFACTURED TRUSSES ARE CONSIDERED A 'DEFERRED' SUBMITTAL. SHOP DRAWINGS AND STRUCTURAL CALCULATIONS SHALL BE PROVIDED BY THE MANUFACTURER STAMPED AND SIGNED BY THEIR LICENSED E.O.R. IN THE STATE IN WHICH THE PROJECT IS LOCATED. ALL ROOF TRUSSES SHALL BE DESIGNED FOR LOADS SHOWN UNDER "DESIGN CRITERIA". ALL ADDITIONAL LOADS FROM MECH. AND ARCH. MUST BE COORDINATED AND DESIGNED FOR AS WELL, RE: MECH./ARCH. ALL FINAL DOCUMENTS, CALCULATIONS, AND SHOP DRAWINGS MUST BE SUBMITTED TO THE PROJECT E.O.R. FOR REVIEW AND APPROVAL.
C. TRUSS MANUFACTURER TO VERIFY ALL LOADING PATTERNS TO FOUNDATIONS BELOW.
D. RE-MANUFACTURED TRUSS PROVIDER TO PROVIDE SUPPORT AT TRUSSES FOR LOADING SHOWN ON ALL PLANS, SECTIONS AND DETAILS.
E. ALL TRUSS BRIDGING TO BE DENOTED AND PROVIDED BY TRUSS MANUFACTURER IN SUBMITTAL.
F. TRUSS MANUFACTURER TO DESIGN TRUSSES PER DEFLECTION RATIOS NOTED IN DESIGN CRITERIA OR A MAXIMUM OF 1" OF DEFLECTION
G. FOR SPECIFICATIONS ON FIRE RATING OF PRE-MANUFACTURED TRUSSES, RE: ARCH.

ABBREVIATIONS

(E)	EXISTING	HT.	HEIGHT
(F)	FUTURE	HVAC	HEATING VENTILATING AND AIR CONDITIONING
(N)	NEW	I.D.	INSIDE DIAMETER
(R)	RENOVATE	IN.	INCH
℄	CENTERLINE	INSUL.	INSULATION
∅	DIAMETER OR ROUND	INT.	INTERIOR
⊥	PERPENDICULAR	JT.	JOINT
□	SQUARE	K.O.	KNOCKOUT
#	NUMBER OR POUND	L.F.	LINEAL FEET OR FOOT
@	AT	L.L.V.	LONG LEG VERTICAL
A.B.	ANCHOR BOLT	L.L.H.	LONG LEG HORIZONTAL
A.F.F.	ABOVE FINISH FLOOR	L.P.	LOW POINT
ABV.	ABOVE	LSL	LAMINATED STRAND LUMBER
ADJ.	ADJUSTABLE	LAM.	LAMINATE
AGG.	AGGREGATE	LVL	LAMINATED VENEER LUMBER
ALT.	ALTERNATIVE	LBS.	POUNDS
ALUM.	ALUMINUM	M.B.	MACHINE BOLT
APPROX.	APPROXIMATE	M.H.	MANHOLE
ARCH.	ARCHITECTURAL	M.O.	MASONRY OPENING
B.O.	BOTTOM OF	MAX.	MAXIMUM
B.O.C.	BOTTOM OF CONCRETE	MECH.	MECHANICAL
B/T	BETWEEN	MET.	METAL
B.N.	BOUNDARY NAIL(ING)	MFR.	MANUFACTURER
B.U.	BUILT-UP	MIN.	MINIMUM
BD.	BOARD	MISC.	MISCELLANEOUS
BLDG.	BUILDING	MT'D	MOUNTED
BLK.	BLOCK	MTRL	MATERIAL
BM.	BEAM	N	NORTH
BOT.	BOTTOM	N.I.C.	NOT IN CONTRACT
C.C.	CENTER TO CENTER	N.S.	NEAR SIDE
C.I.	CAST IRON	N.T.S.	NOT TO SCALE
C.I.P.	CAST IN PLACE	NO.	NUMBER
CMU	CONCRETE MASONRY UNIT	NOM.	NOMINAL
C.O.	CONCRETE OPENING	N.S.	NEAR SIDE
CLG.	CEILING	O/H	OVERHEAD
CLR.	CLEAR	O/	OVER
CNTRSK.	COUNTERSUNK	O.A.	OVER ALL
COL.	COLUMN	O.C.	ON CENTER
CONC.	CONCRETE	O.D.	OUTSIDE DIAMETER
CONT.	CONTINUOUS	O.H.	OPPOSITE HAND
CORR.	CORRIDOR	OPNG.	OPENING
CW/	COORDINATE WITH	OPP.	OPPOSITE
D.	DEEP	OZ.	OUNCE
D.B.A.	DEFORMED BAR ANCHOR	PART.	PARTICLE
D.F.	DOUGLAS FIR	P/L	PROPERTY LINE
DET.	DETAIL	PL.	PLATE
DIA.	DIAMETER	PLYWD.	PLYWOOD
DIAG.	DIAGONAL	PRE-ENG.	PRE-ENGINEERED METAL BUILDING
DIM.	DIMENSION	PT.	POINT
DN.	DOWN	P.S.L.	PARALLEL STRAND LUMBER
DWG.	DRAWING	R.	RADIUS OR RISER
E.B	EXPANSION BOLT	R.D.	ROOF DRAIN
E.B.E.	ECCENTRICALLY BRACED FRAME	R.O.	ROUGH OPENING
E.J.	EXPANSION JOINT	RE:	REFERENCE (CW/)
E.N.	EDGE NAIL(ING)	REINF.	REINFORCE(D)
EA.	EACH	REQ'D.	REQUIRED
EL.	ELEVATION	RM.	ROOM
ELEC.	ELECTRICAL	S.C.	SOLID CORE
ELEV.	ELEVATOR	S.F.	SQUARE FEET OR FOOT
EOR	ENGINEER OF RECORD	S.S.	STAINLESS STEEL
EQ.	EQUAL	SCHED.	SCHEDULE
EQUIP.	EQUIPMENT	SECT.	SECTION
E.S.	EDGE SCREW(ING)	SHT.	SHEET
EXP.	EXPANSION	SIM.	SIMILAR OR SIMILAR TO
EXT.	EXTERIOR	SPECS.	SPECIFICATIONS
F.B.	FLAT BAR	SQ.	SQUARE
F.D.	FLOOR DRAIN	STD.	STANDARD
F.O.	FACE OF	STRUC.	STRUCTURAL
F.O.C.	FACE OF CURB/CONCRETE	SUSP.	SUSPENDED
F.O.F.	FACE OF FINISH	SYM.	SYMMETRICAL
F.O.M.	FACE OF MASONRY	T&G	TONGUE & GROOVE
F.O.S.	FACE OF STUDS	T.O.B.	TOP OF BEAM
F.O.T.	FACE OF TREAD	T.O.C.	TOP OF CURB/CONCRETE
FDN.	FOUNDATION	T.O.D.	TOP OF DECK
FIN.	FINISH	T.O.M.	TOP OF MASONRY
FL.	FLOOR(ING)	T.O.S.	TOP OF SLAB
FLASH.	FLASHING	T.O.W.	TOP OF WALL
F.S.	FAR SIDE	THK.	THICKNESS
FT.	FOOT OR FEET	TJI	TRUSS JOIST I-JOIST
FTG.	FOOTING	TYP.	TYPICAL
FTW.	FIRE TREATED WOOD	U.B.C.	UNIFORM BUILDING CODE
FURR.	FURRING	U.O.N.	UNLESS OTHERWISE NOTED
GA.	GAUGE OR GAGE	U.N.O.	UNLESS NOTED OTHERWISE
GALV.	GALVANIZED	V.I.F.	VERIFY IN FIELD
GSN	GENERAL STRUCTURAL NOTES	VERT.	VERTICAL
GYP.	GYPSUM	W/	WITH
H.	HIGH	W/O	WITHOUT
H.C.A.	HEADED CONCRETE ANCHOR	WD.	WOOD
H.S.S.	HOLLOW STRUCTURAL STEEL	W.	WIDE
H.P.	HIGH POINT	W.P.	WORK POINT
HORIZ.	HORIZONTAL	W.W.F.	WELDED WIRE FABRIC
HR.	HOUR		

SHEET LIST

SHEET NUMBER	SHEET NAME
S0.0	GENERAL STRUCTURAL NOTES
S0.1	GENERAL STRUCTURAL NOTES
S0.2	TYPICAL DETAILS
S1.0	FOUNDATION PLAN
S1.1	SHEAR WALL PLAN
S2.0	FOUNDATION DETAILS
S2.1	FOUNDATION DETAILS
S2.2	BUILDING SECTIONS
S3.0	ROOF FRAMING PLAN
S3.2	CEILING FRAMING PLAN
S4.0	FRAMING DETAILS
S4.1	FRAMING DETAILS
S4.2	FRAMING DETAILS
S4.3	FRAMING DETAILS
S4.4	FRAMING DETAILS

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05/03/2023

Cheddar's SCRATCH KITCHEN EST 1979

Issue Date: 11-20-22

REVISION INFORMATION

REV #2	CLIENT COMMENTS	4/5/23

Restaurant #: 22K0000

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE.
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
GENERAL STRUCTURAL NOTES

S0.0

1 POST-INSTALLED ANCHORS

A. ADHESIVE ANCHORS
1. APPROVED ADHESIVE FOR CONCRETE:
a. HILTI HIT-RE 500V3 WITH SAFESET TECHNOLOGY (ICC-ES ESR-3814)
b. HILTI HIT-HY 200 WITH SAFESET TECHNOLOGY (ICC-ES ESR-3187)
c. DEWALT PURE 110+ (ICC-ES ESR-3298)
d. SIMPSON SET-XP (ICC-ES ESR-2508), (NOT APPROVED FOR >20DIA. EMBEDMENT)
2. APPROVED ADHESIVE FOR GROUTED MASONRY:
a. HILTI HIT-HY 270 (ICC-ES ESR-4143)
b. HILTI HIT-HY-200 (ICC-ES ESR-3963)
c. SIMPSON SET-XP (IAPMO UES ER-265)
d. DEWALT AC100+GOLD (ICC-ES ESR-3200)
3. APPROVED ADHESIVE FOR UNGROUTED MASONRY:
a. HILTI HIT-HY 270 (ICC-ES ESR-4143)
b. DEWALT AC100+GOLD (ICC-ES ESR-3200)
4. APPROVED ADHESIVE FOR UNREINFORCED MASONRY OR BRICK:
a. HILTI HIT-HY 270 (ICC-ES ESR-4144)
b. SIMPSON SET (ICC-ES ESR-1772)
c. DEWALT AC100+GOLD (ICC-ES ESR-4105)
5. PLASTIC MESH OR STAINLESS-STEEL SCREEN TUBES SHALL BE USED FOR HOLLOW MASONRY IF INDICATED BY E.O.R. ON STRUCTURAL PLANS.
6. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS AND CERTIFICATION TESTING REPORTS FOR ADHESIVE INSTALLATION.
7. ALTERNATIVE EPOXIES MAY BE USED IF AN (ICC-ES ESR) OR (IAPMO-UES ER) APPROVAL FOR USE IN CRACKED CONCRETE IS SUBMITTED TO THE E.O.R. AND APPROVED PRIOR TO USE.
8. UTILIZE HOLE CLEANING AS RECOMMENDED FOR THE PRODUCT BY THE MANUFACTURER, REFER TO THE MANUFACTURED PUBLISHED INSTALLATION INSTRUCTIONS (MPII) FOR INSTALLATION INSTRUCTIONS.
9. EPOXY SHALL BE WITHIN THE MANUFACTURERS RECOMMENDED LIFE TIME AND PRIOR TO EXPIRATION DATE. DO NOT USE EPOXY THAT HAS NOT BEEN STORED PER MANUFACTURES RECOMMENDATIONS AND MAY HAVE EXPERIENCED FREEZE THAW CYCLES OR EXTREME HEAT.
10. DO NOT INSTALL ADHESIVE ANCHORS IN CONCRETE IF CONCRETE IS LESS THAN 21 DAYS OLD, CONTRACTOR MUST OBTAIN WRITTEN APPROVAL FROM THE E.O.R. TO INSTALL IN THE 7-21 DAY TIME PERIOD.
11. DO NOT INSTALL ADHESIVE ANCHORS IF SUBSTRATE TEMPERATURE IS BELOW 40 DEGREE F UNLESS EPOXY IS APPROVED FOR LOWER TEMPERATURE, REFER TO MANUFACTURES PUBLISHED INSTALLATION INSTRUCTIONS (MPII)
12. DO NOT INSTALL ADHESIVE ANCHOR IN WET OR DAMP HOLE UNLESS PRODUCT IS APPROVED FOR SUCH CONDITIONS WITHOUT STRENGTH REDUCTION, CONTACT ENGINEER IF HOLES BECOME WET OR DAMP.
13. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR VERTICAL OVERHEAD ORIENTATION TO SUPPORT SUSTAINED TENSION LOADS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI/CRSI (ACI 318) PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO E.O.R. FOR APPROVAL PRIOR TO INSTALLATION.
a. SHOULD AN ACI CERTIFIED INSTALLER NOT BE AVAILABLE AT A MINIMUM THE INSTALLER SHALL BE TRAINED BY THE MANUFACTURES EMPLOYED REPRESENTATIVE.
b. INSTALLATION OF ANCHORS SHALL HAVE CONTINUOUS OR PERIODIC INSPECTION IN ACCORDANCE WITH CURRENT IBC AND WHERE DESIGNATED IN THE SPECIAL INSPECTIONS PROGRAM.
c. HOLES WILL BE EPOXY FILLED UTILIZING A "PISTON PLUG" OR EQUIVALENT DEVICE TO ELIMINATE THE POSSIBILITY OF AIR GAPS.
14. BARS AND RODS USED MUST BE DEFORMED OR THREADED FOR THE FULL EMBEDMENT DEPTH EPOXY IS APPLIED.

B. MECHANICAL ANCHORS
1. APPROVED MECHANICAL ANCHORS FOR CONCRETE:
a. HILTI KWIK BOLT TZ (ICC-ES ESR-1917)
b. SIMPSON STRONG-BOLT 2 (ICC-ES ESR-3037)
c. DEWALT POWER-STUD+SD2 (ICC-ES ESR-2502)
2. APPROVED MECHANICAL ANCHORS FOR GROUTED MASONRY:
a. HILTI KWIK BOLT 3 (ICC-ES ESR-1385)
b. SIMPSON WEDGE-ALL (ICC-ES ESR-1396)
c. SIMPSON STRONG-BOLT 2 (IAPMO-UES ER-240)
d. DEWALT POWER-STUD+SD1 (ICC-ES ESR-2966)
3. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS AND CERTIFICATION TESTING REPORTS FOR MECHANICAL ANCHOR INSTALLATION.
4. ALTERNATIVE MECHANICAL ANCHORS MAY BE USED IF AN (ICC-ES ESR) OR (IAPMO-UES ER) APPROVAL FOR USE IN CRACKED CONCRETE IS SUBMITTED TO THE STRUCTURAL ENGINEER AND APPROVED PRIOR TO USE.
5. DO NOT INSTALL MECHANICAL ANCHORS IN CONCRETE LESS THAN 7 DAYS OLD, CONTRACTOR MUST OBTAIN WRITTEN APPROVAL FROM THE ENGINEER TO INSTALL IN THE 7-21 DAY TIME PERIOD.

C. SCREW ANCHORS
1. APPROVED SCREW ANCHORS FOR CONCRETE:
a. HILTI KWIK HUS-EZ (ICC-ES ESR-3027)
b. SIMPSON TITEN HD (ICC-ES ESR-2713)
c. DEWALT SCREW BOLT+ (ICC-ER ESR-3889)
2. APPROVED SCREW ANCHORS FOR GROUTED MASONRY:
a. HILTI KWIK HUS-EZ (ICC-ES ESR-3056)
b. SIMPSON TITEN HD (ICC-ES ESR-1056)
c. DEWALT WEDGE-BOLT+ (ICC-ER ESR-2526)
3. FOLLOW ALL OF THE MANUFACTURER'S RECOMMENDATIONS AND CERTIFICATION TESTING REPORTS FOR SCREW ANCHOR INSTALLATION.
4. ALTERNATIVE SCREW ANCHORS USED IN CONCRETE APPLICATION MAY BE USED IF AN (ICC-ES ESR) OR (IAPMO-UES ER) APPROVAL FOR USE IN CRACKED CONCRETE IS SUBMITTED TO THE E.O.R. PRIOR TO USE.
5. ALTERNATIVE SCREW ANCHORS USED IN GROUTED MASONRY APPLICATION MAY BE USED IF AN (ICC-ES ESR) OR (IAPMO-UES ER) APPROVAL FOR USE IN GROUTED MASONRY IS SUBMITTED TO THE E.O.R. AND APPROVED PRIOR TO USE.

D. POWDER ACTUATED FASTENERS
1. APPROVED POWDER ACTUATED FASTENERS DRIVEN INTO STEEL:
a. HILTI X-U P8 TH UNIVERSAL KNURLED SHANK FASTENER (ICC-ES ESR-2269)
b. SIMPSON PDPA DRIVE PIN (ICC-ES ESR-2138)
c. DEWALT 8MM HEAD SPIRAL CSI DRIVE PIN (ICC-ES ESR-2024)
2. APPROVED POWDER ACTUATED FASTENERS DRIVEN INTO CONCRETE:
a. HILTI X-U UNIVERSAL KNURLED SHANK FASTENER (ICC-ES ESR-2269)
b. SIMPSON PDPA (ICC-ESR-2138)
c. DEWALT 8MM HEAD SPIRAL CSI DRIVE PIN (ICC-ES ESR-2024)
3. APPROVED POWDER ACTUATED FASTENERS DRIVEN INTO MASONRY:
a. HILTI X-U UNIVERSAL KNURLED SHANK FASTENER (ICC-ES ESR-2269)
b. SIMPSON PDPA (ICC-ESR-2138)
4. FOLLOW THE MANUFACTURER'S'S RECOMMENDATIONS AND CERTIFICATION TESTING REPORTS FOR POWDER ACTUATED FASTENER INSTALLATION.
5. ALTERNATIVE POWDER ACTUATED FASTENERS MAY BE USED IF AN (ICC-ES ESR) OR (IAPMO-UES ER) APPROVAL FOR USE IN STEEL IS SUBMITTED TO THE E.O.R. AND APPROVED PRIOR TO USE.
6. ALTERNATIVE POWDER ACTUATED FASTENERS MAY BE USED IF AN (ICC-ES ESR) OR (IAPMO-UES ER) APPROVAL FOR USE IN CRACKED CONCRETE IS SUBMITTED TO THE E.O.R. AND APPROVED PRIOR TO USE.
7. ALTERNATIVE POWDER ACTUATED FASTENERS MAY BE USED IF AN (ICC-ES ESR) OR (IAPMO-UES ER) APPROVAL FOR USE IN MASONRY IS SUBMITTED TO THE E.O.R. AND APPROVED PRIOR TO USE.

E. ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY MANUFACTURER OR SUCH OTHER METHOD AS APPROVED BY THE E.O.R. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE E.O.R. PRIOR TO USE. SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.
F. REFER TO STRUCTURAL DRAWINGS FOR EMBEDMENT DEPTH, ROD TYPE AND SIZE, AND OTHER SPECIFIC INFORMATION.
G. DO NOT APPLY LOAD TO ANCHOR UNTIL CONCRETE OR GROUT HAS REACHED FULL DESIGN STRENGTH.
H. ALL HOLES SHALL BE DRILLED WITH ANSI STANDARD BIT DESIGNED FOR CONCRETE OR HOLLOW DRILL BIT, DIAMOND CORED HOLES ARE NOT ALLOWED UNLESS INDICATED IN DESIGN DETAIL OR PRE-APPROVED BY THE E.O.R.
I. ABANDONED HOLES – NO ANCHOR SHALL BE INSTALLED WITHIN 1.5 ROD DIAMETERS OF AN ABANDONED HOLE THAT HAS BEEN GROUT FILLED, (3.0 ROD DIAMETERS FOR UN-GROUTED HOLES).
J. OVER DRILL BAR DIAMETER BY ¼" U.N.O. BY THE MANUFACTURER AND TO THE REQUIRED DEPTH AS INDICATED ON THE STRUCTURAL DRAWINGS.
K. REMOVE ALL DIRT, DUST, WATER AND ICE FROM DRILLED HOLES BEFORE INSTALLATION.
L. REMOVE ANY DIRT, DUST, RUST OR OIL ON BAR OR ROD BEFORE INSTALLATION U.N.O.
M. ALL MANUFACTURERS RECOMMENDATIONS SHALL BE FOLLOWED EXACTLY.

2 PLYWOOD SHEATHING

A. PANEL REQUIREMENTS:
1. SHEATHING SHALL BE INSTALLED IN ACCORDANCE WITH APA RECOMMENDATIONS AND THE LATEST IBC CODE.
2. ORIENTED STRAND BOARD (OSB) OF THE SAME STRENGTH EQUIVALENCE CAN BE SUBSTITUTED FOR PLYWOOD.
3. WALL SHEATHING MAY BE INSTALLED VERTICALLY OR HORIZONTALLY. ROOF/FLOOR SHEATHING TO BE INSTALLED HORIZONTALLY. ALL SHEATHING SHALL BE PLACED PERPENDICULAR TO THE FRAMING WITH STAGGERED END JOINTS AT 4'-0".
4. NO SHEATHING PANEL LESS THAN 24" WIDE IN ANY DIRECTION SHALL BE USED.
5. SHEATHING SHALL BE A MINIMUM OF 7/16" THICK FOR WALL, 3/4" THICK FOR ROOF AND 3/4" THICK FOR FLOOR, U.N.O.
6. PROVIDE 1/8" SPACE AT ALL SHEATHING PANEL EDGES FOR EXPANSION/SHRINKAGE. USE OF SIMPSON PSCL PANEL SHEATHING CLIPS, OR APPROVED EQUIVALENT IS ACCEPTABLE.
7. INTERMEDIATE FRAMING AND BLOCKING TO BE 2X NOMINAL MEMBERS MINIMUM, U.N.O. BLOCKING IS REQUIRED AT ALL PANEL EDGES.
8. ALL SHEATHING SHALL HAVE AN EXPOSURE DURABILITY OF EXPOSURE 1, UNLESS PANELS ARE SUBJECT TO PERMANENT EXPOSURE TO WEATHER OR MOISTURE, THEN PANELS SHALL HAVE AN EXPOSURE DURABILITY OF EXTERIOR.
9. ALL SHEATHING SHALL HAVE A MINIMUM SPAN RATING OF (24/16) U.N.O. AND NO LESS THAN THE TYPICAL FRAMING SPACING LISTED ON PLANS.
10. ALL PLYWOOD, SHEATING AND DECKING TO BE, "ZIP SHEATHING SYSTEM" AND INSTALLED PER MANUFACTURERS RECOMENDATIONS.

B. FASTENER REQUIREMENTS:
1. SHEATHING SHALL HAVE THE FOLLOWING MINIMUM FASTENER SIZE, SPACING AND PATTERN:
A. WOOD FRAMED WALLS - 10d NAILS, 6" O.C. AT PANEL EDGES AND 12" O.C. @ INTERMEDIATE SUPPORTS, U.N.O.
B. WOOD FRAMED ROOF/FLOOR DIAPHRAGMS - 10d NAILS, 6" O.C. AT PANEL EDGES AND 12" O.C. @ INTERMEDIATE SUPPORTS, U.N.O.
C. LIGHT GAUGE FRAMED WALLS - #8 SMS SCREWS, 6" O.C. AT PANEL EDGES AND 12" O.C. @ INTERMEDIATE SUPPORTS. U.N.O.
2. THE MINIMUM EDGE DISTANCE FOR NAILS IN THE RECEIVING MEMBERS AND SHEATHING SHALL BE 3/8" FOR 2" NOMINAL RECEIVING MEMBERS AND 1/2" FOR 3" OR LARGER NOMINAL RECEIVING MEMBERS.
3. UNLESS OTHERWISE NOTED, FRAMING CLIPS ARE EITHER A35 OR LTP4, OR APPROVED EQUIVALENT. USE 1-1/2" LONG NAILS TO ATTACH FRAMING CLIPS DIRECTLY TO FRAMING, USE 2-1/2" NAILS WHEN CLIPS ARE INSTALLED OVER SHEATHING.
4. STAGGER ALL EDGE NAILS AT PANEL JOINTS WHERE SHEATHING IS APPLIED TO BOTH FACES OF A WALL.
5. FLOOR SHEATHING SHALL BE BONDED w/ INTERMEDIATE OR EXTERIOR GLUE, IN ADDITION TO MECHANICAL FASTENERS.
6. DRIVE NAILS FLUSH WITH PANEL SURFACE. DO NOT FRACTURE SURFACE BY OVERDRIVING NAILS. SUPPLEMENT ANY OVERDRIVEN NAILS BY ADDING AN EQUAL NUMBER FOR PROPERLY DRIVEN NAILS IN NEW HOLES. ANY SHINER OR NAILS THAT MISS FRAMING MEMBERS WHEN ATTACHING SHEATHING CAN REMAIN. HOWEVER, ADDITIONAL NAILS ARE REQUIRED WHICH DIRECTLY ATTACHED THE SHEATHING TO THE FRAMING PER SPACING LISTED ON PLANS.

3 WOOD FRAMING

A. ALL WOOD CONSTRUCTION SHALL CONFORM TO REQUIREMENTS SET FORTH IN THE LATEST NDS, "NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION", AND THE LATEST AF&PA, 'AMERICAN FOREST & PAPER ASSOCIATION REFERENCE STANDARDS.
B. ALL STRUCTURAL LUMBER SHALL BE SPRUCE PINE FIR (SPF) #1/#2 OR BETTER, U.N.O. ALL INTERIOR NON-LOAD BEARING WALLS CAN BE SPF STUD GRADE. ALL STRUCTURAL LUMBER SHALL BE MARKED AND GRADED BY AN APPROVED GRADING INSPECTION AGENCY.
C. ALL STRUCTURAL WOOD FRAMING AND CONNECTIONS SHALL MEET THE REQUIREMENTS PROVIDED IN THE INTERNATIONAL BUILDING CODE, CHAPTER 23, TABLE 2304.9.1, TYPICAL.
D. PNEUMATIC NAILING SHALL BE PLAIN SHANK, COATED OR GALVANIZED:
1. 8D = 0.131" DIA. x 2 ½" MIN. LENGTH
2. 10D = 0.148" DIA. x 3" MIN. LENGTH
3. 16D = 0.162" DIA. x 3 ½" MIN. LENGTH
E. HAND NAILING SHALL BE SINKERS, COATED:
1. 8D = 0.131" DIA. x 2 3/8"
2. 10D =0.148" DIA. x 2 7/8"
3. 16D = 0.162" DIA. x 3 ¼"
F. ALL METAL HANGERS AND CONNECTIONS ARE NOTED AS 'SIMPSON STRONG-TIE' AND SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS, U.N.O. AN APPROVED EQUIVALENT MAY BE USED INSTEAD WITH PRIOR APPROVAL FROM THE STRUCTURAL EOR.
G. PROVIDE WET USE ADHESIVES.
H. ALL PLATES AND WOOD INSTALLED WITHIN 1" OF CONCRETE OR MASONRY SHALL BE PRESSURE TREATED SOUTHERN YELLOW PINE (SYP) OR HAVE SUFFICENT WEATHER RESISTANT PROPERTIES.
I. MAXIMUM LUMBER MOISTURE CONTENTS SHALL BE 15%.
J. ALL FRAMING DETAILS SHALL BE IN ACCORDANCE WITH THE ADOPTED CODE.
K. PROVIDE SOLID BLOCKING BELOW ALL BEARING WALLS AND POSTS. PROVIDE BLOCKING @ 24" O.C. @ JOISTS PARALLEL WITH BEARING WALLS ABOVE.
L. BLOCK AND NAIL ALL HORIZONTAL PANEL EDGES AT SHEAR WALLS.
M. PROVIDE STEEL STRAPS AT PIPES IN STUD WALLS AS REQUIRED BY THE ADOPTED CODE.
N. OVER-FRAMING SHALL BE DONE SUCH THAT VERTICAL LOADS ARE TRANSFERRED TO MAIN STRUCTURE BELOW BY DIRECT BEARING AT SPACING NOT TO EXCEED 24" O.C.
O. ALL WINDOW SIZES IN EXTERIOR WOOD WALLS ARE NOMINAL; VERIFY ACTUAL OPENINGS WITH WINDOW MANUFACTURERS, RE: ARCH.
P. ALL ROOF OPENINGS GREATER THAN 12"x12" SHALL BE FRAMED IN OPENINGS.
Q. ALL FASTENERS IN PRESSURE TREATED WOOD MUST MEET THE REQUIREMENTS OF IBC 2304.9.5.
R. ALL LAMINATED VENEER LUMBER SHALL BE I-LEVEL MICROLLAM LVL AND SHALL HAVE THE FOLLOWING MINIUMUM SECTION PROPERTIES: (SUBSTITUTIONS ARE ALLOWED WITH PRIOR WRITTEN APPROVAL FROM THE STRUCTURAL E.O.R.)
a. FB = 2,600 PSI
b. FV = 285 PSI
c. E = 2,000,000 PSI
S. ALL INTERIOR NON-LOAD BEARING WALLS SHALL HAVE MIN, (2) 2x10 FOR HEADERS. SEE ARCH. FOR LOCATIONS
T. GLUE-LAMINATED BEAMS SHALL BE SOUTHERN PINE COMBINATION 24F-V4 FOR SIMPLE SUPPORTED AND 24F-V8 FOR CANTILEVERED BEAMS AND MULTI-SPAN CONDITIONS, U.N.O. MEMBERS SHALL BE MANUFACTURED USING WATERPROOF ADHESIVES AND SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI/AITC A190, 1-2022 OR APPROVED EQUIVALENT. ANY HOLES AND/OR NOTCHES IN THE BEAMS SHALL BE IN ACCORDANCE WITH THE STANDARDS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC). BEAMS SHALL BE ARCHITECTURAL APPEARANCE GRADE U.N.O. AND SHALL HAVE THE FOLLOWING MIN. SECTION PROPERTIES: FB = 2400 PSI, FV = 210 PSI, E = 1,700,000 PSI. PROVIDE WET USE GLUE ON ALL EXTERIOR LOCATIONS.
U. FOR SPECIFICATIONS ON FIRE RATING OF WOOD, RE: ARCH.

4 TYPICAL LUMBER NAILING SCHEDULE

NAILING SHOWN IS TYPICAL EXCEPT AS NOTED ON PLANS. USE COMMON NAILS.

1.	JOIST TO SILL OF GIRDER, TOENAILS	3-8d
2.	BRIDGING TO JOIST, TOE NAIL EACH END	2-8d
3.	1"x6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2-8d
4.	WIDER THAN 1"x6" SUBFLOOR TO EACH JOIST, FACE NAIL	3-8d
5.	2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2-16d
6.	SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL 16" O.C.	16d AT
7.	TOP PLATE TO STUD, END NAIL	2-16d
8.	STUD TO SOLE PLATE NAILS OR 4-8d TOE NAILS	2-16d END
9.	DOUBLE STUDS, FACE NAIL 12" O.C.	16d AT
10.	DOUBLED TOP PLATES, FACE NAIL 16" O.C.	16d AT
11.	TOP PLATES, LAPS AND INTERSECTIONS, FACE NAILS	2-16d
12.	CONTINUOUS HEADER, TWO PIECES 16" O.C. ALONG EA. EDGE	16d AT
13.	CEILING JOISTS TO PLATE, TOE NAIL	3-8d
14.	CONTINUOUS HEADER TO STUD, TOE NAIL	4-8d
15.	CEILING JOISTS, LAPS OVER PARTITIONS, FACE WALL	3-16d
16.	CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3-16d
17.	RAFTER TO PLATE, TOENAIL	3-8d
18.	1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2-8d
19.	1"x8" SHEATHING OR LESS TO EACH BEARING, FACE NAIL	2-8d
20.	WIDER THAN 1"x8" SHEATHING TO EACH BEARING, FACE NAIL	3-8d
21.	BUILT-UP CORNER STUDS 24" O.C.	16d AT
22.	BUILT-UP GIRDER AND BEAMS 32" O.C. AT TOP & BOTTOM	2-20d AT
23.	2" PLANKS EACH BEARING	2-16d AT

5 STRUCTURAL OBSERVATIONS

A. PER IBC SECTION 1709, STRUCTURAL OBSERVATIONS SHALL BE PERFORMED BY A REPRESENTATIVE FROM THE ENGINEER OF RECORD'S OFFICE (TAMARACK GROVE ENGINEERING, PLLC) OR AN APPOINTED REPRESENTATIVE TO PERFORM ON-SITE STRUCTURAL OBSERVATION VISITS DURING SIGNIFICANT TIMES OF CONSTRUCTION-RELATED TO OUR DEFERRED SUBMITTAL SCOPE OF WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL SIGNIFICANT TIMES OF CONSTRUCTION WITH THE ENGINEER OF RECORD'S OFFICE PRIOR TO THE COMPLETION POINT REQUIRING SITE OBSERVATIONS FOR THE CONSTRUCTION AND/OR PLACEMENT (MINIMUM OF 4 CALENDAR DAYS). SIGNIFICANT TIMES OF CONSTRUCTION ARE AS FOLLOWS:
1. CONCRETE FOUNDATION AND REBAR PLACEMENT.
2. PLACEMENT OF PERIMETER LOAD BEARING WALLS, LOAD SUPPORTING BEAMS, FLOOR FRAMING AND/OR HEADERS AND LATERAL RESISTING CONNECTION ELEMENTS.
3. COMPLETION OF ROOF FRAMING AND LATERAL BRACING (SHEAR WALLS), PRIOR TO COVERING WITH ANY ARCHITECTURAL FINISHES.
4. COMPLETION OF ALL STRUCTURAL SYSTEMS AS REQUIRED AND/OR DEFINED BY THE LOCAL JURISDICTION.
B. STRUCTURAL OBSERVATIONS DO NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE SPECIAL INSPECTIONS REQUIRED BY THE IBC SECTION 1704 OR OTHER SECTIONS OF THE CODE AS REQUIRED BY THE LOCAL BUILDING JURISDICTION.
C. STRUCTURAL OBSERVATIONS REQUIRED IN OBSERVANCE OF SECTION 1704 OR PER LOCAL JURISDICTION.

6 SPECIAL INSPECTIONS & TESTING (QUALITY ASSURANCE PLAN)

A. GENERAL:
1. INDEPENDENT TESTING LAB SHALL BE RETAINED BY OWNER TO PROVIDE INSPECTIONS AND SPECIAL INSPECTIONS AS DESCRIBED HEREIN.
2. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PROVIDING ON SITE ACCESS TO ALL REQUIRED INSPECTIONS AND NOTIFIES TESTING LAB IN TIME TO PERFORM SUCH INSPECTIONS PRIOR.
3. DO NOT COVER WORK REQUIRED TO BE INSPECTED PRIOR TO INSPECTION BEING MADE. IF WORK IS COVERED, CONTRACTOR WILL BE RESPONSIBLE FOR UNCOVERING AS NECESSARY.
4. THE CONTRACTOR SHALL CORRECT ALL DEFICIENCIES AS NOTED WITHIN THE SPECIAL INSPECTION REPORTS AND/OR THE ENGINEER OF RECORD'S FIELD OBSERVATION (STRUCTURAL OBSERVATIONS) REPORTS TO BRING THE CONSTRUCTION INTO COMPLIANCE WITH THE CONTRACT DOCUMENTS, ADDENDUMS, REVISIONS, RFI'S AND/OR WRITTEN INSTRUCTIONS. THE CONTRACTOR IS RESPONSIBLE TO REQUEST SUMMARY REPORTS FROM THE SPECIAL INSPECTOR AND ENGINEER OF RECORD AT THE TIME OF THE PROJECT SUBSTANTIAL COMPLETION. PRIOR TO REQUESTING THE SUMMARY OF STRUCTURAL OBSERVATION REPORTS FROM THE ENGINEER OF RECORD, THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT AND ENGINEER OF RECORD A LETTER STATING THAT ALL OUTSTANDING ITEMS NOTED ON PREVIOUS STRUCTURAL OBSERVATION REPORTS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, ADDENDUMS, REVISIONS, RFI'S AND/OR WRITTEN INSTRUCTIONS.

B. SPECIAL INSPECTIONS:
1. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED TO MEET THE REQUIREMENTS OF THE 2018 INTERNATIONAL BUILDING CODE (IBC) AS RECOMMENDED BY THE LOCAL BUILDING JURISDICTION.
2. REQUIRED SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT CERTIFIED TESTING LABORATORY EMPLOYED BY THE OWNER PER SECTION 1701 OF THE 2018 IBC FOR THE AREAS INDICATED IN THE SPECIAL INSPECTION PROGRAM.
3. THE INDEPENDENT CERTIFIED TESTING LABORATORY AND INSPECTORS SHALL BE A QUALIFIED PERSON WHO SHALL SHOW COMPETENCE TO THE SATISFACTION OF THE LOCAL BUILDING OFFICIAL, OWNER, ARCHITECT AND ENGINEER OF RECORD FOR THE PARTICULAR OPERATION. ALL SPECIAL INSPECTION REPORTS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT, ARCHITECT AND ENGINEER OF RECORD STATING THE PROJECT NAME AND ADDRESS.
4. THE CONTRACTOR AND SPECIAL INSPECTOR SHALL NOTIFY THE ENGINEER OF RECORD OF ANY ITEMS NOT COMPLYING WITH THE PROJECT SPECIFICATIONS, CONTRACT DOCUMENTS AND/OR APPLICABLE CODES BEFORE PROCEEDING WITH ANY WORK INVOLVING THAT ITEM. THE ENGINEER OF RECORD WILL REVIEW THE ITEM AND DETERMINE ITS ACCEPTABILITY. IF WORK INVOLVING THAT ITEM PROCEEDS WITHOUT PRIOR APPROVAL FROM THE ENGINEER OF RECORD, THEN THE WORK WILL BE CONSIDERED NON-COMPLIANT.

C. SPECIAL INSPECTIONS PROGRAM NOTES:
1. ITEMS CHECKED WITH **X** SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR FROM A TESTING AGENCY APPROVED BY THE BUILDING OFFICIAL.
2. THE CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND-OR SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM OR A WIND-OR SEISMIC-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS PROGRAM, SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT PER IBC, SECTION 1706.1.
3. SPECIAL INSPECTION IS NOT REQUIRED FOR WORK PERFORMED BY AN APPROVED FABRICATOR MEETING THE REQUIREMENTS OF IBC SECTION 1704.2.2.
4. THE SPECIAL INSPECTOR SHALL PROVIDE A COPY OF THEIR REPORT TO THE BUILDING OFFICIAL, OWNER, ARCHITECT, ENGINEER OF RECORD AND CONTRACTOR.
5. CONTINUOUS SPECIAL INSPECTION MEANS FULL-TIME OBSERVATION OF THE WORK REQUIRING SPECIAL INSPECTION BY THE APPROVED SPECIAL INSPECTOR PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED.
6. PERIODIC SPECIAL INSPECTION MEANS PART-TIME OR INTERMITTENT INSPECTIONS OF THE WORK AT INTERVALS NECESSARY TO CONFIRM THAT THE WORK REQUIRING SPECIAL INSPECTIONS IS IN CONFORMANCE WITH THE APPROVED PERMIT CONSTRUCTION DOCUMENTS AND SPECIFICATIONS.
7. ALL STRUCTURAL SHOP AND FIELD WELDS SHALL BE VISUALLY INSPECTED. THE SPECIAL INSPECTOR NEED NOT BE CONTINUOUSLY PRESENT DURING WELDING, EXCEPT AS NOTED, PROVIDED THE MATERIALS, QUALIFICATIONS OF WELDING PROCEDURES AND WELDERS ARE VERIFIED PRIOR TO THE START OF THE WORK; PERIODIC INSPECTIONS ARE MADE OF WORK IN PROGRESS; AND A VISUAL INSPECTION OF ALL WELDS IS MADE AFTER COMPLETION OR PRIOR TO SHIPMENT OF SHOP WELDING.
8. THE CONTRACTOR SHALL SUBMIT A 'WELDING PROCEDURE SPECIFICATION' (WPS) IN ACCORDANCE WITH AWS 5.1.2 FOR REVIEW BY THE SPECIAL INSPECTOR PRIOR TO BEGINNING ANY WORK. THE WPS SHALL INCLUDE ALL INFORMATION RECOMMENDED IN THE SAMPLE FORM OF APPENDIX E OF THE AWS CODE INCLUDING RECOMMENDATIONS FROM THE ELECTRODE MANUFACTURER, PROPOSED METHOD OF BASE METAL PREPARATIONS, BACK GOUGING SEQUENCE, METHOD OF PLACEMENT OF NEW WELD MATERIALS, BACKER PLATE AND RUNOFF TAB REMOVAL AND FINAL FINISHING.
9. THE INSPECTOR SHALL VERIFY WELDER QUALIFICATIONS, WPS, WELDING PROCESS, ELECTRODE, ASSEMBLY CONFIGURATION, FIT-UP TOLERANCE (1/16 INCH MAXIMUM), PREHEAT AND INTERPASS TEMPERATURE AND PREPARATION OF ALL STEEL SURFACES. ALL STRUCTURAL WELDING REQUIREMENTS SHALL BE PERFORMED BY A CERTIFIED WELDER, MEETING ALL OF THE LOCAL BUILDING JURISDICTION REQUIREMENTS.
10. ALL WELDING REINFORCING TO BE ASTM A706, GRADE 60.
11. ALL BIDDER DESIGNED/DEFERRED SUBMITTAL COMPONENTS, WHERE SHOWN, SHALL INCLUDE A QUALITY ASSURANCE PROGRAM FOR SPECIAL INSPECTIONS WHERE REQUIRED BY IBC SECTION 1707.1.
12. PER IBC, SECTION 1707.4, PERIODIC SPECIAL INSPECTIONS IS REQUIRED FOR NAIL ATTACHMENTS, BOLTING, ANCHORING 1 AND OTHER FASTENING COMPONENTS WITHIN THE SEISMIC-FORCE-RESISTING SYSTEM, INCLUDING LATERAL WALL BRACING AND HOLDOWNS.

7 GENERAL STRUCTURAL NOTES

A. ALL ELEVATIONS AND HEIGHTS GIVEN ARE FROM THE FINISHED FLOOR DATUM ELEVATION, WHICH IS SET AT 100'-0".
B. DO NOT SCALE DRAWINGS, CONTACT A.O.R. OR E.O.R. FOR DIMENSION CLARIFICATIONS PRIOR TO CONSTRUCTION.
C. VERIFY ALL OPENINGS, BUILDING DIMENSIONS, COLUMN GRID LOCATIONS AND DIMENSIONS WITH OWNER PRIOR TO POURING OF ANY CONCRETE FOUNDATIONS OR CONSTRUCTION.
D. THE ENGINEER OF RECORD IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THESE PLANS UNLESS SUCH CHANGES ARE AUTHORIZED IN WRITING BY THE PROJECT ENGINEER OF RECORD.
E. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SAFE AND ADEQUATE SHORING AND/OR TEMPORARY STRUCTURAL STABILITY FOR ALL PARTS OF THE STRUCTURE DURING CONSTRUCTION. THE STRUCTURE SHOWN ON THE DRAWINGS HAS BEEN DESIGNED FOR FINAL CONFIGURATION.
F. NOTCHING AND/OR CUTTING OF ANY STRUCTURAL MEMBER IN THE FIELD IS PROHIBITED, UNLESS PRIOR CONSENT IS GIVEN BY THE STRUCTURAL ENGINEER OF RECORD.
G. IT IS NECESSARY THAT THE STRUCTURAL DRAWINGS BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS TO HAVE A COMPLETE SCOPE OF WORK INVOLVED IN THIS PROJECT.

8 SHOP DRAWINGS & DEFERRED SUBMITTALS

A. DEFERRED SUBMITTALS ITEMS PER IBC 107.3.4.1 SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL. ALL DEFERRED SUBMITTALS SHALL BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE THE PROJECT IS LOCATED IN. (SPECIALTY ENGINEER) AND SHALL BE THE SOLE RESPONSIBILITY OF THE SPECIALTY ENGINEER INCLUDING, BUT NOT LIMITED TO, DESIGN, COORDINATION, DIMENSIONS, AND INTENDED PURPOSE. DEFERRED SUBMITTAL ITEMS SHALL INCLUDE A QUALITY ASSURANCE PLAN AS REQUIRED BY CHAPTER 17 OF THE IBC. REVIEW BY THE ENGINEER OF RECORD SHALL BE FOR GENERAL CONFORMANCE TO THE DESIGN LOADING CRITERIA SET FORTH ON THE CONTRACT DRAWINGS AND SPECIFICATIONS. THE DEFERRED SUBMITTALS ITEMS SHALL NOT BE FABRICATED OR INSTALLED UNTIL THE DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED BY THE ENGINEER OF RECORD AND APPROVED BY THE BUILDING OFFICIAL.
B. FOR REVIEW BY THE ENGINEER OF RECORD:
1. DEFERRED SUBMITTAL/SHOP DRAWINGS LIST:
a. PRE-MANUFACTURED ROOF TRUSS LAYOUTS AND ENGINEERING.
b. STEEL FABRICATION SHOP DRAWINGS

9 MASONRY/STONE VENEER

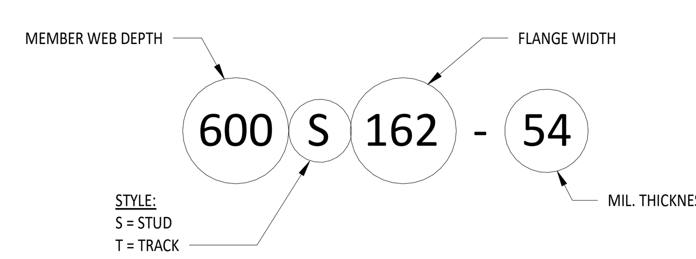
A. 8" WALLS, SPECIFIED COMPRESSIVE STRENGTH , f'm= 2,000 PSI
1. MASONRY UNITS = ASTM C-90, GRADE N, f'm = 2,000 PSI MIN. NORMAL WEIGHT BLOCK.
2. MORTAR = ASTM C-270, TYPE S, MIN. COMPRESSIVE STRENGTH OF 1,500 PSI, U.N.O.
3. GROUT STRENGTH = 2,000 PSI MIN., U.N.O.
B. REBAR USED = ASTM A615, GRADE 60 WHERE WELDING REQUIRED USE ASTM A706, GRADE 60.
C. ALL REINFORCING SHALL BE CENTERED IN WALL, U.N.O.
D. ALL CMU WALLS SHALL BE RUNNING BOND, U.N.O.
E. REINFORCING BAR LAP = 60 BAR DIAMETERS.
F. TYPICAL REINFORCING SHALL BE #4 VERT. BARS AT 16" O.C. w/ #4 HORIZ. BARS IN CMU BOND BEAM AT 4'-0" O.C., U.N.O.
G. SPECIAL INSPECTIONS ARE REQUIRED ON A CONTINUOUS BASIS.
H. THE TYPICAL LINTEL OVER OPENINGS IN THE WALL SHALL HAVE (2) SETS OF (2) #5 BARS EQUALLY SPACED FOR 8" WALLS, U.N.O.
I. LAP ALL BOND BEAMS WHERE STEPPED 4'-0".
J. THERE SHALL BE A MIN. OF (1) #4 BAR ON ALL SIDES OF, AND ADJACENT TO, EVERY OPENING WHICH IS LESS THAN 48" IN BOTH DIRECTIONS. WHERE THE OPENINGS ARE 48" OR GREATER IN EITHER DIRECTION, A MIN. OF (2) #5 BAR SHALL BE USED, AND SUCH BARS SHALL EXTEND NOT LESS THAN 24" BEYOND THE CORNER OF THE OPENINGS, U.N.O. AS SHOWN.
K. AT CORNERS AND WALL INTERSECTIONS, GROUT THE ADJACENT CORNERS WITH A VERTICAL BAR AND LAP THE BOND BEAM STEEL OR PROVIDE CORNER BARS OF EQUAL SIZE.
L. ALL DOWELS FROM THE FOUNDATION WALL SHALL MATCH SIZE AND LOCATION OF VERTICAL REINFORCING IN MASONRY, U.N.O. EXTEND DOWEL A MIN. OF 30 BAR DIAMETERS INTO THE FOUNDATION.
M. VERTICAL CONTROL JOINT SHALL BE PROVIDED IN THE WALLS AS SHOWN ON THE ELEVATIONS
N. THE MASONRY CONTRACTOR SHALL COORDINATE THE PLACING OF ANY OPENINGS WITH THE GENERAL CONTRACTOR, RE: ROOF PLAN.
O. COORD. WITH ARCH. SHEETS FOR TYPE OF BLOCK USED.
P. ALL CMU WALLS ABOVE GRADE ARE TO BE PARTIALLY GROUTED, U.N.O. ALL CMU CELLS RECEIVING REINFORCEMENT, ANCHOR BOLTS OR H.C.A. SHALL BE SOLID GROUTED.
Q. ALL CMU WALLS BELOW GRADE / FINISHED FLOOR ARE TO BE SOLID GROUTED, HIGH STRENGTH BLOCK & TYPE 'N' MORTAR, U.N.O.
R. WET SETTING OF REINFORCING BARS IN FOOTINGS AND WALLS IS NOT ALLOWED.
S. ALL CELLS CONTAINING REINFORCEMENT SHALL BE FILLED SOLIDLY WITH GROUT. GROUT SHALL BE A WORKABLE MIXTURE SUITABLE FOR PUMPING WITHOUT SEGREGATION AND SHALL BE THOROUGHLY MIXED. GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACING AND RECONSOLIDATED AFTER EXCESS MOISTURE HAS BEEN ABSORBED, BUT BEFORE WORKABILITY IS LOST. THE GROUTING OF A WALL SHALL BE COMPLETED IN ONE DAY WITH NO INTERRUPTIONS GREATER THAN ONE HOUR.

10 LIGHT GAUGE STEEL FRAMING

1. MEMBER REQUIREMENTS:
A. DESIGN, FABRICATION AND ERECTION OF LIGHT GAUGE STEEL FRAMING SHALL CONFORM TO THE SPECIFICATIONS AND STAND OF THE AMERICAN IRON AND STEEL INSTITUTE (AISI), AS CONTAINED IN THE "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION, INCLUDING ALL APPLICABLE AMENDMENTS.
B. FRAMING MEMBER AND ACCESSORIES SHALL CONFORM TO:

a.	16 GAUGE AND HEAVIER	=ASTM A1003, GR. 50
b.	GALVANIZED	=ASTM A 653, GR. 50
c.	PAINTED	=ASTM A 570, GR. 50
d.	18 GAUGE AND LIGHTER	=ASTM A1003, GR. 33
e.	GALVANIZED	=ASTM A 653, GR. 33
f.	PAINTED	=ASTM A 570, GR. C

C. FOR MEMBERS 54 MILS (16 GAUGE) THICK OR THICKER, ALL STRUCTURAL MEMBERS SHALL HAVE A MIN. YIELD STRENGTH OF 50 KSI. U.N.O. ALL THINNER SHALL HAVE MIN. YIELD STRENGTH OF 33 KSI.
D. ALL CONT. TRACKS SHALL BE UNPUNCHED AND MATCH STUD GAUGE U.N.O.
E. ALL MEMBERS SHALL CONFORM TO THE SECTION PROPERTIES TABLE OF STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) (ICPO ER-4943P).
F. WALL STUD BRIDGING AS RECOMMENDED BY MFR SHALL BE INSTALLED AT 4'-0" O.C. TO PREVENT BOTH WEAK AXIS BENDING AND STUD ROTATION. WALLS 8'-0" OR SHORTER SHALL HAVE A SINGLE ROW OF BRIDGING AT MID-HEIGHT. ADDITIONALLY, BRIDGING SHALL BE PROVIDE AT ROOF LINES AND WHERE NOTED ON THE DRAWINGS. SOLID BLOCKING SHALL BE INSTALLED IN LIEU OF BRIDGING WHERE NOTED ON THE DRAWINGS. WALL STUD BRIDGING ONLY REQUIRED WHEN WALL SHEATHING/DRYWALL IS NOT PROVIDED ON EITHER SIDE.
G. ALL MEMBERS SHALL BE ERECTED PLUMB AND BE SECURELY SEATED FOR FULL END BEARING ON TOP AND BOTTOM TRACK. U.N.O.
H. SPLICING OF AXIALLY LOADED STUDS OR BRACING IS NOT PERMITTED.
I. FRAMING COMPONENTS SHALL BE CUT SQUARELY OR TO THE EXACT ANGLE TO TIGHT FIT THE ABUTTING MEMBERS. MEMBERS SHALL BE HELD FIRMLY UNTIL PROPERLY FASTENED.
J. PROVIDE BACK-TO-BACK OR NESTED MEMBERS AT ALL JAMBS, CORNERS, INTERSECTIONS AND BEAM BEARING. U.N.O.
K. TYPICAL LIGHT GAUGE STEEL FRAMING MEMBER NOTATION SHOWN BELOW:



2. FASTENING REQUIREMENTS
A. FASTENING OF COMPONENTS SHALL BE WITH SELF-TAPPING SCREWS OR WELDS AND FOLLOW THE LATEST EDITION OF THE AISI GUIDELINE RECOMMENDATIONS. WIRE TYING OF COMPONENTS IS NOT PERMITTED.
B. ALL WELDS OF GALVANIZED STEEL SHALL BE TOUCHED UP WITH ZINC-RICH PAINT. ALL WELDS OF CARBON SHEET STEEL SHALL BE TOUCH UP WITH RUST INHIBITIVE PAINT.
C. SCREWS SHALL BE SELF-TAPPING PAN HEAD, HEX HEAD OR WAFER HEAD SHEET METAL SCREWS. SCREWS WHICH ARE REMOVED SHALL BE REPLACED BY A SCREW OF A LARGER DIA. WHERE THE REPLACEMENT IS MADE INTO AN EXISTING HOLE. REPLACE ALL SCREWS WITH STRIP OUT MATERIAL. SCREWS SHALL BE SPACED NO CLOSER THAN 5/8" O.C. AND WITH A MIN. FREE EDGE DISTANCE OF ½". CLIP ANGLES OR FLAT CLIPS USED FOR ATTACHMENT SHALL BE 18 GA. MIN. U.N.O. ALL SCREWS #8 AND LARGER SHALL HAVE A MIN. HEAD SIZE OF 5/16".
D. ALL WELDING SHALL BE PERFORMED BY WELDERS EXPERIENCED IN LIGHT GAUGE STEEL FRAMING WORK. ALL WELDING SHALL CONFORM WITH THE LATEST AMERICAN WELDING SOCIETY STANDARDS AND CONFORM TO THE FOLLOWING (MIN. ROD DIA.= 1/8"):
a. 18 GAUGE AND LIGHTER: E60XX
b. 16 GAUGE AND HEAVIER: E70XX
c. LIGHT GAUGE TO STRUCTURAL STEEL: E70XX (LOW HYDROGEN)

SPECIAL INSPECTIONS PROGRAM
ESTABLISHED PER 2020 FBC CHAPTER 17

ITEM	CONTINUOUS	PERIODIC	COMMENTS
GENERAL STRUCTURAL INSPECTIONS AS REQUIRED BY SECTION 1704.4			
SLAB REINFORCEMENT			BY BUILDING OFFICIAL
FINAL INSPECTION			BY BUILDING OFFICIAL
CONCRETE			
REINFORCING SIZE AND PLACEMENT		X	ACI 318: 20, 25.2, 25.3, 26.1.1-26.6.3, IBC 1908.4
BOLTS TO BE INSTALLED PRIOR TO AND DURING CONCRETE PLACEMENT (FOR ALLOWABLE STRESS INCREASE)	X		ACI 318: 17.8.2
VERIFY USE OF REQUIRED DESIGN MIX		X	IBC 1904.1, 1904.2, 1908.2, 1908.3, ACI 318: 19, 26.4.3, 26.4.4
PREPARATION OF TEST SPECIMENS	X		ASTM C 172, ASTM C 31, ACI 318: 26.4, 26.12, IBC 1908.10
CONCRETE PLACEMENT	X		IBC 1908.6-1908.8, ACI 318: 26.5
LIGHT WEIGHT CONCRETE AIR-DRY UNIT WEIGHT	X		ACI 318/EOR
MAINTENANCE OF SPECIFIED CURING TEMPERATURES AND TECHNIQUES		X	IBC 1908.9, ACI 318: 26.5.3-26.5.5
INSPECT FORM WORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		X	ACI 318: 26.11.1.2 (b)
WELDING: STRUCTURAL STEEL			
MATERIAL VERIFICATION OF WELD FILLER MATERIALS	X		AISC 360, SECTION A3.5
COMPLETE AND PARTIAL PENETRATION	X		IBC 1704.3.1, AWS D1.1, AISC 360, TABLE C-N5.4-1
MULTIPASS FILLET WELDS	X		
SINGLE PASS FILLETS > 5/16"	X		
SINGLE PASS FILLETS ≤ 5/16"		X	
FLOOR AND ROOF DECK WELDS		X	AWS D1.3
WELDED STUDS		X	IBC 1704.3/E.O.R
WELDING OF STAIRS AND RAILING SYSTEMS		X	IBC 1704.3/ E.O.R.
SPECIAL CASES: (IBC 1705.1.1)			
EPOXY OR ADHESIVE ANCHOR PLACEMENT	X		ACI 318: 17.8.2.4
EXPANSION OR SCREW ANCHOR PLACEMENT	X		ACI 318: 17.8.2

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Project No.: 22-20544

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DOUGLAS DEAN HARDIN LICENSE No. PE 88957 STATE OF FLORIDA PROFESSIONAL ENGINEER

Douglas Dean Hardin
Florida License # 88957
812 S LaCassia, Boise ID 83705
05/03/2023

Cheddar's SCRATCH KITCHEN EST 1979

Issue Date: 11-20-22

REVISION INFORMATION

Restaurant #: 22K0000

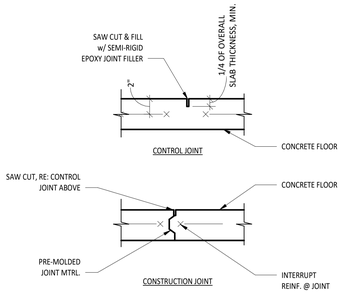
CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE.
RIVERVIEW, FL 33578

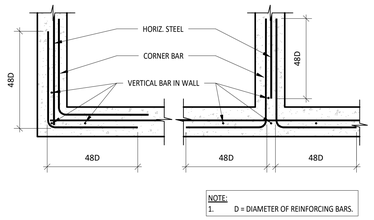
RIVERVIEW, FL

Drawing:
GENERAL STRUCTURAL NOTES

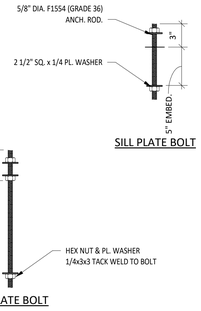
S0.1



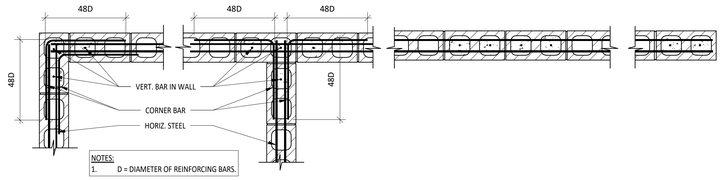
1 CONSTRUCTION & CONTROL JOINT
1 1/2" = 1'-0"



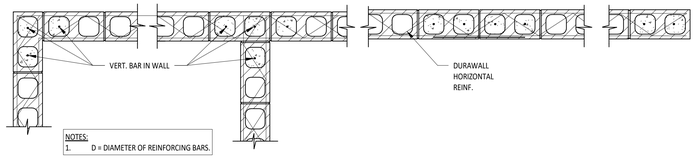
2 CORNER/INTERSECTION REINFORCING
3/4" = 1'-0"



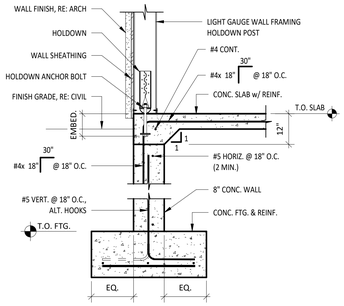
3 TYPICAL BASE PLATE ANCHOR BOLT AND SILL ANCHOR BOLT
1 1/2" = 1'-0"



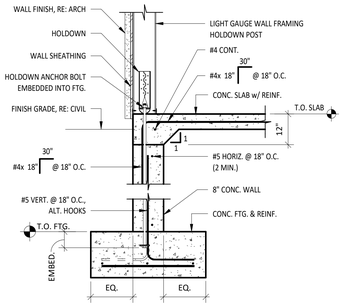
4 TYPICAL REINFORCING @ CMU INTERSECTION
3/4" = 1'-0"



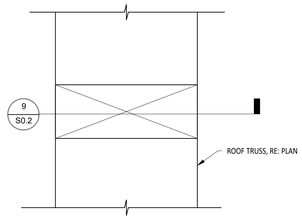
5 TYPICAL REINFORCING @ CMU INTERSECTION
3/4" = 1'-0"



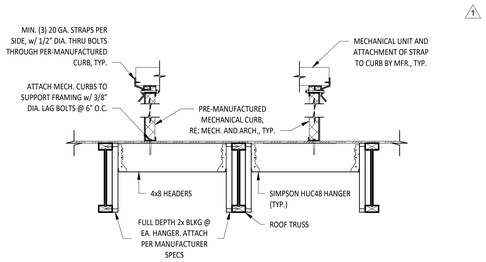
6 TYPICAL PERIMETER FOUNDATION @ HOLDOWN
3/4" = 1'-0"



7 PERIMETER FOOTING FOUNDATION @ HOLDOWN INTO FOOTING
3/4" = 1'-0"



8 SQUARE OR RECT. FRAME PLAN
3" = 1'-0"



9 SQUARE OR RECT. FRAME DETAIL
3/4" = 1'-0"

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Douglas Dean Hardin
Florida License # 88957
812 S LaCassia, Boise ID 83705
05/03/2023

Cheddar's SCRATCH KITCHEN

Issue Date:	11-20-22
REVISION INFORMATION	
REV #1 CITY COMMENTS	4/5/23
REV #2 CLIENT COMMENTS	4/5/23

Restaurant #: 22K0000

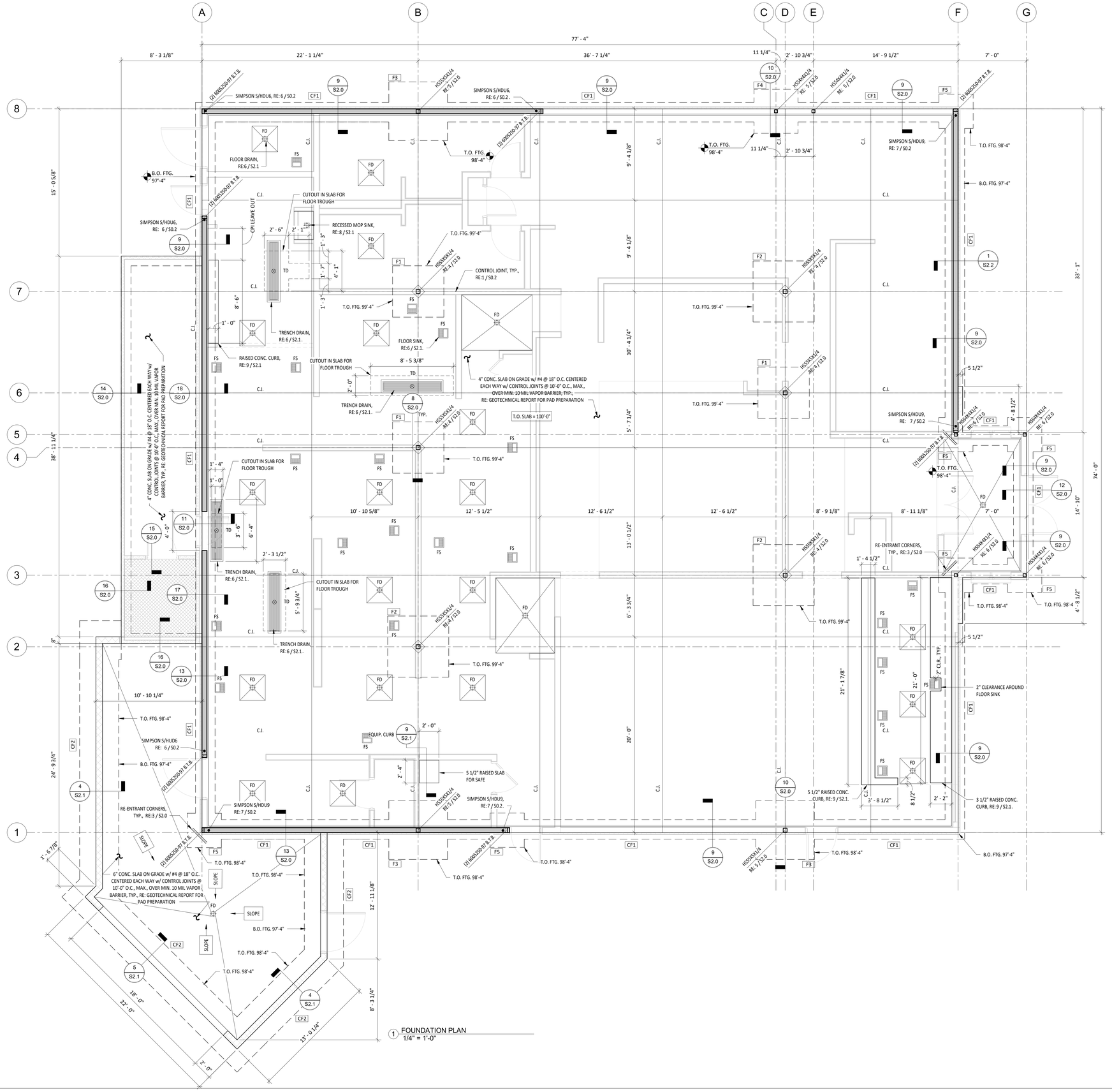
CHEDDARS
SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE.
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
TYPICAL DETAILS

S0.2



1 FOUNDATION PLAN
1/4" = 1'-0"

FOUNDATION NOTES:

1. TOP OF SLAB IS 100'-0". THIS IS A REFERENCE ELEVATION, REFER TO CIVIL DRAWINGS FOR ACTUAL ELEVATION.
2. REFER TO GEOTECHNICAL REPORT FOR SITE PREPARATION.
3. ALL PERIMETER BUILDING DIMENSIONS ARE MEASURED TO THE OUTSIDE FACE OF THE FOUNDATION WALL/GRADE BEAM.
4. FOR ALL FOUNDATION DETAILS NOT CUT ON PLAN, RE: S1.2 & S3.0.
5. SHADED WALLS DENOTE SHEAR WALL LOCATIONS, FOR SHEAR WALL PLAN, RE: S1.1.
6. FOR SLAB FLOOR DRAIN, TRENCH DRAIN ,RECESSES, PENETRATIONS, ETC., RE: ARCH.

BUILDING FOOTING SCHEDULE

TYPE	FOOTING SIZE	Bottom Reinforcing	Top Reinforcing
F1	5'-3"x5'-3"x1'-2"	(6) #5 EACH WAY	N/A
F2	6'-3"x6'-3"x1'-2"	(7) #5 EACH WAY	N/A
F3	6'-0"x6'-0"x1'-0"	(6) #5 EACH WAY	N/A
F4	4'-6"x4'-6"x1'-0"	(4) #5 EA. WAY	N/A
F5	3'-6"x3'-6"x1'-0"	(3) #5 EA. WAY	N/A
CF1	2'-0" x CONT x 1'-0"	(3) #5xCONT.	N/A
CF2	4'-0" x CONT x 1'-0"	(4) #5xCONT.	N/A

INTERIOR LIGHT GAUGE FRAMING (L/240):		
	3 5/8" WALL FRAMING	6" WALL FRAMING
BOTTOM TRACK	362T125-33	600T125-33
WALL FRAMING	362S162-33 @ 24" O.C.	600S162-33 @ 24" O.C.
SILL	362T125-33	600T125-33
HEADER	SEE SCHEDULE	SEE SCHEDULE
TOP TRACK	362T125-33	600T125-33

EXTERIOR LIGHT GAUGE FRAMING SCHEDULE (L/240)	
	6" WALL FRAMING
BOTTOM TRACK	600T125-43
WALL FRAMING	600S250-68 @ 16" O.C.
SILL	600T125-43
HEADER	SEE SCHEDULE
TOP TRACK	600T125-43

HDU HOLDOWN SCHEDULE		
TYPE	ANCHOR BOLT	EMBEDMENT
S/HDU6	5/8" DIA. (PAB5)	11" INTO FDN. WALL TURNDOWN
S/HDU9	7/8" DIA. (PAB7)	7" INTO FOOTING

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Cheddar's SCRATCH KITCHEN

Issue Date:	11-20-22
REVISION INFORMATION	
REV #2	CLIENT COMMENTS 4/5/23

Restaurant #: 22K0000

CHEDDARS SCRATCH KITCHEN
PROTO 18

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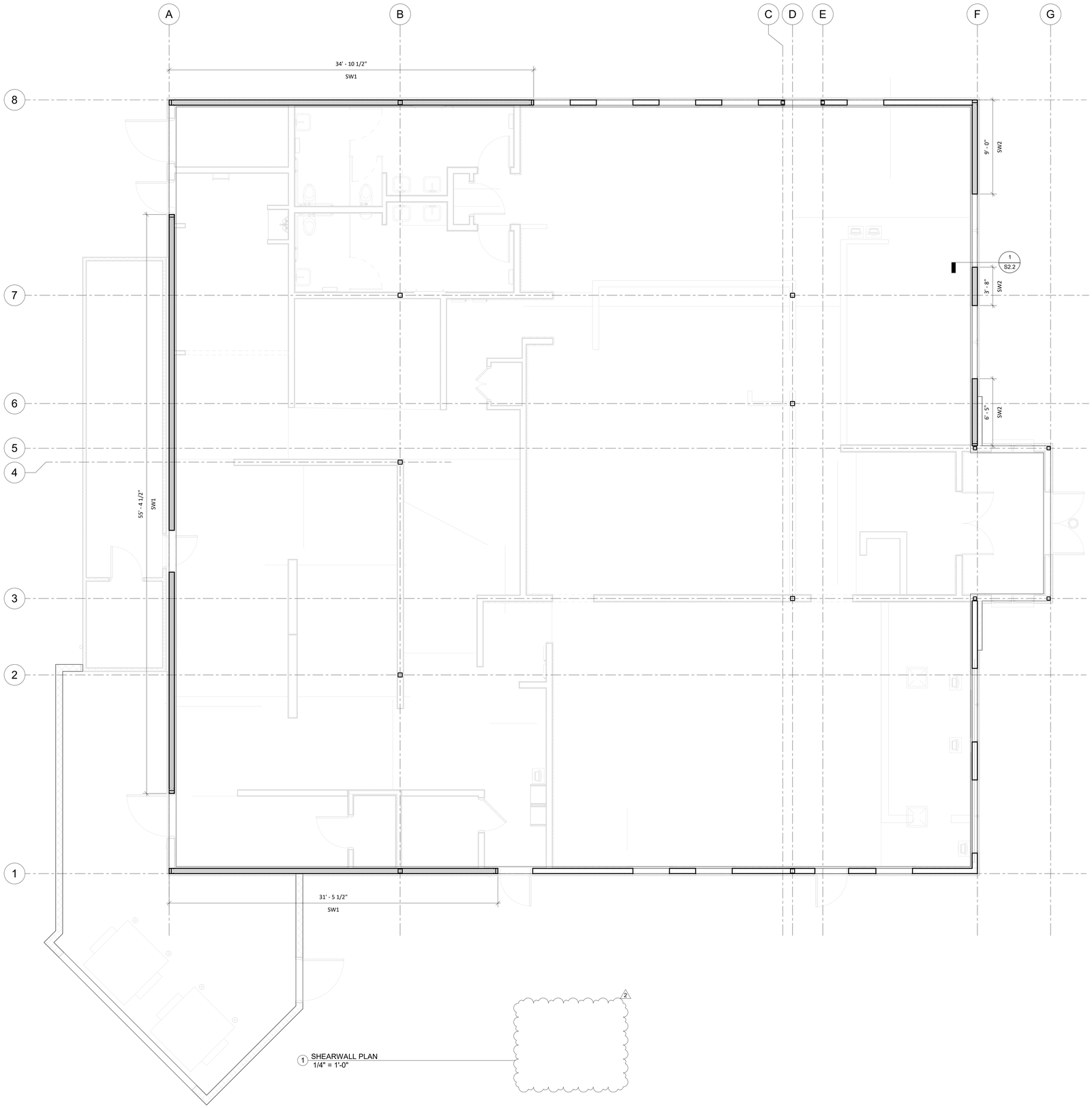
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
FOUNDATION PLAN

2

S1.0



1 SHEARWALL PLAN
1/4" = 1'-0"

SHEARWALL NOTES:

1. SHADED WALLS DENOTE SHEARWALL LOCATIONS.
2. #' - #" / SW# — INDICATES SHEARWALL LENGTH & TYPE.

SHEAR WALL SCHEDULE	
LIGHT GAUGE FRAMING - LIGHT GAUGE FRAMING	#10 TEK SCREWS
LIGHT GAUGE FRAMING - CONCRETE	"HILTI" 0.157" DIA. XU FASTENERS -OR- SIMPSON
LIGHT GAUGE FRAMING - MASONRY	"HILTI" 0.157" DIA. XU (P.A.F.)
LIGHT GAUGE FRAMING - STEEL	"SIMPSON" STRONG DRIVE SELF-DRILLING X METAL SCREW -OR- "HILTI" 0.157" DIA. XU (P.A.F.)
LIGHT GAUGE FRAMING - WOOD	SD#10 Wood Screws

NOTES:
1. ALL FASTENERS ARE TYPICAL, UNLESS NOTED OTHERWISE ON PLAN, ELEVATION, SECTION, OR DETAILS.

SHEAR WALL SCHEDULE

MARK	SHEATHING	FASTENER SIZE	EDGE NAILING "E.N."	SILL PLATE ANCHORAGE 5/8"X8" HEADED ANCHOR SPACING
SW1	7/16" APA RATED PLY 1 SIDE ONLY	#8	6"	48" O.C.
SW2	7/16" APA RATED PLY 2 SIDES	#8	4"	24" O.C.

NOTES:
1. FOR TYPICAL SILL PLATE ANCHORAGE, RE: SCHEDULE
2. SHEAR WALL SILL PLATE ANCHORAGE & HOLDOWN ANCHORS ARE IN ADDITION TO THE TYPICAL SILL PLATE ANCHORS SPECIFIED.
3. FOR SHEAR WALL FRAMING DETAIL, RE: 1 / S4.1

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05/03/2023

Cheddar's SCRATCH KITCHEN

Issue Date:	11-20-22
REVISION INFORMATION	
REV #2 CLIENT COMMENTS	4/5/23
Restaurant #:	22K0000

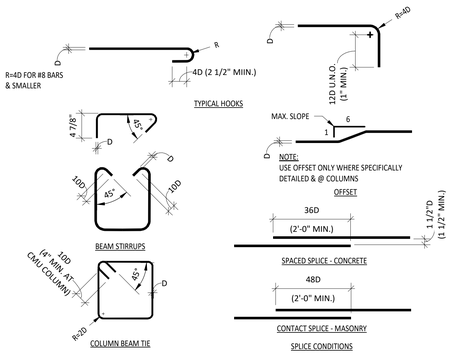
CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE.
RIVERVIEW, FL 33578

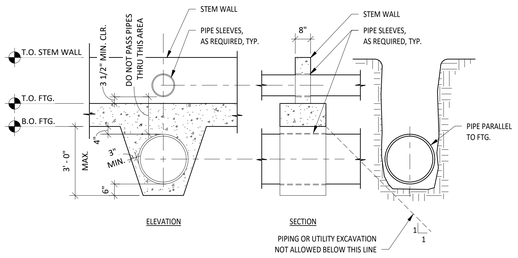
RIVERVIEW, FL

Drawing:
SHEAR WALL PLAN

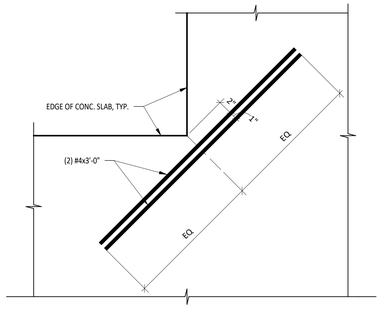
S1.1



1 REINFORCING BAR BENDS
1" = 1'-0"

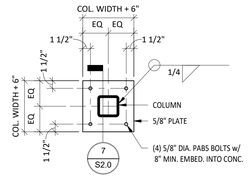


2 CONCRETE FOUNDATION WALL AND FOOTING PENETRATION
3/8" = 1'-0"

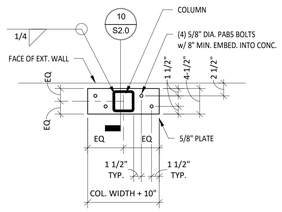


NOTES:
1. CORNER REINF. TO BE CENTERED IN SLAB.
2. DO NOT SAW CUT OR PLACE JONTS IN AREA OF REINFORCING THAT ALLOWS MOVEMENT.

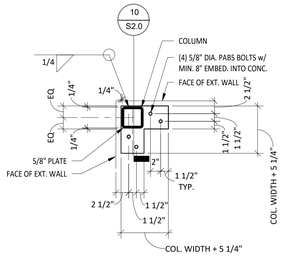
3 REINF. AT RE-ENTRANT CORNERS
1 1/2" = 1'-0"



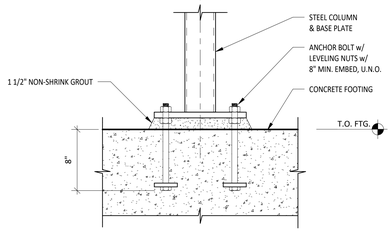
4 BASE PLATE DETAIL
1" = 1'-0"



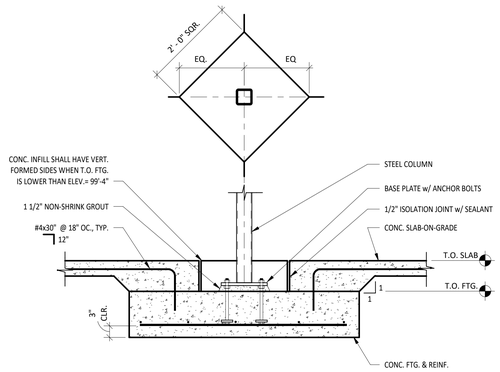
5 BASE PLATE DETAIL
1" = 1'-0"



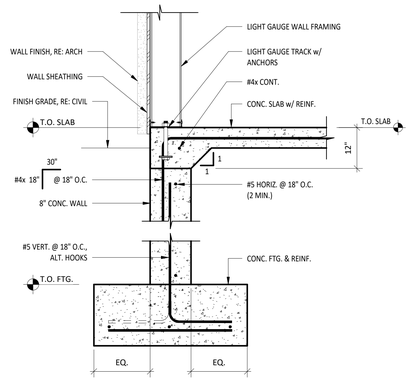
6 BASE PLATE DETAIL
1" = 1'-0"



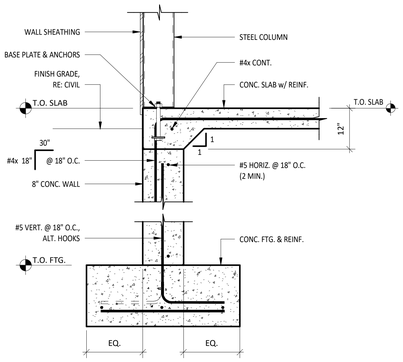
7 INTERIOR COLUMN FOOTING
1 1/2" = 1'-0"



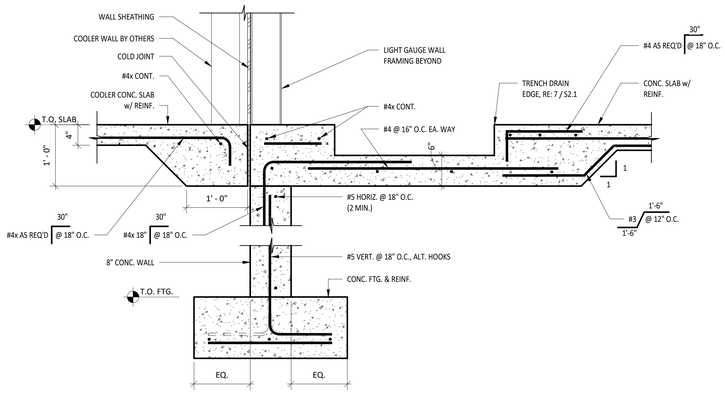
8 INTERIOR COLUMN FOOTING
3/4" = 1'-0"



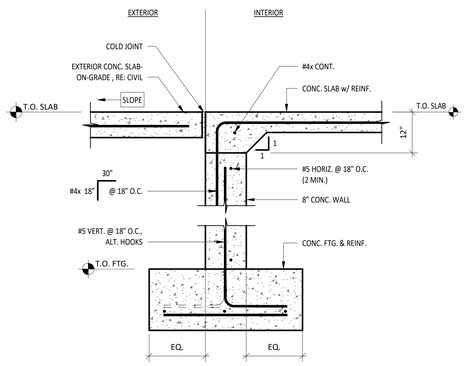
9 TYPICAL PERIMETER WALL FOOTING
1" = 1'-0"



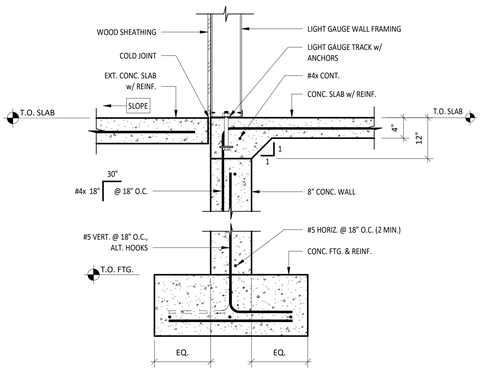
10 PERIMETER COLUMN FTG.
1" = 1'-0"



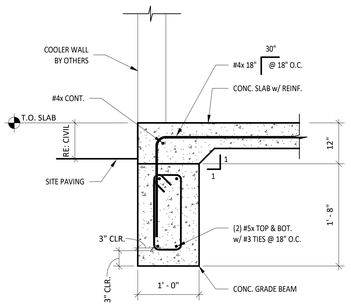
11 TRENCH DRAIN @ PERITMETER WALL FOOTING
1" = 1'-0"



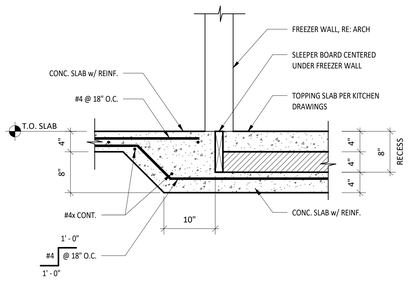
12 TYPICAL PERIMETER WALL FTG. @ DOOR
1" = 1'-0"



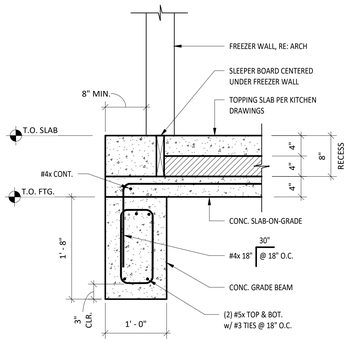
13 PERIMETER WALL FOOTING @ DUMPSTER SLAB
1" = 1'-0"



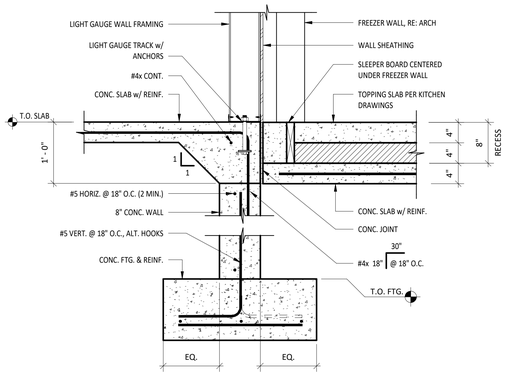
14 PERIMETER WALL FOOTING AT COOLER
1" = 1'-0"



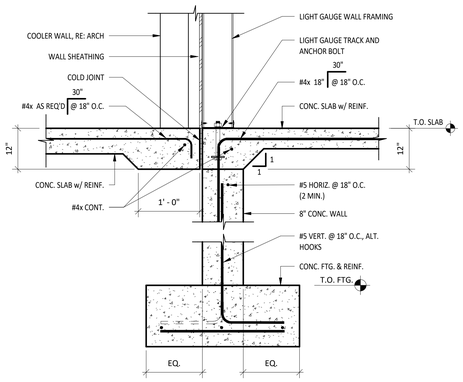
15 RECESSED FREEZER SLAB
1" = 1'-0"



16 RECESSED FREEZER SLAB
1" = 1'-0"



17 PERIMETER WALL FOOTING AT RECESSED FREEZER
1" = 1'-0"



18 PERIMETER WALL FOOTING AT RECESSED COOLER
1" = 1'-0"

TAMARACK GROVE ENGINEERING
812 S. La Cassia Drive
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(208) 345-8941
fax (208) 345-8946
web www.tamarackgrove.com
firm Firm No.: M14000009249
Project No.: 22-20544

CLINET:
DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

STATE OF FLORIDA PROFESSIONAL ENGINEER LICENSE No. PE 88957 DOUGLAS DEAN HARDIN
Douglas Dean Hardin
Florida License # 88957
812 S LaCassia, Boise ID 83705
05/03/2023

Cheddar's SCRATCH KITCHEN

Issue Date:	11-20-22
REVISION INFORMATION	
REV #2	CLIENT COMMENTS 4/5/23

Restaurant #: 22K0000

CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE.
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
FOUNDATION DETAILS

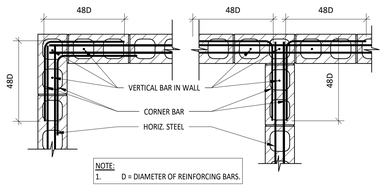
2

S2.0

REINFORCING LAP SCHEDULE, 1_d		
BAR SIZE	MASONRY	
	SINGLE BAR	DOUBLE BAR
3	1' -0"	1' -1"
4	1' -3"	2' -0"
5	1' -11"	3' -3"
6	3' -7"	6' -2"
7	5' -0"	8' -8"
8	7' -8"	13' -6"
9	9' -10"	17' -7"
10	12' -5"	22' -6"
11	15' -3"	28' -3"
14	N/A	N/A
18	N/A	N/A

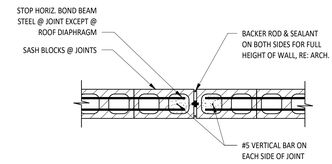
NOTES:
1. MASONRY LAP LENGTHS BASED ON f'm = 1,500 psi.
2. MASONRY "SINGLE BAR" LAP LENGTHS BASED ON BARS CENTERED WALL.
3. MASONRY "DOUBLE BAR" LAP LENGTHS BASED ON BARS OCCURRING AT EACH FACE OF WALL.

1 LAP SPLICE LENGTH SCHEDULE
1" = 1'-0"

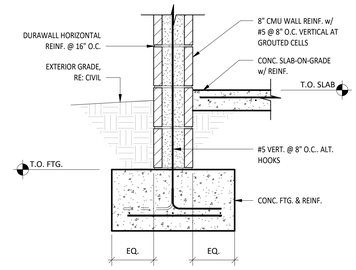


NOTE:
1. D = DIAMETER OF REINFORCING BARS.

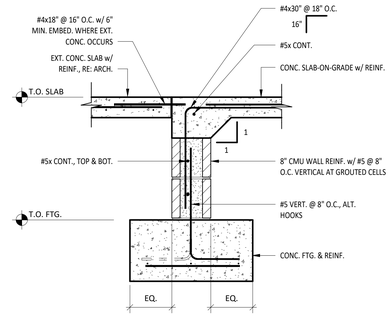
2 CORNER/INTERSECTION REINFORCING
3/4" = 1'-0"



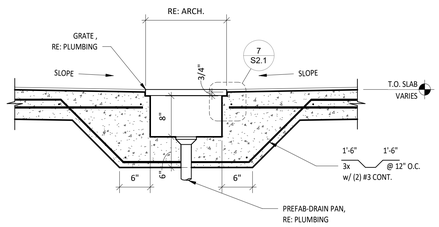
3 CMU WALL CONTROL JOINT
3/4" = 1'-0"



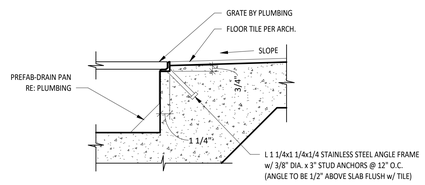
4 CMU DUMPSTER SCREENWALL
1" = 1'-0"



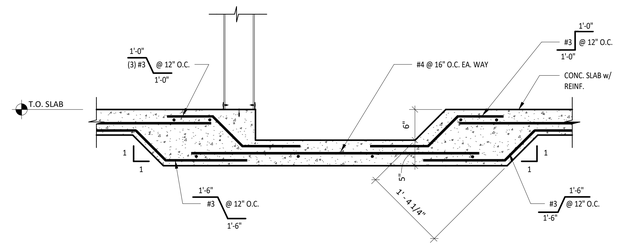
5 CMU DUMPSTER SCREENWALL AT ENTRY
1" = 1'-0"



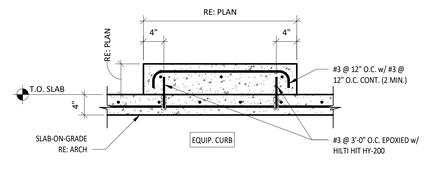
6 TYPICAL FLOOR TRENCH DRAIN
1" = 1'-0"



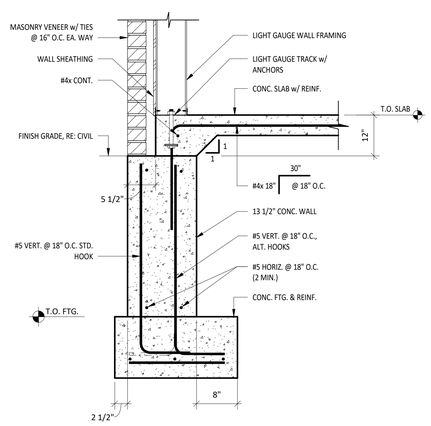
7 TYPICAL TRENCH DRAIN EDGE
1 1/2" = 1'-0"



8 RECESSED MOP SINK
1" = 1'-0"



9 TYPICAL CONCRETE CURB
1" = 1'-0"



10 PERIMETER WALL FOOTING AT BRICK LEDGE
1" = 1'-0"

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Douglas Dean Hardin
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05/03/2023

Cheddar's SCRATCH KITCHEN

Issue Date:	11-20-22

REVISION INFORMATION

REV #2	CLIENT COMMENTS	4/5/23

Restaurant #: 22K0000

CHEDDARS SCRATCH KITCHEN
PROTO 18

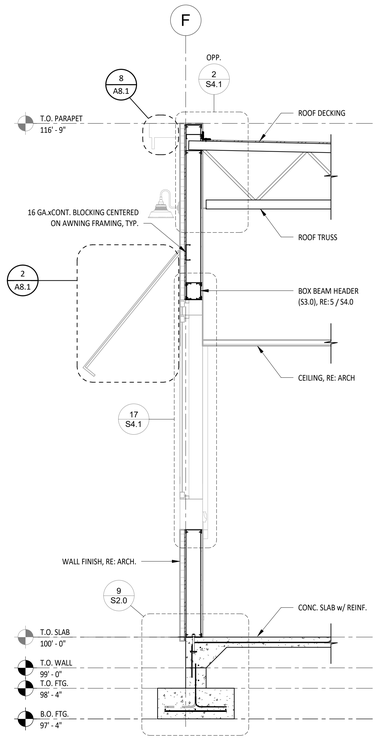
10150 BLOOMINGDALE AVE.
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
FOUNDATION DETAILS

2

S2.1



1 BUILDING SECTION
1/2" = 1'-0"

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Cheddar's
SCRATCH KITCHEN

Issue Date:	11-20-22

REVISION INFORMATION

REV #1	CITY COMMENTS	4/5/23

Restaurant #: 22K0000

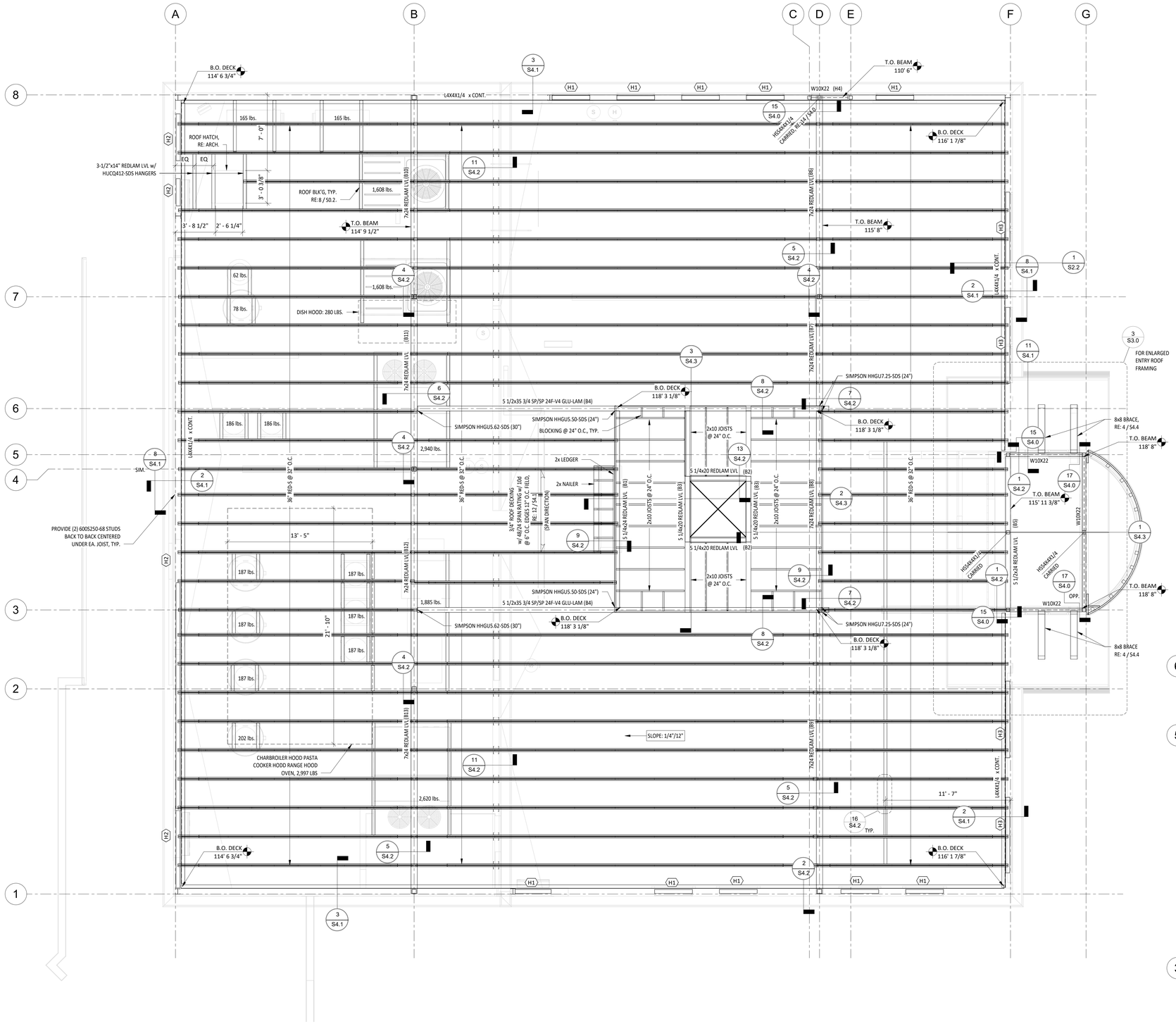
CHEDDARS
SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE.
RIVERVIEW, FL 33578

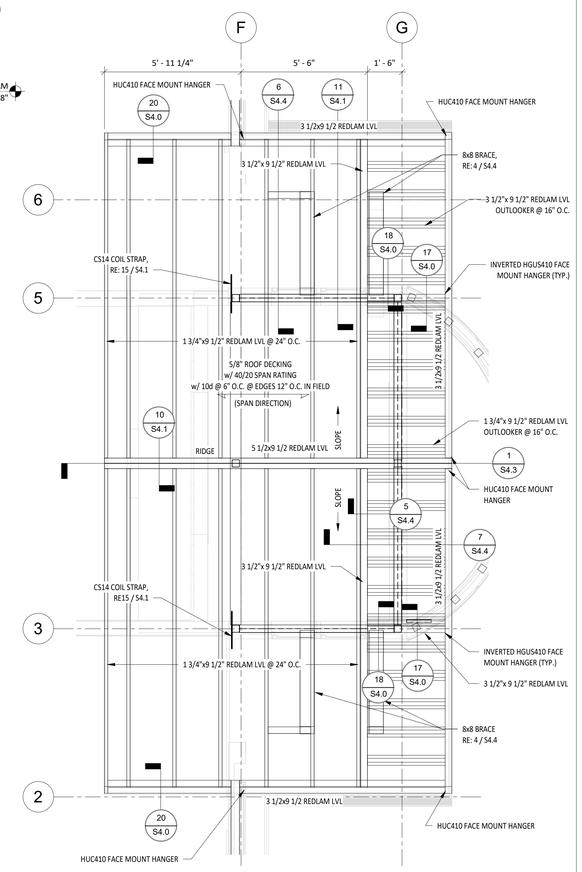
RIVERVIEW, FL

Drawing:
BUILDING
SECTIONS

S2.2



1 ROOF FRAMING PLAN
1/4" = 1'-0"



3 ENLARGED ENTRY ROOF FRAMING PLAN
3/8" = 1'-0"

FRAMING NOTES:

1. TRUSS BEARING ELEVATION = RE: ARCH., TYP.
2. ALL HUNG CEILINGS, HOODS, EXHAUSTS, AND ARCH. ELEMENT CONNECTIONS, RE: ARCH.
3. IN ADDITION TO THE DEAD LOAD, THE CONNECTIONS OF THE OVERBUILD TO THE SUPPORTING TRUSSES AND BLOCKING IMPART THE FOLLOWING WIND LOAD REACTIONS PER LINEAR FOOT, 200 lbs. DOWN AND 200 lbs. UPLIFT.
4. DESIGN TRUSSES ADJACENT TO ROOF SCREEN POSTS FOR 500 lbs. VERT. DEAD LOAD.
5. FOR TYPICAL FRAMING DETAILS NOT CUT ON PLAN RE: S4.0, S4.1, S4.2 & S4.3.

INTERIOR LIGHT GAUGE FRAMING HEADER SCHEDULE (L/240)

SPAN	3 5/8" WALL FRAMING		6" WALL FRAMING	
	JAMB STUDS	HEADER FRAMING	JAMB STUDS	HEADER FRAMING
0'-0" TO 4'-0"	3625162-33	(2) 362T125-33 TOP & BOTTOM w/ (2) 3625162-33 VERTICAL	6005162-33	(2) 600T125-33 TOP & BOTTOM w/ (2) 6005162-33 VERTICAL
4'-1" TO 8'-0"	3625162-43	(2) 362T125-43 TOP & BOTTOM w/ (2) 3625162-43 VERTICAL	6005162-43	(2) 600T125-43 TOP & BOTTOM w/ (2) 6005162-43 VERTICAL
8'-1" TO 12'-0"	3625162-54	(2) 362T125-54 TOP & BOTTOM w/ (2) 3625162-54 VERTICAL	6005162-54	(2) 600T125-54 TOP & BOTTOM w/ (2) 6005162-54 VERTICAL

EXTERIOR LIGHT GAUGE FRAMING HEADER SCHEDULE (L/240)

SPAN	SYMBOL	6" WALL FRAMING	
		JAMB STUDS	HEADER FRAMING
0'-0" TO 4'-0"	H1	6005162-97	(2) 600T125-43 TOP & BOTTOM w/ (2) 6005162-43 VERTICAL
4'-1" TO 6'-0"	H2	(1) 600T250-97 (1) 6005250-97 NESTED	(2) 600T250 -97 TOP & BOTTOM w/ (2) 6005162-97 VERTICAL STIFFENERS REQUIRED
6'-1" TO 8'-0"	H3	6005250-97	(2) 600T125-97 TOP & BOTTOM w/ (2) 6005162-97 VERTICAL

INTERIOR LIGHT GAUGE FRAMING (L/240):

	3 5/8" WALL FRAMING	6" WALL FRAMING
BOTTOM TRACK	362T125-33	600T125-33
WALL FRAMING	3625162-33 @ 24" O.C.	6005162-33 @ 24" O.C.
SILL	362T125-33	600T125-33
HEADER	SEE SCHEDULE	SEE SCHEDULE
TOP TRACK	362T125-33	600T125-33

EXTERIOR LIGHT GAUGE FRAMING SCHEDULE (L/240)

	6" WALL FRAMING
BOTTOM TRACK	600T125-43
WALL FRAMING	6005250-68 @ 16" O.C.
SILL	600T125-43
HEADER	SEE SCHEDULE
TOP TRACK	600T125-43

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cheddar's SCRATCH KITCHEN

Issue Date:	11-20-22

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Restaurant #: 22K0000

CHEDDARS
SCRATCH KITCHEN
PROTO 18

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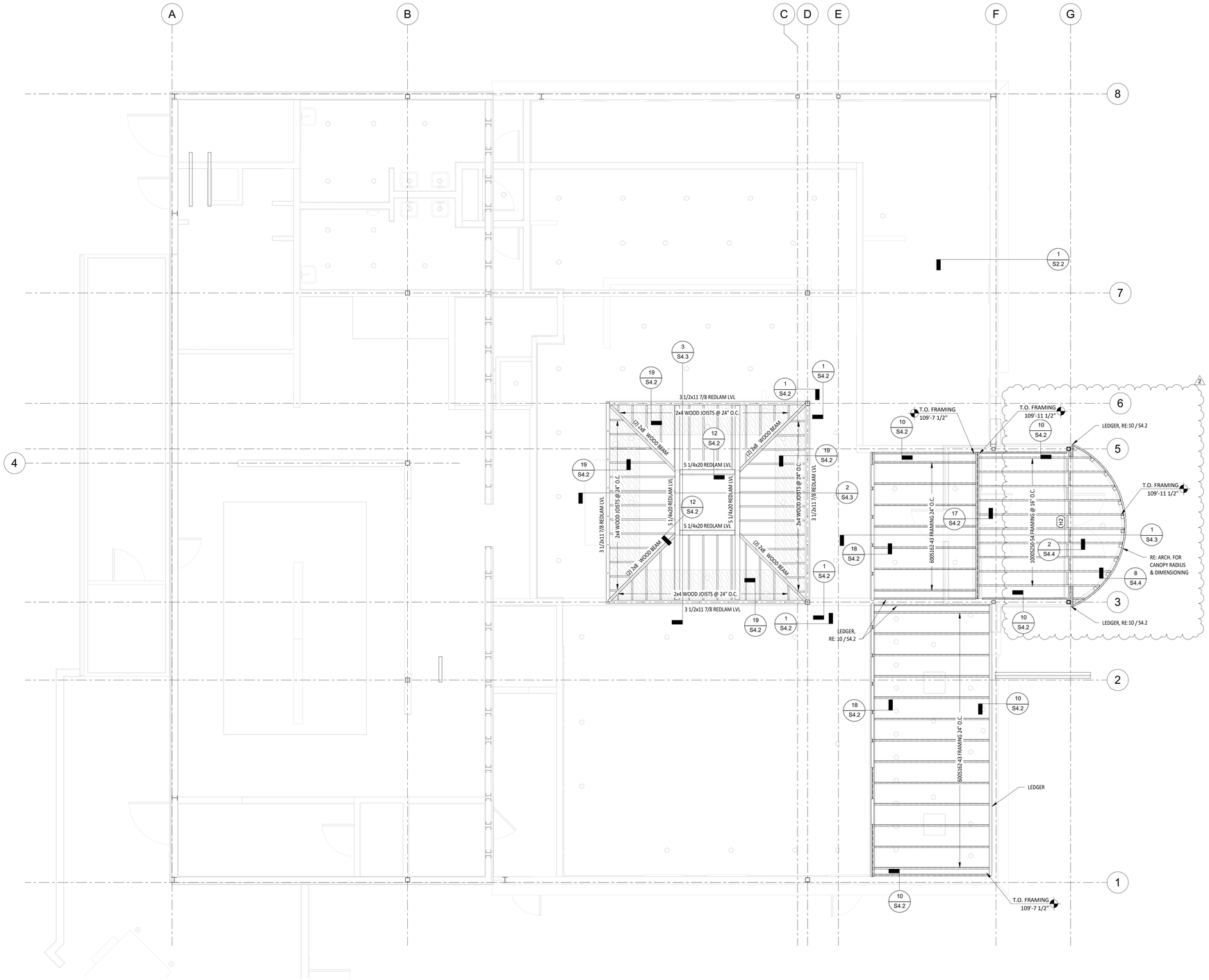
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
ROOF FRAMING PLAN

S3.0

EXTERIOR LIGHT GAUGE FRAMING HEADER SCHEDULE (L/240)			
SPAN	SYMBOL	6" WALL FRAMING	
		JAMB STUDS	HEADER FRAMING
0'-0" TO 4'-0"	**H1**	600S162-97	(2) 600T125-43 TOP & BOTTOM w/ (2) 600S162-43 VERTICAL
4'-1" TO 6'-0"	**H2**	(1) 600T250-97 (1) 600S250-97 NESTED	(2) 600T250 -97 TOP & BOTTOM w/ (2) 600S162-97 VERTICAL STIFFENERS REQUIRED
6'-1" TO 8'-0"	**H3**	600S250-97	(2) 600T125-97 TOP & BOTTOM w/ (2) 600S162-97 VERTICAL



1 CEILING FRAMING PLAN
1/4" = 1'-0"

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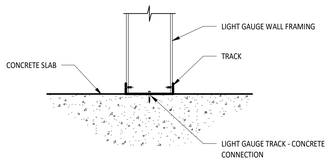
RIVERVIEW, FL 33578

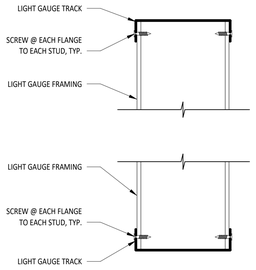
RIVERVIEW, FL

Drawing:
CEILING FRAMING PLAN

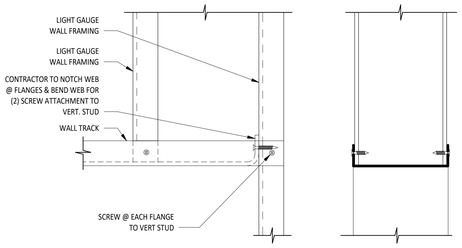
S3.2



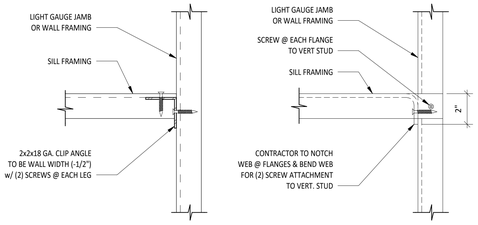
1 STUD WALL TRACK - CONCRETE CONNECTION
1 1/2" = 1'-0"



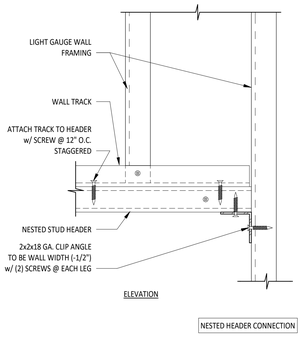
2 TRACK - STUD CONNECTION
3" = 1'-0"



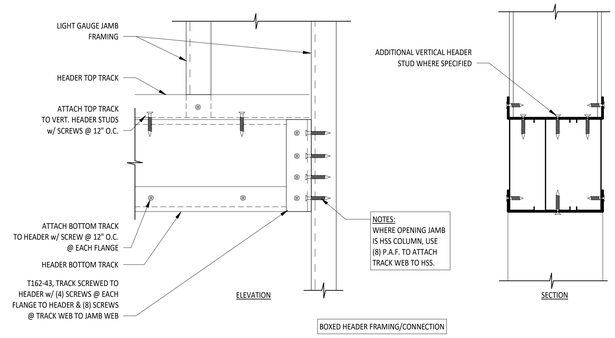
3 TRACK FRAMED OPENING CONNECTION
3" = 1'-0"



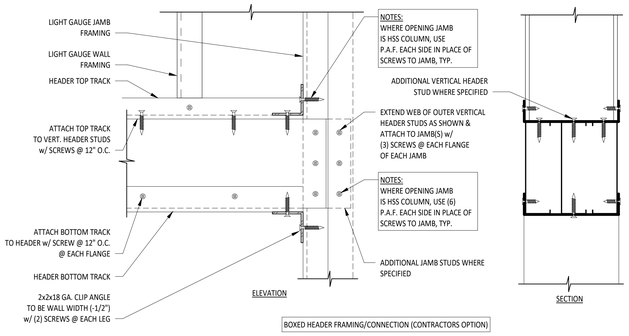
4 SILL - JAMB CONNECTION
3" = 1'-0"



NESTED HEADER CONNECTION

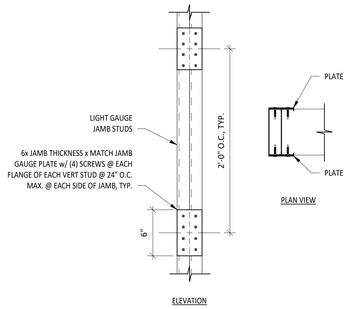


BOXED HEADER FRAMING/CONNECTION

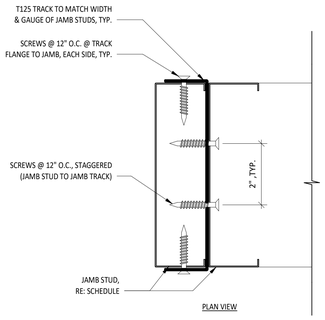


BOXED HEADER FRAMING/CONNECTION (CONTRACTORS OPTION)

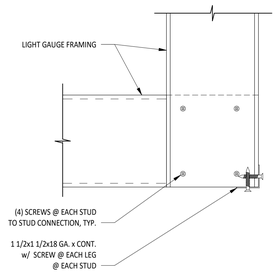
5 TYPICAL HEADER FRAMING
3" = 1'-0"



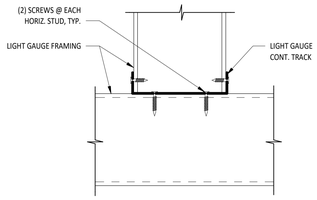
6 MULTIPLE JAMB CONNECTION - OPTION 1
1 1/2" = 1'-0"



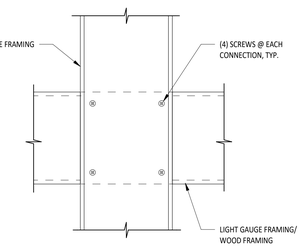
7 MULTIPLE JAMB CONNECTION - OPTION 2
6" = 1'-0"



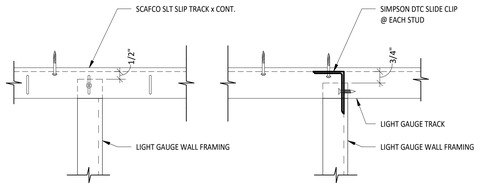
8 CORNER FRAMING CONNECTION
3" = 1'-0"



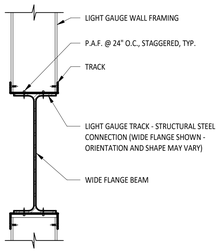
9 TRACK - CROSSING STUD CONNECTION
3" = 1'-0"



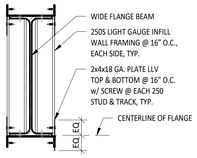
10 TYPICAL STUD - STUD CONNECTION
3" = 1'-0"



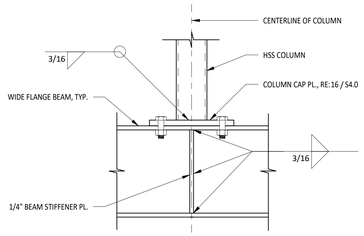
11 TYPICAL STEEL STUD - SLIP TRACK CONNECTION
3" = 1'-0"



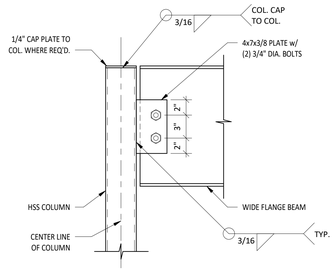
12 STUD WALL TRACK - STRUCTURE CONNECTION
1 1/2" = 1'-0"



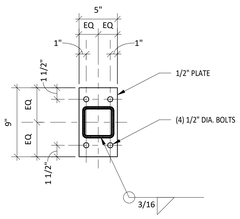
13 STUD WALL TRACK - STRUCTURE CONNECTION
1 1/2" = 1'-0"



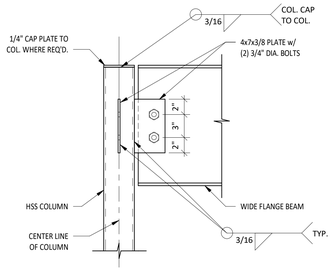
14 TYPICAL BEAM TO COLUMN CONNECTION
1 1/2" = 1'-0"



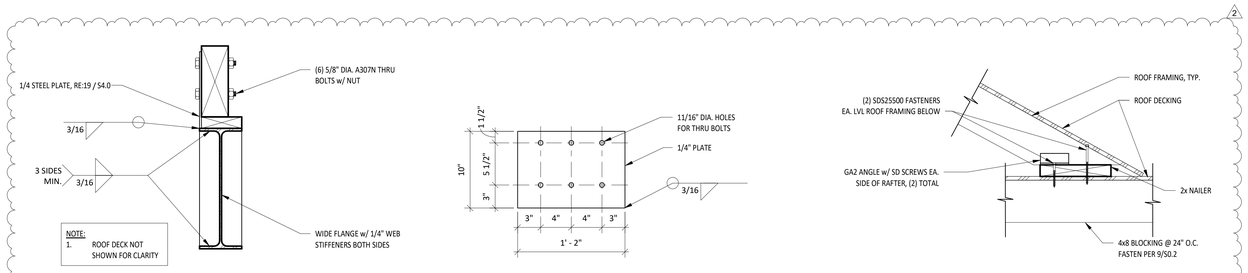
15 COLUMN - BEAM SHEAR CONNECTION
1 1/2" = 1'-0"



16 CAP PLATE DETAILS
1 1/2" = 1'-0"



17 COLUMN - BEAM SHEAR CONNECTION
1 1/2" = 1'-0"



18 BEAM - BEAM BEARING CONNECTION
1 1/2" = 1'-0"

19 STEEL PLATE DETAIL
1 1/2" = 1'-0"

20 ROOF FRAMING CONNECTION
1 1/2" = 1'-0"

TAMARACK GROVE ENGINEERING
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Project No.: 22-20544

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DOUGLAS DEAN HARDIN LICENSE No. PE 88957 STATE OF IDAHO PROFESSIONAL ENGINEER

Douglas Dean Hardin
Florida License # 88957
812 S LaCassia, Boise ID 83705
05/03/2023

Cheddar's SCRATCH KITCHEN

Issue Date:	11-20-22
REVISION INFORMATION	
REV #2	CLIENT COMMENTS 4/5/23
Restaurant #:	22K0000

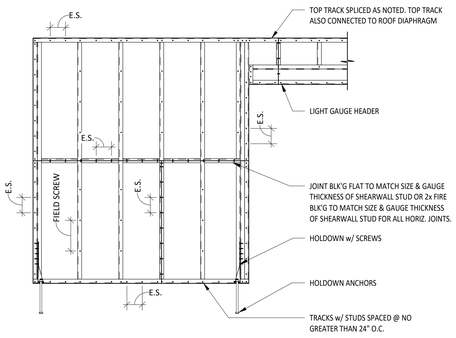
CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE.
RIVERVIEW, FL 33578

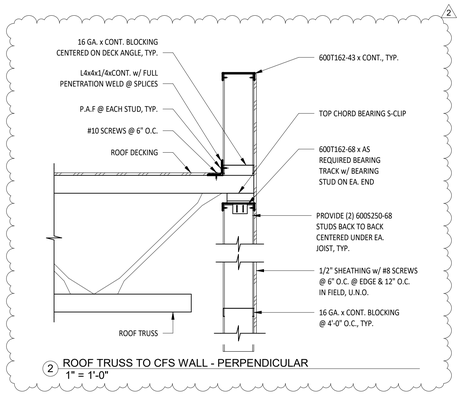
RIVERVIEW, FL

Drawing:
FRAMING DETAILS

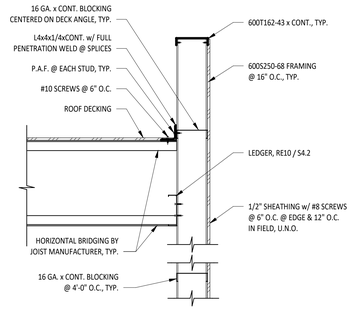
S4.0



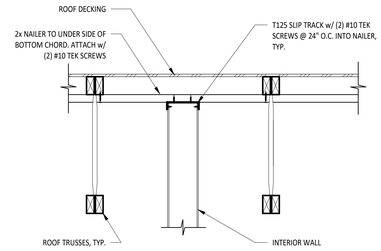
1 STRUCTURAL SHEARWALL SCHEDULE
1/2" = 1'-0"



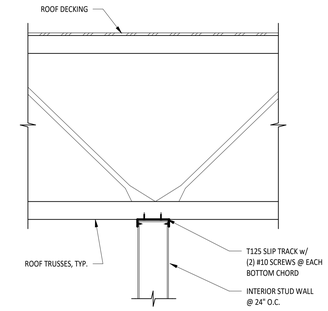
2 ROOF TRUSS TO CFS WALL - PERPENDICULAR
1" = 1'-0"



3 ROOF JOIST TO CFS WALL - PARALLEL
1" = 1'-0"



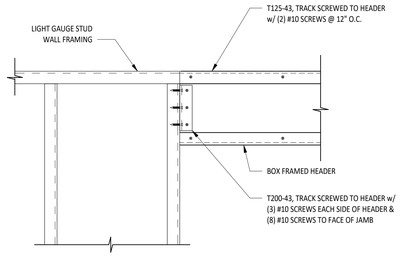
4 LIGHT GAUGE WALL FRAMING TO NAILER
1" = 1'-0"



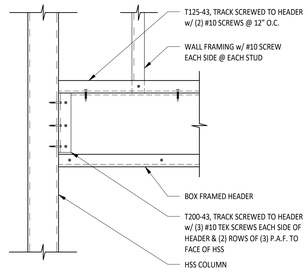
5 LIGHT GAUGE WALL FRAMING TO ROOF TRUSSES- PERPENDICULAR
1" = 1'-0"

NOTES:

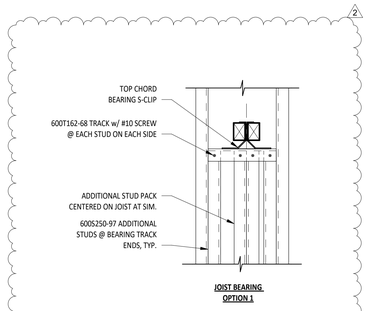
1. WHERE PLYWOOD PANELS ARE APPLIED ON BOTH FACES OF A WALL, PLYWOOD PANEL JOINS SHALL OCCUR AT FRAMING, INCLUDING BLOCKING, AND FASTENERS ON EA. SIDE OF THE EDGE SHALL BE STAGGERED.
2. THE MINIMUM EDGE DISTANCE FOR FASTENERS IN THE RECEIVING MEMBERS AND THE PLYWOOD SHALL BE 3/8".
3. THE HOLDOWN ANCHOR IS IN ADDITION TO THE SILL ANCHOR BOLTS.
4. NO PANEL WIDTH LESS THAN 12" SHALL BE USED.
5. PLYWOOD MAY BE INSTALLED VERT. OR HORIZ.
6. SHEAR WALLS MORE THAN ONE VERT. PANEL IN HEIGHT SHALL HAVE EITHER VERT. OR HORIZ. STAGGERED SPLICED JOINTS AT CONT. HORIZ. JOINTS THE BLOCKING SHALL BE A MIN. THICKNESS OF 33 MIL. w/ A MIN. WIDTH OF 1 1/2" AND SHALL BE EITHER INSTALLED ON TOP OF OR BELOW SHEATHING.
7. SHEARWALL SHEATHING AND FASTENERS PATTERN TO BE CONTINUOUS ABOVE AND BELOW OPENING.
8. GRADE EXPOSURE 1CDX (32/16).
9. ORIENTED STRAND BOARDS (OSB) OF THE SAME EQUIVALENCE MAY BE SUBSTITUTED.
10. END STUDS SHALL BE FULL HEIGHT.
11. WHERE STUD MUST BE CUT DUE TO THE PLACEMENT OF ANCHOR BOLTS OR OTHER PRODUCTS, AN ADDITIONAL STUD SHALL BE INSERTED ALONG SIDE.
12. ALL PANEL EDGES SHALL BE BLOCKED WITH A MIN. THICKNESS OF 33 MIL w/ A MIN. WIDTH OF 1 1/2" AND SHALL BE EITHER INSTALLED ON TOP OF OR BELOW SHEATHING.
13. ALL SHEAR WALL SHEATHING SHALL BE 7/16" THICK A.P.A. RATED SHEATHING, EXPOSURE 1.
14. SHEATHING SHALL BE APPLIED WITH EDGES 1/8" APART AT SIDE JOINTS AND 1/8" APART AT END JOINTS.
15. CONTRACTOR TO VERIFY THE SHEAR ANCHORS ARE A MINIMUM OF 5/8" DIA. SPACED @ 24" O.C. MAX. CONTACT E.O.R. IF ANCHORS DO NOT MEET THIS REQUIREMENT.



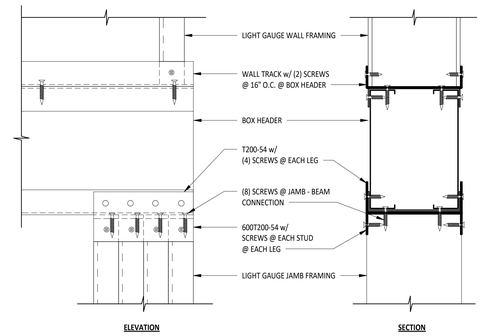
6 BOX HEADER CONNECTION @ WALL FRAMING
1 1/2" = 1'-0"



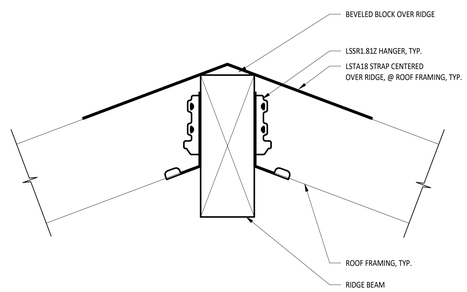
7 BOX HEADER CONNECTION @ HSS COLUMN
1 1/2" = 1'-0"



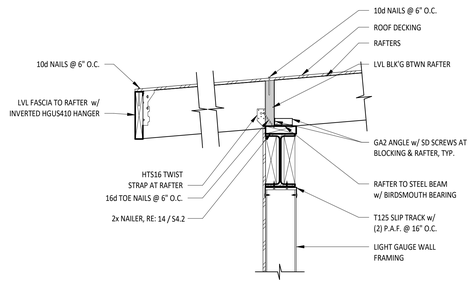
8 LIGHT GAUGE JOIST BEARING/STUD PACK ELEVATION
1 1/2" = 1'-0"



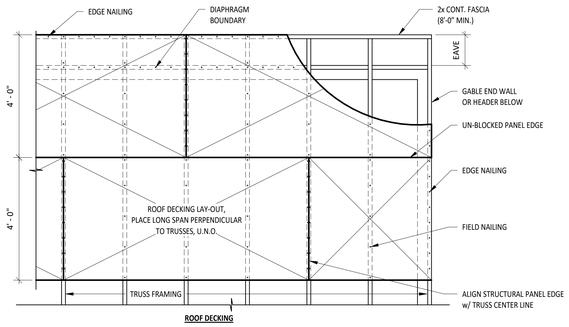
9 LIGHT GAUGE JAMB @ BOX HEADER
3" = 1'-0"



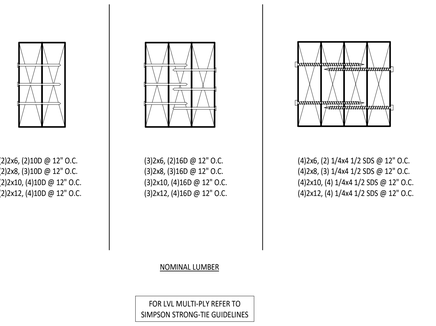
10 FRAMING CONNECTION @ ROOF
3" = 1'-0"



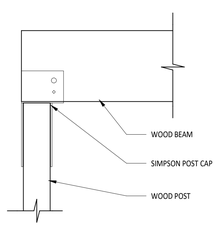
11 EAVE FRAMING
1" = 1'-0"



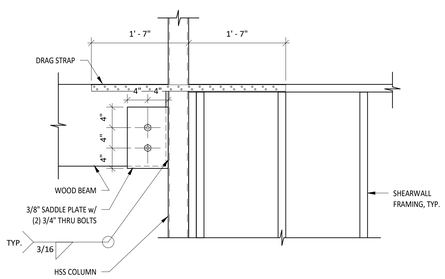
12 ROOF DIAPHRAGM/SHEATHING NAILING (TYPICAL)
1/2" = 1'-0"



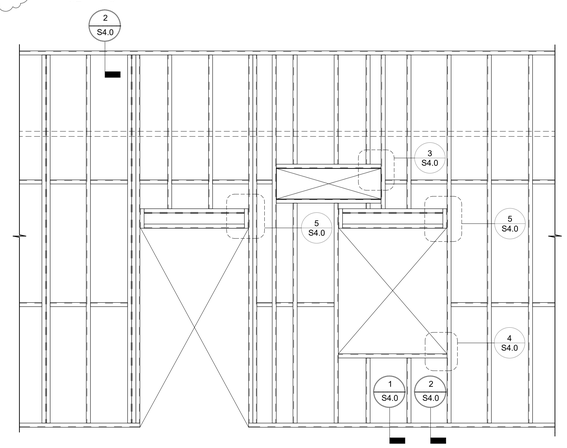
13 MULTI-PLY BEAM ATTACHMENT
3" = 1'-0"



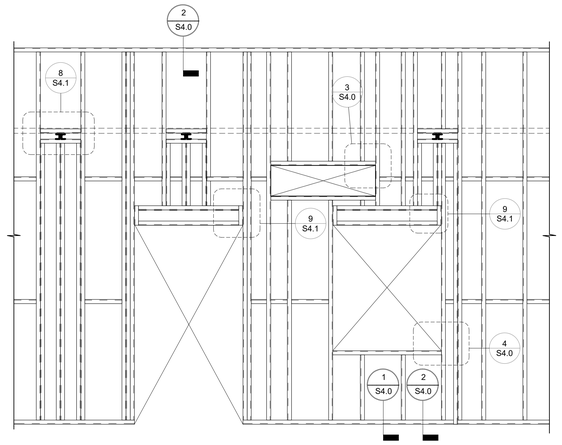
14 WOOD BEAM AT POST
1 1/2" = 1'-0"



15 DRAG TO BEAM
1" = 1'-0"



16 TYPICAL EXTERIOR WALL FRAMING - PASS-BY w/ PARAPET
1/2" = 1'-0"



17 TYPICAL EXTERIOR WALL FRAMING - PASS-BY w/ TRUSS BEARIING
1/2" = 1'-0"

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Boise, ID 83705
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web www.tamarackgrove.com
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Project No.: 22-20544

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DOUGLAS DEAN HARDIN LICENSE No. PE 88957 STATE OF FLORIDA PROFESSIONAL ENGINEER
Douglas Dean Hardin
Florida License # 88957
812 S LaCassia, Boise ID 83705
05/03/2023

Cheddar's SCRATCH KITCHEN

Issue Date:	11-20-22

REVISION INFORMATION

REV #2	CLIENT COMMENTS	4/5/23

Restaurant #: 22K0000

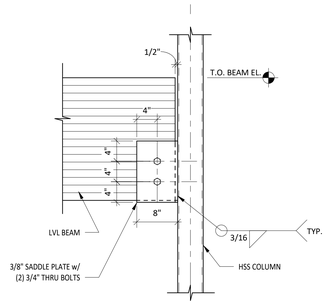
CHEDDARS SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE.
RIVERVIEW, FL 33578

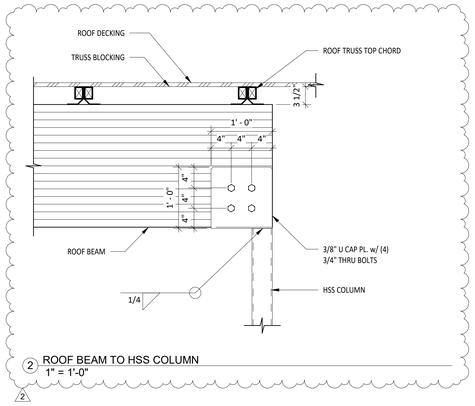
RIVERVIEW, FL

Drawing:
FRAMING DETAILS

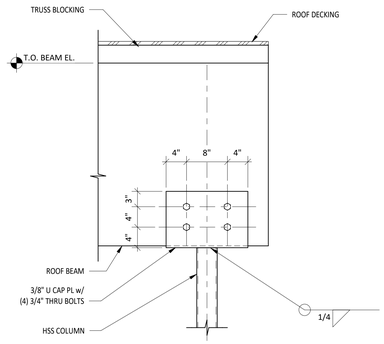
S4.1



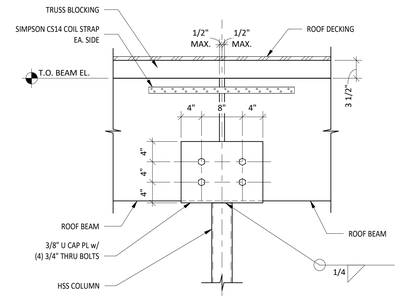
1 LVL BEAM TO HSS COLUMN CONNECTION DETAIL
1" = 1'-0"



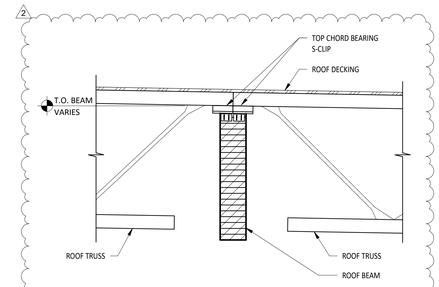
2 ROOF BEAM TO HSS COLUMN
1" = 1'-0"



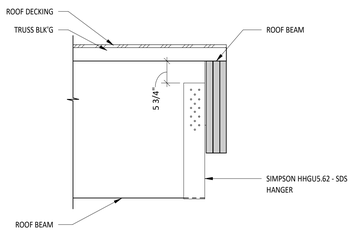
3 BEAM TO HSS COLUMN CONNECTION DETAIL
1" = 1'-0"



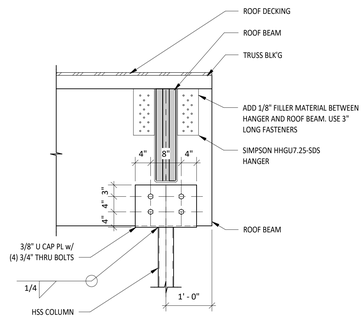
4 BEAM TO HSS COLUMN CONNECTION DETAIL
1" = 1'-0"



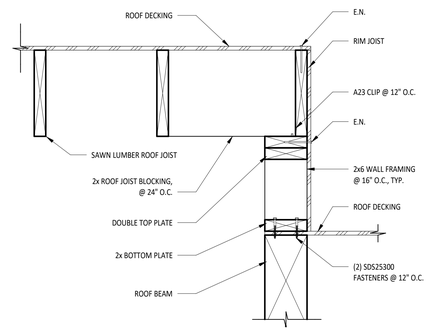
5 TRUSS BEARING @ BEAM
3/4" = 1'-0"



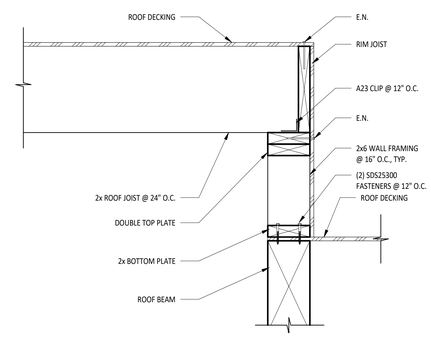
6 BEAM - BEAM CONNECTION
3/4" = 1'-0"



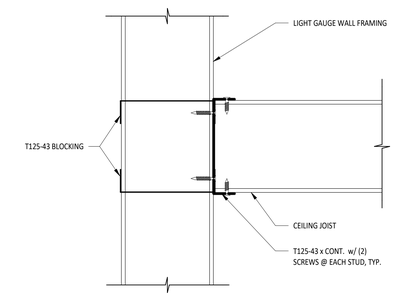
7 BEAM - BEAM CONNECTION
3/4" = 1'-0"



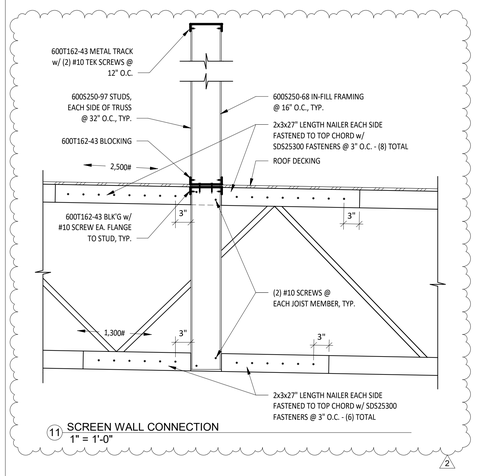
8 ROOF JOIST @ WALL PARALLEL
1 1/2" = 1'-0"



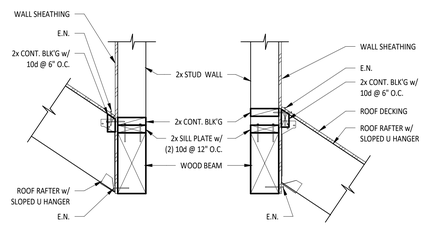
9 ROOF JOIST @ WALL PERPENDICULAR
1 1/2" = 1'-0"



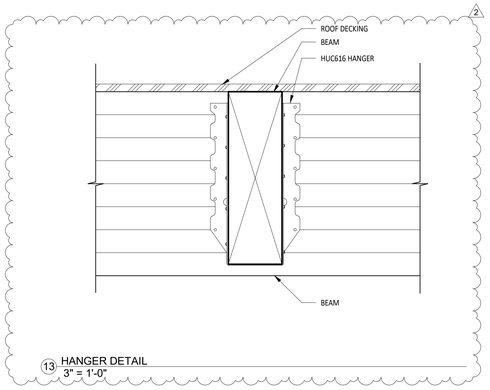
10 BLOCKING @ CEILING FRAMING
3" = 1'-0"



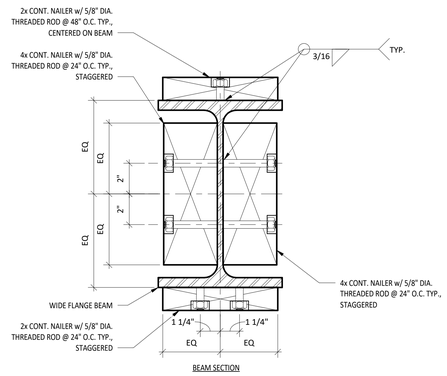
11 SCREEN WALL CONNECTION
1" = 1'-0"



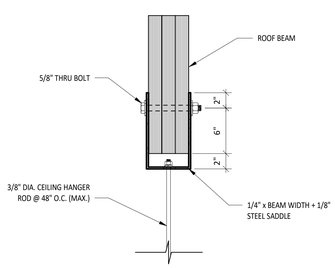
12 RAFTER TO BEAM CONNECTION
1" = 1'-0"



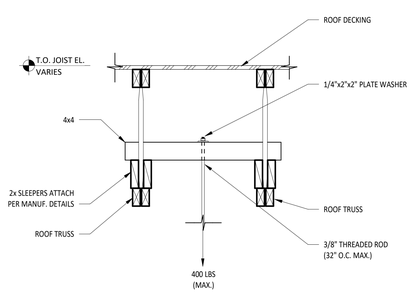
13 HANGER DETAIL
3" = 1'-0"



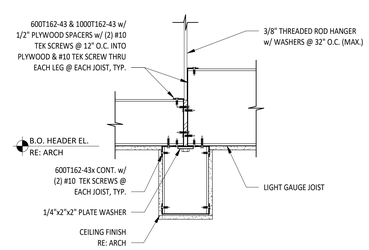
14 WOOD INFILL FRAMING @ W-BEAM
3" = 1'-0"



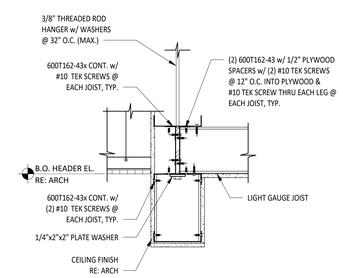
15 TYPICAL HANGER ROD AT ROOF BEAM DETAIL
1 1/2" = 1'-0"



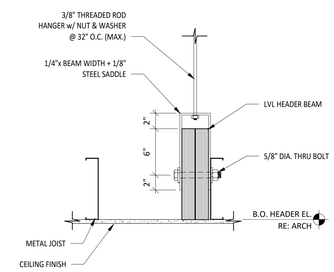
16 ROOF CONNECTION @ TRUSS FRAMING
1" = 1'-0"



17 DOUBLE 2x CEILING HEADER/HANGER ROD DETAIL
1 1/2" = 1'-0"



18 DOUBLE 2x CEILING HEADER/HANGER ROD DETAIL
1 1/2" = 1'-0"



19 LVL CEILING HEADER/HANGER ROD DETAIL
1 1/2" = 1'-0"

TAMARACK GROVE ENGINEERING
812 S. La Cassia Drive
Boise, ID 83705
(208) 345-8941
fax (208) 345-8946
web www.tamarackgrove.com
firm Firm No.: M14000009249
Project No.: 22-20544

CLINET:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

DOUGLAS DEAN HARDIN
LICENSE
No. PE 88957
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Douglas Dean Hardin
Florida License # 88957
812 S LaCassia, Boise ID 83705
05/03/2023

Cheddar's SCRATCH KITCHEN

Issue Date:	11-20-22
REVISION INFORMATION	
REV #2 CLIENT COMMENTS	4/5/23

Restaurant #: 22K0000

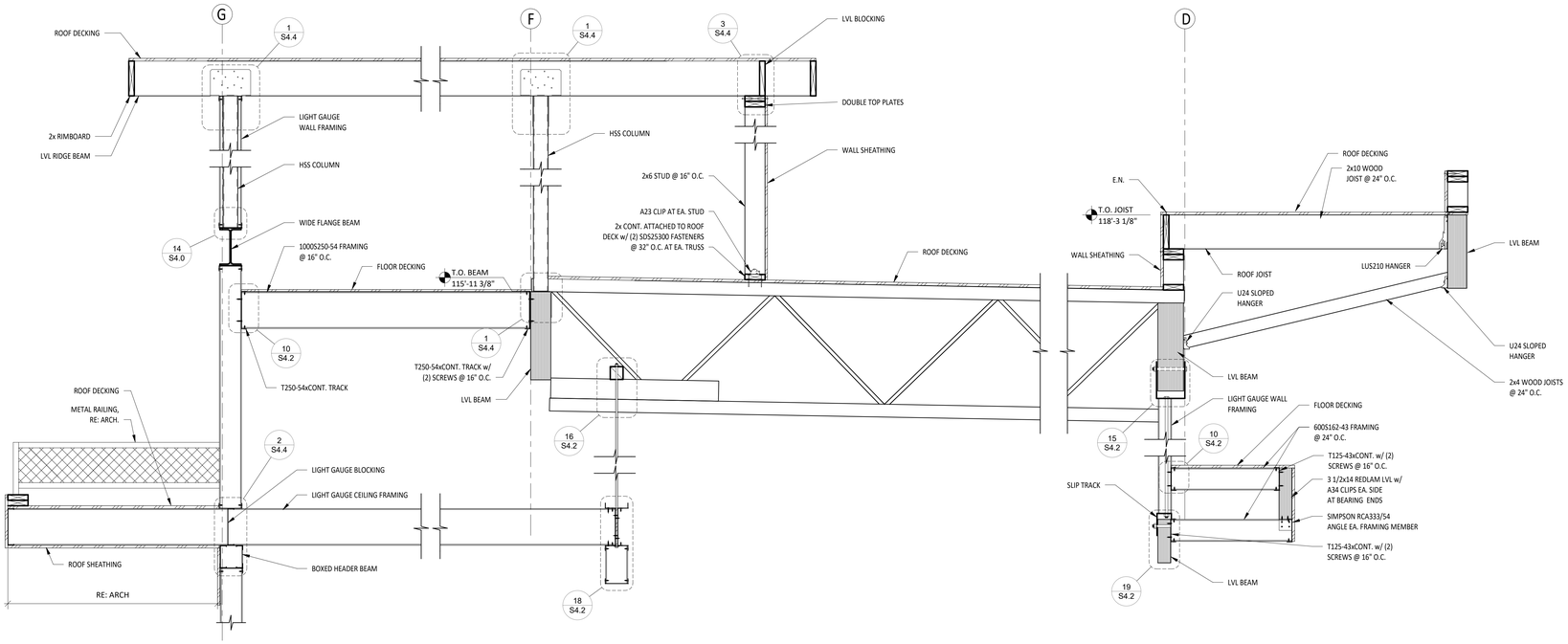
CHEDDARS
SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE.
RIVERVIEW, FL 33578

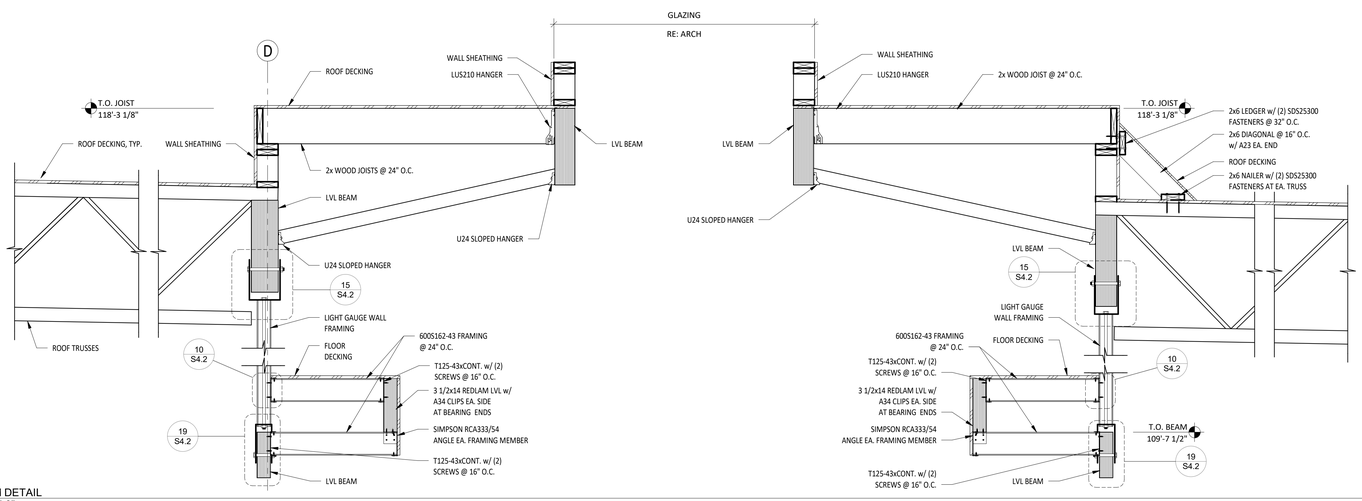
RIVERVIEW, FL

Drawing:
FRAMING DETAILS

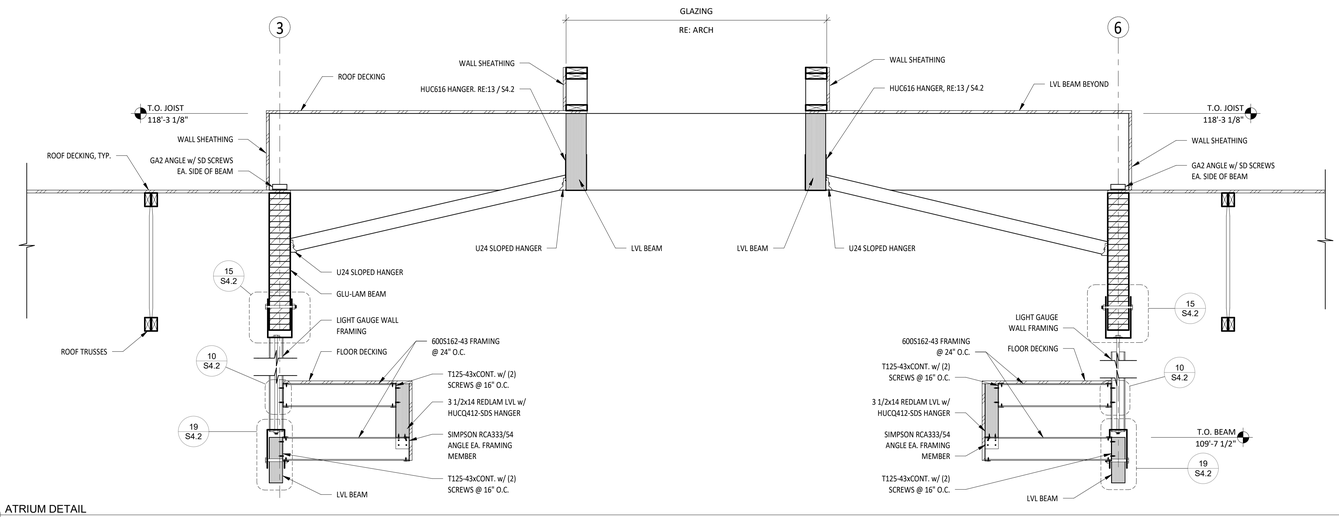
S4.2



1 SIDE ATRIUM DETAIL
3/4" = 1'-0"



2 ATRIUM DETAIL
3/4" = 1'-0"



3 ATRIUM DETAIL
3/4" = 1'-0"

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Cheddar's SCRATCH KITCHEN

Issue Date: 11-20-22

REVISION INFORMATION

REV #2	CLIENT COMMENTS	4/5/23

Restaurant #: 22K0000

CHEDDARS SCRATCH KITCHEN
PROTO 18

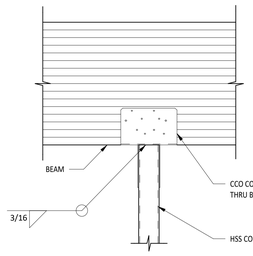
10150 BLOOMINGDALE AVE.
RIVERVIEW, FL 33578

RIVERVIEW, FL

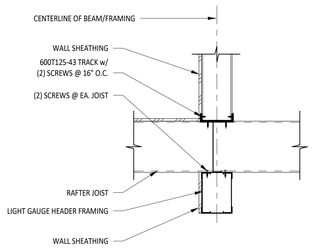
Drawing:
FRAMING DETAILS

2

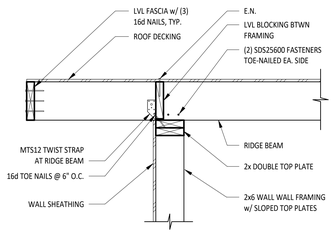
S4.3



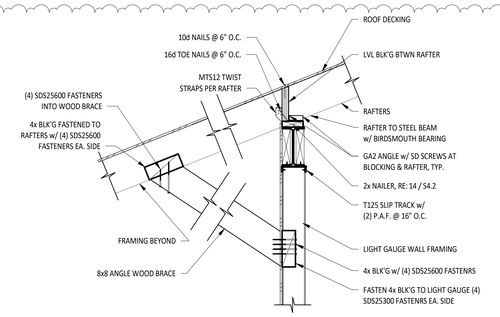
1 BEAM TO HSS COLUMN
1" = 1'-0"



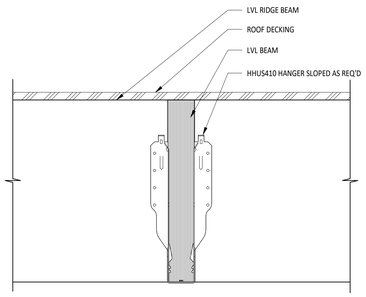
2 ENTRY WALL RAFTER CONNECTION
1" = 1'-0"



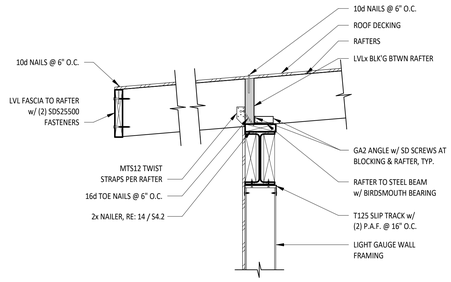
3 EAVE FRAMING SECTIONS
1" = 1'-0"



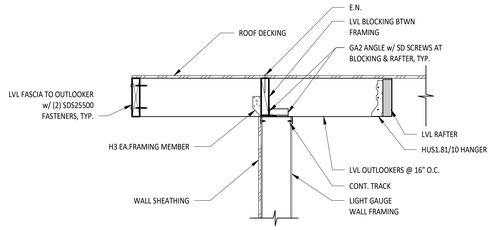
4 EAVE FRAMING
3/4" = 1'-0"



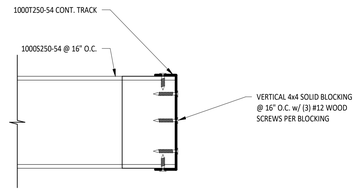
5 LVL RIDGE BEAM TO LVL RAFTER HANGER CONNECTION
3" = 1'-0"



6 EAVE FRAMING
1" = 1'-0"



7 EAVE FRAMING SECTIONS
1" = 1'-0"



8 ENTRY OVERHANG SOFFIT CONNECTION
3" = 1'-0"

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Cheddar's SCRATCH KITCHEN

Issue Date:	11-20-22

REVISION INFORMATION

REV #2	CLIENT COMMENTS	4/5/23

Restaurant #: 22K0000

CHEDDARS
SCRATCH KITCHEN
PROTO 18

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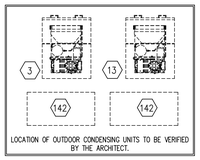
RIVERVIEW, FL 33578

RIVERVIEW, FL

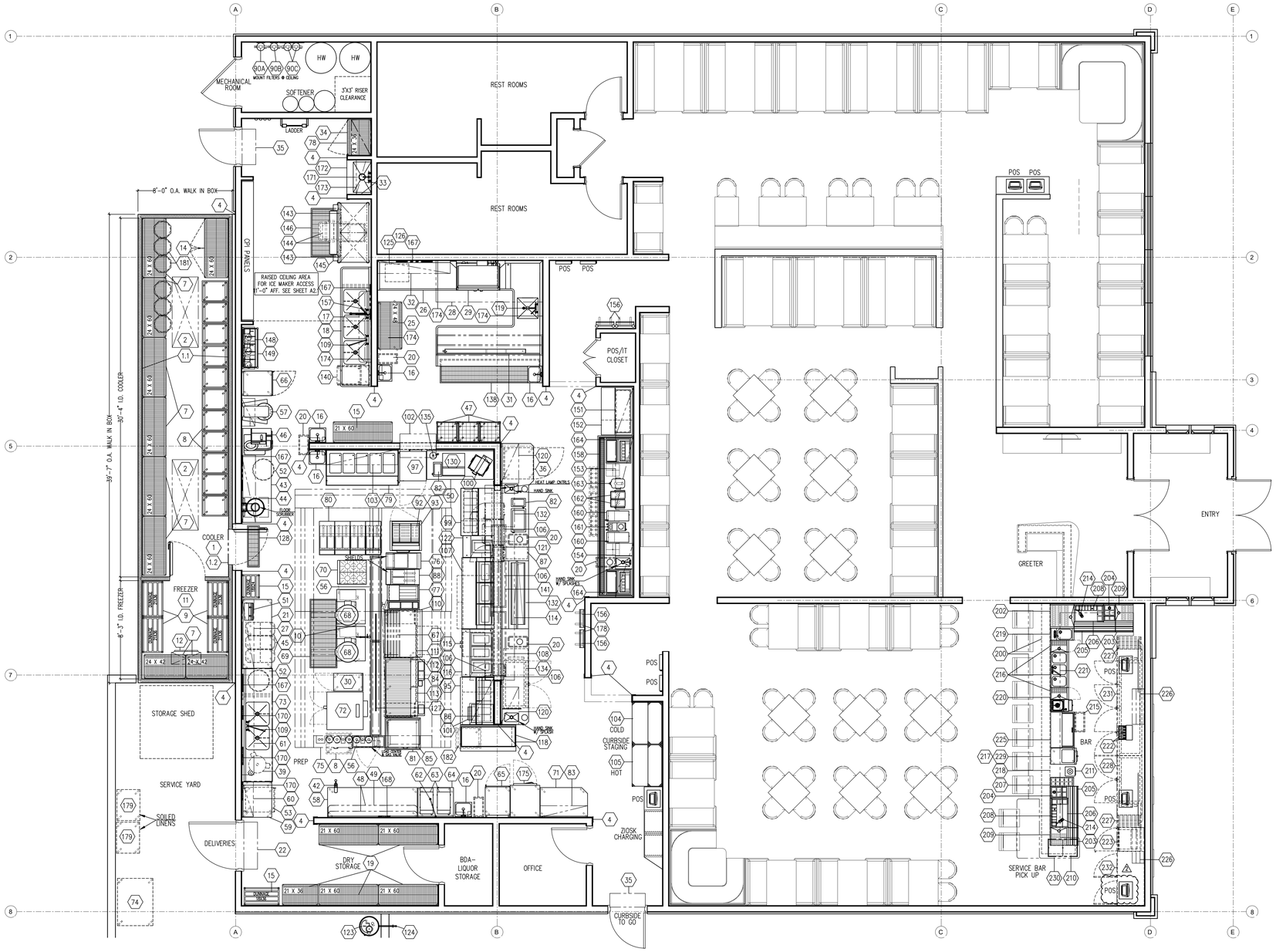
Drawing:
FRAMING DETAILS

S4.4



LOCATION OF OUTDOOR CONDENSING UNITS TO BE VERIFIED BY THE ARCHITECT.

LOCATION OF ROOF MOUNTED EXHAUST FANS, SUPPLY FANS AND DISH MACHINE CONDENSATE EXHAUST FAN AND REQUIRED SUPPLY TO BE DETERMINED BY THE ARCHITECT.



FOODSERVICE EQUIPMENT SCHEDULE		
ITEM	QTY.	DESCRIPTION
1	1	WALK-IN COOLER
1.1	15	ALUMINUM WALK-IN COVE BASE
1.2	1	WALK-IN STRIP CURTAIN
2	2	COOLER EVAPORATOR COIL
3	1	COOLER CONDENSING UNIT
4	LOT	CORNER GUARD/ END CAPS
5	-	OPEN NUMBER
6	-	OPEN NUMBER
7	LOT	WALK-IN SHELVING (4 POST)
8	LOT	MOBILE UTILITY RACK
9	LOT	WALK-IN DUNNAGE RACK
10	1	POT AND KETTLE FILLER
11	1	WALK-IN FREEZER
12	1	FREEZER EVAPORATOR COIL
13	1	FREEZER CONDENSING UNIT
14	1	SECURITY UNIT
15	2	DRY STORAGE DUNNAGE RACK
16	5	HAND SINK
17	1	WALL MOUNTED POT RACK
18	1	POT WASH SINK
19	LOT	DRY STORAGE SHELVING UNITS
20	LOT	TRASH CAN
21	1	WORK TABLE
22	1	48" AIR CURTAIN & MICROSWITCH
23	-	OPEN NUMBER
24	1	WALL SHELF
25	LOT	MOBILE CLEAN DISH SHELVING
26	1	CLEAN DISHTABLE
27	1	WALL SHELF
28	1	CONDENSATE HOOD
29	1	DISHMACHINE
30	1	SMOKER OVEN
31	1	SOILED DISHTABLE W/ OVERSHELF
32	1	WALL SHELF
33	1	MOP SINK STAINLESS FLASHING
34	1	SECURITY UNIT (CHEMICALS)
35	2	36" AIR CURTAIN WITH MICROSWITCH
36	1	UNDERCOUNTER FREEZER
37	1	WORK TABLE
38	-	OPEN NUMBER
39	1	LETTUCE DRYER
40	-	OPEN NUMBER
41	-	OPEN NUMBER
42	1	CAN OPENER
43	1	WORK TABLE
44	1	WALL SHELF
45	3	INGREDIENT BIN
46	1	SLICER
47	LOT	GLASS RACKS & CARTS
48	-	OPEN NUMBER
49	LOT	WALL SHELVES
50	1	WORK TABLE
51	1	FOOD SEALER
52	2	MOBILE CHILLER
53	1	HALF SIZE PROOFER
54	-	OPEN NUMBER
55	-	OPEN NUMBER
56	1	S/S COOK LINE CHASE WAY
57	1	30 QT. MIXER
58	1	MOBILE WORK TABLE
59	1	MOBILE WORK TABLE
60	1	WALL SHELF
61	1	WALL SHELF
62	1	POT FILLER FAUCET
63	2	COUNTERTOP RETHERMALIZER
64	1	WORK TABLE
65	1	FULL HT. HOT HOLDING CABINET
66	1	THAW BOX
67	1	TUBULAR GRIDDLE OVERSHELF
68	2	20 GALLON KETTLE
69	1	FLOOR THROUGH W/ GRATE
70	1	4 BURNER HOTPLATE ON STAND
71	1	WORK TABLE
72	1	DOUBLE CONVECTION OVEN
73	1	PREP TABLE WITH SINKS
74	1	FRYER OIL DISPOSAL BIN
75	LOT	EXHAUST HOOD W/ FIRE SUPPRESSION
76	1	PASTA COOKER
77	1	CRISP N HOLD ON STAND
78	1	WALL SHELF
79	1	REFRIGERATED BATTER STATION
80	1	4 FRYER BANK W/ BUILT-IN FILTRATION
81	1	TURBOCHEF OVEN STAND
82	2	HOT FOOD WELL
83	LOT	WALL SHELVES
84	1	60" CHAR BROILER
85	1	TURBO CHEF OVEN
86	1	WALL SHELF
87	1	COMPRESSOR FOR EXPO COLD WELLS
88	1	FRYER W/ BUILT-IN FILTRATION
89	-	OPEN NUMBER
90A	LOT	SOFTENED WATER FILTER FOR TEA BREWERS
90B	LOT	UNSOFTENED WATER FILTER SODA / COFFEE
90C	LOT	UNSOFTENED WATER FILTER FOR ICE MAKERS
91	-	OPEN NUMBER
92	1	CRISP N HOLD
93	1	UNDER COUNTER FREEZER
94	-	OPEN NUMBER
95	1	REFRIGERATED PREP TABLE
96	-	OPEN NUMBER
97	1	WORK TOP FREEZER
98	1	BACK BAR SUPPORT LEGS (NOT SHOWN)
99	1	SALAD PREP / PANTRY REFRIGERATOR
100	1	TORTILLA PRESS
101	1	CONTACT TOASTER
102	1	S/S PASS THRU SHELF
103	1	WALL SHELF
104	1	METRO STATIONCARRYOUT (COLD)
105	1	METRO STATION CARRYOUT (HOT)
106	3	MICROWAVE OVEN

FOODSERVICE EQUIPMENT SCHEDULE		
ITEM	QTY.	DESCRIPTION
107	1	REFRIGERATED PREP TABLE
108	1	66" DUAL MOUNTED HEAT LAMPS
109	2	FAUCET
110	1	CONDIMENT RAIL
111	1	48" GRIDDLE
112	1	48" REFRIGERATED EQUIPMENT STAND
113	1	60" REFRIGERATED EQUIPMENT STAND
114	1	DOUBLE PASS THRU SHELF
115	1	FREE STANDING WARMING DRAWER
116	1	3 WELL HOT FOOD TABLE
117	-	OPEN NUMBER
118	1	CROISSANT SERVER W/ STAND
119	1	PRE-RINSE FAUCET
120	2	WALL SHELF
121	1	THERMO FINISHER
122	1	1 WELL HOT FOOD TABLE
123	1	BULK STORAGE CO2 TANK
124	1	CO2 REMOTE FILL BOX
125	1	BOOSTER HEATER STAND
126	1	BOOSTER HEATER
127	1	GRILL STATION SPLASH SHIELD
128	1	FLOOR THROUGH W/ GRATE
129	-	OPEN NUMBER
130	1	NACHO CHIP WARMER
131	1	EXPO COUNTER W/ COLD WELLS
132	1	COUNTERTOP FOOD WARMER
133	-	OPEN NUMBER
134	1	UNDER COUNTER REFRIGERATOR
135	1	DIPPER WELL
136	-	OPEN NUMBER
137	-	OPEN NUMBER
138	1	FLOOR THROUGH W/ GRATE
139	-	OPEN NUMBER
140	1	UNDER COUNTER BUN PAN RACK
141	1	84" DUAL MOUNTED HEAT LAMPS
142	2	ICE MACHINE REMOTE CONDENSERS
143	2	ICE MACHINE
144	1	ICE BIN WITH MOBILE ICE CART
145	1	ICE SCOOP HOLDER
146	1	FLOOR THROUGH W/ GRATE
147	-	OPEN NUMBER
148	3	CARBONATORS
149	1	BAG IN BOX SYSTEM
150	-	OPEN NUMBER
151	1	WALL SHELF
152	1	SALAD PREP TABLE
153	1	BEVERAGE AREA WALL SHELF
154	1	BEVERAGE AREA WALL SHELF
155	-	OPEN NUMBER
156	2	S/S TRAY JACK HOLDER (WALL MOUNT)
157	1	PRE-RINSE W/ ADD ON FAUCET
158	1	BEVERAGE COUNTER W/ DUMP SINK
159	-	OPEN NUMBER
160	2	ICED TEA BREWER
161	1	COFFEE BREWER
162	2	LEMONADE DISPENSER
163	2	ICED TEA DISPENSER
164	2	SODA DISPENSER W/ BIN
165	2	18" PEPPER MILL SHELF (FLOOR MOUNT)
166	2	S/S TRAY JACK HOLDER (FLOOR MOUNT)
167	LOT	36" PEG HOOK RACK
168	LOT	12" PEG HOOK RACK
169	-	OPEN NUMBER
170	LOT	KNIFE RACK
171	1	MOP SINK FAUCET
172	1	MOP SINK
173	1	MOP SINK SHELF
174	LOT	STAINLESS WALL FLASHING
175	1	REACH - IN FREEZER
176	-	OPEN NUMBER
177	-	OPEN NUMBER
178	2	18" PEPPER MILL SHELF (WALL MOUNT)
179	-	OPEN NUMBER
180	-	OPEN NUMBER
181	6	BEER KEG DOLLIES
182	1	HALF HEIGHT MOBILE BREAD RACK
183	1	KDS POLE 72" FLOOR MNT. (NOT SHOWN)
184	2	KDS POLE 36" HOOD MNT. (NOT SHOWN)
185	2	CH BUMP BRACKET
186	1	CASH DRAWER HOLDER (NOT SHOWN)
187	3	PRINTER SHELF (NOT SHOWN)

BAR EQUIPMENT SCHEDULE		
ITEM	QTY.	DESCRIPTION
200	1	BAR TOP AND DIE WALL
201	-	OPEN NUMBER
202	1	CORNER DRAIN BOARD
203	2	18" DOUBLE SPEED RAIL
204	2	INSULATED BOTTLE WELL
205	2	42" DOUBLE SPEED RAIL
206	2	30" ICE BIN W/ COLD PLATE
207	1	LIQUOR DISPLAY
208	2	CONDIMENT TRAY
209	2	18" DRAIN BOARD
210	-	OPEN NUMBER
211	1	BAR BLENDER
212	-	OPEN NUMBER
213	-	OPEN NUMBER
214	2	36" SODA GUNS
215	LOT	TRASH CAN
216	1	BAR SINK WITH DRAINBOARD STORAGE
217	1	BEVERAGE MACHINE CART
218	1	BLENDER STATION
219	1	12" DUMP SINK
220	1	UNDERBAR HAND SINK
221	1	STAINLESS STEEL DRINK RAIL
222	1	BEER TOWER AND DRAINER
223	1	SINGLE DOOR REFRIGERATOR
224	-	OPEN NUMBER
225	1	36" GLASS FROSTER
226	2	LIQUOR BOTTLE DISPLAY
227	2	BACK BAR STEM WEAR CABINET
228	1	2 DOOR BACK REFRIGERATOR
229	1	FROZEN BEVERAGE MACHINE
230	1	SERVICE BAR PICK UP COUNTER
231	1	4 DOOR BACK REFRIGERATOR
232	1	SECURED LIQUOR CABINET

NOTE:
1. PROVIDE SHUT OFFS FOR EACH CARBONATOR (3).
2. ALL STORAGE SHELVING TO HAVE BOTTOM SHELF 12" AFF.

NOTE:
ALL WALK IN SHELVING UNITS ARE 5 TIER HIGH

ALL DRY STORAGE SHELVING UNITS ARE 5 TIER HIGH

idstudio4

6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
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PROJECT NUMBER:
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4564
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date:	01/23/23
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 2215

CHEDDAR'S SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

FOOD SERVICE FLOOR PLAN

FS-1

FOOD SERVICE EQUIPMENT SCHEDULE

					ELECTRICAL DATA					PLUMBING DATA									
ITEM NO.	QUANTITY	DESCRIPTION	MAKE	MODEL	VOLTS	PHASE	AMPS	DIRECT	CORD & PLUG	HOT WATER	COLD WATER	WASTE	DIRECT	INDIRECT	FLOOR SINK	FLOOR DRAIN	GAS	BTU	REMARKS
1	1	WALK-IN COOLER	KOLPAK	CUSTOM	120	1	20	X											REFER TO SHOPS
1.1	LOT	ALUMINUM WALK-IN COVE BASE	NEW AGE	9787C															
1.2	2	WALK-IN STRIP CURTAIN	CURTON	M108-PR-4080															
2	2	COOLER EVAPORATOR COIL	KOLPAK		120	1	1.6					1"		X					REFER TO SHOPS
3	1	COOLER CONDENSING UNIT	KOLPAK		208	3	16.6	X											REFER TO SHOPS
4	LOT	CORNER GUARD / END CAPS	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
5	-	OPEN NUMBER																	REFER TO SHOPS
6	-	OPEN NUMBER																	SIZES PER PLAN
7	LOT	WALK-IN STORAGE SHELVING	METRO (4 POST)	METROSEAL															
8	LOT	MOBILE UTILITY RACK	ADVANCE TABCO	PR20-3W-1X															
9	LOT	WALK-IN DUNNAGE RACK	METRO	DUNNAGE RACK															
10	1	POT AND KETTLE FILLER	T&S BRASS	B-0605						1/2"	1/2"								
11	1	WALK-IN FREEZER	KOLPAK	CUSTOM	120	1	20	X											REFER TO SHOPS
12	1	FREEZER EVAPORATOR COIL	KOLPAK		208	3	1.0					1"		X					REFER TO SHOPS
13	1	FREEZER CONDENSING UNIT	KOLPAK	SEC53K3	208	3	12.6	X											REFER TO SHOPS
14	1	SECURITY UNIT	METRO	METROSEAL															3 SHELVES
15	2	DRY STORAGE DUNNAGE RACK	METRO	DUNNAGE RACK															
16	5	HAND SINK	CUSTOM S/S	BY CUSTOM S/S FABRICATOR						1/2"	1/2"	1 1/2"	X						WITH SPLASHES
17	1	WALL MOUNTED POT RACK	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
18	1	POT WASH SINK	CUSTOM S/S	BY CUSTOM S/S FABRICATOR						(2)1/2"	(2)1/2"	2"		X					REFER TO SHOPS
19	LOT	DRY STORAGE SHELVING UNITS	METRO	SUPER ERECTA PRO															SIZES PER PLAN
20	LOT	TRASH CANS	RUBBERMAID	SLIM JIM															SMALLWARES
21	1	WORK TABLE	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
22	1	48" AIR CURTAIN & MICROSWITCH	MARS	N248-1U	120	1	10		X										CONNECT TO MICRO SWITCH
23	-	OPEN NUMBER																	REFER TO SHOPS
24	1	S/S WALL SHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
25	2	MOBILE CLEAN DISH SHELVING	METRO	SUPER ERECTA															W/ CASTERS SIZE PER PLAN
26	1	CLEAN DISHTABLE	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
27	1	WALL SHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
28	1	CONDENSATE HOOD	CAPTIVE AIRE	CUSTOM															REFER TO SHOPS
29	1	DISHMACHINE	ECOLAB	EC44HH	208	3	56	X		3/4"		2"		X					140° HOT WATER
30	1	SMOKER OVEN	ALTO-SHAAM	1000-SK-I	208	1	31		X										
31	1	SOILED DISHTABLE W/ OVERSHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR						1/2"	1/2"	2"		X					REFER TO SHOPS
32	1	WALL SHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
33	1	MOP SINK STAINLESS FLASHING	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
34	1	SECURITY UNIT (CHEMICALS)	METRO	METROSEAL															
35	2	36" AIR CURTAIN & MICROSWITCH	MARS	N236-1U	120	1	10		X										REFER TO SHOPS
36	1	WORK TOP FREEZER	DELFIELD	GUF32BP-S-EX	115	1	4.7												
37	-	OPEN NUMBER																	REFER TO SHOPS
38	-	OPEN NUMBER																	
39	1	LETTUCE DRYER	HOBART	SD-PS	120	1	2.5		X										
40	-	OPEN NUMBER																	
41	-	OPEN NUMBER																	
42	1	CAN OPENER	EDLUND	S-11															
43	1	WORK TABLE	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
44	1	WALL SHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
45	3	INGREDIENT BIN	RUBBERMAID	SMALLWARES															SMALLWARES
46	1	SLICER	GLOBE	3850N	120	1	7		X										
47	LOT	GLASS RACKS & CARTS		SMALLWARES															SMALLWARES
48	-	OPEN NUMBER																	
49	LOT	WALL SHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
50	1	WORK TABLE	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
51	1	FOOD SEALER	VACMASTER	BS116	120	1	8		X										
52	2	MOBILE CHILLER	PLASCON PACKAGING	MC-32	120	1	3.5		X										
53	1	HALF SIZE PROOFER	FWE	ETC-UA-4PH	120	1	20		X										
54	-	OPEN NUMBER																	
55	1	S/S CHEF COUNTER PASS SHELVES	CUSTOM S/S	BY CUSTOM S/S FABRICATOR	120/ 208	3	250	X											
56	1	S/S COOK LINE CHASE WAY	CUSTOM S/S	BY CUSTOM S/S FABRICATOR	120/ 208	3	250	X											
57	1	30 QT. MIXER	GLOBE	SP30	120	1	15		X										
58	1	MOBILE WORK TABLE	CUSTOM S/S	BY CUSTOM S/S FABRICATOR						1/2"	1/2"								REFER TO SHOPS
59	1	MOBILE WORK TABLE	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
60	1	WALL SHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
61	1	WALL SHELF		BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
62	1	POT FILLER FAUCET	T&S BRASS	B-0580						1/2"									
63	2	COUNTERTOP RETHERMALIZER	PITCO	CRTE	208	1	28.8EA		X			3/8"		X					
64	1	WORK TABLE	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
65	1	FULL HT. HOT HOLDING CABINET	ALTO-SHAAM	1200-UP	120	1	16		X										
66	1	THAW BOX	ELECTROLUX	727655	208	1	7.2		X										
67	1	TUBULAR GRIDDLE OVERSHELF	DELFIELD	PART OF #112 REF BASE															
68	2	20 GAL. ELECTRIC KETTLE	GROEN	DEE/4-20	208	3	30	X		1/2"	1/2"								W/ PANTRY FAUCET
69	1	FLOOR THROUGH W/ GRATE	CUSTOM S/S	BY CUSTOM S/S FABRICATOR								3"							
70	1	4 BURNER HOTPLATE ON STAND	VULCAN	VCRH24													3/4"	100M	
71	1	WORK TABLE	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															
72	1	DOUBLE CONVECTION OVEN	DFG-100-ES (DOUBLE)	BLODGETT	(2)115	1	5.0 EA.										(2)3/4"	45M EA.	
73	1	PREP TABLE WITH SINKS	CUSTOM S/S	BY CUSTOM S/S FABRICATOR						1/2"	1/2"	2"		X					
74	1	FRYER OIL DISPOSAL BIN		BY OWNER															
75	1	EXHAUST SYS. W/ FIRE SUPPRESSION	CAPTIVE AIRE	CUSTOM	120	1	20												REFER TO SHOPS
76	1	PASTA COOKER	PITCO	SSPG14	120	1	1.0				1/2"	2"		X			3/4"	60M	
76A	1	PASTA SPLASH GUARD	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
77	1	CRISP-N-HOLD ON STAND	CARTER HOFFMAN CUSTOM S/S	CNH14 BY CUSTOM S/S FABRICATOR	120	1	15												REFER TO SHOPS
78	1	WALL SHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
79	1	REFRIGERATED BATTER STATION	CUSTOM S/S	BY CUSTOM S/S FABRICATOR	120	1	10												REFER TO SHOPS
80	1	4 FRYER BANK W/ BUILT-IN FILTRATION	HENNY PENNY	EEG 244	120	1	12.2										1"	300M	
81	1	TURBOCHEF OVEN STAND	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
82	2	HOT FOOD WELL	APW	W-9	120	1	3.3												
83	LOT	WALL SHELVES	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															
84	1	60" CHARBROILER	VULCAN	VACB60													3/4"	198M	
85	1	TURBO CHEF OVEN	TURBO CHEF	HHD-9500-152-DL	208	1	50		X										
86	1	WALL SHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
87	1	COMPRESSOR FOR EXPO COLD WELLS	CUSTOM S/S	BY CUSTOM S/S FABRICATOR	120	1	5 EA.												REFER TO SHOPS
88	1	FRYER W/ BUILT-IN FILTRATION	HENNY PENNY	EEG241	120	1	24.4										3/4"	75M	
89	-	OPEN NUMBER																	

FOOD SERVICE EQUIPMENT SCHEDULE

					ELECTRICAL DATA					PLUMBING DATA									
ITEM NO.	QUANTITY	DESCRIPTION	MAKE	MODEL	VOLTS	PHASE	AMPS	DIRECT	CORD & PLUG	HOT WATER	COLD WATER	WASTE	DIRECT	INDIRECT	FLOOR SINK	FLOOR DRAIN	GAS	BTU	REMARKS
90A	LOT	SOFTENED WATER FILTER BANK FOR TEA BREWERS	ECO-LAB	BY ECO-LAB							1"								
90B	LOT	UNSOFTENED WATER FILTER BANK FOR SODA / COFFEE	ECO-LAB	BY ECO-LAB							1"								
90C	LOT	UNSOFTENED WATER FILTER FOR ICE MAKERS	ECO-LAB	BY ECO-LAB (2 INDIVIDUAL FILTERS)							(2) 1/2"								
91	-	OPEN NUMBER																	
92	1	CRISP-N-HOLD	CARTER HOFFMAN	CNH28	208	1	14		X										REFER TO SHOPS
93	1	UNDER COUNTER FREEZER	DELFIELD	GUF32P-S-EX	115	1	5.3		X										REFER TO SHOPS
94	-	OPEN NUMBER	-	-															W/ BRACKETS
95	1	REFRIGERATED PREP TABLE	DELFIELD	18648-PTBP	115	1	4.7												
96	-	OPEN NUMBER																	REFER TO SHOPS
97	1	WORK TOP FREEZER	DELFIELD	GUF27BP-S-EX	115	1	5.0		X										
98	6	S/S BACK BAR SUPPORT LEGS (NOT SHOWN)	CUSTOM S/S	BY CUSTOM S/S FABRICATOR					X										
99	1	SALAD PREP/PANTRY REFRIGERATOR	DELFIELD	18648PTBMP	115	1	6.5		X										
100	1	TORTILLA PRESS	GLOBE	GSG14D	120	1	15		X										
101	1	CONTACT TOASTER	STAR	HCTE 13M-208	208	1	13.5		X										
102	1	S/S PASS THRU SHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
103	1	WALL SHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
104	1	METRO CARRYOUT STATION (COLD)	METRO	CDR3048CS-C															
105	1	METRO CARRYOUT STATION (HOT)	METRO	CDR3048CS-H	120	1	10.0												REFER TO SHOPS
106	3	MICROWAVE OVEN	MENUMASTER	MDC212	208	1	15.3		X										
107	1	REFRIGERATED PREP TABLE	DELFIELD	18RC72P (W/BS72 & 21FP4)	115	1	6.5												40"X24" PASS THRU SHELF
108	1	66" DUAL MOUNTED HEAT STRIP	HATCO	GRAHL-66D3	120/ 208	1	17.5	X											INCLUDED IN ITEM 114
109	2	FAUCET	T&S BRASS	B-0231						1/2"	1/2"								
110	1	CONDIMENT RAIL	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
111	1	48" GRIDDLE	VULCAN	948 RX	120	1	1		X								3/4"	108M	
112	1	REFRIGERATED EQUIPMENT STAND	DELFIELD	17C47P	115	1	6.7 EA.		X										
113	1	REFRIGERATED EQUIPMENT STAND	DELFIELD	F2960CP	115	1	6.7 EA.		X										
114	1	DOUBLE PASS THRU SHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
115	1	FREE STANDING WARMING DRAWER	ALTO-SHAAM	500-1DN	120	1	5.3 EA		X										REFER TO SHOPS
116	1	3 WELL HOT FOOD TABLE	DELFIELD	EHEI48C	208	1	20	X											
117	-	OPEN NUMBER																	
118	1	CROISSANT SERVER W/ STAND	MARSHALL-AIR CUSTOM S/S	BV7B BY CUSTOM S/S FABRICATOR	208	1	11.9a		X										
119	1	PRE RINSE FAUCET	T&S BRASS	B-0133/ B-0109-01						1/2"	1/2"								
120	2	WALL SHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
121	1	THERMO FINISHER	HATCO	TFW-461R/1	208	1	16		X										
122	1	1 WELL HOT FOOD TABLE	DELFIELD	CUSTOM 22" UNIT	120	1	17	X	X										
123	1	BULK CO2 TANK	NuCo																
124	1	CO2 REMOTE FILL BOX	NuCo																
125	1	BOOSTER HEATER STAND	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
126	1	BOOSTER HEATER	HATCO	C30	208	3	83.3	X		3/4"									
127	-	OPEN NUMBER																	
128	1	FLOOR TROUGH W/ GRATE	CUSTOM S/S	BY CUSTOM S/S FABRICATOR								3"							
129	-	OPEN NUMBER																	
130	1	NACHO CHIP WARMER	CARTER HOFFMANN	CW2E	120	1	12.6		X										
131	1	EXPO COUNTER WITH COLD WELL	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
132	1	COUNTERTOP FOOD WARMER	APW	W3V	120	1	13.8		X										
133	-	OPEN NUMBER																	REFER TO SHOPS
134	1	UNDER COUNTER REFRIGERATOR	PERLICK	BBSLP60R	120	1	2.5												
135	1	DIPPER WELL	T&S BRASS	B-2282/00667845							1/2"	1"		X					
136	-	OPEN NUMBER																	
137	-	OPEN NUMBER																	REFER TO SHOPS
138	1	FLOOR TROUGH W/ GRATE	CUSTOM S/S	BY CUSTOM S/S FABRICATOR								3"							REFER TO SHOPS
139	-	OPEN NUMBER																	
140	1	UNDER COUNTER BUN PAN RACK		SMALLWARES															
141	1	84" DUAL MOUNTED HEAT LAMPS	HATCO	GRAHL-84D3	120/ 208	1	23.2	X											INCLUDED IN ITEM 114
142	2	ICE MACHINE REMOTE CONDENSERS	HOSHIZAKI	URC22F															POWER CONN. AT ICE CUBER
143	2	ICE MACHINE	HOSHIZAKI	KMS-1601MRH-3	208 120	3 1	8.4 EA. 3.0 EA.	X			(2) 1/2"	1/2"		X					FILTERED WATER
144	1	ICE BIN WITH MOBILE ICE CART	FOLLETT	DEV1650SG-60-ICS-125								2"		X					
145	2	ICE SCOOP HOLDERS	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
146	1	FLOOR TROUGH W/ GRATE	CUSTOM S/S	BY CUSTOM S/S FABRICATOR								3"							REFER TO SHOPS
147	-	OPEN NUMBER																	
148	3	CARBONATORS	COKE USA	VARIES	120	1	16 EA		X		1/2"								UNSOFTENED FILTERED WATER
149	1	BAG IN THE BOX SYSTEM	COKE USA	VARIES															
150	-	OPEN NUMBER																	
151	1	WALL SHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
152	1	SALAD PREP TABLE	DELFIELD	18648PTBMP	115	1	6.5		X										
153	1	BEVERAGE AREA WALL SHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
154	1	BEVERAGE AREA WALL SHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
155	-	OPEN NUMBER	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
156	2	S/S TRAY JACK HOLDER (WALL MTD)	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
157	1	PRE RINSE W/ ADD ON FAUCET	T&S BRASS	B-0133/ B0155-05						1/2"	1/2"								
158	1	BEVERAGE COUNTER W/ DUMP SINK	CUSTOM S/S	BY CUSTOM S/S FABRICATOR						1/2"	1/2"	1-1/2"							REFER TO SHOPS
159	-	OPEN NUMBER																	
160	2	ICED TEA BREWER	BUNN	35700-0002	120	1	14 EA		X		1/2"								SOFTENED FILTERED WATER
161	1	COFFEE BREWER	BUNN	AXIOM-DV-3	120	1	20		X		1/4"								UNSOFTENED FILTERED WATER
162	2	LEMONADE DISPENSER	CITRUS WORLD		120	1	15 EA		X										
163	2	ICED TEA DISPENSER	BUNN	34100															
164	2	SODA DISPENSER W/ BIN	COKE USA		120	1	15 EA		X			2"		X					
165	2	18" PEPPER MILL SHELF (FLOOR MTD)	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															
166	2	S/S TRAY JACK HOLDER (FLOOR MTD)	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															-
167	LOT	36" PEG HOOK RACK		SMALLWARES															REFER TO SHOPS
168	LOT	12" PEG HOOK RACK		SMALLWARES															REFER TO SHOPS
169	-	OPEN NUMBER	-	-															
170	LOT	KNIFE RACK		SMALLWARES															REFER TO SHOPS
171	1	MOP SINK FAUCET	-	PROVIDED BY G.C.															
172	1	MOP SINK	-	PROVIDED BY G.C.															
173	1	MOP SINK SHELF	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															
174	LOT	STAINLESS WALL FLASHING	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
175	1	REACH IN FREEZER	TRAULSEN	G12000	120	1	11.3		X										

FOOD SERVICE EQUIPMENT SCHEDULE

					ELECTRICAL DATA					PLUMBING DATA									
ITEM NO.	QUANTITY	DESCRIPTION	MAKE	MODEL	VOLTS	PHASE	AMPS	DIRECT	CORD & PLUG	HOT WATER	COLD WATER	WASTE	DIRECT	INDIRECT	FLOOR SINK	FLOOR DRAIN	GAS	BTU	REMARKS
176	-	OPEN NUMBER	-	-															REFER TO SHOPS
177	-	OPEN NUMBER	-	-															
178	2	18" PEPPER MILL SHELF (WALL MTD)	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															REFER TO SHOPS
179	-	OPEN NUMBER	-	-															
180	-	OPEN NUMBER	-	-															
181	6	BEER KEG DOLLIES	CHANNEL	KDA17															REFER TO SHOPS
182	1	HALF HEIGHT MOBILE BREAD RACK	ALEXANDER	WAREHOUSE															
183	2	KDS POLE 72" FL. MNT. (NOT SHOWN)	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															-
184	2	KDS POLE 36" HD. MNT. (NOT SHOWN)	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															-
185	2	CH BUMP BRACKET	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															NOT SHOWN ON PLAN
186	1	CASH DRAWER HOLDER (NOT SHOWN)	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															-
187	3	PRINTER SHELF (NOT SHOWN)	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															-

BAR EQUIPMENT

200	1	BAR TOP AND DIE WALL	CUSTOM MILLWORK	CUSTOM															
201	-	OPEN NUMBER																	
202	1	CORNER DRAIN BOARD	PERLICK	CUSTOM								1/2"		X					REFER TO SHOPS
203	2	18" DOUBLE SPEED RAIL	PERLICK	SR-D12A															
204	2	INSULATED BOTTLE WELL	PERLICK	TS12U W/4" BACK SPLASH								1/2"		X					
205	2	42" DOUBLE SPEED RAIL	PERLICK	SR-D42A															
206	2	30" ICE BIN W/ COLD PLATE	PERLICK	TSC301C10 W/4" BACKSPLASH								1/2"		X					
207	1	LIQUOR DISPLAY	PERLICK	TSCE8SSR								1/2"		X					
208	2	CONDIMENT TRAY	PERLICK	CC7															
209	2	18" DRAINBOARD	PERLICK	TS18 W/4" BACKSPLASH															
210	-	OPEN NUMBER																	
211	1	BAR BLENDER	VITAMIX	34013	120	1	11.5		X										
212	-	OPEN NUMBER	-	-															
213	-	OPEN NUMBER	-	-															REFER TO SHOPS
214	2	36" SODA GUN	COKE USA																
215	LOT	TRASH CANS	RUBBERMAID	SLIM JIM															SMALLWARES
216	1	BAR SINK WITH DRAINBOARDS	PERLICK	TS33C W/BS & (2EA) SC12-18						1/2"	1/2"	1/2"		X					WITH DOORS
217	1	BEVERAGE MACHINE CART	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															
218	1	BLENDER STATION	PERLICK	TS12BLD W/4" BACKSPLASH															
219	1	12" DUMP SINK	PERLICK	TSD12HS						1/2"	1/2"	1 1/2"		X					
220	1	UNDERBAR HAND SINK	PERLICK	TS12HSN						1/2"	1/2"	1 1/2"		X					
221	1	STAINLESS STEEL DRINK RAIL	CUSTOM S/S	BY CUSTOM S/S FABRICATOR															
222	1	BEER TOWER AND DRAINER	PERLICK	5 TAP "TEE" TOWER								1/2"							
223	1	SINGLE DOOR REFRIGERATOR	PERLICK	HC24RS4	115	1	3		X										
224	-	OPEN NUMBER	PERLICK																
225	1	36" GLASS FROSTER	PERLICK	FR36RT-3	115	1	4 EA		X										
226	2	LIQUOR BOTTLE DISPLAY	CUSTOM MILLWORK	BY MILLWORK CONTRACTOR	120	1	2		X										REFER TO SHOPS
227	2	BACK BAR STEM WEAR CABINET	CUSTOM MILLWORK	BY MILLWORK CONTRACTOR															REFER TO SHOPS
228	1	2 DOOR BACK BAR REFRIGERATOR	PERLICK	BBS60	120	1	4.2		X										
229	1	FROZEN BEVERAGE MACHINE	FROSTY FACTORY	232W	208	1	15.0		X		1/2"	3/4"		X					
230	1	SERVICE BAR PICK UP COUNTER	CUSTOM S/S	BY CUSTOM S/S FABRICATOR								1/2"							REFER TO SHOPS
231	1	4 DOOR BACK BAR REFRIGERATOR	PERLICK	BBS108	120	1	9.0		X										
232	1	SECURED LIQUOR CABINET	CUSTOM MILLWORK																REFER TO SHOPS

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PROJECT NUMBER:
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4564
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date: 01/23/23

REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 2215

CHEDDAR'S
SCRATCH KITCHEN
PROTO 18

10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

FOOD SERVICE
EQUIPMENT
SCHEDULE

FS-2.1

GENERAL CONTRACTOR REQUIREMENTS (DIVISIONS 3, 6, 7 & 9)

1. THE GENERAL CONTRACTOR AND/OR SUBDIVISIONS SHALL FURNISH AND INSTALL WALL BLOCKING WHERE WALLS REQUIRE REINFORCEMENT. LENGTHS OF WALL BLOCKING ARE NOMINAL; ALWAYS EXTEND TO THE NEXT STUD IN EACH DIRECTION.
2. GENERAL CONTRACTOR AND/OR SUBDIVISIONS TO PROVIDE REINFORCEMENT ABOVE FINISHED CEILING FOR HANGING OF SECTION 114000 FURNISHED EQUIPMENT. COORDINATE EXACT SIZE AND REQUIREMENTS WITH SECTION 114000.
3. GENERAL CONTRACTOR AND/OR SUBDIVISIONS SHALL FURNISH ANY AND ALL FIRE-RESISTANT RATED SHAFTS (IF REQUIRED) FOR EXHAUST HOOD DUCTS IN ACCORDANCE WITH ALL BUILDING CODES.

GENERAL FOODSERVICE AND HEALTH CODE REQUIREMENTS

1. ALL FOODSERVICE EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE CURRENT EDITION OF CODES, RULES AND REGULATIONS OF THE GOVERNING HEALTH DEPARTMENT AUTHORITIES AND BE MANUFACTURED IN STRICT COMPLIANCE WITH AND, IF APPLICABLE, BEAR THE SEAL OF UL, NEMA, ASME, NSF, ETL, AGA, OSHA AND NFPA.
2. CEILING AND WALL SURFACES ADJACENT TO OR ABOVE ANY FOOD PREPARATION AREA, INCLUDING KITCHEN, DISHWASHING AND SERVING AREAS, ETC., SHALL BE SMOOTH, EASILY CLEANABLE AND LIGHT IN COLOR. ANY MATERIALS NOT CLEARLY CONSISTENT WITH THIS REQUIREMENT SHOULD BE SUBMITTED TO THE LOCAL HEALTH JURISDICTION FOR PRIOR APPROVAL OF USE. LAY IN CEILING TILE MUST BE NON-POROUS AND NON-FISSURED PANELS ONLY. A CORROSION RESISTANT SUSPENSION SYSTEM IS RECOMMENDED.
3. CONSTRUCT PARTITION WALLS BETWEEN KITCHEN AREAS AND PUBLIC AREAS FOR MAXIMUM SOUND CONTROL IF APPLICABLE.
4. FLOORS IN FOOD PREPARATION, FOOD STORAGE, UTENSIL WASHING AND JANITORIAL AREAS SHALL MEET HEALTH DEPARTMENT REQUIREMENTS AND SHALL HAVE COVED BASE.
5. THERE SHALL BE A MINIMUM 50 FOOT-CANDLES OF LIGHT ON ALL WORKING SURFACES AND EQUIPMENT IN FOOD PREPARATION AND UTENSIL WASHING AREAS; INCLUDING WORK SURFACES OF EQUIPMENT LOCATED UNDER EXHAUST HOODS. WALK-IN COOLER/FREEZERS AND DRY STORAGE ROOMS TO HAVE A MINIMUM OF 20 FOOT CANDLE POWER.
6. LAMP GUARDS OR SLEEVES, SOLID PLASTIC LENSES OR APPROVED COATED BULBS SHALL BE USED ON ALL LIGHTING IN EQUIPMENT OR OVER FOOD CONTACT AREAS.
7. BACKSPLASHES WHEN SEALED ON EQUIPMENT SHALL BE SEALED TO WALLS WITH SILICONE SEALANT IN A NEAT WORKMANLIKE MANNER. SEALANT MUST BE APPROVED BY THE NATIONAL SANITATION FOUNDATION (NSF).
8. SPACE BETWEEN ALL EQUIPMENT AND WALL, CEILING, FLOORS AND ADJOINING UNITS NOT PORTABLE AND HAVING ENCLOSED BODIES SHALL BE COMPLETELY SEALED AGAINST ENTRANCE OF FOOD PARTICLES OR VERMIN BY MEANS OF SILICONE SEALANT OR TRIM STRIPS.
9. EQUIPMENT PLACED ON TABLES AND COUNTERS SHALL BE READILY MOVABLE, COMPLETELY SEALED TO WORK SURFACE, OR MOUNTED ON LEGS NO LESS THAN 4 INCHES IN HEIGHT IF EQUIPMENT WEIGHS MORE THAN 75 POUNDS.
10. ALL FLOOR MOUNTED EQUIPMENT SHALL BE INSTALLED ON EITHER A MINIMUM OF 6 INCH HIGH STAINLESS STEEL LEGS WITH ADJUSTABLE SANITARY FEET, MOUNTED ON CASTERS, OR RESTING ON 6 INCH HIGH RAISED CURBS.
11. DISHWASHERS OR CHEMICAL SANITIZING MACHINE SHALL BE DESIGNED WITH A HIGH TEMPERATURE FINAL RINSE OF 180°F AND WASH CYCLE TEMPERATURES OF 160°F.
12. ALL REFRIGERATION EQUIPMENT SHALL HAVE THERMOMETERS WHICH ARE EASILY READABLE, IN PROPER WORKING CONDITION, AND ACCURATE WITHIN A RANGE OF PLUS OR MINUS 2°.
13. VACUUM BREAKERS, WHEN REQUIRED, SHALL BE A MINIMUM OF 6 INCHES ABOVE THE FLOOD LEVEL RIM WITH NO SHUT OFF DEVICES BEYOND THE DISCHARGE OF THE VACUUM BREAKER.
14. HANDWASHING FACILITIES ARE REQUIRED FOR FOOD PREPARATION, COOKING, SERVING AND UTENSIL WASHING AREAS AND WILL BE SHOWN ON THE FOODSERVICE EQUIPMENT PLANS.
15. NEW EXHAUST HOODS SHALL BE CONSTRUCTED TO MEET THE LOCAL BUILDING CODES AND MEET THE FOLLOWING STANDARDS: NSF, UL AND NFPA-96. NEW HOODS ARE TO BEAR UL CLASSIFIED LABEL WITHOUT DAMPERS IN EXHAUST VENT COLLARS. HOODS SHALL BE DESIGNED WITH A MINIMUM OF 6 INCH OVERHANG AT ALL EXPOSED COOKING AREAS.
16. THE EXHAUST HOODS AND EXHAUST DUCT SYSTEMS SHALL BE PROVIDED WITH AN AUTOMATIC FIRE EXTINGUISHING SYSTEM. THE FIRE SUPPRESSION SYSTEM SHALL BE ENGINEERED, SIZED AND INSTALLED IN ACCORDANCE WITH UL 300, NFPA AND BUILDING CODES.

GENERAL NOTES

ALL ELECTRICAL AND MECHANICAL OUTLET STUB-OUT HEIGHTS ARE GIVEN FROM FINISHED FLOOR TO CENTER LINE OF OUTLET. (EXAMPLE: 1/2" C/W/ +2") ALL OUTLETS NOTED AS "STUB-UP" TO BE BROUGHT ABOVE FINISHED FLOOR AT LOCATION SHOWN. CONTRACTOR TO VERIFY ALL DIMENSIONS AT JOB SITE.

ALL HORIZONTAL DIMENSIONS SHOWN ARE TAKEN FROM FINISHED WALL TO CENTER LINE OF OUTLET OR FROM CENTER OF OUTLET TO CENTER LINE OF OUTLET, UNLESS OTHERWISE NOTED ON PLANS OR DETAILED.

CONTRACTOR SHALL PROVIDE AND INSTALL SUITABLE BLOCKING OR BACKING IN WALLS AND CEILINGS TO SUPPORT FIXTURES, EQUIPMENT AND CANOPIES.

CONTRACTOR TO CUT OR PROVIDE HOLES THROUGH CEILINGS, ROOFS AND WALL FOR DUCTS, ETC. IN ACCORDANCE WITH LOCAL BUILDING CODES AND IN ACCORDANCE WITH DUCT SIZES SPECIFIED.

THE PLANS PROVIDED ARE FOR THE SOLE PURPOSE OF INDICATING OUTLET LOCATIONS & EQUIPMENT REQUIREMENTS. THE PLANS DO NOT RELIEVE THE GENERAL CONTRACTOR & SUB-CONTRACTOR OF THE RESPONSIBILITY OF COMPLYING WITH APPLICABLE CODES.

LAST DATED REVISIONS VOID ALL PREVIOUS DRAWINGS.

PLUMBING GENERAL REQUIREMENTS (DIVISION 22)

1. FOODSERVICE DRAWINGS INDICATE PLUMBING ROUGH-IN/CONNECTIONS POINTS FOR EQUIPMENT SPECIFIED UNDER THE KITCHEN EQUIPMENT (SECTION 114000) CONTRACT. ADDITIONAL PLUMBING REQUIREMENTS ARE NOT INDICATED ON FOODSERVICE DRAWINGS.
2. ROUGH-INS, PIPING, AND FINAL CONNECTIONS TO ALL FOODSERVICE EQUIPMENT SHALL BE COMPLETED BY PLUMBING CONTRACTOR (DIVISION 22).
3. FLOOR DRAINS ARE INDICATED FOR KITCHEN EQUIPMENT. ADDITIONAL DRAINS MAY BE REQUIRED UNDER DIVISION 22.
4. PLUMBING CONTRACTOR (DIVISION 22) SHALL SUPPORT ALL SUPPLY AND DRAIN LINES TIGHT AGAINST UNDERSIDE OF EQUIPMENT TO ALLOW SPACE FOR CLEANING.
5. ALL DIMENSIONS ARE SHOWN FROM FINISHED FLOORS, FINISHED WALLS, AND/OR COLUMN CENTERLINES TO CENTER OF ROUGH-IN.
6. KITCHEN EQUIPMENT CONTRACTOR (SECTION 114000) SHALL FURNISH ALL FAUCETS, BASKET WASTES, TWIST/LEVER WASTES, GAS HOSES, & SAFETY REGULATORS AS SPECIFIED. PLUMBING CONTRACTOR (DIVISION 22) SHALL INSTALL ALL FAUCETS, BASKET WASTES, TWIST/LEVER WASTES, GAS HOSES, & SAFETY REGULATORS WITH THE NECESSARY COMPONENTS AND SUPPLY NIPPLES TO MAKE FINAL CONNECTIONS; INCLUDING THE INSTALLATION OF COMPONENTS NOT SHOWN OR SHIPPED LOOSE.
7. ALL PLUMBING LINES TO BE CONCEALED WITHIN WALLS, CEILINGS, AND FLOORS WHERE POSSIBLE.

PLUMBING NOTES (DIVISION 22)

1. INSTALL KEC (SECTION 114000) FURNISHED FAUCET(S).
2. INSTALL KEC (SECTION 114000) FURNISHED TWIST WASTE/LEVER(S).
3. INSTALL KEC (SECTION 114000) FURNISHED QUICK DISCONNECT(S) & RESTRAINING DEVICE(S) PER MANUFACTURER'S RECOMMENDATIONS.
4. INSTALL KEC (SECTION 114000) FURNISHED FLOOR TROUGH(S).
5. EXTEND AND/OR CONNECT DRAIN(S).
6. MANIFOLD DRAINS TO SINGLE CONNECTION.
7. FURNISH AND INSTALL BALL VALVE IN DRAIN LINE. VALVE TO BE IN EASILY ACCESSIBLE LOCATION.
8. INSTALL KEC (SECTION 114000) FURNISHED WATER FILTER. PIPING FROM FILTER OUTLET TO POINTS OF USE SHALL BE CONCEALED WITHIN WALLS AND CEILINGS. EXTEND DRAIN(S) TO FLOOR SINK/FLOOR DRAIN.
9. INSTALL KEC (SECTION 114000) FURNISHED SOLENOID VALVE(S), VACUUM BREAKER(S), FLOW CONTROL(S), PRESSURE REGULATOR(S), AND WATER INLET(S).
10. CONNECT 180°F HOT WATER SUPPLY FROM BOOSTER HEATER OUTLET TO DISHWASHER INLET. INSTALL TEMPERATURE/PRESSURE GAUGE(S) AND PRESSURE REGULATOR. CONNECT BOOSTER HEATER DRAIN(S) IN HARD COPPER TO FLOOR SINK/FLOOR DRAIN.
11. INSTALL KEC (SECTION 114000) FURNISHED DRAIN LINE TEMPERING KIT PER MANUFACTURER'S RECOMMENDATIONS.
12. CONNECT DRAIN(S) WITH REFRIGERATION GRADE HARD COPPER USING 1" STANDOFFS. "P" TRAP DRAIN OUTSIDE WALK-IN COMPARTMENT(S). PROVIDE AND INSTALL SLEEVES THRU WALK-IN AND BUILDING WALLS FOR DRAIN LINE(S). FOAM & CAULK AROUND SLEEVES AND DRAIN LINES. WRAP WITH DRAIN LINE HEATER AND INSULATION WHERE SUBJECT TO FREEZING TEMPERATURES.
13. INSTALL KEC (SECTION 114000) FURNISHED HOSE REEL, MIXING VALVE, CHROME FITTINGS, VACUUM BREAKER, AND CONTROL VALVE.
14. INSTALL KEC (SECTION 114000) FURNISHED FIRE SUPPRESSION SYSTEM GAS SHUT OFF VALVE. MUST BE ACCESSIBLE AND NOT CONCEALED IN WALL OR CEILING.
15. PROVIDE GRAY WATER AND SLURRY PIPING TO AND FROM (SECTION 114000) FURNISHED PULPER, TROUGH, AND WATER EXTRACTOR. INSTALL KEC (SECTION 114000) FURNISHED TROUGH INLET NOZZLES AND PROVIDE SHUT OFF VALVE AT EACH NOZZLE.
16. VERIFY UTILITIES FOR EXISTING & NIC EQUIPMENT.

PLUMBING NOTES

CONTRACTOR TO VERIFY RUNNING OF LINES OR DRAINS THROUGH FIXTURES SO AS NOT TO BLOCK SCRAP CAN OR STORAGE SPACE

CONTRACTOR TO PROVIDE REQUIRED PRESSURE REGULATING VALVES FOR HOT WATER LINE TO DISHWASHER RINSE CONNECTION AND ALL OTHER EQUIPMENT REQUIRING PRESSURE REGULATORS.

SEE PLUMBING SPECIFICATIONS AND PLANS FOR FURTHER INFORMATION.

CONTRACTOR TO PROVIDE ALL INDIRECT DRAINS FROM EQUIPMENT TO FLOOR SINKS.

BAR EQUIPMENT INDIRECT DRAINS TO BE MANIFOLDED AND RUN TO FLOOR SINK TO REDUCE CONGESTION AT THE FLOOR SINKS WHERE ALLOWABLE BY LOCAL CODES.

ELECTRICAL GENRAL REQUIREMENTS (DIVISION 26)

1. FOODSERVICE DRAWINGS INDICATE ELECTRICAL ROUGH-IN/CONNECTIONS POINTS FOR EQUIPMENT SPECIFIED UNDER THE KITCHEN EQUIPMENT (SECTION 114000) OF THE CONTRACT. ADDITIONAL ELECTRICAL REQUIREMENTS ARE NOT INDICATED ON FOODSERVICE DRAWINGS.
2. ROUGH-INS, INTERWRING, AND FINAL CONNECTIONS TO ALL FOODSERVICE EQUIPMENT SHALL BE COMPLETED BY ELECTRICAL CONTRACTOR (DIVISION 26).
3. PROVIDE DEDICATED CIRCUITS FOR FOODSERVICE EQUIPMENT AS REQUIRED.
4. ALL DIMENSIONS ARE SHOWN FROM FINISHED FLOORS, FINISHED WALLS, AND/OR COLUMN CENTERLINES TO CENTER OF ROUGH-IN.
5. ELECTRICAL CONTRACTOR (DIVISION 26) SHALL FURNISH AND INSTALL ALL NECESSARY COMPONENTS TO MAKE FINAL CONNECTIONS; INCLUDING THE INSTALLATION OF COMPONENTS NOT SHOWN OR SHIPPED LOOSE.
6. ALL ELECTRICAL CONDUIT TO BE CONCEALED WITHIN WALLS, CEILINGS, AND FLOORS WHERE POSSIBLE.
7. ELECTRICAL CONTRACTOR (DIVSION 26) TO PROVIDE GFCI RECEPTACLES WHERE REQUIRED.

ELECTRICAL NOTES (DIVISION 26)

1. FURNISH AND INSTALL CORD AND PLUG SET(S).
2. INSTALL KEC (SECTION 114000) FURNISHED CORD AND PLUG SET(S).
3. FURNISH AND INSTALL DEVICE & COVER IN KEC (SECTION 114000) FURNISHED JUNCTION BOX.
4. CONNECT TO JUNCTION BOX, DEVICE, & COVER FURNISHED BY KEC (SECTION 114000).
5. CONNECT WITH LIQUID TIGHT CONDUIT FROM JUNCTION BOX TO EQUIPMENT/DEVICES.
6. CONNECT WITH LIQUID TIGHT CONDUIT THRU CONTROL TO EQUIPMENT.
7. CONNECT THRU DISPOSER CONTROL TO SOLENOID VALVE AND MOTOR.
8. FURNISH AND INSTALL WIRING TO KEC (SECTION 114000) FURNISHED REMOTE CONTROL SWITCHES.
9. FURNISH AND INSTALL SWITCH. CONNECT TO LIGHTS FURNISHED AND INSTALLED BY KEC (SECTION 114000).
10. CONNECT POWER SUPPLY TO KEC (SECTION 114000) FURNISHED LOAD CENTER. COUNTER SHALL BE PREWIRED AND SHIPPED IN SECTIONS. CONNECT BETWEEN SECTIONS.
11. CONNECT TO KEC (SECTION 114000) FURNISHED JUNCTION BOX ABOVE WALK-IN DOOR. LIGHT FIXTURE LOCATED ADJACENT/ABOVE DOOR IS PREWIRED TO FACTORY MOUNTED LIGHT SWITCH. MOUNT ADDITIONAL SECTION 114000 FURNISHED LIGHTS WHERE INDICATED AND CONNECT TO SWITCH. ALL CONDUIT SHALL BE EXPOSED ON TOP OF THE WALK-IN. NO EXPOSED CONDUIT WILL BE ALLOWED INSIDE THE WALK-IN.
12. FOAM & SEAL INSIDE AND OUTSIDE OF CONDUIT PENETRATIONS THRU WALK-IN.
13. CONNECT KEC (SECTION 114000) FURNISHED TEMPERATURE ALARM SYSTEM. COORDINATE WITH BUILDING SYSTEMS.
14. CONNECT TO KEC (SECTION 114000) FURNISHED FUSED DISCONNECT AT CONDENSING UNIT.
15. INSTALL KEC (SECTION 114000) FURNISHED DEFROST TIMER. CONNECT THRU TIMER TO EVAPORATOR COIL.
16. CONNECT FROM KEC (SECTION 114000) FURNISHED CONDENSING UNIT, THRU DEFROST TIMER, TO EVAPORATOR COIL.
17. PROVIDE NEMA RECEPTACLE WITH WEATHER COVER BEHIND FREEZER EVAPORATOR COIL FOR DRAIN LINE HEATER.
18. CONNECT EXHAUST FAN THRU FAN CONTROL CONTACTS IN DISHWASHER.
19. CONNECT TABLE LIMIT SWITCH TO DRY CONTACT ON KEC (SECTION 11400) FURNISHED DISHMACHINE.
20. CONNECT DRAIN WATER TEMPERING DEVICE PER MANUFACTURER'S RECOMMENDATIONS.
21. CONNECT THRU KEC (SECTION 114000) FURNISHED LIGHT SWITCH MOUNTED IN FACE OF HOOD OR HOOD CONTROL CABINET TO LIGHT FIXTURES IN HOOD(S). INTERWIRE LIGHT FIXTURES BETWEEN HOOD SECTONS AS REQUIRED.
22. CONNECT THRU KEC (SECTION 114000) FURNISHED FAN CONTROL SWITCH MOUNTED IN FACE OF HOOD OR HOOD CONTROL CABINET TO EXHAUST FAN(S)/MAKE-UP AIR UNIT(S). INTERWIRE THRU MOTOR STARTER(S)/VARIABLE FREQUENCY DRIVE(S) AND OVERLOAD PROTECTION DEVICE(S) AS REQUIRED.
23. CONNECT 120 VOLT FROM KEC (SECTION 114000) FURNISHED MICROSWITCH IN FIRE SUPPRESSION SYSTEM CONTROL PANEL TO SHUNT TRIP BREAKER(S) FOR SHUT DOWN OF POWER TO ALL ELECTRICAL DEVICES UNDER HOOD(S) AND 18" OUTSIDE PERIMETER OF HOOD(S). CONNECT FROM MICROSWITCH TO DIVISION 26 FURNISHED RELAY(S) OR SWITCHES FOR SHUT DOWN/CONTROL OF HOOD LIGHTS, MAKE-UP AIR FAN, AND FIRE ALARM SYSTEM.
24. CONNECT 120 VOLT FROM KEC (SECTION 114000) FURNISHED MICROSWITCH IN FIRE SUPPRESSION SYSTEM CONTROL PANEL THRU MANUAL RESET RELAY TO ELECTRIC GAS VALVE.
25. PROVIDE CONCEALED CONDUIT AND RECESSED OCTAGONAL JUNCTION BOX IN WALL AT 42"-48" AFF FOR REMOTE MANUAL PULL STATION(S). COORDINATE LOCATION(S) WITH FIRE SUPPRESSION SYSTEM CONTRACTOR AND AUTHORITIES HAVING JURISDICTION PRIOR TO ROUGH-IN.
26. VERIFY UTILITIES FOR EXISTING/NIC EQUIPMENT.
27. INSTALL 3/4" EMPTY CONDUIT AND JUNCTION BOX FOR DATA CONNECTION. VERIFY EXACT REQUIREMENTS AND TERMINATION POINTS PRIOR TO ROUGH-IN.
28. VERIFY AND PROVIDE UTILITIES FOR EXISTING/NIC EQUIPMENT PRIOR TO ROUGH-IN.

ELECTRICAL NOTES

ALL ELECTRICAL OUTLETS AND CONNECTIONS SHOWN ON THESE PLANS ARE FOR FIXTURES AND EQUIPMENT AS SHOWN ON EQUIPMENT PLAN ONLY. SEE ELECTRICAL PLANS FOR FURTHER BUILDING ELECTRICAL REQUIREMENTS.

SEE ELECTRICAL SPECIFICATIONS AND PLANS FOR FURTHER INFORMATION.

ALL CONDUIT TO BE RUN ABOVE WALK-IN COOLERS WITH PENETRATIONS INTO COOLERS SEALED. P.V.C. CONDUIT TO BE USED TO REDUCE THERMAL CONDUCTION.

WALL MOUNTED SWITCHES, OUTLETS, AND JUNCTION BOXES TO BE FLUSH MOUNTED. UNLESS OTHERWISE NOTED. CORD & PLUG FURNISHED W/UNIT UNLESS NOTED BY E.C.

E.C. TO SUPPLY C&P FOR ITEMS # 49, 51, 67, 75, AND OTHER EQUIPMENT AS NOTED.

NOTE: ALL EQUIPMENT SUPPLIED WITH CORD AND CAPS TO BE PROVIDED WITH SPRING HOLDERS TO PREVENT CORDS FROM CONTACT WITH FLOOR

WALK-IN & ICE MACHINE REFRIGERATION GENERAL REQUIREMENTS

1. SEE WALK-IN DETAILS ON SHEET FS3.9.
2. REFRIGERATION CONTRACTOR UNDER KEC (SECTION 114000) SHALL CONNECT DRAIN(S) WITH REFRIGERATION GRADE HARD COPPER USING 1"STANDOFFS. "P" TRAP DRAIN OUTSIDE WALK-IN COMPARTMENT(S). PROVIDE AND INSTALL SLEEVES THRU WALK-IN AND BUILDING WALLS FOR DRAIN LINE(S). FOAM & CAULK AROUND SLEEVES AND DRAIN LINES. WRAP WITH DRAIN LINE HEATER AND INSULATION WHERE SUBJECT TO FREEZING TEMPERATURES.
3. OVERALL HEIGHT OF WALK-IN SHALL BE APPROX. 9' - 0" AFF FROM FINISHED FLOOR TO TOP OF WALK-IN.
4. KEC (SECTION 114000) SHALL FURNISH AND INSTALL METAL CLOSURE PANELS & TRIM TO MATCH WALK-IN FACING WHERE WALK-IN ABUTS BUILDING WALLS AND CEILING. REFER TO DETAIL ON SHEET QF700.
5. BUILDING FLOOR UNDER WALK-IN MUST BE LEVEL WITHIN PLUS OR MINUS 1/8".
6. GENERAL CONTRACTOR AND/OR SUBDIVISIONS SHALL FURNISH AND INSTALL ROOF PAD FOR KEC (SECTION 114000) FURNISHED REFRIGERATION RACK.
7. GENERAL CONTRACTOR AND/OR SUBDIVISIONS SHALL FURNISH AND INSTALL CONCRETE PAD FOR KEC (SECTION 114000) FURNISHED REFRIGERATION RACK/CONDENSING UNITS.
8. GC (DIVISION 7) TO INSTALL KEC (SECTION 114000) FURNISHED EQUIPMENT RAILS AND PIPE CURBS FOR ROOFTOP CONDENSING UNITS.
9. REFRIGERATION CONTRACTOR UNDER KEC (SECTION 114000) SHALL FURNISH REFRIGERATION PIPING AND INSTALL CONDENSERS, CONDENSING UNITS, AND EVAPORATOR COILS. REFRIGERATION CONTRACTOR TO CHARGE, START-UP, RUN, AND CHECK FOR PROPER OPERATING TEMPERATURES.
10. KEC (SECTION 114000) FURNISHED REMOTE CONDENSERS/CONDENSING UNITS FOR ICE MACHINES SHALL BE INSTALLED ON BUILDING ROOF DIRECTLY ABOVE ICE MACHINE.
11. REFRIGERATION CONTRACTOR UNDER KEC (SECTION 114000) SHALL INSTALL PRECHARGED REFRIGERATION LINE SETS FOR ICE MACHINES.

REFRIGERATION NOTES

ALL CONDUIT TO BE PVC OR METAL, DIAMETER AS INDICATED ON PLAN, MINIMUM BENDING RADIUS TO BE 24", FACTORY "L'S" WILL NOT BE PERMITTED.

CONTRACTOR TO PROVIDE 5-WIRE SERVICE FROM FREEZER AND 28" BLOWER COILS FOR AUTO, DEFROST SYSTEM TO STOP COMPRESSOR BLOWER COIL FAN & START HEATERS IN BLOWER COIL.

CONDUIT RUNS ARE SHOWN SCHEMATICALLY EXACT LOCATION AND ROUTING TO BE DETERMINED IN FIELD TO SUIT JOB CONDITIONS.

REFRIGERATION LINES FOR WALK-IN REFRIGERATOR TO RUN OVERHEAD & DROP DOWN TO COMPRESSORS. REFRIGERATION LINES ARE TO BE INSULATED AND PROTECTED.

SLEEVES TO BE PROVIDED ON ALL WALLS REQUIRING REFRIGERATION LINE PASS.

REFRIGERATION CONTRACTOR TO WRAP COIL CONDENSATE DRAIN TUBING WITH HEATER CABLE TO PREVENT FREEZING (AT FREEZER ONLY).

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PROJECT NUMBER:
DCH22007

CLIENT:

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Cheddar's SCRATCH KITCHEN

Issue Date:	01/23/23
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

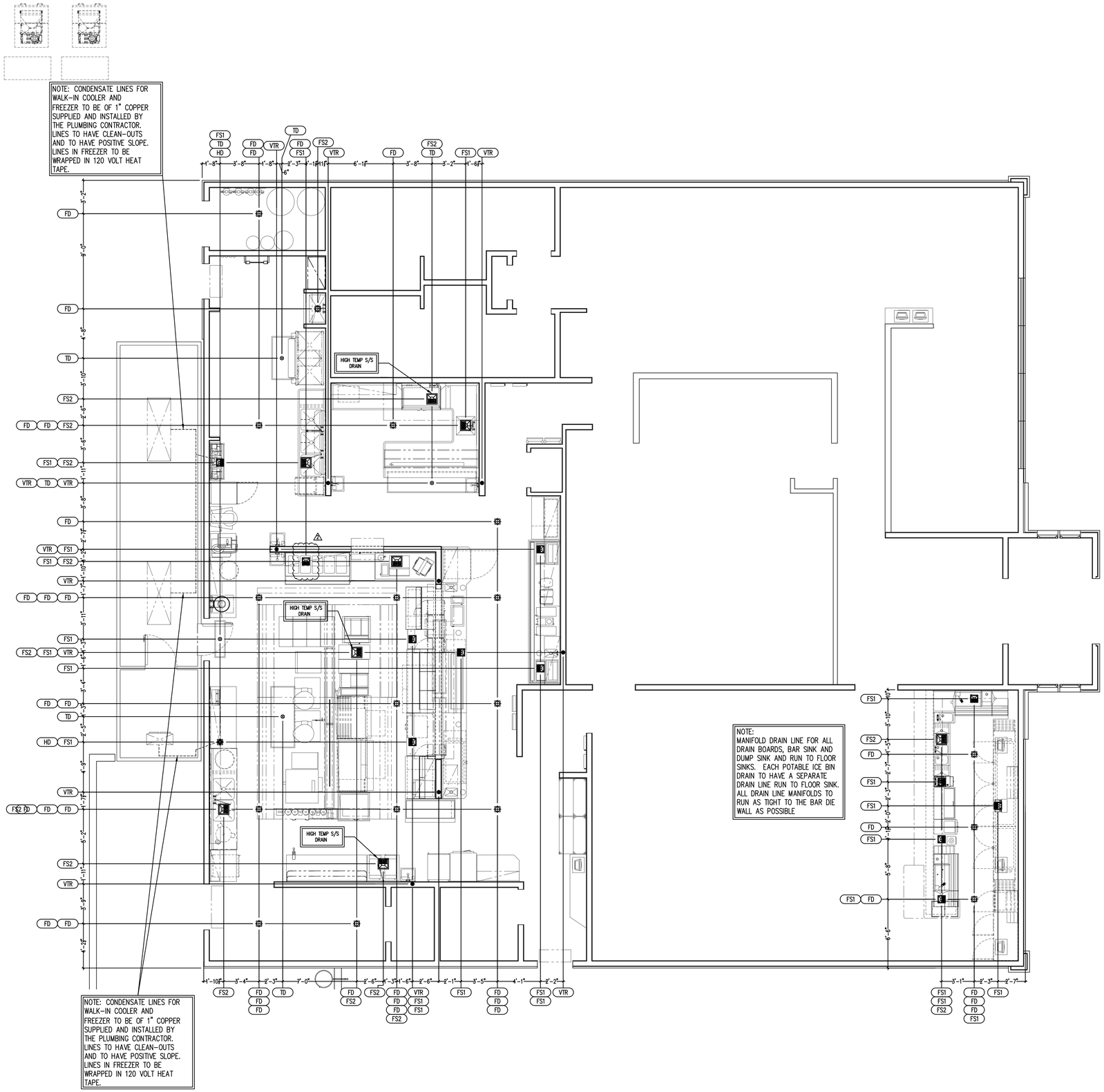
Restaurant #: 2215

CHEDDAR'S
SCRATCH KITCHEN
PROTO 18
10150 BLOOMINGDALE AVE
RIVERVIEW, FL 33578

RIVERVIEW, FL

FOOD SERVICE
GENERAL AND MEP
NOTES

FS-2.2



DRAIN SYMBOL KEY

- FD – FLOOR DRAIN (INDIRECT – AREA CLEAN & CONDENSATE)
- HD – 4" HUB DRAIN (INDIRECT – CONDENSATE)
- FS1 – 8" X 8" FLOOR SINK (INDIRECT – GENERAL PURPOSE)
- FS2 – 12" X 12" FLOOR SINK (INDIRECT – GENERAL PURPOSE)
- VTR – 2" WASTE (DIRECT CONNECTED VENTED WASTE)
- TD – 4" WASTE (INDIRECT – FLOOR TROUGHS 5" BELOW SLAB)
- TD1 – 3" 6" WIDE X 5" DEEP WASTE MADE OF POLYESTER POLYMER CONCRETE (AT BAR)

GENERAL NOTES

1. ALL DRAIN LOCATION DIMENSIONS ARE TO THE BUILDING STRUCTURE.
2. ALL DRAIN LINES FROM FOOD SERVICE EQUIP. TO FLOOR SINKS ARE SUPPLIED AND INSTALLED BY THE PLUMBING CONTRACTOR. ALL DRAIN LINES ARE TO BE COPPER.
3. ALL AREA CLEAN FLOOR DRAINS ARE TO BE SET AT 3/4" BELOW FINISHED FLOOR GRADE.

PLUMBING ROUGH-IN NOTES

THIS ROUGH-IN DRAWING INDICATES THE LOCATION OF ALL UTILITIES REQUIRED PLUS RECOMMENDED MINIMUM AREA FLOOR DRAINS. UTILITY REQUIREMENTS AND DIMENSIONS ARE BASED UPON THE EQUIPMENT SPECIFIED.

ALL PLUMBING LINES SHALL BE EXTENDED THROUGH AND OUT OF THE BUILDING WALLS WHERE POSSIBLE.

ALL PLUMBING LINES SHALL BE EXTENDED AND INTERCONNECTED TO ALL CONNECTION POINTS ON THE EQUIPMENT BY THE G.C.

ALL INDIRECT WASTE AND CONDENSATE DRAINS SHALL BE EXTENDED FROM EQUIPMENT FITTING TO APPROPRIATE DRAIN BY THE G.C.

ONLY COMPONENTS SUPPLIED STANDARD BY THE MANUFACTURER ARE INCLUDED. SHUT-OFFS, PRESSURE REGULATORS, VACUUM BREAKERS,ETC.,SHALL BE BY THE G.C.

PLUMBING CONTRACTOR IS RESPONSIBLE FOR CHECKING THE SEALS AROUND ALL PENETRATION TO THE WALK-IN FREEZER AND/OR COOLER PANELS WHILE INSTALLING CONDENSATE LINES.

NOTE: ALL AREA CLEAN FLOOR DRAINS ARE TO BE SET AT 3/4" BELOW FINISHED FLOOR

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Cheddar's SCRATCH KITCHEN

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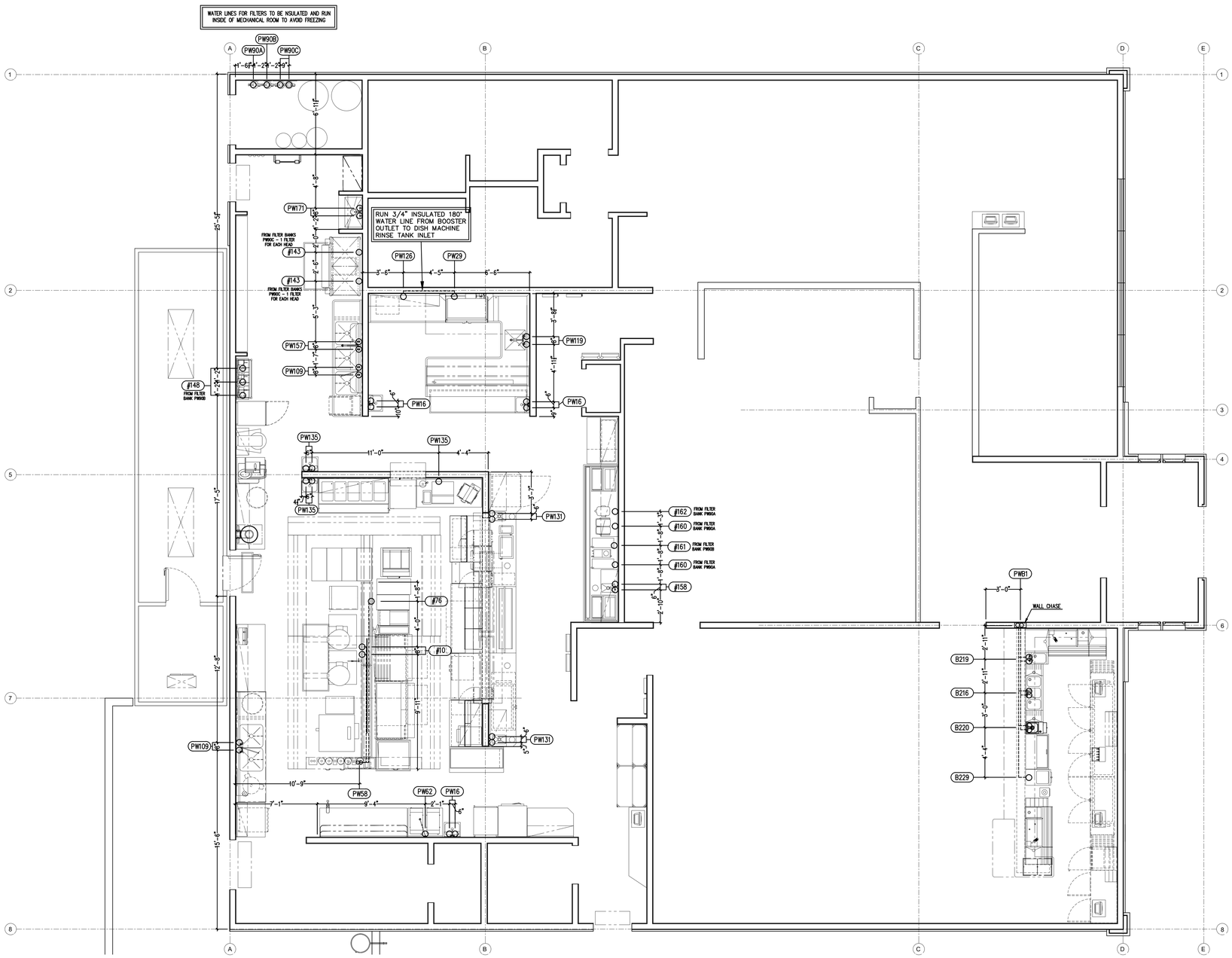
PROTO 18
10150 BLOOMINGDALE AVE
RIVERVIEW, FL 33578

RIVERVIEW, FL

FOOD SERVICE DRAIN LOCATIONS

FS-3.1



WATER CONNECTION SCHEDULE

PW16 (5 EACH) 1/2" H&CW 22" AFF. (HAND SINK)
PW29 3/4" HW (140° DEGREES MIN.) 60" AFF. (DISHMACHINE)
PW58 1" H&CW DOWN FROM CEILING THRU CHASE – CONNECT TO EQUIPMENT AS LISTED BELOW
#10 – 1/2" H&CW 36" AFF. (KETTLE AND POT FILLER FAUCET)
#76 – 1/2" CW 18" AFF. (PASTA COOKER)
PW62 1/2" HW 54" AFF. (POT FILLER FAUCET)

☆ NOTE: ALL WATER LINES BRANCHING FROM FILTERS TO EQUIPMENT TO BE RUN ABOVE CEILING.

PW90A 1/2" CW (SOFTENED WATER), 90" AFF. – REDUCE AND
CONNECT TO FILTER SYSTEM AND BRANCH TO THE FOLLOWING:
ITEM #160 – (2 EACH) ICED TEA BREWER @ 48" AFF.
ITEM #162 – LEMONADE DISPENSER @ 48" AFF.

PW109 (3 EACH) 1/2" H&CW 12" AFF. (3 COMP FAUCETS)
PW119 1/2" H&CW 12" AFF. (PRE–RINSE FAUCET)
PW131 1/2" H&CW 18" AFF. (HAND SINK IN EXPO COUNTER)
PW157 1/2" H&CW 12" AFF. (POT WASH FAUCET)
PW158 1/2" H&CW 18" AFF. (DUMP SINK)
PW126 3/4"CW 18" AFF. (BOOSTER HEATER)
PW171 1/2" H&CW 36" AFF. (MOP SINK FAUCET)

☆ NOTE: ALL WATER LINES BRANCHING FROM FILTERS TO EQUIPMENT TO BE RUN ABOVE CEILING.

PW90B 1/2" I.D. CW (UNSOFTENED WATER), 90" AFF. – REDUCE AND CONNECT TO FILTER SYSTEM AND BRANCH TO THE FOLLOWING:
ITEM #161 – COFFEE BREWERS @ 48" AFF.
ITEM #148 – (4 EACH) CARBONATORS @ 84" AFF.

☆ NOTE: ALL WATER LINES BRANCHING FROM FILTERS TO EQUIPMENT TO BE RUN ABOVE CEILING.

PW90C (2 EACH) 1/2" CW (UNSOFTENED WATER), 90" AFF. –
CONNECT TO INDIVIDUAL FILTERS AND BRANCH TO
ITEM #143 – (2 EACH) ICE MAKER HEADS

PW135 1/2" CW 12" AFF. (DIPPER WELL)
PWB1 3/4"H&CW DOWN FROM CEILING, RUN THRU BAR DIE WALL@ 12"
AFF., REDUCE AS REQUIRED AND CONNECT TO:
ITEM #B216 – BAR SINK
ITEM #B219 – 12" DUMP SINK
ITEM #B220 – UNDERBAR HAND SINK
ITEM #B229 – FROZEN BEVERAGE MACHINE (CW ONLY)

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2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 2215

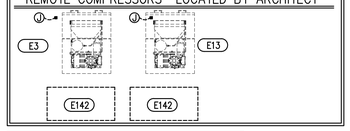
CHEDDAR'S
SCRATCH KITCHEN
PROTO 18
10150 BLOOMINGDALE AVE
RIVERVIEW, FL 33578

RIVERVIEW, FL

FOOD SERVICE
WATER
REQUIREMENT PLAN

FS-3.2

REMOTE COMPRESSORS LOCATED BY ARCHITECT



NOTE
VERIFY WITH THE WALK IN MANUFACTURER'S SHOP DRAWINGS FOR THE COOLER AND FREEZER LIGHT FIXTURE LAYOUT AND LIGHT FIXTURE QUANTITIES,WALK IN SHOPS TAKE PRECEDENT.

NOTE
VERIFY WITH THE WALK IN MANUFACTURER'S SHOP DRAWINGS FOR THE COOLER AND FREEZER LIGHT FIXTURE LAYOUT AND LIGHT FIXTURE QUANTITIES,WALK IN SHOPS TAKE PRECEDENT.

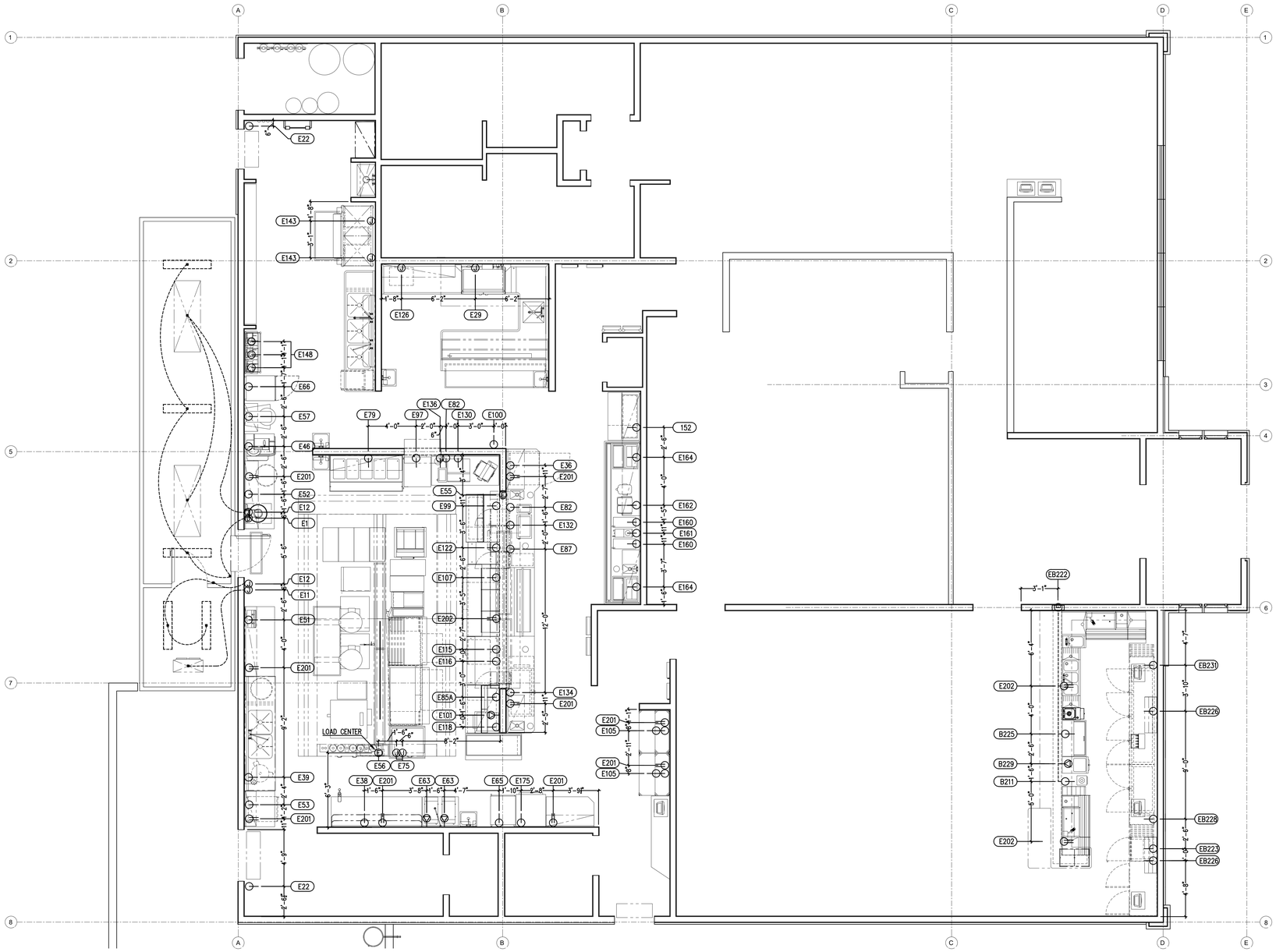
NOTE:
ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR CHECKING THE SEALS AROUND ALL PENETRATION TO THE WALK-IN FREEZER AND/OR COOLER PANELS WHILE INSTALLING THE LIGHTS.

VERIFY WALK-IN LIGHT LOCATIONS WITH MANUFACTURER'S SHOP DRAWINGS

NOTE:
LOCATIONS FOR REQUIRED DISCONNECTS TO BE LOCATED BY THE ARCHITECT, SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR IN ACCORDANCE WITH ALL LOCAL CODES. REFER TO ARCHITECTURAL DETAILS.

NOTE:
ALL OUTLET RECEPTACLES TO BE GFI AND FURNISHED WITH WATER PROOF COVERS.

ELECTRICAL CONTRACTOR TO PROVIDE A 1" ELECTRICAL CONDUIT TO THE CONTROL WIRING BETWEEN THE ICE MAKER HEADS AND THE REMOTE CONDENSERS



ELECTRICAL ROUGH-IN SCHEDULE

E1 120/1PH 20A 112" AFF. (WALK-IN COOLER/ BEER COOLER)
E2 (3 EACH) 120/1PH 1.6A 112" AFF. (COOLER EVAPORATOR COIL)
E3 208/3PH 16.6A AS LOCATED BY ARCHITECT FOR COOLER CONDENSING UNIT
E11 120/1PH 20A 112" AFF. (WALK-IN FREEZER)
E12 208/1PH 0.8A 112" AFF. (WALK-IN FREEZER)
E13 208/3PH 12.6A AS LOCATED BY ARCHITECT FOR FREEZER CONDENSING UNIT
E22 (3 EACH) 120/1PH 10A 90" AFF. (AIR CURTAIN)
E23 120/1PH 15A 98" AFF. (POWER PACK)

NOTE: VERIFY ALL WALK-IN ELECTRICAL WITH MANUFACTURER'S SHOP DRAWINGS

E29 208/3PH 55A 72" AFF. (DISHMACHINE)
E36 115/1PH 4.7A 18" AFF. (WORKTOP FREEZER)
E38 120/1PH 12.0A 50" AFF. (FOOD PROCESSOR)
E39 120/1PH 2.5A 50" AFF. (LETTUCE DRYER)
E46 120/1PH 7.0A 50" AFF. (SLICER)
E51 120/1PH 12.0A 48" AFF. (FOOD SEALER)
E52 (2 EACH) 120/1PH 3.5A 18" AFF. (MOBILE CHILLLER)
E53 120/1PH 20A 18" AFF. (HALF SIZE PROOFER)
E54 120/1PH 15A 98" AFF. (POWER PACK)

E56 120-208/3PH 350A DOWN FROM CEILING THRU CHASE, CONNECT TO INTEGRATED LOAD CENTER IN RACEWAY. VERIFY ALL CONNECTIONS WITH FABRICATORS SHOP DRAWINGS. COOK LINE WALL COMES PRE-WIRED WITH GFI RECEPTACLES TO INCLUDE THE FOLLOWING ITEMS:
ITEM #30 208/1PH 31A 36" AFF. (SMOKER OVEN)
ITEM #68 (2EA.) 208/3PH 30A 18" AFF. (20 GAL. ELECTRIC KETTLE) (1EA)
ITEM #72 (2 EACH) 115/1PH 8A 36", 48"AFF. (DBL. STACK CONVECTION OVEN)
ITEM #76 120/1PH 1.0A 18" AFF. (PASTA COOKER)
ITEM #77 120/1PH 15A 18" AFF. (CRISP N HOLD)
ITEM #79 120/1PH 10A 18" AFF. (BATTER TABLE)
ITEM #80 120/1PH 48.8A 18" AFF. (4 FRYER BANK/ W BUILT IN FILTRATION)
ITEM #82 120/1PH 3.3A 43" AFF. (HOT FOOD WELL)
ITEM #85 208/3PH 50A 48" AFF. (TURBO CHEF OVEN)
ITEM #85B115/1PH 4.7A 18" AFF. (REFRIGERATED PREP TABLE)
ITEM #88 120/1PH 24.4A 18" AFF. (1 FRYER BANK/ W BUILT IN FILTRATION)
ITEM #92 208/1PH 14A 18" AFF. (28" CRISP N HOLD)
ITEM #93 115/1PH 5.3A 18" AFF. (UNDERCOUNTER FREEZER)
ITEM #112 115/1PH 4.8A 18" AFF. (REFRIGERATED EQUIPMENT STAND)
ITEM #113 115/1PH 4.8A 18" AFF. (REFRIGERATED EQUIPMENT STAND)

NOTE: REFER TO FABRICATOR'S SHOP DRAWINGS FOR LOAD CENTER HOOK UP

E57 120/1PH 15.0A 50" AFF. (30 QT. MIXER)
E63 (2 EACH) 208/1PH 28.8A 50" AFF. (COUNTER TOP RETHERMALIZER)
E65 120/1PH 16.0A 72" AFF. (FULL HT. HOLDING CABINET)
E66 208/1PH 16A EA. 18" AFF. (THAW BOX)
E75 120/1PH 20A EA. 112" AFF. (EXHAUST HOODS / FIRE SUPPRESSION SYSTEM)

NOTE: VERIFY ALL EXHAUST CANOPY ELECTRICAL WITH MANUFACTURER'S SHOP DRAWINGS

E79 120/1PH 10A 18" AFF. (REFRIGERATED BATTER STATION)
E82 120/1PH 3.3A 43" AFF. (HOT FOOD WELL)
E85A 115/1PH 4.7A 18" AFF. (REFRIGERATED PREP TABLE)
E87 120/1PH 5.0A 18" AFF. (COLD RAIL COMPRESSOR)
E97 115/1PH 5.8A 18" AFF. (REACH-IN UNDERCOUNTER FREEZER)
E99 115/1PH 4.7A 18" AFF. (REFRIGERATED PREP TABLE)
E100 120/1PH 15.0A 50" AFF. (TORTILLA GRILL)
E101 208/1PH 12.25A 50" AFF. (CONTACT TOASTER)

EQUIPMENT IN CHEF'S COUNTER PASS SHELVES POWER ABOVE CEILING IN CHASE

E55 S/S SHELF LOAD CENTER. VERIFY ELECTRICAL WITH EQUIPMENT MANUFACTURER SPECIFICATIONS
E106 (3 EACH) 208/1PH 15.3A (MICROWAVE OVEN)
E108 (2 EACH) 120/208/1PH 23.2A (60" HEAT LAMP)
E108.1 (2 EACH) 120/208/1PH 40.0A (REMOTE CONTROL BOX HEAT LAMP)
E117 120/1PH 3.3A (HOLDING UNIT)
E121 208/1PH 16.0A (THERMO FINISHER)
E141 120/208/1PH 4.52 KW (84" DUAL HEAT LAMP)

E105 (3 EACH) 120/1PH 10A 39" AFF & (1 EACH) AT 52" AFF. (METRO CARRYOUT STATION (HOT))
E107 115/1PH 6.5A 18" AFF. (REFRIGERATION PREP TABLE)
E115 120/1PH 5.3A 18" AFF. (FREE STANDING WARMING DRAWER)
E116 208/1PH 20A 24" AFF. (3 HOT WELL FOOD TABLE)
E118 208/1PH 11.9A 18" AFF. (CROISSANT WARMER)
E122 120/1PH 17A 18" AFF. (WELL HOT FOOD TABLE)
E126 208/3PH 83.3A 72" AFF. (BOOSTER HEATER)
E130 120/1PH 12.6A 50" AFF. (NACHO CHIP WARMER)
E132 120/1PH 13.8A 43" AFF. (COUNTERTOP FOOD WARMER)
E134 115V/1PH 6.5A 24" AFF. (UNDERCOUNTER DBL. REACH-IN REFRIGERATOR)
E136 120/1PH 1.6A 24" AFF. (ICE CREAM DIPPING CABINET)
E142 (2 EACH) POWER FOR REMOTE CONDENSER COMES FROM ICE MAKERS
E143 (2 EACH) 208-230/3PH EA. 90" AFF. (ICE MAKER HEAD)
E148 (4 EACH) 120/1PH 16.0A 104" AFF. (CARBONATORS)
E152 115/1PH 12A 24" AFF. (60" SALAD PREP TABLE)
E160 (2 EACH) 120/1PH 14.0A 50" AFF. (ICE TEA BREWER)
E161 120/1PH 20A 50" AFF. (COFFEE MAKER)
E162 120/1PH 15.0A 50" AFF. (LEMONADE DISPENSER)
E164 (2 EACH) 120/1PH 15.0A 12" AFF. (SODA DISPENSER)
E175 120/1PH 11.3A 48" AFF. (REACH-IN FREEZER)
E200 (1 EACH) 120/1PH 20A 18" AFF. (UTILITY -MOUNT VERTICAL)
E201 (8 EACH) 120/1PH 20A 50" AFF. (UTILITY - MOUNT HORIZONTAL) UNLESS OTHERWISE NOTED
E202 (2 EACH) 120/1PH 20A 24" AFF. (UTILITY - MOUNT HORIZONTAL) UNLESS OTHERWISE NOTED
EB222 ELEC. SERVICE FOR UNDERBAR - STUB UP INTO BAR DIE WALL AND RUN WIRING TO PROVIDE POWER TO THE FOLLOWING: (NO EXPOSED CONDUIT ALLOWED)
ITEM #B211 120/1PH 11.5A UNDERSIDE OF BAR TOP (BAR BLENDER)
ITEM #B225 (2 EACH) 120/1PH 4A 18" AFF. (24" GLASS FROSTER)
ITEM #B229 208/1PH 15.0A 24" AFF. (FROZEN BEVERAGE MACHINE)
20A UTILITY OUTLET FOR SUBMERSIBLE GLASS WASHER BRUSH
EB223 (2 EACH) 120/1PH 3.0A 18" AFF. (SINGLE DOOR REFRIGERATOR)
EB226 (2 EACH) 120/1PH 2.0A 48" AFF. (LIQUOR DISPLAY STEP)
EB228 120/1PH 4.2A 18" AFF. (TWO DOOR BACK BAR REFRIGERATOR)
EB231 120/1PH 4.2A 18" AFF. (FOUR DOOR BACK BAR REFRIGERATOR)

ELECTRICAL CONNECTION LEGEND

- DUPLEX RECEPT., 20-AMP, 120-VOLT, GROUND TYPE, HORIZONTAL MOUNT
- SIMPLEX RECEPT., 20-AMP, 120-VOLT, GROUND TYPE, HORIZONTAL MOUNT
- SPECIAL PURPOSE RECEPTACLE., 20-AMP, 208-VOLT, GROUND TYPE, VERTICAL MOUNT
- JUNCTION BOX
- POS / PRINTER SYSTEM DATA CABLE
- ELECTRICAL CONDUIT FEED
- FIELD WIRING, CONCEALED IN WALL, FLOOR, CEILING OR WITHIN EQUIPMENT

NOTE:
ALL RECEPTACLES CALLED OUT AT 54" AFF. ARE TO BE MOUNTED HORIZONTALLY.

INTERCONNECT DEFROST TIMERS ON ALL WALK-IN EVAPORATOR COILS TO REMOTE COMPRESSORS. (120 VOLT)

REMOTE COMPRESSORS AND ROOF MOUNTED FANS SHALL BE LOCATED BY ENGINEER. REFER TO MECHANICAL PLANS.

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6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER:
DCH22007

CLIENT:
DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4564
www.darden.com

Cheddar's
SCRATCH KITCHEN

Issue Date:	01/23/23

REVISION INFORMATION

1	CITY COMMENTS	04.04.2023
2	COORDINATION COMMENTS	04.05.2023

Restaurant #: 2215

CHEDDAR'S
SCRATCH KITCHEN
PROTO 18
10150 BLOOMINGDALE AVE
RIVERVIEW, FL 33578

RIVERVIEW, FL

FOOD SERVICE
ELECTRICAL
REQUIREMENT PLAN

FS-3.3

KITCHEN DISPLAY SYSTEM LOCATION KEY

QUICK SELL – DECK MOUNTED – FACING SERVER ALLEY SIDE . POWER AND DATA FROM CEILING.

ENTREE – DECK MOUNTED – FACING SERVER ALLEY SIDE . POWER AND DATA FROM CEILING.

SET 1 – DECK MOUNTED – FACING COOK LINE ALLEY SIDE. POWER AND DATA FROM CEILING. (PROVIDE ADDITIONAL DUPLEX RECEPTACLE FOR PRINTER).

SET 2 – DECK MOUNTED – FACING COOK LINE ALLEY SIDE. POWER AND DATA FROM CEILING. (PROVIDE ADDITIONAL DUPLEX RECEPTACLE FOR PRINTER).

FLAT TOP – POLE MOUNTED TO RACE WAY; SCREEN FACING ALLEY. FEED THROUGH RACE WAY TO LOCATION AS SHOWN.

OVEN LOAD – POLE MOUNTED TO RACE WAY; SCREEN FACING ALLEY. FEED THROUGH RACE WAY TO LOCATION AS SHOWN.

FRY – WALL MOUNTED SCREEN FACING EXPO COUNTER. FEED POWER AND DATE FROM CEILING.

BURGER – WALL MOUNTED FACING COOK'S SIDE. POWER AND DATA FROM CEILING.

PANTRY – DECK MOUNTED TO UPPER SHELF FACING FRY STATION. FEED FROM CEILING WALL.

TOGO – WALL MOUNTED FACING ALLEY SIDE. POWER AND DATA FROM CEILING.

NOTE: ALL KDS POLE LOCATIONS REQUIRE A DEDICATED DUPLEX RECEPTACLE AND DATA LINE.

REFER TO THE ARCHITECT'S "E" SHEETS FOR PRINTER LOCATIONS.

NOTE : ALL KDS LOCATIONS REQUIRE A DEDICATED DUPLEX RECEPTACLE & DATA LINE

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PROTO 18

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RIVERVIEW, FL

FOOD SERVICE
KDS LOCATIONS

FS3.4

GAS CONNECTION SCHEDULE

PG1 2" GAS FEED DOWN LOAD CENTER WALL FROM CEILING, CONNECT TO EQUIPMENT AS FOLLOWS:

ITEM #70 – 4 BURNER COUNTERTOP HOTPLATE – 3/4" GAS 100,000 BTU @ 24" AFF.
ITEM #72 – CONVECTION OVEN – 3/4" GAS 110,000 BTU @ 24"AFF.
ITEM #80 – 4 FRYER BANK W/ BUILT-IN FILTER – 1" GAS 300,000 BTU @ 24" AFF.

PG2 2" GAS FEED DOWN WALL FROM CEILING, CONNECT TO EQUIPMENT AS FOLLOWS:

ITEM #76 – PASTA COOKER – 3/4" GAS 60,000 BTU @ 24" AFF.
ITEM #84 – CHAR BROILER – 3/4" GAS 187,000 BTU @ 24" AFF.
ITEM #88 – 1 FRYER BANK W/ BUILT-IN FILTER – 3/4" GAS 75,000 BTU @ 24" AFF.
ITEM #111 – 48" COUNTERTOP GRIDDLE – 3/4" GAS 108,000 BTU @ 36" AFF.

NOTE: GAS VALVES TO BE LOCATED BY ARCHITECT. PLUMBER TO SUPPLY AND INSTALL GAS VALVES IN COMPLIANCE WITH ALL LOCAL CODES.

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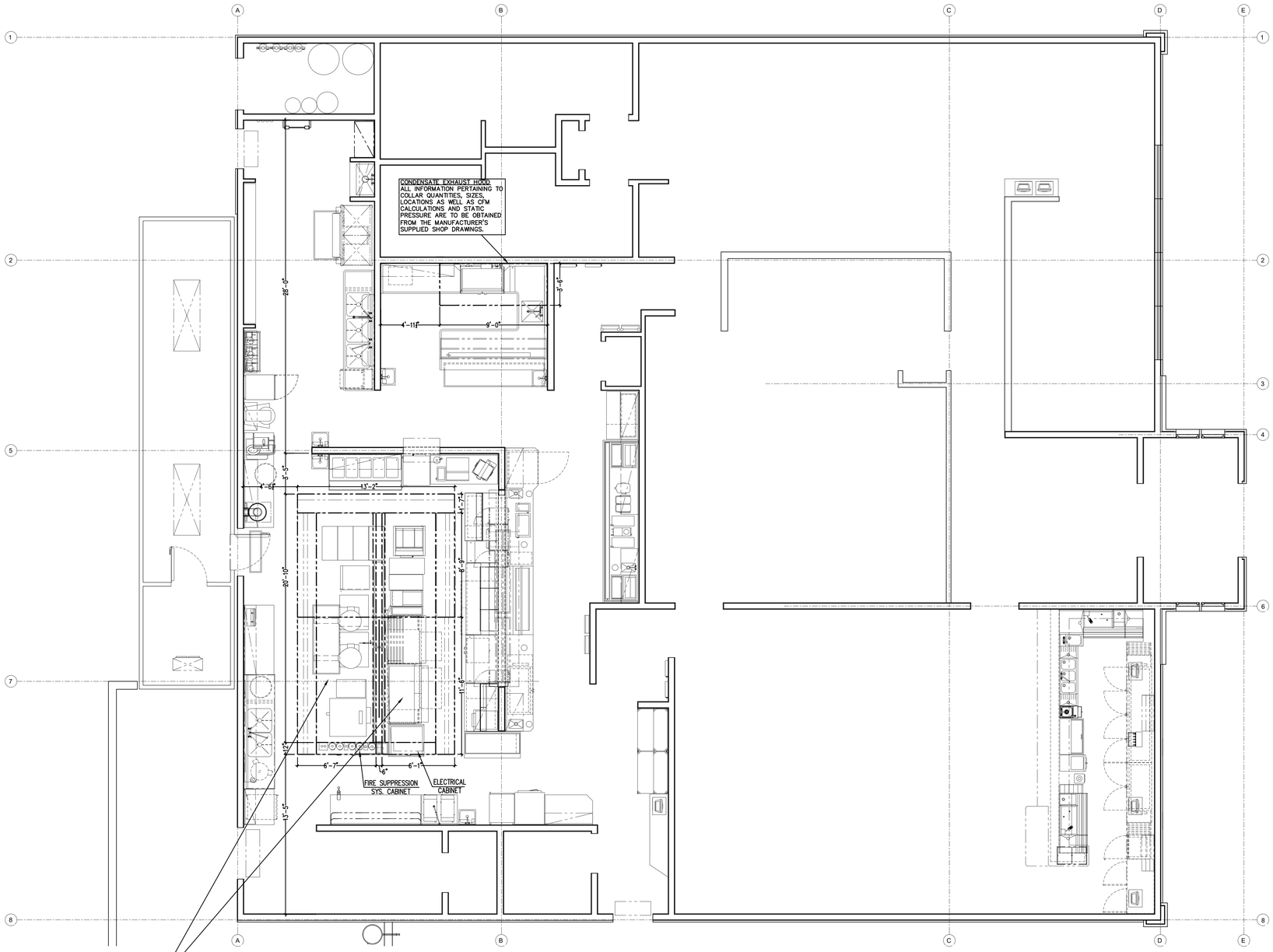
RIVERVIEW, FL

FOOD SERVICE
GAS
REQUIREMENT
PLAN

FS-3.5



NOTE: VERIFY ALL INFORMATION WITH MANUFACTURER'S SHOP DRAWINGS

NOTE: ALL HOOD CANOPIES TO BE INSTALLED 6'-8" AFF.

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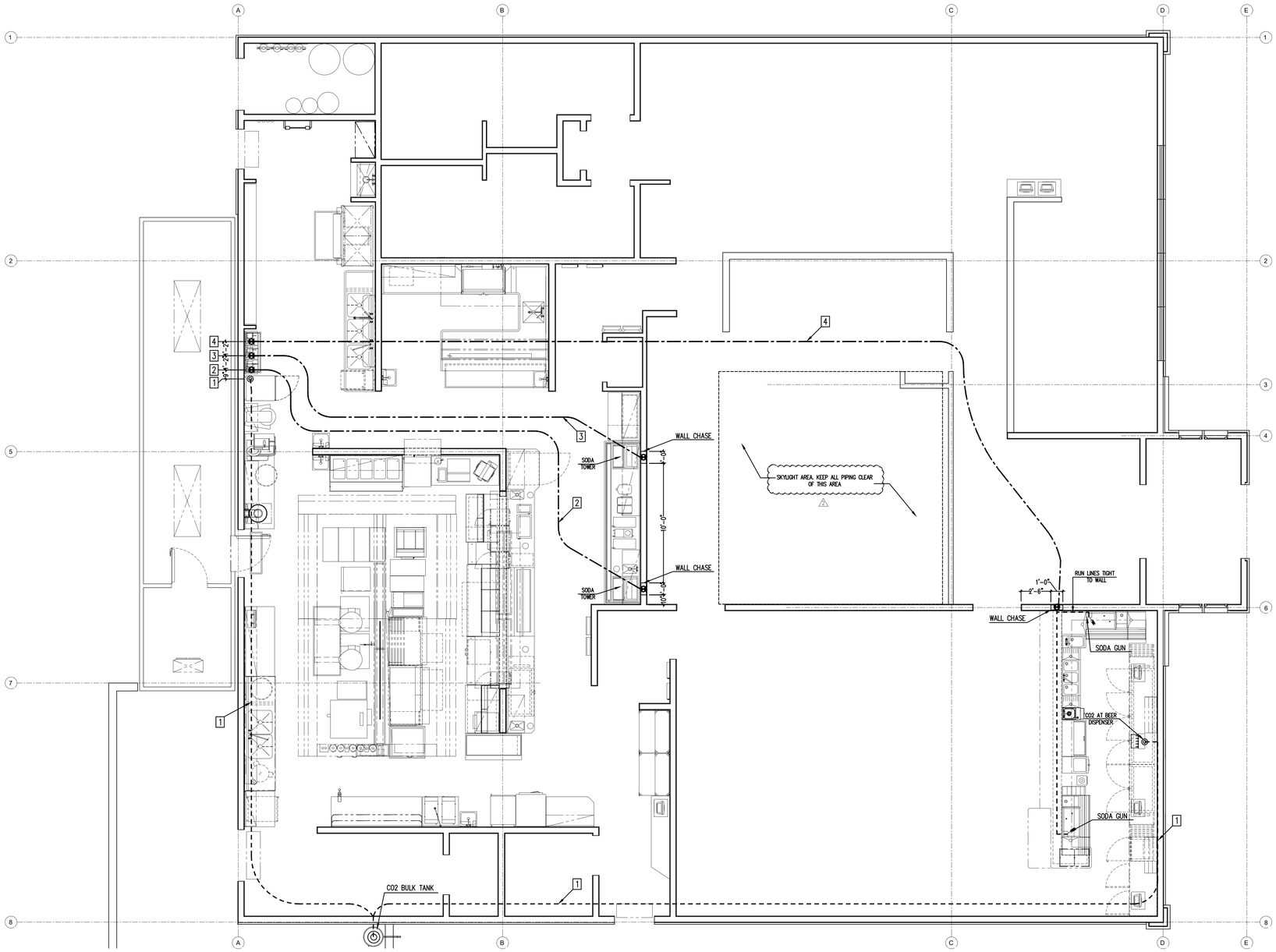
RIVERVIEW, FL

FOOD SERVICE EXHAUST HOOD LOCATION PLAN

FS-3.6



GENERAL NOTES

SODA LINES RUNNING OVERHEAD ABOVE THE CEILING AND DOWN WALL CHASES. G.C. IS TO SUPPLY AND INSTALL 6" PVC CHASES PER THE LAYOUT SHOWN ON THIS SHEET. THE CHASE(S) SHALL MAINTAIN A MINIMUM 24" SWEEP WHERE REQUIRED, NO 45 OR 90 DEGREE BENDS ARE ALLOWED.

1. CO2 LINES – GC TO RUN 2" AIRTIGHT PVC CHASE ABOVE CEILING FROM BULK CO2 TANK IN SERVICE YARD TO SODA SYSTEM BIBB RACK IN KITCHEN. GC ALSO TO RUN 2" AIRTIGHT PVC CHASES OVERHEAD FROM BULK CO2 TANK LOCATED IN THE SERVICE YARD TO BEER DISPENSER AT BAR.

2. SODA LINE RUN FOR SODA TOWER "A": SODA LINES TO RUN FROM BIBB RACK IN KITCHEN ABOVE CEILING TO MAIN BEVERAGE COUNTER CHASE. RUN LINES DOWN CHASE AND EXIT @ 12" AFF WITH ADEQUATE SWEEP TO AVOID FLOW RESTRICTION AND RUN TO SODA TOWER IN BEVERAGE STATION AND CONNECT TO TOWER.

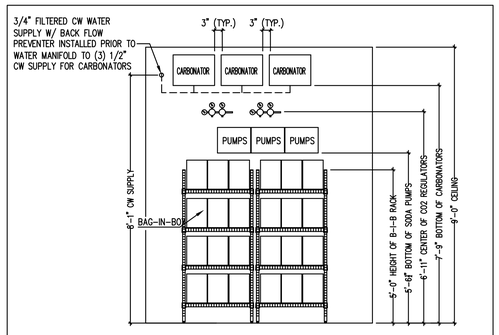
3. SODA LINE RUN FOR SODA TOWER "B": SODA LINES TO RUN FROM BIBB RACK IN KITCHEN ABOVE CEILING TO MAIN BEVERAGE COUNTER CHASE. RUN LINES DOWN CHASE AND EXIT @ 12" AFF WITH ADEQUATE SWEEP TO AVOID FLOW RESTRICTION AND RUN TO SODA TOWER IN BEVERAGE STATION AND CONNECT TO TOWER.

4. SODA LINE RUNS FOR BAR GUNS: SODA LINES TO RUN FROM BIBB RACK IN KITCHEN DOWN CHASE AT BAR. EXIT LINE @ 12" AFF WITH ADEQUATE SWEEP TO AVOID FLOW RESTRICTION AND CONTINUE SODA LINES DOWN BAR DIE WALL TO CONNECTION.

- - - - - - - - - - - - - CO2 OVER HEAD LINES FROM CO2 TANK TO CARBONATORS AND BAR DISPENSER

—·—·—·—·— SODA LINES ABOVE CEILING TO WALL CHASE

NOTE: ALL LINE RUNS SHOWN ARE APPROXIMATE. SODA SYSTEM INSTALLERS TO USE BEST ROUTING OF LINES TO AVOID CONFLICTING WITH OTHER BUILDING SYSTEMS THAT ARE RUN ABOVE CEILINGS.



PROTOTYPE INSTALLATION FOR SODA B-I-B EQUIPMENT

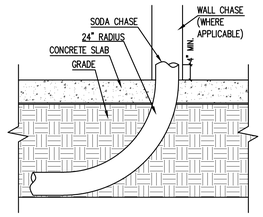
UNDERFLOOR CONDUIT CONSTRUCTION

CONDUIT RUNS UNDER SLAB MUST HAVE SMOOTH INTERIOR WITH MINIMUM DIAMETER OF 6 INCHES. ANY CONDUIT MUST HAVE ONLY ONE (1) 24" RADIUS SWEEP BEND (45° OR 90°) AT EACH END WITH NO ADDITIONAL BENDS IN THAT CONDUIT. PLUMBING STYLE FACTORY "L" BENDS ARE NOT ACCEPTABLE.

CONDUIT MUST BE CONSTRUCTED WITH TIGHT, INTERNALLY SMOOTH JOINTS AND MUST BE LEAK TIGHT. PRESSURE TEST AS REQUIRED.

CONDUIT TO BE CAPPED AND SEALED AT BOTH ENDS DURING FURTHER CONSTRUCTION. INSTALLER TO TRIM EXPOSED ENDS TO 4 INCHES ABOVE FINISHED FLOOR DURING PRODUCT LINE INSTALLATION. AFTER PRODUCT LINES ARE INSTALLED, THE OPEN ENDS OF THE CONDUIT ARE TO BE FILLED AND SEALED (WATERTIGHT) APPROXIMATELY 2 TO 4 INCHES AT EACH END.

SPECIFY AS: "PROVIDE MINIMUM 6 INCH APPROVED MATERIAL CONDUIT AS DESCRIBED IN ARTICLE 347 OF THE NATIONAL ELECTRICAL CODE TO MEET UL STANDARD 651, NEMA SPECIFICATION TC-2, ROBINTECH DUCT AND SWEEP ELBOWS OR EQUAL. DIAMETER TO BE AS INDICATED WITH MINIMUM BENDING RADIUS OF 24 INCHES. PLUMBING STYLE FACTORY "L" BENDS ARE NOT ACCEPTABLE."



SLAB ON GRADE CONDUIT DETAIL

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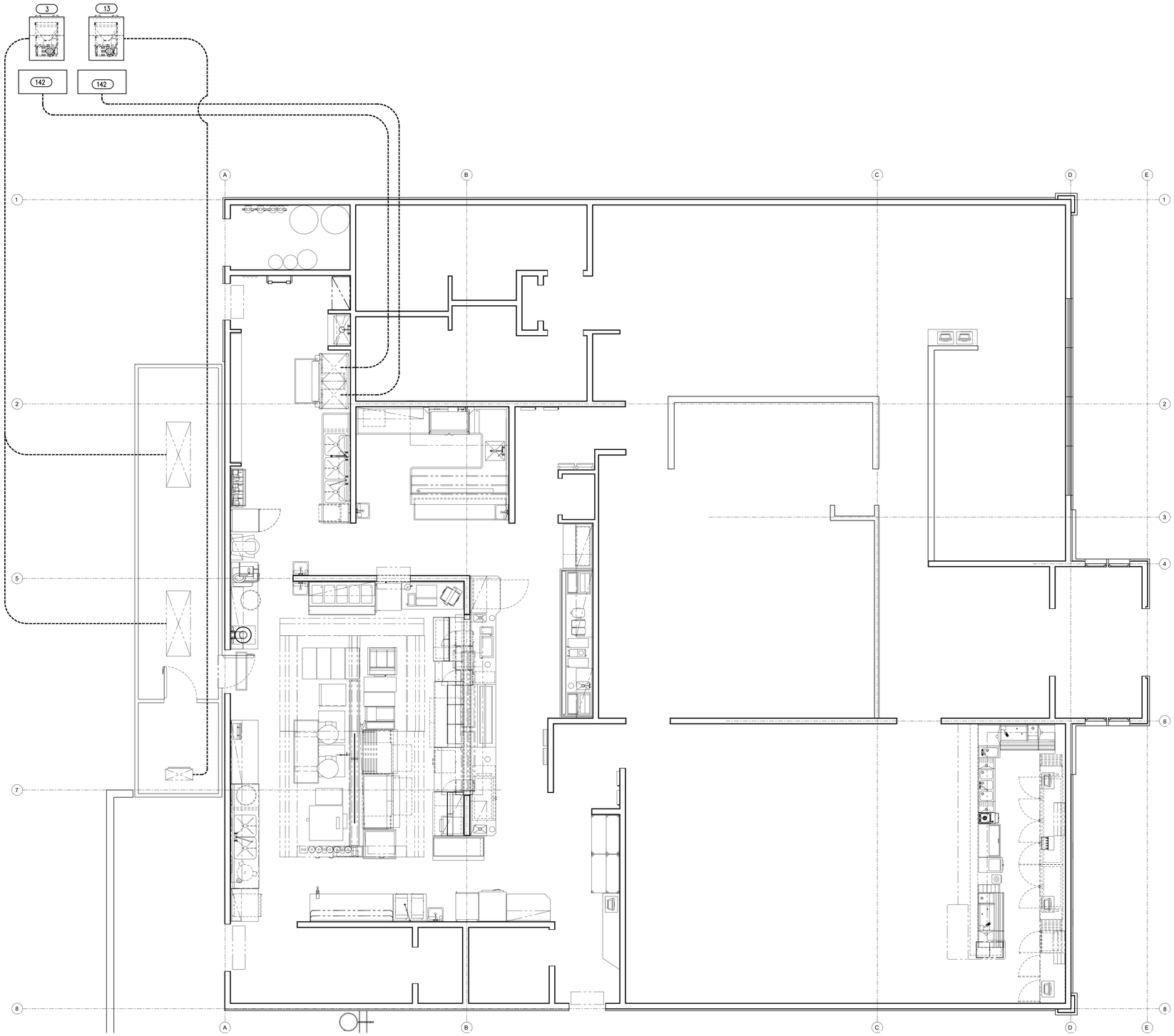
FOOD SERVICE SODA & CO2 CHASES

FS-3.7



REFRIGERATION LINE SCHEDULE

ITEM #3 (WALK–IN COOLER & BEER COOLER) 7/8" SUCTION LINE 1/2"LIQUID LINE (REFER TO WALK–IN SHOP DRAWINGS AS DIFFERENT VENDORS MAY HAVE DIFFERENT SIZE REQUIREMENTS)

ITEM #13 (WALK–IN FREEZER) 7/8" SUCTION LINE 1/2" LIQUID LINE (REFER TO WALK–IN SHOP DRAWINGS AS DIFFERENT VENDORS MAY HAVE DIFFERENT SIZE REQUIREMENTS)

ITEM #142 (ICE MAKER / CONDENSER) 5/8" SUCTION LINE 3/8" LIQUID LINE

ALL REFRIGERATION LINES TO BE SUPPLIED AND INSTALLED BY REFRIGERATION CONTRACTOR IN ACCORDANCE WITH ALL LOCAL CODES. LINES TO BE INSULATED AND RUN ABOVE CEILING WHERE POSSIBLE. ALL ROOF PENETRATIONS TO BE SEALED WATER–TIGHT BY BONDED ROOFER.

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RIVERVIEW, FL

FOOD SERVICE
REMOTE
REFRIGERATION
PLAN

FS-3.8

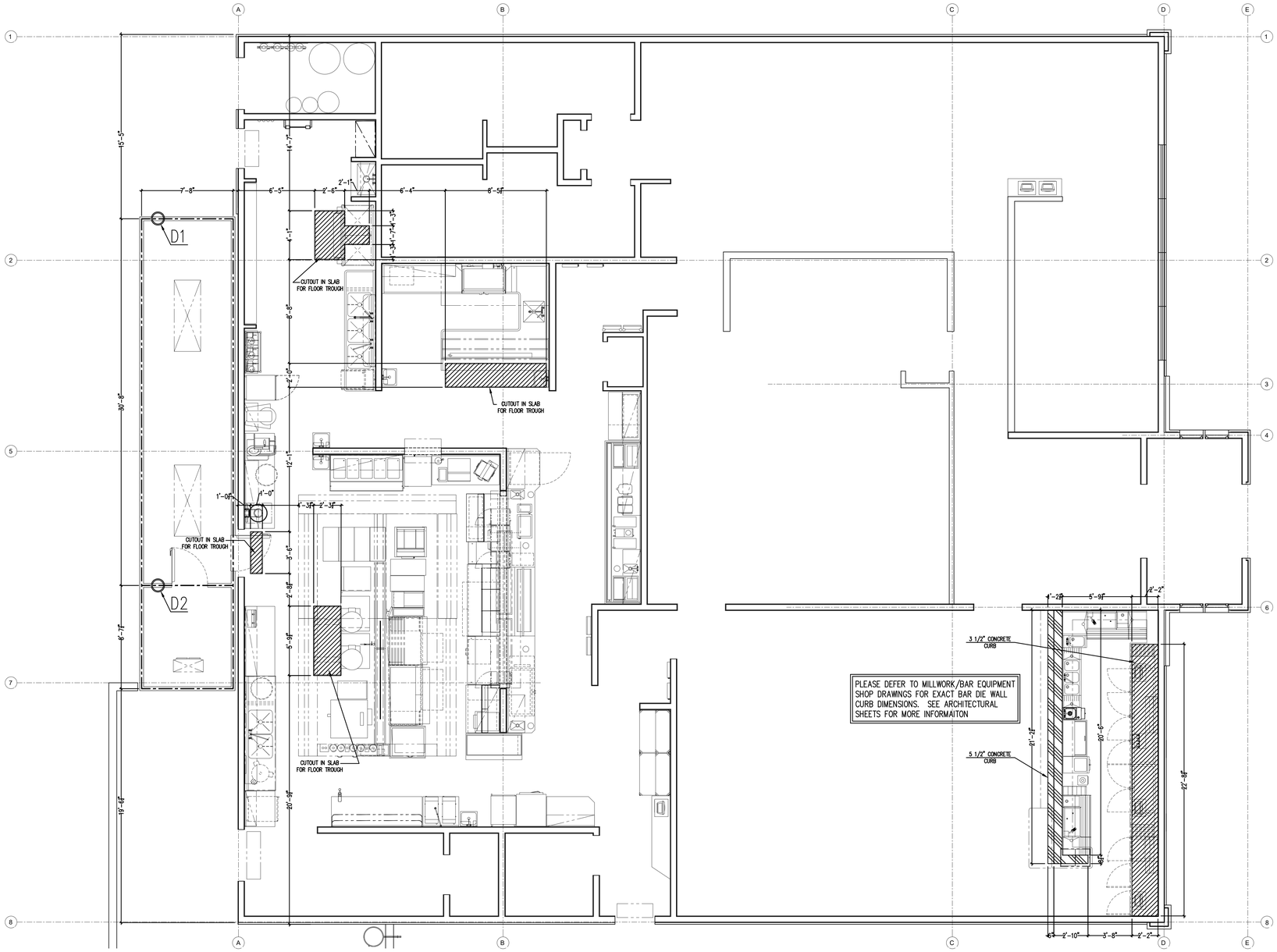
REFER TO PLUMBING AND OR STRUCTURAL DRAWINGS FOR THE FLOOR TROUGH DETAIL.

GENERAL CONTRACTOR TO PROVIDE TWO YARDS OF ROCK FREE SAND FOR INSTALLERS TO LEVEL WALK-IN FREEZER.

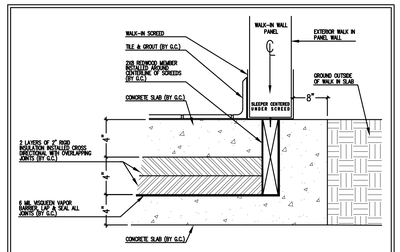
THE GENERAL CONTRACTOR IS RESPONSIBILE FOR PROVIDING A SMOOTH AND LEVEL RECESS FOR THE WALK-IN FREEZER.

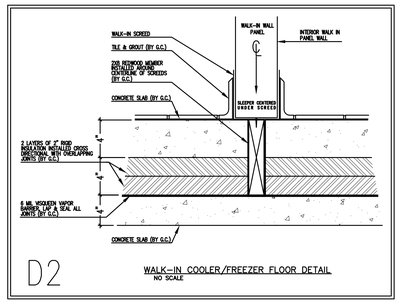
GENERAL CONTRACTOR TO INSTALL MIN. 3/4" PLYWOOD ON TOP OF WALK-INS IMMEDIATELY AFTER THE WALK-IN BOX HAS BEEN ERECTED.

REFER TO WALK IN MANUFACTURER'S SHOP DRAWINGS FOR INFORMATION ON PROPER INSTALLATION OF SLOPED ROOF ON WALK IN BOX AND FLASHING OF THE MEMBRANE TO THE BUILDING. SLOPED ROOF AND MEMBRANE MUST BE INSTALLED AND FLASHED TO THE BUILDING WATER TIGHT.



PLEASE DEFER TO MILLWORK/BAR EQUIPMENT SHOP DRAWINGS FOR EXACT BAR DIE WALL CURB DIMENSIONS. SEE ARCHITECTURAL SHEETS FOR MORE INFORMAITON





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6201 CAMPUS CIRCLE DRIVE E
IRVING, TEXAS 75063
TEL: 972.870.1288
WWW.IDSTUDIO4.COM

PROJECT NUMBER:
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4564
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date:	01/23/23
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 2215

CHEDDAR'S
SCRATCH KITCHEN
PROTO 18
10150 BLOOMINGDALE AVE
RIVERVIEW, FL 33578

RIVERVIEW, FL

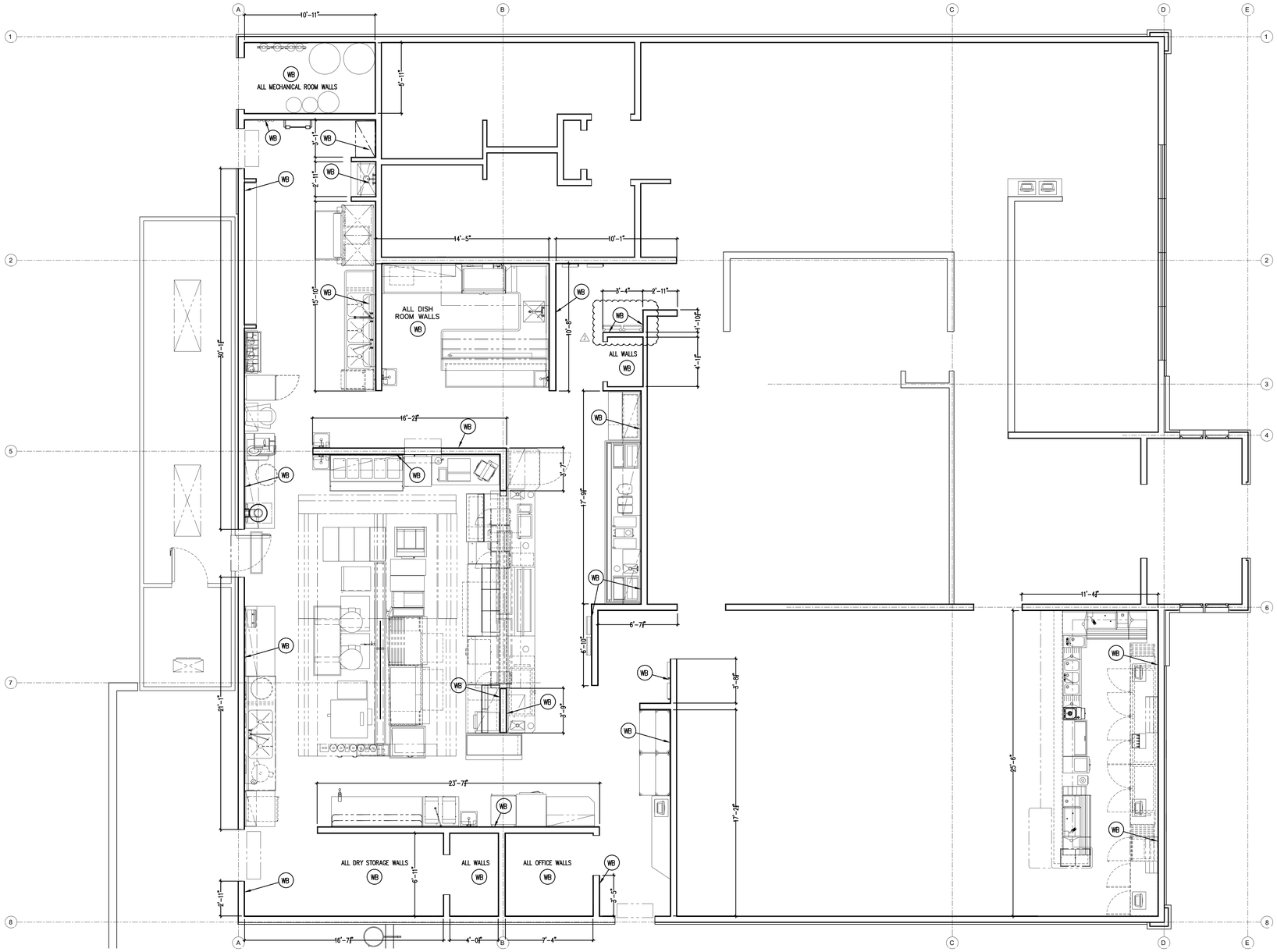
FOOD SERVICE SLAB CONDITIONS & DETAIL

FS-3.9

WALL BACKING SCHEDULE

WB — GENERAL CONTRACTOR TO PROVIDE PLYWOOD WALL BACKING ON NOTED NON-MASONRY WALLS. BACKING TO BE FROM 12" AFF. TO 96" AFF. TO ACCOMMODATE WALL MOUNTED HAND SINKS AND OVERSHELVES.

NOTE:
LOCAL CODES PREVAIL REGARDING THE USE OF COMBUSTABLE MATERIALS INSTALLED BEHIND AND/OR NEAR COOKING APPLIANCES. IN THE EVENT THAT PLYWOOD IS NOT ALLOWED AS A WALL BACKING MATERIAL, USE A "TYPE-X" WALL BACKING MATERIAL, (LOCAL CODES WILL STIPULATE A SINGLE OR DOUBLE LAYER). VERIFY ALL APPLICABLE LOCAL CODES.



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PROTO 18

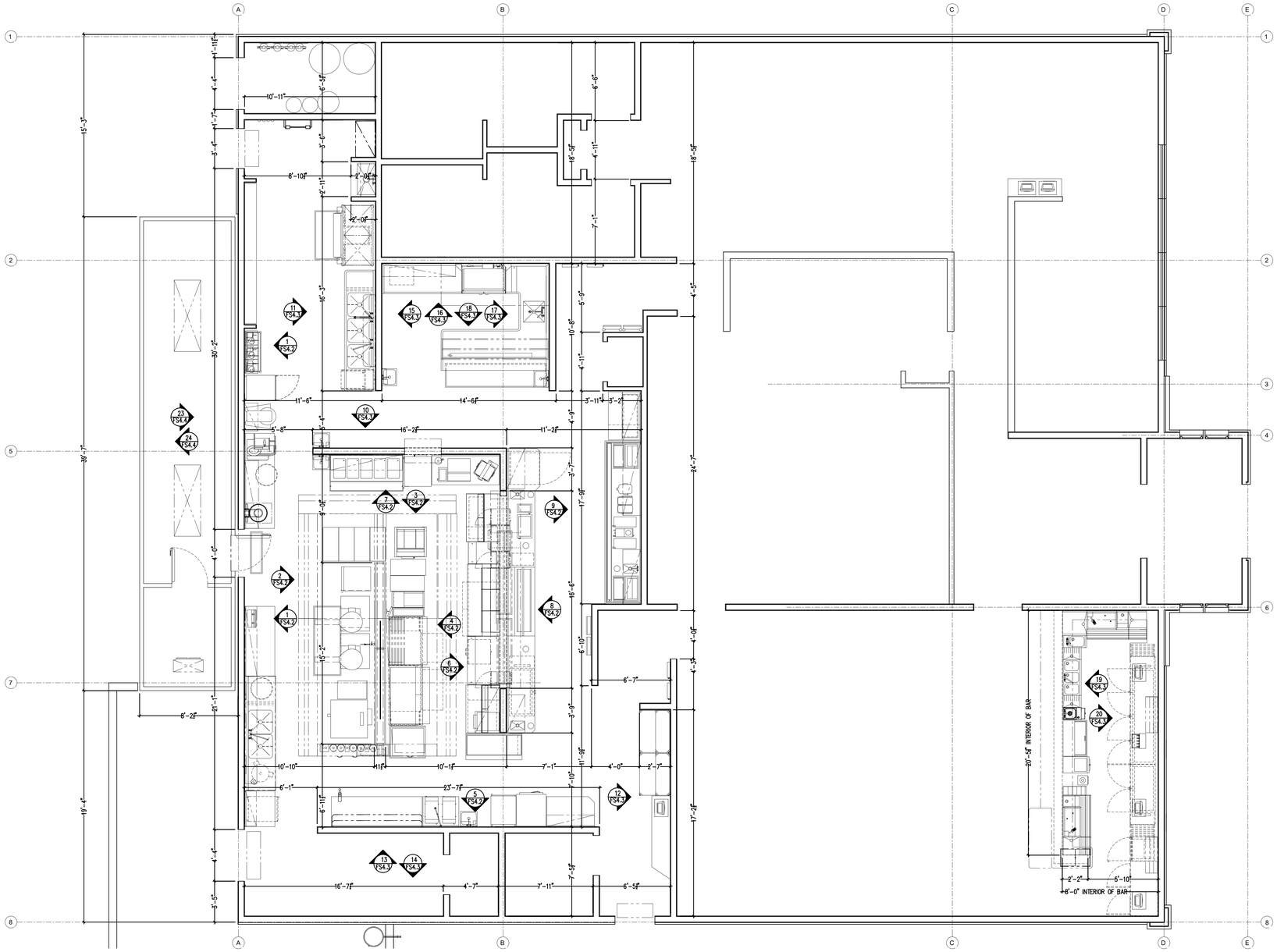
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

RIVERVIEW, FL

FOOD SERVICE
WALL BACKING
FLOOR PLAN

FS-3.10



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CHEDDAR'S
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PROTO 18

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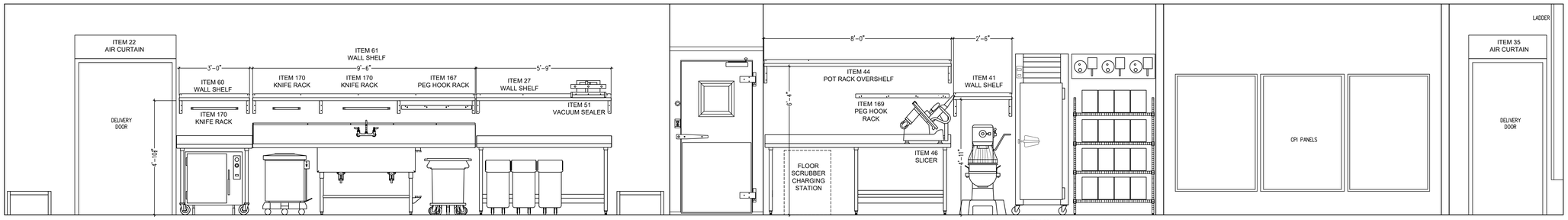
RIVERVIEW, FL 33578

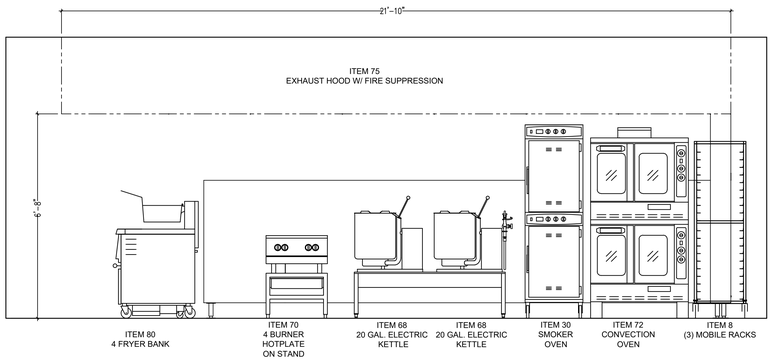
RIVERVIEW, FL

FOOD SERVICE
CRITICAL DIMENSION
& ELEVATION KEY

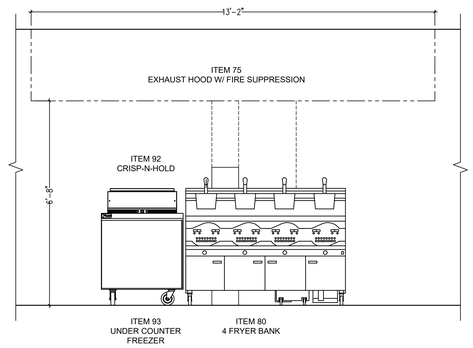
FS-4.1



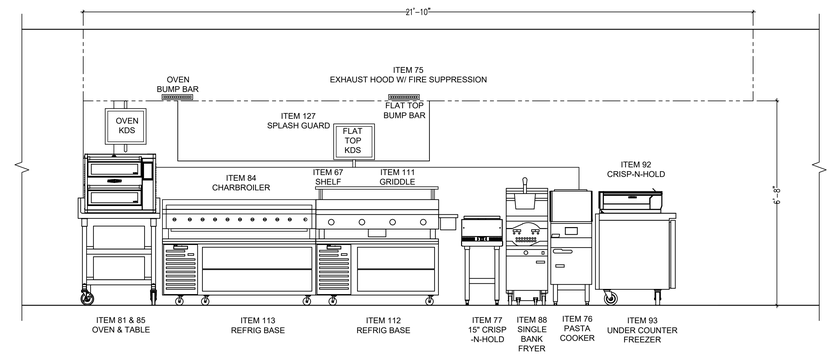
ELEVATION 1 - 1/2" = 1'-0"



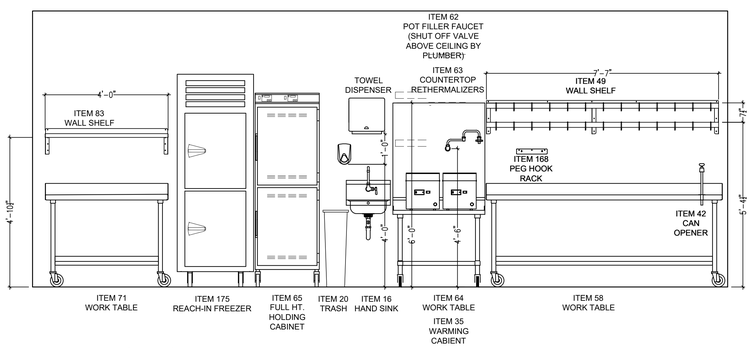
ELEVATION 2 - 1/2" = 1'-0"



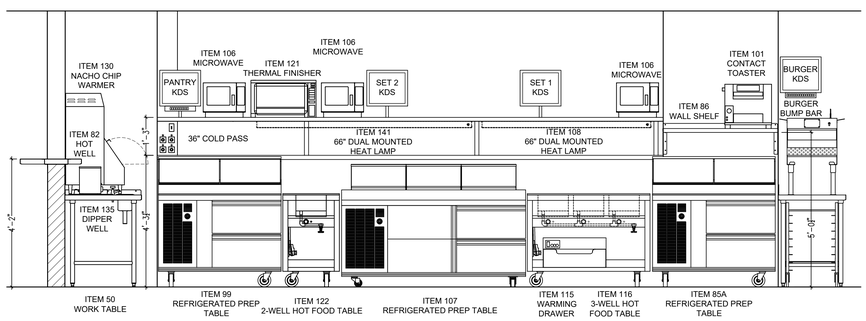
ELEVATION 3 - 1/2" = 1'-0"



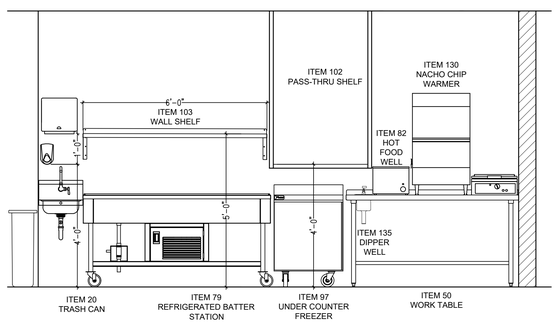
ELEVATION 4 - 1/2" = 1'-0"



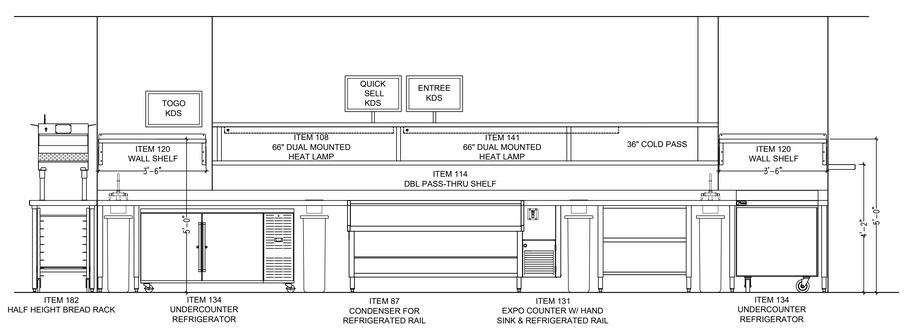
ELEVATION 5 - 1/2" = 1'-0"



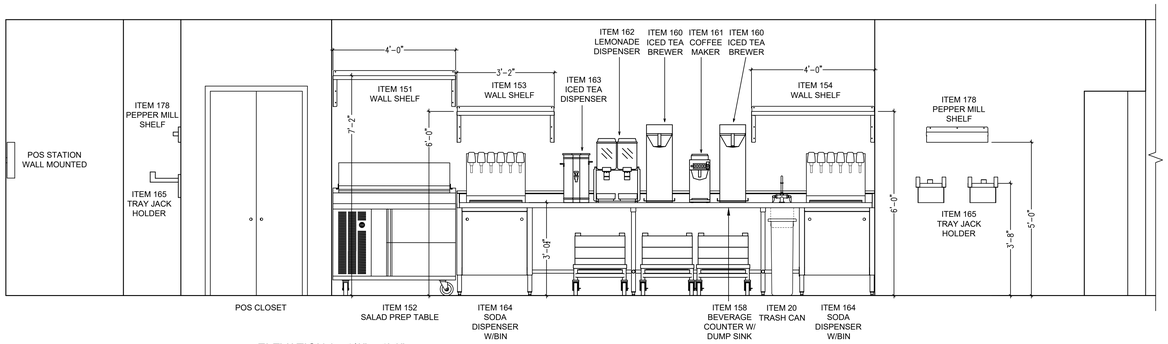
ELEVATION 6 - 1/2" = 1'-0"



ELEVATION 7 - 1/2" = 1'-0"



ELEVATION 8 - 1/2" = 1'-0"



ELEVATION 9 - 1/2" = 1'-0"

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Cheddar's SCRATCH KITCHEN

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CHEDDAR'S
SCRATCH KITCHEN
PROTO 18

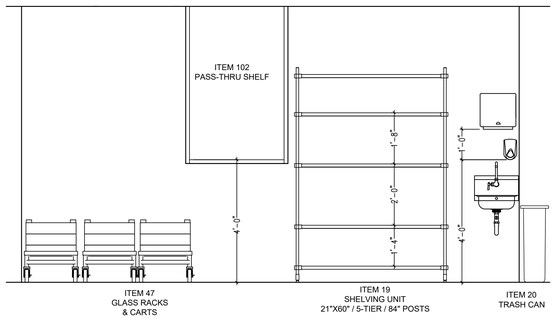
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

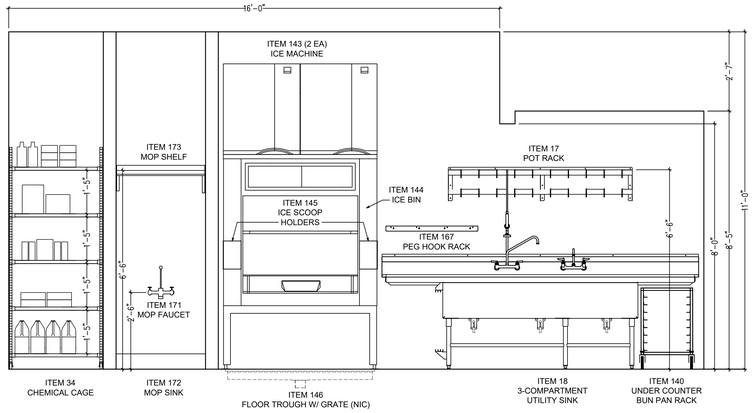
RIVERVIEW, FL

FOOD SERVICE
ELEVATIONS

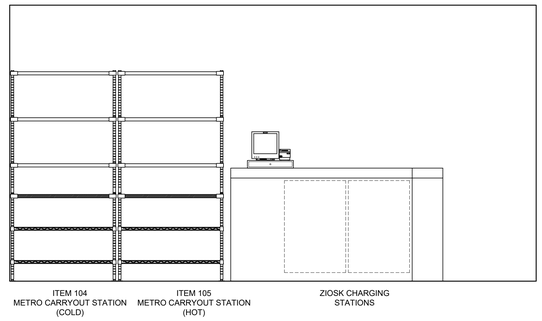
FS-4.2



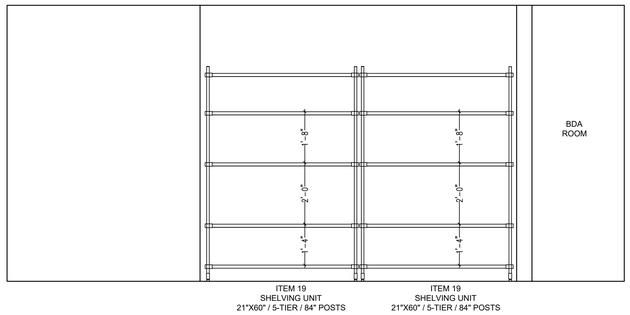
ELEVATION 10 - 1/2" = 1'-0"



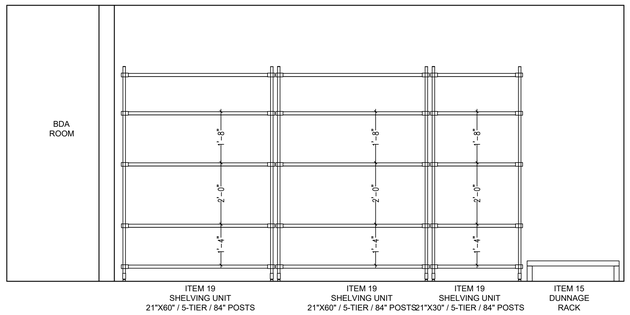
ELEVATION 11 - 1/2" = 1'-0"



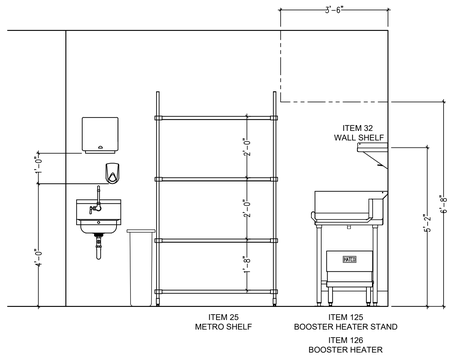
ELEVATION 12 - 1/2" = 1'-0"



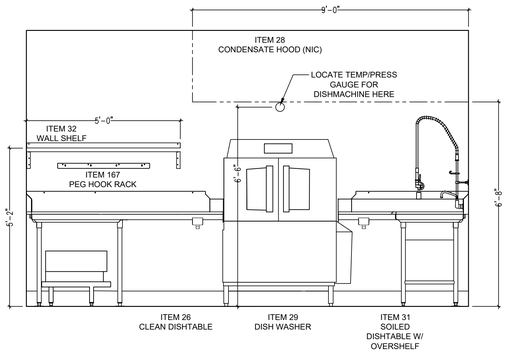
ELEVATION 13 - 1/2" = 1'-0"



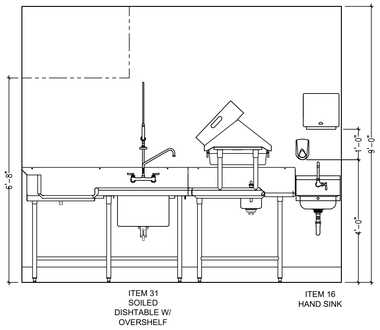
ELEVATION 14 - 1/2" = 1'-0"



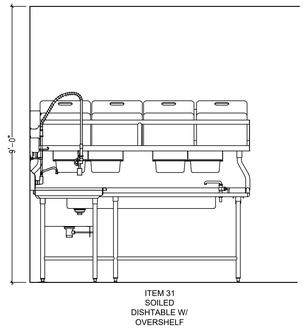
ELEVATION 15 - 1/2" = 1'-0"



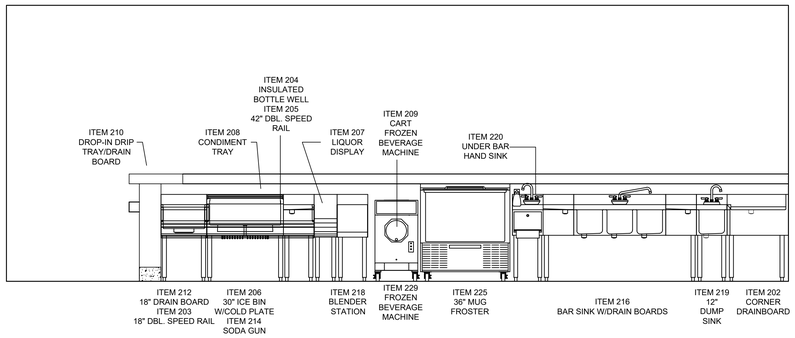
ELEVATION 16 - 1/2" = 1'-0"



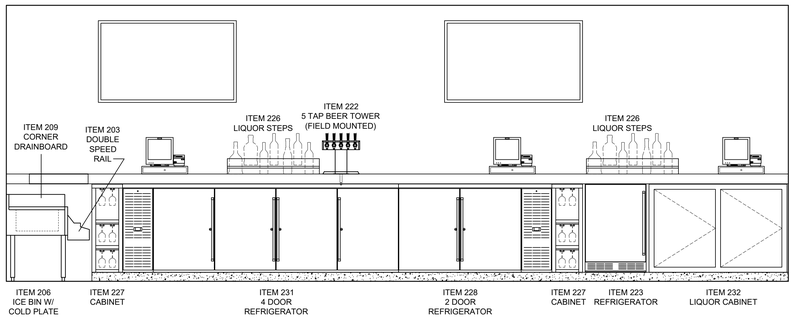
ELEVATION 17 - 1/2" = 1'-0"



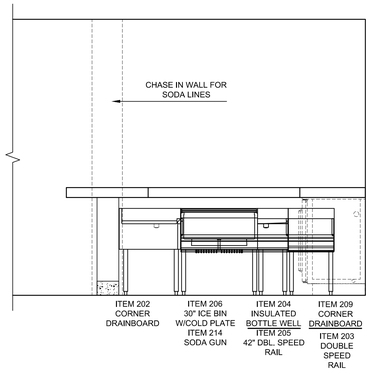
ELEVATION 18 - 1/2" = 1'-0"



ELEVATION 19 - 1/2" = 1'-0"



ELEVATION 20 - 1/2" = 1'-0"



ELEVATION 21 - 1/2" = 1'-0"

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Cheddar's
SCRATCH KITCHEN

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CHEDDAR'S
SCRATCH KITCHEN
PROTO 18

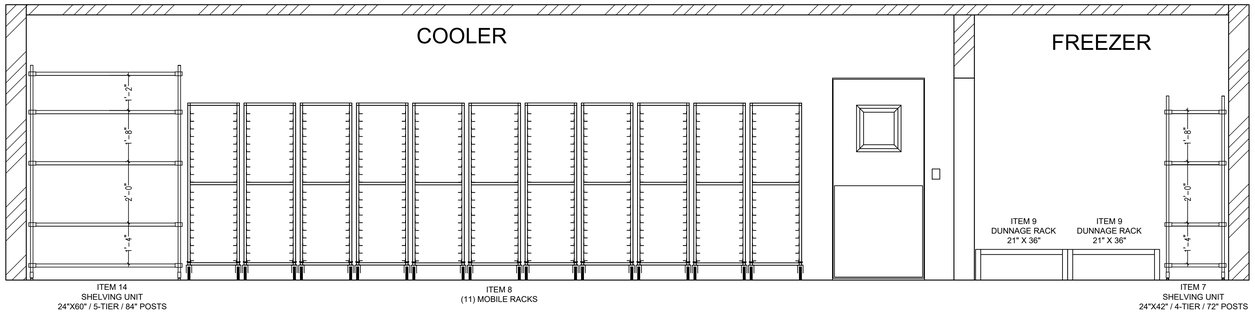
10150 BLOOMINGDALE AVE

RIVERVIEW, FL 33578

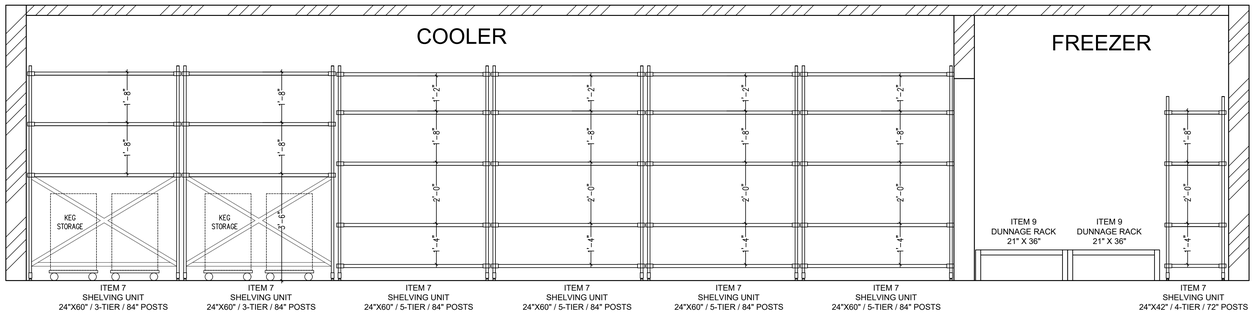
RIVERVIEW, FL

FOOD SERVICE
ELEVATIONS

FS-4.3



ELEVATION 23 - 1/2" = 1'-0"



ELEVATION 24 - 1/2" = 1'-0"

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RIVERVIEW, FL

FOOD SERVICE
ELEVATIONS

FS-4.4

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
	CONDUIT
	CONDUIT IN OR UNDER FLOOR
	CONDUIT STUBBED UP
	CONDUIT STUBBED DOWN
	TELEPHONE SYSTEM CONDUIT
	CONTINUATION
H-1,3,5	THREE (3) ONE-POLE CIRCUITS
H-1/3/5	ONE (1) THREE-POLE CIRCUIT
	2X4 FLUORESCENT LIGHTING FIXTURE NORMAL/EMERGENCY
	2X2 FLUORESCENT LIGHTING FIXTURE NORMAL/EMERGENCY
	1X4 FLUORESCENT LIGHTING FIXTURE
	FLUORESCENT LIGHTING FIXTURE, WALL MTD. NORMAL/EMERGENCY
	FLUORESCENT STRIP FIXTURE, NORMAL/EMERGENCY
	UNDERCABINET FIXTURE (VERIFY LENGTHS)
	RECESSED DOWNLIGHT, NORMAL/EMERGENCY
	PENDANT FIXTURE
	WALL WASHER
	WALL MOUNTED FIXTURE, NORMAL/EMERGENCY
	WALL PACK FIXTURE, NORMAL/EMERGENCY
	LIGHTING TRACK WITH TRACK FIXTURES
	FAN/LIGHT COMBINATION FIXTURE
	FLOOD LIGHT FIXTURE
	SINGLE HEAD POLE LIGHT FIXTURE
	DUAL HEAD POLE LIGHT FIXTURE
	THREE HEAD POLE LIGHT FIXTURE
	FOUR HEAD POLE LIGHT FIXTURE
	EXIT LIGHT FIXTURE - FACES & CHEVRONS AS SHOWN
	WALL MOUNTED EXIT LIGHT FIXTURE
	EMERGENCY BATTERY PACK LIGHT
	COMBINATION EXIT/EMERGENCY BATTERY PACK LIGHT
	REMOTE EMERGENCY HEAD
$	SINGLE POLE TOGGLE SWITCH
$3	THREE-WAY TOGGLE SWITCH
$4	FOUR-WAY TOGGLE SWITCH
$OS	OCCUPANCY SENSOR WALL SWITCH
$MC	MOMENTARY CONTROL SWITCH
$M	MOTOR RATED SWITCH W/THERMAL OVERLOAD
$K	KEY OPERATED SWITCH
$T	SWITCH WITH TIMER
	DIMMER SWITCH
OS	CEILING OCCUPANCY SENSOR
OS	WALL OCCUPANCY SENSOR
TC	TIME CLOCK
PC	PHOTOCELL

SYMBOL	DESCRIPTION
	SIMPLEX RECEPTACLE, WALL/ABOVE CTR/FLR/CEILING
	DUPLEX RECEPTACLE, WALL/ABOVE CTR/FLR/CEILING
	QUADRUPLEX RECEPTACLE, WALL/ABOVE CTR/FLR/CEILING
GFCI	GROUND FAULT CIRCUIT INTERRUPTER RCPT.
	GFCI RCPT., WALL/ABOVE CTR/WEATHERPROOF
	USB DUPLEX RECEPTACLE
	ISOLATED GROUND DUPLEX RECEPTACLE
	ISOLATED GROUND QUAD. RECEPTACLE
	HALF-SWITCHED DUPLEX RECEPTACLE
	POKE-THROUGH DEVICE
	SPECIAL RECEPTACLE AS NOTED
J	CEILING MOUNTED JUNCTION BOX
J	WALL JUNCTION BOX
	FURNITURE/EQUIPMENT CONNECTION
	POWER POLE
	MULTI-OUTLET ASSEMBLY (PLUGMOLD)
	PANELBOARD, SURFACE MOUNTED
	PANELBOARD, FLUSH MOUNTED
	DISTRIBUTION PANEL/SWITCHBOARD
	WIREWAY
M	METER
	MOTOR CONNECTION
	NON-FUSED DISCONNECT SWITCH
XX/Y/ZZAF	FUSED DISCONNECT SWITCH. XX-SWITCH RATING, Y-NUMBER OF POLES, ZZAF-FUSE RATING
XX	MAGNETIC MOTOR STARTER. XX-SIZE INDICATED
	COMB. MAGNETIC STARTER/DISC SWITCH
	VFD
	LOW VOLTAGE TRANSFORMER
	GROUND BAR
	AUTOMATIC TRANSFER SWITCH
	PUSHBUTTON
	TELEPHONE OUTLET, WALL/ABOVE CTR/FLR/CEILING
	DATA OUTLET, WALL/ABOVE CTR/FLR/CEILING
	COMBINATION TELE./DATA OUTLET, WALL/AC/FLR/CLG
TV	FLOOR TV OUTLET
TV	WALL TV OUTLET
TV	CEILING MOUNTED TV OUTLET
	TELEPHONE BACKBOARD

NOTE: NOT ALL SYMBOLS MAY APPLY - REFER TO FLOOR PLANS

FIRE ALARM SYSTEM

A COMPLETE AND OPERATIONAL FIRE ALARM SYSTEM SHALL BE PROVIDED AND INSTALLED THROUGHOUT THE ENTIRE AREA OF THE BUILDING, AS REQUIRED, BY A FIRM LICENSED TO DESIGN AND INSTALL FIRE ALARM SYSTEMS IN THE PHYSICAL JURISDICTION OF THE BUILIDING(S) IN WHICH THE SYSTEM IS TO BE INSTALLED. THE FIRM SHALL HAVE ALL CREDENTIALS AND PROOF OF REQUIRED INSURANCE SUBMITTED WITH THE BID DOCUMENTS. COMPETE FIRE ALARM PLANS AND EQUIPMENT CUTSHEETS FOR ALL FIRE ALARM EQUIPMENT SHALL BE SUBMITTED TO THE LOCAL AUTHORITY HAVING JURISDICTION FOR REVIEW, APPROVAL AND PERMIT PRIOR TO INSTALLATION. SUBMITTAL DOCUMENTS SHALL INCLUDE VOLTAGE DROP CALCULATIONS FOR ALL FIRE ALARM CONDUCTORS. ALL OF THE SUBMITTAL DOCUMENTS SHALL BE SUBMITTED TO THE DESIGN TEAM AND ENGINEER FOR REVIEW TO ENSURE THE SYSTEM DOES NOT, WITHIN THE LIMITS OF THE APPLICABLE CODES AND REQUIREMENTS, CONFLICT WITH THE ARCHITECTURAL INTENT OF THE BUILDING(S).

THE COMPLETED FIRE ALARM SYSTEM SHALL BE AN INTELLIGENT ADDRESSABLE SYSTEM AND SHALL BE IN COMPLIANCE WITH ALL APPLICABLE CODES AND STANDARDS. THE SYSTEM SHALL INCLUDE ALL DEVICES SUCH AS, BUT NOT LIMITED TO, FLOW AND TAMPER SWITCHES, SMOKE DETECTORS, HEAT DETECTORS, DUCT SMOKE DETECTORS, IN THE SUPPLY AND/OR RETURN AS REQUIRED BY CODE AND BY THE LOCAL AUTHORITY HAVING JURISDICTION, DETECTORS AT ALL FIRE / SMOKE DAMPERS, SHUNT / TRIP CONTROL OF ELEVATORS, NOTIFICATION DEVICES AS REQUIRED BY APPLICABLE CODE, LOCAL AUTHORITY HAVING JURISDICTION, AND THE OWNER'S DESIGN STANDARDS. NOTIFICATION DEVICES SHALL BE IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT OF 1990 AND ALL OTHER SUCH LOCAL CODES. THE FIRE ALARM SYSTEM SHALL BE EQUIPPED WITH A COMPUTER BASED CONTROL SOFTWARE PACKAGE THAT WILL PROVIDE FOR OFF-SITE MONITORING AND CONTROL. THE CONTROL SYSTEM SHALL BE CAPABLE OF PROVIDING GRAPHIC DISPLAY SHOWING LOCATIONS AND STATE OF THE FIRE ALARM DEVICES. THE FIRE ALARM CONTROL SYSTEM SHALL BE CAPABLE OF PRODUCING A COMPLETE HISTORY LOG OR REPORT.

THE CONTRACTOR SHALL BE FAMILIAR WITH ALL APPLICABLE CODES, REQUIREMENTS BY THE LOCAL AUTHORITY HAVING JURISDICTION, AND THE OWNERS STANDARDS FOR CONSTRUCTION AND OPERATION OF FIRE ALARM SYSTEMS. ANY CHANGES TO THE FINAL INSTALLATION DUE TO THE CONTRACTOR NOT HAVING BEEN AWARE OF ANY OF THE ABOVE SHALL BE MADE A NO COST TO THE OWNER, ENGINEER, OR DESIGN TEAM.

FIRE ALARM DEVICES ON THESE DRAWINGS DO NOT CONSTITUTE A COMPLETE FIRE ALARM SYSTEM DESIGN. THEY ARE SHOWN FOR COORDINATION AND PREFERRED DEVICE LOCATION PURPOSES.

FIRE ALARM LEGEND

SYMBOL	DESCRIPTION
	CEILING MOUNTED SMOKE DETECTOR
D	DUCT MOUNTED SMOKE DETECTOR
	UNDERFLOOR MTD. SMOKE DETECTOR
D	UNDERFLOOR DUCT MTD. SMOKE DETECTOR
	CEILING MOUNTED HEAT DETECTOR
BT	SMOKE BEAM TRANSMITTER
BR	SMOKE BEAM RECEIVER
F	MANUAL PULL STATION
F	FIRE ALARM HORN-WALL MOUNT
	FIRE ALARM AUDIO/VISUAL SIGNAL-WALL MT
	FIRE ALARM VISUAL SIGNAL-WALL MOUNT
	FIRE ALARM AUDIO/VISUAL SIGNAL-CEILING MOUNT
	FIRE ALARM VISUAL SIGNAL-CEILING MOUNT
F	FIRE ALARM SPEAKER/STROBE-CEILING MOUNT
	FIRE ALARM FLAME DETECTOR-CEILING MOUNT
	FIREMAN HANDSET JACK
F	EMERGENCY TELEPHONE
FS TS	WATERFLOW & TAMPER SWITCH
FCP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR PANEL

NOTE: NOT ALL SYMBOLS USED

KITCHEN EQUIPMENT ELECTRICAL CONNECTION SCHEDULE

ITEM NO.	DESCRIPTION	TYPE	VOLTAGE	PHASE	AMPS	HGT AFF	REMARKS	CIRCUIT NUMBER
E1	WALK-IN COOLER	BTC THRU JUNCTION BOX	120 V	1	5.0 A	112"	DIV. 16 TO MOUNT & WIRE KEC FURNISHED LIGHTS SHIPPED LOOSE	B-16
E2	EVAPORATOR COIL	BTC THRU JUNCTION BOX	120 V	1	1.6 A	112"		C-25
E2	EVAPORATOR COIL	BTC THRU JUNCTION BOX	120 V	1	1.6 A	112"		C-25
E2	EVAPORATOR COIL	BTC THRU JUNCTION BOX	120 V	1	1.6 A	108"		C-27
E3	REMOTE CONDENSING UNIT, AIR COOLED	BTC THRU JUNCTION BOX	208 V	3	16.6 A			B-2,4,6
E11	WALK-IN FREEZER	BTC THRU JUNCTION BOX	120 V	1	5.0 A	112"	DIV. 16 TO MOUNT & WIRE KEC FURNISHED LIGHTS SHIPPED LOOSE & INTERWIRE DOOR HEATER	B-29
E12	EVAPORATOR COIL	BTC THRU JUNCTION BOX	208 V	3	0.5 A	112"		C-26,28,30
E13	REMOTE CONDENSING UNIT, AIR COOLED	BTC THRU JUNCTION BOX	208 V	3	12.6 A			M-30,32,34
E22	AIR CURTAIN	SIMPLEX NEMA 5-20R	120 V	1	10.0 A	90"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	A-22
E22	AIR CURTAIN	SIMPLEX NEMA 5-20R	120 V	1	10.0 A	90"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	A-26
E28	CONDENSATE HOOD	BTC THRU JUNCTION BOX	120 V	1	15.0 A	48"		D-33
E29	DISHWASHER, CONVEYOR TYPE	BTC THRU JUNCTION BOX	208 V	3	56.0 A	72"	DIV. 16 TO FURNISH & INSTALL DISCONNECT SWITCH	MDP-37,39,41
E35	AIR CURTAIN	SIMPLEX NEMA 5-20R	120 V	1	10.0 A	90"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-24
E36	FREEZER COUNTER, WORK TOP	SIMPLEX NEMA 5-20R	120 V	1	4.7 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-1
E38	FOOD PROCESSOR, BENCHTOP/COUNTERTOP	SIMPLEX NEMA 5-20R	120 V	1	12.0 A	48"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	C-16
E39	SALAD/VEGETABLE DRYER, ELECTRIC	SIMPLEX NEMA 5-20R	120 V	1	2.5 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	C-4
E46	FOOD SLICER, ELECTRIC	SIMPLEX NEMA 5-20R	120 V	1	7.0 A	48"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	C-12
E51	FOOT-OPERATED IMPULSE BAG SEALER	SIMPLEX NEMA 5-20R	120 V	1	8.0 A	48"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	C-18
E52	MINI CHILL UNIT	SIMPLEX NEMA 5-20R	120 V	1	3.5 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	C-20
E52	MINI CHILL UNIT	SIMPLEX NEMA 5-20R	120 V	1	3.5 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-5
E53	PROOFER CABINET, MOBILE, UNDERCOUNTER	SIMPLEX NEMA 5-20R	120 V	1	15.8 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-7
E57	30 QUART MIXER	SIMPLEX NEMA 5-20R	120 V	1	15.0 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	C-2
E63	RETHERMALIZER, WATER TANK, ELECTRIC	SIMPLEX NEMA L6-30P	208 V	1	28.8 A	48"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	C-22,24
E65	HEATED CABINET, MOBILE	SIMPLEX NEMA 5-20R	120 V	1	16.0 A	78"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	C-13
E66	THAW BOX	SIMPLEX NEMA 5-20R	120 V	1	7.2 A	86"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	C-10
E71	OIL COLLECTION SYSTEM	SIMPLEX NEMA 5-20R	120 V	1	8.4 A	96"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-36
E74	FRYER OIL DISPOSAL CART	SIMPLEX NEMA 5-20R	120 V	1	12.0 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-34
E79	REFRIGERATED BATTER STATION	SIMPLEX NEMA 5-20R	120 V	1	10.0 A	16"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	C-8
E82	HOT FOOD WELL	SIMPLEX NEMA 5-20R	120 V	1	3.3 A	48"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-41
E85A	REFRIGERATOR PREP TABLE	SIMPLEX NEMA 5-20R	120 V	1	4.7 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-32
E99	SALAD PREP/PANTRY REFRIGERATOR	SIMPLEX NEMA 5-20R	120 V	1	6.5 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	C-7
E100	TORTILLA PRESS	SIMPLEX NEMA 5-20R	120 V	1	15.0 A	48"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-26
E101	TOASTER, CONTACT GRILL, CONVEYOR TYPE	SIMPLEX NEMA 6-20R	208 V	1	13.5 A	72"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	C-9,11
E105	METRO CARRYOUT STATION (HOT)	SIMPLEX NEMA 5-20R	120 V	1	10.0 A	48"		B-18
E106	MICROWAVE OVEN	SIMPLEX NEMA 6-15R	208 V	1	15.3 A	72"	BUILT INTO #131 EXPO COUNTER; DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-21,23
E106	MICROWAVE OVEN	SIMPLEX NEMA 6-15R	208 V	1	15.3 A	72"	BUILT INTO #131 EXPO COUNTER; DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-25,27
E106	MICROWAVE OVEN	SIMPLEX NEMA 6-15R	208 V	1	15.3 A	72"		B-37,39
E107	REFRIGERATOR PREP TABLE	SIMPLEX NEMA 5-20R	120 V	1	6.5 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	C-1
E108	HEAT LAMP, STRIP TYPE	BTC THRU JUNCTION BOX	208 V	1	17.5 A	108"	POWER FROM REMOTE CONTROL BOXES (ITEM 108.1) DIV. 16 TO INTERWIRE TO REMOTE CONTROL BOXES AS REQ'D.	B-8,10
E116	HOT FOOD WELL TABLE, ELECTRIC	SIMPLEX NEMA 6-30R	208 V	1	15.0 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	C-3,5
E118	CROISSANT SERVER W/STAND	SIMPLEX NEMA 5-20R	120 V	1	11.9 A	48"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	C-15
E121	THERMO FINISHER	SIMPLEX NEMA 6-20R	208 V	1	16.0 A	18"		A-31,33
E122	HOT FOOD WELL TABLE, ELECTRIC	SIMPLEX NEMA 5-30R	120 V	1	17.0 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-28
E126	BOOSTER HEATER, ELECTRIC	BTC THRU JUNCTION BOX	208 V	3	83.3 A	24"	DIV. 16 TO FURNISH & INSTALL DISCONNECT SWITCH	MDP-31,33,35
E130	NACHO CHIP WARMER, BULK	SIMPLEX NEMA 5-20R	120 V	1	12.6 A	48"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-36
E131	EXPO COUNTER, REFRIGERATED	BTC THRU JUNCTION BOX	120 V	1	20.0 A	16"	VERIFY FINAL ELECTRICAL REQUIREMENTS WTIH (KEC) FABRICATOR'S SHOP DRAWINGS.	B-19
E132	FOOD WARMER	SIMPLEX NEMA 5-20R	120 V	1	13.8 A	44"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-14
E134	UNDER COUNTER REFRIGERATOR	SIMPLEX NEMA 5-20R	120 V	1	2.5 A	18"	BUILT INTO #131 EXPO COUNTER; DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-12
E136	ICE CREAM DIPPING CABINET, DROP-IN	SIMPLEX NEMA 5-20R	120 V	1	1.6 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-34
E141	HEAT LAMP, STRIP TYPE	BTC THRU JUNCTION BOX	208 V	1	23.2 A	108"	ELECTRICIAN TO BRING SERVICE DOWN FROM CEILING VIA S/S CHASE INTEGRAL WITH OVERSHELF, ITEM #114, BTC @ CONTROL HOUSING IN EQUIPMENT.	B-20,22
E143	CUBER ICE MACHINE	BTC THRU JUNCTION BOX	208 V	3	8.4 A	98"		M-24,26,28
~~E143~~	~~CUBER ICE MACHINE~~	~~BTC THRU JUNCTION BOX~~	~~208 V~~	~~3~~	~~8.4 A~~	~~98"~~		~~M-18,20,22~~
E143b	CUBER ICE MACHINE	SIMPLEX NEMA 5-20R	120 V	1	3.0 A	98"		M-36
E143b	CUBER ICE MACHINE	SIMPLEX NEMA 5-20R	120 V	1	3.0 A	98"		M-37
E148	CARBONATOR	BTC THRU JUNCTION BOX	120 V	1	16.0 A	86"	VERIFY FINAL ELECTRICAL REQUIREMENTS WITH EQUIPMENT PROVIDED.	D-20
E148	CARBONATOR	BTC THRU JUNCTION BOX	120 V	1	16.0 A	86"	VERIFY FINAL ELECTRICAL REQUIREMENTS WITH EQUIPMENT PROVIDED.	D-22
E148	CARBONATOR	BTC THRU JUNCTION BOX	120 V	1	16.0 A	86"	VERIFY FINAL ELECTRICAL REQUIREMENTS WITH EQUIPMENT PROVIDED.	D-26
E152	SALAD PREP TABLE	SIMPLEX NEMA 5-20R	120 V	1	6.5 A	18"		B-3
E160	TEA BREWER	SIMPLEX NEMA 5-20R	120 V	1	14.0 A	54"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-11
E160	TEA BREWER	SIMPLEX NEMA 5-20R	120 V	1	14.0 A	54"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-15
E161	COFFEE MAKER	SIMPLEX NEMA 5-20R	120 V	1	15.0 A	54"	VERIFY FINAL ELECTRICAL REQUIREMENTS WITH EQUIPMENT PROVIDED.	B-13
E162	LEMONADE DISPENSER	SIMPLEX NEMA 5-20R	120 V	1	15.0 A	54"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-7
E164	SODA ICE & BEVERAGE DISPENSER	SIMPLEX NEMA 5-20R	120 V	1	15.0 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-5
E164	SODA ICE & BEVERAGE DISPENSER	SIMPLEX NEMA 5-20R	120 V	1	15.0 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	B-17
E190.1	FIRE SUPPRESSION SYSTEM	BTC THRU JUNCTION BOX	120 V	1	1.5 A	108"		D-10
E190.2	HOOD CONTROL PANEL	BTC THRU JUNCTION BOX	120 V	1	1.5 A	108"		A-25
E191.1	FIRE SUPPRESSION SYSTEM	BTC THRU JUNCTION BOX	120 V	1	1.5 A	108"		C-6
E198	POS - BUMP SCREEN	DUPLEX NEMA 5-20R	120 V	1	15.0 A	64"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	E-1
E198	POS - BUMP SCREEN	DUPLEX NEMA 5-20R	120 V	1	15.0 A	64"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	E-3
E201.1	CONVENIENCE OUTLET	DUPLEX NEMA 5-20R	120 V	1	1.5 A		DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-8
E201.1	CONVENIENCE OUTLET	DUPLEX NEMA 5-20R	120 V	1	1.5 A		DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-8
E201.1	CONVENIENCE OUTLET	DUPLEX NEMA 5-20R	120 V	1	1.5 A		DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-8
E201.2	CONVENIENCE OUTLET	DUPLEX NEMA 5-20R	120 V	1	1.5 A		DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-28
E201.2	CONVENIENCE OUTLET	DUPLEX NEMA 5-20R	120 V	1	1.5 A		DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-28
E201.2	CONVENIENCE OUTLET	DUPLEX NEMA 5-20R	120 V	1	1.5 A		DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-28
E201.2	CONVENIENCE OUTLET	DUPLEX NEMA 5-20R	120 V	1	1.5 A		DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-28
E201.3	CONVENIENCE OUTLET	DUPLEX NEMA 5-20R	120 V	1	1.5 A		DIV. 16 TO MOUNT OUTLET HORIZONTALLY	A-40
E201.3	CONVENIENCE OUTLET	DUPLEX NEMA 5-20R	120 V	1	1.5 A		DIV. 16 TO MOUNT OUTLET HORIZONTALLY	A-40
E202	CONVENIENCE OUTLET	DUPLEX NEMA 5-20R	120 V	1	1.5 A		DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-37
E202	CONVENIENCE OUTLET	DUPLEX NEMA 5-20R	120 V	1	1.5 A		DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-37
E211	BLENDER, BAR	SIMPLEX NEMA 5-20R	120 V	1	11.5 A	12"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-4
E223	UNDERCOUNTER REFRIGERATOR, REACH-IN	SIMPLEX NEMA 5-20R	120 V	1	3.0 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-38
E225	GLASS FROSTER	SIMPLEX NEMA 5-20R	120 V	1	4.0 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-2
E226	LIQUOR BOTTLE DISPLAY, COUNTERTOP	SIMPLEX NEMA 5-20R	120 V	1	2.0 A	54"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-6
E226	LIQUOR BOTTLE DISPLAY, COUNTERTOP	SIMPLEX NEMA 5-20R	120 V	1	2.0 A	54"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-12
E228	BACKBAR REFRIGERATOR	SIMPLEX NEMA 5-20R	120 V	1	4.2 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-42
E229	FROZEN DRINK MACHINE - AIR COOLED	SIMPLEX NEMA 5-20R	120 V	1	26.0 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-39
E231	BACKBAR REFRIGERATOR	SIMPLEX NEMA 5-20R	120 V	1	9.0 A	18"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	D-35
E235	POS - CASH REGISTER	DUPLEX NEMA 5-20R	120 V	1	15.0 A	48"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	E-2
E235	POS - CASH REGISTER	DUPLEX NEMA 5-20R	120 V	1	15.0 A	48"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	E-2
E235	POS - CASH REGISTER	DUPLEX NEMA 5-20R	120 V	1	15.0 A	48"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	E-18
E236	POS - PRINTER	DUPLEX NEMA 5-20R	120 V	1	15.0 A	48"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	E-11
E236	POS - PRINTER	DUPLEX NEMA 5-20R	120 V	1	15.0 A	48"	DIV. 16 TO MOUNT OUTLET HORIZONTALLY	E-13

LIGHTING FIXTURE SCHEDULE

NOTES:

A. FINAL FIXTURE SELECTIONS SHALL BE SUBMITTED TO AND APPROVED BY OWNER.
B. CONTRACTOR SHALL PROVIDE ALL NECESSARY HARDWARE, ACCESSORIES, AND INSTALLATION TO MAINTAIN THE INTEGRITY OF ANY FIRE RATED ASSEMBLIES IN WHICH FIXTURES ARE INSTALLED.
C. ALL MOUNTING HEIGHTS SHALL BE CONFIRMED WITH ARCHITECTURAL PLANS OR ARCHITECT PRIOR TO ROUGH-IN.
D. PROVIDE ALL EMERGENCY FIXTURES AND NIGHTLIGHTS WITH MINIMUM 90 MINUTE, BATTERY BACKUP/INVERTER. SEE ELECTRICAL LIGHTING PLAN(S) FOR EXACT LOCATIONS.
E. LAMP COLOR TEMPERATURES SHALL BE UNIFORM THROUGHOUT THE INSTALLATION UNLESS NOTED OTHERWISE.
F. EXTERIOR FIXTURES SHALL BE U.L.-LISTED FOR DAMP OR WET LOCATIONS AS REQUIRED BY THE INSTALLATION.
G. CONTRACTOR SHALL PROVIDE EXTERIOR FIXTURES WITH ALL ACCESSORIES AS REQUIRED TO COMPLY WITH LOCAL LIGHTING ORDINANCES.
H. CONTRACTOR SHALL VERIFY DIMMING METHODS FOR DIMMED FIXTURES WITH DIMMER SWITCHES/CONTROLS BEFORE PURCHASE.
I. ALL FIXTURES WITHIN FOOD PREPARATION AREAS SHALL HAVE SHATTERPROOF LAMPS OR PROTECTIVE SHATTERPROOF SHIELD.
J. CONTRACTOR SHALL COORDINATE LENGTHS OF COVE AND UNDERCABINET LIGHTING WITH THE SPACE TO BE INSTALLED AND PROVIDE ACCORDINGLY.
K. REFER TO SHEET ES.1 FOR SITE LIGHT FIXTURE SCHEDULE.
L. ELECTRICAL CONTRACTOR SHALL PURCHASE MATERIAL FROM OWNER'S VENDOR CAPITAL LIGHTING, NO EXCEPTIONS.
CAPITAL LIGHT CONTACT: ANGELA McCOY - NATIONAL SALES MANAGER
MOBILE: 860.520.2387

TYPE	DESCRIPTION	MANUFACTURER	MODEL	LAMPS	WATTAGE	REMARKS
A	RECESSED EYEBALL	LOTUS LED LIGHTS	LRG3-27K-BK-15-FRP312	(1) 7.5W LED 2700K 15 DEGREE BEAM	7.5 W	RECESSED, 120V., WITH BLACK TRIM RING
A1	RECESSED EYEBALL	LOTUS LED LIGHTS	LRG3-27K-BK-FRP312	(1) 7.5W LED 2700K 38 DEGREE BEAM	7.5 W	RECESSED, 120V., WITH BLACK TRIM RING
A2	4" ADJUSTABLE RECESSED EYEBALL	CONTECH LIGHTING	LVR16-LRT-181-CTR1624-B	(1) 50W LED	50.0 W	RECESSED, 120V., WITH BLACK TRIM RING
AA	4' LED WALL GRAZER	BOCA FLASHER	NANOLUME 6W-27K-15X40-120V-W-2-C-4FT	6W PER LINEAR FOOT	6.0 W	
B	NOT USED				0.0 W	
C	RECESSED DOWNLIGHT	LOTUS LED LIGHTS	LL4RRG-27K-BK-FRP4	(1) 14.5W LED 2700K 92 DEGREE BEAM	14.5 W	RECESSED WITH BLACK TRIM RING, 120V, CONTROLLED WITH CEILING SENSOR (LEVITON ODCOS-ILW) AND WALL SENSOR (LEVITON OSSMT-MDW) CONNECTED IN PARALLEL
D	CHANDELIER	METROPOLITAN	N3708-BP	(8) 9W/60A19F	72.0 W	SURFACE MOUNTED SUSPENDED FROM CEILING, 120V.
D2	CHANDELIER	METROPOLITAN	N3715-BP	(5) 9W/A19	45.0 W	SURFACE MOUNTED SUSPENDED FROM CEILING, 120V.
G4	L.E.D. WALL GRAZER	BOCA FLASHER	HPNLS-LO8-2700K-10X60-120V-B-W-S-C-SPBBL	10W/LF LED	10.0 W	MOUNT TO TOP OF ENTRY CANOPY. COORDINATE EXACT LOCATION AND AIMING.
H	2 X 4 LED GRID TROFFER	MAXLITE	MFLP24EP4035	40W LED	40.0 W	40W LED
HE	2 X 4 LED GRID TROFFER	MAXLITE	MFLP24EP4035EM	40W LED	40.0 W	RECESS MOUNTED 120V. PROVIDE WITH 90 MINUTE BATTERY PACK.
L	TWIN HEAD EMERGENCY EGRESS LIGHT	LIGHTALARMS	LCA2LED-B	IN FIXTURE	4.0 W	SURFACE MOUNTED 120V. PROVIDED WITH 90 MINUTE BATTERY PACK.
L2	EXTERIOR EMERGENCY EGRESS LIGHT	LIGHTALARMS	ELF612D/LED	IN FIXTURE	4.0 W	EXTERIOR EMERGENCY EGRESS LIGHT. PROVIDED WITH 90 MINUTE BATTERY PACK.
L3	RECESSED CONCEALED EMERGENCY EGRESS LIGHT	LIGHTALARMS	APR-25-LC-UI-DL	IN FIXTURE	4.0 W	FIXTURE SHALL BE RECESSED IN CANOPY AND SHALL OPEN UPON LOSS OF POWER. COLOR SHALL MATCH CANOPY. PROVIDED WITH 90 MINUITE BATTERY PACK.
M2	SELF CONTAINED EMERGENCY EXIT SIGN	LIGHTALARMS	QLXN500RN-RID	IN FIXTURE	4.0 W	SURFACE MOUNTED WITH ADJUSTABLE BRACKET, 120V.
OL1	MAIN ENTRY GAS WALL SCONCE	LEGENDARY	AS1E1-W	GAS	0.0 W	SURFACE MOUNTED TO WALL; INSTALL VALVES AT FIXTURE LOCATIONS. REF PLBG AND ELEC DWGS FOR DETAILS.
OL3	RECESSED DOWNLIGHT	LOTUS LED LIGHTS	LL4RRG-27K-BK-FRP4	(1) 14.5W LED 2700K	14.5 W	RECESSED IN SOFFIT - SHIP WITH BLACK TRIM RINGS; 120V
OL4	WALL MOUNTED DECORATIVE SCONCE	TBD	TBD	5.5W LED	5.5 W	
OL5	WALL MOUNTED DECORATIVE SCONCE; RUBBED BRONZE; LOW VOLTAGE	KICHLER	16016-AZT-27 / XFMR: WAC LIGHTING 9150TRN-SS	5.5W LED	5.5 W	WALL MOUNTED - 120V, ELECTRICIAN TO INSTALL J-BOX IN MASONRY WALL AT 12" A.F.F. TO BOTTOM OF FIXTURE
OL8	ROOF MOUNTED LIGHT	RAB LIGHTING	LES13Y	13W LED	13.0 W	ROOF MOUNTED - REFER TO ELECTRICAL ROOF PLAN, E4.0 FOR LIGHT DIRECTION.
OL9	12V DORMER AND LANDSCAPE LIGHTING	KICHLER	16020AZT27	12W LED	12.0 W	MOUNT ON ROOF AIMED AT DORMERS. ROUTE CONDUIT UNDER ROOF. NO EXPOSED CONDUITS ON ROOF.
OL11	UTILITY-AREA WALL PACK	TBD	TBD	5.5W LED	25.0 W	
Q	PADDLE FAN IN MAIN DINNING ROOM	FANIMATION	CHEDDAR'S BLADES - ISP2-HANDLE	NO LAMPS	100.0 W	WALL MOUNTED. OLD CHICAGO FINISH. PALM LEAF BLADES.
Q1	CUSTOM LED DRUM PENDANT	CONTECH LIGHTING	RLMCHD802-Q1	SATCO S9629 9.5WA19/LED/2700K	9.5 W	PENDANT MOUNT, SUSPENDED FROM CEILING, 120V.
Q2	CUSTOM LED DRUM PENDANT CLUSTER	CONTECH LIGHTING	RLMCHD803-Q2	(3) SATCO S9629 9.5WA19/LED/2700K	28.5 W	PENDANT MOUNT, SUSPENDED FROM CEILING, 120V.
Q3	(3) SATCO S9629 9.5WA19/LED/2700K	CONTECH LIGHTING	RLMCHD804-Q3	(3) SATCO S9629 9.5WA19/LED/2700K	28.5 W	PENDANT MOUNT, SUSPENDED FROM CEILING, 120V.
R1	MONOPOINT LIGHT FIXTURE	LF ILLUMINATION	TXA01-B-J-13C-9227-W-D1-1-BB/OPT-TXA01B-SNBB/LA18B	(1) 15W LED 38 DEGREE BEAM	15.0 W	
U	32" UNDER CABINET	NORA LIGHTING	NUD-8832/27/W	7W/LF LED 2700K	28.0 W	SURFACE MOUNTED UNDER BAR ON BARTENDER SIDE 120V
W	HOOD LAMP	TBD	TBD	9W LED GREEN CREATIVE 977809A19DIM827	9.0 W	
Y	L.E.D. ROPE LIGHT	CONTECH LIGHTING	TLT-24V-1-27K-12R / TLP24VHW96-ENC /TLC1P12HW / TLACS6 / TLACS4 / TLALF6	1W PER FT, LED 3000K	1.0 W	MOUNT UNDER GRANITE COUNTER ON BAR SIDE
Y2	L.E.D. ROPE LIGHT	NOVAFLEX	PRO 120 0-RECESSED-2515-0 DRIVER: NF-PS-MAXX-96W-24V	3W PER FT, LED 2700K	3.0 W	MOUNT RECESSED IN SHELVING AND ON BACK OF CANTILEVERED SHELF
Y3	L.E.D. STICK LIGHT	FEELUX	NDF15-2700K-120V-C90	16W LED; 2700K	16.0 W	MOUNT INSIDE LIQUOR TIER BOX

CONDUIT TYPES

CONDUIT TYPE FOR EACH LOCATION:

INDOOR EXPOSED*: EMT, IMC, OR RMC.

INDOOR CONCEALED: EMT, IMC, RMC, METAL CLAD (MC)** / ARMOR CLAD (AC) CABLE**.

OUTDOOR UNDERGROUND: RMC OR PVC SCHEDULE 40**.

OUTDOOR ABOVE GROUND (EXPOSED TO WEATHER): GALVANIZED CORROSION-PROTECTIVE COATING RMC.

*EXPOSED LOCATIONS INCLUDE BELOW CEILING, SURFACE MOUNT LOCATION SUCH AS MECHANICAL ROOMS, FIRE SPRINKLER ROOMS, ELECTRICAL ROOMS, I.T. ROOMS, PLUMBING ROOMS, AND OTHER SIMILAR ROOMS.

**WHERE ALLOWED BY LOCAL CODES AND AHJ.

MEP ENGINEER:

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN EST 1979

Issue Date: 02.15.2023

REVISION INFORMATION

1	CITY COMMENTS	04.04.2023
2	COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

BLOOMINGDALE AVE &
GORNTO LAKE RD

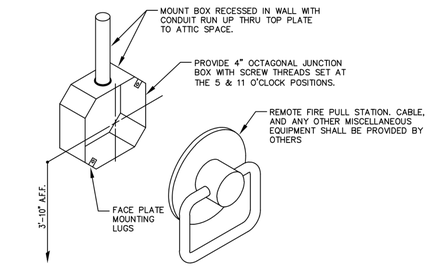
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:

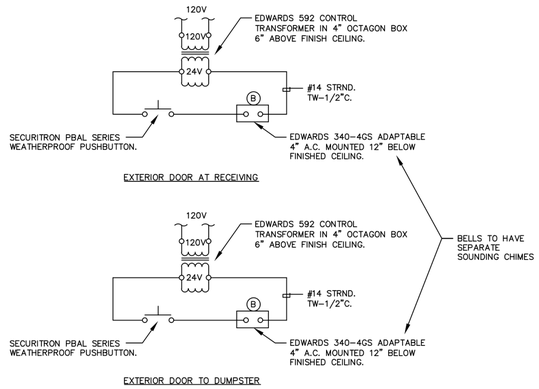
ELECTRICAL SCHEDULES

E0.1

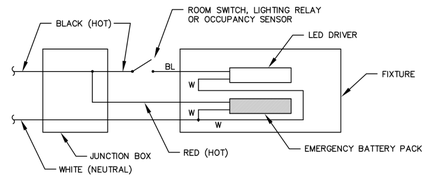


4/0 BOX WITH 1/2" TABS POSITIONED AS SHOWN WITH TABS IN UPPER RIGHT AND LOWER LEFT OF BOX. BOX TO BE 4'-0" A.F.F., 3/4" E.M.T. TO RUN FROM BOX TO 12" ABOVE CEILING LINE. ONE(1) 4/0 BOX IS TO BE PROVIDED FOR EACH PULL STATION. 4/0 BOX, 1/2" TABS, AND CONDUIT TO BE FURNISHED BY THE ELECTRICAL CONTRACTOR.

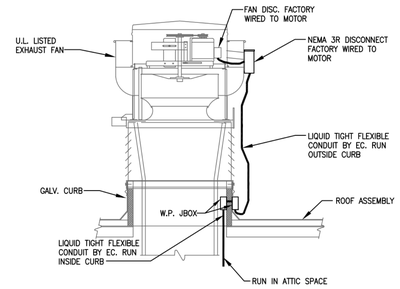
ANSUL PULL STATION DETAIL 1
SCALE: NONE



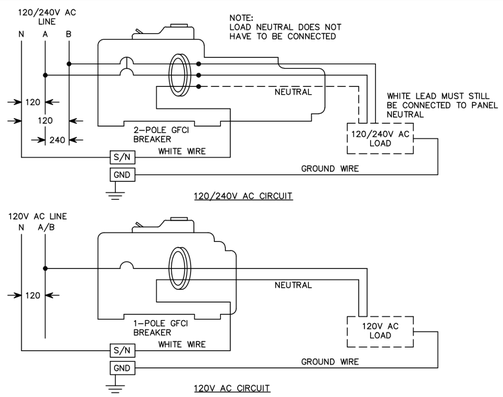
DOOR BELL WIRING DIAGRAM 2
SCALE: NONE



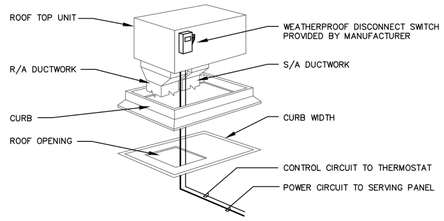
EMERGENCY LIGHTING WIRING DIAGRAM 3
SCALE: NONE



EXHAUST FAN ELECTRICAL CONNECTION DETAIL 4
SCALE: NONE



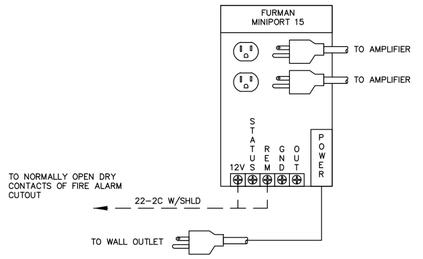
120V-1 POLE AND 208V-2-POLE GFCI BREAKER WIRING DIAGRAM 5
SCALE: NONE



NOTE:
ALL WIRING BY ELECTRICAL CONTRACTOR.

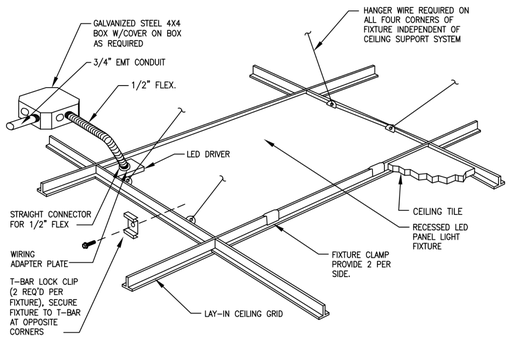
ROOF TOP UNIT WIRING DIAGRAM 6
SCALE: NONE

NOT USED 7
SCALE: NONE

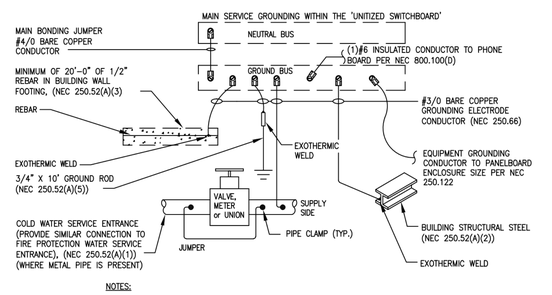


NOTE:
- CONTACT CLOSURE SWITCH IS NOT PROVIDED BY DMX. NORMALLY OPEN CONTACT SHALL BE PROVIDED BY THE CONTRACTOR.
- 22-2C W/SHLD TO THE CONTACT SWITCH REQUIRED.
- CONTRACTOR SHALL CONNECT THE CONTACT SWITCH.
- NOT ALL INSTALLATIONS WILL REQUIRE A "FIRE ALARM" CUT OFF SYSTEM.
- PLUG THE AMPLIFIER AC POWER INTO THE MINIPORT 15. WHEN CLOSURE OCCURS ON 12V AND REM CONTACT TERMINALS POWER IS REMOVED FROM THE AMPLIFIERS THUS SHUTTING DOWN THE MUSIC SOURCE.

FIRE CUT OFF WIRING DETAIL 8
SCALE: NONE



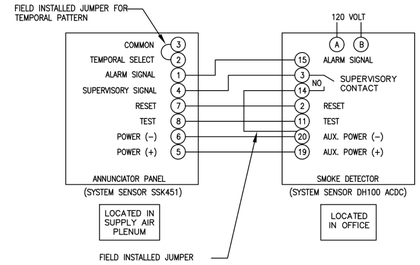
TYPICAL RECESSED LED PANEL FIXTURE MOUNTING DETAIL 9
SCALE: NONE



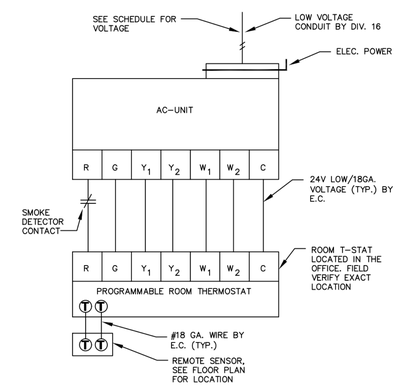
NOTES:

1. ALL GROUNDING SHALL BE INSTALLED IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
2. ALL GROUNDING ELECTRODE CONDUCTORS SHALL BE COPPER #3/0 UNLESS NOTED OTHERWISE.
3. REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL GROUNDING REQUIREMENTS.

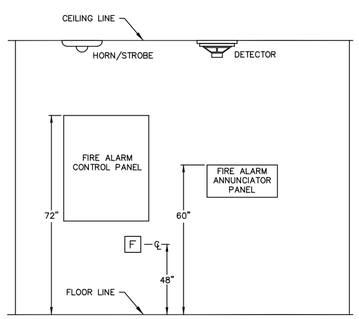
GROUNDING OF MAIN SERVICE ENTRANCE 10
SCALE: NONE



SMOKE DETECTOR WIRING DIAGRAM 11
SCALE: NONE



THERMOSTAT WIRING DIAGRAM 12
SCALE: NONE

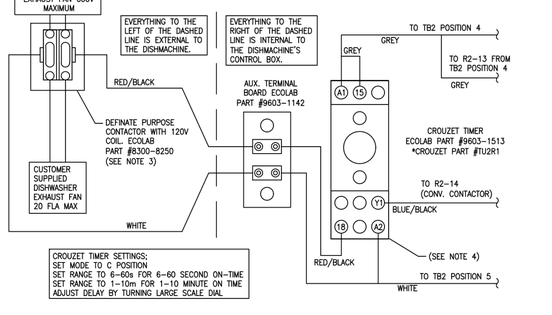


NOTE: HORN STROBE AND STROBE TO BE 80" TO BOTTOM OF LENSE.

TYPICAL FIRE ALARM ELEVATION DETAIL 13
SCALE: NONE

NOTES:

1. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL #12CU WIRING AND 3/4" CONDUIT AS REQUIRED.
2. TIMER, TERMINAL BOARD AND CONTACTOR PROVIDED BY DISHWASHER SUPPLIER, INSTALLED BY ELECTRICAL CONTRACTOR.
3. IN A SEPARATE BOX MOUNTED TO WALL, INSTALL CONTACTOR WITH A 120VAC COIL. BRING 120VAC INTO THIS BOX TO POWER THE FAN VIA CONTACTOR. EXTEND WIRES AS SHOWN ON DIAGRAM FROM TERMINAL STRIP TO CONTACTOR COIL. TIMER WILL USE MACHINES CONTROL VOLTAGE TO ENGAGE THE COIL.
4. REWIRE TIMER CIRCUIT IN MACHINE TO MATCH THIS CONFIGURATION.



DISHWASHER EXHAUST ELECTRICAL INTERCONNECTION SCHEMATIC 14
SCALE: NONE

NOT USED 15
SCALE: NONE

NOT USED 16
SCALE: NONE

MEP ENGINEER:

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Cheddar's SCRATCH KITCHEN

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Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

BLOOMINGDALE AVE & GORNTO LAKE RD

RIVERVIEW, FL 33578

RIVERVIEW, FL

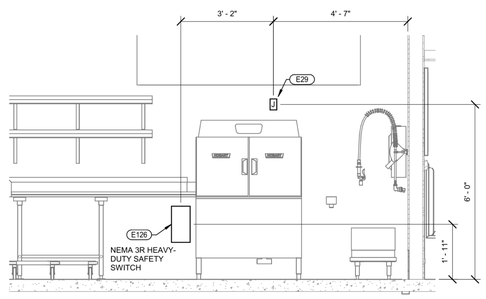
Drawing:
ELECTRICAL DETAILS

E0.2

NOT USED
SCALE: 1/2"=1'-0" | 1

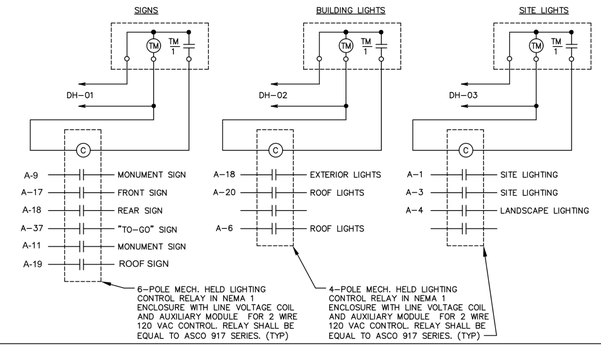
NOT USED
SCALE: 1/2"=1'-0" | 2

NOT USED
SCALE: 1/2"=1'-0" | 3

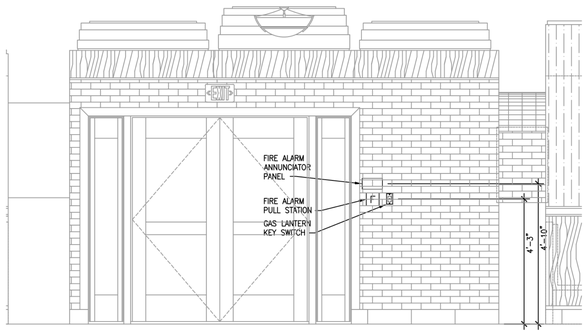


DISHROOM ELEVATION DETAIL
SCALE: 1/2"=1'-0" | 4

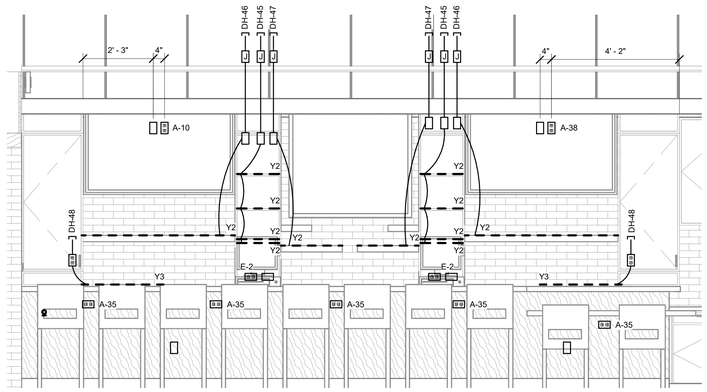
NOT USED
SCALE: 1/2"=1'-0" | 5



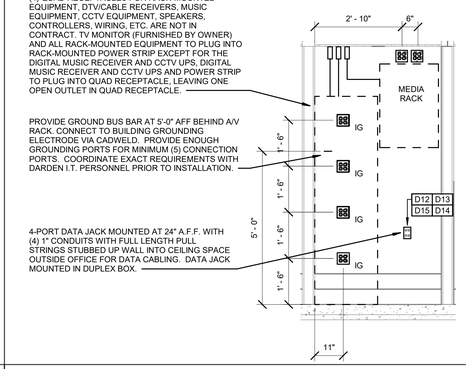
EXTERIOR LIGHTING DETAIL
SCALE: NONE | 6



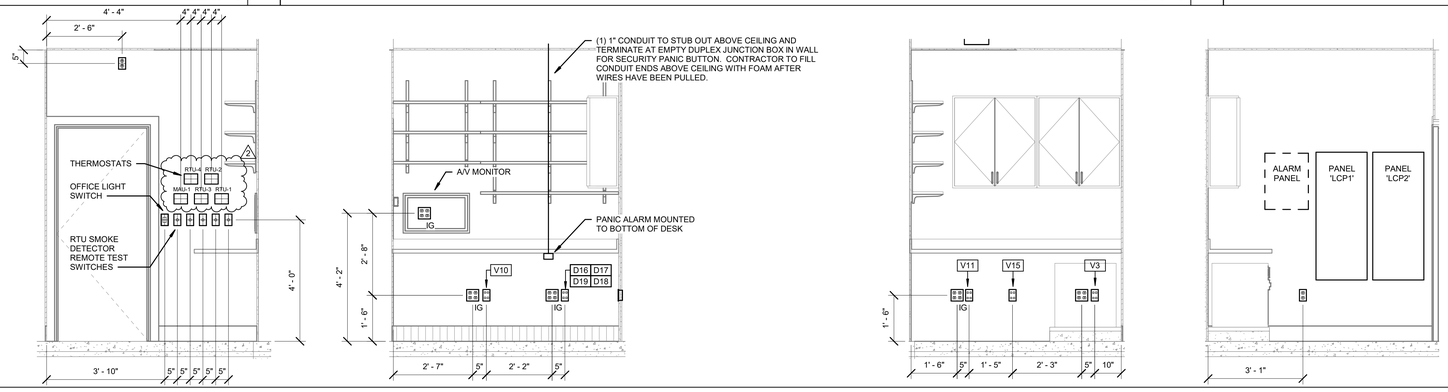
FRONT ENTRANCE ELEVATION
SCALE: 1/2"=1'-0" | 7



ELECTRICAL POWER BACK BAR ELEVATION
SCALE: 1/2"=1'-0" | 8



IT CLOSET ELEVATION
SCALE: 1/2"=1'-0" | 9



OFFICE ELEVATION - ELECTRICAL
SCALE: 1/2"=1'-0" | 10

MEP ENGINEER:

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DCH22007

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DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
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Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

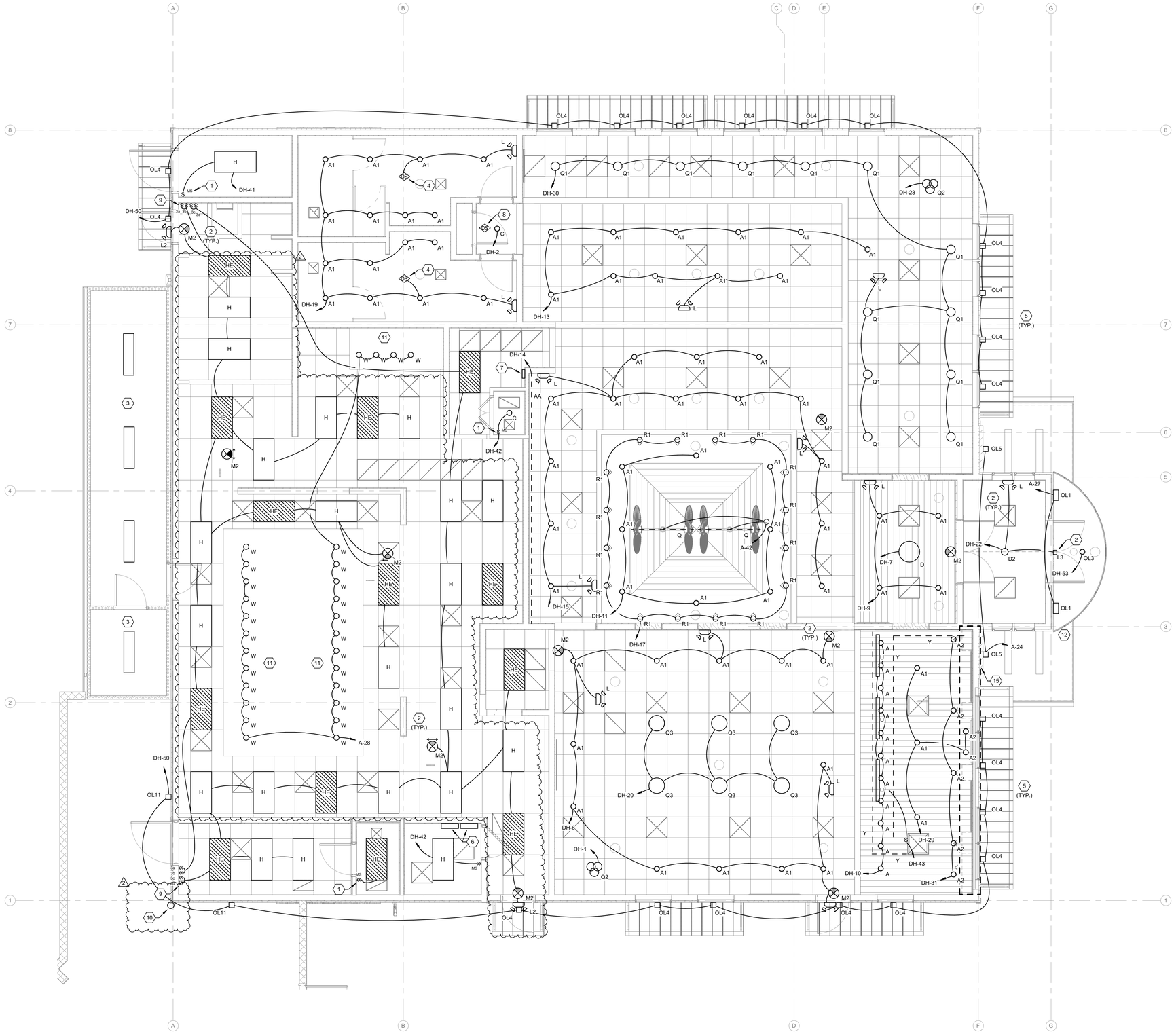
BLOOMINGDALE AVE & GORNTO LAKE RD

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
ELECTRICAL DETAILS

E0.3



LIGHTING FLOOR PLAN 1
1/4" = 1'-0"

GENERAL NOTES - E1.0

A.	VERIFY EXACT LOCATIONS OF ALL LIGHT FIXTURES AND SIGNS WITH ARCHITECTURAL DRAWINGS. VERIFY LOCATIONS OF SIGN CONNECTIONS WITH SIGN CONTRACTOR.
B.	PROVIDE ADDITIONAL BLOCKING WHERE NECESSARY TO INSTALL ALL LIGHTING AND POWER OUTLETS IN EXACT LOCATIONS.
C.	PROVIDE FIXTURE STUDS AND ADDITIONAL SUPPORT WHERE REQUIRED DUE TO THE WEIGHT OF THE FIXTURE.
D.	ALL FLEXIBLE METAL CONDUIT NOT CONCEALED IN WALLS OR ABOVE CEILING SHALL BE LIQUID TIGHT AND INSTALLED PER N.E.C., ARTICLE 351. ALL CONDUITS INSTALLED ABOVE THE CEILING, IN THE T-BAR CEILING AREAS SHALL BE INSTALLED ABOVE THE BOTTOM CORD OF THE TRUSSES. DROPS TO LIGHT FIXTURES SHALL BE DIRECTLY ABOVE THE FIXTURE.
E.	ALL LIGHT FIXTURE TRIMS SHALL SIT FLUSH WITH FINISHED CEILING. CHECK FOR "LIGHT LEAKS". ALL LIGHT FIXTURE REFLECTORS SHALL BE CLEANED OF ALL DIRT.
F.	LIGHTING PACKAGE IS PROVIDED BY OWNER AND INSTALLED BY ELECTRICAL CONTRACTOR.
G.	INSTALL TWO #12 GAUGE SAFETY HANGAR WIRES ON ALL TYPE "A" & "B" AND ONE WIRE ON TYPES L & N FIXTURES.
H.	OUTLET BOXES SHALL NOT BE USED AS SOLE SUPPORT FOR CEILING FANS, EXCEPT FOR LISTED FANS NOT EXCEEDING 35 LBS. IN WEIGHT CAN BE MOUNTED ON BOXES IDENTIFIED FOR SUCH USE.
I.	NO ARMORED CABLE IS ALLOWED, INCLUDING LIGHT FIXTURE WHIPS.
J.	REFER TO LIGHT FIXTURE SCHEDULE, DRAWING E3.1, FOR FIXTURE DESCRIPTIONS, MANUFACTURER AND MODEL NUMBERS.
K.	REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF LIGHT FIXTURES.
L.	REFER TO SP SHEETS FOR ELECTRICAL SPECIFICATIONS.
M.	ELECTRICAL CONTRACTOR TO COORDINATE LIGHT FIXTURE AIMING WITH ARCHITECT AFTER FURNITURE HAS BEEN SET UP.
N.	ALL SPEAKERS TO BE LOCATED AND INSTALLED AS SHOWN ON ARCHITECTURAL PLANS. ALL SPEAKERS SHALL BE BLACK IN COLOR, COORDINATE COLOR WITH ARCHITECT.
O.	ALL EXIT SIGNS AND EMERGENCY DRIVERS SHALL BE PROVIDED WITH AN UNSWITCHED HOT CONDUCTOR. BOTH SWITCHED AND UNSWITCHED HOT CONDUCTORS SHALL BE PROVIDED FOR FIXTURES WITH BOTH NORMAL AND EMERGENCY DRIVERS.

KEYNOTES - E1.0

1	PROVIDE WALL MOUNTED MOTION SENSOR. SENSOR SHALL BE WATT STOPPER #WI-300-W UNLESS NOTED OTHERWISE.
2	CONNECT EMERGENCY FIXTURES TO UNSWITCHED LEG OF CIRCUIT FOR NORMAL OPERATION. IN CASE OF POWER LOSS, FIXTURES EMERGENCY BATTERY WILL ENERGIZE THE FIXTURE.
3	REFER TO ELECTRICAL POWER PLAN FOR CONNECTION TO COOLER/FREEZER PROVIDED LIGHTS.
4	DUAL TECHNOLOGY OCCUPANCY SENSOR (LOS-CDT-2000R-WH) TO BE CEILING MOUNTED TO MAINTAIN BOTH RESTROOMS' LIGHTS ON WHEN OCCUPANCY IS DETECTED IN EITHER RESTROOM. CONTRACTOR SHALL FURNISH AND INSTALL 18AWG2 CONDUCTOR WIRE FROM EACH OCCUPANCY SENSOR TO LUTRON LCP PANEL.
5	REFER TO DETAIL SHEET 7/E0.2 FOR PLACEMENT OF LIGHT FIXTURE TYPE 'G2'.
6	DIMMER CONTROL PANEL (PANEL 'LCP1' AND 'LCP2') WITH REMOTE DIMMER CONTROL PAD FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO DIMMER PANELS.
7	DIMMER CONTROL STATION MOUNTED ON WALL AT 48" AFF. PROVIDE ALL CABLING AS REQUIRED FROM LUTRON CONTROL PANEL TO CONTROL STATION.
8	INFRARED OCCUPANCY SENSOR (LOS-CDT-2000R-WH) TO BE MOUNTED AT CEILING AND SHALL ACTIVATE BOTH RESTROOMS' LIGHTS UPON DETECTION OF MOTION. CONTRACTOR SHALL FURNISH AND INSTALL 18AWG2 CONDUCTOR WIRE FROM EACH OCCUPANCY SENSOR TO LUTRON LCP PANEL.
9	SWITCHES FOR KITCHEN LED LIGHTING. TWO SWITCHES PER CIRCUIT FOR DUAL LEVEL SWITCHING PER ENERGY CODE. SINGLE SWITCH TO CONTROL EVERY ODDS/EVENS PER ENERGY CODE.
10	LOCATION FOR PHOTOCELL MOUNTED TO UNDERSIDE OF SOFFIT. CONTRACTOR SHALL ADJUST PER MANUFACTURER'S SPECIFICATIONS. ROUTE TO LIGHTING PANEL LCP2.
11	LIGHT FIXTURE SUPPLIED AND INSTALLED BY HOOD SUPPLIER. ELECTRICAL CONTRACTOR TO INSTALL LIGHT BULBS FOR IN-HOOD LIGHT FIXTURE. CONNECT TO CIRCUIT SHOWN.
12	REFER TO DETAIL E/E0.3 FOR LIGHTING CONTROL.
13	not used
14	not used
15	REFER TO DETAIL E/E0.3 FOR BACK BAR LIGHTING.

MEP ENGINEER:

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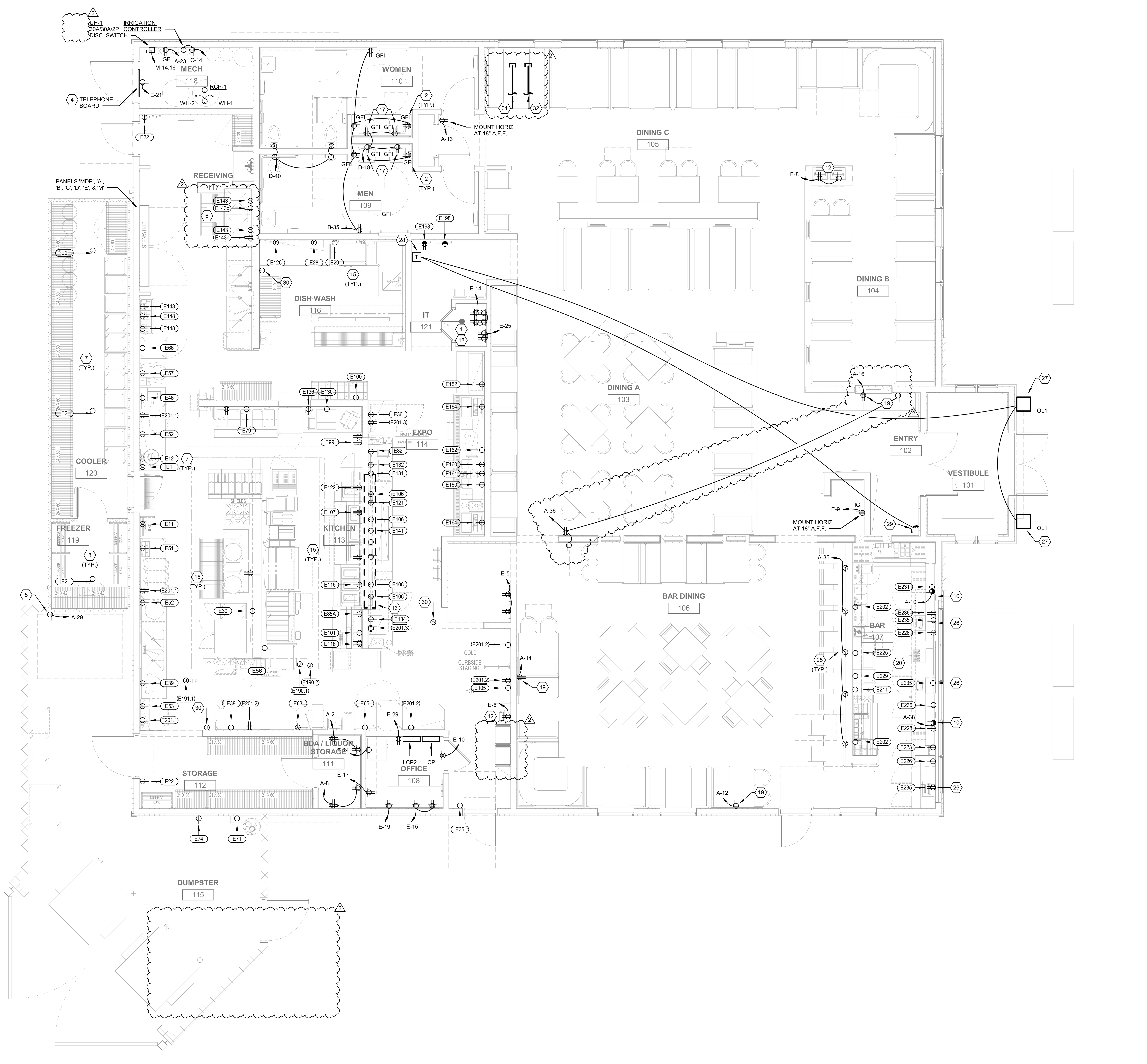
RIVERVIEW, FL

Drawing:
LIGHTING FLOOR PLAN

E1.0



POWER FLOOR PLAN 1
1/4" = 1'-0"

GENERAL NOTES - E2.0

A.	REFER TO GENERAL AND SPECIFICATION NOTES, FOR ALL REQUIREMENTS. ALL ROUGH-IN ARE TO BE INPSECTED BY K.E.C. CONTRACTOR BEFORE ANY WALL FINISHES ARE TO BE INSTALLED.
B.	ELECTRICAL CONTRACTOR TO COODRINATE RECEPTACLE MOUNTING HEIGHT, CONFIGURATION OF EQUIPMENT LOCATIONS AND REQUIREMENTS OF EQUIPMENTS WITH ARCHITECTURAL MILLWORK DRAWING PRIOR TO ROUGH-IN ELECTRICAL DEVICES.
C.	ALL WORK SHOWN SHALL COMPLY WITH ALL NATIONAL, STATE, AND LOCAL CODE ORDINANCES, ETC.
D.	ALL OUTLET COVERS TO BE ENGRAVED PER CORRESPONDING BREAKERS. ALL OUTLET COVERS TO BE STAINLESS STEEL.
E.	ELECTRICAL CONTRACTOR SHALL VERIFY AND PROVIDE ALL CONDUIT AND WIRE FOR CONNECTION TO ALL ELECTRICAL DEVICES, PER MANUFACTURERS'S INSTALLATION INSTRUCTIONS.
F.	PER NEC ARTICLE 210.8 (B)(2), ALL SINGLE-PHASE RECEPTACLES RATED AT 150 VOLTS TO GROUND OR LESS, 50 AMPS OR LESS AND THREE-PHASE RECEPTACLES RATED AT 150 VOLT TO GROUND OR LESS, 100 AMPS OR LESS INSTALLED IN THE KITCHEN SHALL HAVE GROUND FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL. PROVIDE A GFCI TYPE RECEPTACLE WHERE THE RECEPTACLE IS READILY ACCESSIBLE, OTHERWISE PROVIDE A GFCI BREAKER IN THE PANELBOARD. IF GFCI CIRCUIT BREAKERS ARE USED FOR EQUIPMENT UNDER THE HOOD, PROVIDE ALL RELAYS AND CONTACTORS TO CIRCUIT EQUIPMENT TO HOOD SHUNT SYSTEM TO DISCONNECT POWER FROM EQUIPMENT.
G.	CONDUIT FOR LIGHTING IN WALK-IN COOLERS AND FREEZERS SHALL BE RUN ON TOP OF THE BOXES AND SEALED AIR TIGHT INTERNALLY WHERE THEY ENTER THE UNITS.
H.	COLOR OF RECEPTACLES AND COVERPLATES ARE TO COMPLIMENT SURROUNDING WALL (E.G.: BROWN/BROWN IN WOOD PANELING, ETC).
I.	ALL RECEPTACLES ABOVE SINK COUNTER TOPS ARE TO BE G.F.I. TYPE.
J.	NO EXPOSED CONDUITS ARE ALLOWED IN KITCHEN.
K.	ALL PVC CHASES ARE TO HAVE CAPS AND BE STUBBED UP 4"A.F.F. MAXIMUM. ALL CHASES TO HAVE 90° SWEEPS.
L.	ALL NEMA 5-15, NEMA 15-20, NEMA 6-15, NEMA 6-20 RECEPTACLES, WITH THE EXCEPTIONS OF RECEPTACLES THAT ARE NOT ACCESSIBLE, INSTALLED IN DEDICATED SPACE, OR INSTALLED OVER 5'-6" AFF, SHALL BE TAMPER-RESISTANT IN COMPLIANCE WITH NEC 406.12(5) AND 518.2.
M.	ALL EXPOSED CONDUIT IN THE SEATING AREA SHALL BE PAINTED TO MATCH THE SURROUNDING SURFACE FINISH. EXPOSED CONDUIT IS PERMITTED ONLY IF IT IS ABSOLUTELY NOT POSSIBLE TO CONCEAL THE CONDUIT. THE CONTRACTOR SHALL BRING CONDITIONS WHERE EXPOSED CONDUIT IS NECESSARY TO THE ATTENTION OF THE OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION. EXPOSED CONDUIT THAT HAS NOT BEEN PRIOR APPROVED SHALL BE REMOVED AND RE-ROUTED AT THE CONTRACTOR'S EXPENSE.
N.	WHEN A CONDITION IN THE KITCHEN AREA REQUIRES EXPOSED CONDUIT, THE CONDITION SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S PROJECT MANAGER. ANY EXPOSED CONDUIT IN THE KITCHEN SHALL BE GRAY SEAL-TITE. EXPOSED CONDUIT THAT HAS NOT BEEN PRIOR APPROVED SHALL BE REMOVED AND RE-ROUTED AT THE CONTRACTOR'S EXPENSE.
O.	REFER TO SHEET E3.0 FOR ADDITIONAL POWER REQUIREMENTS PERTAINING TO POS & COMMUNICATIONS SYSTEMS.
P.	ITEM NUMBERS ON PLAN CORRESPOND TO NUMBERS IN "KITCHEN EQUIPMENT ELECTRICAL CONNECTION SCHEDULE" SHEET E0.1 & "ELECTRICAL ROUGH-IN SCHEDULE" ON SHEET FS-3.3.
Q.	REFER TO SP SHEETS FOR ELECTRICAL SPECIFICATIONS.
R.	ELECTRICAL CONTRACTOR SHALL ASSIST IN INSTALLING SPEAKER AND COMPUTER CABLES FROM DRIVE THROUGH WINDOW AND ORDER COUNTER, TO COOK'S SPEAKER AND COMPUTER PRINTERS AT FOOD PREP. COUNTER. LEAVE 10 FT. OF EXCESS CABLE AT BOTH ENDS. FINAL CONNECTION BY OTHERS.
S.	AT COMPLETION OF ALL ELECTRICAL WORK AND AFTER FULL POWER HAS BEEN ENERGIZED, A FINAL INSPECTION OF ELECTRICAL WORK WILL BE MADE TO SEE THAT ALL WORK COMPLIES WITH THESE PLANS AND SPECIFICATIONS.
T.	INSTALL COMPUTER PRINTER AND CASH REGISTER CIRCUIT IN SEPARATE CONDUIT WITH ISOLATED EQUIPMENT GROUND WIRE. INSTALL A SECOND EQUIPMENT GROUND WIRE WHETHER STEEL OR PVC IS USED. NO OTHER CIRCUITS IN THIS CONDUIT OR J-BOX EXCEPT FOR COMPUTERIZED EQUIPMENT AND ASSOCIATED TELEPHONE EQUIPMENT CIRCUITS. RECEPTACLES SHALL BE TWISTLOCK HUBBELL AND IG-4700 DUPLEX OR EQUAL FOR ITEM AND DUPLEX STRAIGHT BLADE HUBBELL #IG-5362 OR EQUAL FOR ITEM
U.	THE CONDUIT SYSTEM EQUIPMENT GROUND WIRE SHALL BE GREEN. THE ISOLATED GROUND WIRE MUST BE GREEN BUT OF A DISTINCTLY DIFFERENT SHADE FROM THE EQUIPMENT GROUND WIRE, OR GREEN WITH A STRIPE. COLOR CODE SHALL BE CONSISTENT FROM PANEL TO ALL RECEPTACLES. AT TIME OF INSPECTION. INSPECTOR, CONTRACTOR SHALL REMOVE RECEPTACLES FROM BOXES TO VERIFY COLOR CODE AND CONNECTION OF GROUND WIRES.
V.	ELECTRICAL CONTRACTOR SHALL INSTALL OWNER FURNISHED KITCHEN HOOD FAN CONTROL PANEL AND INSTALL ALL FIELD CONNECTIONS AS SHOWN ON VENDOR DRAWINGS, FIELD CONNECTIONS INCLUDED BUT ARE NOT LIMITED TO HOOD FAN SWITCHES, ANSUL MICRO SWITCHES, SMOKE DETECTORS, ETC. EXHAUST FANS SHALL RUN UPON ANSUL ALARM PER NFPA 96, SEE VENDOR WIRING DIAGRAM, "M" DRAWINGS & "K" DRAWINGS.

KEYNOTES - E2.0

1	FOUR (4) QUAD RECEPTACLES LOCATED WITHIN SOUND RACK EQUIPMENT ENCLOSURE. REFER TO DETAIL 10/E0.3.
2	RECEPTACLE FOR TOWEL DISPENSER LOCATED BEHIND DISPENSOR. MOUNT HORIZONTAL AT 48" AFF.
3	JUNCTION BOXES ARE PROVIDED AND INSTALLED WITH EQUIPMENT. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL DEVICE WITHIN JBOX AND RUN SEAL-TIGHT TO CONTRACTOR PROVIDED AND INSTALLED JUNCTION IN WALL.
4	TELEPHONE BOARD LOCATION. REFER TO DETAIL 4/E5.0.
5	WEATHERPROOF, WEATHER RATED, GFI RECEPTACLE WITH "IN-USE" COVER. MOUNT AT 18" A.F.F.
6	PROVIDE ALL INTERCONNECTION WIRING BETWEEN ICE MAKER AND REMOTE CONDENSING UNIT PER MANUFACTURER'S INSTRUCTIONS.
7	PROVIDE ALL INTERCONNECTION WIRING BETWEEN COOLER EVAPORATOR AND COOLER REMOTE CONDENSING UNIT PER MANUFACTURER'S INSTRUCTIONS.
8	PROVIDE ALL INTERCONNECTION WIRING BETWEEN FREEZER EVAPORATOR AND FREEZER REMOTE CONDENSING UNIT PER MANUFACTURER'S INSTRUCTIONS.
9	3/4" WITH PULL STRING DOWN TO THERMOSTAT. CONTROL WIRING FURNISHED AND INSTALLED BY HVAC CONTRACTOR.
10	RECEPTACLE FOR TELEVISION. REFER TO ELECTRICAL POWER BACK BAR ELEVATION 8/E0.3.
11	ROUTE POWER CONDUIT UNDER SLAB ALONG SIDE COMMUNICATION CONDUIT TO VERTICAL WALL.
12	COORDINATE MOUNTING HEIGHT OF POS RECEPTACLES WITH MILLWORK PRIOR TO ROUGH-IN.
13	NOT USED
14	PROVIDE WEATHERPROOF JUNCTION BOX AND RAINTIGHT CONDUIT FOR TRASH COMPACTOR. MINIMIZE EXPOSED CONDUIT RUNS. REFER TO DETAIL 5/E0.03.
15	COOKLINE RECEPTACLES SHALL BE PROVIDED WITH METAL OUTLET COVERS. COVER MANUFACTURER SHALL BE RED DOT OR EQUAL.
16	ITEMS #106, 108, AND, 141, ARE PREWIRED JUNCTION BOXES AND TOMBSTONE RECEPTACLES. CONTRACTOR SHALL PROVIDE JUNCTION BOX ABOVE CEILING AND CONNECT TO PREWIRED CONDUCTORS FOR THESE LOADS.
17	GFI RECEPTACLE FOR ELECTRONIC FAUCET. MOUNT RECEPTACLE 6" BELOW COUNTER FOR CORD-PLUG WIRE CONNECTION. TRANSFORMER HIDDEN BUT ACCESSIBLE.
18	CONFIRM LOCATION OF SOUND EQUIPMENT PRIOR TO INSTALLATION.
19	RECEPTACLE FOR TELEVISION. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHT.
20	REFER TO 5/E0.3 AND 8/E0.3 FOR RECEPTACLE ELEVATIONS.
21	WALL MOUNTED KDS OVEN REPEATER. COORDINATE MOUNTING HEIGHT AND LOCATION WITH KITCHEN EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
22	COORDINATE LOCATION AND MOUNTING HEIGHT OF KDS MONITOR IG RECEPTACLE WITH KITCHEN EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
23	COORDINATE LOCATION OF SIX (6) CEILING MOUNTED KDS RECEPTACLES WITH KITCHEN EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
24	COORDINATE MOUNTING OF KDS RECEPTACLES (2) WITH KITCHEN EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN. PROVIDE TWO (2) IG DUPLEX RECEPTACLES SPACED 3" APART.
25	MOUNT HORIZONTAL COMBINATION USB/DUPLEX RECEPTACLE OUTLET TIGHT TO TOP OF BAR DIE WALL. OUTLETS SHALL BE SPACED 6'-0" APART OR AS SHOWN.
26	RECEPTACLE LOCATED UNDER BAR TIGHT TO BOTTOM OF COUNTER FOR BAR P.O.S. COORDINATE LOCATION WITH OWNER PRIOR TO ROUGH-IN.
27	GAS LANTERNS, TYPE OL1. REFER TO SHEET E0.1 LIGHT FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
28	NETIC COIL) TRANSFORMER BY ELECTRICAL CONTRACTOR, LOCATE IN ACCESSIBLE ATTIC SPACE. MATCH POLARITY OF CONNECTION FOR ALL LANTERNS.
29	KEYED SWITCH FOR CONTROL OF LANTERNS. MOUNT AT 7'-0" ABOVE FINISHED FLOOR.
30	EMPTY CONDUIT TO EXPOSED CEILING ABOVE HEX J-BOX RECESSED IN WALL @48"A.F.F.. REFER TO KITCHEN EQUIPMENT PLANS FOR FIRE PULL DETAIL.
31	PROVIDE (3) 2" CONDUITS WITH PULLSTRING ROUTED FROM ABOVE PANELBOARD 'MDP' TO AN ACCESSIBLE AREA ABOVE DINING C CEILING FOR FUTURE CIRCUITS. CAP AT BOTH ENDS.
32	PROVIDE (1) 2" CONDUIT WITH PULLSTRING ROUTED FROM ABOVE LIGHTING CONTROL PANEL 'LCP1' TO AN ACCESSIBLE AREA ABOVE DINING C CEILING FOR FUTURE LIGHTING CIRCUITS. CAP AT BOTH ENDS.

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date:		02.15.2023
REVISION INFORMATION		
1	CITY COMMENTS	04.04.2023
2	COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

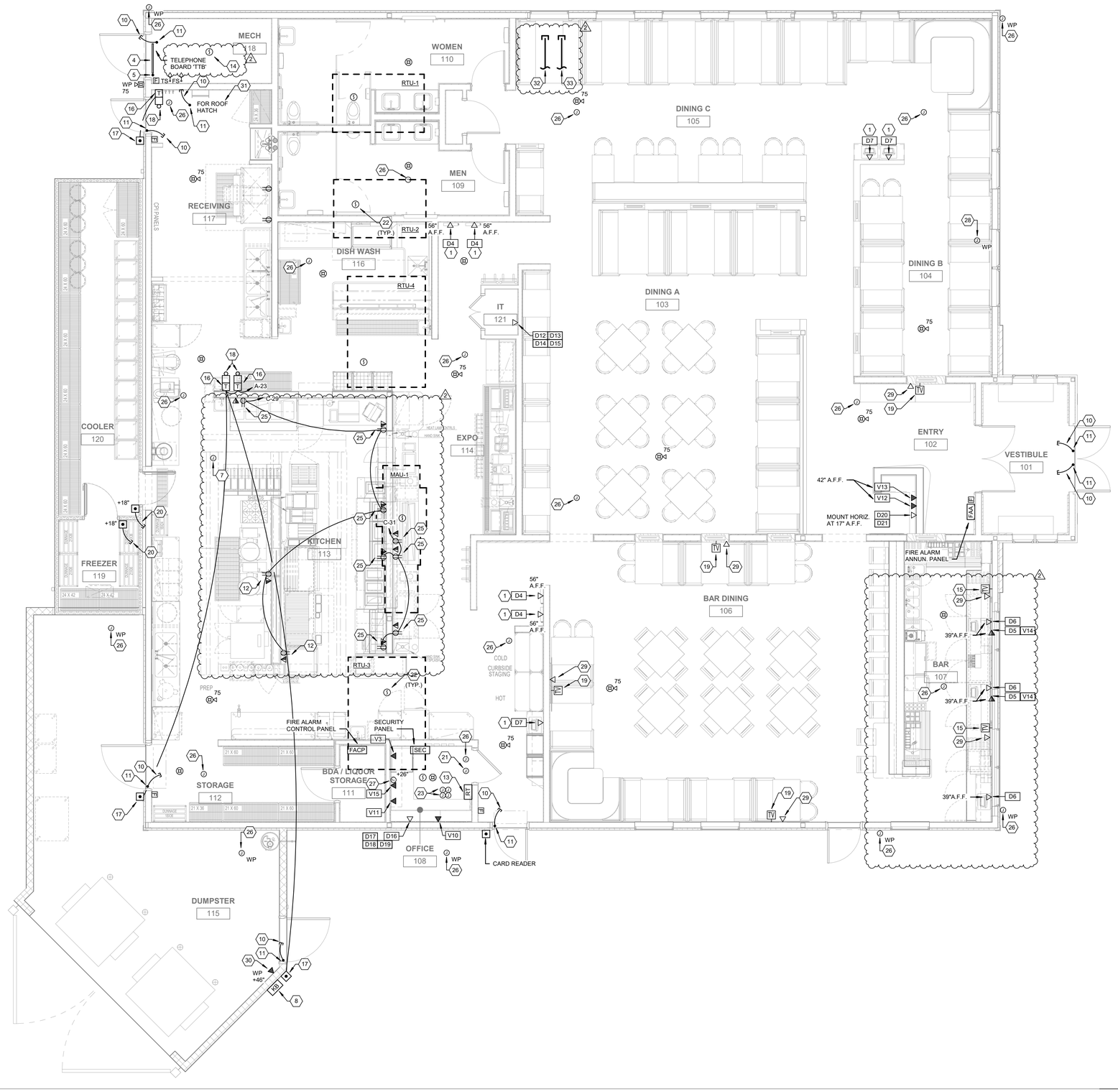
BLOOMINGDALE AVE &
GORNTO LAKE RD

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
POWER FLOOR PLAN

E2.0



SPECIAL SYSTEMS FLOOR PLAN 1

1/4" = 1'-0"

GENERAL NOTES - E3.0

1	AN APPROVED MANUAL FIRE ALARM SYSTEM MONITORED BY A LISTED CENTRAL STATION, REMOTE STATION OR PROPRIETARY STATION SHALL BE PROVIDED, DESIGNED PER NFPA STD. 72 AND INTERNATIONAL FIRE CODE. PRIOR TO INSTALLATION A LICENSED CONTRACTOR SHALL SUBMIT TO THE FIRE DEPARTMENT, ONE (1) SET OF MANUFACTURER'S CUT SHEETS AND STATE FIRE MARSHALL LISTING SHEETS FOR EACH DEVICE, THREE (3) SETS OF SHOP DRAWINGS, A COMPLETED PERMIT APPLICATION, AND APPLICABLE FEES FOR REVIEW. ELECTRICAL CONTRACTOR SHALL INSTALL CONDUIT ONLY AND OUTLET BOXES. WIRING AND DEVICES SHALL BE BY OWNERS FIRE ALARM SYSTEM CONTRACTOR. FIRE ALARM SYSTEM CONTRACTOR SHALL SUBMIT FINAL FIRE ALARM SYSTEM SHOP DRAWINGS TO LOCAL FIRE DEPARTMENT PLAN CHECK FOR APPROVAL PRIOR TO INSTALLATION. PROVIDE DOCUMENTATION TO FIRE INSPECTOR VERIFYING SERVICE CONTRACTS OF FIRE ALARM SYSTEM. PROVIDE A COPY OF THE SIGNED CONTRACT WITH THE COST OF THE JOB.
2	REVIEW AND APPROVAL BY THE AHJ SHALL NOT RELIEVE THE APPLICANT OF THE RESPONSIBILITY OF COMPLIANCE WITH THIS CODE PER NFPA 1:1.14.4.
3	PLANS SHALL HAVE SYMBOL LEGEND THAT MATCH LAYOUT.
4	ALL STROBES SHALL BE SYNCHRONIZED WHEN MORE THAN TWO (2) ARE IN ANY FIELD OF VISION.
5	SIGNAGE WILL BE PROVIDED ON THE OUTSIDE OF THE ELECTRICAL ROOM OR FACP ROOM STATING (FACP INSIDE, NO STORAGE).
6	REMOTE TEST SWITCH (RTS) SHALL BE PROVIDED WITH LED INDICATOR, LOCATED IN A NORMALLY OCCUPIED AREA 48" AFF. THE ACTIVATION OF THE DUCT DETECTOR SHALL SHUNT THE A/C UNIT DOWN IMMEDIATELY, WITHOUT DELAY.
7	PROVIDE A MUSIC SHUNT TRIP DEVICE FOR FIRE ALARM SYSTEM TO DISABLE THE MUSIC SYSTEM DURING AN EMERGENCY, ALLOWING OCCUPANTS TO HEAR THE ALARM SYSTEM WHEN IT'S SOUNDING.
8	A REDUCED LAYOUT OF THE SPACE DEPICTING THE LOCATION OF THE FACP WILL BE POSTED NEXT TO THE ANNUNCIATOR PANEL.
9	PER NFPA 72:12.14.8.4 MANUAL FIRE ALARM PULL STATION BOXES SHALL BE LOCATED WITHIN 5FT OF EACH EXIT DOORWAY.
10	SEQUENCE OF OPERATION: ACTIVATION OF DUCT DETECTOR WILL INITIATE GLOBAL SHUTDOWN OF ALL A/C UNITS.
11	REFER TO FS SHEETS FOR ADDITIONAL LOCATION INFORMATION.
12	ALL CONDUIT ON THIS SHEET FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
13	VERIFY AND FIELD COORDINATE ALL EQUIPMENT ROUGH-IN REQUIREMENTS.
14	ALL EMPTY CONDUIT TO HAVE NYLON PULLSTRINGS INSTALLED.
15	ROUTE ALL EXPOSED CONDUIT PARALLEL AND PERPENDICULAR TO TRUSSES BETWEEN BOTTOM OF TOP CHORD AND TOP OF BOTTOM CHORD AS REQUIRED. PAINT AS DIRECTED.
16	REFER TO SP SHEETS FOR ELECTRICAL SPECIFICATIONS.
17	FIRE ALARM SYSTEM DESIGN SHALL MEET THE REQUIREMENTS OF IBC 907.5.2.3 INCLUDING 20% SPARE CAPACITY PROVISIONS FOR CIRCUITS SERVING EMPLOYEE WORKSPACES.

KEYNOTES - E3.0

1	PROVIDE 1" CONDUIT TO HUB WITH CAT. 5 CABLE FROM EACH POS DATA OUTLET LOCATION. REFER TO SPECIAL SYSTEMS RISER DIAGRAM ON SHEET ES.0
2	PROVIDE 6"X6" PULLBOX FOR CONNECTION TO AUDIO SYSTEM. LOCATE AT AUDIO SHELF.
3	PROVIDE 3/4" EMPTY CONDUIT WITH PULLWIRE TO TELEPHONE PANEL.
4	TELEPHONE BOARD LOCATION LOCATED ON WALL. REFER TO 4ES.0.
5	PROVIDE (2) 4"C. TO MAIN TELEPHONE/TELEVISION PANEL "TTB".
6	PROVIDE AND INSTALL (2) 6"X6" SURFACE MOUNTED WATER HEATER ALARMS. VERIFY WITH WATER HEATER MANUFACTURER ALARM SPEC. PROVIDE AND INSTALL CONTROL WIRING AS REQUIRED.
7	PROVIDE 4" HEXAGON RECESSED JUNCTION BOX MOUNTED AT 46" AFF TO BOTTOM FOR HOOD SUPPRESSION SYSTEM MANUAL PULL STATION. PROVIDE WITH 3/4" CONDUIT TO A MINIMUM OF 12" ABOVE THE CEILING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. VERIFY LOCATION WITH SUPPLIER AND FIRE MARSHAL.
8	PROVIDE 4400 SERIES KNOX VAULT. PROVIDE KEYS WITH IDENTIFICATION TAGS FOR THE KNOX VAULT. OBTAIN ORDERING FORMS THRU LOCAL CITY OF SERVICES. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
9	SECURITY PANIC BUTTON. REFER TO OFFICE ELEVATIONS.
10	PROVIDE 3/4" CONDUIT ONLY FOR SECURITY SYSTEM WIRES. STUB INTO ACCESSIBLE CEILING SPACE FOR ROUTING TO SECURITY PANEL AND HP PANEL.
11	PROVIDE STUB CONDUIT DOWN TO TOP OF DOOR 8" FROM STRIKE SIDE OF THE DOOR AS DIRECTED BY SECURITY SYSTEM CONTRACTOR FOR CONNECTION TO SECURITY DEVICES ON DOOR.
12	PROVIDE 1" CONDUIT TO HUB WITH CAT. 5 CABLE FROM ~60"AFF MOUNTED KDS DATA OUTLETS. COORDINATE LOCATION AND REQUIREMENTS WITH KITCHEN EQUIPMENT PROVIDER.
13	PROVIDE ROOF HATCH. REFER TO ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION. INSTALL 1" EMPTY CONDUIT WITH PULL WIRE TO 6" ABOVE CEILING. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
14	HEAT DETECTOR PER NFPA 72.
15	TV OUTLET LOCATION. REFER TO ELECTRICAL POWER BACK BAR ELEVATION 1/E0.3 AND 8/E0.3.
16	LOW VOLTAGE TRANSFORMER. MOUNT AT 96" A.F.F. REFER TO DOOR BUZZER WIRING DIAGRAM, DETAIL 2/E0.2.
17	WEATHERPROOF PUSHBUTTON. MOUNT AT 48" A.F.F. REFER TO DOOR BUZZER WIRING DIAGRAM, DETAIL 2/E0.2.
18	WALL MOUNTED BELL. MOUNT AT 96" A.F.F. REFER TO DOOR BUZZER WIRING DIAGRAM, DETAIL 2/E0.2.
19	TV OUTLET LOCATION. REFER TO ARCHITECTURAL ELEVATION FOR EXACT LOCATION.
20	PANIC BUTTON AT 18" A.F.F. FOR SINGLE GANG BOX. PROVIDE PROTECTOR COVER OVER PUSHBUTTON.
21	JUNCTION BOX MOUNTED ABOVE DOOR FOR PHONE BELL.
22	DUCT SMOKE DETECTORS INDICATED SHALL BE FACTORY MOUNTED WITHIN RETURN AND SUPPLY AIR SIDE OF EACH ROOF TOP UNIT IN DUCTWORK. HVAC CONTRACTOR TO WIRE SHUTDOWN RELAY FROM DETECTOR TO RTU.
23	FIVE (5) ROOFTOP UNIT THERMOSTAT. REFER TO 10/E0.3 FOR MOUNTING LOCATION. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
24	ROUTE COMMUNICATIONS CONDUIT UNDER SLAB TO VERTICAL WALL TO ABOVE CEILING. REFER TO LOW VOLTAGE CABLING NOTE FOR OTHER REQUIREMENTS.
25	PROVIDE 1" CONDUIT TO HUB WITH CAT. 5 CABLE FROM CEILING MOUNTED KDS DATA OUTLETS. COORDINATE LOCATION AND REQUIREMENTS WITH KITCHEN EQUIPMENT PROVIDER.
26	COORDINATE REQUIREMENTS AND MOUNTING HEIGHTS OF JUNCTION BOXES WITH SECURITY SYSTEM INSTALLER. PROVIDE 3/4"C. WITH PULL STRING BACK TO OFFICE ABOVE SECURITY SYSTEM CABINET.
27	COORDINATE REQUIREMENTS AND MOUNTING HEIGHTS OF JUNCTION BOXES WITH IT SYSTEM INSTALLER. PROVIDE 3/4"C. WITH PULL STRING BACK TO OFFICE ABOVE SOUND CABINET.
28	WEATHERPROOF JUNCTION BOX FOR SECURITY SIREN. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH SECURITY VENDOR.
29	ROUTE CAT 6 FROM TV BACK TO OFFICE.
30	PHONE DATA OUTLET WITH 1/2" CONDUIT TO ABOVE CEILING AT KITCHEN REAR DOOR.
31	ROOF HATCH IS LOCATED ABOVE CEILING FROM MECHANICAL ROOM. REFER TO SHEET A1.5 FOR ELEVATIONS.
32	PROVIDE (1) 2" CONDUIT WITH PULLSTRING ROUTED FROM ABOVE FIRE ALARM PANEL TO AN ACCESSIBLE LOCATION ABOVE DINING C CEILING FOR FUTURE FIRE ALARM CABLING USE. CAP AT BOTH ENDS.
33	PROVIDE (1) 2" CONDUIT WITH PULLSTRING ROUTED FROM HUB TO AN ACCESSIBLE LOCATION ABOVE DINING C CEILING FOR FUTURE DATA CABLING. CAP AT BOTH ENDS.

LOW VOLTAGE CABLING NOTE

ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL CAT6 CABLING, BUT NOT THE TERMINATION OR PUSH WORK. CONTRACTOR SHALL PROVIDE ALL CAT6 CABLING BETWEEN DESIGNATED POS TERMINALS, EMV TERMINALS, KDS TERMINALS, PRINTERS, AND VIEWERS, AND THE MAIN EQUIPMENT RACK IN THE OFFICE. LOW VOLTAGE REQUIREMENTS ARE LISTED BELOW:

- USE ONLY PLENUM RATED CABLE.
- OPEN CEILINGS REQUIRE BLACK CAT6 PLENUM RATED CABLE.
- CABLES ARE TO BE CLEARLY TAGGED AT BOTH ENDS IN THE FOLLOWING FORMAT:
  - *POS TERMINALS: P1, P2, P3...
  - *EMV TERMINALS: E1, E2, E3...
  - *KDS / KITCHEN PRINTERS / RECIPE VIEWERS: K1, K2, K3...
  - *PHONE LINES: P1, P2, P3...
  - *ACCESS POINTS: A1, A2, A3...
  - *HOST TERMINALS: H1, H2, H3...
  - *OFFICE EQUIPMENT: M1, M2, M3...
- EACH POS TERMINAL RUN WILL REQUIRE A SECOND RUN FOR THE EMV DEVICE.
- PROVIDE A 10 FOOT SERVICE LOOP ON BOTH ENDS OF THE CABLE.
- CABLE RUNS WILL BE NEATLY TIED AND ATTACHED TO THE RAFTERS OR STRUCTURE ABOVE.
- NO CABLES SHOULD LIE ON THE CEILING GRID.

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.

1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

BLOOMINGDALE AVE & GORNTO LAKE RD

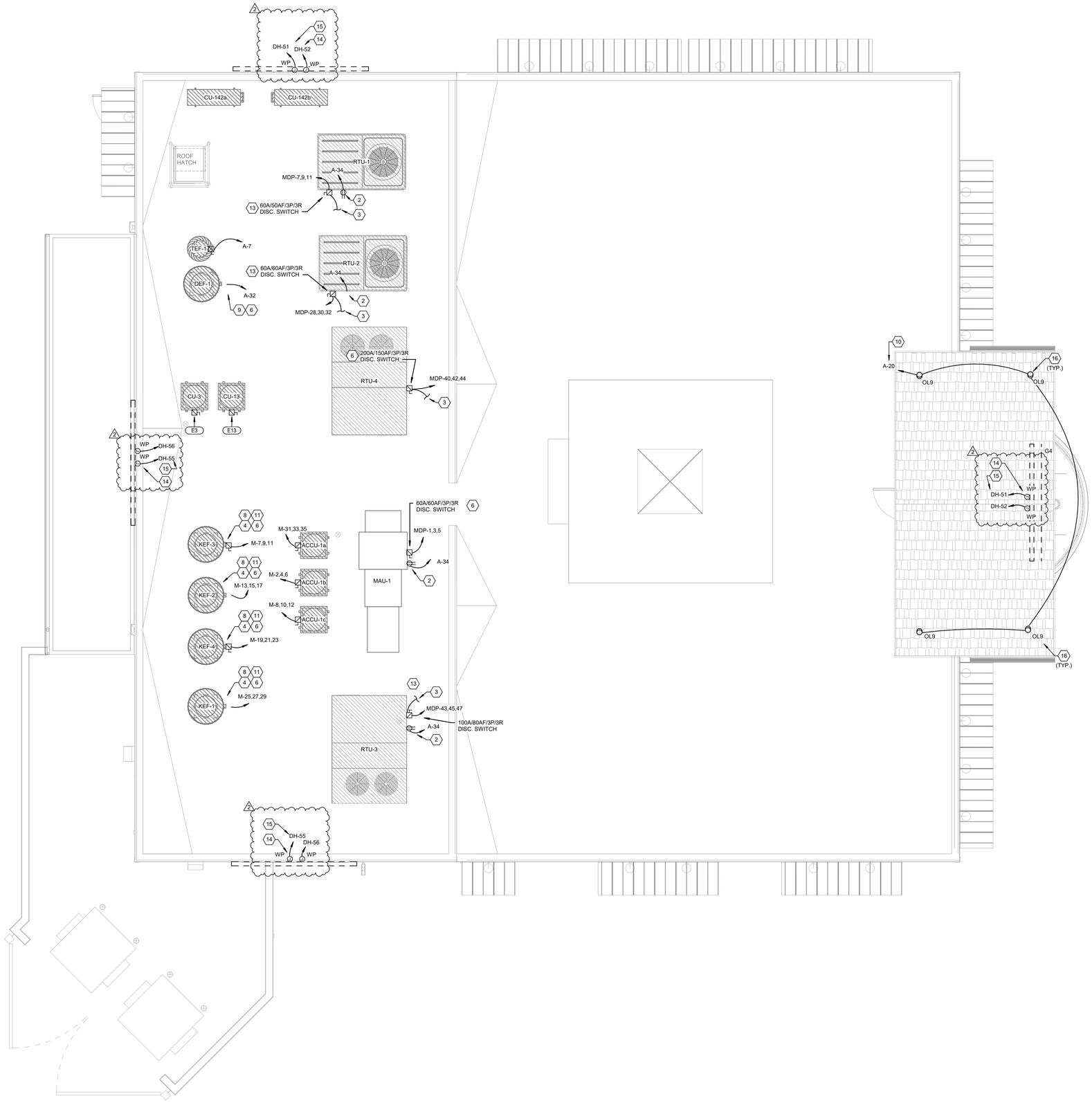
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:

SPECIAL SYSTEMS FLOOR PLAN

E3.0



ELECTRICAL ROOF PLAN
1/4" = 1'-0"
1

KEYNOTES - E4.0

1	(1) 1"C. WITH #8 CU THWN, 1#10 CU EGC. THIS IS A SINGLE POINT CONNECTION FOR THE ENTIRE FREEZER UNITS WHICH INCLUDES A CONDENSING UNIT, A EVAPORATOR COIL FAN AND A HEATER COIL.
2	WEATHERPROOF, WEATHER RATED, GFCI OUTLET PROVIDED WITH RTU TO BE WIRED TO CIRCUIT NOTED. CONDUIT AND WIRING TO RUN IN ATTIC SPACE AND UP IN ROOF CURB TO OUTLET IN RTU.
3	3/4" CONDUIT WITH PULLSTRING DOWN TO RESPECTIVE UNITS' THERMOSTAT AND HUMIDISTAT. COORDINATE LOCATIONS WITH SPECIAL SYSTEMS FLOOR PLAN.
4	POWER FOR ANSUL FIRE SUPPRESSION SYSTEM. COORDINATE LOCATION WITH POWER FLOOR PLAN.
5	ROUTE THROUGH KITCHEN CONTROL PANEL. REFER TO POWER FLOOR PLAN FOR LOCATION.
6	CONTRACTOR SHALL PROVIDE ALL ELECTRICAL CONNECTIONS, WIRING AND CONDUITS NECESSARY FOR THE INTERLOCKING OF KITCHEN EXHAUST FANS AND DOAS UNIT THROUGH THE KITCHEN CONTROL PANEL. REFER TO NOTE 5.
7	ROUTE FEEDERS FOR CONDENSING UNITS DOWN THRU WEATHER TIGHT FIELD FABRICATED DOGHOUSE. REFER TO MECHANICAL ROOF PLAN FOR ADDITIONAL INFORMATION OF DOGHOUSE.
8	CONNECT EXHAUST FAN TO KITCHEN HOOD CONTROLLER. REFER TO POWER FLOOR PLAN FOR LOCATION OF KITCHEN HOOD CONTROLLER.
9	ROUTE ELECTRICAL POWER FROM EXHAUST FAN THROUGH DISHWASHER CONTROLLER. REFER TO DISHWASHER EXHAUST ELECTRICAL SCHEMATIC DIAGRAM.
10	JUNCTION BOX AND CONDUIT FOR ROOF LED LIGHTING SHALL BE LOCATED BELOW ROOF. COORDINATE LOCATION AND MOUNTING OF LED DRIVER WITH LED MANUFACTURER AND PROVIDE AS NECESSARY PRIOR TO ROUGH-IN.
11	SAFETY SWITCH, 600V, 30A/20A/3P/WP, 3#12,#12G, IN 3/4"C. DOWN TO PRE-WIRED ELECTRICAL CONTROL PANEL ON KITCHEN HOOD.
12	WEATHERPROOF JUNCTION BOX WITH WEATHERHEAD AND 2" CONDUIT INTO ATTIC SPACE FOR SATELLITE DISH SYSTEM.
13	SAFETY SWITCH TO ARRIVE FACTORY INSTALLED ON RTU.
14	WEATHERPROOF JUNCTION BOX FOR EXTERIOR SIGNAGE. REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR SIGNAGE LOCATIONS. COORDINATE LOCATION AND REQUIREMENTS WITH SIGN INSTALLER PRIOR TO ROUGH-IN AND PROVIDE AS NECESSARY. COORDINATE REQUIRED DISCONNECTING MEANS WITH LOCAL AUTHORITY HAVING JURISDICTION AND NEC.
15	REFER TO DETAIL 6/E0.3 FOR LIGHTING CONTROLS. REFER TO 6/E5.0 FOR DIMMING CONTROLS - CONTRACTOR SHALL VERIFY FINAL DIMMING TYPE WITH SIGN VENDOR PRIOR TO ORDER OF DIMMING PANEL MODULES AND ROUGH-IN.
16	INSTALLATION. REFER TO DETAIL 1/T/E0.2 FOR ADDITIONAL INFORMATION.
17	NOT USED
18	LUTRON PHOTOCELL SHALL BE PLACED ON ROOF FACING NORTH. PROVIDE 1/2" CONDUIT WITH PULL STRING TO LB BOX. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
19	POWER TO ICE MACHINE CONDENSING UNIT FED FROM ICE MACHINE BELOW. PROVIDE DISCONNECT SWITCH FOR SHUTTING DOWN POWER FOR MAINTENANCE.

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

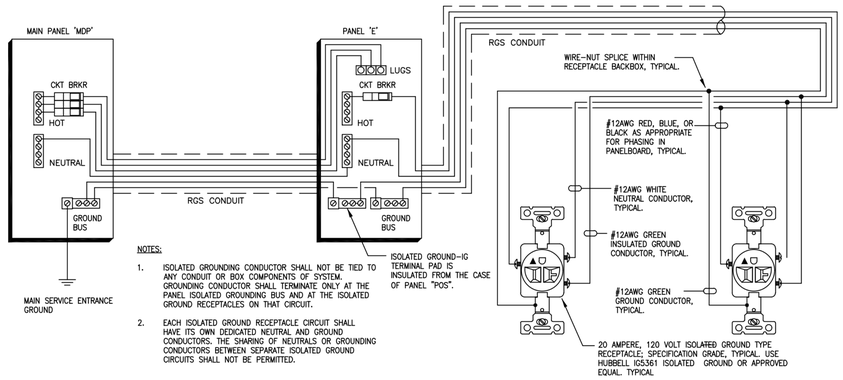
BLOOMINGDALE AVE & GORNTO LAKE RD

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
ELECTRICAL ROOF PLAN

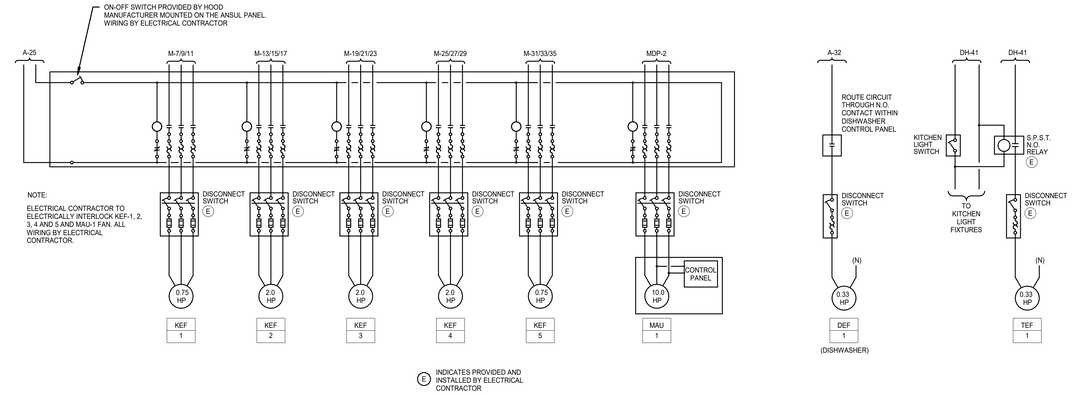
E4.0



NOTES:

1. ISOLATED GROUNDING CONDUCTOR SHALL NOT BE TIED TO ANY CONDUIT OR BOX COMPONENTS OF SYSTEM. GROUNDING CONDUCTOR SHALL TERMINATE ONLY AT THE PANEL ISOLATED GROUNDING BUS AND AT THE ISOLATED GROUND RECEPTACLES ON THAT CIRCUIT.
2. EACH ISOLATED GROUND RECEPTACLE CIRCUIT SHALL HAVE ITS OWN DEDICATED NEUTRAL AND GROUND CONDUCTORS. THE SHARING OF NEUTRALS OR GROUNDING CONDUCTORS BETWEEN SEPARATE ISOLATED GROUND CIRCUITS SHALL NOT BE PERMITTED.

DEDICATED ISOLATED GROUND SCHEMATIC
SCALE: NONE
1



EXHAUST & MAKE-UP AIR INTERLOCK WIRING DIAGRAM
SCALE: NONE
2

FIRE ALARM SCHEMATIC GENERAL NOTES:

A. PROVIDE DUCT MOUNTED SMOKE DETECTORS IN DUCTWORK AS SHOWN ON MECH PLANS PER SPECIFICATIONS.

B. FIRE ALARM CONTRACTOR SHALL BE CURRENTLY LICENSED WITH THE STATE AND SUBMIT A COMPLETE FIRE ALARM SUBMITTAL (PLANS, SPECS., CUT SHEETS ETC.) PREPARED BY THE STATE REGISTERED FIRE PROTECTION CONTRACTOR, AND SUBMITTED TO AUTHORITY HAVING JURISDICTION FOR APPROVAL. INFORMATION SHALL NOT BE LIMITED TO THE FOLLOWING.

- SEQUENCE OF OPERATION
- CATALOG CUT SHEETS.
- POINT TO POINT DIAGRAM.
- HORN,STROBE LIGHTS, MANUAL PULL STATION LAYOUT.
- CANDELA OF STROBES.
- BATTERY CALCULATIONS INCLUDING TOTAL STANDBY AND ALARM CURRENT.

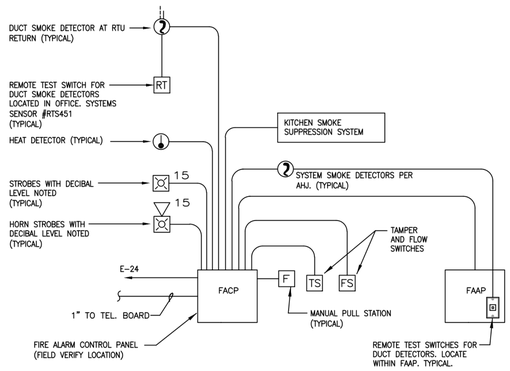
C. CONTRACTOR SHALL PROVIDE ADDITIONAL FIRE ALARM DEVICES PER AHJ AND INCLUDE ALL EXPENSES IN BID TO COMPLETE AN OPERABLE FIRE ALARM SYSTEM AS REQUIRED BY AUTHORITY HAVING JURISDICTION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

D. PROVIDE THE NUMBER OF ACTIVE AND SPARES ADDRESSES AS REQUIRED TO THE FIRE ALARM PANEL TO ACCOMMODATE ALL DEVICES

E. PROVIDE DEDICATED TELEPHONE LINE FOR 24-HOUR MONITORING SYSTEM PER CITY REQUIREMENT.

F. CONTRACTOR SHALL FURNISH/INSTALL FIRE ALARM DEVICES, SYSTEM COMPONENTS, WIRING/CONDUITS AND CONTROLS AS REQUIRED AND COMPLETE THE FIRE ALARM SYSTEM PER NFPA 72 AND AUTHORITY HAVING JURISDICTION "AHJ". FIRE ALARM DEVICES SHALL BE MONITORED FROM AN APPROVED CENTRAL STATION PER AHJ.

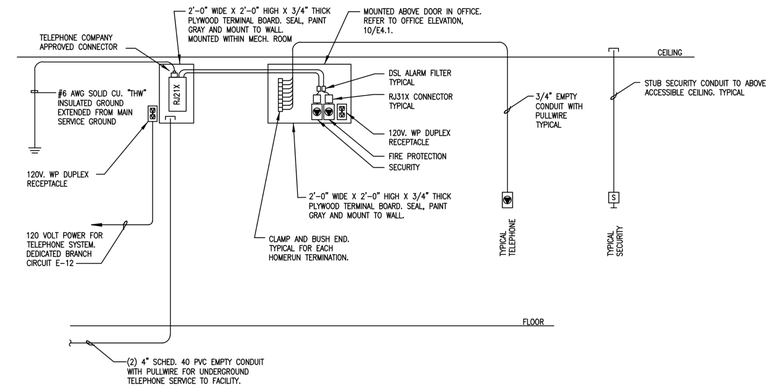
G. REFER TO MECHANICAL DRAWINGS AND KITCHEN DRAWINGS FOR INTERFACE REQUIREMENTS WITH KITCHEN SMOKE SUPPRESSION SYSTEM.



FIRE ALARM RISER DIAGRAM
SCALE: NONE
3

TELEPHONE SYSTEM RISER DIAGRAM

1. VERIFY, COORDINATE AND INCORPORATE THE REQUIREMENTS OF THE TELE. CO. AND ALL GOVERNING CODES IN FORCE, PRIOR TO COMMENCEMENT OF WORK.
2. FURNISH AND INSTALL A RACEWAY SYSTEM OF CABLE AND 3/4" CONDUIT AND PROPERLY SIZED JUNCTION BOXES WITH COVERPLATES FOR THE TELEPHONE SYSTEM AS SHOWN ON THE DRAWINGS AND IN THE DIAGRAM.
3. ALL CONDUIT SHALL ORIGINATE AT THE JUNCTION BOXES, BE NO SMALLER THAN 3/4" ELECTRICAL TRADE SIZE, BE CONTINUOUS AND TERMINATE AT THE SYSTEM TERMINAL BOARD NEATLY CLAMPED AND WITH BUSHED ENDS. HOME RUNS SHALL BE LIMITED TO ONE (1) TELEPHONE OUTLET IN ONE 3/4" CONDUIT.
4. THERE ARE MULTIPLE DEDICATED TELEPHONE LINES AND THEY SHALL BE SEGREGATED FROM EACH OTHER AND SHALL BE SEGREGATED FROM THE STANDARD TELEPHONE LINES.
5. ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL A 200 LB TEST NYLON PULL LINE IN ANY EMPTY CONDUIT. TAG EACH END OF PULL LINE AS TO SERVICE AND THE LOCATION OF THE OPPOSITE TERMINUS OF THE CONDUIT.



TELEPHONE SYSTEM RISER DIAGRAM
SCALE: NONE
4

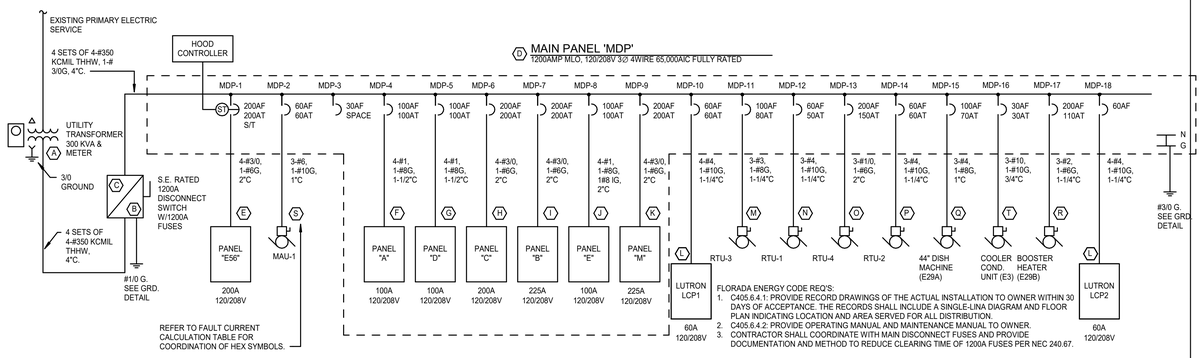
LUTRON DIMMIMG PANEL 'LCP1' 120/208V, 3PH, 4W 10K AIC, 175 MLO

Breaker	Module Number & Type	Lutron Panel #	Dimming Circuit	Room	Circuit Description	DL Zone	Notes	Fixture Type	Load Type	Qty	Fixture Load	Power Factor	Actual Load (W/VA)	Amp Load	Module Load
1	1	DH-01	DH-01	Spare					Auto			0.85	0	0.0	
		DH-02	DH-02	Restroom Vestibule	Dow nlights			C	Auto	5	7.5	0.85	44	0.4	
	4A	DH-03	DH-03	Atrium	Walkw ay Lights			A1	Auto	8	7.5	0.85	71	0.6	
		DH-04	DH-04	Spare					Auto			0.85	0	0.0	0.0
2	2	DH-05	DH-05	Main Dining - Family Table	Booth Lights			R1	MLV	5	15	0.833	90	0.8	
		DH-06	DH-06	Bar Dining	Dow nlights			A1	Auto	21	7.5	0.85	185	1.5	
	4A	DH-07	DH-07	Lobby/Vestibule	Chandelier			D	Auto	1	48	0.85	56	0.5	
		DH-08	DH-08	Atrium	Dow nlights			A	Auto	13	7.5	0.85	115	1.0	3.7
3	3	DH-09	DH-09	Vestibule	Dow nlights			A1	Auto	4	7.5	0.85	35	0.3	
		DH-10	DH-10	Bar Dining	Bar Top Lights			A	Auto	9	7.5	0.85	79	0.7	
	4A	DH-11	DH-11	Main Dining	Table Lights			A/A1	Auto	8	7.5	0.85	71	0.6	
		DH-12	DH-12	Atrium	Table Lights			A	Auto	18	7.5	0.85	159	1.3	2.9
4	4	DH-13	DH-13	Main Dining	Booth Lights			A	Auto	4	7.5	0.85	35	0.3	
		DH-14	DH-14	Main Dining	LED Strips			AA	ELV	35	6	0.833	252	2.1	
	4A	DH-15	DH-15	Main Dining	Walkw ay Lights			A1	Auto	32	7.5	0.85	282	2.4	
		DH-16	DH-16	Main Dining	Uplights			R1	MLV	16	15	0.833	288	2.4	7.1
5	5	DH-17	DH-17	Spare					Auto			0.85	0	0.0	
		DH-18	DH-18	Main Dining	Pendants			Q1	MLV	10	9	0.833	108	0.9	
	4A	DH-19	DH-19	Restrooms	Dow nlights			A1	Auto	21	7.5	0.85	185	1.5	
		DH-20	DH-20	Bar Dining	Pendants			Q3	MLV	4	9	0.833	43	0.4	2.8
6	6	DH-21	DH-21	Atrium	Pendants			V1	MLV	1	38	0.833	46	0.4	
		DH-22	DH-22	Entry	Chandelier			D2	MLV	1	18	0.833	22	0.2	
	4A	DH-23	DH-23	Main Dining	Pendants			Q2	MLV	1	9	0.833	11	0.1	
		DH-24	DH-24	Dining	Divider Wall Lights			S	ELV	8	4.1	0.85	39	0.3	1.0
7	7	DH-25	DH-25	Bar Dining	Pendants			Q1	MLV	7	9	0.833	76	0.6	
		DH-26	DH-26	Bar Dining	Custom Pendants			B	MLV	1	50	0.833	60	0.5	
	4A	DH-27	DH-27	Spare					Auto			0.85	0	0.0	
		DH-28	DH-28	Spare					MLV			0.833	0	0.0	1.1
8	8	DH-29	DH-29	Bar Dining	Back Bar Lights			A	Auto	3	7.5	0.85	26	0.2	
		DH-30	DH-30	Main Dining	Pendants			Q1	MLV	7	9	0.833	76	0.6	
	4A	DH-31	DH-31	Back Bar	Dow nlights			A1	Auto	4	7.5	0.85	35	0.3	
		DH-32	DH-32	Main Dining	Flag Accents			K2	ELV	2	18	0.833	43	0.4	1.5
9	9	DH-33	DH-33	Exterior	Aw ning Lights			G2	ELV	5	7.5	0.833	45	0.4	
		DH-34	DH-34	Spare					Auto			0.833	0	0.0	
	4A	DH-35	DH-35	Back Bar	LED Strips						9	0.833	0	0.0	
		DH-36	DH-36	Bar	Undercounter LED (Back)			Y	ELV	33	1	0.85	39	0.3	0.7

LUTRON DIMMIMG PANEL 'LCP2' 120/208V, 3PH, 4W 10K AIC, 175 MLO

Breaker	Module Number & Type	Lutron Panel #	Dimming Circuit	Room	Circuit Description	DL Zone	Notes	Fixture Type	Load Type	Qty	Fixture Load	Power Factor	Actual Load (W/VA)	Amp Load	Module Load
1	1	DH-37	DH-37	Signs			Controlled via Photocell		Auto	2		0.85	0	0.0	
		DH-02	DH-38	Building Lights			Controlled via Contactor Group.		Non-Dim			1	0	0.0	
	X	DH-03	DH-39	Parking Lot Lights			Controlled via Contactor Group.		Non-Dim	5		0.85	0	0.0	
		DH-04	DH-40	Parking Lot Lights			Controlled via Contactor Group.		Non-Dim	4		0.85	0	0.0	0.0
2	2	DH-05	DH-41	Kitchen	Troffers			HIHE	Non-Dim	29	40	1	1160	9.7	
		DH-06	DH-42	Expo	Troffers			FHHHE/	Non-Dim	8	40	1	320	2.7	
	X	DH-07	DH-43	Back Bar	Under counter Work Lights			U	Non-Dim	4	14	1	56	0.5	
		DH-08	DH-44	Spare								1	0	0.0	12.8
4	4	DH-09	DH-45	Back Bar	Tape Light			Y2	ELV	8	5	0.833	48	0.4	
		DH-10	DH-46	Back Bar	Tape Light			Y2	ELV	2	5	0.833	12	0.1	
	X	DH-11	DH-47	Back Bar	Tape Light			Y2	ELV	2	5	0.833	12	0.1	
		DH-12	DH-48	Back Bar	Tape Light			Y3	ELV	2	9	0.833	22	0.2	0.8
5	5	DH-13	DH-49	Spare								0.85	0	0.0	
		DH-14	DH-50	Exterior	Aw ning Lights			G2	ELV	10	7.5	0.85	88	0.7	
	4A	DH-15	DH-51	Signs			Controlled via Photocell		Auto	2		0.833	0	0.0	
		DH-16	DH-52	Signs			Controlled via Photocell		Auto			0.833	0	0.0	0.7
6	6	DH-17	DH-53	Exterior	Soffit Dow nlights			DL3	ELV	36	14.5	0.85	614	5.1	
		DH-18	DH-54	Dormer	Porcelene Socket			G	MLV	3	6	1	18	0.2	
	4A	DH-19	DH-55	Signs			Controlled via Photocell		Auto			1	0	0.0	
		DH-20	DH-56	Signs			Controlled via Photocell		Auto			1	0	0.0	5.3

LUTRON DIMMING PANEL SCHEDULE
NOT TO SCALE
6



FLORADA ENERGY CODE REQ'S:
1. C405.6.4.1: PROVIDE RECORD DRAWINGS OF THE ACTUAL INSTALLATION TO OWNER WITHIN 30 DAYS OF ACCEPTANCE. THE RECORDS SHALL INCLUDE A SINGLE-LINA DIAGRAM AND FLOOR PLAN INDICATING LOCATION AND AREA SERVED FOR ALL DISTRIBUTION.
2. C405.6.4.2: PROVIDE OPERATING MANUAL AND MAINTENANCE MANUAL TO OWNER.
3. CONTRACTOR SHALL COORDINATE WITH MAIN DISCONNECT FUSES AND PROVIDE DOCUMENTATION AND METHOD TO REDUCE CLEARING TIME OF 1200A FUSES PER NEC 240.67.

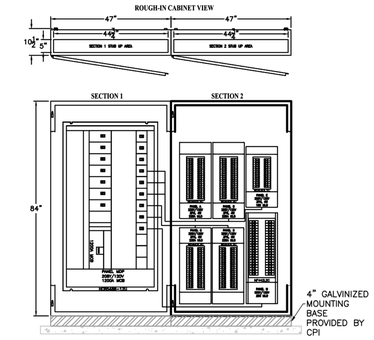
ELECTRICAL ONE-LINE RISER DIAGRAM
SCALE: NONE
5

AVAILABLE FAULT CURRENT CALCULATIONS

Design Point	Available Fault Current at Source End (A)	C Value	One-Way Length (ft)	f Value	M Value	Available Fault Current at Load End (A)
A	55514	28033	25	0.1374	0.8792	48807
B	48807	22965	3	0.0177	0.9826	47959
C	47959	22965	1	0.0058	0.9942	47682
D	47682	28033	55	0.2597	0.7939	20000
E	20000	12844	25	0.3242	0.7552	15104
S	20000	3806	37	1.6190	0.3818	7636
F	20000	7293	5	0.1142	0.8975	17950
G	20000	7293	5	0.1142	0.8975	17950
H	20000	12844	5	0.0648	0.9391	18782
I	20000	12844	5	0.0648	0.9391	18782
J	20000	7293	5	0.1142	0.8975	17950
K	20000	12844	5	0.0648	0.9391	18782
L	20000	3806	50	2.1879	0.3137	6274
M	20000	4774	50	1.7443	0.3644	7288
N	20000	2425	22	1.5109	0.3983	7965
O	20000	8925	28	0.5225	0.6568	13136
P	20000	3806	18	0.7876	0.5594	11188
Q	20000	3806	20	0.8752	0.5333	10666
T	20000	981	20	3.3954	0.2275	4550
R	20000	5907	20	0.5639	0.6394	12789
L	20000	3806	50	2.1879	0.3137	6274

* CALCULATIONS PERFORMED USING BUSSMANN POINT-TO-POINT METHOD. ASSUMPTIONS ARE A 300 KVA UTILITY TRANSFORMER WITH IMPEDANCE OF 2.1%Z. CONTRACTOR SHALL VERIFY THIS INFORMATION WITH UTILITY COMPANY AND NOTIFY ENGINEER IMMEDIATELY IF TRANSFORMER SIZE IS LARGER, IMPEDANCE IS SMALLER, OR FEEDER LENGTHS ARE SHORTER THAN INDICATED. SIZE FUSE AND EQUIPMENT AIC RATINGS ACCORDINGLY.

FAULT CURRENT CALCULATION
SCALE: NONE
7



ELECTRICAL SWITCHGEAR ELEVATION
SCALE: 1/2" = 1'-0"
8

MEP ENGINEER:
JARRET L. RICE, P.E. (LIC# 82028) PLANO, TEXAS
PHONE: (469) 608-1268

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PROJECT NUMBER
DCH22007

CLIENT:
DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
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Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
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Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

BLOOMINGDALE AVE & GORNTO LAKE RD

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
ELECTRICAL RISER DIAGRAMS AND DETAILS

E5.0

Branch Panel: M

Location: RECEIVING 117 **Volts:** 208Y/120V **A.I.C. Rating:** 42,000 AIC FULLY RATED
Supply From: MDP **Phases:** 3 **Mains Type:** MLO
Mounting: SURFACE **Wires:** 4 **Mains Rating:** 200 A
Enclosure: NEMA 1 **MCB Rating:** 200 A

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	SPARE	20 A	1	0			1917						2
3	SPARE	20 A	1		0			1917		3	20 A	ACCU-1b	4
5	SPARE	20 A	1			0			1917				6
7				829			1917						8
9	KEF-1	20 A	3		829			1917		3	20 A	ACCU-1c	10
11						829			1917				12
13				829			1500						14
15	KEF-2	20 A	3		829			1500		2	20 A	UH-1	16
17						829			1009				18
19				781			1009			3	20 A	E143 ICE MACHINE	20
21	KEF-3	20 A	3		781			1009					22
23						781			1009				24
25				1021			1009			3	20 A	E143 ICE MACHINE	26
27	KEF-4	20 A	3		1021			1009					28
29						1021			1513				30
31				1917			1513			3	30 A	REMOTE CONDENSING UNIT, AIR COOLED	32
33	ACCU-1a	30 A	3		1917			1513					34
35						1917			360	1	20 A	E143a ICE MACHINE	36
37	E143a ICE MACHINE	20 A	1	360			0			1	20 A	SPARE	38
39	SPARE	20 A	1		0			0		1	20 A	SPARE	40
41	SPARE	20 A	1			0			0	1	20 A	SPARE	42
				Total Load:	14599 VA	14239 VA	13099 VA						
				Total Amps:	123 A	120 A	109 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	3000 VA	100.00%	3000 VA		
HVAC	32165 VA	100.00%	32165 VA	**Total Conn. Load:**	41937 VA
Receptacle	720 VA	100.00%	720 VA	**Total Est. Demand:**	41937 VA
Kitchen	6052 VA	100.00%	6052 VA	**Total Conn. Current:**	116 A
				Total Est. Demand Current:	116 A

Notes:
1. PROVIDE BOLT-ON BREAKERS.

Branch Panel: C

Location: RECEIVING 117 **Volts:** 208Y/120V **A.I.C. Rating:** 42,000 AIC SERIES RATED
Supply From: MDP **Phases:** 3 **Mains Type:** MLO
Mounting: SURFACE **Wires:** 4 **Mains Rating:** 100 A
Enclosure: NEMA 1 **MCB Rating:** 100 A

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	(GFI) REFRIGERATOR PREP TABLE	20 A	1	780			1800			1	20 A	(GFI) 30 QUART MIXER	2
3	(GFI) HOT FOOD WELL TABLE, ELECTRIC	20 A	2		1560			300		1	20 A	(GFI) SALAD/VEGETABLE DRYER, ELECTRIC	4
5						1560			180	1	20 A	FIRE SUPPRESSION SYSTEM	6
7	(GFI) REFRIGERATOR PREP TABLE	20 A	1	780			1200			1	20 A	(GFI) WORK COUNTER, REFRIGERATED	8
9	(GFI) TOASTER, CONTACT GRILL, CONVEYOR TYPE	20 A	2		1404			864		1	20 A	(GFI) MEAT CURING AGING CABINET	10
11						1404			840	1	20 A	(GFI) FOOD SLICER, ELECTRIC	12
13	(GFI) HEATED CABINET, MOBILE	20 A	1	1920			360			1	20 A	IRRIGATION CONTROLLER	14
15	(GFI) DISPLAY MERCHANDISER, HEATED	20 A	1		1428			1440		1	20 A	(GFI) FOOD PROCESSOR....	16
17	(GFI) GRIDDLE, GAS, COUNTERTOP	20 A	1			120			960	1	20 A	(GFI) FOOT-OPERATED IMPULSE BAG SEALER	18
19	(GFI) FREEZER COUNTER, WORK TOP	20 A	1	636			420			1	20 A	(GFI) MINI CHILL UNIT	20
21	HOOD CONTROL PANEL	20 A	1		180			2995		2	40 A	(GFI) RETHERMALIZER, WATER TANK, ELECTRIC	22
23	FIRE SUPPRESSION SYSTEM	20 A	1			180			2995				24
25	E2 COOLER EVAP COIL	20 A	1	384			60			3	20 A	E12 FREEZER EVAP COIL	26
27	E2 COOLER EVAP COIL	20 A	1		192			60					28
29	REC - KDS	20 A	1			900			60				30
31	REC - KDS	20 A	1	900			360			1	20 A	WH-1 & WH-2	32
33	SPARE	20 A	1		0			0		1	20 A	SPARE	34
35	SPARE	20 A	1			0			0	1	20 A	SPARE	36
37	SPARE	20 A	1	0			360			1	20 A	RCP-1	38
39	SPARE	20 A	1		0			0		1	20 A	SPARE	40
41	SPARE	20 A	1			0			0	1	20 A	SPARE	42
				Total Load:	9960 VA	10423 VA	9199 VA						
				Total Amps:	84 A	88 A	77 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	1656 VA	100.00%	1656 VA		
Receptacle	1980 VA	100.00%	1980 VA	**Total Conn. Load:**	29582 VA
Kitchen	25946 VA	65.00%	16865 VA	**Total Est. Demand:**	20501 VA
				Total Conn. Current:	82 A
				Total Est. Demand Current:	57 A

Notes:
1. PROVIDE BOLT-ON BREAKERS.
2. "(GFI)" = GFI CIRCUIT BREAKER
3. PROVIDE SHUNT-TRIP BREAKER AT PANEL "MDP"

Branch Panel: MDP

Location: RECEIVING 117 **Volts:** 208Y/120V **A.I.C. Rating:** 65,000 AIC FULLY RATED
Supply From: T-UTIL **Phases:** 3 **Mains Type:** MLO
Mounting: SURFACE **Wires:** 4 **Mains Rating:** 1200 A
Enclosure: NEMA 1 **MCB Rating:** 1200 A

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1				3247			3536						2
3	DOAS-1	60 A	3		3247			4048		3	60 A	LUTRON DIMMING PANEL LCP1	4
5						3247			2727				6
7				4611			6884						8
9	RTU-1	60 A	3		4611			6116		3	200 A	PANEL A	10
11						4611			4910				12
13				7476			9960						14
15	PANEL D	100 A	3		11280			10423		3	200 A	PANEL C	16
17						4212			9199				18
19				19993			--			1	--	SHUNT TRIP DEVICE	20
21	PANEL B	200 A	3		16292			10080					22
23						15153			3060	3	100 A	PANEL E	24
25				14599			5040						26
27	PANEL M	200 A	3		14239			4611					28
29						13099			4611	3	60 A	RTU-2	30
31	BOOSTER HEATER, ELECTRIC	110 A	3	10003			4611						32
33	(PADLOCKABLE HASP)				10003			0					34
35	SEE NOTE 3					10003			0	3	60 A	LUTRON DIMMING PANEL LCP2	36
37	DISHWASHER, CONVEYOR TYPE	70 A	3	6725			0						38
39	(PADLOCKABLE HASP)				6725			11240					40
41	SEE NOTE 3					6725			11240	3	150 A	RTU-4	42
43				6341			11240						44
45	RTU-3	80 A	3		6341			10147					46
47						6341			15551	3	200 A	E56	48
49	SPACE	--	1	--			14653						50
51	SPACE	--	1		--			--		1	--	SPACE	52
53	SPACE	--	1			--			--	1	--	SPACE	54
				Total Load:	128921 VA	138404 VA	114690 VA						
				Total Amps:	1093 A	1172 A	956 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	5463 VA	125.00%	6829 VA		
Other	15866 VA	100.00%	15866 VA	**Total Conn. Load:**	382015 VA
HVAC	129858 VA	100.00%	129858 VA	**Total Est. Demand:**	305017 VA
Receptacle	17160 VA	79.14%	13580 VA	**Total Conn. Current:**	1060 A
Kitchen	213668 VA	65.00%	138884 VA	**Total Est. Demand Current:**	847 A

Notes:
1. PROVIDE BOLT-ON BREAKERS.
2. PROVIDE "LOCK OUT-TAG OUT" FOR CIRCUITS NOTED.

Branch Panel: E56

Location: STORAGE 112 **Volts:** 208Y/120V **A.I.C. Rating:** 10,000 AIC SERIES RATED
Supply From: MDP **Phases:** 3 **Mains Type:** MLO
Mounting: SURFACE **Wires:** 4 **Mains Rating:** 200 A
Enclosure: NEMA 3R **MCB Rating:** 200 A

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	(GFI) SMOKER OVEN	20 A	2	3266			3603						2
3					3266			3603		3	40 A	(GFI) KETTLE, ELECTRIC, TILTING	4
5						3603			3603				6
7	(GFI) KETTLE, ELECTRIC, TILTING	40 A	3	3603			960			1	20 A	(GFI) CONVECTION OVEN, GAS	8
9					3603			960		1	20 A	CONVECTION OVEN, GAS	10
11	(GFI) PASTA COOKER, GAS	20 A	1			120			900	2	20 A	(GFI) FRENCH FRY WARMER	12
13	(GFI) WORK COUNTER, REFRIGERATED	20 A	1	1200			900						14
15	(GFI) FRYER, GAS, MULTIPLE BATTERY	20 A	1		1464			396		1	20 A	(GFI) FOOD PAN WARMER, COUNTERTOP	16
17	(GFI) CONVECTION OVEN, ELECTRIC	50 A	2			4160			1464	1	20 A	(GFI) FRYER, GAS, FLOOR MODEL, FULL POT	18
19				4160			1456			2	20 A	(GFI) FRENCH FRY WARMER	20
21	(GFI) EQUIPMENT STAND, REFRIGERATED...	20 A	1		804			1456					22
23	(GFI) EQUIPMENT STAND, REFRIGERATED...	20 A	1			804			--	1	--	SPACE	24
25	SPACE	--	1	--			--			1	--	SPACE	26
27	SPACE	--	1		--			--		1	--	SPACE	28
29	SPACE	--	1			--			--	1	--	SPACE	30
31	SPACE	--	1	--			--			1	--	SPACE	32
33	SPACE	--	1		--			--		1	--	SPACE	34
35	SPACE	--	1			--			--	1	--	SPACE	36
37	SPACE	--	1	--			--			1	--	SPACE	38
39	SPACE	--	1		--			--		1	--	SPACE	40
41	SPACE	--	1			--			--	1	--	SPACE	42
				Total Load:	19147 VA	15551 VA	14653 VA						
				Total Amps:	161 A	131 A	122 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Kitchen	49351 VA	65.00%	32078 VA		
				Total Conn. Load:	49351 VA
				Total Est. Demand:	32078 VA
				Total Conn. Current:	137 A
				Total Est. Demand Current:	89 A

Notes:
1. INTEGRATED LOAD CENTER IN RACEWAY PROVIDED WITH KITCHEN EQUIPMENT - COORDINATE WITH KITCHEN CONSULTANT SHOP DRAWINGS.
2. WIRING DEVICES ARE PRE-WIRED FROM LOAD CENTER.
3. CIRCUITING IS FOR REFERENCE ONLY. PANEL IS PREWIRED WITH CIRCUIT BREAKERS AND BRANCH CIRCUITS. VERIFY EXACT LOADS WITH FINAL EQUIPMENT SELECTIONS.
"(GFI)" = GFI CIRCUIT BREAKER

Branch Panel: D

Location: RECEIVING 117 **Volts:** 208Y/120V **A.I.C. Rating:** 42,000 AIC SERIES RATED
Supply From: MDP **Phases:** 3 **Mains Type:** MLO
Mounting: SURFACE **Wires:** 4 **Mains Rating:** 100 A
Enclosure: NEMA 1 **MCB Rating:** 100 A

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	SPARE	20 A	1	0			480			1	20 A	(GFI) GLASS FROSTER	2
3	SPARE	20 A	1		0			1380		1	20 A	(GFI) BLENDER, BAR	4
5	(GFI) MINI CHILL UNIT	20 A	1			420			240	1	20 A	(GFI) LIQUOR BOTTLE DISPLAY, COUNTERTOP	6
7	(GFI) PROOFER CABINET, MOBILE,...	20 A	1	1896			540			1	20 A	(GFI) CONVENIENCE OUTLET	8
9	SPARE	20 A	1		0			180		1	20 A	(GFI) FIRE SUPPRESSION SYSTEM	10
11	SPARE	20 A	1			0			240	1	20 A	(GFI) LIQUOR BOTTLE DISPLAY, COUNTERTOP	12
13	SPARE	20 A	1	0			0			1	20 A	SPARE	14
15	SPARE	20 A	1		0			0		1	20 A	SPARE	16
17	SPARE	20 A	1			0			720	1	20 A	RESTROOM FAUCET AND SENSOR	18
19	SPARE	20 A	1	0			1920			1	20 A	(GFI) CARBONATOR	20
21	SPARE	20 A	1		0			1920		1	20 A	(GFI) CARBONATOR	22
23	SPARE	20 A	1			0			0	1	20 A	SPARE	24
25	SPARE	20 A	1	0			1920			1	20 A	(GFI) CARBONATOR	26
27	SPARE	20 A	1		0			720		1	20 A	(GFI) CONVENIENCE OUTLET	28
29	SPARE	20 A	1			0			0	1	20 A	SPARE	30
31	SPARE	20 A	1	0			0			1	20 A	SPARE	32
33	(GFI) CONDENSATE HOOD	20 A	1		1800			1440		1	20 A	(GFI) FRYER OIL DISPOSAL CART	34
35	(GFI) LIQUOR BOTTLE DISPLAY, COUNTERTOP	20 A	1			1080			1008	1	20 A	(GFI) OIL COLLECTION SYSTEM	36
37	(GFI) CONVENIENCE OUTLET	20 A	1	360			360			1	20 A	(GFI) UNDERCOUNTER REFRIGERATOR,...	38
39	(GFI) FROZEN DRINK MACHINE - AIR COOLED	20 A	1		3120			720		1	20 A	FLUSH SENSORS	40
41	SPARE	20 A	1			0			504	1	20 A	(GFI) BACKBAR REFRIGERATOR	42
				Total Load:	7476 VA	11280 VA	4212 VA						
				Total Amps:	66 A	98 A	35 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	720 VA	100.00%	720 VA		
Receptacle	1800 VA	100.00%	1800 VA	**Total Conn. Load:**	22968 VA
Kitchen	20448 VA	65.00%	13291 VA	**Total Est. Demand:**	15811 VA
				Total Conn. Current:	64 A
				Total Est. Demand Current:	44 A

Notes:
1. PROVIDE BOLT-ON BREAKERS.
2. "(GFI)" = GFI CIRCUIT BREAKER

Branch Panel: A

Location: RECEIVING 117 **Volts:** 208Y/120V **A.I.C. Rating:** 42,000 AIC SERIES RATED
Supply From: MDP **Phases:** 3 **Mains Type:** MLO
Mounting: SURFACE **Wires:** 4 **Mains Rating:** 200 A
Enclosure: NEMA 1 **MCB Rating:** 200 A

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	SPARE	20 A	1	0			720			1	20 A	REC - BDA ROOM	2
3	SPARE	20 A	1		0			120		1	20 A	EXTERIOR LIGHTING	4
5	SPARE	20 A	1			0			39	1	20 A	ROOF LIGHTS	6
7	TEF-1	15 A	1	696			720			1	20 A	REC - BDA ROOM	8
9	MONUMENT SIGN	20 A	1		1200			300		1	20 A	TV RECEPTACLES - BAR	10
11	MONUMENT SIGN	20 A	1			1200			300	1	20 A	TV RECEPTACLES - BAR	12
13	RECEPTACLES	20 A	1	180			300			1	20 A	TV RECEPTACLES - BAR	14
15	SPARE	20 A	1		0			300		1	20 A	TV RECEPTACLES	16
17	SPARE	20 A	1			0			0	1	20 A	SPARE	18
19	SPARE	20 A	1	0			60			1	20 A	ROOF LIGHTS	20
21	SPARE	20 A	1		0			1200		1	20 A	AIR CURTAIN	22
23	WATER SOFTNER RECEPT/DOOR BUZZER	20 A	1			360			11	1	20 A	EXTERIOR LIGHTING	24
25	HOOD CONTROL PANEL	20 A	1	180			1200			1	20 A	E22 AIR CURTAIN	26
27	GAS LANTERNS	20 A	1		0			252		1	20 A	HOOD LIGHTING	28
29	RECEPTACLES	20 A	1			180			0	1	20 A	SPARE	30
31	(GFI) THERMO FINISHER	20 A	2	1664			864			1	15 A	DEF-1	32
33					1664			720		1	20 A	REC - ROOFTOP	34
35	BAR RECEPTACLES	20 A	1			900			540	1	20 A	REC - GENERAL PURPOSE	36
37	SPARE	20 A	1	0			300			1	20 A	TV RECEPTACLES - BAR	38
39	SPARE	20 A	1		0			360		1	20 A	(GFI) CONVENIENCE OUTLET	40
41	SPARE	20 A	1			0			1380	1	20 A	DINING PADDLE FAN	42
				Total Load:	6884 VA	6116 VA	4910 VA						
				Total Amps:	59 A	53 A	41 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	1682 VA	125.00%	2103 VA		
Other	2760 VA	100.00%	2760 VA	**Total Conn. Load:**	17910 VA
HVAC	1560 VA	100.00%	1560 VA	**Total Est. Demand:**	17149 VA
Receptacle	6000 VA	100.00%	6000 VA	**Total Conn. Current:**	50 A
Kitchen	5908 VA	80.00%	4726 VA	**Total Est. Demand Current:**	46 A

Notes:
1. PROVIDE BOLT-ON BREAKERS.

Branch Panel: E

Location: RECEIVING 117 **Volts:** 208Y/120V **A.I.C. Rating:** 42,000 AIC SERIES RATED
Supply From: MDP **Phases:** 3 **Mains Type:** MLO
Mounting: SURFACE **Wires:** 4 **Mains Rating:** 100 A
Enclosure: NEMA 1 **MCB Rating:** 100 A

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	POS - BUMP SCREEN	20 A	1	1800			3600			1	20 A	POS - CASH REGISTER	2
3	POS - BUMP SCREEN	20 A	1		1800			0		1	20 A	SPARE	4
5	BAR WAIT - POS TERMINAL	20 A	1			360			180	1	20 A	BAR WAIT - POS TERMINAL	6
7	SPARE	20 A	1	0			360			1	20 A	POS - BUMP SCREEN	8
9	HOSTESS STATION	20 A	1		180			180		1	20 A	OFFICE RECEPTACLE	10
11	POS - PRINTER	20 A	1			1800			0	1	20 A	SPARE	12
13	BACKBAR REFRIGERATOR	20 A	1	1800			1440			1	20 A	DATA RACK RECEPTACLES	14
15	SOUND RACK CABINET	20 A	1		720			0		1	20 A	SPARE	16
17	OFFICE RECEPTACLE	20 A	1			360			1800	1	20 A	POS - CASH REGISTER	18
19	OFFICE RECEPTACLE	20 A	1	360			0			1	20 A	SPARE	20
21	TELEPHONE BOARD	20 A	1		180			0		1	20 A	SPARE	22
23	SPARE	20 A	1			0			360	1	20 A	FIRE ALARM PANEL WITH SNAP LOCK	24
25	REC - IT CLOSET	20 A	1	720			0			1	20 A	SPARE	26
27	SPARE	20 A	1		0			0		1	20 A	SPARE	28
29	OFFICE RECEPTACLE	20 A	1			180			0	1	20 A	SPARE	30
				Total Load:	10080 VA	3060 VA	5040 VA						
				Total Amps:	87 A	26 A	45 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	5580 VA	100.00%	5580 VA		
Kitchen	12600 VA	65.00%	8190 VA	**Total Conn. Load:**	18180 VA
				Total Est. Demand:	13770 VA
				Total Conn. Current:	50 A
				Total Est. Demand Current:	38 A

Notes:
1. PROVIDE BOLT-ON BREAKERS.
2. ISOLATED GROUND PANEL

Branch Panel: B

Location: RECEIVING 117 **Volts:** 208Y/120V **A.I.C. Rating:** 42,000 AIC SERIES RATED
Supply From: MDP **Phases:** 3 **Mains Type:** MLO
Mounting: SURFACE **Wires:** 4 **Mains Rating:** 200 A
Enclosure: NEMA 1 **MCB Rating:** 200 A

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	(GFI) FREEZER COUNTER, WORK TOP	20 A	1	564			1993						2
3	(GFI) REFRIGERATOR PREP TABLE	20 A	1		780			1993		3	30 A	REMOTE CONDENSING UNIT, AIR COOLED	4
5	(GFI) SODA ICE & BEVERAGE DISPENSER	20 A	1			1800			1993				6
7	(GFI) BEVERAGE DISPENSER, ELECTRIC...	20 A	1	1800			1820			2	20 A	(GFI) HEAT LAMP, STRIP TYPE	8
9								1820					10
11	(GFI) TEA BREWER	20 A	1			1680			300	1	20 A	(GFI) BACKBAR REFRIGERATOR	12
13	(GFI) COFFEE MAKER	20 A	1	1800			1656			1	20 A	(GFI) FOOD WARMER	14
15	(GFI) TEA BREWER	20 A	1		1680			600		1	20 A	(GFI) WALK-IN COOLER	16
17	(GFI) SODA ICE & BEVERAGE DISPENSER	20 A	1			1800			1200	1	20 A	(GFI) WORK CENTER (HOT)	18
19	(GFI) EXPO COUNTER	20 A	1	2400			2413			2	30 A	HEAT LAMP, STRIP TYPE	20
21	(GFI) MICROWAVE OVEN	20 A	2		1591			2413					22
23						1591			1200	1	20 A	(GFI) FREEZER, UNDERCOUNTER, REACH-IN	24
25	(GFI) MICROWAVE OVEN	20 A	2	1591			1800			1	20 A	(GFI) SANDWICH / PANINI GRILL	26
27					1591			2040		1	30 A	(GFI) HOT FOOD WELL TABLE, ELECTRIC	28
29	(GFI) WALK-IN FREEZER	20 A	1			600							30
31							564			1	20 A	(GFI) REFRIGERATOR PREP TABLE	32
33								192		1	20 A	(GFI) ICE CREAM DIPPING CABINET, DROP-IN	34
35	RESTROOM RECEPTACLES	20 A	1			1080			1512	1	20 A	(GFI) NACHO CHIP WARMER, BULK	36
37	(GFI) MICROWAVE OVEN	20 A	2	1591			0			1	20 A	SPARE	38
39					1591			0		1	20 A	SPARE	40
41	(GFI) FOOD PAN WARMER, COUNTERTOP	20 A	1			396			0	1	20 A	SPARE	42
				Total Load:	19993 VA	16292 VA	15153 VA						
				Total Amps:	168 A	137 A	126 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	1200 VA	100.00%	1200 VA		
HVAC	5980 VA	100.00%	5980 VA	**Total Conn. Load:**	51437 VA
Receptacle	1080 VA	100.00%	1080 VA	**Total Est. Demand:**	36325 VA
Kitchen	43177 VA	65.00%	28065 VA	**Total Conn. Current:**	143 A
				Total Est. Demand Current:	101 A

Notes:
1. PROVIDE BOLT-ON BREAKERS.
"(GFI)" = GFI CIRCUIT BREAKER

MEP ENGINEER:
JARRET L. RICE, P.E. (LIC# 82028) PLANO, TEXAS
PHONE: (469) 608-1268

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PROJECT NUMBER
DCH22007

CLIENT:
DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

cheddars SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

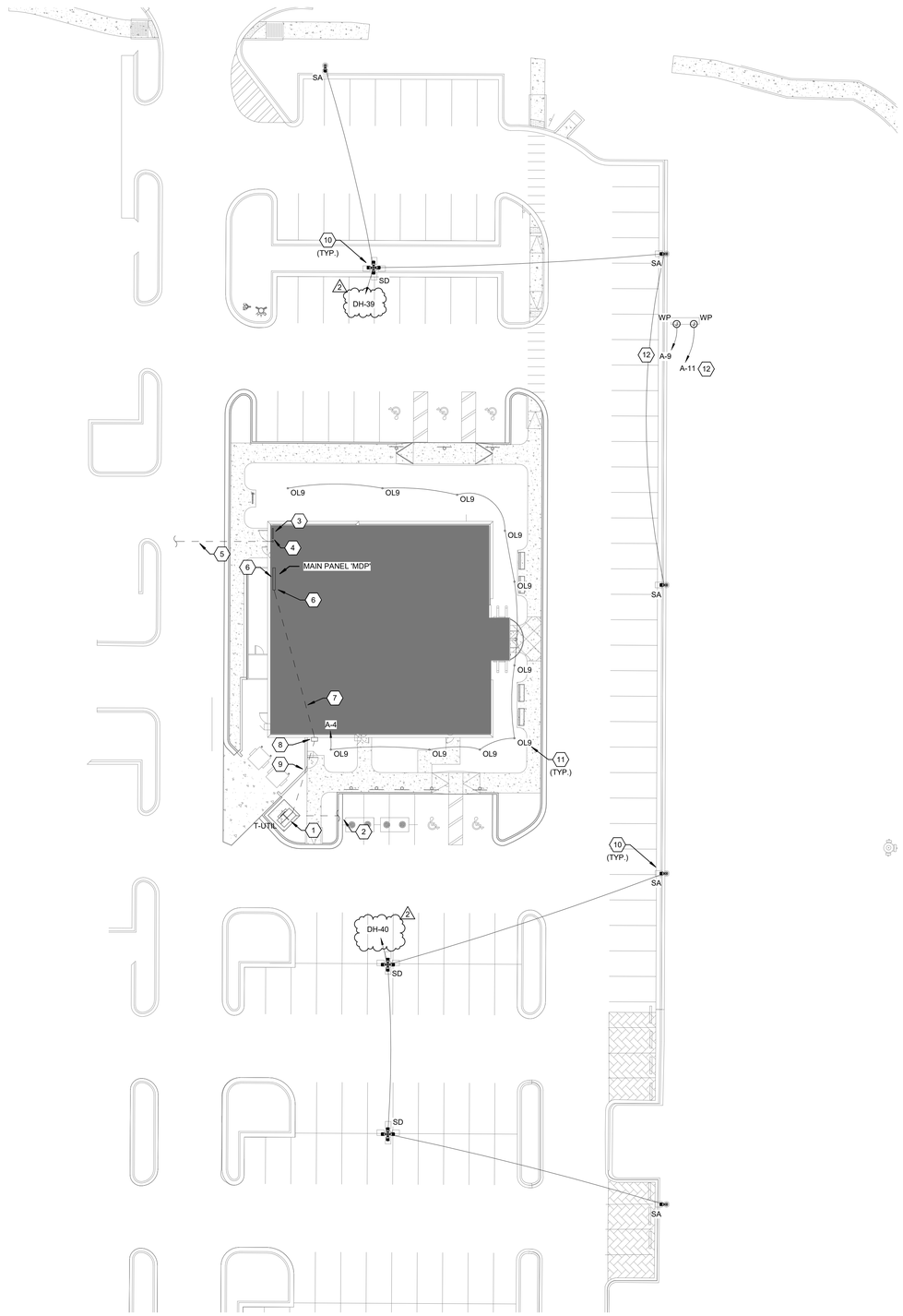
BLOOMINGDALE AVE & GORNTO LAKE RD

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
ELECTRICAL SCHEDULES

E5.1



SITE PLAN - ELECTRICAL
1" = 20'-0"
1

KEYNOTES - ES.0

1	POWER COMPANY PAD MOUNTED TRANSFORMER, 120/208V, 3 PHASE, 4 WIRE SECONDARY. CONTRACTOR TO INSTALL CONCRETE PAD, GROUNDING AND BARRIER PER POWER COMPANY REQUIREMENTS.
2	EXISTING UNDERGROUND PRIMARY CONDUIT WITH UTILITY CONDUCTORS ARE EXISTING TO REMAIN.
3	LOCATION OF TELEPHONE BOARD. REFER TO SHEET E3.0 FOR FINAL LOCATION.
4	STUB UP LOCATION OF TELEPHONE SERVICE CONDUIT. CAP AND FLAG.
5	2-4" EMPTY PVC CONDUITS WITH PULLWIRE FROM STUB UP LOCATION NEAR TELEPHONE BOARD (NOTE 3) TO PROPERTY LINE. CAP & FLAG. VERIFY LOCATION WITH TELEPHONE COMPANY PRIOR TO WORK.
6	STUB UP LOCATION OF SECONDARY FEEDER AT MAIN PANEL 'MDP'. SECTION OF UNITIZED SWITCHBOARD 'USB'.
7	UNDERGROUND SERVICE SECONDARY FEEDER, 4 SETS [4-350KCM, 4"C] FROM SERVICE DISCONNECT LOCATION TO LOCATION OF UNITIZED SWITCHBOARD 'MDP' BY CONTRACTOR. TRANSITION FROM PVC TO RGS CONDUIT AT ELBOW BELOW GRADE FOR ABOVE GRADE ROUTING.
8	ELECTRICAL SERVICE MAIN DISCONNECT SWITCH ON EXTERIOR WALL OF BUILDING. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 2'-0" SEPARATION BETWEEN THE GAS METER AND ANY ELECTRICAL SERVICE EQUIPMENT.
9	UNDERGROUND SERVICE SECONDARY FEEDER, 4 SETS [4-350KCM, 4"C] FROM UTILITY TRANSFORMER TO MAIN DISCONNECT SWITCH LOCATION BY CONTRACTOR. TRANSITION FROM PVC TO RGS CONDUIT AT ELBOW BELOW GRADE FOR ABOVE GRADE ROUTING. COORDINATE EXACT LENGTH OF FEEDER AND LOCATION OF TRANSFORMER WITH LOCAL UTILITY COMPANY AND INCLUDE ALL SECONDARY WORK AND MATERIALS IN BID.
10	NEW SITE LIGHTING ON POLE BASES. CONNECT TO CIRCUIT A-1 AND A-3.
11	PROVIDE (9) TYPE 'OL9' LIGHT FIXTURES FOR LANDSCAPING. COORDINATE LOCATIONS OF LIGHT FIXTURES WITH LANDSCAPE DESIGNER PRIOR TO ROUGH-IN.
12	REFER TO DETAIL 5/E0.3 FOR LIGHTING CONTROLS.

COMMISSIONING STATEMENT

2

1	PER THE REQUIREMENTS OF THE FLORIDA ENERGY CODE SECTION C408, A COMMISSIONING/TESTING AGENT(S) IS RESPONSIBLE FOR THE TESTING AND/OR CALIBRATION OF THE BUILDING SYSTEMS.
2	SYSTEMS TO BE TESTED, OR SERVICES TO BE PERFORMED, SHALL INCLUDE, BUT ARE NOT LIMITED TO: -LIGHTING SYSTEMS OCCUPANCY SENSOR CONTROLS -TIME CONTROLS / TIME CLOCK -DAYLIGHT RESPONSIVE CONTROLS
3	COMMISSIONING AGENT(S) SHALL VERIFY INSTALLED EQUIPMENT MATCHES THE SPECIFIED EQUIPMENT SHOWN ON THE CONSTRUCTION DOCUMENTS.
4	UPON COMPLETION, COMMISSIONING AGENT SHALL PROVIDE A FULL REPORT STATING THE EQUIPMENT IS IN COMPLIANCE WITH AND/OR SYSTEMS HAVE BEEN CALIBRATED TO THE CONDITIONS STATED IN THE CONSTRUCTION DOCUMENTS.

MEP ENGINEER:

JARRET L. RICE, P.E. (LIC# 82028) PLANO, TEXAS
PHONE: (469) 608-1268

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.

1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023
Restaurant #:	21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

BLOOMINGDALE AVE &
GORNTO LAKE RD

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:

ELECTRICAL SITE PLAN

ES.0

OSQ Series

OSQ™ LED Area/Flood Luminaire featuring Cree TrueWhite® Technology – Medium & Large

Rev. Date: V5 09/14/2021

Product Description

The OSQ™ Area/Flood luminaire blends extreme optical control, advanced thermal management and modern, clean aesthetics. Built to last, the housing is rugged cast aluminum with an integral, weathertight LED driver compartment. Versatile mounting configurations offer simple installation. Its slim, low-profile design minimizes wind load requirements and blends seamlessly into the site providing even, quality illumination. The 6L lumen package is a suitable upgrade for HID applications up to 250 Watt, and the 11L lumen package is a suitable upgrade for HID applications up to 400 Watt. The 22L lumen package is a suitable upgrade for HID applications up to 750 Watts, and the 30L lumen package is a suitable upgrade for HID applications up to 1000 Watts.

Applications: Parking lots, walkways, campuses, car dealerships, office complexes, tunnels, underpasses, and internal roadways

Performance Summary

Utilizes Cree TrueWhite® Technology on 5000K Luminaires

NanoOptic® Precision Delivery Grid™ optic

Assembled in the U.S.A. of U.S. and imported parts

Initial Delivered Lumens: 4,000 - 30,000

Efficacy: Up to 173 LPW

CRI: Minimum 70 CRI (3000K, 4000K & 5700K); 90 CRI (5000K)

CCT: 3000K, 4000K, 5000K, 5700K

Limited Warranty†: 10 years on luminaire; 10 years on Colorfast DeltaGuard® finish; up to 5 years for Synapse® accessories; 1 year on luminaire accessories

† See http://creelighting.com/warranty for warranty terms. For Synapse accessories, consult Synapse spec sheets for details on warranty terms.

Ordering Information

Fully assembled luminaire is composed of two components that must be ordered separately:
Example: **Mount**: OSQ-ML-B-AA-BK + **Luminaire**: OSQM-8-6L-30K7-2M-UL-NM-DK

Mount (Luminaire must be ordered separately)*

OSQ-

OSQ-ML-B-AA Adjustable Arm
OSQ-ML-B-DA Direct Arm
OSQ-ML-B-TSP Transportation Mount (stainless steel; do not specify color)
OSQ-ML-B-TM Trunnion Mount

Color Options: **SV** Silver, **BK** Black, **BZ** Bronze, **WH** White

* Reference EPA and pole configuration suitability data beginning on page 12

Luminaire (Mount must be ordered separately)

OSQ

Family	Size	Series	Lumen Package	CCT/CRI	Optic	Voltage	Mount	Color Options	Controls**	Options
OSQ	**M** Medium **L** Large	**B**	**Medium** **4L** 4,000 Lumens **6L** 6,000 Lumens **Medium or Large** **9L** 9,000 Lumens **11L** 11,000 Lumens **14L** 14,000 Lumens **LARGE ONLY** **22L** 22,000 Lumens **30L** 30,000 Lumens	**30K7** 3000K 70 CRI **40K7** 4000K, 70 CRI **50K8** 5000K, 90 CRI **57K7** 5700K, 70 CRI	**Asymmetrics** **2M*** Type II Medium **3M*** Type III Medium **4M*** Type IV Medium **Symmetrics** **5M** Type V Medium **5W** Type V Narrow **5Q** Type V Square **Area/Flood** **3X** NEMA® 3x3 **4X** NEMA® 4x4 **5X** NEMA® 5x5 **6X** NEMA® 6x6 **7X** NEMA® 7x5	**UL** Universal 120-277V **UNV** Universal 347-480V - Not available with 4L or 6L lumen packages	**NM** No Mount - Must specify mount from table above - Mount ships separately	**BK** Black **BZ** Bronze **SV** Silver **WH** White	**PML Programmable Multi-Level, up to 40' Mounting Height** - Refer to PML spec sheet for details - Intended for downlight applications at 0' lat **PML2 Programmable Multi-Level, 10-30' Mounting Height** - Refer to PML2 spec sheet for details - Intended for downlight applications at 0' lat **DY/SR/SY/SA/SH/SG/SS/SU/SY** **Field Adjustable Output** - Must select DY, SR, SY, SA, SH, SG, SL, SS, or SU - Refer to field range adjustability - Refer to pages 12-18 for power and lumen values - Not available with PML or PML2 options **XH/XY/XA/XG/XX/XS/XY** **Locked Lumen Output** - Must select XH, XY, XA, XG, XX, XS, or XY - Not available with 22L or 30L lumen packages - Not available with PML or PML2 options - Lumen output is permanently locked to the setting selected - Refer to pages 12-18 for power and lumen values	**20KV 20kV/10kA Surge Suppression** - Replaces standard 10kV surge protection **F** - Compatible with 120V, 277V or 347V (phase to neutral) - Consult factory if fusing is required for 208V, 240V or 480V (phase to phase) - Refer to PML spec sheet for availability with PML options - When code dictates fusing, use time delay fuse **R NEMA® 7-Pin Photocell Receptacle** - 7-pin receptacle per ANSI C136.41 - Intended for downlight applications with maximum 45° tilt - Refer to photocell specs for details - 18" (457mm) cover is shipped on luminaire and extra luminaire - Requires photocell or shorting cap by others **RL Rotate Left** - LED and optic are rotated to the left - Refer to RR/RL configuration diagram on page 19 for optic directionality - Not for use with symmetric optics **RR Rotate Right** - LED and optic are rotated to the right - Refer to RR/RL configuration diagram on page 19 for optic directionality - Not for use with symmetric optics

† Lumen Package codes identify approximate light output only. Actual lumen output levels vary by CCT and optic selection. Refer to Initial Delivered Lumen tables for specific lumen values
* Available with Backlight Shield when ordered with field-installed accessory (see table above)
** Luminaire comes standard with 0-10V dimming

US: creelighting.com (800) 236-4800
Canada: creelighting-canada.com (800) 473-1234

CREE LIGHTING

SSS Series

Crown-Weld® Straight Square Steel Poles

Rev. Date: V5 02/24/2020

Product Description

Cree Lighting's proprietary Crown-Weld® pole base crown weld configuration was designed to minimize stress in areas most vulnerable to failure, provide superior strength and higher wind load ratings, than poles of similar height and cross-section. Both premium pole design and extended life finish combine for a 7-year limited warranty for a reduced lifetime cost of ownership.

Non-tapered square steel poles are supplied with a painted galvanized steel 2-piece base cover, four partially galvanized anchor bolts, Masonite mounting template and pole cap (except open top mount). Steel pole base has slotted holes to accommodate installation. A standard 3" x 5" hand hole is located 14" above the bottom of pole base on 4-6" poles; 3" poles have a 2-5/8" x 4-1/2" hand hole located 14" above the bottom of the base plate. A 1/2" stainless-steel weld stud with grounding lug is located inside the pole, opposite the hand hole.

Cree Lighting poles are steel shot cleaned to remove any rust, mill scale, oxides, or other unwanted particles from the pole resulting in a surface preparation that exceeds the specifications published by the SSPC-SP10. Iron phosphate is then applied, creating an iron oxide base with a flat or amorphous metal phosphate topcoat. This coating significantly adds to the performance of the finished coating by improving bonding and minimizing the spread of oxidation if the coating is scratched, improving corrosion resistance. Polyester powder coating is applied to a 6-mil thickness.

CONSTRUCTION & MATERIALS

- Square, non tapered pole of structural steel tubing (ASTM A 500 Grade B) with a minimum yield strength of 50,000 p.s.i. (4-6" poles) or 46,000 p.s.i. (3" poles) welded to a formed carbon steel base plate (ASTM A-36 HRS) with a minimum yield strength of 36,000 p.s.i.
- Anchor bolts (F1554 Grade 55) are "L" bent bars having a minimum yield strength of 55,000 p.s.i. The bolts are at least partially galvanized per ASTM A153 specifications and furnished complete with two (2) hex nuts and 2 flat washers
- Base cover is 2 pc.16 ga. painted galvannealed steel which connects with two 410 stainless steel screws included
- Pole cap is painted PVC
- Optional GFI receptacle available. Refer to page 3 for details

REGULATORY & VOLUNTARY QUALIFICATIONS

- National Electrical Code Requirements
- UL Listed in US for electrical ground bonding
- CSA Certified in Canada for ground bonding and structural strength
- RoHS Compliant (consult factory for details)

LIMITED WARRANTY†

- 7 years on pole and tenons/7 years on finish /1 year on GFI receptacle

† See http://creelighting.com/warranty for warranty terms

Ordering Information

Fully assembled luminaire is composed of two components that must be ordered separately. If required, a GFI must also be requested at time of order.
Example: **Anchor Bolts:** SSS-4-AB-3/4-28 + **Pole:** SSS-4-7-25-CW-BS-1D-C-B2 + **Optional GFI:** SSS-GFI-STANDARD

Anchor Bolts (Pole must be ordered separately)

SSS-

SSS-3-AB-3/4-18 Anchor Bolts/Template, 3/4" Diameter, 3" Poles
SSS-4-AB-3/4-18 Anchor Bolts/Template, 3/4" Diameter, 4" Poles (10-12')
SSS-4-AB-3/4-28 Anchor Bolts/Template, 3/4" Diameter, 4" Poles (15'+)
SSS-5-AB-1-25 Anchor Bolts/Template, 1" Diameter, 5" Poles
SSS-6-AB-1-36 Anchor Bolts/Template, 1" Diameter, 6" Poles

Optional GFI (Pole and Anchor Bolts must be ordered separately)

SSS-GFI-STANDARD
- Located 30" above the base of the pole on same side as hand hole. Consult factory for placement in other locations
- Not available with 3" poles

Pole (Anchor bolts must be ordered separately)

SSS

Design	Cross Section	Material	Shaft Size	Wall Thickness (GA)	Mounting Height	Base Type	Base Casting/ Cover	Mounting Configuration	Fixture Mounting Pattern	Finish
S Straight	**S** Square	**S** Steel	**3** = 3" **4** = 4" **5** = 5" **6** = 6"	**3" Poles** **11** 11 gauge (0.125") **4" Poles** **11** 11 gauge (0.125") **7** 7 gauge (0.188") - Available only in 20', 22', 25' and 30' mounting heights **5" Poles** **7** 7 gauge (0.188") **6" Poles** **7** 7 gauge (0.188")	**3" Poles** **10** = 10' **12** = 12' **4" Poles** **10** = 10' **12** = 12' **15** = 15' **20** = 20' **25** = 25' **22** = 22' **29** = 29' **27** = 27' **30** = 30'	**5" Poles** **15** = 15' **20** = 20' **25** = 25' **30** = 30' **6" Poles** **20** = 20' **30** = 30'	**CW** Crown Weld	**BS** Standard Metal	**1D** Drilled Single **2D** Drilled 2@180deg **2D18** Drilled Twin@180deg **3D90** Drilled 3@90deg **4D90** Drilled 4@90deg **OT*** Open top to accept internal mount tenons or brackets	**C** Standard - Not available with OT mounting configuration - Not for use with THE EDGE™ High Output luminaires **N** None - Required with OT mounting configuration - Not available with mounting configurations other than OT	**BK** Black **BZ** Bronze **SV** Silver **WH** White

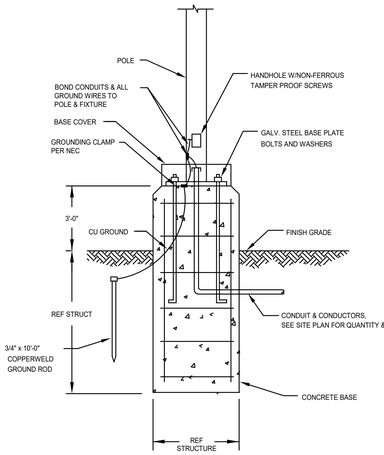
*Order tenon separately. Refer to Brackets and Tenons spec sheet for additional information

CA RESIDENTS WARNING: Cancer and Reproductive Harm - www.p65warnings.ca.gov

US: creelighting.com (800) 236-4800
Canada: creelighting-canada.com (800) 473-1234

CREE LIGHTING

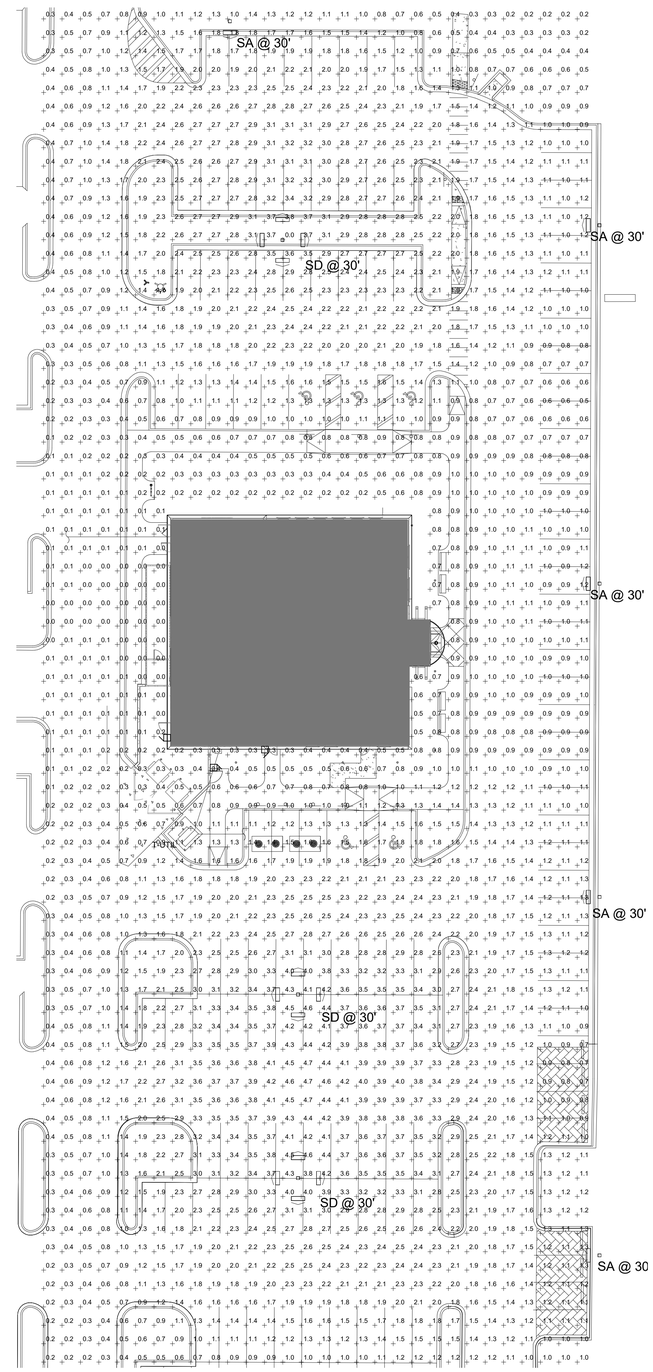
SITE LIGHTING POLE SPECIFICATIONS
NOT TO SCALE
1



POLE BASE GROUNDING DETAIL
NOT TO SCALE
3

Schedule							
Symbol	Label	Quantity	Manufacturer	Catalog Number	Number Lamps	Lumens Per Lamp	Wattage
	SA	5	Cree Lighting	HEAD: (1) OSQ M B 11L 30K7 UL NM BZ with direct mount arm. POLE: SSS-4-11-20-CW-CW-BS-1D	1	8300	72
	SD	3	Cree Lighting	HEAD: (4) OSQ M B 11L 30K7 UL NM BZ with direct mount arm. POLE: SSS-4-11-17-CW-CW-BS-4D90	4	8300	288

PHOTOMETRIC CALCULATIONS AND SCHEDULE
NOT TO SCALE
4



SITE PLAN - PHOTOMETRICS
1" = 20'-0"
2

MEP ENGINEER:

JARRET L. RICE, P.E. (LIC# 82028) PLANO, TEXAS
PHONE: (469) 608-1268

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

BLOOMINGDALE AVE & GORNTO LAKE RD

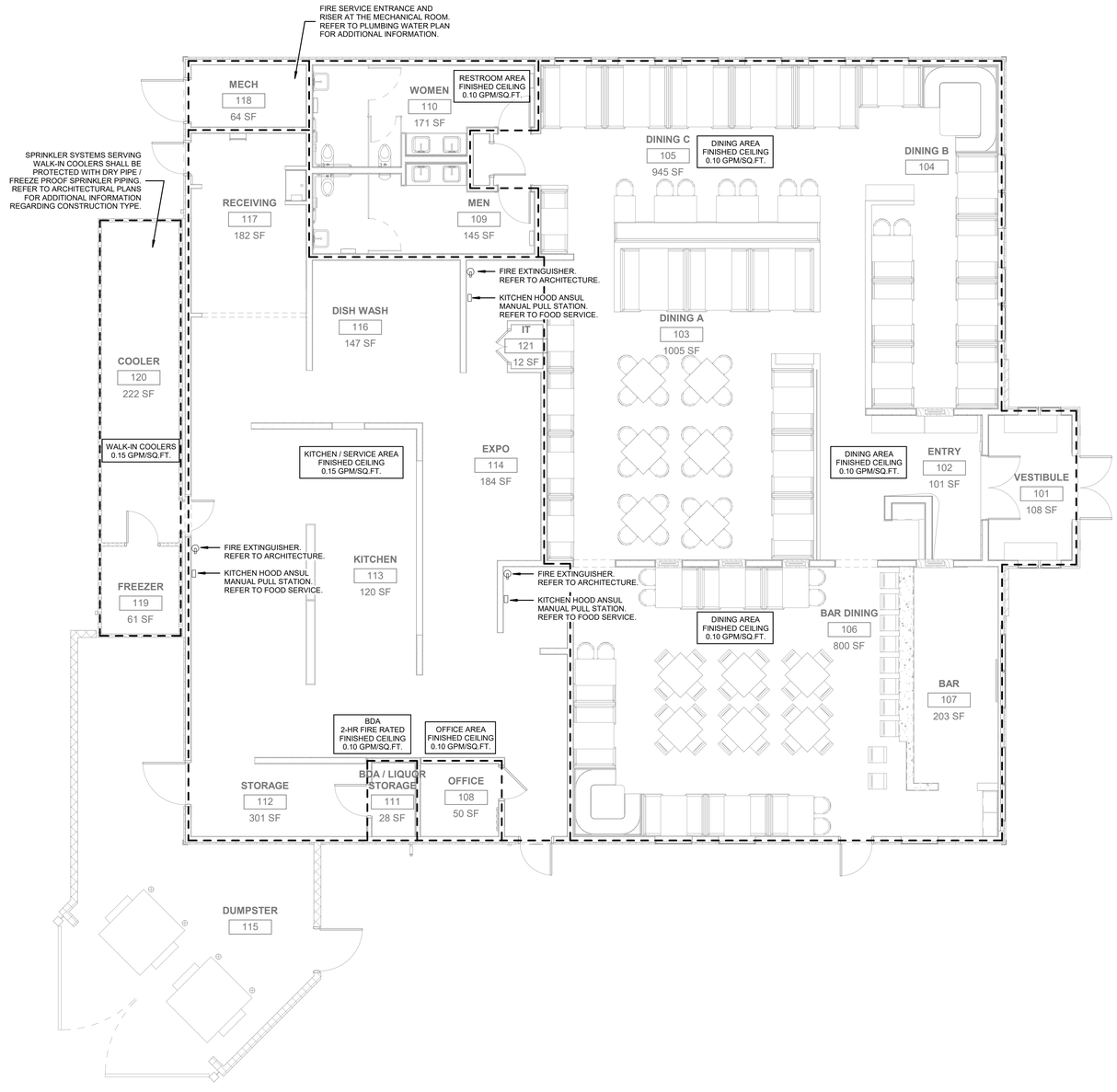
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:

SITE PHOTOMETRIC PLAN

ES.1



FIRE SYSTEMS FLOOR PLAN 1
3/16" = 1'-0"

FIRE PROTECTION DESIGN CRITERIA

KITCHEN / SERVICE AREA

CLASSIFICATION	DENSITY	AREA OF COVERAGE	COVERAGE PER SPRINKLER	HOSE STREAM ALLOWANCE
ORD. HAZARD GROUP 1	0.15 GPM / SQ.FT.	1500 SQ.FT.	130 SQ.FT.	250 GPM

DINING AREA

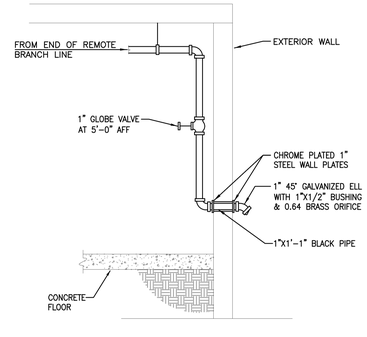
CLASSIFICATION	DENSITY	AREA OF COVERAGE	COVERAGE PER SPRINKLER	HOSE STREAM ALLOWANCE
LIGHT HAZARD	0.10 GPM / SQ.FT.	1500 SQ.FT.	225 SQ.FT.	100 GPM

TRASH ENCLOSURE (DRY PIPE OR FREEZE PROTECTION)

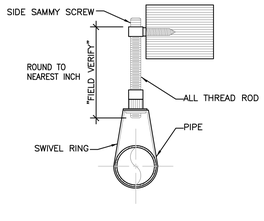
CLASSIFICATION	DENSITY	AREA OF COVERAGE	COVERAGE PER SPRINKLER	HOSE STREAM ALLOWANCE
LIGHT HAZARD	0.10 GPM / SQ.FT.	1500 SQ.FT.	225 SQ.FT.	100 GPM

GENERAL NOTES - FIRE PROTECTION

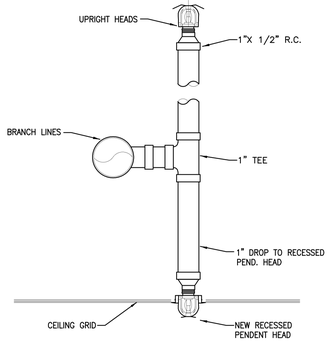
1. COORDINATE FIRE SPRINKLER HEAD LOCATIONS AND RELATED PIPING WITH ALL OTHER TRADES, EQUIPMENT, PIPING, ETC.
2. FIRE SPRINKLER SYSTEM SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 13 - LATEST EDITION, NFPA 14 - LATEST EDITION, NFPA 17 - LATEST EDITION, 2018 INTERNATIONAL FIRE CODE, AND THE LOCAL AUTHORITY HAVING JURISDICTION.
3. FIRE SPRINKLER CONTRACTOR SHALL SUBMIT SCALED LAYOUT DRAWINGS FOR THE FIRE PROTECTION SYSTEM, INDICATING HANGER LOCATIONS, PIPE SIZES, LOCATIONS, ELEVATIONS, SLOPE OF HORIZONTAL RUNS, WALL AND FLOOR PENETRATIONS AND CONNECTIONS.
4. PROVIDE FLOW SWITCH, SHUTOFF VALVE WITH TAMPER SWITCH AND BACK FLOW PREVENTERS AS REQUIRED BY LOCAL AND STATE CODES.
5. EXACT LOCATION & NUMBER OF SPRINKLER HEADS SHALL BE FIELD VERIFIED AND ADJUSTED AT TIME OF INSTALLATION TO PROVIDE FULL COVERAGE.
6. GENERALLY, IT IS THE INTENTION FOR FIRE SPRINKLER MAINS AND BRANCH LINES TO BE ROUTED AS HIGH AS POSSIBLE TIGHT TO THE BOTTOM SIDE OF THE ROOF DECK, TO MAXIMIZE CLEARANCE WITH DUCTWORK AND OTHER TRADES.
7. ROUTE ANY EXPOSED PIPING TIGHT TO BEAMS OR STRUCTURAL FRAMING WHEREVER POSSIBLE SO AS TO RENDER THE PIPING TO BE CONSIDERED CONCEALED.
8. ANY EXTERIOR COMPONENTS SHOWN ARE ONLY FOR THE INTENT AND PURPOSE OF INDICATING NODES AND DISTANCES IN HYDRAULIC CALCULATIONS.
9. ALL SPRINKLER HEADS SHALL BE LOCATED IN THE CENTER OF CEILING TILES UNLESS NOTED OTHERWISE. REFER TO REFLECTED CEILING PLAN FOR CEILING TILE PATTERNS.
10. NO PIPING SHALL BE RUN OVER ELECTRICAL PANELS. COORDINATE WITH ELECTRICAL CONTRACTOR.
11. SPRINKLER HEAD TYPES SHALL BE INSTALLED AS FOLLOWS:
    - 11a. HEADS LOCATED IN FINISHED CEILINGS IN THE FRONT OF HOUSE GUEST AREAS SHALL BE FULLY CONCEALED WITH FLAT BLACK FINISH POP CAPS. SEE ARCHITECTURAL DRAWINGS FOR CEILING TYPES, LOCATIONS, AND ELEVATIONS.
    - 11b. HEADS LOCATED IN KITCHEN/ SERVICE AREAS SHALL BE CHROME FINISH RECESSED WITH CHROME ESCUTCHEONS. SEE ARCHITECTURAL DRAWINGS FOR CEILING TYPES, LOCATIONS, AND ELEVATIONS.
    - 11c. HEADS LOCATED EXPOSED UNDER THE TRASH ENCLOSURE CEILING SHALL BE BRASS UPRIGHT. SEE ARCHITECTURAL DRAWINGS FOR CEILING TYPES, LOCATIONS, AND ELEVATIONS, AND MECHANICAL PLANS FOR PROPOSED DUCTWORK ROUTING.
    - 11d. HEADS LOCATED CONCEALED ABOVE FINISHED CEILINGS SHALL BE BRASS UPRIGHT.
    - 11e. HEADS SERVING THE FRONT OF HOUSE PORCH AREAS SHALL BE INSTALLED AS SIDEWALL CHROME FINISH DRY TYPE, LOCATED AS HIGH AS POSSIBLE. SEE ARCHITECTURAL DRAWINGS FOR FOR CEILING TYPES, LOCATIONS, AND ELEVATIONS.
12. PROVIDE WIRE GUARDS ON SPRINKLER HEADS IN COOLER AND FREEZER.
13. CONTRACTOR TO INSTALL DRY/ FREEZE PROOF SPRINKLER SYSTEM IN ALL AREAS SUBJECT TO POTENTIAL FREEZING.
14. PRIOR TO INSTALLATION, COORDINATE LOCATIONS OF SPRINKLER HEADS WITH PATIO HEATERS TO AVOID INADVERTENTLY SETTING OFF SPRINKLERS DUE TO HEATER PROXIMITY.
15. PROPERLY FILL ANY PENETRATION WITH FOAM TO PREVENT ANY AIR OR CONDENSATION LEAKS.
16. CONTRACTOR TO INSTALL DRY SPRINKLER SYSTEM IN ALL AREAS SUBJECT TO POTENTIAL FREEZING. COORDINATE REQUIREMENTS WITH THE LOCAL JURISDICTION.
17. PROVIDE KNOX BOX IF REQUIRED BY LOCAL CODE. COORDINATE WITH ARCHITECT AND FIRE MARSHALL.
18. CONTRACTOR SHALL SUBMIT (3) SETS OF SHOP DRAWINGS & CALCULATIONS TO ARCHITECT FOR APPROVAL AND ANY REQUIRED SETS TO THE FIRE MARSHALL/ BUILDING DEPARTMENT FOR APPROVAL.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING THE EXISTING WATER MAIN TO DETERMINE THE SYSTEM PRESSURES AND FLOWS.
20. A PERMIT IS REQUIRED BEFORE WORK STARTS. ALL TESTS SHALL BE WITNESSED BY A FIRE INSPECTOR. DO NOT COVER UP UNDERGROUND PIPING UNTIL ALL INSPECTIONS AND TESTING HAVE BEEN COMPLETED.
21. CONTRACTOR SHALL VERIFY CEILING HEIGHTS. HEADS SHALL BE INSTALLED FOR HEIGHTS CALLED OUT ON ROOM FINISH SCHEDULE.
22. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS TO OWNERS INSURANCE CARRIER FOR APPROVAL PRIOR TO SYSTEM INSTALLATION.
23. CONTRACTOR SHALL SUPPLY TO THE ARCHITECT/ ENGINEER A RECORD COPY OF INSTALLATION DRAWINGS AND CALCULATIONS WITH STAMPED APPROVAL AND APPROVAL LETTER FROM STATE AND LOCAL OFFICIALS AND OWNER'S INSURANCE CARRIER. CONTRACTOR SHALL ALSO PROVIDE ARCHITECT WITH SIGNED COPIES OF ALL TEST CERTIFICATES.
24. THE SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT THE CONTRACTOR HAS FAMILIARIZED HIMSELF WITH THE PLANS AND BUILDING SITE. CLAIMS MADE SUBSEQUENT TO THE PROPOSAL FOR MATERIALS AND LABOR BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED IF THEY COULD HAVE BEEN FORESEEN HAD PROPER EXAMINATION BEEN MADE.
25. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, FABRICATION AND INSTALLATION OF THE COMPLETE SPRINKLER SYSTEM. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
    - -INSTALLATION OF THE APPROPRIATE SPRINKLER HEADS.
    - -INSTALLATION OF THE APPROPRIATE PIPING AND HANGERS.
    - -INSTALLATION OF THE ALARM CHECK VALVE ASSEMBLY.
    - -INSPECTOR TEST CONNECTION.
    - -BACKFLOW PREVENTION IF REQUIRED BY LOCAL AUTHORITIES.
    - -RISER PIPE SHALL BE SIZED BY THE FIRE PROTECTION CONTRACTOR.
26. AUTOMATIC SPRINKLER SYSTEM SHOP DRAWINGS, BASED ON AN APPROVED ENGINEERED DESIGN INTENT, SHALL PROVIDE DETAILS FROM THE POINT OF SERVICE. POINT OF SERVICE IS DEFINED AS THE POINT IMMEDIATELY AFTER THE TAP OF THE SERVICE MAIN WHERE WATER IS USED EXCLUSIVELY FOR FIRE PROTECTION PURPOSES. PER RULE 0780-02-07-.01(G)
27. FIRE PROTECTION SYSTEMS SHALL BE DESIGNED FOR SEISMIC DESIGN CATEGORY C AS INDICATED IN THE 'SEISMIC LOADS' SECTION ON SHEET S0.0 AND RISK CATEGORY TYPE II AS INDICATED IN THE 'CRITERIA' SECTION ON SHEET S0.0.
28. FIRE EXTINGUISHER LOCATIONS NOTED ARE FOR REFERENCE ONLY. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS (SHEET A1.2; KEYNOTE #5).



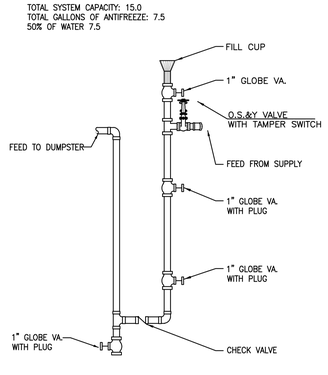
1" INSPECTOR'S TEST PORT DETAIL 2
SCALE: NONE



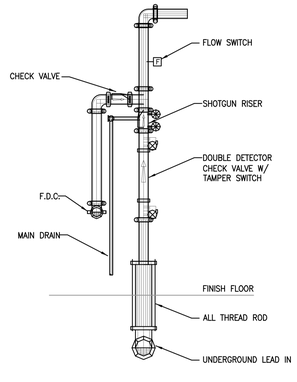
HANGER NO. 15W SIDE SAMMY SCREW 3
SCALE: NONE



TYPICAL DETAIL FOR SPRINKLERS HEADS 4
SCALE: NONE



ANITFREEZE LOOP DETAIL "B" 5
SCALE: NONE



RISER DETAIL "A" 6
SCALE: NONE

MEP ENGINEER:

JARRET L. RICE, P.E. (LIC# 82028) PLANO, TEXAS
PHONE: (469) 608-1268

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

BLOOMINGDALE AVE & GORNTO LAKE RD

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
FIRE SYSTEMS FLOOR PLAN

FP1.1

KITCHEN COOLER CONDENSING UNIT SCHEDULE

MARK	SERVICE	EVAPORATOR AMPS	EVAPORATOR V / PH	CONDENSER AMPS	CONDENSER V / PH	MFR / MODEL	NOTES
FCU- / CU-3	WALK-IN COOLER	1.6	120 / 1	16.6	208 / 3	KOLPAK / SEC53K3	ALL
FCU- / CU-13	WALK-IN FREEZER	1.0	208 / 3	12.6	208 / 3	KOLPAK / SEC53K3	ALL
FCU- / CU-142a	ICE MACHINE	3.0	120 / 1	8.4	208 / 3	HOSHIZAKI / URC22F	ALL
FCU- / CU-142b	ICE MACHINE	3.0	120 / 1	8.4	208 / 3	HOSHIZAKI / URC22F	ALL

NOTES:
1. SCHEDULED INFORMATION INCLUDED FOR COORDINATION ONLY. REFER TO FOOD SERVICE PLANS AND MANUFACTURER SHOP DRAWINGS FOR EXACT SPECIFICATION.
2. INSTALL COMPLETE WITH MANUFACTURER AVAILABLE SUSPENSION MOUNTING BRACKET.
3. COORDINATE POWER AND DISCONNECT REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR.

AIR BALANCE SCHEDULE

MARK	DINING (CFM) S/A	DINING (CFM) O/A	DINING (CFM) E/A	KITCHEN (CFM) S/A	KITCHEN (CFM) O/A	KITCHEN (CFM) E/A
RTU-1	3800	1200	-	-	-	-
RTU-2	3800	1200	-	-	-	-
RTU-3	4500	1540	-	-	-	-
RTU-4	-	-	-	9500	950	-
MAU-1	-	-	-	5790	5790	-
KEF-1	-	-	-	-	-	2900
KEF-2	-	-	-	-	-	1750
KEF-3	-	-	-	-	-	1970
KEF-4	-	-	-	-	-	1850
DEF-1	-	-	-	-	-	1000
TEF-1	-	-	400	-	-	-
SUBTOTALS	12100	3940	400	15290	6740	9470

DINING PRESSURIZATION (O/A - E/A):	3540	
KITCHEN PRESSURIZATION (O/A - E/A):	-2730	
NET BUILDING PRESSURIZATION (DINING + KITCHEN):	810	+3.0%

O/A VENTILATION SCHEDULE

AREA SERVED	VENTILATION (OCCUPANCY) # OF PPL	CFM / PERSON	CFM	VENTILATION (AREA) SQ. FT.	CFM / SF	CFM
DINING	236	7.5	1770	3319	0.18	597
OFFICE	2	7.5	15	62	0.18	11
KITCHEN	24	7.5	180	2041	0.12	245
RESTROOMS	0	0	0	452	0	0
SUBTOTALS			1965			854

TOTAL O.A. REQUIRED (CFM):	2819
TOTAL O.A. PROVIDED (CFM):	4050

ELECTRIC HEATER SCHEDULE

MARK	SERVICE	TYPE	HTG. CAPACITY	MAX. AIRFLOW	VOLTS / PH	MFR	MODEL	NOTES
UH-1	MECH ROOM	UNIT / CABINET	3.0 KW	350	208 / 1	QMARK	MUH03-81	1,2,3

NOTES:
1. COORDINATE POWER AND DISCONNECT REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR.
2. INSTALL COMPLETE WITH MANUFACTURER AVAILABLE SUSPENSION MOUNTING BRACKET.
3. INCLUDE MANUFACTURER AVAILABLE INTEGRAL THERMOSTAT TO PREVENT FREEZING.

MECHANICAL AND PLUMBING ENERGY SUMMARY

TOTAL BTU/h FOR COOLING AND COMBINED BTU/h FOR HEATING / HOT WATER				TOTAL COOLING BTU/h	COMBINED BTU/h FOR HEATING & HW
				866,200	1,448,000
HVAC CONTROLS NARRATIVE:	PACKAGED ROOFTOP UNITS SHALL BE CONTROLLED BY 24/7 PROGRAMMABLE THERMOSTAT. UNITS ARE PROVIDED WITH DUAL ENTHALPY ECONOMIZER.				
	RTU-1	RTU-2	RTU-3	RTU-4	MAU-1
DESIGN AIR FLOW OF SPACES (CFM)	3800	3800	4500	9500	5790
AIR SIDE ECONOMIZERS? (Y/N)	Y	Y	Y	Y	Y
AUTOMATIC MODULATING CONTROL OF OUTDOOR AIR DAMPERS? (Y/N)	Y	Y	Y	Y	Y
KITCHEN EXHAUST SYSTEM AIR BALANCING	HOOD-1 EXHAUST (CFM)	HOOD-2 EXHAUST (CFM)	HOOD-3 EXHAUST (CFM)	HOOD-4 EXHAUST (CFM)	HOOD-5 EXHAUST (CFM)
	2900	1750	1970	1850	1000
CONTROLS FOR WALK IN COOLER AND FREEZER	WALK INS WILL BE PROVIDED WITH INTERNAL THERMOSTAT. ONCE INTERNAL TEMP REACHES SET POINT THE CONDENSER AND EVAPORATOR SECTIONS WILL COME ON. ONCE SET TEMP IS MET THE CONDENSER AND EVAPORATOR WILL SHUT OFF.				
COOLING CAPACITY OF HVAC UNITS (BTU/h)	RTU-1	RTU-2	RTU-3	RTU-4	MAU-1
	116,700	121,800	144,100	303,600	180,000
ECONOMIZER CONTROLS	ECONOMIZERS FOR THE PACKAGED ROOFTOP UNITS ARE ENTHALPY ECONOMIZERS. WHEN THE OUTDOOR TEMPERATURE IS BELOW 60 DEGREES AND THE HUMIDITY IS LESS THAN 50% THE ECONOMIZER WILL BE ON IF COOLING IS CALLED FOR. IN ECONOMIZER MODE THE UNIT WILL DELIVER 100% OUTDOOR AIR AND THE RELIEF AIR DAMPER WILL OPEN ON THE UNIT.				
HOT WATER RECIRCULATION PUMP	PUMP IS PROVIDED WITH INTEGRAL TIMER WITH SETPOINTS.				

TRANE NATIONAL ACCOUNTS EQUIPMENT PACKAGE

NOTES:
1. CHEDDAR'S RESTAURANTS HAS A NATIONAL ACCOUNT AGREEMENT WITH TRANE FOR BUNDLED SOLUTIONS. THE ROOFTOP UNITS ARE AN OWNER FURNISHED ITEM, ASSIGNED TO THE INSTALLING CONTRACTOR. THE INSTALLING CONTRACTOR IS RESPONSIBLE FOR PROPER INSTALLATION AND ONE YEAR LABOR WARRANTY.
2. FOR COMPLETE INFORMATION ON THE SCHEDULED PACKAGE OF EQUIPMENT, CONTACT TRANE NATIONAL ACCOUNTS.
3. ANY CHANGES OR VARIATIONS TO THE ORIGINAL EQUIPMENT PACKAGE DESCRIBED HEREIN THAT WOULD AFFECT THE HVAC EQUIPMENT PACKAGE SHOULD BE BROUGHT TO THE ATTENTION OF THE ACCOUNT COORDINATOR AT TRANE NATIONAL ACCOUNTS AT TIME OF QUOTATION.
4. HEATING AND COOLING EQUIPMENT PACKAGE:
   INCLUDES ALL ROOFTOP AIR CONDITIONERS (INCLUDING CURBS) OR SPLIT SYSTEM AIR CONDITIONING EQUIPMENT WITH ALL ACCESSORIES AS SPECIFIED ON THE PLANS.
5. ORDERING PROCEDURES:
   TRANE NATIONAL ACCOUNTS DEPARTMENT WILL ORDER EQUIPMENT AND COORDINATE SHIPMENT WITH THE SUCCESSFUL HVAC CONTRACTOR. THE HVAC CONTRACTOR WILL BE RESPONSIBLE FOR EQUIPMENT WARRANTY, DELIVERY COORDINATION, RECEIVING AND INSTALLATION AS DESCRIBED IN THE SPECIFICATIONS. THE HVAC CONTRACTOR SHALL CONTACT TRANE NATIONAL ACCOUNTS AT 407.551.1162.
6. SHOP DRAWING SUBMITTALS:
   TRANE SHALL PREPARE SHOP DRAWING SUBMITTAL PACKAGE CONSISTING OF THE FOLLOWING INFORMATION:
   - UNIT SELECTION AT SITE ALTITUDE INCLUDING COOLING AND HEATING CAPACITIES.
   - INFORMATION ON THE HUMIDITROL OPTION INCLUDING SENSORS.
   - OUTSIDE AIR ECONOMIZER AND HAIL GUARD (AS REQUIRED).
   - THERMOSTAT AND REMOTE SENSORS (INCLUDING WIRING DIAGRAMS) PER DRAWINGS.
   - THERMOSTAT PROGRAMMING INSTRUCTIONS AND SEQUENCE OF OPERATIONS.
   - ELECTRICAL POWER CHARACTERISTICS INCLUDING HORSEPOWER, VOLTAGE, AND AMPERAGE.
   - ELECTRICAL OPTIONS SUCH AS DISCONNECT AND RECEPTACLE.
   - ROOF CURB INFORMATION.
   - INSTALLATION INSTRUCTIONS.
   - OPERATING AND MAINTENANCE MANUALS.
7. EQUIPMENT START-UP INSTRUCTION:
   INSTALLING CONTRACTOR IS RESPONSIBLE FOR INITIAL STARTUP, RUNNING THE UNITS & MAINTAINING THE AIR FILTERS DURING THE CONSTRUCTION PHASE. TWO WEEKS PRIOR TO THE BUILDING TRAINING, THE CONTRACTOR WILL COORDINATE THE EQUIPMENT STARTUP VERIFICATION WITH TRANE. THE CONTRACTOR MUST PROVIDE ONE TECHNICIAN TO WORK WITH TRANE.

MECHANICAL TESTING SCHEDULE

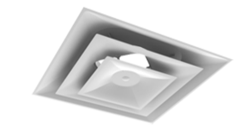
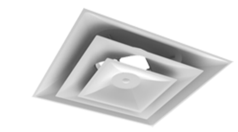
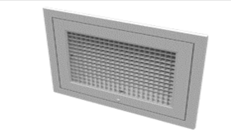
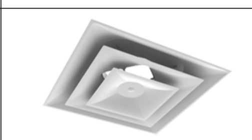
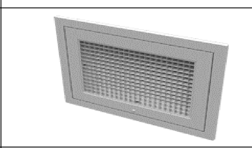
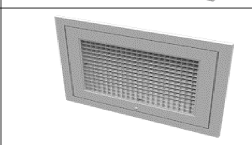
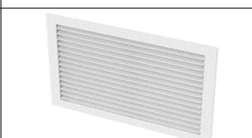
NOTES:
1. CHEDDAR'S CASUAL CAFE HAS A NATIONAL ACCOUNT AGREEMENT WITH THE MELINK CORPORATION FOR A FULL MECHANICAL TEST AND BALANCE (T.A.B.) REMEDIATION SURVEY AND REPORT, TO BE PAID BY THE OWNER.
- FOR COMPLETE INFORMATION ON SCHEDULING THE T.A.B. STORE VISIT, CONTACT THE MELINK CORPORATION AT 513.965.7300 AND PROVIDE APPLICABLE PROJECT INFORMATION INCLUDING THE SITE LOCATION, INTENDED TURNOVER SCHEDULE AND AVAILABLE CONSTRUCTION DOCUMENTS.

PACKAGED ROOFTOP UNIT SCHEDULE

	MARK	RTU-1	RTU-2	RTU-3	RTU-4
GENERAL	SERVING	SIDE DINING	DINING ENTRY	BAR	KITCHEN
	MANUFACTURER	TRANE	TRANE	TRANE	TRANE
	MODEL NO.	YHC120F	YHC120F	YHC150F	YHD300G
	TYPE	GAS	GAS	GAS	GAS
	OPERATING WEIGHT, LBS.	1608	1608	2620	2940
	DIMENSIONS (LxWxH)	100x64x51	100x64x51	122x84x56	122x84x66
	MINIMUM EER	12.4	12.4	12.1	10.6
ELEC.	VOLTS / PH / HZ	208 / 3 / 60	208 / 3 / 60	208 / 3 / 60	208 / 3 / 60
	MCA (AMPS)	48	48	66	117
	MOCP (AMPS)	60	60	80	150
SUPPLY FAN	SUPPLY AIR (CFM)	3800	3800	4500	9500
	OUTSIDE AIR (CFM)	1200	1200	1540	950
	ESP (IN. W.G.)	0.8	0.8	0.8	0.8
	FAN RPM	1100	1100	1100	1100
	MOTOR HP	2.75	2.75	3.0	7.5
COOLING	NOMINAL SIZE TONS	10	10	12.5	25
	TOTAL CAPACITY (MBH)	116.7	121.8	144.1	303.6
	SENSIBLE CAPACITY (MBH)	63.4	65.5	78.2	242.0
	OUTSIDE AIR DB/WB, °F	92.5 / 77.0	92.5 / 77.0	92.5 / 77.0	92.5 / 77.0
	ENTERING AIR DB/WB, °F	80.5 / 67.4	80.5 / 67.4	81.0 / 67.8	76.8 / 64.4
HEATING	TYPE OF HEAT	GAS	GAS	GAS	GAS
	HEATING INPUT (MBH)	200	200	250	400
	HEATING OUTPUT (MBH)	160	160	200	320
	OUTSIDE AIR DB/WB, °F	39	39	39	39
	LEAVING AIR DB/WB, °F	95	95	95	95
NOTES		ALL	ALL	ALL	ALL

NOTES:
1. PROVIDE A FACTORY AVAILABLE UN-INSULATED FLAT ROOF CURB THAT SHALL BE FIELD ASSEMBLED AND SHIMMED SUCH THAT THE TOP OF THE CURB SETS LEVEL. ROOF CURBS TO BE INSTALLED BY THE GENERAL CONTRACTOR, AND FIELD INSULATED BY THE MECHANICAL CONTRACTOR.
2. PROVIDE WITH LOW AMBIENT CONTROLS, MICROPROCESSOR CONTROLS, CONDENSER COIL HAIL GUARD (FOR 'A' AND 'B' CABINETS), HINGED ACCESS PANELS, CRANK CASE HEATER, FRESH AIR TEMPERING KIT, AND FROSTAT.
3. PROVIDE WITH MANUFACTURER'S PROGRAMMABLE 24/7 THERMOSTAT, REMOTE TEMPERATURE AND HUMIDITY SENSORS CAPABLE OF AUTOMATIC COOLING/ HEATING CHANGEOVER.
   - THE CONTROL WIRING FOR THE THERMOSTAT SHALL BE 18AWG STRANDED, SINGLE TWISTED PAIR, INDIVIDUALLY SHIELDED, 100% ALUMINUM SHIELD DRAIN WIRE AND PLENUM RATED TEFLON JACKET (BELDEN 88760).
   - THE CONTROL WIRING FOR THE HUMIDISTAT SHALL BE 22AWG STRANDED, TWO TWISTED PAIRS, INDIVIDUALLY SHIELDED, 100% ALUMINUM SHIELD DRAIN WIRE AND PLENUM RATED TEFLON JACKET (BELDEN 88273).
   - REFER TO THE PLAN SHEETS FOR PROPOSED MOUNTING LOCATIONS OF CONTROL DEVICES.
4. PROVIDE FACTORY INSTALLED OUTDOOR ENTHALPY CONTROLLED ECONOMIZER WITH FULL MODULATING MOTORIZED OUTSIDE AIR DAMPER. FIELD ADJUST BOTH DIP SWITCHES TO THE RIGHT FOR ODE SETTING.
5. MECHANICAL CONTRACTOR SHALL PROVIDE A FIELD INSTALLED RETURN AIR SMOKE DETECTOR 10'-0" DOWNSTREAM OF THE UNIT PRIOR TO RETURN AIR GRILL DUCT CONNECTIONS, CAPABLE OF SHUTTING DOWN THE ROOFTOP UNIT UPON ACTIVATION. INSTALL COMPLETE WITH A KEYED REMOTE DETECTOR (BLACK) INSTALLED IN THE RETURN AIR DUCT.
6. PROVIDE FACTORY INSTALLED ELECTRICAL DISCONNECT. CONVENIENCE RECEPTACLE SHALL BE FIELD WIRED BY THE E.C. AND POWERED SEPARATELY FROM THE UNIT.
7. PROVIDE SINGLE POINT ELECTRICAL POWER CONNECTION INCLUDING STARTERS AND CONTROLS.
8. PROVIDE WITH HUMIDITROL OPTION FOR HOT GAS REHEAT, AND MANUFACTURER'S ADJUSTABLE REMOTE HUMIDITY SENSOR CAPABLE OF AUTOMATIC OPERATION OF THE COOLING CYCLE (ONCE THE DEMAND FOR COOLING IS SATISFIED BY THE T-STAT) FOR SUPPLEMENTAL DEHUMIDIFICATION.
9. UNIT SELECTIONS ARE BASED ON R-410A REFRIGERANT.

AIR DEVICE SCHEDULE

MARK	PICTURE	FACE SIZE	TYPE	MOUNTING TYPE	MAXIMUM N.C.	THROW	MANUFACTURER	MODEL	NOTES
A		24x24	SUPPLY	LAY-IN (TILE CLG.)	30	1-WAY	TITUS	PAS	1,3,4,5,9
B		24x24	SUPPLY	SURFACE (GYP CLG.)	30	4-WAY	TITUS	TMS	2,3,4,6,9
C		12x12	SUPPLY	SURFACE (GYP CLG.)	30	4-WAY	TITUS	TMS	2,3,4,6,9
D		24x24	SUPPLY	LAY-IN (TILE CLG.)	30	4-WAY	TITUS	TMS	2,3,4,6,9
F		24x24	RETURN	SURFACE (GYP CLG.)	30	1-WAY	TITUS	50FF	2,3,9
G		24x24	SUPPLY	LAY-IN (TILE CLG.)	30	4-WAY	EGER	EAMRI12W	1,3,8,9
H		12x24	RETURN	SURFACE (GYP CLG.)	30	1-WAY	TITUS	50FF	1,3,9
J		24x24	RETURN	LAY-IN (TILE CLG.)	30	1-WAY	TITUS	50FF	1,3,9
K		14x14	EXHAUST	SURFACE (GYP CLG.)	30	1-WAY	TITUS	3FL	2,3,6,9

NOTES:
1. AIR DEVICES MOUNTED ON A WHITE SURFACE IN BACK OF HOUSE SHALL BE INSTALLED WITH FACTORY APPLIED OFF WHITE FINISH.
2. AIR DEVICES IN THE FRONT OF HOUSE SHALL BE INSTALLED WITH MANUFACTURER APPLIED FINISH TO MATCH CEILING COLOR, INCLUDING THE INTERIOR OF THE DEVICE. ALL INTERIOR SURFACES VISIBLE FROM 'LINE-OF SIGHT' INCLUDING COLLARS AND FLANGES SHALL SHALL BE FIELD PAINTED BLACK.
3. PROVIDE NECESSARY MOUNTING HARDWARE AND ACCESSORIES AS REQUIRED FOR INTENDED INSTALLATION.
4. AIR DEVICE SHALL BE INSTALLED WITH MANUFACTURER AVAILABLE MOLDED INSULATION BACKING.
5. AIR DEVICE NEAR THE EXHAUST HOOD CANOPY SHALL BE INSTALLED COMPLETE WITHOUT SUPPLY AIR FLOW PATTERN CONTROLLERS, TO PREVENT INTERFERENCE WITH EXHAUST CAPTURE AND CONTAINMENT.
6. AIR DEVICE SHALL BE INSTALLED WITH ACCESSIBLE OPPOSED BLADE DAMPER FOR MANUAL VOLUME ADJUSTMENT.
7. INSTALL COMPLETE WITH MANUFACTURER AVAILABLE INSULATED PLENUM AND TYPE 2A CONCEALED FLANGE FRAME. AIR DEVICE SHALL BE INSTALLED WITH CONTINUOUS FRONT FACE WITH END CAPS AT EITHER END OF THE FULL LENGTH.
8. INSTALL AS AN ALL PLASTIC DEVICE AND COMPONENTS, COMPLETE WITH MANUFACTURER AVAILABLE COLLAR. CONTACT 817.929.6400 FOR ORDERING AND SHIPPING.
9. ACCEPTABLE MANUFACTURER FOR INSTALLED AIR DEVICE IS AS LISTED ONLY.
10. INSTALL COMPLETE WITH MANUFACTURER SUPPLIED FLUSH MOUNT SCREWS. PAINT TO MATCH AIR DEVICE.
11. INSTALL COMPLETE WITH MANUFACTURER AVAILABLE TRIM FRAME.
12. AIR DEVICE SHALL BE INSTALLED WITH OPPOSED BLADE DAMPER AND INSTALLED TO ALLOW VOLUME ADJUSTMENT VIA REMOVABLE CENTER CORE OF AIR DEVICE.

KITCHEN EXHAUST HOOD SCHEDULE

MARK	SERVICE	WIDTH	EXH. RATE (CFM / LF)	EXHAUST COLLAR	EXHAUST AIR (CFM)	MAKE-UP AIR (CFM)	HVAC AIR (CFM)	MOUNTING HEIGHT (AFF)	NOTES
HOOD #1	CHARBROILER	10'-6"	276	16"Ø	2900	1275	600	80"	ALL
HOOD #2	PASTA COOKER	8'-9"	200	14"Ø	1750	930	460	80"	ALL
HOOD #3	RANGE	8'-9"	225	14"Ø	1970	930	460	80"	ALL
HOOD #4	OVEN	10'-6"	176	14"Ø	1850	1275	600	80"	ALL
HOOD #5	DISH MACHINE	9'-3"	108	12"Ø	1000	-	-	80"	4,5,6,7,8,9

NOTES:
1. THE CONTROLS AND LIGHTING FOR THE COOKLINE EXHAUST HOODS SHALL BE FIELD WIRED TO INTERLOCK ALL EXHAUST FANS AND THE MAKEUP AIR UNIT TO START AND STOP SIMULTANEOUSLY. THE ELECTRICAL CONTRACTOR SHALL MAKE ALL NECESSARY CONNECTIONS.
2. THE EXHAUST HOOD SHALL BE FACTORY EQUIPPED WITH PREPIPED FIRE SUPPRESSION SYSTEM TO MEET NFPA 96. THE EXHAUST HOOD MANUFACTURER SHALL CONTRACT THE FINAL PIPING AND HOOKUP OF THE FIRE SUPPRESSION SYSTEM.
3. THE ELECTRICAL CONTRACTOR SHALL; INTERLOCK THE FIRE PROTECTION SYSTEM TO THE HOOD ELECTRICAL CONTROL CABINET AND TO THE ELECTRIC GAS SOLENOID VALVE (INSTALLED BY THE PLUMBING CONTRACTOR) AND FIELD WIRE THE TEMPERATURE SENSORS FROM EACH GREASE DUCT TO THE HOOD ELECTRICAL PANEL. THE KITCHEN HOOD FIRE SUPPRESSION SYSTEM SHALL BE INTERLOCKED TO THE COOKLINE EXHAUST FANS AND MAKEUP AIR UNIT, WITH INTERCONNECTION TO THE FIRE ALARM SYSTEM. THE KITCHEN HOOD SUBCONTRACTOR IN CONJUNCTION WITH THE HVAC CONTRACTOR SHALL PROVIDE AND INSTALL INTERLOCKS FROM THE FIRE SUPPRESSION SYSTEM AS SPECIFIED IN THE SEQUENCE OF OPERATION PROVIDED IN THE CAPTIVEAIRE DRAWINGS.
4. THE EXHAUST HOOD SHALL BE INSTALLED PER THE HEIGHT SPECIFIED IN THE CAPTIVEAIRE DRAWINGS, AND LOCATED IN SPACE PER THE ARCHITECTURAL REFLECTED CEILING PLAN.
5. THE EXHAUST HOOD IS FACTORY FABRICATED FOR UL LISTED CONSTRUCTION AND SHALL BE INSTALLED IN ACCORDANCE WITH ALL UL SPECIFICATIONS.
6. THE EXHAUST HOOD SHALL BE FIELD CUT FOR THE INSTALLATION OF THE EXHAUST COLLAR(S). EXHAUST COLLAR(S) SHALL BE PROVIDED WITH THE EXHAUST HOOD PACKAGE AND SHIPPED LOOSE (WITH BOLTS, RETAINING RINGS, AND FIRE RATED CAULK) FOR FIELD INSTALLATION PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
7. THE COMPLETE EXHAUST HOOD PACKAGE SHALL BE FURNISHED BY OWNER AND INSTALLED BY THE MECHANICAL CONTRACTOR.
8. FOR ADDITIONAL INFORMATION PERTAINING TO THE EXHAUST HOOD PACKAGE, CONTACT MR. RYAN NATALE OF CAPTIVEAIRE AT 321.270.7696 OR RYAN.NATALE@CAPTIVEAIRE.COM
9. ALL KITCHEN EXHAUST HOODS SHALL BE PERMITTED UNDER SEPARATE PERMIT.

FAN SCHEDULE

MARK	SERVICE	CFM	E.S.P. IN W.G.	DRIVE	MOTOR HP	RPM	VOLTS/PH	MFR.	MODEL	TYPE	WEIGHT	NOTES
KEF-1	HOOD #1 - CHARBROILER	2900	1.50	DIRECT	3.00	1166	208 / 3	CAPTIVEAIRE	DU180HFA	ROOF UPBLAST FAN	202	1,3,5,6,9,10
KEF-2	HOOD #2 - PASTA COOKER	1750	1.00	DIRECT	1.50	1015	208 / 3	CAPTIVEAIRE	DU180HFA	ROOF UPBLAST FAN	187	1,3,5,6,9,10
KEF-3	HOOD #3 - RANGE	1970	1.25	DIRECT	1.50	1019	208 / 3	CAPTIVEAIRE	DU180HFA	ROOF UPBLAST FAN	187	1,3,5,6,9,10
KEF-4	HOOD #4 - OVEN	1850	1.00	DIRECT	1.50	1064	208 / 3	CAPTIVEAIRE	DU180HFA	ROOF UPBLAST FAN	187	1,3,5,6,9,10
DEF-1	HOOD #5 - DISH MACHINE	1000	0.50	DIRECT	0.50	1515	120 / 1	CAPTIVEAIRE	DU50HFA	ROOF DOWNBLAST FAN	78	3,4,6,9,10
TEF-1	GENERAL EXHAUST - RESTROOMS	400	0.50	DIRECT	0.25	1282	120 / 1	CAPTIVEAIRE	DR30HFA	ROOF DOWNBLAST FAN	62	2,4,6,9
MAU-1	MAKE-UP AIR - COOKLINE HOODS	5790	0.50	DIRECT	10.00	1282	208 / 3	CAPTIVEAIRE	A3-24D-MPU	ROOF MAKE-UP AIR FAN	1885	1,3,6,7,8,9,10

NOTES:
1. THE UTILITY CABINET SHALL BE FACTORY EQUIPPED WITH A PREWIRE PACKAGE TO INTERLOCK THE OPERATION OF THE COOKLINE EXHAUST FANS WITH THE MAKEUP AIR UNIT.
2. THE FAN SHALL BE FACTORY EQUIPPED WITH AN INDEPENDENT WEATHER PROOF DISCONNECT SWITCH IN SIGHT OF THE EQUIPMENT.
3. WEATHER PROOF DISCONNECT SWITCH AND INTERNAL WIRING SHALL BE FACTORY INSTALLED.
4. THE FAN SHALL BE FACTORY EQUIPPED WITH A GRAVITY BACKDRAFT DAMPER.
5. FIELD INSTALL WITH ROOF MOUNTED GREASE GUARDS (FURNISHED BY OWNER).
6. OWNER FURNISHED WITH HOOD PACKAGE, INSTALLED BY MECHANICAL CONTRACTOR.
7. THE MAKEUP AIR UNIT SHALL BE FURNISHED WITH HEAT PUMP CONDENSING UNITS, RATED FOR 16°F TEMP RISE OR APPROXIMATELY 103-MBH HEATING CAPACITY.
8. THE MAKEUP AIR UNIT SHALL BE FACTORY EQUIPPED WITH DX DUAL STAGE COOLING SYSTEM, RATED FOR 180-MBH TOTAL CAPACITY/ 106-MBH SENSIBLE CAPACITY, AND A COOLING INTAKE THERMOSTAT. THE MECHANICAL CONTRACTOR SHALL FIELD ADJUST TO 75°F-DB (ADJ).
9. ALL EQUIPMENT SHALL BE INSTALLED AND STARTED-UP PER THE MANUFACTURER'S "INSTALLATION, OPERATION, AND MAINTENANCE MANUALS". THE MECHANICAL CONTRACTOR SHALL COMPLETE ALL FACTORY "START-UP AND MAINTENANCE DOCUMENTATION" INCLUDED WITH THE EQUIPMENT PACKAGE, AND PROVIDE A COPY TO THE CHEDDARS CONSTRUCTION MANAGER.
10. THE HOOD FAN IS INTERLOCKED WITH THE MANUFACTURER FURNISHED DEMAND CONTROL VENTILATION SYSTEM, WITH THE VFD'S AND CONTROLS COMPONENTS LOCATED IN THE UTILITY CABINET INSTALLED ADJACENT TO THE HOODS.

MECHANICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
	DUCTWORK
	LINED DUCTWORK
	SIZE TRANSITION
	SHAPE TRANSITION
	RADIUS ELBOW
	MITERED ELBOW
	MITERED ELBOW W/ TURNING VANES
	RADIUS TEE
	MITERED TEE
	MITERED TEE W/ TURNING VANES
	RECTANGULAR DUCT UP - MITERED ELBOW
	RECTANGULAR DUCT DOWN - MITERED ELBOW
	RECTANGULAR DUCT UP - RADIUS ELBOW
	RECTANGULAR DUCT DOWN - RADIUS ELBOW
	ROUND DUCT UP
	ROUND DUCT DOWN
	RECTANGULAR DUCT TAKEOFF WITH DAMPER
	ROUND DUCT TAKEOFF WITH DAMPER
	SIDEWALL SUPPLY GRILLE OR REGISTER
	FLEXIBLE DUCT
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE / REGISTER
	EXHAUST AIR GRILLE / REGISTER
	SLOT DIFFUSER
10X10 A-100	INDICATION OF DUCT SIZE, CFM, AND DIFFUSER TYPE
	SUPPLY AIRFLOW
	RETURN AIRFLOW
VD	MANUAL VOLUME DAMPER
VD	VOLUME DAMPER WITH BLADES
	SPIN-IN FITTING WITH DAMPER
FD	FIRE DAMPER
S	SMOKE DAMPER
F/S	FIRE SMOKE DAMPER
M	MOTORIZED DAMPER
	BACKDRAFT DAMPER
T	THERMOSTAT
S	REMOTE SENSOR
H	HUMIDISTAT
C	CO2 SENSOR
CO	CO SENSOR
D	DUCT MOUNTED SMOKE DETECTOR

NOTE: NOT ALL SYMBOLS MAY APPLY - REFER TO FLOOR PLANS

MECHANICAL GENERAL NOTES

1	THESE GENERAL NOTES APPLY TO ALL SHEETS WITHIN THIS CONTRACTOR'S SCOPE OF WORK, UNLESS SPECIFICALLY OTHERWISE NOTED.
2	ALL WORK SHALL COMPLY WITH APPLICABLE NATIONAL, STATE, AND LOCAL CODES, RULES, REGULATIONS, AND REQUIREMENTS.
3	DRAWINGS ARE SCHEMATIC IN NATURE. EXACT LOCATIONS OF DUCTWORK, PIPING, AND EQUIPMENT, INCLUDING REQUIRED CLEARANCES, SHALL BE COORDINATED WITH BUILDING STRUCTURE AND WORK OF OTHER CONTRACTORS.
4	RIGHT-HAND / LEFT-HAND CONFIGURATION OF EQUIPMENT SHALL BE COORDINATED BY THE CONTRACTOR BASED ON EXACT LAYOUT OF DUCTWORK, PIPING, STRUCTURE, AND OTHER COMPONENTS IN THE BUILDING.
5	THIS CONTRACTOR SHALL BE RESPONSIBLE FOR FIRE STOPPING AT ALL MECHANICAL PENETRATIONS OF FIRE AND SMOKE RATED STRUCTURES, FLOORS, AND PARTITIONS. REFER TO ARCHITECTURAL FLOOR PLANS FOR LOCATIONS OF RATED STRUCTURES.
6	THIS CONTRACTOR SHALL PROVIDE ALL ADDITIONAL STEEL, HANGER MATERIALS, RODS, AND CLAMPS AS REQUIRED FOR COORDINATION WITH WORK OF OTHER TRADES.
7	REPORT ALL DISCREPANCIES, IN WRITING, TO THE ENGINEER IMMEDIATELY.
8	COORDINATE CEILING DIFFUSERS AND GRILLES WITH LIGHTING FIXTURES. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR LIGHT FIXTURE LOCATIONS.
9	CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS PRIOR TO ORDERING MATERIALS AND/OR EQUIPMENT OR BEGINNING ANY WORK WITHOUT AUTHORIZATION.
10	CONTRACTOR SHALL FIELD-VERIFY ALL WALLS TO DECK AND PROVIDE TRANSFER BOOTS THRU ALL WALLS TO DECK PER DETAILS.
12	EXISTING CONDITIONS ARE BASED ON INFORMATION PROVIDED BY SITE SURVEY AND PREVIOUS RECORD DRAWINGS . HOWEVER, IT IS NOT INTENDED TO BE A TRUE REPRESENTATION OF ACTUAL CONDITIONS. CONTRACTOR SHALL VISIT JOB SITE PRIOR TO BIDDING TO ASCERTAIN EXISTING CONDITIONS AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO BID.
13	CONTRACTOR SHALL ENGAGE AN INDEPENDENT AIR BALANCING COMPANY (NEBB OR AABC CERTIFIED) TO OBTAIN AIR QUANTITIES SHOWN ON DRAWING. AT COMPLETION OF AIR BALANCE, BALANCING DAMPER SHALL BE TIGHTENED AND PROPERLY SEALED WITH FOIL TAPE. WHERE DAMPER IS LOCATED IN OPEN CEILING APPLICATION, FOIL TAPE SHALL BE OMITTED.
14	ALL LOW PRESSURE DUCTWORK SHALL BE GALVANIZED SHEET METAL, FABRICATED. INSTALL AND SEAL LOW PRESSURE DUCTWORK FOR 2"W.G. IN ACCORDANCE WITH SMACNA STANDARD. DUCTWORK SHALL BE INSULATED WITH 2" FIBERGLASS BLANKET WITH FOIL FACED VAPOR BARRIER TO MEET IECC REQUIREMENTS.
16	ALL SUPPLY AND RETURN DUCT SIZES ARE FREE AREAS.
17	ALL RUNOUTS TO DIFFUSER SHALL BE SAME AS NECK SIZE UNLESS NOTED OTHERWISE. REFER TO GRILLE/DIFFUSER SCHEDULE FOR NECK SIZES.
18	OFFSET DUCTS INTO JOIST SPACE FOR CLEARANCE WHERE SPACE ABOVE CEILING IS NOT SUFFICIENT FOR DUCTS TO CROSS OTHER DUCTS OR WORK OF OTHER TRADES.
19	INSULATED FLEX DUCT IN THE LOW PRESSURE SYSTEM SHALL BE LIMITED TO AN OVERALL LENGTH OF SIX (6) FEET WITH A MAXIMUM OF A 90 DEGREE CHANGE IN DIRECTION. SUPPORTS SHALL BE SADDLE BANDED TO STRUCTURE. SUPPORTING FROM FIRE PROTECTION PIPING, ELECTRICAL CONDUIT OR CEILING SUPPORT WIRES IS NOT ACCEPTABLE.
21	PROVIDE THERMOSTAT IN EACH HVAC ZONE FOR NEW EQUIPMENT. THERMOSTATS TO BE MOUNTED 48" ABOVE FINISHED FLOOR LEVEL UNLESS NOTED OTHERWISE ON THE PLANS. CONTRACTOR TO VERIFY ALL THERMOSTATS LOCATION WITH ARCHITECT AND OWNER PRIOR TO ROUGH IN. COORDINATE THERMOSTAT ROUGH-IN LOCATIONS WITH ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE J-BOX AND CONDUIT TO ABOVE CEILING FOR ALL THERMOSTATS.
23	ALL ENCLOSED ROOMS (INTERIOR AND PERIMETER) SHALL HAVE RETURN AIR PATH. ROOMS WITH ALL WALLS TO DECK SHALL HAVE LINED SHEET METAL RETURN AIR BOOTS PLACED IN WALL ABOVE CEILING SIZED FOR 500 FPM MAXIMUM. FIRE RATED WALLS SHALL HAVE FIRE DAMPERS WITHIN THE DUCT PER LOCAL CODE REQUIREMENTS.
24	PIPES AND DUCTS SHALL BE COORDINATED ON JOB WITH BUILDING STRUCTURE AND WORK OF OTHER CONTRACTORS. ROUTE AS HIGH AS PHYSICALLY POSSIBLE.
25	REPAIR AND PATCH CONSTRUCTION DAMAGED DUE TO THE DEMOLITION OF THIS PROJECT, USING SAME METHODS AND MATERIALS TO MATCH EXISTING.
27	PROVIDE TEMPORARY HIGH EFFICIENCY FILTER MEDIA ON MAIN RETURN AIR AND EXHAUST FROM FLOOR AT BEGINNING OF PROJECT AND REPLACED AT TWO (2) WEEK INTERVALS UNTIL PROJECT COMPLETION AT WHICH TIME THE FILTER MEDIA SHALL BE REMOVED.
28	CONTRACTOR SHALL PROVIDE YOUNG CONCEALED DAMPER REGULATORS WITH A DAMPER CABLE CONTROL KIT EQUAL TO BOWDEN MODEL 270-896P FOR ALL GYPSUM BOARD APPLICATIONS WHERE THE DAMPER IS NOT DIRECTLY ACCESSIBLE. COORDINATE SHAFT SIZE OF DAMPER WITH KIT FOR PROPER COMPATIBILITY. WHERE POSSIBLE, LOCATE REMOTE DAMPER CONTROLLER ABOVE IN PORTION OF THE CEILING THAT IS ACCESSIBLE. REFER TO ARCHITECTURAL DRAWINGS FOR ALL LOCATIONS INDICATED WITH GYPSUM BOARD CEILING AND COORDINATE WITH ARCHITECT FOR EXACT LOCATION OF INSTALLATION.
30	ALL EXISTING DUCTWORK SHALL BE FIELD VERIFIED TO BE INSULATED AND IN GOOD CONDITION, ANY TORN, DAMAGED OR MISSING INSULATION WILL BE REPLACED. EXISTING CONTROLS SHALL BE CONFIRMED TO BE IN WORKING CONDITION.
32	MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL EQUIPMENT AND COMPONENTS REQUIRING THE ATTENTION OF OTHER CONTRACTORS. THIS INCLUDES, BUT NOT LIMITED TO, ELECTRICAL REQUIREMENTS, CONDUIT FOR CONTROL WIRE, T-STAT WALL BOXES, FIRE ALARM DEVICES, FIRE SPRINKLERS NEAR EQUIPMENT, AND PLUMBING CONDENSATE DRAINS.
33	CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEAN STORAGE OF EQUIPMENT AND COMPONENTS PRIOR TO INSTALLATION. THIS INCLUDES, BUT NOT LIMITED TO, PROTECTION AGAINST DUST, CORROSION, DIRT, WATER, SUN LIGHT (U.V. RAYS), GENERAL DAMAGE, AND DAMAGE DUE TO ANIMALS.
34	CONTRACTOR SHALL INSTALL EQUIPMENT AND COMPONENTS IN SUCH A WAY THAT IT DOES NOT IMPEDE NEW OR EXISTING EQUIPMENT CLEARANCES.
35	CONTRACTOR SHALL READ AND FOLLOW ALL MANUFACTURER'S INSTALLATION INSTRUCTIONS, GUIDELINES, AND ASSOCIATED DOCUMENTS.
37	ALL MATERIALS IN AN OPEN AIR RETURN SPACE SHALL BE PLENUM RATED.
38	ALL EQUIPMENT AND COMPONENTS SHALL U.L. RATED OR APPROVED WHERE APPLICABLE. FOREIGN EQUIPMENT AND COMPONENTS NOT U.L. RATED OR APPROVED WILL NOT BE ACCEPTED.

AIR CURTAIN SCHEDULE

MARK	SERVICE	LENGTH	CFM	ELECTRICAL VOLTS/PH	ELECTRICAL MCA	ELECTRICAL MOCP	MFR.	MODEL	TYPE	WEIGHT	NOTES
AC-1	KITCHEN REAR SERVICE DOOR	36"	1750	120 / 1	5.0	20	MARS	STD36-1US-PW	WALL MOUNTED, DOWNBLAST	55	ALL
AC-2	STORAGE / RECEIVING DOOR	48"	2250	120 / 1	5.0	20	MARS	STD48-1US-PW	WALL MOUNTED, DOWNBLAST	55	ALL
AC-3	KITCHEN SIDE DOOR	36"	1750	120 / 1	5.0	20	MARS	STD36-1US-PW	WALL MOUNTED, DOWNBLAST	55	ALL

NOTES:
1. INSTALL COMPLETE WITH MANUFACTURER AVAILABLE DOOR LIMIT MICRO SWITCH.
2. UNIT SHALL HAVE A LOUVERED FACE.
3. OWNER FURNISHED WITH KITCHEN EQUIPMENT PACKAGE, INSTALLED BY MECHANICAL CONTRACTOR.

HVAC SEQUENCE OF OPERATION

MARK	SERVICE	FUNCTION	START TIME	COOLING SETPOINT (°F)	HEATING SETPOINT (°F)	HUMIDITY SETPOINT (%RH)	NOTES
RTU-1	SIDE DINING	OCCUPIED	7:05 AM	71	71	40	1,2,3,4
		UNOCCUPIED	12:30 AM	78	55	40	
RTU-2	DINING ENTRY	OCCUPIED	7:10 AM	71	69	40	1,2,3,4
		UNOCCUPIED	12:30 AM	78	55	40	
RTU-3	BAR	OCCUPIED	7:15 AM	71	71	40	1,2,3,4
		UNOCCUPIED	12:30 AM	78	55	40	
RTU-4	KITCHEN	OCCUPIED	7:00 AM	68	66	40	1,2,3,4
		UNOCCUPIED	12:30 AM	79	55	40	
MAU-1	COOKLINE HOODS	INTERLOCK WITH FANS	MANUAL VIA HOOD SWITCH	75	50	N/A	5

NOTES:
1. UNIT FAN SHALL RUN ON AUTO DURING OCCUPIED HOURS, AND CYCLE ON DEMAND DURING UNOCCUPIED HOURS.
2. UPON A CALL FOR COOLING:
   - COMPRESSORS TO CYCLE TO MAINTAIN THE SPACE SETTING, WITH THE GAS HEATER LOCKED OUT.
   - THERE SHALL BE A 2°F DEAD BAND (ADJUSTABLE) BETWEEN THE 1ST AND 2ND STAGE OF COOLING.
   - THERE SHALL BE A 5 MINUTE (ADJUSTABLE) TIME DELAY BETWEEN THE 1ST AND 2ND STAGE OF COOLING.
3. UPON A CALL FOR HEATING:
   - GAS FURNACE TO CYCLE TO MAINTAIN THE SPACE SETTING, WITH THE COMPRESSORS LOCKED OUT.
   - THERE SHALL BE A 2°F DEAD BAND (ADJUSTABLE) BETWEEN THE 1ST AND 2ND STAGE OF HEATING.
   - THERE SHALL BE A 5 MINUTE (ADJUSTABLE) TIME DELAY BETWEEN THE 1ST AND 2ND STAGE OF HEATING.
4. UPON A CALL FOR HUMIDITY CONTROL:
   - DURING OCCUPIED TIMES WHEN HUMIDISTAT INDICATES AN INCREASE IN HUMIDITY ABOVE THE SET POINT, THE HOT GAS REHEAT SYSTEM SHALL ACTIVATE TO REDUCE THE SPACE HUMIDITY TO BELOW SET POINT.
   - DURING UNOCCUPIED TIMES WHEN HUMIDISTAT INDICATES AN INCREASE IN HUMIDITY ABOVE THE SET POINT, THE FAN SHALL TURN ON AND THE HOT GAS REHEAT SYSTEM SHALL ACTIVATE TO REDUCE THE SPACE HUMIDITY TO BELOW SETPOINT.
5. MAKEUP AIR OPERATION:
   - THE MAKEUP AIR UNIT SHALL BE INTERLOCKED WITH THE EXHAUST HOOD CONTROLS PACKAGE FOR SIMULTANEOUS OPERATION.
   - COMPRESSORS TO CYCLE TO MAINTAIN THE SPACE SETTING, WITH THE GAS HEATER LOCKED OUT.
   - 1ST STAGE OF COOLING BRINGS ON (1) 5 TON CIRCUIT, 2ND STAGE OF COOLING BRINGS ON ADDITIONAL (2) 5 TON CIRCUITS.
   - GAS FURNACE TO CYCLE TO MAINTAIN THE SPACE SETTING, WITH THE COMPRESSORS LOCKED OUT.

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PROJECT NUMBER
DCH22007

CLIENT:
DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

SCRATCH KITCHEN

Issue Date: 02.15.2023

REVISION INFORMATION

1	CITY COMMENTS	04.04.2023
2	COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

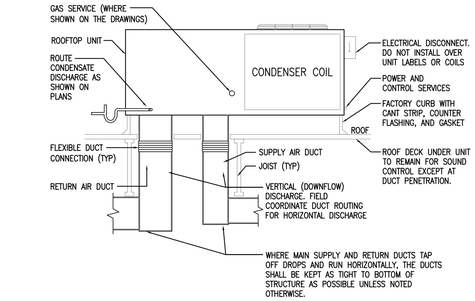
BLOOMINGDALE AVE & GORNTO LAKE RD

RIVERVIEW, FL 33578

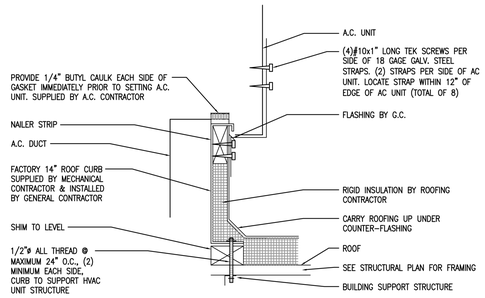
RIVERVIEW, FL

Drawing:
HVAC NOTES & SCHEDULES

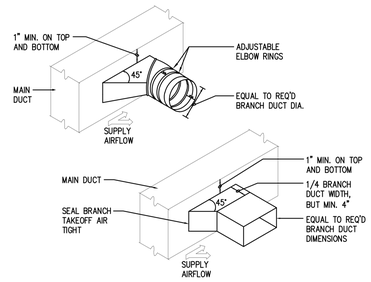
M1.1



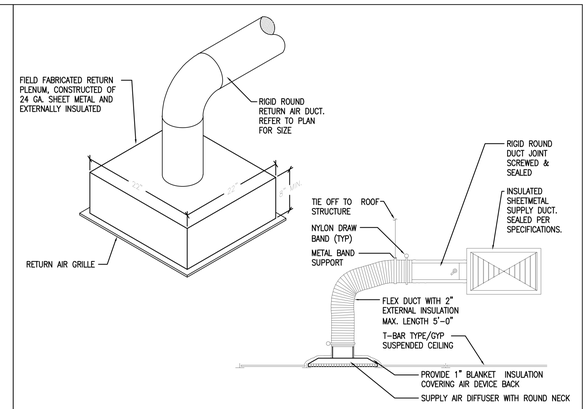
PACKAGED ROOFTOP UNIT DETAIL 1
SCALE: NONE



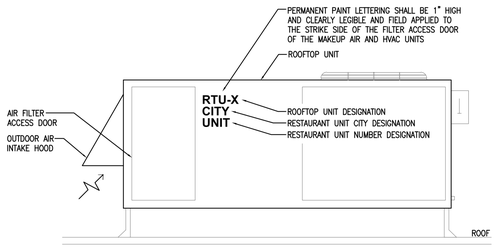
PACKAGED ROOFTOP UNIT CURB BASE DETAIL 2
SCALE: NONE



BRANCH TAKE-OFF FITTING DETAIL 3
SCALE: NONE

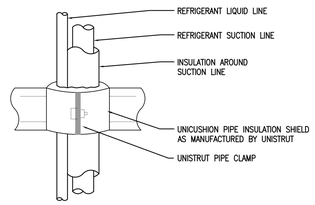


CEILING MOUNTED RETURN/SUPPLY AIR DIFFUSER DETAILS 4
SCALE: NONE



MECHANICAL UNIT LABELING DETAIL 5
SCALE: NONE

NOT USED 6
SCALE: NONE



NOTES:

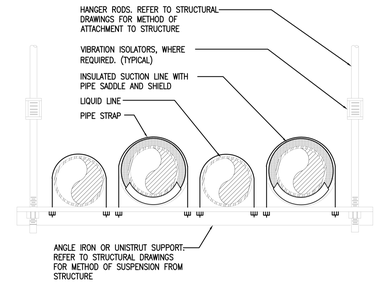
1.) LIQUID AND SUCTION LINES MAY BE ROUTED TOGETHER FOR CONVENIENCE, BUT MUST BE COMPLETELY INSULATED FROM EACH OTHER. DO NOT SOLDER LIQUID AND SUCTION LINES TOGETHER. DO NOT ALLOW METAL TO METAL CONTACT.

2.) LINES SHOULD BE INSTALLED WITH AS FEW BENDS AS POSSIBLE, ALLOWING SERVICE ACCESS TO THE INDOOR COIL.

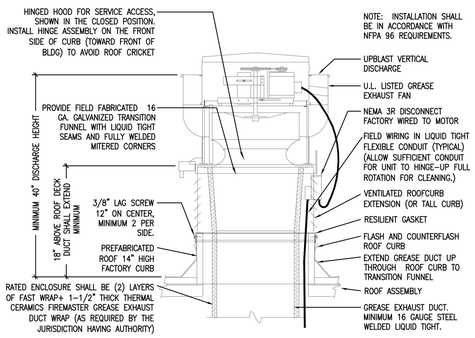
3.) USE LONG RADIUS ELBOWS WHEREVER POSSIBLE, EXCEPT IN OIL RETURN TRAPS, WHERE SHORT RADIUS ELBOWS SHOULD BE USED.

4.) REFER TO MANUFACTURER'S GUIDELINES FOR THE COMPLETE INSTALLATION.

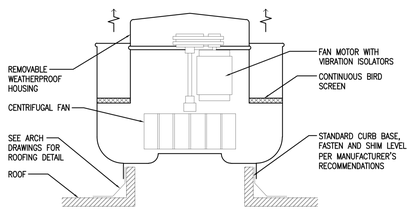
VERTICAL REFRIGERANT PIPE SUPPORT DETAIL 7
SCALE: NONE



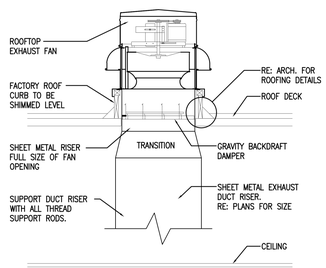
HORIZONTAL REFRIGERANT PIPE SUPPORT DETAIL 8
SCALE: NONE



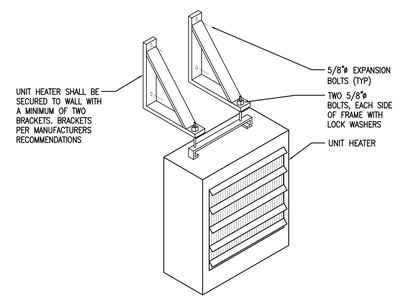
KITCHEN UPBLAST GREASE EXHAUST FAN DETAIL 9
SCALE: NONE



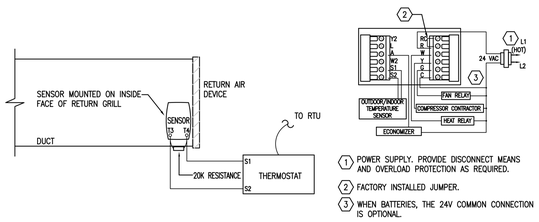
DISHMACHINE UPBLAST EXHAUST FAN DETAIL 10
SCALE: NONE



RESTROOM DOWNBLAST EXHAUST FAN DETAIL 11
SCALE: NONE

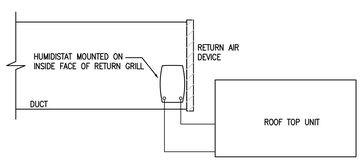


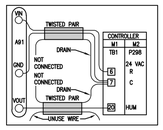
UNIT HEATER DETAIL 12
SCALE: NONE



1. POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.
2. FACTORY INSTALLED JUMPER.
3. WHEN BATTERIES, THE 24V COMMON CONNECTION IS OPTIONAL.

SINGLE TEMPERATURE SENSOR WIRING DIAGRAM 13
SCALE: NONE





HUMIDISTAT WIRING DIAGRAM 14
SCALE: NONE

NOT USED 15
SCALE: NONE

NOT USED 16
SCALE: NONE

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

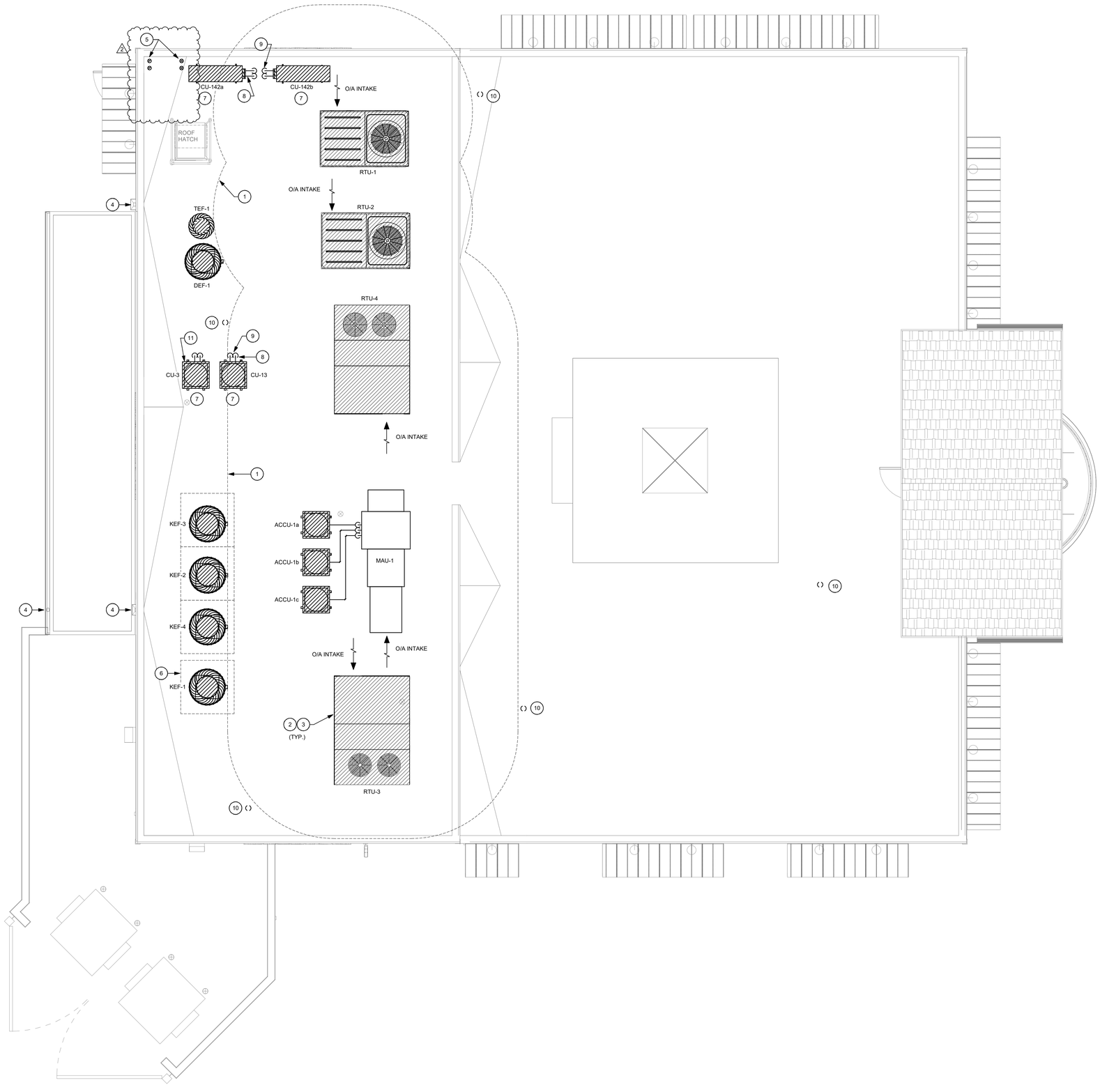
BLOOMINGDALE AVE & GORNTO LAKE RD

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
HVAC DETAILS

M1.2



MECHANICAL ROOF PLAN 1
1/4" = 1'-0"

GENERAL NOTES - HVAC ROOF PLAN

A	ALL OUTDOOR AIR INTAKES BY MECHANICAL EQUIPMENT SHALL HAVE A MINIMUM 10'-0" HORIZONTAL CLEARANCE FROM THE DISCHARGE OF ANY EXHAUST FAN, COMBUSTION EXHAUST OR PLUMBING VENT.
B	PROVIDE VIBRATION ISOLATION DEVICES AND FLEXIBLE DUCT/ PIPING CONNECTIONS TO ALL MOVING MACHINERY NOT INTERNALLY ISOLATED.
C	ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL ELECTRICAL WORK SHOWN ON THE MECHANICAL DRAWINGS.
D	ALL ROOFTOP EQUIPMENT (RTU'S, FANS, CONDENSERS, ETC) SHALL BE SECURELY FASTENED TO BUILDING STRUCTURE WITH ENGINEERED STRUCTURAL TIE-DOWNS FOR HURRICANE PROTECTION AND DESIGNED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE AND LOCAL JURISDICTIONAL REQUIREMENTS.

KEYNOTES - M2.1

1	MAINTAIN A MINIMUM 10'-0" HORIZONTAL SEPARATION BETWEEN ANY EXHAUST AND OUTDOOR AIR INTAKE.
2	REFER TO PLUMBING PLANS FOR CONDENSATE DRAIN TRAP AND ROUTING OF PIPING FROM THE HVAC EQUIPMENT.
3	REFER TO PLUMBING PLANS FOR NATURAL GAS CONNECTION AND ROUTING OF PIPING TO THE HVAC EQUIPMENT.
4	ROOF DRAINAGE TO BE PROVIDED VIA GUTTERS AND DOWNSPOUTS. REFER TO ARCHITECTURE DRAWINGS FOR DETAILS.
5	COMBUSTION AIR INTAKE AND EXHAUST FLUE VENT FOR GAS FIRED WATER HEATERS, FURNISHED AND INSTALLED BY THE PLUMBING CONTRACTOR. REFER TO PLUMBING PLANS FOR ADDITIONAL INFORMATION.
6	MOUNTED GREASE GUARDS SHALL BE FURNISHED BY THE OWNER, AND INSTALLED BY THE MECHANICAL CONTRACTOR AS PART OF THE COMPLETE FAN ASSEMBLY.
7	ROOF MOUNTED AIR COOLED REFRIGERATION CONDENSING UNITS SERVING KITCHEN EQUIPMENT BELOW. FIELD COORDINATE FINAL PLACEMENT.
8	ROUTE PIPING FROM REFRIGERATED EQUIPMENT IN THE KITCHEN UP THRU THE ROOF AND CONNECT TO ROOF MOUNTED REMOTE CONDENSING UNITS.
9	GENERAL CONTRACTOR SHALL PROVIDE WEATHER TIGHT PREFABRICATED ROOF JACK FOR PIPING AND CONDUIT PENETRATION THROUGH THE ROOF. REFER TO ARCHITECTURAL SHEETS FOR ADDITIONAL INFORMATION PERTAINING TO PROPOSED MANUFACTURER AND ROOF JACK SIZE.
10	PLUMBING SANITARY VENT THRU ROOF. REFER TO PLUMBING DRAWINGS FOR SIZE AND ADDITIONAL INFORMATION.
11	SINGLE CONDENSING UNIT CU-3 TO SERVE BOTH EVAPORATOR COILS FCU-3a & FCU-3b IN COOLER-120. REFER TO FOOD SERVICE PLANS FOR DETAILS.

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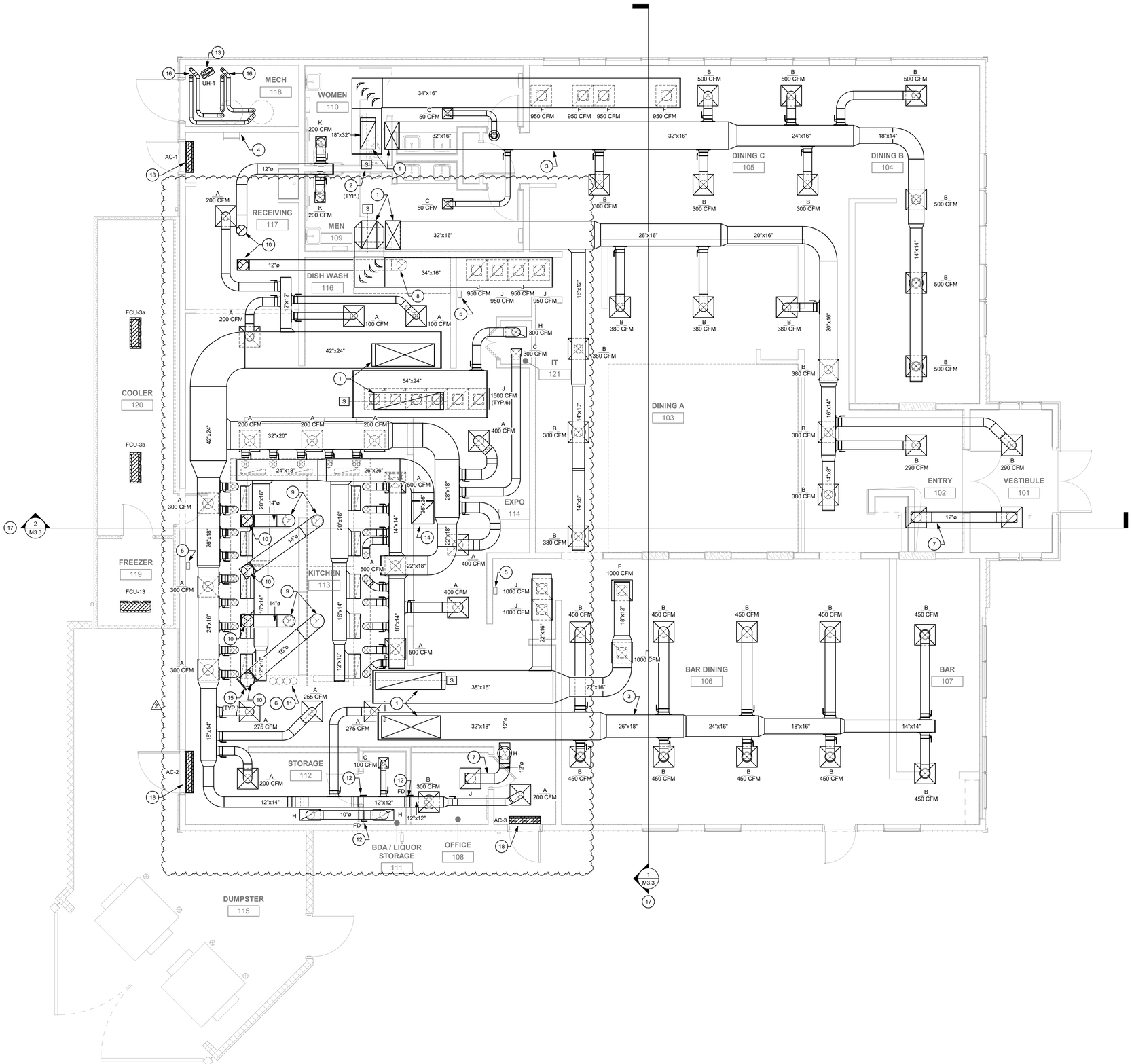
Drawing:
HVAC ROOF PLAN

M2.1



GENERAL NOTES - HVAC FLOOR PLAN

1	REFER TO SHEET M3.2. MECHANICAL CONTROLS PLAN FOR THE PROPOSED LOCATIONS AND WIRING SCHEME FOR THE HVAC CONTROLS PACKAGE.
2	PROVIDE SLOT DIFFUSERS WITH YOUNG REGULATOR BOWDEN 270-301EZ CABLE CONTROL SYSTEM WITH 6" ROUND DAMPER ASSEMBLY. THE ACCESS COVER PLATE SHALL BE MOUNTED ON THE SIDE OF THE FURRDOWN SOFFIT, AND PAINTED TO MATCH THE ADJACENT SURFACE.
3	DIFFUSERS IN ALL GUEST AREAS SHALL NOT HAVE SCREWS IN THE FACE OF THE DEVICE UNLESS NOTED OTHERWISE.
4	AIR DEVICES IN HARD LID CEILING SHALL BE INSTALLED COMPLETE WITH OPPOSED BLADE DAMPER FOR MANUAL VOLUME ADJUSTMENT.
5	RETURN GRILLE AIR QUANTITY LISTED IS FOR PARTIAL RETURN DURING STANDARD OPERATING HOURS. RETURN DUCTS ARE SIZED FOR FULL RETURN DURING NIGHT SETBACK CONDITIONS. REFER TO SHEET AC1.1 FOR AIR BALANCE REPORT ON DESIGN AIRFLOW RATES.
6	FURNISH BALANCE DAMPER AT ALL DUCT TAP-OFFS TO AIR DEVICES.
7	COORDINATE INSTALLATION OF ALL AIR DEVICES WITH ARTCHITECTURAL RCP AND ELECTRICAL LIGHTING PLAN. REFER TO ARCHITECT FOR FINISH AND COLOR.
8	ALL ELBOWS SHALL BE SMOOTH RADIUS (1.5R) WHERE SHOWN AND WHERE SPACE ALLOWS. WHERE MITERED ELBOWS ARE REQUIRED, INSTALL WITH TURNING VANES.
9	ALL GREASE EXHAUST DUCTWORK SHALL BE FURNISHED IN ACCORDANCE WITH NFPA 96 STANDARDS. GREASE DUCTWORK SHALL BE CONSTRUCTED OF STAINLESS STEEL MATERIAL (MINIMUM NO. 18 GAGE THICKNESS) WITH LIQUID-TIGHT WELDED JOINTS AND 2 LAYERS OF FIREMASTER GREASE EXHAUST DUCT WRAP (FOR 2-HR ENCLOSURE COMPLIANT WITH ASTM E2336 FOR TYPE 1 HOOD APPLICATIONS). SLOPE DUCTWORK BACK TOWARDS HOOD AT 1/4" PER FOOT. PROVIDE CLEAN-OUTS EVERY 20-FT AND AT EACH CHANGE OF DIRECTION. COORDINATE EXACT ROUTING OF DUCTWORK AND CONNECTION POINTS TO EXISTING WITH STRUCTURAL SYSTEM JOIST AND BEAMS AND EXISTING DUCTWORK LAYOUT. REFER TO CAPITVEAIRE PLANS FOR SPECIFICATIONS.

KEYNOTES - M3.1

1	ROUTE SUPPLY AND RETURN DUCTS DOWN FROM THE RTU CONNECTIONS THROUGH THE ROOF. TRANSITIONED TO SIZES SHOWN. INSTALL COMPLETE WITH FLEXIBLE CONNECTIONS AT EQUIPMENT. PROVIDE 1/2" INTERNALLY LINED ACOUSTIC INSULATION FOR RETURN DUCT MAIN TO ELIMINATE TRANSMISSION NOISE FROM THE ROOFTOP UNIT.
2	HVAC SMOKE DETECTOR CAPABLE OF SHUTTING DOWN THE RESPECTIVE MECHANICAL UNIT UPON ACTIVATION SHALL BE FIELD INSTALLED 10'-0" DOWNSTREAM OF THE UNIT, PRIOR TO ANY DUCT CONNECTIONS. THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL. THE ELECTRICAL CONTRACTOR SHALL COORDINATE FOR POWER.
3	MAIN DUCT FROM RTU SHALL BE ROUTED ABOVE LOWER CEILING.
4	ALL PIPING, DUCTWORK AND CONDUIT SHALL BE HELD CLEAR FROM THE ROOF LADDER TO MAXIMIZE SERVICE AND ACCESS AREA.
5	MANUAL PULL STATION FOR KITCHEN HOOD FIRE SUPPRESSION SYSTEM ACTIVATION AND GAS SUPPLY SHUT-OFF. COORDINATE THE COMPLETE INSTALLATION WITH OTHER TRADES.
6	THE UTILITY AND FIRE SUPPRESSION CABINETS ARE TO BE FURNISHED WITH THE HOOD PACKAGE, AND INSTALLED COMPLETE WITH THE HOOD ASSEMBLY.
7	PROVIDE TRANSFER AIR DUCT BETWEEN RETURN AIR GRILLES AS SHOWN.
8	EXTEND THE 12"Ø DISH EXHAUST DUCT SHALL BE OF THE SAME SIZE AS THE HOOD COLLAR. FIELD VERIFY ANY REQUIRED TRANSITIONS OR OFFSETS OF DISH EXHAUST DUCT FROM COMBUSTIBLE MATERIALS TO MAINTAIN THE MINIMUM CLEARANCES REQUIRED PER APPLICABLE CODE(S). DISH EXHAUST DUCT MATERIAL SHALL BE STAINLESS STEEL, MINIMUM 18 GAUGE. SLOPE DUCTWORK BACK TOWARD HOOD.
9	PROVIDE WELDED STAINLESS STEEL OR FACTORY PRE-BUILT GREASE EXHAUST DUCT EXTENDED UP FROM THE HOOD COLLAR AND OFFSET HORIZONTALLY BEFORE ROUTING UP THRU ROOF TO THE EXHAUST FAN. HORIZONTAL DUCTWORK SHALL PITCH A MINIMUM 1/4" PER FOOT BACK TOWARDS THE HOOD. GREASE EXHAUST DUCT SHALL BE OF THE SAME SIZE AS THE HOOD COLLAR. FIELD COORDINATE THE REQUIRED TRANSITIONS OF EXHAUST DUCT FROM COMBUSTIBLE MATERIALS TO MAINTAIN THE MINIMUM CLEARANCES REQUIRED PER APPLICABLE CODE(S) AND FIRE WRAP MANUFACTURER'S INSTRUCTIONS. TYPICAL FOR ALL TYPE-I HOOD CONNECTIONS.
10	EXTEND EXHAUST DUCT UP TO ROOF MOUNTED EXHAUST FAN. FIELD VERIFY ANY REQUIRED TRANSITIONS OR OFFSETS OF EXHAUST DUCT FROM STRUCTURE.
11	HOODS AND FILTERS SHALL BE MARKED WITH CORRESPONDING COLORED ZIP TIES SO THAT WHEN FILTERS ARE REMOVED FOR CLEANING THE CORRECT FILTERS ARE PLACED BACK IN THE CORRECT LOCATION. FOUR COLORS TO BE PROVIDED. TABS ARE TO BE LOCATED ON ANSUL AND HANDLE OF FILTER. COORDINATE WITH CHEDDARS MANAGEMENT PRIOR TO INSTALL.
12	PROVIDE FIRE DAMPER WITH APPROPRIATE RATING FOR DUCTWORK THROUGH RATED ASSEMBLY.
13	UNIT HEATER SHALL BE MOUNTED ON FACTORY AVAILABLE WALL BRACKET, AS HIGH AS POSSIBLE FOR CLEARANCE ABOVE THE DOOR JAMB. ANGLE THE DISCHARGE FACE DOWN TOWARDS THE WATER PIPING.
14	ROUTE MAKEUP AIR DUCTWORK FULL SIZE FROM THE UNIT CONNECTION THROUGH THE ROOF AND TRANSITION TO SIZE SHOWN. PROVIDE SMACNA TYPE 2 STATIONARY SPLITTER AT BOTTOM OF DUCT DROP. PROVIDE FLEXIBLE CONNECTION AT EQUIPMENT.
15	FURNISH CLEANOUTS IN GREASE DUCT AT EACH CHANGE IN DIRECTION AND EVERY 20-FT OF LINEAR LENGTH.
16	COMBUSTION AIR INTAKE AND FLUE VENT EXHAUST FOR GAS FIRED WATER HEATERS. FURNISHED AND INSTALLED BY THE PLUMBING CONTRACTOR. SIZE PER EQUIPMENT MANUFACTURER RECOMMENDATION. COORDINATE ROOF PENETRATION, FLASHING AND COUNTER-FLASHING WITH THE GENERAL CONTRACTOR.
17	REFER TO SHEET M3.3. MECHANICAL SECTIONS FOR AND ROUTING ASSOCIATED WITH THE BUILDING SECTIONS.
18	MOUNT THE FLY FAN AIR CURTAIN ON THE WALL ABOVE THE DOOR. COORDINATE THE COMPLETE INSTALLATION WITH OTHER TRADES.

AIR DEVICE RUN-OUT SCHEDULE

SUPPLY DUCTWORK		RETURN / EXHAUST DUCTWORK	
AIRFLOW (CFM)	SIZE (Ø)	AIRFLOW (CFM)	SIZE (Ø)
0 - 80	6"	0 - 75	6"
85 - 180	8"	75 - 160	8"
185 - 320	10"	165 - 295	10"
325 - 520	12"	300 - 480	12"
525 - 800	14"	485 - 700	14"
805 - 1100	16"	705 - 1000	16"

NOTES:
1. PROVIDE RUNOUT DUCT SIZE, FLEX DUCT, AND DIFFUSER COLLAR SIZE AS SCHEDULED FOR ALL DUCTED SUPPLY, RETURN, AND EXHAUST AIR DEVICES UNLESS OTHERWISE NOTED ON PLANS.
2. AIR DEVICE NECK SIZE SHALL BE THE SAME AS THE RUN-OUT SIZE.

MECHANICAL FLOOR PLAN 1
1/4" = 1'-0"

MEP ENGINEER:

JARRET L. RICE, P.E. (LIC# 82028) PLANO, TEXAS
PHONE: (469) 608-1268

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Issue Date: 02.15.2023

REVISION INFORMATION

1	CITY COMMENTS	04.04.2023
2	COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

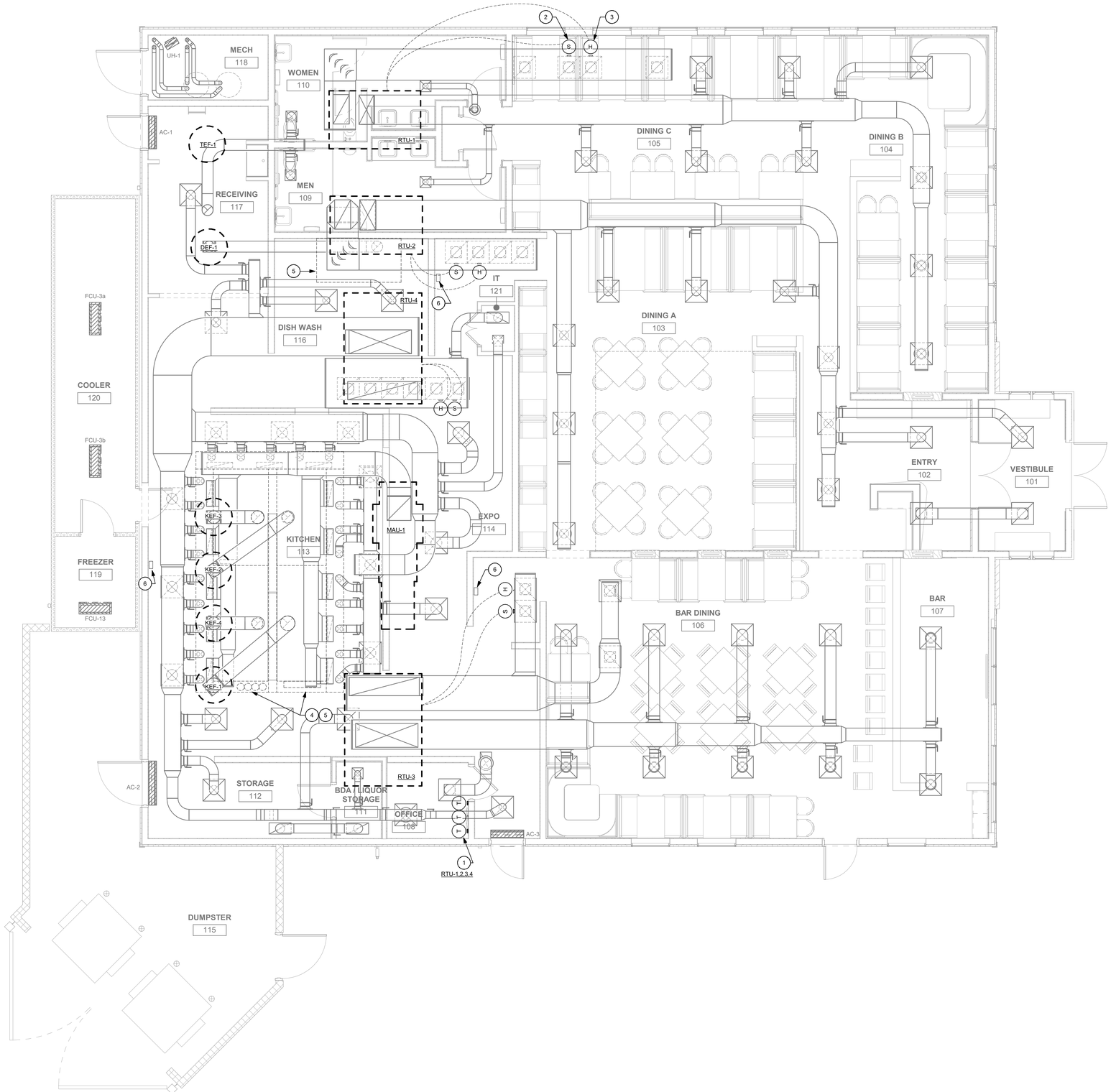
BLOOMINGDALE AVE & GORNTO LAKE RD

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
HVAC FLOOR PLAN

M3.1



MECHANICAL CONTROLS PLAN
1/4" = 1'-0"
1

GENERAL NOTES - HVAC CONTROLS PLAN

1	COORDINATE LOCATION AND MOUNTING HEIGHT OF ALL THERMOSTATS WITH OWNER AND ARCHITECT.

KEYNOTES - M3.2

1	MOUNT SETPOINT THERMOSTATS FOR ALL SYSTEMS ON WALL IN THE MANAGER'S OFFICE, WITH REMOTE TEMPERATURE SENSORS LOCATED AS SHOWN ON PLANS. REFER TO THE ELECTRICAL PLANS FOR PROPOSED MOUNTING LOCATIONS.
2	HVAC TEMPERATURE SENSOR (LENNOX MODEL 47W36) IS TO BE MOUNTED ON INSIDE FACE OF RETURN AIR GRILL AS SHOWN. REFER TO THE MECHANICAL DETAILS FOR PROPOSED MOUNTING INSTALLATION AND WIRING DIAGRAM.
3	HVAC HUMIDITY SENSOR (LENNOX MODEL 17M50) IS TO BE MOUNTED ON INSIDE FACE OF RETURN AIR GRILL AS SHOWN. REFER TO THE MECHANICAL DETAILS FOR PROPOSED MOUNTING INSTALLATION AND WIRING DIAGRAM.
4	THE KITCHEN HVAC UNIT RTU-4 AND THE MAKE-UP AIR UNIT MAU-1 SHALL BE INTERLOCKED AT THE EXHAUST HOOD PREWIRE PACKAGE IN THE UTILITY CABINET. UPON ACTIVATION OF THE SUPPRESSION SYSTEM, BOTH THE ROOFTOP UNIT AND MAKEUP AIR UNIT SHALL BE DEENERGIZED. COORDINATE THE CONNECTION TO THE REQUIRED CONTACTOR WITH THE ROOFTOP UNIT MANUFACTURER.
5	FIELD COORDINATE THE POWER CONNECTION BETWEEN THE EXHAUST FANS AND THE STARTERS AT THE EXHAUST HOOD PREWIRE PACKAGE IN THE UTILITY CABINET. REFER TO THE CAPTIVEAIRE WIRING SCHEMATIC ON SHEET M5.3 FOR ADDITIONAL INFORMATION.
6	LOCATION OF REMOTE MANUAL PULL STATION. REFER TO KITCHEN EQUIPMENT PLANS FOR FIRE PULL DETAIL.
7	HVAC TEMPERATURE SENSOR (LENNOX MODEL 47W36) AND HVAC HUMIDITY SENSOR (LENNOX MODEL 17M50) TO BE WALL MOUNTED IN THIS APPROXIMATE LOCATION. CONFIRM EXACT PLACEMENT WITH ARCHITECT AND OWNER. REFER TO THE MECHANICAL DETAILS FOR PROPOSED MOUNTING INSTALLATION AND WIRING DIAGRAM.

MEP ENGINEER:

JARRET L. RICE, P.E. (LIC# 82028) PLANO, TEXAS
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PROJECT NUMBER
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DARDEN RESTAURANTS, INC.

1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

BLOOMINGDALE AVE &
GORNTO LAKE RD

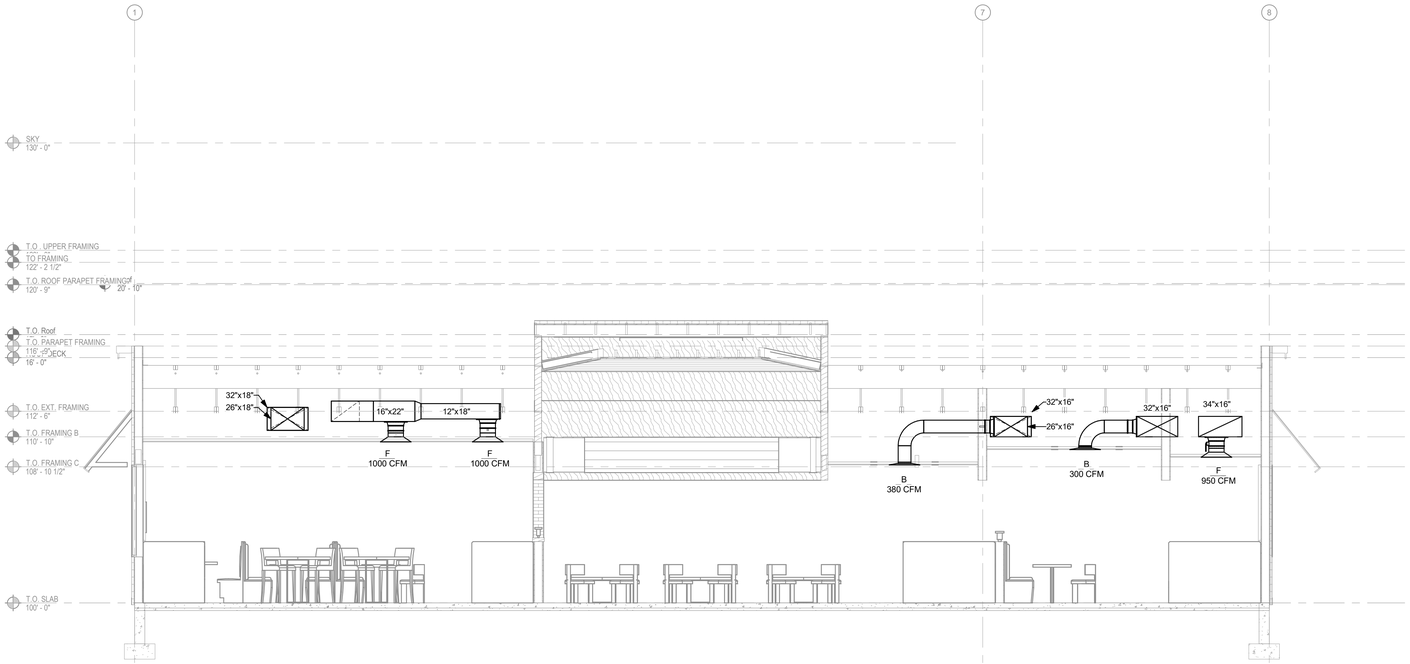
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:

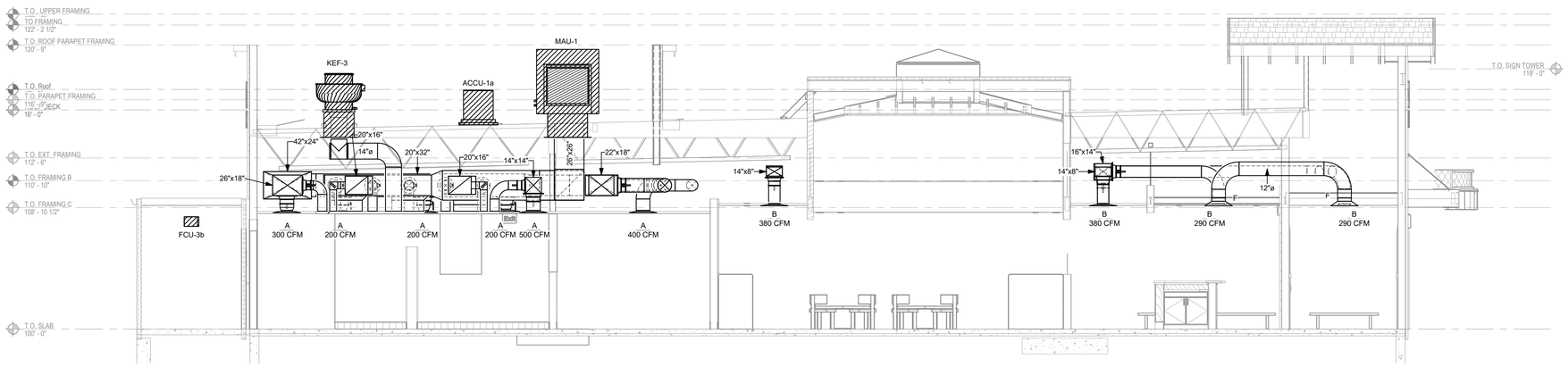
HVAC CONTROLS PLAN

M3.2



MECHANICAL BUILDING SECTION (PLAN NORTH-SOUTH) 1

1/4" = 1'-0"



MECHANICAL BUILDING SECTION (PLAN EAST-WEST) 2

1/4" = 1'-0"

MEP ENGINEER:

JARRET L. RICE, P.E. (LIC# 82028) PLANO, TEXAS
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CHEDDARS
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BLOOMINGDALE AVE &
GORNTO LAKE RD

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:

HVAC SECTIONS

M3.3

HOOD INFORMATION – JOB#5852405

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S) WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP	MUA CFM	AC CFM	HOOD CONSTRUCTION	HOOD CONFIG END TO END	ROW
1	Charbroiler	5424 ND-2-ACPSP-F	CAPTIVEAIRE	10' 6"	600 DEG	I	276	2900			4"	16"	2900	2077	-1.224"	1275	600	430 SS WHERE EXPOSED	LEFT	FRONT
2	Pasta Cooker	5424 ND-2-ACPSP-F	CAPTIVEAIRE	8' 9"	450 DEG	I	200	1750			4"	14"	1750	1637	-0.659"	930	460	430 SS WHERE EXPOSED	RIGHT	FRONT
3	Range	6024 ND-2-ACPSP-F	CAPTIVEAIRE	8' 9"	600 DEG	I	225	1970			4"	14"	1970	1843	-0.834"	930	460	430 SS WHERE EXPOSED	LEFT	BACK
4	Oven	6024 ND-2-ACPSP-F	CAPTIVEAIRE	10' 6"	450 DEG	I	176	1850			4"	14"	1850	1731	-0.684"	1275	600	430 SS WHERE EXPOSED	RIGHT	BACK
5	Dish	4224 VHB-G-REM1	CAPTIVEAIRE	9' 3"	700 DEG	II	108	1000			4"	12"	1000	1273	-0.110"	0	0	430 SS 100%	ALONE	ALONE
6	Side PSP	196 MISC ACPSP-ONLY	CAPTIVEAIRE	13' 5"	300 DEG	I	0	0								1380	675	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S) TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	LIGHT(S) QTY	TYPE	WIRE GUARD	UTILITY CABINET(S) LOCATION	SIZE	FIRE SYSTEM TYPE	FIRE SYSTEM SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1	Charbroiler	CAPTRATE SOLO FILTER	7	20"	16"	85% SEE FILTER SPEC	6	L55 SERIES E26	NO	LEFT	12"x54"x24"			DCV-4111_MA4	1 LIGHT 1 FAN	YES	802 LBS
2	Pasta Cooker	CAPTRATE SOLO FILTER	6	20"	16"	85% SEE FILTER SPEC	6	L55 SERIES E26	NO							YES	551 LBS
3	Range	CAPTRATE SOLO FILTER	6	20"	16"	85% SEE FILTER SPEC	6	L55 SERIES E26	NO							YES	531 LBS
4	Oven	CAPTRATE SOLO FILTER	7	20"	16"	85% SEE FILTER SPEC	6	L55 SERIES E26	NO	RIGHT	12"x60"x24"	TANK FS	4.0/4.0/4.0/4.0			YES	1113 LBS
5	Dish						3	L55 SERIES E26	NO							NO	280 LBS
6	Side PSP						0									NO	183 LBS

HOOD OPTIONS

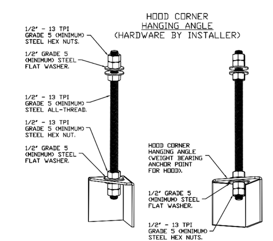
HOOD NO	TAG	OPTION
1	Charbroiler	BACK STANDOFF (FLAT) 9" WIDE 138" LONG.
2	Pasta Cooker	BACK STANDOFF (FLAT) 9" WIDE 105" LONG.
2	Pasta Cooker	RISER SENSOR INSTALL 6IN PLEN.
4	Oven	RISER SENSOR INSTALL 6IN PLEN.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S) WIDTH	LENG	DIA	CFM	SP
1	Charbroiler	Front	138"	19"	6"	MUA	6"	28"		425	0.145"
						MUA	6"	28"		425	0.145"
						MUA	6"	28"		425	0.145"
						AC			8"	120	0.045"
						AC			8"	120	0.045"
						AC			8"	120	0.045"
						AC			8"	120	0.045"
						AC			8"	120	0.045"
2	Pasta Cooker	Front	105"	19"	6"	MUA	6"	28"		465	0.172"
						MUA	6"	28"		465	0.172"
						AC			8"	115	0.042"
						AC			8"	115	0.042"
						AC			8"	115	0.042"
						AC			8"	115	0.042"
3	Range	Front	105"	19"	6"	MUA	6"	28"		465	0.172"
						MUA	6"	28"		465	0.172"
						AC			8"	115	0.042"
						AC			8"	115	0.042"
						AC			8"	115	0.042"
						AC			8"	115	0.042"
4	Oven	Front	138"	19"	6"	MUA	6"	28"		425	0.145"
						MUA	6"	28"		425	0.145"
						MUA	6"	28"		425	0.145"
						AC			8"	120	0.045"
						AC			8"	120	0.045"
						AC			8"	120	0.045"
						AC			8"	120	0.045"
						AC			8"	120	0.045"
6	Side PSP	Front	161"	10"	6"	AC			8"	135	0.057"
						AC			8"	135	0.057"
						AC			8"	135	0.057"
						AC			8"	135	0.057"
						AC			8"	135	0.057"
		Back	161"	9"	6"	MUA	6"	28"		460	0.169"
						MUA	6"	28"		460	0.169"
						MUA	6"	28"		460	0.169"

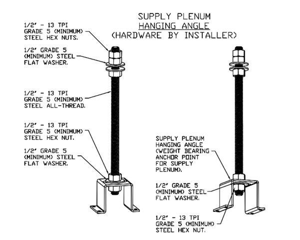
CAPTIVEAIRE HOODS ARE ETL SANITATION LISTED AND BUILT IN COMPLIANCE WITH NSF/ANSI STANDARD 2, AND TO UL 710 & ULC710 STANDARDS.

E.T.L. LISTED 102900319PRT-001



ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



ASSEMBLY INSTRUCTIONS

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SPECIFICATION: CAPTRATE® GREASE-STOP® SOLO FILTER

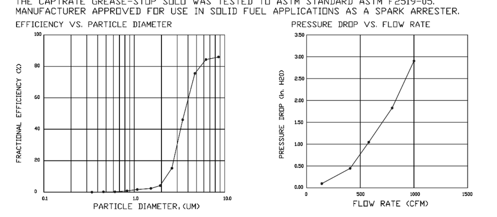
THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05. MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.



CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
NFPA #96.
NSF STANDARD #2.
UL STANDARD #1046.
INT. MECH. CODE (IMC).
ULC-S649.

PATENT NUMBERS

AC-PSP (UNITED STATES) - US PATENT 7963830 B2.
AC-PSP WALL (CANADA) - CA PATENT 2820509.
AC-PSP ISLAND (CANADA) - CA PATENT 2520330.

CAPTIVEAIRE SYSTEMS RECOMMENDS THE USE OF LISTED, PRE-FABRICATED ROUND GREASE EXHAUST DUCT TO REDUCE STATIC PRESSURE IN THE SYSTEM, MINIMIZE INSTALLATION AND INSPECTION TIMES, AND ENSURE DUCT IS LIQUID TIGHT

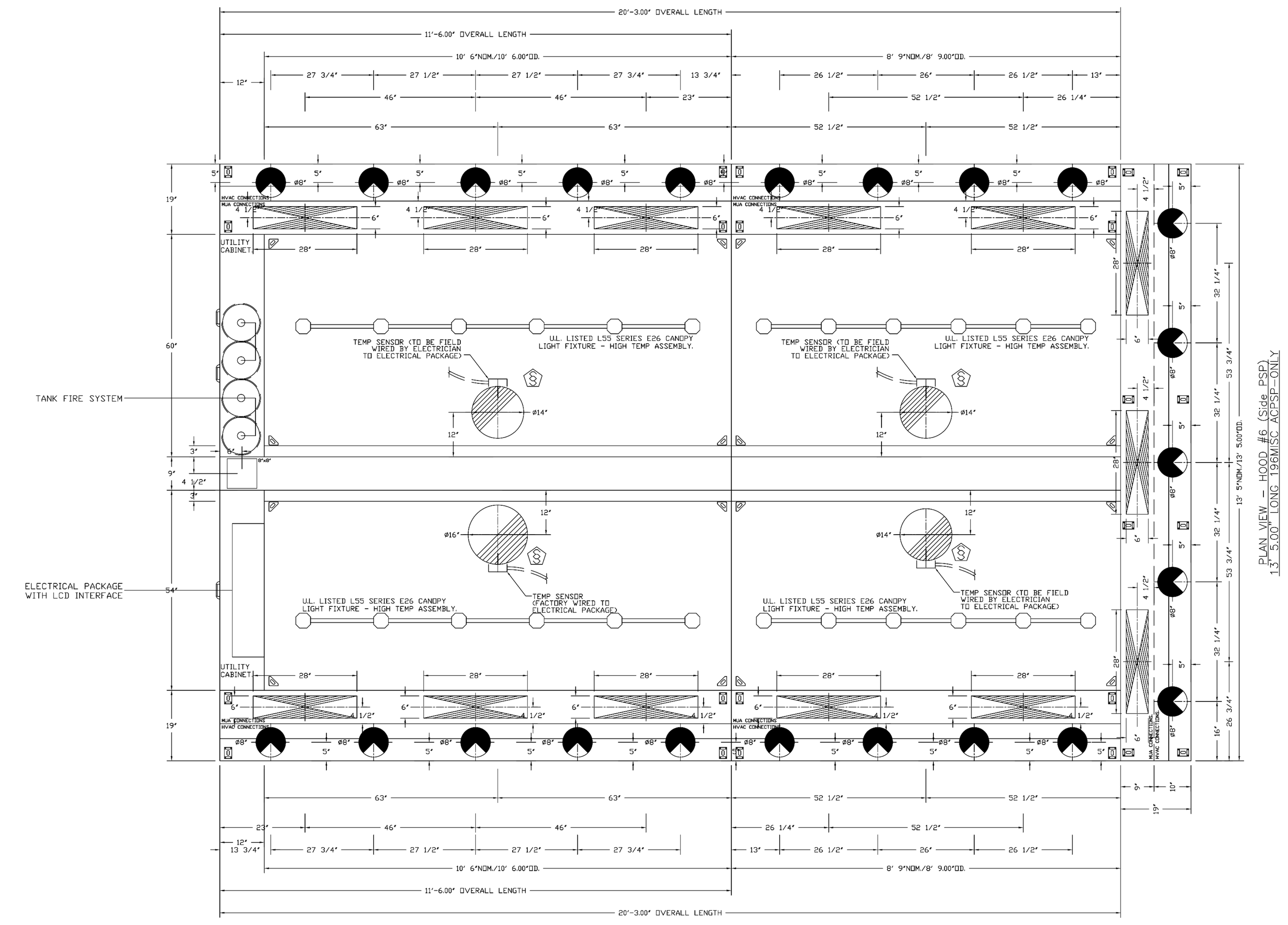
HVAC DISTRIBUTION NOTE

HIGH VELOCITY DIFFUSERS OR HVAC RETURNS SHOULD NOT BE PLACED WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

REVISIONS | CAPTIVEAIRE Florida National Accounts | 239 N Hunt Club Blvd., STE 201, Longwood, FL, 32779 PHONE: (407) 682-3100 FAX: (919) 227-5913 EMAIL: reg60@captiveaire.com www.captiveaire.com
Cheddars Riverview FL #2215, 10150 Bloomingdale Avenue, Riverview, FL, 33578
DATE: 2/10/2023 | DWG.#: 5852405 | DRAWN BY: RAN-60 | SCALE: 3/4" = 1'-0" | MASTER DRAWING | SHEET NO. 1

PLAN VIEW – HOOD #4 (Oven) 10' 6.00" LONG 6024ND-2-ACPSP-F
ACPSP SHIPS LOOSE FOR FIELD INSTALLATION

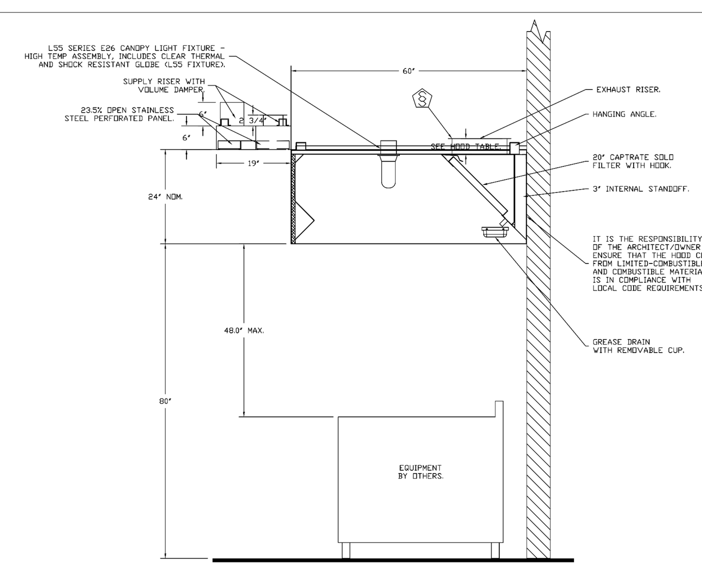
PLAN VIEW – HOOD #3 (Range) 8' 9.00" LONG 6024ND-2-ACPSP-F
ACPSP SHIPS LOOSE FOR FIELD INSTALLATION



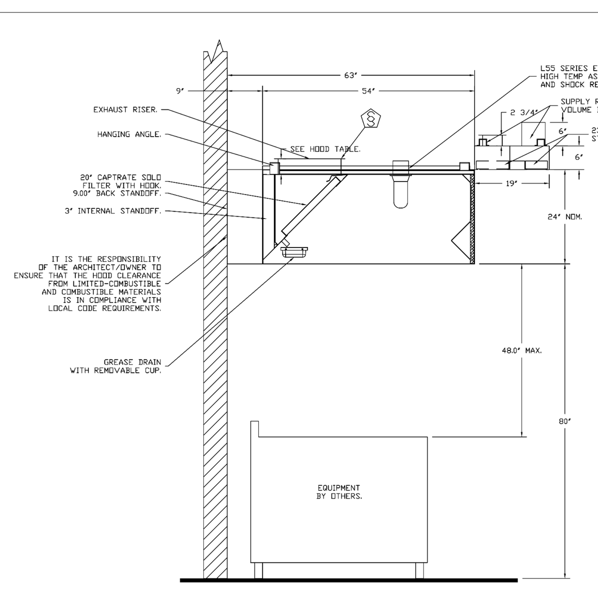
PLAN VIEW – HOOD #1 (Charbroiler) 10' 6.00" LONG 5424ND-2-ACPSP-F
ACPSP SHIPS LOOSE FOR FIELD INSTALLATION

PLAN VIEW – HOOD #2 (Pasta Cooker) 8' 9.00" LONG 5424ND-2-ACPSP-F
ACPSP SHIPS LOOSE FOR FIELD INSTALLATION

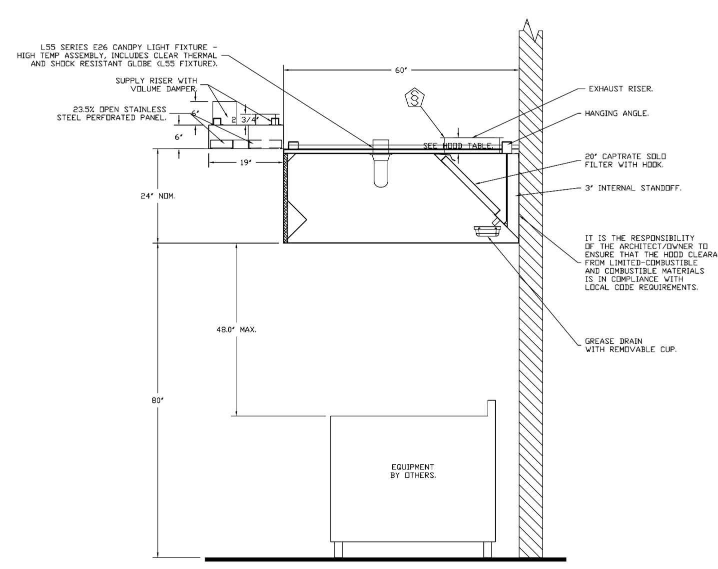
REVISIONS | CAPTIVEAIRE Florida National Accounts | Cheddars Riverview FL #2215, 10150 Bloomingdale Avenue, Riverview, FL, 33578 | DATE: 2/10/2023 | DWG.#: 5852405 | DRAWN BY: RAN-60 | SCALE: 3/4" = 1'-0" | MASTER DRAWING
SHEET NO. 2



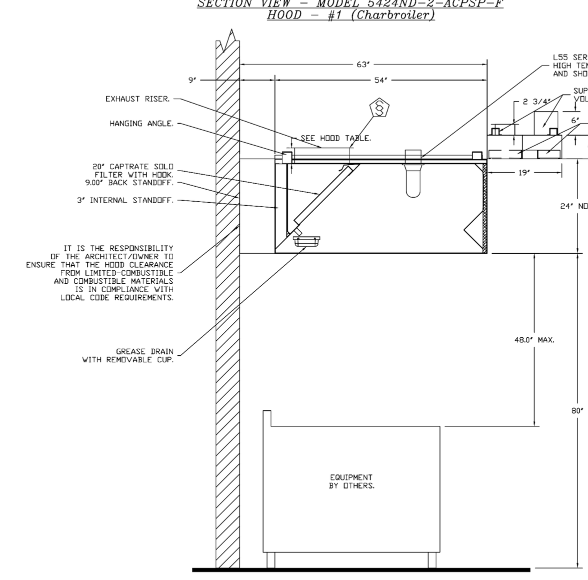
SECTION VIEW – MODEL 6024ND-2-ACPSP-F HOOD – #4 (Oven)



SECTION VIEW – MODEL 5424ND-2-ACPSP-F HOOD – #1 (Charbroiler)

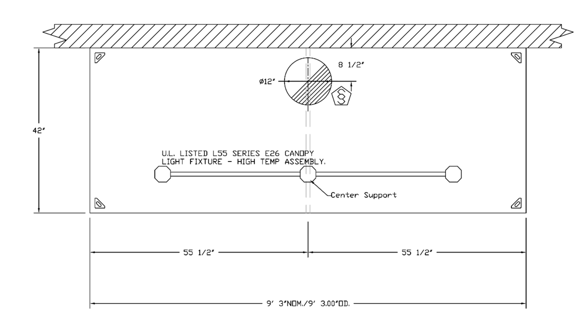


SECTION VIEW – MODEL 6024ND-2-ACPSP-F HOOD – #3 (Range)

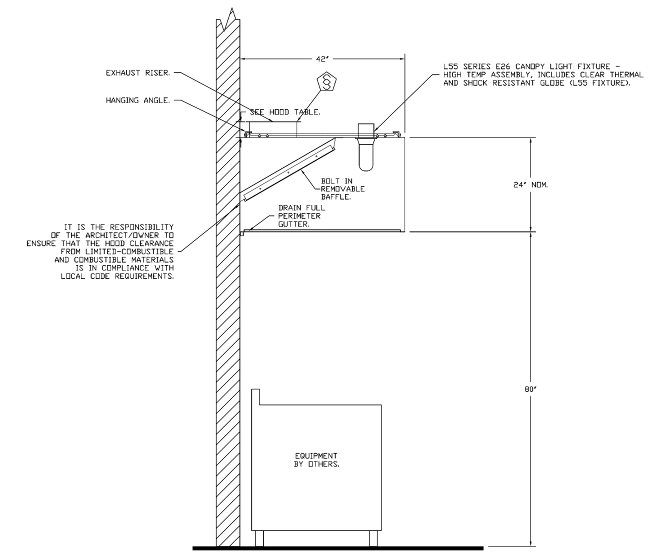


SECTION VIEW – MODEL 5424ND-2-ACPSP-F HOOD – #2 (Pasta Cooker)

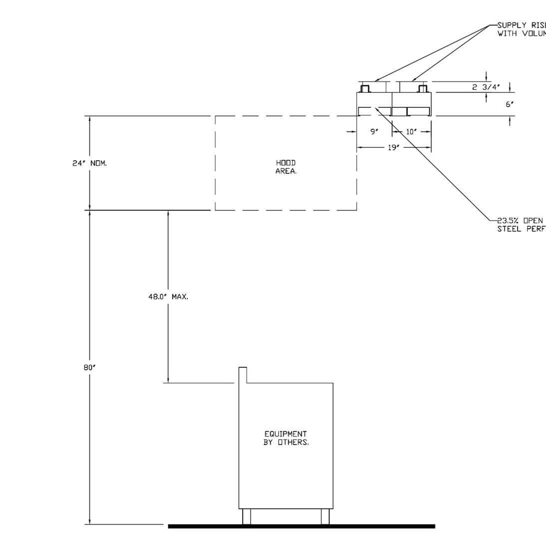
REVISIONS | CAPTIVEAIRE Florida National Accounts | Cheddars Riverview FL #2215, 10150 Bloomingdale Avenue, Riverview, FL, 33578 | DATE: 2/10/2023 | DWG.#: 5852405 | DRAWN BY: RAN-60 | SCALE: 3/4" = 1'-0" | MASTER DRAWING
SHEET NO. 3



PLAN VIEW – HOOD #5 (Dish) 9' 3.00" LONG 4224VHB-G-REM1



SECTION VIEW – MODEL 4224VHB-G-REM1 HOOD – #5 (Dish)



SECTION VIEW – MODEL 196MISC ACPSP-ONLY HOOD – #6 (Side PSP)

REVISIONS | CAPTIVEAIRE Florida National Accounts | Cheddars Riverview FL #2215, 10150 Bloomingdale Avenue, Riverview, FL, 33578 | DATE: 2/10/2023 | DWG.#: 5852405 | DRAWN BY: RAN-60 | SCALE: 3/4" = 1'-0" | MASTER DRAWING
SHEET NO. 4

FOR REFERENCE ONLY

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PROJECT NUMBER
DCH22007

CLIENT:
DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN EST 1979

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

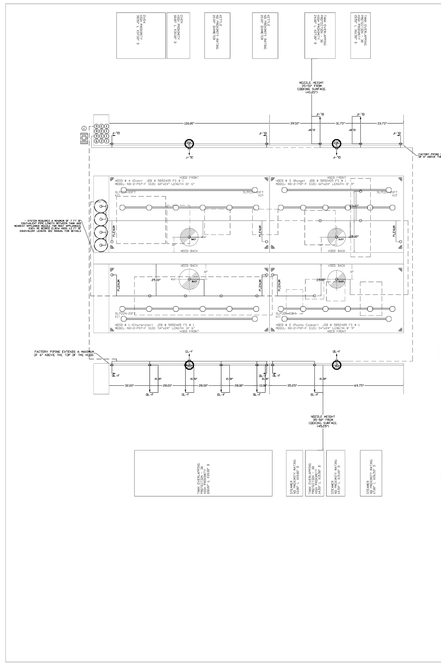
BLOOMINGDALE AVE & GORNTO LAKE RD

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
KITCHEN HOOD INFORMATION

M4.1



NOTES:
- ALL PIPE SHOWN ARE SCHDY
- FIRE SYSTEM PIPE AND NOZZLES SUPPLIED BY CAE
- FLEX CONNECTORS FOR NOZZLES: PROTECTO-FLEX 400 LONG PIECES OF CHROME PLATED STEEL BRAIDED LOOKS, TO BE USED AS FOLLOWS:
  - 1 FOOT FOR 1/2" NOZZLES, 1.5 FOOT FOR 3/4" NOZZLES, 2 FOOT FOR 1" CHROME PIPE LENGTH NEEDED
  - ADDITIONAL FLEX TO BE FIELD-FABRICATED TO ALLOW FOR ANY ADJUSTMENT NECESSARY DUE TO FIELD-INSTALLED EQUIPMENT.
- ALL PIPE SHALL BE PLACED SO AS TO NOT INTERFERE WITH AN OBSTRUCTION, ALL PIPE TO BE PLACED AS CLOSE TO CEILING AS POSSIBLE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 12" ABOVE THE TOP OF THE HOOD.
- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE DIMENSIONS, NOT THE OVERALL DIMENSIONS.
- THIS FIRE SYSTEM COMPLIES WITH UL 300 REQUIREMENTS.
- OLY NOZZLE PART NUMBER REPLACES 2007-3/8H-SS-SS
- ALL NOZZLES:
  2007-3/8H-SS-SS
  ANSI ACCEPTABLE REVIEW/OLY FL #2205.

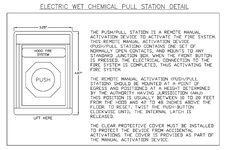
SYSTEM SIZE TANK/GH-4 TOTAL FP REQUIRED 74.
NOZZLE # 1 WALL-SLOT (CAPS INCLUDED) 3" WIDE X 24" HIGH
NOZZLE # 2 WALL-SLOT (CAPS INCLUDED) 3" WIDE X 24" HIGH
NOZZLE # 3 WALL-SLOT (CAPS INCLUDED) 3" WIDE X 24" HIGH
NOZZLE # 4 WALL-SLOT (CAPS INCLUDED) 3" WIDE X 24" HIGH
NOZZLE # 5 WALL-SLOT (CAPS INCLUDED) 3" WIDE X 24" HIGH
NOZZLE # 6 WALL-SLOT (CAPS INCLUDED) 3" WIDE X 24" HIGH
NOZZLE # 7 WALL-SLOT (CAPS INCLUDED) 3" WIDE X 24" HIGH
NOZZLE # 8 WALL-SLOT (CAPS INCLUDED) 3" WIDE X 24" HIGH
NOZZLE # 9 METAL SLOT-VENT CAPS (INCLUDES 2 ADDITIONAL CAPS)

- HEAVY-DUTY APPLIANCES (RATED 6GPM) WILL REQUIRE AN ADDITIONAL 1/2" NOZZLE PER 6GPM OVER 6GPM. ADJUST THE SYSTEM CONTAINS ANY HORIZONTAL RUN OVER 25 FT IN LENGTH.
  - MEDIUM TO LIGHT-DUTY APPLIANCES (RATED <5GPM) WILL NOT REQUIRE ADDITIONAL NOZZLES UNLESS OTHERWISE NOTED.

LEGEND — FIRE CABINET TANK SYSTEM
1 4 GALLON TANK
2 PRIMARY ACTUATOR RELEASE.
3 SECONDARY ACTUATOR RELEASE.
4 PRIMARY GAS VALVE ACTUATOR.
5 PRIMARY HOOD ASSEMBLY.
6 SECONDARY HOOD ASSEMBLY.
7 SECONDARY GAS VALVE ACTUATOR DEVICE.

PROVIDED FOR INSTALLATION INCLUDED ABOVE BOOKS, BUSINESS CARDS AT CONTRACTOR INSTALLER ONLY IN THE LOCATION NOTED ABOVE. THE SITE CONTRACTOR TO PROVIDE ALL ADDITIONAL BOOKS, BUSINESS CARDS AT CONTRACTOR INSTALLER'S DISCRETION. THIS SHALL BE REQUIRED IF A SECOND OR THIRD SYSTEM IS REQUIRED TO PROTECT THE HOOD. ALL PULL STATIONS, MANUAL GAS VALVE ACTUATORS, AND ANY OTHER ACCESSORIES MUST BE LOCATED WITHIN 5 FEET OF THE HOOD. ALL PULL STATIONS, MANUAL GAS VALVE ACTUATORS, AND ANY OTHER ACCESSORIES MUST BE MOUNTED WITHIN 5 FEET OF THE HOOD. ALL PULL STATIONS, MANUAL GAS VALVE ACTUATORS, AND ANY OTHER ACCESSORIES MUST BE MOUNTED WITHIN 5 FEET OF THE HOOD.

ELECTRIC WET CHEMICAL PULL STATION DETAIL



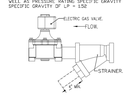
THE PUSH/PULL STATION IS A REMOTE MANUAL ACTUATION DEVICE FOR USE WITH THE CAE FIRE SYSTEM. THE PUSH/PULL STATION CONTAINS ONE SET OF NORMALLY OPEN CONTACTS WHICH WILL CLOSE IN ANY NORMAL OPERATION. WHEN THE PUSH/PULL TOP BUTTON IS PRESSED, THE ELECTRICAL CONNECTION TO THE FIRE SYSTEM IS COMPLETED, THUS ACTIVATING THE FIRE SYSTEM.

THE REMOTE MANUAL ACTUATION (PUSH/PULL) STATION SHOULD BE MOUNTED AT A POINT OF EGRESS AND POSITIONED AT A HEIGHT DETERMINED BY THE AHJ. THE PULL STATION MUST BE MOUNTED IN THE VERT POSITION WITH THE HANDLE BETWEEN 36 TO 48 FEET FROM THE HOOD AND 42 TO 48 INCHES ABOVE THE FLOOR TO RESET. TWIST THE PUSH-BUTTON CLOCKWISE UNTIL THE INTERNAL LATCH IS RELEASED.

THE CLEAR PROTECTIVE COVER MUST BE INSTALLED TO PROTECT THE DEVICE FROM ACCIDENTAL ACTIVATING THE COVER IS PROVIDED AS PART OF THE MANUAL ACTIVATION DEVICE.

ELECTRIC GAS VALVES ONLY
3/4" THROUGH 2" VALVES CAN BE MOUNTED WITH THE SOLENOID IN ANY POSITION ABOVE HORIZONTAL.
2½-10" THROUGH 24 VALVES MUST BE MOUNTED WITH THE SOLENOID VERTICAL AND UPRIGHT.

ALL GAS UNDERSTRENGTHS
PROPER CLEARANCE MUST BE PROVIDED IN ORDER TO SERVICE THE SOLENOID AND THE VALVE. A GAS STRAINER MUST BE PROVIDED AT THE BASE OF THE STRAINER CUSTOMER MUST ACCEPT 3% CONSUMPTION AS WELL AS PRESSURE RATING SPECIFIC GRAVITY OF NATURAL GAS = 0.64, SPECIFIC GRAVITY OF LP = 1.52



FIRE SYSTEM INFORMATION — JOB#6852405

FIRE SYSTEM NO.	TAG	TYPE	SIZE	FLOW RATE	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1	TANK (1)		REVISIONS	GPM	FIRE CHEMICAL	RIGHT SIDE 4

GAS INFORMATION

GAS SYSTEM NO.	TAG	TYPE	SIZE	SUPPLIED BY
1		SE ELECTRICAL	2.0IN	CAPITOLIANE SYSTEMS

FIRE SYSTEM PARTS LIST KEY:

FIRE SYSTEM NO.	TAG	KEY NUMBER - PART DESCRIPTION	QTY. OF PARTS	QTY. OF NOZZLES
1		1 - 1 - TANK FIRE EXTINGUISHER MAINTENANCE FREE (VOLT CHARGE LABEL ONLY)	1	0
		1 - 2 - TANK FIRE EXTINGUISHER PRESSURE-PRESSURE (VOLT CHARGE LABEL ONLY)	1	0
		1 - 3 - TANK FIRE EXTINGUISHER PRESSURE-PRESSURE (VOLT CHARGE LABEL ONLY) "WARNING" WITH 2 FT OF FLEX LEAD. 90	1	0
		1 - 4 - FLOW PIPE 90 DEGREE	1	0
		1 - 5 - NOZZLE 1/2 WALL SLOT CAP (INCLUDED)	2	0
		1 - 6 - NOZZLE 1/2 WALL SLOT CAP (INCLUDED)	2	0
		1 - 7 - NOZZLE 1/2 WALL SLOT CAP (INCLUDED) (BLUE) (BRASS)	2	0
		1 - 8 - NOZZLE 1/2 WALL SLOT CAP (INCLUDED)	2	0
		1 - 9 - NOZZLE 1/2 WALL SLOT CAP (INCLUDED)	2	0
		1 - 10 - TRIDENT 1/2" 90 PRO-FLEX 8.0IN UTILITY WFT FEMALE CONNECTION, VERIFY	2	0
		1 - 11 - TRIDENT 1/2" 90 PRO-FLEX 8.0IN UTILITY WFT FEMALE CONNECTION, VERIFY	2	0
		1 - 12 - PRESSURE GAUGE 2.0 INCH 1/4 BOTTOM MOUNT 0-160 PSI, 0-11 BAR, 0-1.6 MPA(RED)	1	0
		1 - 13 - PRESSURE SWITCH 1/4 NPT, 1 SPDT, 15A, 125/250 VAC, 0.5A, 125 VDC, 0.25A(RED)	1	0
		TANKLESS BELOWS ACTUATOR, FIRE PUMP SUPPRESSION	1	0
		1 - 14 - TANK FIRE EXTINGUISHER, FIRE SUPPRESSION ACTUATOR HOSE, 1FT BRAIDED STAINLESS STEEL,	1	0
		1 - 15 - 4FT SERIES-304 TANK - PRESSURIZED TANK (DEE FOR TANK FIRE SUPPRESSION)	4	0
		1 - 16 - 4FT SERIES-304 TANK - PRESSURIZED TANK (DEE FOR TANK FIRE SUPPRESSION)	4	0
		CHEMICAL AND HEAT DETECTION SYSTEM SCHEMATIC	1	0
		1 - 17 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 18 - NOZZLES PRO PRESS 1/2 PRESS 2 PRESS 90 ELBOW 1/2	10	0
		1 - 19 - NOZZLES PRO PRESS 1/2 PRESS 2 PRESS 90 ELBOW 1/2	10	0
		1 - 20 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 21 - PYROMAXX SCHEMATIC SCHEMATIC FOR - DEVICE PLATE FOR FIRE SYSTEM TANK INSTALLATION FIRE SUPPRESSION	4	0
		1 - 22 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 23 - SUPERVISORY EXPANSION LOOP CONNECTION KIT - CONNECTION FOR PANELS REFERS TO SUPERVISORY EXPANSION LOOP CONNECTION KIT - CONNECTION FOR PANELS REFERS TO SUPERVISORY EXPANSION LOOP CONNECTION KIT - CONNECTION FOR PANELS REFERS TO SUPERVISORY EXPANSION LOOP CONNECTION KIT - CONNECTION FOR PANELS REFERS TO	4	0
		1 - 24 - SUPERVISORY EXPANSION LOOP CONNECTION KIT - CONNECTION FOR PANELS REFERS TO SUPERVISORY EXPANSION LOOP CONNECTION KIT - CONNECTION FOR PANELS REFERS TO SUPERVISORY EXPANSION LOOP CONNECTION KIT - CONNECTION FOR PANELS REFERS TO	4	0
		1 - 25 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 26 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 27 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 28 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 29 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 30 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 31 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 32 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 33 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 34 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
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		1 - 42 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
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		1 - 120 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 121 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 122 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 123 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 124 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 125 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 126 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 127 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 128 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 129 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 130 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 131 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 132 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 133 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 134 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 135 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 136 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 137 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 138 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 139 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 140 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 141 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 142 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 143 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 144 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 145 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 146 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 147 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
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		1 - 149 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 150 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 151 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
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		1 - 155 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 156 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 157 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 158 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
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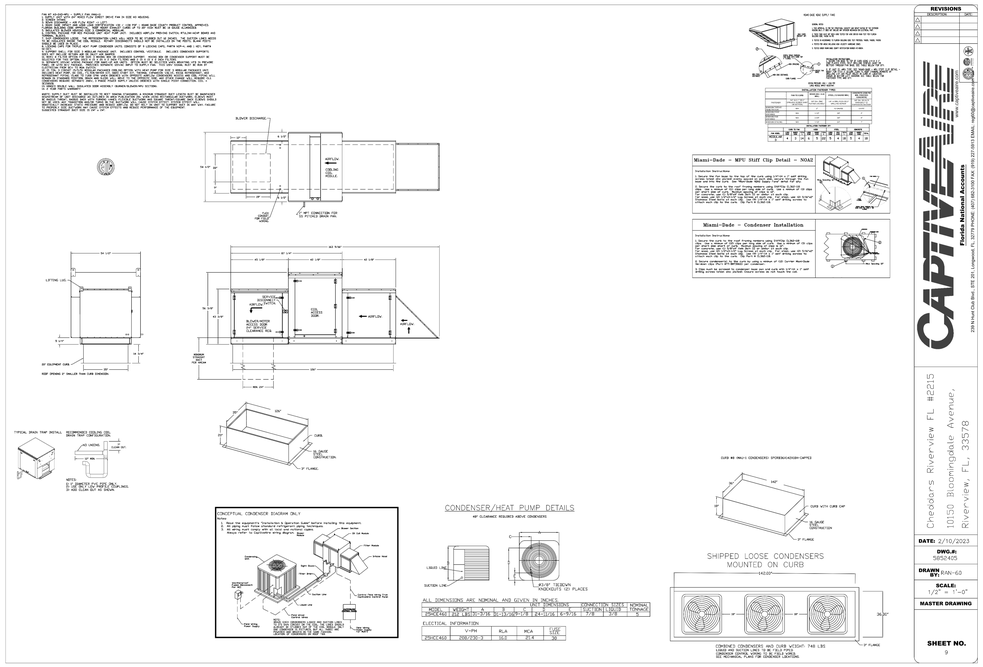
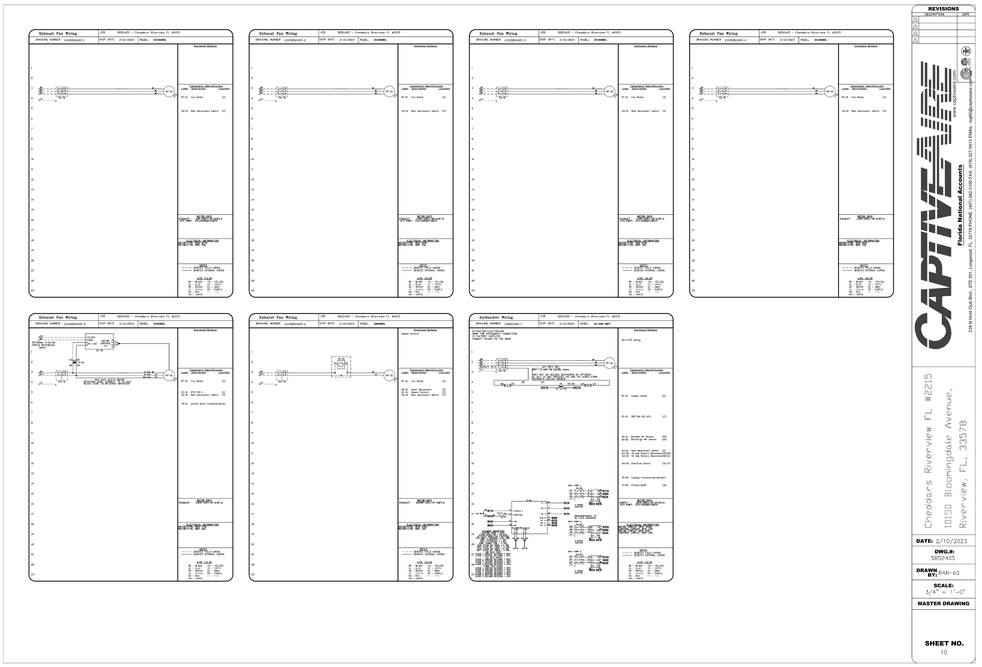
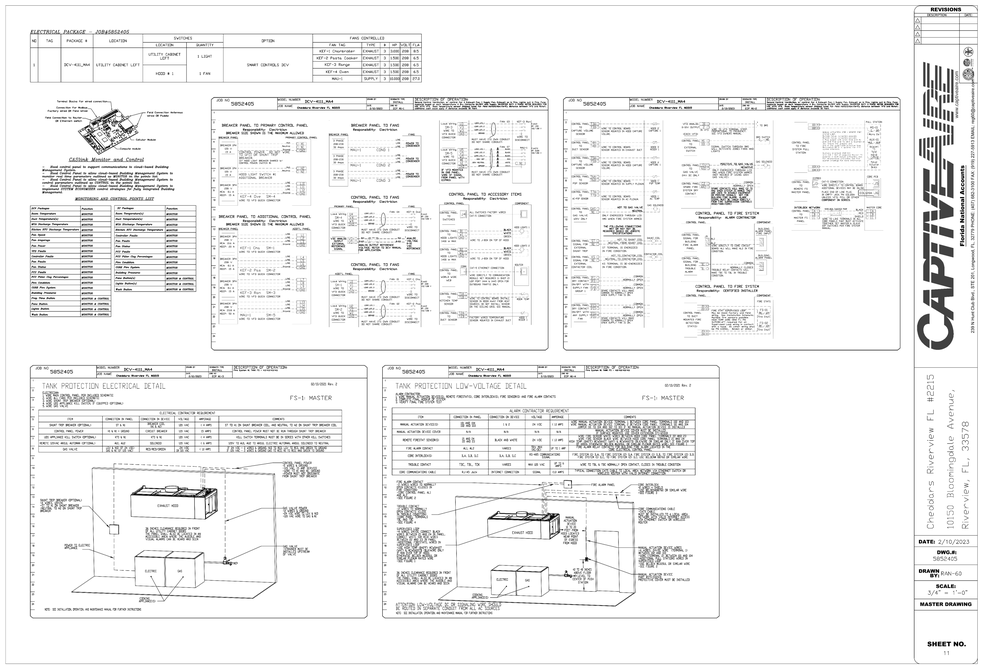
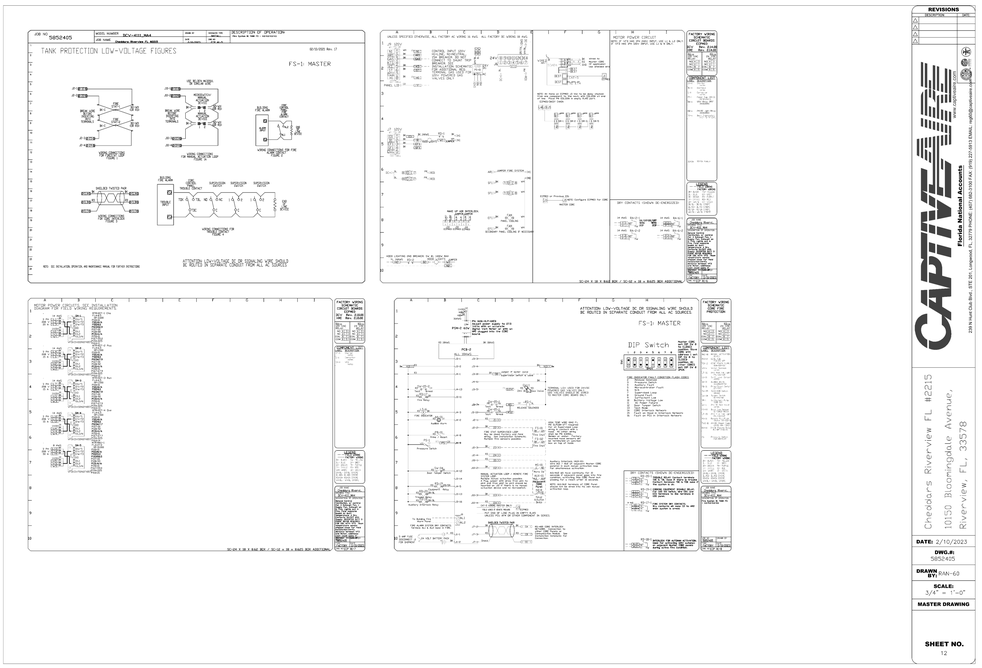
		1 - 162 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 163 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 164 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 165 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 166 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 167 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 168 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 169 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 170 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUPPRESSION	10	0
		1 - 171 - 1/2 INCH 90 DEGREE ELBOW, 150 LB, STAINLESS STEEL, FIRE SUP









FOR REFERENCE ONLY

THE INFORMATION PRESENTED ON THIS SHEET WAS PRODUCED BY THE EXHAUST HOOD MANUFACTURER AS PART OF THE OWNER FURNISHED, CONTRACTOR INSTALLED, FAN AND HOOD PACKAGE. IT IS INCLUDED FOR REFERENCE & COORDINATION ONLY.

THESE DOCUMENTS WERE NOT PREPARED BE THE ENGINEER OF RECORD. AS SUCH, THE E.O.R. ASSUMES NO RESPONSIBILITY FOR ERRORS, OMISSIONS, OR CODE COMPLIANCE ISSUES.

MEP ENGINEER:

JARRET L. RICE, P.E. (LIC# 82028) PLANO, TEXAS
PHONE: (469) 608-1268

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

BLOOMINGDALE AVE & GORNTO LAKE RD

RIVERVIEW, FL 33578

RIVERVIEW, FL

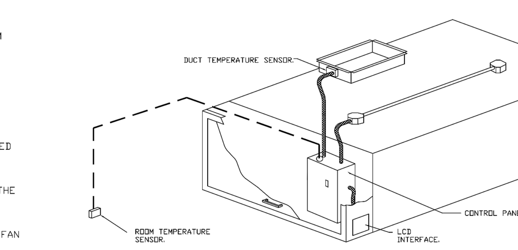
Drawing:

KITCHEN HOOD INFORMATION

M4.3

DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS:

- CONTROLS SHALL BE LISTED BY ETL (UL 508A) AND SHALL COMPLY WITH DEMAND VENTILATION SYSTEM TURNDOWN REQUIREMENTS OUTLINED IN IECC 403.2.8 (2015).
- THE CONTROL ENCLOSURE SHALL BE NEMA 1 RATED AND LISTED FOR INSTALLATION INSIDE OF THE EXHAUST HOOD UTILITY CABINET. THE CONTROL ENCLOSURE MAY BE CONSTRUCTED OF STAINLESS STEEL OR PAINTED STEEL.
- TEMPERATURE PROBE(S) LOCATED IN THE EXHAUST DUCT RISER(S) SHALL BE CONSTRUCTED OF STAINLESS STEEL.
- A DIGITAL CONTROLLER SHALL BE PROVIDED TO ACTIVATE THE HOOD EXHAUST FANS DYNAMICALLY BASED ON A FIXED DIFFERENTIAL BETWEEN THE AMBIENT AND DUCT TEMPERATURES SENSORS. THIS FUNCTION SHALL MEET THE REQUIREMENTS OF IMC 507.1.1.
- A DIGITAL CONTROLLER SHALL PROVIDE ADJUSTABLE HYSTERESIS SETTINGS TO PREVENT CYCLING OF THE FANS AFTER THE COOKING APPLIANCES HAVE BEEN TURNED OFF AND/OR THE HEAT IN THE EXHAUST SYSTEM IS REDUCED.
- A DIGITAL CONTROLLER SHALL PROVIDE AN ADJUSTABLE MINIMUM FAN RUN-TIME SETTING TO PREVENT FAN CYCLING.
- VARIABLE FREQUENCY DRIVES (VFDS) SHALL BE PROVIDED FOR FANS AS REQUIRED. THE DIGITAL CONTROLLER SHALL MODULATE THE VFDS BETWEEN A MINIMUM SETPOINT AND A MAXIMUM SETPOINT ON DEMAND. THE DUCT TEMPERATURE SENSOR INPUT(S) TO THE DIGITAL CONTROLLER SHALL BE USED TO CALCULATE THE SPEED REFERENCE SIGNAL.
- THE VFD SPEED RANGE OF OPERATION SHALL BE FROM 0% TO 100% FOR THE SYSTEM, WITH THE ACTUAL MINIMUM SPEED SET AS REQUIRED TO MEET MINIMUM VENTILATION REQUIREMENTS.
- AN INTERNAL ALGORITHM TO THE DIGITAL CONTROLLER SHALL MODULATE SUPPLY FAN VFD SPEED PROPORTIONAL TO ALL EXHAUST FANS THAT ARE LOCATED IN THE SAME FAN GROUP AS THE SUPPLY FAN.
- THE SYSTEM SHALL OPERATE IN PREP MODE DURING LIGHT COOKING LOAD OR COOL DOWN MODE WHEN SUFFICIENT HEAT REMAINS UNDERNEATH THE HOOD SYSTEM AFTER COOKING OPERATIONS HAVE COMPLETED. OPERATION DURING EITHER OF THESE PERIODS WILL DISABLE THE SUPPLY FANS AND PROVIDE AN EXHAUST FAN SPEED THAT IS EQUAL TO THE MINIMUM VENTILATION REQUIREMENT.
- A DIGITAL CONTROLLER SHALL DISABLE THE SUPPLY FAN(S), ACTIVATE THE EXHAUST FAN(S), ACTIVATE THE APPLIANCE SHUNT TRIP, AND DISABLE AN ELECTRIC GAS VALVE AUTOMATICALLY WHEN FIRE CONDITION IS DETECTED ON A COVERED HOOD.
- A DIGITAL CONTROLLER SHALL ALLOW FOR EXTERNAL BMS FAN CONTROL VIA DRY CONTACT (EXTERNAL CONTROL SHALL NOT OVERRIDE FAN OPERATION LOGIC AS REQUIRED BY CODE).
- AN LCD INTERFACE SHALL BE PROVIDED WITH THE FOLLOWING FEATURES:
  A. ON/OFF PUSH BUTTON FAN & LIGHT SWITCH ACTIVATION.
  B. INTEGRATED GAS VALVE RESET FOR ELECTRONIC GAS VALVES (NO RESET RELAY REQUIRED).
  C. VFD FAULT DISPLAY WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  D. DUCT TEMPERATURE SENSOR FAILURE DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  E. MIS-WIRED DUCT TEMPERATURE SENSOR DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  F. A SINGLE LOW VOLTAGE CAT-5 RJ45 WIRING CONNECTION.
  G. AN ENERGY SAVINGS INDICATOR THAT UTILIZES MEASURED KWH FROM THE VFDS.



TYPICAL HOOD CONTROL PANEL INSTALLATION

SEQUENCE OF OPERATIONS:
THE HOOD CONTROL PANEL IS CAPABLE OF OPERATING IN ONE OR MORE OF THE FOLLOWING STATES AT ANY GIVEN TIME:

- AUTOMATIC: THE SYSTEM OPERATES BASED ON THE DIFFERENTIAL BETWEEN ROOM TEMPERATURE AND THE TEMPERATURE AT THE HOOD CAVITY OR EXHAUST DUCT COLLAR. FANS ACTIVATE AT A CONFIGURABLE TEMPERATURE DIFFERENTIAL THRESHOLD. DEPENDING ON THE JOB CONFIGURATION EACH FAN ZONE CAN BE CONFIGURED AS STATIC OR DYNAMIC. THESE TERMS REFER TO WHETHER A VARIABLE MOTOR (SUCH AS EC MOTORS OR VFD DRIVEN MOTORS) MODULATE WITH TEMPERATURE. IF THE PANEL IS EQUIPPED WITH VARIABLE SPEED FANS AND THE ZONE IS DEFINED AS "DYNAMIC", THESE WILL MODULATE WITHIN A USER-DEFINED RANGE BASED ON THE TEMPERATURE DIFFERENTIAL. PANELS EQUIPPED WITH VARIABLE SPEED FANS AND A FAN ZONE DEFINED AS "STATIC", FANS WILL RUN AT A SET SPEED CALCULATED FOR THE DRIVE. DEMAND CONTROL VENTILATION SYSTEMS ARE CAPABLE OF MODULATING EXHAUST AND MAKE UP AIR FAN SPEEDS PER THE REQUIREMENTS OUTLINED IN IECC 403.2.8.
- MANUAL: THE SYSTEM OPERATES BASED ON HUMAN INPUT FROM AN HMI.
- SCHEDULE: A WEEKLY SCHEDULE CAN BE SET TO RUN FANS FOR A SPECIFIED PERIOD THROUGHOUT THE DAY. THERE ARE THREE OCCUPIED TIMES PER DAY TO ALLOW FOR THE USER TO SET UP A TIME THAT IS SUITABLE TO THEIR NEEDS. ANY TIME THAT IS WITHIN THE DEFINED OCCUPIED TIME, THE SYSTEM WILL RUN AT MODULATION MODE AND FOLLOW THE FAN PROCEDURE ALGORITHM BASED ON TEMPERATURE DURING THIS TIME. DURING UNOCCUPIED TIME, THE SYSTEM WILL HAVE AN EXTRA OFFSET TO PREVENT UNINTENDED ACTIVATION OF THE SYSTEM DURING A TIME WHERE THE SYSTEM IS NOT BEING OCCUPIED.
- OTHER: THE SYSTEM OPERATES BASED ON THE INPUT FROM AN EXTERNAL SOURCE (DDC, BMS OR HARD-WIRED INTERLOCK).
- FIRE: UPON ACTIVATION OF THE HOOD FIRE SUPPRESSION SYSTEM, THE EXHAUST FAN WILL COME ON OR CONTINUE TO TO RUN, THE HOOD MAKEUP AIR WILL SHUTDOWN, AND A SIGNAL WILL BE SENT FOR ACTIVATING THE SHUNT TRIP BREAKER PROVIDED BY THE ELECTRICIAN. FUEL GAS WILL SHUT OFF VIA A MECHANICAL/ELECTRICAL GAS VALVE ACTUATED BY THE HOOD FIRE SUPPRESSION SYSTEM.

DISH EXHAUST FAN INTERLOCK DETAIL

- DISH EXHAUST FAN TO BE INTERLOCKED WITH DISH MACHINE TO RUN SIMULTANEOUSLY WITH DISH MACHINE AND TO CONTINUE TO OPERATE FOR A TIME OF 10 MINUTES AFTER DISH MACHINE STOPS TO ENSURE EXCESS STEAM IS CAPTURED.
- EXHAUST FAN CONTACTOR TO BE SUPPLIED AND INSTALLED BY ELECTRICIAN. REFERENCE FAN WIRING DIAGRAMS FOR SIZING.
- CROUZET TIMER SWITCH TO BE SUPPLIED AND INSTALLED BY ECOLAB.
- THE FOLLOWING TIMER SWITCH SETTINGS WILL NEED TO BE SET:
  A. SET THE "RANGE" TO 1-10MIN
  B. SET THE "TIME" TO 10
  C. SET THE "FUCTION" TO C

SYSTEM DESIGN VERIFICATION (SDV)

IF ORDERED, CAS SERVICE WILL PERFORM A SYSTEM DESIGN VERIFICATION (SDV) ONCE ALL EQUIPMENT HAS HAD A COMPLETE START UP PER THE OPERATION AND INSTALLATION MANUAL. TYPICALLY, THE SDV WILL BE PERFORMED AFTER ALL INSPECTIONS ARE COMPLETE.

ANY FIELD RELATED DISCREPANCIES THAT ARE DISCOVERED DURING THE SDV WILL BE BROUGHT TO THE
ATTENTION OF THE GENERAL CONTRACTOR AND CORRESPONDING TRADES ON SITE. THESE ISSUES WILL BE DOCUMENTED AND FORWARDED TO THE APPROPRIATE SALES OFFICE. IF CAS SERVICE HAS TO
RESOLVE A DISCREPANCY THAT IS A FIELD ISSUE, THE GENERAL CONTRACTOR WILL BE NOTIFIED AND BILLED FOR THE WORK. SHOULD A RETURN TRIP BE REQUIRED DUE TO ANY FIELD RELATED DISCREPANCY THAT CANNOT BE RESOLVED DURING THE SDV, THERE WILL BE ADDITIONAL TRIP CHARGES.

DURING THE SDV, CAS SERVICE WILL ADDRESS ANY DISCREPANCY THAT IS THE FAULT OF THE MANUFACTURER. SHOULD A RETURN TRIP BE REQUIRED, THE GENERAL CONTRACTOR AND APPROPRIATE SALES OFFICE WILL BE NOTIFIED. THERE WILL BE NO ADDITIONAL CHARGES FOR MANUFACTURER DISCREPANCIES.

REVISIONS (DESCRIPTION / DATE)

CAPTIVEAIRE — Florida National Accounts — 239 N Hunt Club Blvd., STE 201, Longwood, FL 32779 PHONE: (407) 682-3100 FAX: (919) 227-5913 EMAIL: rng60@captiveaire.com www.captiveaire.com

Cheddars Riverview FL #2215
10150 Bloomingdale Avenue,
Riverview, FL, 33578

DATE: 2/10/2023
DWG.#: 5852405
DRAWN BY: RAN-60
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 13

GREASE DUCT SPECIFICATIONS:
PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW" ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "DW" IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "DW" DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER THE MANUFACTURES INSTALLATION GUIDE.
PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURES LISTING MODEL "DW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12". DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE ACCUMULATION IN HORIZONTAL RUNS.

CUSTOMER APPROVAL TO MANUFACTURE:

- Approved as Noted ☐
- Approved with NO Exception Taken ☐
- Revise and Resubmit ☐

SIGNATURE ____________
Your Title ____________ Date ____________

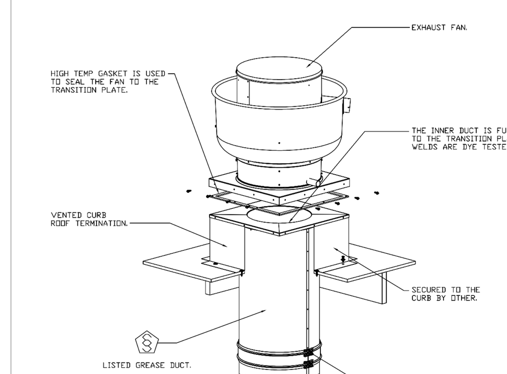
SINGLE WALL FACTORY BUILT DUCTWORK

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.
- DUCTWORK FOR TYPE I HOODS TO BE FIELD WRAPPED PER INSULATIONS MANUFACTURERS GUIDELINES
- LISTED DUCTWORK AND FIREWRAP PROVIDED TO OWNER BY CAPTIVEAIRE.

DUCT DIAMETER	HORIZONTAL WALL SUPPORT (ft)	VERTICAL WALL SUPPORT (ft)	VERTICAL CURB SUPPORT (ft)
12"	10'	10'	24'
14"	10'	10'	24'
16"	10'	10'	24'

DUCTWORK #6 PARTS - JOB#5852405 FIREWRAP & HARDWARE TO FIELD WRAP SINGLE WALL DUCTWORK #1 - #4

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
ADDITIONAL PARTS										
	3M-2000PLUS						0.80		6	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	735602000						52.00		16	DUCT - DUCT INSULATION FOR ZERO CLEARANCE TO COMBUSTIBLES - 300" X 24" X 1-1/2" ROLL. UNIFRAX FYREWRAP ELITE 1.5.
	BANDING.5						5.00		7	DUCT - FIRE BARRIER WRAP STAINLESS STEEL BANDING .5" WIDTH - 200 FT PER ROLL.
	SEAL.50-100						1.00		5	DUCT - FIRE BARRIER WRAP STAINLESS STEEL BANDING SEAL .5" WIDTH. QUANTITY OF 100.
	TAPEALUM						0.25		7	DUCT - FIRE BARRIER WRAP ALUMINUM FOIL TAPE - 3" X 150' ROLL.
TOTAL WEIGHT							826.55			



FOR REFERENCE ONLY. FOLLOW CAPTIVEAIRE "AsOrdered" DRAWINGS FOR ACCURATE DUCT LABELING

DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.

CAPTIVEAIRE SYSTEMS RECOMMENDS THE USE OF LISTED, PRE-FABRICATED ROUND GREASE EXHAUST DUCT TO REDUCE STATIC PRESSURE IN THE SYSTEM, MINIMIZE INSTALLATION AND INSPECTION TIMES, AND ENSURE DUCT IS LIQUID TIGHT

HVAC DISTRIBUTION NOTE

HIGH VELOCITY DIFFUSERS OR HVAC RETURNS SHOULD NOT BE PLACED WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

REVISIONS (DESCRIPTION / DATE)

CAPTIVEAIRE — Florida National Accounts — 239 N Hunt Club Blvd., STE 201, Longwood, FL 32779 PHONE: (407) 682-3100 FAX: (919) 227-5913 EMAIL: rng60@captiveaire.com www.captiveaire.com

Cheddars Riverview FL #2215
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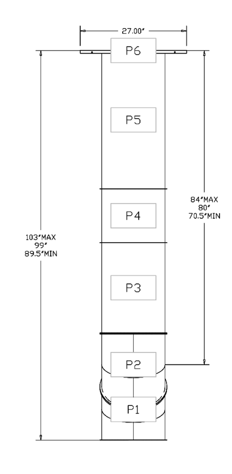
DATE: 2/10/2023
DWG.#: 5852405
DRAWN BY: RAN-60
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 14

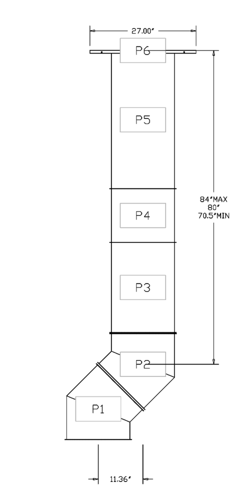
DUCTWORK #1 PARTS - JOB#5852405 CHARBROILER

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW1645ASY	2900				-0.07	7.22	2076.97	1	SINGLE WALL DUCT 45 DEGREE ELBOW, 16" DUCT, ASSEMBLY.
P2	DW1645ASY	2900				-0.1	7.22	2076.97	1	SINGLE WALL DUCT 45 DEGREE ELBOW, 16" DUCT, ASSEMBLY.
P3	DW1623LT	2900				-0.0132	12.32	2076.97	1	SINGLE WALL DUCT 16" DIAMETER, 23" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P4	DW1624AJDKIT	2900				-0.0078	16.63	2076.97	1	SINGLE WALL DUCT ADJUSTABLE, 16" DIAMETER, 23.5" LONG, FLANGE AT ONE END WITH A 16" ADJUSTABLE COLLAR - STAINLESS STEEL.
P5 ASSEMBLED W/P6	DW1635LT	2900				-0.02	18.67	2076.97	1	SINGLE WALL DUCT 16" DIAMETER, 35" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P6 ASSEMBLED W/P5	DW2616TPDBEX	2900					9.00	2076.97	1	DUCT TO CURB TRANSITION 3/4" DOWN TURN, 26 1/2" CURB TO 16" DUCT, 16 GA ALUMINIZED. USED ON NCA16FA / NCA16HPFA & NCA18FA / NCA18HPFA. TRANSITION PLATE OD IS 27.00" DESIGNED FOR USE WITH EXHAUST FAN. NON-STANDARD PART.
SYSTEM AT P6						-1.435	0.00			
	3M-2000PLUS						0.80		2	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	DW16CLASY						1.18		5	DUCT "V" CLAMP WITH NEW DESIGN 14 GA BRACKETS, 16" DUCT, ASSEMBLY.
TOTAL WEIGHT							78.56			

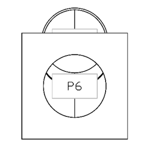
DUCTWORK #1 FRONT VIEW
CHARBROILER



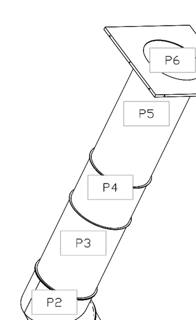
DUCTWORK #1 SIDE VIEW
CHARBROILER



DUCTWORK #1 TOP VIEW
CHARBROILER



DUCTWORK #1 SE VIEW
CHARBROILER



REVISIONS (DESCRIPTION / DATE)

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Cheddars Riverview FL #2215
10150 Bloomingdale Avenue,
Riverview, FL, 33578

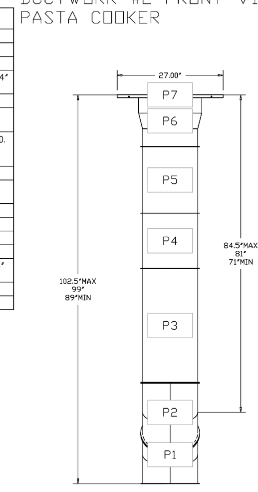
DATE: 2/10/2023
DWG.#: 5852405
DRAWN BY: RAN-60
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 15

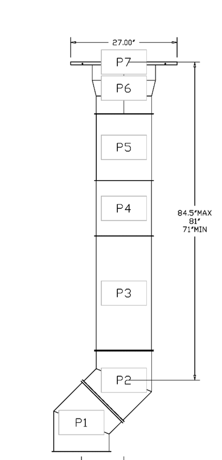
DUCTWORK #2 PARTS - JOB#5852405 PASTA COOKER

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW1445ASY	1750				-0.0438	7.22	1637.02	1	SINGLE WALL DUCT 45 DEGREE ELBOW, 14" DUCT, ASSEMBLY.
P2	DW1445ASY	1750				-0.0625	7.22	1637.02	1	SINGLE WALL DUCT 45 DEGREE ELBOW, 14" DUCT, ASSEMBLY.
P3	DW1429LT	1750				-0.0114	13.62	1637.02	1	SINGLE WALL DUCT 14" DIAMETER, 29" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P4	DW1424AJDKIT	1750				-0.0056	14.56	1637.02	1	SINGLE WALL DUCT ADJUSTABLE, 14" DIAMETER, 23.5" LONG, FLANGE AT ONE END WITH A 14" ADJUSTABLE COLLAR - STAINLESS STEEL.
P5	DW1417LT	1750				-0.007	8.22	1637.02	1	SINGLE WALL DUCT 14" DIAMETER, 17" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P6 ASSEMBLED W/P7	DW1416ADP13	1750				-0.008	7.53	1637.02	1	SINGLE WALL DUCT ADAPTER, 14" DUCT DIA TO 16" DUCT DIA, ASSEMBLY - 430 STAINLESS STEEL.
P7 ASSEMBLED W/P6	DW2616TPDBEX	1750					9.00	1253.35	1	DUCT TO CURB TRANSITION 3/4" DOWN TURN, 26 1/2" CURB TO 16" DUCT, 16 GA ALUMINIZED. USED ON NCA16FA / NCA16HPFA & NCA18FA / NCA18HPFA. TRANSITION PLATE OD IS 27.00" DESIGNED FOR USE WITH EXHAUST FAN. NON-STANDARD PART.
SYSTEM AT P7						-0.7968	0.00			
	3M-2000PLUS						0.80		2	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	DW14CLASY						1.06		6	DUCT "V" CLAMP WITH NEW DESIGN 14 GA BRACKETS, 14" DUCT, ASSEMBLY.
ADDITIONAL PARTS										
Extra 1	DW1645ASY						7.22		1	SINGLE WALL DUCT 45 DEGREE ELBOW, 16" DUCT, ASSEMBLY.
Extra 2	DW1645ASY						7.22		1	SINGLE WALL DUCT 45 DEGREE ELBOW, 16" DUCT, ASSEMBLY.
Extra 3	DW1612AJDKIT						9.76		1	SINGLE WALL DUCT ADJUSTABLE, 16" DIAMETER, 11.5" LONG, FLANGE AT ONE END WITH A 16" ADJUSTABLE COLLAR - STAINLESS STEEL.
	DW16CLASY						1.18		4	DUCT "V" CLAMP WITH NEW DESIGN 14 GA BRACKETS, 16" DUCT, ASSEMBLY.
TOTAL WEIGHT							104.25			

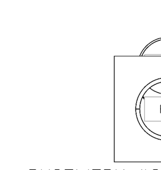
DUCTWORK #2 FRONT VIEW
PASTA COOKER



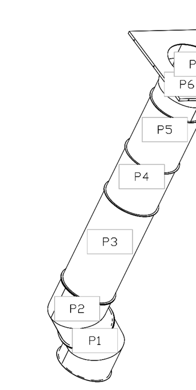
DUCTWORK #2 SIDE VIEW
PASTA COOKER



DUCTWORK #2 TOP VIEW
PASTA COOKER



DUCTWORK #2 SE VIEW
PASTA COOKER



REVISIONS (DESCRIPTION / DATE)

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Cheddars Riverview FL #2215
10150 Bloomingdale Avenue,
Riverview, FL, 33578

DATE: 2/10/2023
DWG.#: 5852405
DRAWN BY: RAN-60
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 16

FOR REFERENCE ONLY

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MEP ENGINEER:

JARRET L. RICE, P.E. (LIC# 82028) PLANO, TEXAS
PHONE: (469) 608-1268

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN EST 1979

Issue Date:		02.15.2023
REVISION INFORMATION		
1	CITY COMMENTS	04.04.2023
2	COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

BLOOMINGDALE AVE &
GORNTO LAKE RD

RIVERVIEW, FL 33578

RIVERVIEW, FL

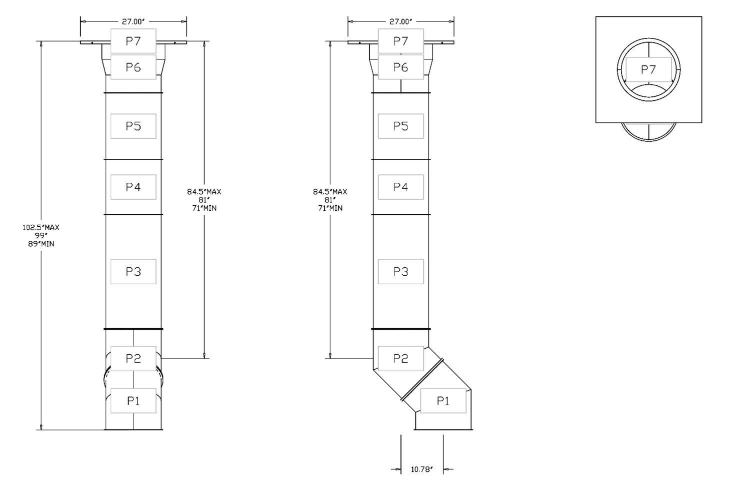
Drawing:
KITCHEN HOOD INFORMATION

M4.4

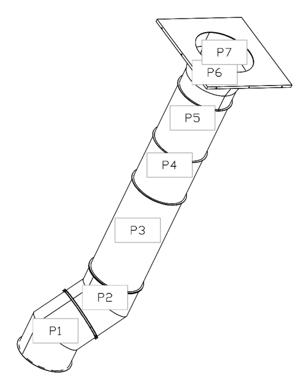
DUCTWORK #3 PARTS - JOB#5852405 RANGE

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW1445ASY	1970				-0.056	7.22	1842.82	1	SINGLE WALL DUCT 45 DEGREE ELBOW, 14" DUCT, ASSEMBLY.
P2	DW1445ASY	1970				-0.08	7.22	1842.82	1	SINGLE WALL DUCT 45 DEGREE ELBOW, 14" DUCT, ASSEMBLY.
P3	DW1429LT	1970				-0.0148	13.62	1842.82	1	SINGLE WALL DUCT 14" DIAMETER, 29" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P4	DW1424AJDKIT	1970				-0.0072	14.56	1842.82	1	SINGLE WALL DUCT ADJUSTABLE, 14" DIAMETER, 23.5" LONG, FLANGE AT ONE END WITH A 14" ADJUSTABLE COLLAR - STAINLESS STEEL.
P5	DW1417LT	1970				-0.009	8.22	1842.82	1	SINGLE WALL DUCT 14" DIAMETER, 17" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P6 ASSEMBLED W/P7	DW1416ADP13	1970				-0.01	7.53	1842.82	1	SINGLE WALL DUCT ADAPTER, 14" DUCT DIA TO 16" DUCT DIA, ASSEMBLY - 430 STAINLESS STEEL.
P7 ASSEMBLED W/P6	DW2616TPDBEX	1970					9.00	1410.91	1	DUCT TO CURB TRANSITION 3/4" DOWN TURN, 26 1/2" CURB TO 16" DUCT, 16 GA ALUMINIZED. USED ON NCA16FA / NCA16HPFA & NCA18FA / NCA18HPFA. TRANSITION PLATE OD IS 27.00" DESIGNED FOR USE WITH EXHAUST FAN. NON-STANDARD PART.
SYSTEM AT P7						-1.011	0.00			
	3M-2000PLUS						0.80		2	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	DW14CLASY						1.06		6	DUCT "V" CLAMP WITH NEW DESIGN 14 GA BRACKETS, 14" DUCT, ASSEMBLY.
ADDITIONAL PARTS										
Extra 1	DW1604LT						2.57		1	SINGLE WALL DUCT 16" DIAMETER, 4" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
Extra 2	DW1612AJDKIT						9.76		1	SINGLE WALL DUCT ADJUSTABLE, 16" DIAMETER, 11.5" LONG, FLANGE AT ONE END WITH A 16" ADJUSTABLE COLLAR - STAINLESS STEEL.
	DW16CLASY						1.18		2	DUCT "V" CLAMP WITH NEW DESIGN 14 GA BRACKETS, 16" DUCT, ASSEMBLY.
TOTAL WEIGHT							90.02			

DUCTWORK #3 FRONT VIEW RANGE
DUCTWORK #3 SIDE VIEW RANGE
DUCTWORK #3 TOP VIEW RANGE



DUCTWORK #3 SE VIEW RANGE



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DESCRIPTION | DATE:

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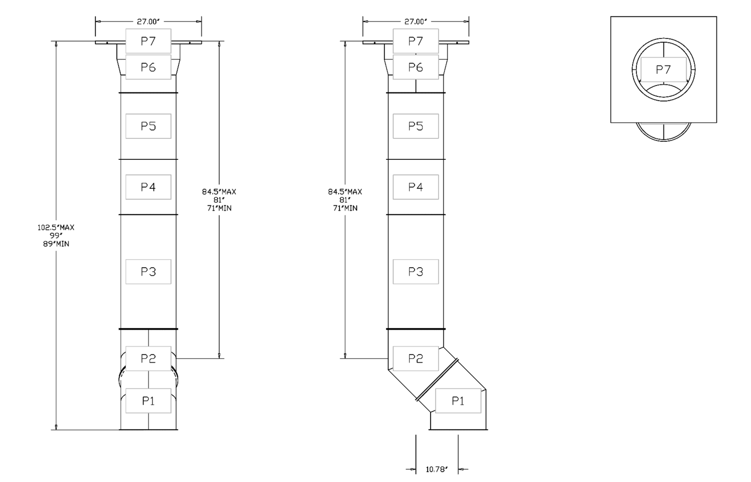
Cheddars Riverview FL #2215
10150 Bloomingdale Avenue,
Riverview, FL, 33578

DATE: 2/10/2023
DWG.#: 5852405
DRAWN BY: RAN-60
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 17

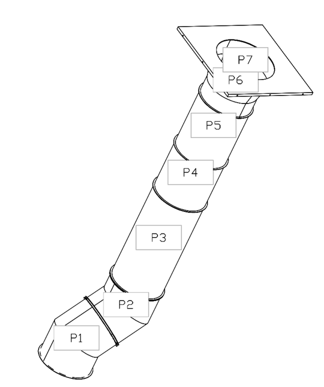
DUCTWORK #4 PARTS - JOB#5852405 OVEN

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW1445ASY	1850				-0.049	7.22	1730.57	1	SINGLE WALL DUCT 45 DEGREE ELBOW, 14" DUCT, ASSEMBLY.
P2	DW1445ASY	1850				-0.07	7.22	1730.57	1	SINGLE WALL DUCT 45 DEGREE ELBOW, 14" DUCT, ASSEMBLY.
P3	DW1429LT	1850				-0.0128	13.62	1730.57	1	SINGLE WALL DUCT 14" DIAMETER, 29" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P4	DW1424AJDKIT	1850				-0.0062	14.56	1730.57	1	SINGLE WALL DUCT ADJUSTABLE, 14" DIAMETER, 23.5" LONG, FLANGE AT ONE END WITH A 14" ADJUSTABLE COLLAR - STAINLESS STEEL.
P5	DW1417LT	1850				-0.008	8.22	1730.57	1	SINGLE WALL DUCT 14" DIAMETER, 17" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P6 ASSEMBLED W/P7	DW1416ADP13	1850				-0.009	7.53	1730.57	1	SINGLE WALL DUCT ADAPTER, 14" DUCT DIA TO 16" DUCT DIA, ASSEMBLY - 430 STAINLESS STEEL.
P7 ASSEMBLED W/P6	DW2616TPDBEX	1850					9.00	1324.96	1	DUCT TO CURB TRANSITION 3/4" DOWN TURN, 26 1/2" CURB TO 16" DUCT, 16 GA ALUMINIZED. USED ON NCA16FA / NCA16HPFA & NCA18FA / NCA18HPFA. TRANSITION PLATE OD IS 27.00" DESIGNED FOR USE WITH EXHAUST FAN. NON-STANDARD PART.
SYSTEM AT P7						-0.839	0.00			
	3M-2000PLUS						0.80		2	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	DW14CLASY						1.06		6	DUCT "V" CLAMP WITH NEW DESIGN 14 GA BRACKETS, 14" DUCT, ASSEMBLY.
ADDITIONAL PARTS										
Extra	DW1490ASY						10.62		1	SINGLE WALL DUCT 90 DEGREE ELBOW, 14" DUCT, ASSEMBLY.
	DW14CLASY						1.06		1	DUCT "V" CLAMP WITH NEW DESIGN 14 GA BRACKETS, 14" DUCT, ASSEMBLY.
TOTAL WEIGHT							87.01			

DUCTWORK #4 FRONT VIEW OVEN
DUCTWORK #4 SIDE VIEW OVEN
DUCTWORK #4 TOP VIEW OVEN



DUCTWORK #4 SE VIEW OVEN



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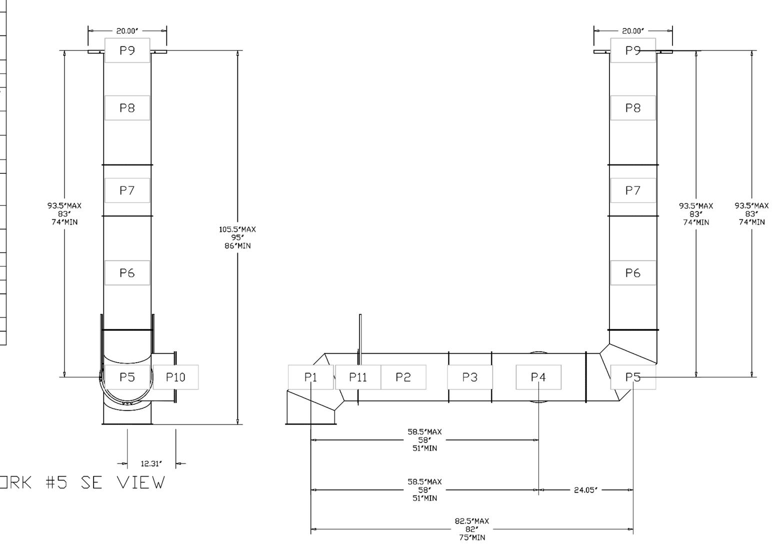
Cheddars Riverview FL #2215
10150 Bloomingdale Avenue,
Riverview, FL, 33578

DATE: 2/10/2023
DWG.#: 5852405
DRAWN BY: RAN-60
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 18

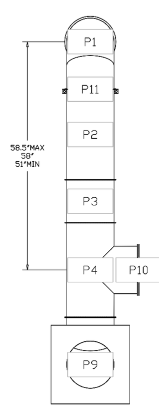
DUCTWORK #5 PARTS - JOB#5852405 DISH

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW1290ASY	1000				-0.077	8.44	1273.24	1	SINGLE WALL DUCT 90 DEGREE ELBOW, 12" DUCT, ASSEMBLY.
P2	DW1223LT	1000				-0.0068	9.41	1273.24	1	SINGLE WALL DUCT 12" DIAMETER, 23" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P3	DW1218AJDKIT	1000				-0.0032	9.90	1273.24	1	SINGLE WALL DUCT ADJUSTABLE, 12" DIAMETER, 17.5" LONG, FLANGE AT ONE END WITH A 12" ADJUSTABLE COLLAR - STAINLESS STEEL.
P4 ASSEMBLED W/P10	DW12TEASY	1000		1		-0.007	11.69	1273.24	1	SINGLE WALL DUCT TEE, 12" DUCT, ASSEMBLY.
P5	DW1290ASY	1000				-0.0616	8.44	1273.24	1	SINGLE WALL DUCT 90 DEGREE ELBOW, 12" DUCT, ASSEMBLY.
P6	DW1229LT	1000				-0.0083	11.69	1273.24	1	SINGLE WALL DUCT 12" DIAMETER, 29" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P7	DW1230AJDKIT	1000				-0.0037	15.04	1273.24	1	SINGLE WALL DUCT ADJUSTABLE, 12" DIAMETER, 29.5" LONG, FLANGE AT ONE END WITH A 12" ADJUSTABLE COLLAR - STAINLESS STEEL.
P8 ASSEMBLED W/P9	DW1229LT	1000				-0.008	11.69	1273.24	1	SINGLE WALL DUCT 12" DIAMETER, 29" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
P9 ASSEMBLED W/P8	DW1912TPDBEX	1000					7.50	1273.24	1	DUCT TO CURB TRANSITION 3/4" DOWN TURN, 19-1/2" CURB TO 12" DUCT, 16 GA ALUMINIZED STEEL. FOR USE WITH EXHAUST FANS.
SYSTEM AT P9						-0.2856	0.00			
P10 ASSEMBLED W/P4 O=T	DW1213ADKIT						2.93		1	DUCT ACCESS DOOR WITH HANDLE & GREASE DAM, FOR 12" DUCT USE 13" DOOR. STAINLESS STEEL.
P11	DW12SUBRASY						2.76		1	DUCT SUPPORT BRACKET KIT, 12" DUCT, USED FOR HANGING DUCT. 12 GA STEEL, CLEAR ZINC COATING. - 2 RINGS, 4 BRACKETS, & HARDWARE BAG 2.
	3M-2000PLUS						0.80		3	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	DW12CLASY						0.94		9	DUCT "V" CLAMP WITH NEW DESIGN 14 GA BRACKETS, 12" DUCT, ASSEMBLY.
ADDITIONAL PARTS										
Extra 1	DW1204LT						1.93		1	SINGLE WALL DUCT 12" DIAMETER, 4" LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
Extra 2	DW1212AJDKIT						7.33		1	SINGLE WALL DUCT ADJUSTABLE, 12" DIAMETER, 11.5" LONG, FLANGE AT ONE END WITH A 12" ADJUSTABLE COLLAR - STAINLESS STEEL.
	DW12CLASY						0.94		2	DUCT "V" CLAMP WITH NEW DESIGN 14 GA BRACKETS, 12" DUCT, ASSEMBLY.
TOTAL WEIGHT							121.49			

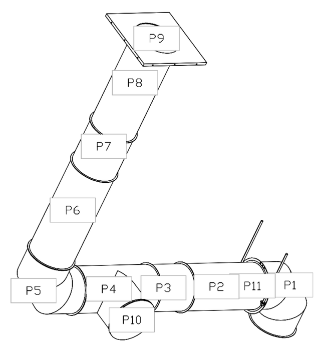
DUCTWORK #5 FRONT VIEW DISH
DUCTWORK #5 SIDE VIEW DISH



DUCTWORK #5 TOP VIEW DISH



DUCTWORK #5 SE VIEW DISH



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DESCRIPTION | DATE:

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Florida National Accounts
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Cheddars Riverview FL #2215
10150 Bloomingdale Avenue,
Riverview, FL, 33578

DATE: 2/10/2023
DWG.#: 5852405
DRAWN BY: RAN-60
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 19

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MEP ENGINEER:

JARRET L. RICE, P.E. (LIC# 82028) PLANO, TEXAS
PHONE: (469) 608-1268

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date:		02.15.2023
REVISION INFORMATION		
1	CITY COMMENTS	04.04.2023
2	COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

BLOOMINGDALE AVE &
GORNTO LAKE RD

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
KITCHEN HOOD INFORMATION

M4.5

PLUMBING EQUIPMENT SCHEDULE

MARK	FIXTURE	ROUGH-IN SIZE S / W	V	CW	HW	DESCRIPTION / REMARKS
WH-1 & WH-2	TANK TYPE WATER HEATER	-	-	1-1/2"	1-1/2"	AO SMITH, #BTH-199, LOW NOX NATURAL GAS FIRED TANK TYPE UNIT COMPLETE WITH T&P VALVE, 100 GAL. CAPACITY, 199,000 BTUH INPUT, 97% EFFICIENCY, EACH WITH A 261 GPH RECOVERY AT A 100°F RISE. PROVIDE HOT AND COLD WATER HEAT TRAP FITTINGS/ RISERS.
ET-1	EXPANSION TANK	-	-	3/4"	-	ARMTROL #ST-25V, WITH STEEL BODY AND BUTYL RUBBER DIAPHRAGM FOR 10 GALLONS CAPACITY/ 10.3 GALLONS ACCEPTANCE, 50 PSI FACTORY PRE-CHARGED.
RCP-1	RECIRCULATION PUMP	-	-	3/4"	3/4"	GRUNDFOS #UPS26-99SF INLINE HOT WATER OPEN SYSTEM RECIRCULATING PUMP, CAPABLE OF 4.5 GPM (140°F) @ 6' HEAD, 0.16 HP, 115V/1PH, INTEGRAL ATTACHED TIMER AND AQUASTAT FOR OPERATION CONTROLS, AND ATTACHED POWER CORD.
TP-1	TRAP PRIMER	-	-	1/2"	-	PPP PR-500 MACHINED OF CORROSION RESISTANT BRASS-CONTAINING NO SPRINGS OR DIAPHRAMS. "O" RING SEALS TESTED FOR RELIABILITY AT A TERPERATURE RANGE OF -40°F TO 450°F. INSTALL A MINIMUM 12" ABOVE THE TRAPS TO INSURE PROPER FLOW. INLET OPENING 1/2" MALE NPT, OUTLET 1/2" FEMAL NPT. PRIMER CAPABLE OF SERVING A MAXIMUM OF 4 TRAPS WITH DISTRIBUTION HEADER.
WHA-1	WATER HAMMER ARRESTOR	-	-	LINE SIZED	-	PPP, INC. SERIES SC, FULLY MECHANICAL WATER HAMMER ARRESTER SIZED AND LOCATED PER THE MANUFACTURER SPECIFICATIONS.
MXV-1	MIXING VALVE	-	-	1/2"	1/2"	WATTS REGULATOR #LFMMV UNDER SINK THERMOSTATIC MIXING VALVE, WITH BRASS BODY AND INTEGRAL MOUNTING HOLES, TAMPER RESISTANT ENCLOSURE.
MXV-2	MIXING VALVE	-	-	1/2"	1/2"	WATTS REGULATOR #L1170-M2 THERMOSTATIC MIXING VALVE, WITH BRASS BODY AND INTEGRAL MOUNTING HOLES, TAMPER RESISTANT ENCLOSURE.
RPZ-1	REDUCED PRESSURE ZONE ASSEMBLY	-	-	1/2"	-	WATTS REGULATOR SS009 REDUCED PRESSURE ZONE ASSEMBLY WATER SUPPLY TO CARBONATOR(S) SHALL BE PROTECTED BY AN APPROVED REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER AND SHALL BE RATED FOR 150 PSI, THE BODY & ADAPTERS ARE OF STAINLESS STEEL CONSTRUCTION, ALL RUBBER COMPONENTS COMPLY WITH FDA FOOD ADDITIVE REGULATIONS. THE MODEL IS SUBJECT TO LOCAL HEALTH DEPARTMENT APPROVAL WATTS SB-2.
BFP-1	BACKFLOW PREVENTER	-	-	LINE SIZED	-	WATTS REGULATOR 007 DOUBLE CHECK VALVE ASSEMBLY. WATER SUPPLY TO ROOFTOP UNIT MOUNTED HOSE BIBB(S) SHALL BE PROTECTED BY AN APPROVED BACKFLOW PREVENTER AND SHALL BE RATED FOR 150 PSI, TWO POSITIVE SEATING CHECK MODULES WITH CAPTURED SPRINGS AND RUBBER SEAT DISCS.
BFP-2	BACKFLOW PREVENTER	-	-	LINE SIZED	-	WATTS REGULATOR SD-3 DUAL CHECK WITH ATMOSPHERIC PORT. WATER SUPPLY TO BEVERAGE FIXTURE APPLIANCES, ICE MAKERS, ETC. SHALL BE PROTECTED BY AN APPROVED BACKFLOW PREVENTER AND SHALL BE RATED FOR CONTINUOUS OR INTERMITTENT PRESSURE, STAINLESS STEEL BODY CONSTRUCTION AND ALL RUBBER INTERNAL COMPONENTS.
BFP-3	BACKFLOW PREVENTER	-	-	LINE SIZED	-	WATTS REGULATOR 007 DOUBLE CHECK VALVE ASSEMBLY. DOMESTIC WATER SERVICE AND FIRE WATER SERVICE TO THE BUILDING SHALL BE PROTECTED BY AN APPROVED BACKFLOW PREVENTER AND SHALL BE RATED FOR 150 PSI, TWO POSITIVE SEATING CHECK MODULES WITH CAPTURED SPRINGS AND RUBBER SEAT DISCS. VERIFY APPROVAL WITH UTILITY AND JURISDICTION PRIOR TO INSTALLATION.
VB-1	VACUUM BREAKER	-	-	-	LINE SIZED	WATTS REGULATOR 288-A ATMOSPHERIC TYPE ANTI-SIPHON VACUUM BREAKER WITH INTERNAL LIGHT WEIGHT DISC FLOAT WITH SILICONE DISC FOR TIGHT SEATING.
WS-1 RO-1	WATER SOFTENER R.O. SYSTEM	-	-	2"	-	WATER SOFTENER / RO SYSTEM TO BE FURNISHED BY OWNER AND INSTALLED BY THE PLUMBING CONTRACTOR.
GI-1	GREASE INTERCEPTOR	6"	3"	-	-	SCHIER #GB-1000 HYDROMECHANICAL POLYETHYLENE GREASE INTERCEPTOR, 200-GPM WITH 4,959-LBS OF GREASE CAPACITY. REFER TO CIVIL FOR LOCATION AND LAYOUT RELATIVE TO THE BUILDING. REFER TO P1.3 FOR ADDITIONAL INFORMATION.
GI-2	GREASE INTERCEPTOR	4"	3"	-	-	SCHIER #GB-50 HYDROMECHANICAL POLYETHYLENE GREASE INTERCEPTOR, 50-GPM WITH 439.5-LBS OF GREASE CAPACITY. REFER TO CIVIL FOR LOCATION AND LAYOUT RELATIVE TO THE BUILDING.
SW-1	SAMPLE WELL	6"	-	-	-	SCHIER #SV10 POLYETHYLENE SAMPLE WELL PORT, REFER TO CIVIL FOR LOCATION AND LAYOUT RELATIVE TO THE BUILDING. REFER TO SHEET P1.3 FOR MORE INFORMATION.

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	ROUGH-IN SIZE S / W	V	CW	HW	DESCRIPTION / REMARKS
WC-1	WATER CLOSET	4"	2"	1-1/2"	-	AMERICAN STANDARD 'MADERA' FLOW-WISE #2234.001 FLOOR MOUNTED, FLUSH VALVE, WHITE VITREOUS CHINA WITH EVERCLEAN SURFACE, 1.28 GPF SIPHON JET BOWL, 1 1/2" TOP SPUD CONNECTION, BOLT CAPS. INCLUDE SLOAN ROYAL #111 ESS-1.6 TOP SPUD SENSOR OPERATED FLUSH VALVE, ELONGATED OPEN FRONT SEAT (LESS COVER) WITH CHECK HINGE STOPS. INSTALL SOLID RING PIPE SUPPORT SLOAN J-212-A.
WC-2	WATER CLOSET (ADA)	4"	2"	1-1/2"	-	AMERICAN STANDARD 'MADERA' FLO-WISE #3461.001 ADA COMPLIANT FLOOR MOUNTED, FLUSH VALVE, WHITE VITREOUS CHINA WITH EVERCLEAN SURFACE, 1.28 GPF SIPHON JET BOWL, 1 1/2" TOP SPUD CONNECTION, BOLT CAPS. INCLUDE SLOAN ROYAL # 111 ESS-1.6 TOP SPUD SENSOR OPERATED FLUSH VALVE, ELONGATED OPEN FRONT SEAT (LESS COVER) WITH CHECK HINGE STOPS. INSTALL SOLID RING PIPE SUPPORT SLOAN J-212-A.
UR-1	URINAL (ADA)	2"	1-1/2"	3/4"	-	TOTO UT104E LOW CONSUMPTION 0.5GPF WASHOUT URINAL. 3/4" TOP SPUD INLET. WHITE VITREOUS CHINA. INCLUDE SLOAN ROYAL #186 ESS-0.5 EXPOSED TOP SPUD SENSOR OPERATED FLUSH VALVE.
LAV-1	LAVATORY (ADA)	2"	1-1/2"	1/2"	1/2"	AMERICAN STANDARD #0426.000 UNDER COUNTER MOUNT. INSTALL COMPLETE WITH KOHLER K-13462 ELECTRONIC PLUG-IN FAUCET WITH GRID DRAIN, EL.154 TRANSFORMER & MIX-135A THERMOSTATIC MIXING VALVE FOR 110° HW SUPPLY.
LAV-2	LAVATORY (ADA)	2"	1-1/2"	1/2"	1/2"	AMERICAN STANDARD 'DECORUM' #9024.001EC ADA COMPLIANT WALL MOUNTED, WHITE VITREOUS CHINA LAVATORY WITH CONCEALED ARM SUPPORTS AND CENTER HOLE FOR FAUCET. KOHLER K-13462 ELECTRONIC PLUG-IN WITH GRID DRAIN, EL.154 TRANSFORMER & MIX-135A THERMOSTATIC MIXING VALVE FOR 110° HW SUPPLY. P-TRAP AND WATER SUPPLIES SHALL BE WRAPPED WITH TRUEBRO LAVGUARD #102 FOR ADA PROTECTION.
TD-1	TRENCH DRAIN	3"	2"	-	-	TRENCH DRAIN SLAB RECESSES SHALL BE FORMED IN PLACE BY G.C., PER SIZE AND LOCATIONS SHOWN ON THE FOOD SERVICE DRAWINGS. THE STAINLESS STEEL DRAIN LINER AND FIBERGLASS GRATE SHALL BE OWNER FURNISHED AND INSTALLED BY THE GC. PROVIDE TRAP ZAP LOCKING DRAIN BRACKET FOR COMPLETE INSTALLATION.
FD-1	FLOOR DRAIN	3"	2"	-	-	ZURN #LC-P3S PVC BODY FLOOR DRAIN WITH #LC-CS CAST IRON ADAPTOR THREADED SHANK, PROVIDE WITH TRAP ZAP LOCKING DRAIN BRACKET FOR COMPLETE INSTALLATION.
FD-2	FLOOR DRAIN	3"	2"	1/2"	-	ZURN #LC-P3S PVC BODY FLOOR DRAIN AND TRAP PRIMER, WITH #LC-CS CAST IRON ADAPTOR THREADED SHANK, PROVIDE WITH TRAP ZAP LOCKING DRAIN BRACKET FOR COMPLETE INSTALLATION.
SYD	SERVICE YARD DRAIN	4"	-	-	-	ZURN #Z610-3-NL-HLC-YC, CAST IRON, 12X12 HEAVY DUTY, AREA DRAIN, CAST IRON SEDIMENT BUCKET AND HINGED, LOCKABLE, SOLID COVER.
FS-1	FLOOR SINK	3", 4"	2"	-	-	ZURN FD-2370-H-Y, 12"x12"x6" DEEP PVC BODY, SQUARE SLOTTED MEDIUM DUTY, 1/2 GRATING, WHITE ACID RESISTING PVC INTERIOR AND TOP, ANTISPLASH INTERIOR WITH BOTTOM SEDIMENT BUCKET. PROVIDE TRAP ZAP LOCKING DRAIN BRACKET FOR COMPLETE INSTALLATION. COORDINATE LOCATION WITH 6"x6" TILES.
FS-2	FLOOR SINK	3", 4"	2"	-	-	ZURN Z-1910-2-32, 8"x8"x6" DEEP CAST IRON BODY, SQUARE SLOTTED MEDIUM DUTY 1/2 GRATING, WHITE ACID RESISTING PORCELAIN ENAMEL INTERIOR AND TOP, ALUMINUM ANTISPLASH INTERIOR. PROVIDE TRAP ZAP LOCKING DRAIN BRACKET FOR COMPLETE INSTALLATION.
FS-3	FLOOR SINK	3", 4"	2"	-	-	ZURN #1902 SANI-FLOOR RECEPTOR, 12x12x10 ACID RESISTING PORCELAIN ENAMEL INTERIOR AND TOP, CAST IRON BODY, AND SQUARE SLOTTED ACID RESISTING ENAMELED LIGHT DUTY GRATE. COORDINATE GRATE CONFIGURATION WITH KITCHEN ROUGH IN PLANS. PROVIDE TRAP ZAP LOCKING DRAIN BRACKET FOR COMPLETE INSTALLATION.
FCO	FLOOR CLEANOUT	LINE SIZED	-	-	-	ZURN #CO-2450, PVC BODY WITH SQUARE ADJUSTABLE SCORIATED NICKEL BRONZE TOP, GASKET SEAL BRASS THREADED PLUG WITH RECESSED SOCKET.
WCO	WALL CLEANOUT	LINE SIZED	-	-	-	ZURN #CO-2410-CO2530, NO-HUB PVC CLEANOUT TEE WITH ROUND STAINLESS STEEL COVER AND CENTER SCREW, GASKETED SEAL IRON THREADED PLUG WITH RECESSED SOCKET.
DCO	DOUBLE CLEANOUT	LINE SIZED	-	-	-	ZURN #CO-2448, PVC CLEANOUT WITH ROUND ADJUSTABLE SCORIATED SECURED CAST IRON TOP, GASKET SEAL CAST IRON PLUG WITH RECESSED SOCKET. INSTALL IN MINIM OF 12"x12"x4" REINFORCED CONCRETE PAD WITH BEVELED EDGES.
-	-	-	-	-	-	-
HB-2	HOSE BIBB	-	-	3/4"	-	ZURN Z-1300 ECOLOTROL, ANTI-SIPHON VACUUM BREAKER, POLISHED BRONZE AUTOMATIC DRAINING, FREEZE RESISTANT, WALL CLAMP, STEM FOR 6" WALL THICKNESS, PROVIDE 12'X12" WALL OR CEILING ACCESS DOOR.
HB-3	HOSE BIBB	-	-	3/4"	3/4"	MIFAB #MHY-45 SELF DRAINING FREEZELESS WALL FAUCET ENCLOSED IN A FLUSH MOUNTED WALL BOX, WITH ANTI-SIPHON INTEGRAL VACUUM BREAKER AND ROUGH BRASS FINISH. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT ABOVE FINISHED GRADE (UNO).
HB-4	HOSE BIBB	-	-	3/4"	-	MIFAB MHY-90-31 AUTOMATIC DRAINING WALL FAUCET WITH ANTI-SIPHON INTEGRAL VACUUM BREAKER. INSTALL FIXTURE THROUGH CURB BASE OF MECHANICAL ROOFTOP UNIT.
HD-1	HUB DRAIN	3"	2"	-	-	FIELD FABRICATED PVC BODY HUB DRAIN WITH BOTTOM OUTLET AND PVC REDUCER. TOP OF THE HUB SHALL BE 6" AFF.
SS-1	SERVICE SINK	3"	2"	3/4"	3/4"	SERVICE SINK SHALL BE CUSTOM BUILT BY OTHERS. PROVIDE DRAIN (FD-1) AND SPEAKMAN #SC-5811 CHROME PLATED SERVICE FAUCET W/ VACUUM BREAKER, INTEGRAL STOPS, WALL BRACE, PAIL HOOK AND HOSE THREAD ON SPOUT.
RD-1	ROOF DRAIN	4"	-	-	-	ZURN #RD2130-NH3-C" COMBINATION ROOF DRAIN AND OVERFLOW, CAST IRON BODY WITH UNDERDECK CLAMP WITH INTEGRAL GRAVEL GUARD AND CAST IRON DOME STRAINER.
RD-2	ROOF DRAIN	2"	-	-	-	DUROLAST 2 PIECE PVC ROOF DRAIN, CAST IRON DOME STRAINER ITEM 1830, 1 PAIR COMPOSITE DRAIN RINGS, DUROLAST SEALANT SB-240 OR MANUFACTURER OR APPROVED EQUAL.
DN-1	DOWNSPOUT NOZZLE	4"	-	-	-	ZURN #199 DOWNSPOUT NOZZLE, NICKEL BRONZE BODY WITH DECORATIVE FACE OF WALL FLANGE AND OUTLET NOZZLE.

PLUMBING SYMBOL LEGEND

SYMBOL	ABBREV.	DESCRIPTION
	W	SANITARY WASTE
	GW	GREASE WASTE
	V	VENT LINE
	RD	ROOF DRAIN
	OFD	OVERFLOW ROOF DRAIN
	CD	CONDENSATE DRAIN
	F	FIRE PROTECTION PIPING
	DSP	DRY SPRINKLER PIPING
	FDC	FIRE DEPARTMENT CONNECTION
	SPR	SPRINKLER PIPING
	G	NATURAL GAS LINE
	PD	PUMPED DISCHARGE
	CW	DOMESTIC COLD WATER
	SW	SOFTENED WATER
	FW	FILTERED WATER
	DA	DIALYSIS SUPPLY WATER
	HW	DOMESTIC HOT WATER
	HWR	DOMESTIC HOT WATER RETURN
		DIRECTION OF FLOW
		DIRECTION OF FALL
		PIPE UP
		PIPE DOWN
		TEE DOWN
		P-TRAP
		SPRINKLER FLOOR CONTROL VALVE ASSEMBLY
CA	CA	COMPRESSED AIR
		2-WAY CLEANOUT
		UNION
		GATE VALVE
		BALL VALVE OR BALANCING VALVE
		CHECK VALVE
		STRAINER
		BALANCING VALVE
	NFWH / HB	NON FREEZE WALL HYDRANT / HOSE BIBB
	PRV	PRESSURE REDUCING VALVE
	PRV	PRESSURE REDUCING VALVE
	PRV	PRESSURE REDUCING VALVE
		GAS COCK
		BALANCING VALVE
		CONNECT TO EXISTING
		DEMOLISH TO POINT
	VTR	VENT THRU ROOF
	AFF	ABOVE FINISHED FLOOR
	BFF	BELOW FINISHED FLOOR
	AFG	ABOVE FINISHED GRADE
	CWV	COMBINATION WASTE AND VENT
	CO	CLEANOUT
	FCO	FLOOR CLEANOUT
	FDC	FIRE DEPARTMENT CONNECTION
	GPM	GALLONS PER MINUTE
	DS	DOWNSPOUT
	RD	ROOF DRAIN
	SQFT	SQUARE FEET

NOTE:
NOT ALL SYMBOLS AND LINE TYPES MAY BE USED ON PLANS.

BACKFLOW DEVICE SCHEDULE

ITEM / FIXTURE	EQUIPMENT #	BACKFLOW DEVICE
BAG-N-BOX SODA SYSTEM	-	RPZ-1
ROOF MOUNTED HOSE BIBB	-	BFP-1
TEA BREWER(S)	-	BFP-2
COFFEE MACHINE(S)	-	
ICE MAKER(S)	-	
ECOLAB CONNECTION(S)	-	
CAPPUCCINO MACHINE	-	
SODA DISPENSER(S)	-	
DOMESTIC WATER SERVICE	-	BFP-3
FIRE WATER SERVICE	-	
DISHWASHER	-	VB-1
POT FILL FAUCET(S)	-	INTEGRAL
HOSE BIBB(S)	-	
SERVICE SINK	-	

NOTES:
1. BACKFLOW PREVENTERS SHALL BE INSTALLED UPSTREAM OF ALL FIXTURES LISTED IN THIS SCHEDULE OR OTHERWISE REQUIRED BY LOCAL JURISDICTIONAL CODES.

PLUMBING GENERAL NOTES

1	NOTE: FOR THE PURPOSE OF CLEARNESS AND LEGIBILITY, THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ALTHOUGH SIZES AND LOCATIONS OF EQUIPMENT ARE DRAWN TO SCALE WHEREVER POSSIBLE, THE CONTRACTOR SHALL MAKE USE OF ALL DATA IN ALL OF THE CONTRACT DOCUMENTS AND VERIFY THIS INFORMATION PRIOR TO ORDERING, FABRICATING OR INSTALLING ANY MATERIALS.
2	THE PLUMBING SYSTEM DESIGN, INSTALLATION AND MATERIALS SHALL CONFORM TO ALL FEDERAL, STATE AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION.
3	PLUMBING QUALITY, WEIGHTS OF MATERIALS AND ALTERNATE METHODS OF CONSTRUCTION SHALL CONFORM TO THE 2018 INTERNATIONAL PLUMBING CODE WITH STATE AMENDMENTS.
4	CONTRACTOR SHALL COORDINATE ALL WORK SHOWN ON THESE DRAWINGS AND SPECIFICATIONS WITH ALL DISCIPLINES AND TRADES PRIOR TO SUBMITTAL OF BID AND INSTALLATION OF SYSTEM.
5	CONTRACTOR SHALL MAKE ALL ARRANGEMENTS WITH UTILITY COMPANIES FOR SERVICE AND CONNECTIONS AND SHALL PAY FOR ALL FEES, CHARGES, PERMITS AND METERS.
6	THE PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND LABOR (INCLUDING THE COMPLETE PLUMBING SYSTEM) FOR A PERIOD OF ONE YEAR FROM WRITTEN ACCEPTANCE BY THE TENANT. ANY DEFECTS IN MATERIALS AND OR LABOR FOUND WITHIN THE GUARANTEE PERIOD SHALL BE REMEDIED OR REPAIRED BY THIS CONTRACTOR IN A TIMELY FASHION, AT NO COST TO THE TENANT.
7	ALL PLUMBING FIXTURE LOCATIONS (WATER CLOSETS, LAVATORIES ETC.) ARE DIAGRAMMATIC. CONTRACTOR SHALL REFER TO FOOD SERVICE AND ARCHITECTURAL DRAWINGS FOR EXACT PLACEMENT AND MOUNTING HEIGHTS.
8	ANY DEVIATIONS FROM THE DRAWINGS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION.
9	CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTAL OF BID AND FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS. SUBMITTAL OF BID WILL VERIFY THAT THE CONTRACTOR HAS VISITED THE SITE.
10	PIPING SHALL BE INSTALLED PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. THE INSTALLATION SHALL MEET ALL CONSTRUCTION CONDITIONS AND ALLOW FOR THE INSTALLATION OF OTHER TRADES.
11	TRAP PRIMERS FOR FLOOR DRAINS AND FLOOR SINKS AND WATER HAMMER ARRESTORS TO BE INSTALLED AS PER THE 2018 INTERNATIONAL PLUMBING CODE WITH STATE AMENDMENTS AND THE LATEST EDITION OF THE AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE 1010) SIZING AND INSTALLATION REQUIREMENTS.
12	ALL VALVES, TRAP PRIMERS, WATER HAMMER ARRESTORS OR OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS SHALL BE INSTALLED BEHIND AN ACCESS PANEL.
13	ALL SERVICE WATER HEATING EQUIPMENT TO BE IN COMPLIANCE WITH THE 2018 INTERNATIONAL PLUMBING CODE WITH STATE AMENDMENTS REQUIREMENTS AND LABELED AS SUCH.
14	ALL ITEMS PROJECTING THROUGH THE ROOF SHALL BE FLASHED THROUGH CURBS OR PIPE SEALS A MINIMUM OF 12" ABOVE THE ROOF. THE PIPE CURBS AND SEALS SHALL BE INSTALLED BY THE ROOFING CONTRACTOR. ENSURE THAT AMPLE BOOT OPENINGS ARE PROVIDED TO ACCOMMODATE ANY ELECTRICAL CONDUIT PENETRATIONS REQUIRED FOR POWER.
15	ALL WATER PIPING TO BE INSULATED AS PER THE 2018 INTERNATIONAL PLUMBING CODE WITH STATE AMENDMENTS AND REQUIREMENTS: PIPE SIZE INSULATION THICKNESS INSULATION VALUE 1/2" THRU 1 1/4" 1" R = 4.0 1-1/2" THRU 2" 1-1/2" R = 6.0
16	CONTRACTOR SHALL PROVIDE: FAUCETS, TRAPS, STOPS, BALL VALVES, BACKFLOW DEVICES FOR KITCHEN EQUIP. GASCOCKS, WATER HAMMER ARRESTORS, CLEANOUT COVERS AND INDIRECT WASTE TO AN APPROVED RECEPTOR AND ALL NECESSARY TRIM FOR A COMPLETELY CONNECTED PLUMBING SYSTEM.
17	ALL CLEANOUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE AND LOCATED AS PER CODE REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE ALL CLEAN OUT LOCATIONS WITH EQUIPMENT, MILLWORK, ETC., PRIOR TO INSTALLATION.
18	ALL PLUMBING FIXTURE VENTS TO TERMINATE A MINIMUM OF 12 INCHES FROM ANY VERTICAL SURFACE AND 10'-0" FROM OR 3'-0" ABOVE ANY MECHANICAL EQUIPMENT OUTSIDE AIR INTAKE.
19	ALL VALVES, UNIONS, ETC. TO BE SAME SIZE AS CONNECTED SUPPLY LINE UNLESS OTHERWISE NOTED ON DRAWINGS.
20	UNIONS SHALL BE PROVIDED AND INSTALLED AFTER EACH SCREW-TYPE VALVE AND PRIOR TO EQUIPMENT CONNECTIONS.
21	ALL UNDERGROUND METALLIC PIPE AND FITTINGS SHALL BE PROTECTED IN ACCORDANCE WITH THE SOILS ENGINEER'S RECOMMENDATIONS.
22	NO PIPING SHALL BE DIRECTLY EMBEDDED IN CONCRETE, MASONRY WALLS, OR CONCRETE FOOTINGS.
23	THE PLUMBING CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS FOR ALL POINTS OF CONNECTION WITH THE GENERAL CONTRACTOR AND OTHER TRADES PRIOR TO START OF WORK.
24	VERIFY EXACT LOCATIONS, DEPTH AND SIZE OF ALL PIPING TO WHICH CONNECTIONS ARE REQUIRED. COORDINATE ALL CONNECTIONS WITH SITE CONDITIONS AND SITE UTILITY CONTRACTOR/ REPRESENTATIVE.
25	ALL HORIZONTAL PIPING LINES EXTENDED AND CONNECTED TO EQUIPMENT SHALL BE RUN AT THE HIGHEST POSSIBLE ELEVATIONS AND NOT LESS THAN 6" ABOVE THE FLOOR TO PROVIDE CLEARANCE FOR CLEANING.
26	ALL CUTTING OF EXISTING PAVING, WALKS AND/OR FLOORS SHALL UTILIZE MACHINE SAW CUTTING EQUIPMENT. HOLES FOR PIPES IN CONCRETE WALLS OR FLOORS SHALL UTILIZE CORE DRILLING EQUIPMENT. COORDINATE WITH ARCHITECTURAL DETAILS FOR FLOOR CUTTING AND PATCHING.
27	THE PLUMBING CONTRACTOR IS TO PROVIDE ALL ADDITIONAL STEEL, HANGER MATERIALS, RODS AND CLAMPS AS REQUIRED FOR COORDINATION WITH WORK OF OTHER TRADES.
28	PIPING LAYOUT IS SCHEMATIC ONLY, EXACT ROUTING AND INSTALLATION OF PIPES TO BE COORDINATED WITH THE BUILDING STRUCTURE AND THE WORK OF OTHER CONTRACTORS. NO WATER OR DRAIN LINES ARE PERMITTED TO BE INSTALLED OVER OR UNDER ELECTRICAL PANELS.
29	NO LIQUID TRANSMISSION PLUMBING PIPING SHALL BE INSTALLED ABOVE ELECTRICAL SWITCH GEAR, EQUIPMENT, OR PANELS. MAKE ADJUSTMENTS NECESSARY TO REROUTE PIPING FOR ACTUAL INSTALLATION OF ELECTRIC EQUIPMENT.
30	WHENEVER FOUNDATION WALLS, EXTERIOR WALLS, ROOFS, ETC. ARE PENETRATED FOR THE INSTALLATION OF PLUMBING SYSTEMS, THEY SHALL BE PATCHED TO MATCH EXISTING CONSTRUCTION AND SEALED WEATHER TIGHT.
31	NO EXPOSED PIPING IN THE GUEST AREAS. ANY EXPOSED GAS PIPING IN THE KITCHEN SHALL BE PAINTED WHITE.
32	DURING THE PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF ALL CHANGES MADE IN THE PLUMBING SYSTEMS. THE RECORD DRAWING SHALL SHOW CHANGES IN MANUFACTURER (WITH NUMBERS AND TRADE NAMES). MATERIALS, SIZES, LOCATIONS AND HOOK-UP POINTS. AS-BUILTS SHALL BE GIVEN TO OWNER'S CONSTRUCTION MANAGER AT COMPLETION OF JOB.
33	UPON COMPLETION OF JOB, THIS CONTRACTOR SHALL INSPECT ALL EXPOSED PORTIONS OF THE PLUMBING INSTALLATION AND COMPLETELY REMOVE ALL EXPOSED LABELS, SOIL, MARKINGS AND FOREIGN MATERIAL EXCEPT PRODUCT LABELS AND THOSE REQUIRED BY LAW.
34	PLUMBING CONTRACTOR SHALL PROVIDE MANUFACTURER'S OPERATION LITERATURE FOR ALL INSTALLED EQUIPMENT AND FIXTURES PRIOR TO THE DATE OF STORE TURNOVER.

KITCHEN HOT WATER DEMAND

DESCRIPTION	QTY.	GPH	TOTAL GPH
LAVATORY	5	5	25
KITCHEN HAND SINK	7	5	35
BAR HAND SINK	3	5	15
20 GALLON KETTLE	1	10	10
3 COMPARTMENT SINK	1	90	90
PRE-RINSE SINK	6	20	120
DISHWASHER	1	50	50
SERVICE SINK FAUCET	1	20	20
HOT WATER, SUM-TOTAL GPH:			365

PEAK DEMAND
1. 365 GPH (PEAK DEMAND) x 0.40 (DEMAND FACTOR) = 146 GPH
2. 146 GPH (DEMAND) x 1.0 (STORAGE FACTOR) = 146 GALS
3. 365 GPH (PEAK DEMAND) / 60 MIN./HR = 6 GPM
4. DOMESTIC SUPPLY WATER TEMPERATURE = 40 °F
5. DESIGN SUPPLY HOT WATER FOR KITCHEN = 140 °F
6. MIN. OUTPUT BTUH REQUIRED AT WATER HEATER (500 x GPM x ΔT) = 300,000 BTU/h

PROBABLE DEMAND
1. 146 GPH (PROBABLE DEMAND) x 0.40 (DEMAND FACTOR) = 58.4 GPH
2. 58.4 GPH (DEMAND) x 1.0 (STORAGE FACTOR) = 58.4 GALS
3. 146 GPH (PROBABLE DEMAND) / 60 MIN./HR = 2.4 GPM
4. DOMESTIC SUPPLY WATER TEMPERATURE = 40 °F
5. DESIGN SUPPLY HOT WATER FOR KITCHEN = 140 °F
6. MIN. OUTPUT BTUH REQUIRED AT WATER HEATER (500 x GPM x ΔT) = 120,000 BTU/h

GAS DEMAND LOAD

	DESCRIPTION	CONN. SIZE	QTY.	INPUT (MBH / EA)	TOTAL (MBH)
70	4 BURNER COUNTER TOP RANGE	3/4"	1	100	100
72	CONVECTION OVEN	3/4"	1	110	110
76	PASTA COOKER	3/4"	1	60	60
80	FRYER BANK	1"	1	300	300
84	CHARBROILER	1"	1	187	187
88	FRYER BANK	1"	1	75	75
111	GRIDDLE	1"	1	108	108
OL1	GAS WALL SCONCE	1/2"	2	10	20
WH-1	WATER HEATER	3/4"	1	199	199
WH-2	WATER HEATER	3/4"	1	199	199
RTU-1	ROOFTOP UNIT	3/4"	1	200	200
RTU-2	ROOFTOP UNIT	3/4"	1	200	200
RTU-3	ROOFTOP UNIT	3/4"	1	250	250
RTU-4	ROOFTOP UNIT	1"	1	400	400
MAU-1	MAKE-UP AIR UNIT	-	-	0	0

COOKING APPLIANCE SUB-TOTAL	940
WATER HEATING SUB-TOTAL	398
HVAC SUB-TOTAL	1,050
GAS DEMAND TOTAL (MBH)	2,408
GAS DEMAND TOTAL (BTU/h)	2,408,000
GAS DEMAND TOTAL (CFH)	2,408

NOTES:
1. THE SYSTEM IS SIZED FOR A TOTAL DEVELOPED LENGTH OF MAXIMUM 300'-0".
2. THE CONTRACTOR SHALL COORDINATE WITH THE NATURAL GAS SERVICE PROVIDER FOR THE PROVISION OF THE COMPLETE SYSTEM INCLUDING METER AND REGULATOR ASSEMBLY, ETC.
3. THE SERVICE PRESSURE TO THE BUILDING SHALL BE INSTALLED FOR DISTRIBUTION AS MEDIUM PRESSURE SUPPLY (2.0 PSI).
4. COORDINATE THE COMPLETE INSTALLATION OF THE METER ASSEMBLY INCLUDING DISTRIBUTION PIPING DOWNSTREAM FROM THE METER.
5. PIPE SIZES SHOWN ON THE RISER DIAGRAM ARE BASED ON 2018 INTERNATIONAL FUEL GAS CODE, TABLE 402.4(5). VERIFY FIELD CONDITIONS FOR ACTUAL DEVELOPED LENGTH AND POSSIBLE ADJUSTMENTS TO PIPE SIZES IN THE FIELD.

PIPING MATERIAL SCHEDULE

1.	WATER PIPE (ABOVE & BELOW GRADE)	UPONOR CROSSLINKED POLYETHYLENE (PEX-a) PIPING MEETING ASTM F 877, SDR 9 STANDARDS. NO JOINTS OR FITTINGS SHALL BE INSTALLED BELOW THE BUILDING SLAB. FIELD COORDINATE THE INSTALLATION OF MANUFACTURED PIPING COLOR AND PIPING LENGTHS TO RUN AS STRAIGHT AS POSSIBLE. ALL PIPING AND FITTINGS SHALL BE BY THE SAME MANUFACTURER.
2.	WATER PIPE (AT THE COOKLINE WALL)	ABOVE GROUND WATER PIPE INSTALLED WITHIN 10'-0" OF THE COOKLINE APPLIANCES SHALL BE INSTALLED AS TYPE 'L' COPPER WITH WROUGHT COPPER FITTINGS AND "NO-LEAD" SOLDER. PIPING INSULATION IS NOT REQUIRED DUE TO PROXIMITY TO HEAT SOURCES.
3.	WATER PIPE (INSULATION)	BOTH HOT AND COLD WATER PIPING SHALL BE INSTALLED COMPLETE WITH INSULATION EITHER IN CONCEALED OR EXPOSED LOCATIONS. REFER TO GENERAL NOTES FOR INSULATION THICKNESS INFO.
4.	SEWER AND VENT PIPE (ABOVE & BELOW GRADE)	DWV SCHEDULE 40 POLYVINYL CHLORIDE (PVC) PIPING. INSIDE BUILDING SERVICE WEIGHT (HUBLESS) CAST IRON SOIL PIPE AND STAINLESS STEEL NO HUB COUPLINGS SHALL BE UTILIZED FOR THE FIRST 10'-0" OF PIPING RECEIVING DISCHARGE FROM A DISHWASHER(S) AND RETHERMALIZER(S).
5.	CONDENSATE DRAIN PIPE AND INDIRECT DRAINAGE PIPE (INTERIOR TO BUILDING)	TYPE 'M' COPPER WITH 95/5 SILVER SOLDER JOINT FITTINGS. INSULATE INTERIOR CONDENSATE PIPING WITH 1/2" ARMAFLEX CLOSED CELL PIPE INSULATION WITH SELF SEALING ADHESIVE JOINTS, OR EQUIVALENT.
6.	CONDENSATE DRAIN PIPE (EXTERIOR TO BUILDING)	TYPE 'M' COPPER WITH 95/5 SILVER SOLDER JOINT FITTINGS.
7.	GAS PIPE	GAS PIPE - SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON FITTINGS. WELDED JOINTS FOR PIPE 2 1/2" AND LARGER AND ALL JOINTS BELOW GRADE. EXTERIOR GAS PIPING AT THE METER ASSEMBLY SHALL BE FIELD PAINTED TO MATCH THE ADJACENT WALL FINISH. GAS PIPING EXTERIOR ON THE ROOF SHALL BE FIELD PAINTED WITH ZINC RICH GALVANIZED PAINT FOR CORROSION PROTECTION. GAS PIPING INTERIOR TO THE BUILDING AND ON BUILDING ROOF SHALL BE FIELD PAINTED YELLOW.
8.	SUSPENDED PIPING SUPPORT	REFER TO THE PIPE HANGER DETAIL FOR ROD SIZE AND SPACING INFORMATION FOR SUSPENDED PIPING.
9.	STORM DRAIN PIPE (ABOVE & BELOW GRADE)	DWV SCHEDULE 40 POLYVINYL CHLORIDE (PVC) PIPING. INSULATE ABOVE GROUND IN BUILDING PIPING WITH 1/2" ARMAFLEX CLOSED CELL PIPE INSULATION WITH SELF SEALING ADHESIVE JOINTS, OR EQUIVALENT.
10.	WATER PIPE (ICE MACHINE PRE-COOLING COIL)	ABOVE GROUND WATER PIPE INSTALLED IN THE PRE-COOLING COIL SHALL BE INSTALLED AS TYPE 'L' COPPER WITH WROUGHT COPPER FITTINGS AND "NO-LEAD" SOLDER.

MEP ENGINEER:
JARRET L. RICE, P.E. (LIC# 82028) PLANO, TEXAS
PHONE: (469) 608-1268

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PROJECT NUMBER
DCH22007

CLIENT:
DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date: 02.15.2023

REVISION INFORMATION

1	CITY COMMENTS	04.04.2023
2	COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

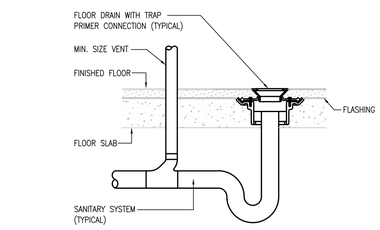
BLOOMINGDALE AVE & GORNTO LAKE RD

RIVERVIEW, FL 33578

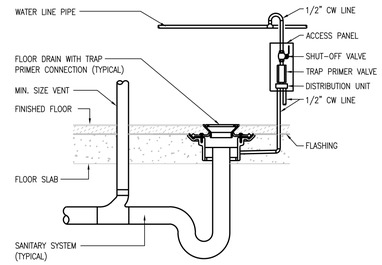
RIVERVIEW, FL

Drawing:
PLUMBING NOTES & SCHEDULES

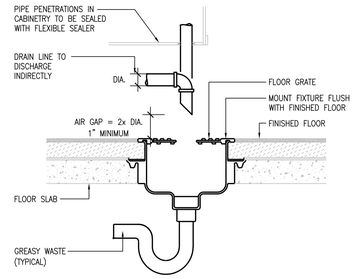
P1.1



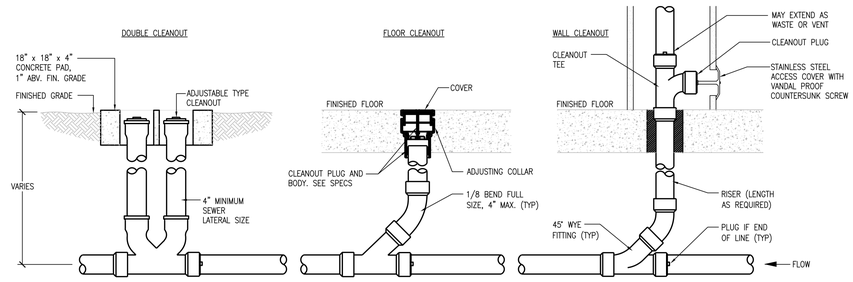
KITCHEN FLOOR DRAIN DETAIL 1
SCALE: NONE



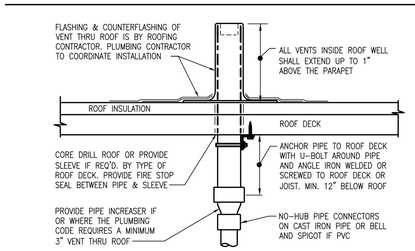
RESTROOM FLOOR DRAIN DETAIL 2
SCALE: NONE



FLOOR SINK DETAIL 3
SCALE: NONE

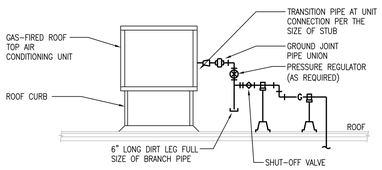


CLEANOUT DETAILS 4
SCALE: NONE



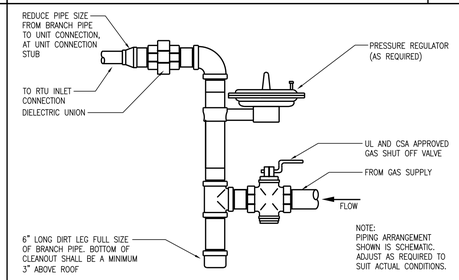
REFER TO PLANS FOR VTR PIPE SIZES AND LOCATIONS. LOCATE VTR MIN. THREE FEET FROM PROPERTY LINE, OR TEN FEET HORIZONTAL OR THREE FEET VERTICAL ABOVE ANY BUILDING OPENING OR FRESH AIR INTAKE, OR ONE FOOT FROM ANY VERTICAL SURFACE. LOCATE VTR MINIMUM 18" FROM PARAPET, EXPANSION JOINT, EQUIPMENT CURB, ETC. OFFSET IN CEILING SPACE WHERE REQUIRED TO MEET THESE CONDITIONS

VENT THROUGH ROOF DETAIL 5
SCALE: NONE



NOTES:
1. PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST AS REQUIRED TO SUIT ACTUAL CONDITIONS.
2. PIPING SHALL BE INSTALLED TO AVOID INTERFERENCE WITH MAINTENANCE ACCESS DOORS.

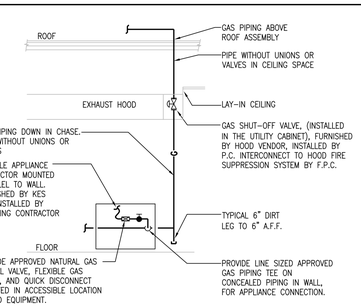
HVAC GAS PIPING DETAIL 6
SCALE: NONE



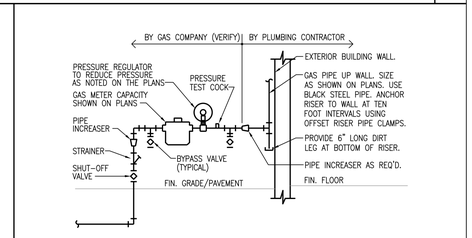
NOTE:
PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST AS REQUIRED TO SUIT ACTUAL CONDITIONS.

NOTES:
1. PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST AS REQUIRED TO SUIT ACTUAL CONDITIONS.
2. PIPING SHALL BE INSTALLED TO AVOID INTERFERENCE WITH MAINTENANCE ACCESS DOORS.

HVAC GAS CONNECTION DETAIL 7
SCALE: NONE

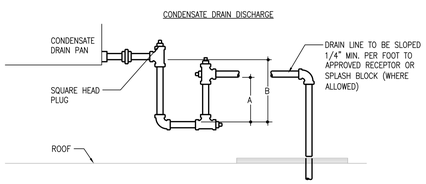


KITCHEN EQUIP. GAS CONNECTION DETAIL 8
SCALE: NONE



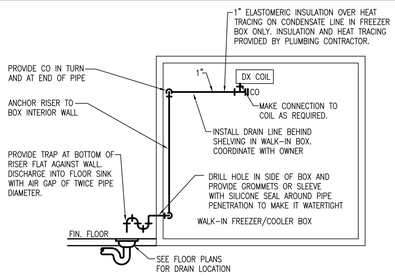
NOTE:
VERIFY REQUIREMENTS FOR METERING AND PIPING WITH GAS COMPANY. INSTALL OTHER UTILITIES A MINIMUM OF 10'-0" FROM GAS LINE. PLUMBING CONTRACTOR SHALL PAY ALL GAS COMPANY FEES FOR INSTALLATION. USE WELDED OR SCREWED PIPE AND FITTINGS PER PLUMBING SPECS. GAS COMPANY SHALL EXCAVATE, BACKFILL AND REPAIR ANY PAVING OR SOD FOR GAS SERVICE LINE INSTALLATION FROM MAIN TO BUILDING.

GAS SERVICE DETAIL 9
SCALE: NONE



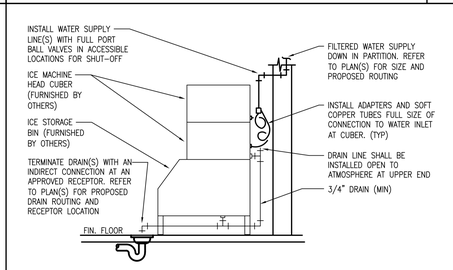
NOTES:
1. FILL TRAP MANUALLY ON INITIAL START-UP.
2. TRAP EACH COMPONENT DRAIN CONNECTION.
3. A = NEGATIVE STATIC PRESSURE = 2"
4. B = 2x NEGATIVE STATIC PRESSURE = 4"

HVAC CONDENSATE CONNECTION DETAIL 10
SCALE: NONE



NOTE:
INSTALL PIPE AS HIGH AS POSSIBLE, ANCHORED TO WALL OF BOX WITH SUPPORTS AT MAXIMUM 6'-0" ON CENTERS. SLOPE HORIZONTAL PIPE AT MINIMUM TWO PERCENT IN THE DIRECTION OF FLOW. FINISH PIPE EXTERIOR TO WALK-IN BOX WITH CHROMATONE PAINT.

FREEZER/COOLER CONDENSATE DRAIN DETAIL 11
SCALE: NONE



NOTE:
PROVIDE COLD WATER ROUGH-IN AT TOP OF ICE MACHINE. ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST AS REQUIRED TO SUIT CONDITIONS. VERIFY CONNECTIONS WITH MANUFACTURER.

ICE MACHINE CONNECTION DETAIL 12
SCALE: NONE

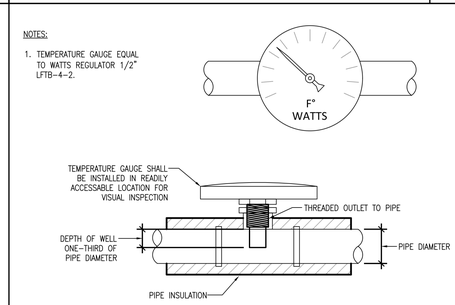
SINGLE/DOUBLE FIXTURE	PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
	A	1/2"	1-11
	B	3/4"	12-32
	C	1"	33-60
	D	1-1/4"	61-113
	E	1-1/2"	114-154
	F	2"	154-330

MULTIPLE FIXTURES	FIXTURE UNIT TABULATION		
	FIXTURE	COLD	HOT
	VALVE WATER CLOSET	10	--
	TANK WATER CLOSET	5	--
	URINAL	5	--
	LAVATORY/SINK	1.5	1.5
	JANITOR'S SINK	3	3
	SHOWER/BATHTUB	2	2

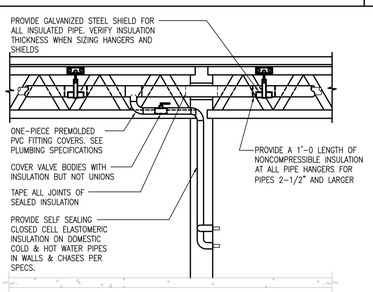
NOTE:
FOR BATTERIES OF FIXTURES, PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON & O-RING CONSTRUCTION, HAVING PDI #WH-201, ASSE #1010 & ANSI #A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS AS SHOWN ON THE DRAWINGS AND/OR PER THE TABLES SHOWN ABOVE. PROVIDE ACCESSIBILITY WHERE REQUIRED BY LOCAL CODE.

WATER HAMMER ARRESTOR DETAIL 13
SCALE: NONE

NOTES:
1. TEMPERATURE GAUGE EQUAL TO WATTS REGULATOR 1/2" LFTB-4-2.



HOT WATER TEMPERATURE GAUGE DETAIL 14
SCALE: NONE

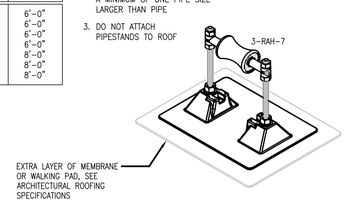


WOOD TRUSS PIPE INSULATION DETAIL 15
SCALE: NONE

ROOF PIPE SUPPORT SCHEDULE	
PIPE SIZE	MAXIMUM SPACING
1"	6'-0"
1 1/4"	6'-0"
1 1/2"	6'-0"
2"	6'-0"
2 1/2"	8'-0"
3"	8'-0"
4"	8'-0"

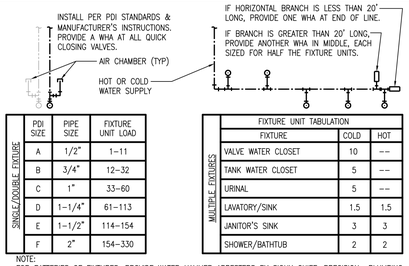
NOTES:
1. SUPPORTED PIPE AT ALL ELBOWS AND AT SPACING SPECIFIED.
2. PIPE SUPPORT BLOCK SHALL BE A MINIMUM OF ONE PIPE SIZE LARGER THAN PIPE
3. DO NOT ATTACH PIPESTANDS TO ROOF

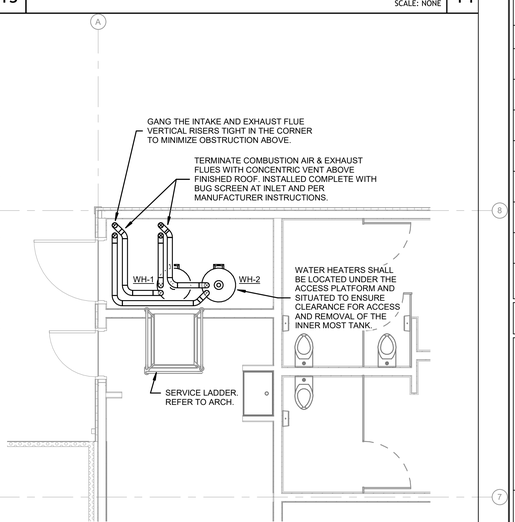
MIRO INDUSTRIES, INC.
170 WEST COTTAGE AVE
SANDY, UTAH 84070
(801) 566-3680



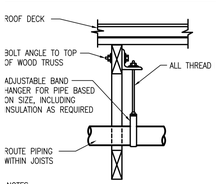
ROOF PIPING SUPPORT DETAIL 16
SCALE: NONE

NOT USED 17
SCALE: NONE





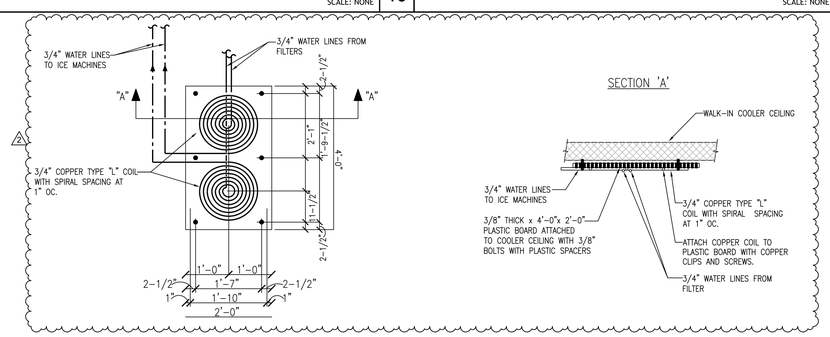
WATER HEATER EXHAUST FLUE DETAIL 20
SCALE: 1/4"=1'-0"



PIPE SIZE	PEX-a PIPE HANGER SPACING	COPPER PIPE HANGER SPACING	STEEL PIPE HANGER SPACING	PVC PIPE HANGER SPACING
1/2"	32"	5'	7'	4'
3/4"	32"	5'	7'	4'
1"	32"	6'	7'	4'
1-1/4"	32"	7'	8'	5'
1-1/2"	32"	8'	9'	5'
2"	32"	8'	10'	5'
2-1/2"	32"	10'	11'	6'
3"	32"	11'	12'	6'

NOTES:
1. PROVIDE UPPER ATTACHMENT AS REQUIRED FOR CASES NOT SHOWN HERE. DO NOT INSTALL HANGER INSIDE INSULATION OR OTHERWISE PENETRATE VAPOR BARRIER. DO NOT HANG ONE PIPE FROM ANOTHER EXCEPT IN CHASES. SLOPE ALL WATER PIPING SLIGHTLY TOWARD DRAINABLE LOCATIONS.
2. HANGER SPACING FOR PIPE SIZE: AS INDICATED ON TABLE. CAST IRON: 10' AND WITHIN 1'-0" OF ALL JOINTS. ROD SIZES FOR PIPE SIZE: 2" AND SMALLER=3/8", 2 1/2" TO 3"=1/2". LOCATE HANGERS WITHIN 1'-0" OF VALVES AND FITTINGS. PROVIDE SUPPLEMENTARY STEEL STRUTS BETWEEN JOISTS IF REQUIRED. LOCATE HANGERS WITHIN 1'-0" OF EQUIPMENT CONNECTIONS. ANCHOR WATER PIPE AGAINST SWAYING DUE TO CHANGES IN WATER VELOCITY.
3. CHAINS AND PERFORATED STRAP IRON AND STEEL ARE NOT ACCEPTABLE. DO NOT SUSPEND PIPE FROM JOIST BRACING MEMBERS. REFER TO CODE AND SPECIFICATIONS FOR FURTHER INFORMATION. PROVIDE SEISMIC BRACING IF/AS REQUIRED BY LOCAL AUTHORITIES. TRAPEZE HANGERS MAY BE USED FOR MULTIPLE PARALLEL PIPES, SEE "TRAPEZE PIPE HANGER DETAIL."
4. FOR PEX-a PIPING INSTALLED WITH THE MANUFACTURER AVAILABLE 23GA GALVANIZED METAL PIPE SUPPORT FOR STRAIGHTER RUNS OF INSTALLED PIPING, THE HANGER SPACING MAY INCREASE AS FOLLOWS: 3/4" AND SMALLER = 6'-0" OC, 1" TO 3" = 8'-0".

WOOD TRUSS PIPE HANGER DETAIL 18
SCALE: NONE



ICE MACHINE PRECOOL COIL SCHEMATIC 19
SCALE: NONE

MEP ENGINEER:
JARRET L. RICE, P.E. (LIC# 82028) PLANO, TEXAS
PHONE: (469) 608-1268

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PROJECT NUMBER
DCH22007

CLIENT:
DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

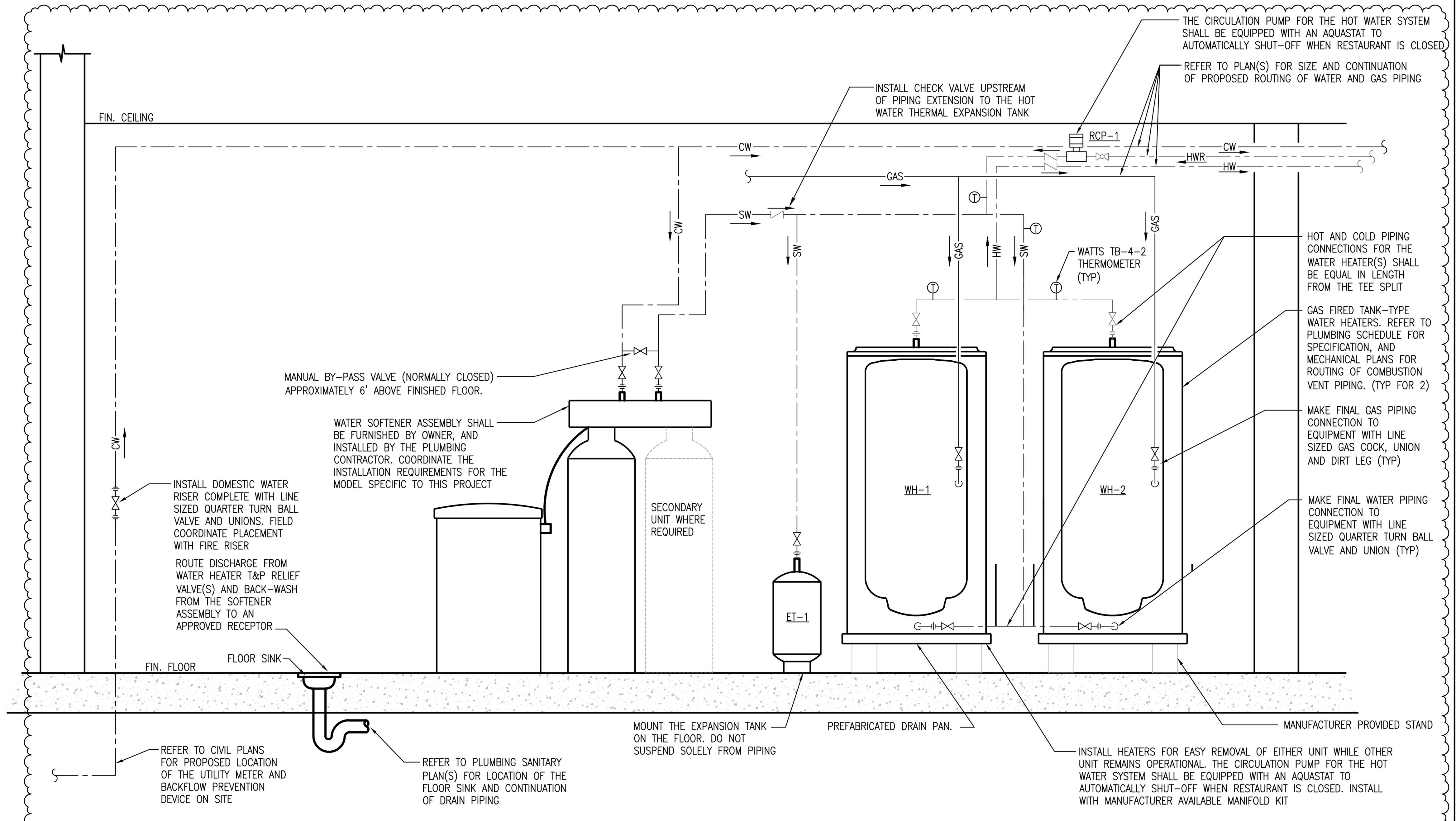
BLOOMINGDALE AVE & GORNTO LAKE RD

RIVERVIEW, FL 33578

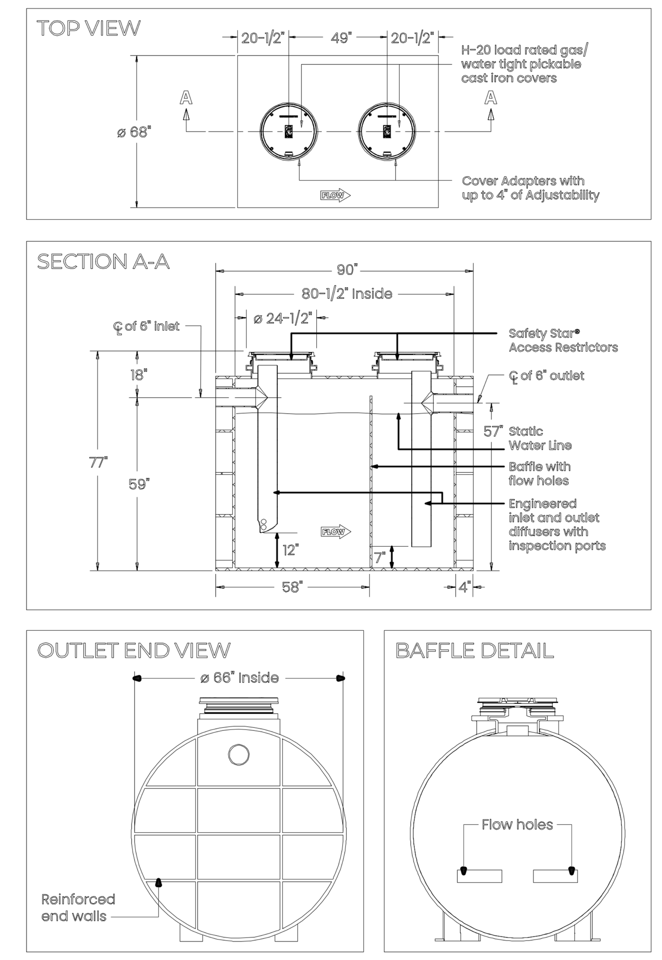
RIVERVIEW, FL

Drawing:
PLUMBING DETAILS

P1.2



MECHANICAL ROOM EQUIPMENT PIPING DETAIL 1
SCALE: NONE



SPECIFICATIONS

NOTES
1. 6" plain end inlet/outlet
2. Unit weight - w/composite covers: 1,400 lbs.; w/cast iron covers: 1,516 lbs. (for wet weight add 2,310 lbs.)
3. Maximum operating temperature: 150° F continuous
4. Capacities - Liquid: 1,010 gal.; Grease: 6,547 lbs. (894 gal.) Solids: 103 gal.
5. Satisfies Miami DERM 99% efficiency requirements; retaining 6,237 lbs. (854 gal.) of grease at 99.0% efficiency.
6. Built-in Flow control. For series installations, only install flow control on the first unit in the series if necessary.
7. For gravity drainage applications only.
8. Do not use for pressure applications.
9. Cover placement allows full access to tank for proper maintenance.
10. Vent not required unless per local code.
11. Engineered inlet and outlet diffusers with inspection ports are removable to inspect / clean piping. For series installations, the top of the inlet diffuser on the first unit in the series must be sealed.
12. Integral air relief / Anti-siphon / Sampling access.
13. Adjustable cover adapters provide up to 4" of additional height.
14. Flow rates are based on 2-minute drain time.
15. Safety Star®, access restrictor built into each cover adapter, prevents accidental entry to tanks (450 lb rating).

ENGINEER SPECIFICATION GUIDE
Schier Great Basin™ grease interceptor model # GB-1000 shall be lifetime guaranteed and made in USA of seamless, molded polyethylene with minimum 3/4" uniform wall thickness. Interceptor shall be furnished for below-grade installation with adjustable cover adapter and Safety Star® access restrictor built into each cover adapter. Interceptor shall be certified to ASME A112.14.3 (Type C) and CSA B481.1. Interceptor flow rate shall be 100 GPM. Interceptor grease capacity shall be 6,237 lbs. Cover shall provide water/gas-tight seal and have minimum 16,000 lbs. load capacity.

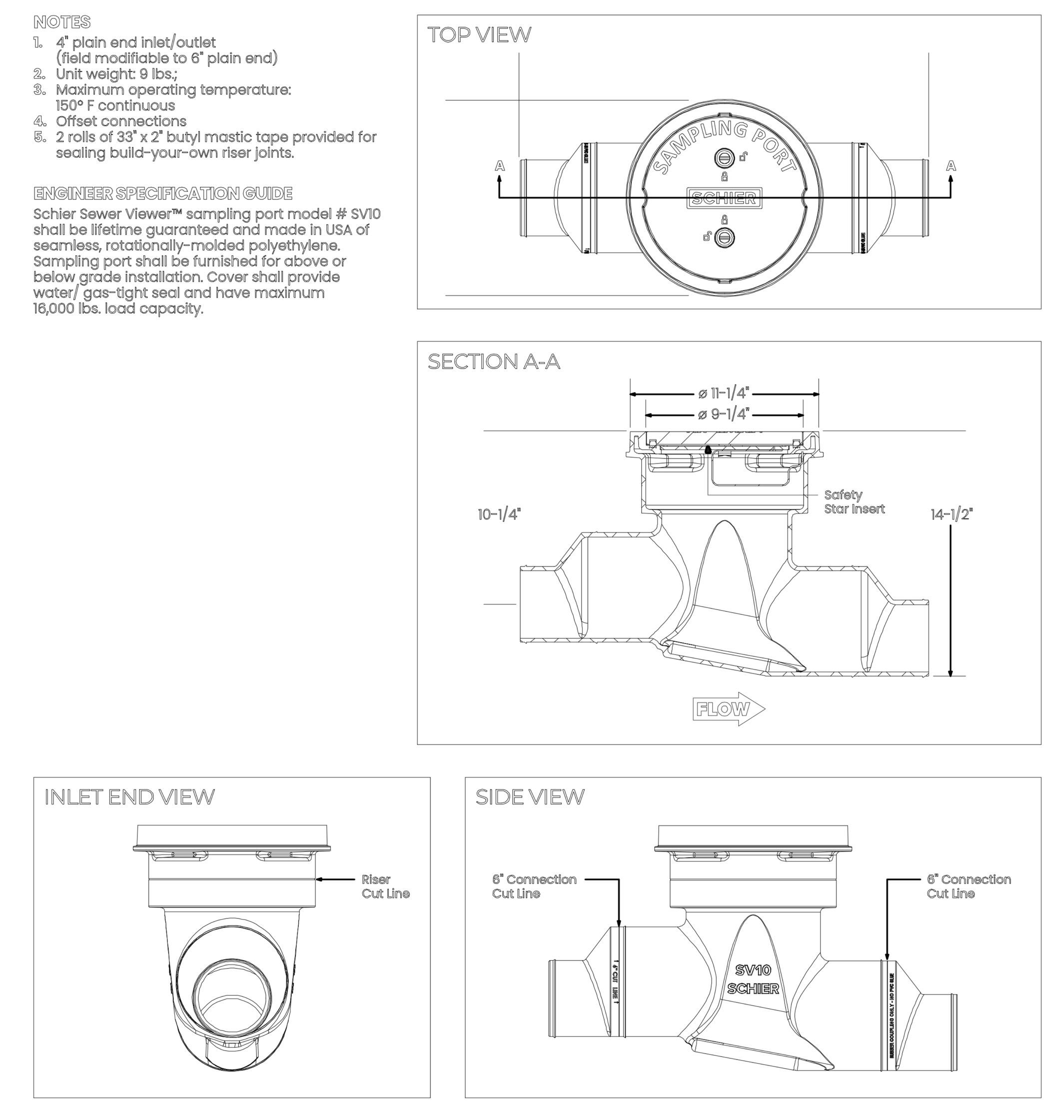
CERTIFIED PERFORMANCE
Great Basin™ hydromechanical grease interceptors are third party performance-tested and listed by IAPMO to ASME #A112.14.3 and CSA B481.1 grease interceptor standards and greatly exceed requirements for grease separation and storage. They are compliant to the Uniform Plumbing Code and the International Plumbing Code.

Rated Grease Capacities for Units Piped in Series

No. of Units In Series	Removal Efficiency	
	100 GPM – 98.8%	100 GPM – 99%
2	13,094 lbs.	12,474 lbs.
3	19,641 lbs.	18,711 lbs.
4	26,188 lbs.	24,948 lbs.

SCHIER
MODEL NUMBER: GB-1000
DESCRIPTION: 100 GPM Polyethylene Grease Interceptor – 1,010 gallon capacity
PART #: 4080-002-01 | DWG BY: B. Karrer | DATE: 12/2/2020 | REV: | ECO:
8455 Woodland Drive | Shawnee, KS 66218 | 913-951-3300 | schierproducts.com
© Copyright 2020 Schier Products Company

GREASE INTERCEPTOR DETAIL 2
SCALE: NONE



SPECIFICATIONS

NOTES
1. 4" plain end inlet/outlet (field modifiable to 6" plain end)
2. Unit weight: 9 lbs.;
3. Maximum operating temperature: 150° F continuous
4. Offset connections
5. 2 rolls of 33" x 2" butyl mastic tape provided for sealing build-your-own riser joints.

ENGINEER SPECIFICATION GUIDE
Schier Sewer Viewer™ sampling port model # SV10 shall be lifetime guaranteed and made in USA of seamless, rotationally-molded polyethylene. Sampling port shall be furnished for above or below grade installation. Cover shall provide water/ gas-tight seal and have maximum 16,000 lbs. load capacity.

SCHIER
MODEL NUMBER: SV10
DESCRIPTION: Polyethylene Wastewater Sampling Port
PART #: 8065-001-01 | DWG BY: B. Karrer | DATE: 3/1/2020 | REV: | ECO:
9500 Woodend Road | Edwardsville, KS 66111 | 913-951-3300 | schierproducts.com
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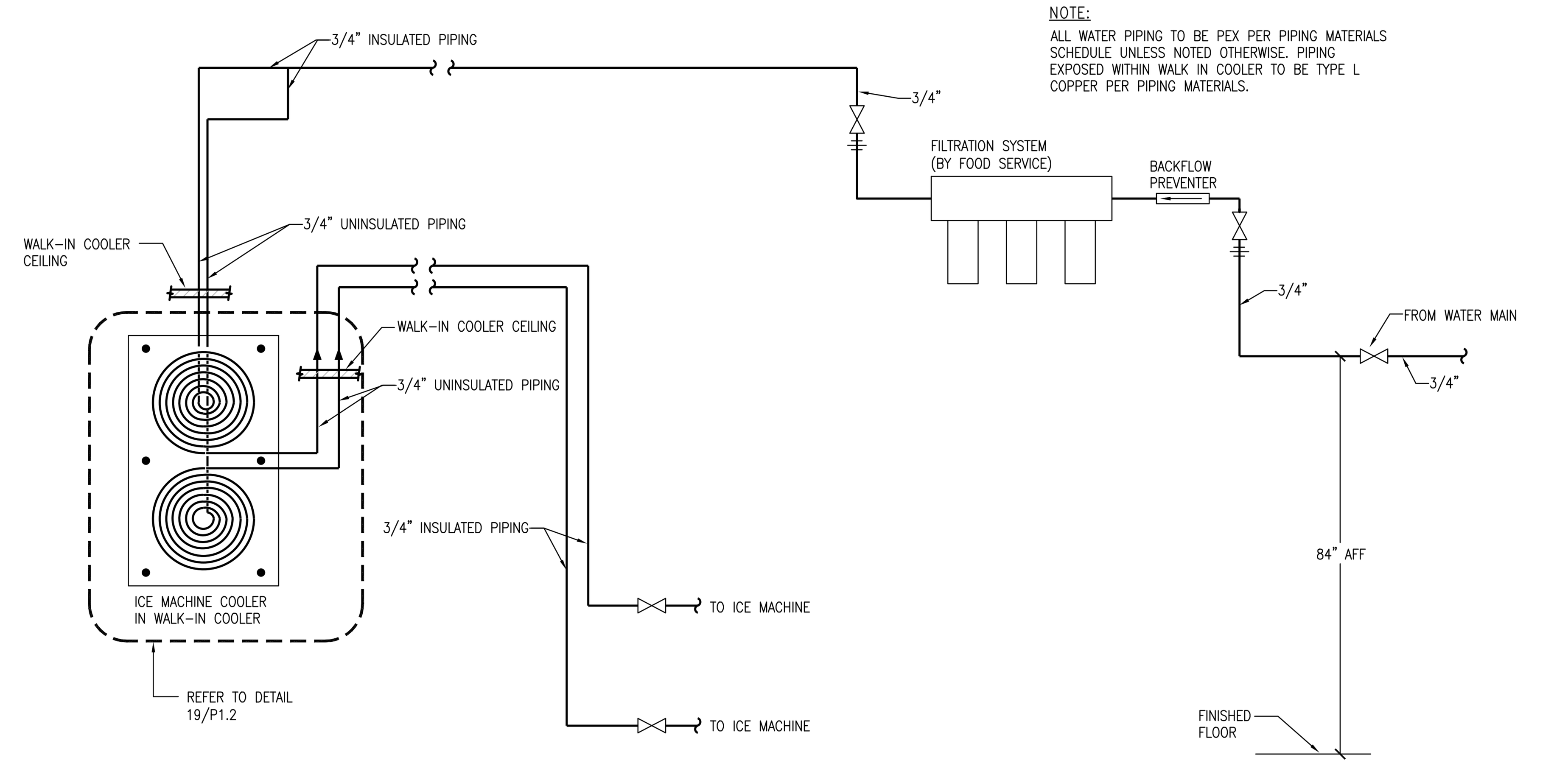
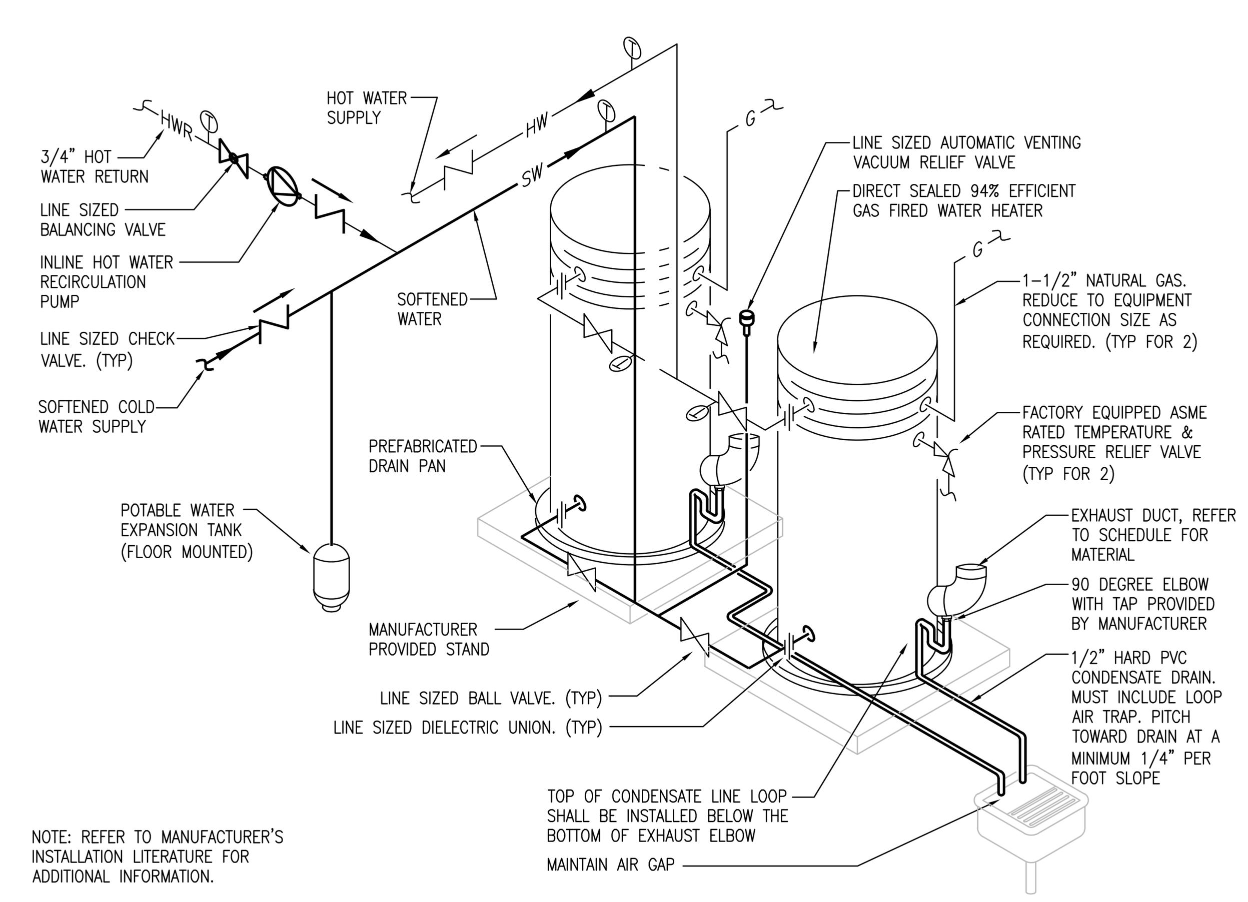
SAMPLE WELL BASIN DETAIL (WHERE REQUIRED BY THE JURISDICTION) 3
SCALE: NONE

NOTE:
ALL WATER PIPING TO BE PEX PER PIPING MATERIALS SCHEDULE UNLESS NOTED OTHERWISE. PIPING EXPOSED WITHIN WALK IN COOLER TO BE TYPE L COPPER PER PIPING MATERIALS.



WATER FILTER PROVISION SCHEMATIC 4
SCALE: NONE



NOTE: REFER TO MANUFACTURER'S INSTALLATION LITERATURE FOR ADDITIONAL INFORMATION.

NOTES:
1. PIPE SIZES TO BE AS SHOWN ON PLANS AND EXTENDED FULL SIZE TO WATER HEATER CONNECTION. INSTALL COMPLETE WITH FULL SIZE VALVES.
2. REFER TO PLANS FOR PROPOSED LOCATION OF DROPS TO WATER HEATERS.
3. PLUMB SWING CHECK VALVE IN GRAVITY CLOSED POSITION.
4. PIPE ALL RELIEF VALVES TO APPROVED RECEPTOR.
5. REFER TO MECHANICAL PLANS FOR PROPOSED ROUTING OF COMBUSTION AIR VENTING.

GAS FIRED WATER HEATER PIPING DETAIL 5
SCALE: NONE

GREASE INTERCEPTOR CALCULATIONS *Reviewed by: Tye*

Reference No. 47916 — Project Name: Cheddars - Riverview, FL

Step 1: Flow rate to grease interceptor
Fixture flow rate: (cu in / 231) = gal x 0.75 / 1 min = 1 min flow rate

NAME	TYPE	DIMENSIONS	QTY	CU IN	FLOW RATE
016	Hand Sink	10" x 14" x 5"	6	4,200	13.62 GPM
018	3 Compartment Sink	21" x 21" x 14" (3)	1	18,522	60.14 GPM
029	Dishwasher (Conveyor)	N/A	1	5,775	25 GPM
048	Prep Sink One Bowl	26" x 14" x 10"	1	3,640	11.82 GPM
062	Soup Kettle	N/A	1	4,620	20 GPM
068	Soup Kettle	20 gal.	1	4,620	20 GPM
073	2 Compartment Sink	24" x 24" x 14" (2)	1	16,128	52.36 GPM
076	Soup Kettle	N/A	1	4,620	20 GPM
091	Soup Kettle	40 gal.	1	9,240	40 GPM
119	Pre-Rinse Sink One Bowl	21" x 21" x 14"	1	6,174	1 GPM
122	Warming Table (with drain)	N/A	1	N/A	1 GPM
131	Hand Sink	10" x 14" x 5"	1	700	2.27 GPM
135	Dipper Well	N/A	1	N/A	4 GPM
157	Prep Sink One Bowl	20" x 20" x 5"	1	2,000	6.49 GPM
158	Dump Sink One Bowl	10" x 14" x 5"	1	700	2.27 GPM
171	Mop Basin	24" x 24" x 10"	1	5,760	18.7 GPM
216	3 Compartment Sink	21" x 21" x 14" (3)	1	18,522	60.14 GPM
219	Dump Sink One Bowl	10" x 14" x 6"	1	840	2.73 GPM
220	Hand Sink	10" x 14" x 5"	1	700	2.27 GPM
Total					**363.83 GPM**

Step 2: Grease Production
Number of Seats x 4 turns per seat x Grease Production Value x Days between pump-out = Grease output

Number of seats in facility: 256
Grease production value: 0.0455 lbs per serving (Family Restaurant: High / Flatware)
Days between pump-outs: 90 days

256 x 4 x 0.0455 x 90 = 4193.28 lbs of FOG

SCHIER MODEL	
GB-1000	**Description:** Polyethylene Grease Interceptor **Dimensions:** Length: 92", Width: 73.75", Height: 71.25" **Flow Rates/Grease Capacities:** 200 GPM / 4959.0 lbs **Liquid Capacity:** 1000 gal

GREASE INTERCEPTOR SIZING 6
SCALE: NONE

MEP ENGINEER:
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PROJECT NUMBER
DCH22007

CLIENT:
DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Issue Date: 02.15.2023

REVISION INFORMATION

1	CITY COMMENTS	04.04.2023
2	COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

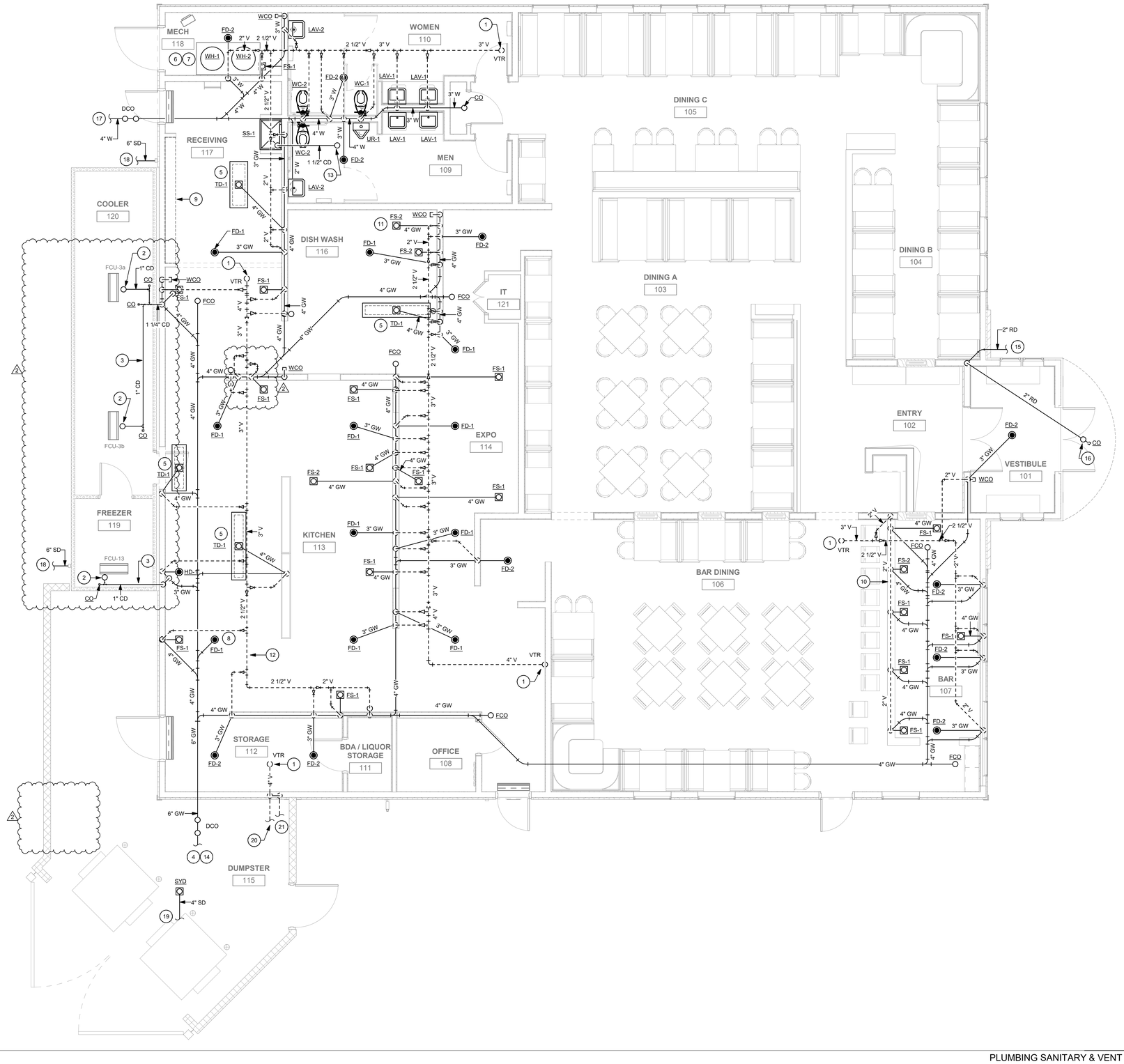
CHEDDARS SCRATCH KITCHEN
PROTO 18

BLOOMINGDALE AVE & GORNTO LAKE RD
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
PLUMBING DETAILS

P1.3



PLUMBING SANITARY & VENT FLOOR PLAN 1

1/4" = 1'-0"

GENERAL NOTES - PLUMBING DWV PLAN

A	KEY NOTES WITH ELLIPTICAL SYMBOL AND NUMBER CORRESPOND TO KITCHEN EQUIPMENT SHOWN IN THE FOOD SERVICE SHEETS.
B	ANY EXPOSED PIPING SHALL BE INSTALLED AS TIGHT AS POSSIBLE TO THE HEATED SIDE OF THE EXPOSED ROOF STRUCTURE. PIPING INSTALLED IN EXTERIOR WALLS SHALL BE INSTALLED ON THE HEATED SIDE OF THE WALL INSULATION.
C	INSTALLATION OF THE PLUMBING SYSTEMS SHALL BE COORDINATED WITH ELECTRICAL AND MECHANICAL EQUIPMENT, STRUCTURAL SLAB AND FRAMING.
D	REFER TO PLUMBING SHEET P1.1 FOR PLUMBING FIXTURE AND EQUIPMENT SCHEDULES INCLUDING SPECIFICATIONS AND ROUGH-IN SIZES.
E	REFER TO THE FOOD SERVICE SHEETS FOR ADDITIONAL INFORMATION PERTAINING TO KITCHEN EQUIPMENT NOT SHOWN ON THESE SHEETS.
F	PLUMBING CONTRACTOR SHALL COORDINATE WITH THE KITCHEN EQUIPMENT SUPPLIER FOR THE COMPLETE INSTALLATION AND SERVICE CONNECTIONS OF ALL KITCHEN EQUIPMENT.
G	PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE INSTALLATION OF ALL DRAIN LINES FROM KITCHEN EQUIPMENT. REFER TO THE FOOD SERVICE SHEETS FOR PROPOSED SIZES AND ROUTING. ALL INDIRECT DRAIN LINES SHALL BE INSTALLED WITH APPROVED AIR GAPS.
H	REFER TO ARCHITECTURAL AND MILLWORK DRAWINGS FOR DETAILS OF COUNTERTOPS, CASEWORK, AND OTHER FIXTURES, SHOWING EXACT LOCATION OF OPENINGS FOR PLUMBING ITEMS BEING INSTALLED. COORDINATE THE COMPLETE INSTALLATION WITH THE GENERAL CONTRACTOR.
I	THE PROPOSED ROUTING AND SIZES OF UNDERSLAB SODA AND BEER SLEEVE LINES ARE SHOWN ON THE FOOD SERVICE SHEETS. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR COMPLETE INSTALLATION AND COORDINATION WITH OTHER DISCIPLINES.
J	PLUMBING CONTRACTOR TO ARRANGE AND PAY FOR ALL REQUIRED FEES, PERMITS, AND MISCELLANEOUS COSTS ASSOCIATED WITH THE PLUMBING WORK PER LOCAL PLUMBING CODES.
K	PLUMBING CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF UTILITIES AND PIPING PRIOR TO ANY NEW CONSTRUCTION. COORDINATE WITH CIVIL DRAWINGS AND LOCAL UTILITIES PRIOR TO NEW INSTALLATION.
L	ALL WALL PIPING STUB-OUTS SHALL BE SECURELY TIED TO THE STRUCTURE WITH SUFFICIENT BACKING TO ELIMINATE ANY MOVEMENT.
M	FINAL CONNECTIONS TO SINKS IN THE KITCHEN SHALL BE HARD PIPED.
N	ALL PENETRATIONS IN FIRE RATED WALL ASSEMBLIES SHALL BE SEALED WITH UL LISTED FIRE STOPPING MATERIAL.
O	CLEANOUTS SHALL BE INSTALLED ON CONDENSATE DRAIN LINES FROM WALK-IN COOLER & FREEZER EVAPORATORS.
P	PLUMBING CONTRACTOR IS RESPONSIBLE FOR CHECKING THE SEALS AROUND ALL PENETRATIONS TO THE FREEZER/COOLER WALLS WHILE INSTALLING CONDENSATE LINES.
Q	MANIFOLD DRAIN LINES FOR BAR DRAIN BOARDS, SINK AND DUMP SINK AND RUN TO FLOOR SINKS. EACH POTABLE ICE BIN DRAIN SHALL BE INSTALLAED WITH A SEPARATE DRAIN LINE TERMINATED TO NEARBY FLOOR SINK. ALL DRAIN LINE MANIFOLDS TO RUN AS TIGHT TO THE BAR DIE WALL AS POSSIBLE.
R	UNDERGROUND NONMETALLIC WATER AND IRRIGATION SYSTEM PIPING LARGER THAN TWO (2) INCHES IN DIAMETER SHALL BE INSTALLED WITH INSULATED COPPER TRACER WIRE OR OTHER APPROVED CONDUCTOR LOCATED ADJACENT TO THE PIPING. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER WIRE SHALL TERMINATE ABOVE GROUND AT EACH END OF THE NONMETALLIC PIPING. THE TRACER WIRE SIZE SHALL NOT BE LESS THAN 18 AWG AND THE INSULATION TYPE SHALL BE SUITABLE FOR DIRECT BURIAL.

KEYNOTES - P2.1

1	ROUTE VENT UP TO VTR. COORDINATE ROOF PENETRATION LOCATION WITH OUTDOOR AIR INTAKE OF ROOFTOP EQUIPMENT. MAINTAIN A MINIMUM 10'-0" HORIZONTAL CLEARANCE.
2	ROUTE WALK-IN COOLER/ FREEZER CONDENSATE DRAIN LINE AS HIGH AS POSSIBLE AND ALONG WALLS AS SHOWN. INSULATE ALL CONDENSATE PIPING WITH CLOSED CELL ARMAFLEX AND PITCH A MINIMUM OF 1/4" PER FOOT IN THE DIRECTION OF FLOW. SEAL ALL COOLER WALL PENETRATIONS WATER TIGHT AND COVER EACH WITH AN ESCUTCHEON PLATE. PROVIDE FULL SIZE TRAP AND EXTEND ABOVE FLOOR AND BEHIND EQUIPMENT FOR AN INDIRECT CONNECTION TO AN APPROVED RECEPTOR.
3	CONDENSATE DRAIN LINE IN THE WALK-IN FREEZER SHALL BE HEAT TRACED TO PREVENT FREEZING. HEAT TRACE TAPE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR.
4	REFER TO CIVIL PLANS FOR CONTINUATION OF UNDERGROUND GREASE WASTE PIPING. COORDINATE PROPOSED ROUTING WITH SITE UTILITIES, GRADING, LANDSCAPING AND CONCRETE WORK.
5	FIELD FABRICATED TRENCH DRAINS SHALL BE FORMED IN PLACE BY OTHERS AND INSTALLED COMPLETE BY THE PLUMBING CONTRACTOR.
6	PROVIDE PREFABRICATED DRAIN PAN UNDER WATER HEATER. EXTEND LINE SIZED DRAIN LEADER FROM PAN (3/4" MIN.), AND TERMINATE INDIRECTLY AT FLOOR SINK. COORDINATE ROUTING IN THE FIELD.
7	EXTEND T&P VALVE DRAIN LEADER (3/4" MIN.) AND TERMINATE INDIRECTLY AT FLOOR SINK. COORDINATE ROUTING IN THE FIELD.
8	FIXTURE DRAIN IS CONNECTED TO A HORIZONTAL BRANCH DRAIN AND IS CONSIDERED COMBINATION WASTE AND VENT SYSTEM PER 2018 INTERNATIONAL PLUMBING CODE.
9	PROPOSED ELECTRICAL PANEL LOCATION. NO PIPING SHALL BE INSTALLED ABOVE OR BELOW THE CEILING AT THIS LOCATION.
10	ROUTE VENT PIPING IN LOW WALL RISE IN FULL HEIGHT WALL, PROCEED TO ROUTE IN CEILING SPACE, AS SHOWN.
11	4" SEWER PIPE FROM FLOOR SINK SERVING THE DISHWASHER, THE FIRST 10' SHALL BE CAST IRON.
12	INSTALL PIPING AS HIGH AS POSSIBLE TO AVOID CONFLICT WITH ANSUL PULL STATION CONDUIT.
13	HVAC CONDENSATE DRAIN PIPING DOWN FROM ROOF. ROUTE CONDENSATE DRAINAGE TO NEAREST APPROVED RECEPTACLE WITH AN INDIRECT CONNECTION.
14	REFER TO CIVIL DRAWINGS FOR ESTIMATED GREASE INTERCEPTOR LOCATION. COORDINATE PROPOSED ROUTING OF GREASE WASTE PIPING TO GREASE INTERCEPTOR WITH SITE UTILITIES, GRADING, LANDSCAPING AND CONCRETE WORK.
15	EXTEND THE BUILDING PRIMARY STORM LEADER PIPING ON SITE. REFER TO THE CIVIL UTILITY PLAN(S) FOR PROPOSED ROUTING BEYOND THE BUILDING. VERIFY LOCATION & INVERT ELEVATIONS OF CONNECTIONS AT THE MAIN PRIOR TO ANY WORK.
16	STORM DRAIN PIPING DOWN FROM ROOF DRAIN ABOVE.
17	REFER TO CIVIL DRAWINGS FOR ESTIMATED SANITARY SEWER LOCATION. COORDINATE PROPOSED ROUTING OF SANITARY WASTE PIPING TO SITE UTILITIES, GRADING, LANDSCAPING AND CONCRETE WORK.
18	ROUTE THE STORM DRAIN GUTTER DOWNSPOUT LEADER (PROVIDED BY THE GC) DOWN ON EXTERIOR OF BUILDING AND BELOW GRADE FOR EXTENSION ON SITE. REFER TO THE CIVIL UTILITY PLAN(S) FOR PROPOSED ROUTING BEYOND THE BUILDING.
19	4" AREA DRAIN SERVING SERVICE YARD TO BE ROUTED TO SANITARY SEWER THROUGH GI-2. REFER TO CIVIL FOR CONTINUATION. COORDINATE PROPOSED ROUTING OF GREASE WASTE PIPING TO GREASE INTERCEPTOR WITH SITE UTILITIES, GRADING, LANDSCAPING, AND CONCRETE WORK.
20	3" VENTS FROM GREASE INTERCEPTOR. CONNECT AT 42" A.F.F. PROVIDE WALL CLEANOUT IN EACH VENT. DO NOT CONNECT INTERCEPTOR VENTS TO BUILDING VENT. FIELD VERIFY EXISTING CONDITIONS AND COORDINATE WITH CIVIL.
21	3" VENTS FROM GREASE INTERCEPTOR. REFER TO CIVIL FOR CONTINUATION.

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CLIENT:

DARDEN RESTAURANTS, INC.

1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

Cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023

REVISION INFORMATION

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Restaurant #: 21K0037

CHEDDARS
SCRATCH KITCHEN
PROTO 18

BLOOMINGDALE AVE &
GORNTO LAKE RD

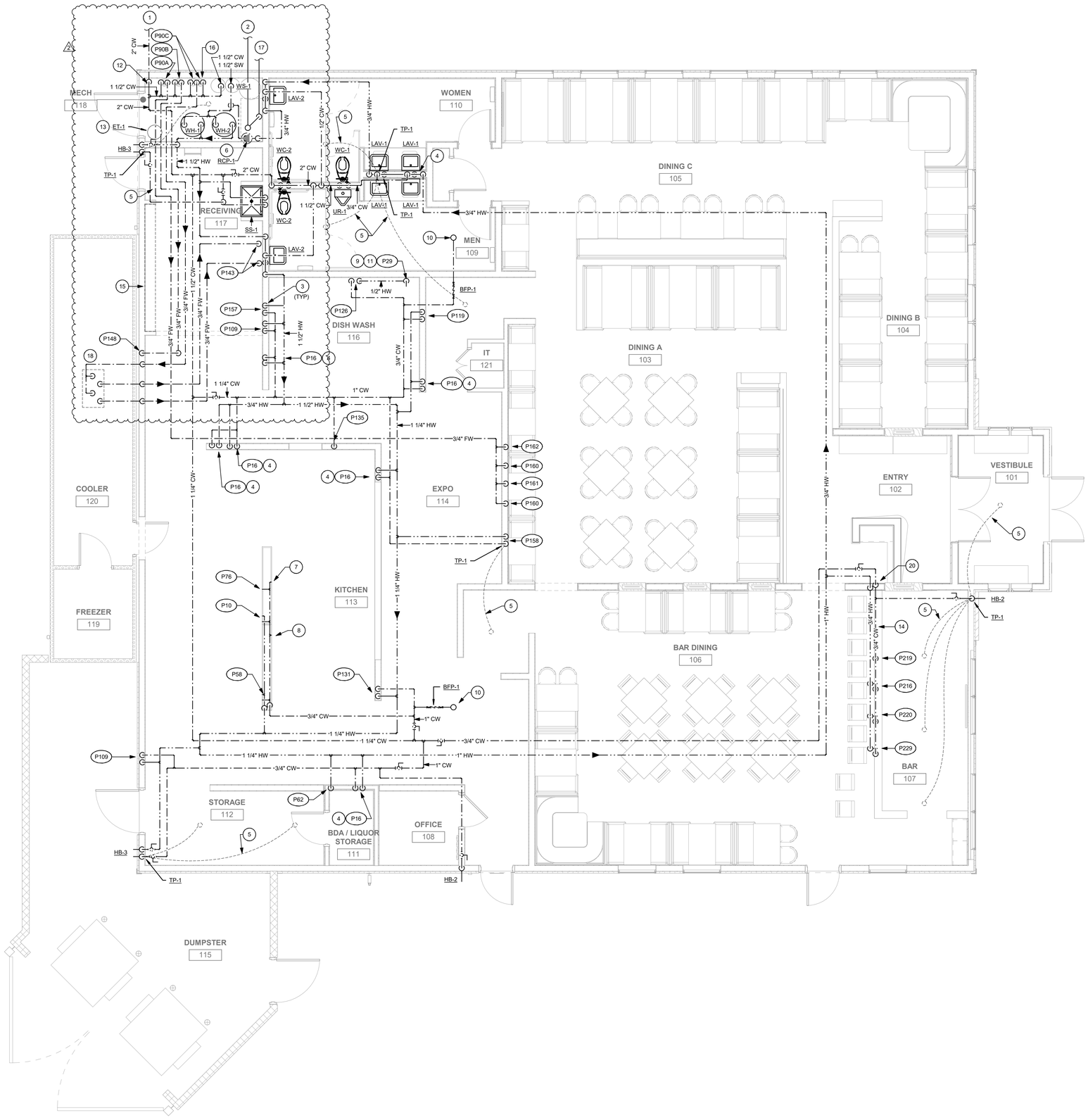
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:

PLUMBING DWV
FLOOR PLAN

P2.1



PLUMBING WATER FLOOR PLAN
1/4" = 1'-0"
1

GENERAL NOTES - PLUMBING WATER PLAN

A	KEY NOTES WITH ELLIPTICAL SYMBOL AND NUMBER CORRESPOND TO KITCHEN EQUIPMENT SHOWN IN THE FOOD SERVICE SHEETS.
B	ANY EXPOSED PIPING SHALL BE INSTALLED AS TIGHT AS POSSIBLE TO THE HEATED SIDE OF THE EXPOSED ROOF STRUCTURE. PIPING INSTALLED IN EXTERIOR WALLS SHALL BE INSTALLED ON THE HEATED SIDE OF THE WALL INSULATION.
C	INSTALLATION OF THE PLUMBING SYSTEMS SHALL BE COORDINATED WITH ELECTRICAL AND MECHANICAL EQUIPMENT, STRUCTURAL SLAB AND FRAMING.
D	REFER TO PLUMBING SHEET P1.1 FOR PLUMBING FIXTURE AND EQUIPMENT SCHEDULES INCLUDING SPECIFICATIONS AND ROUGH-IN SIZES.
E	REFER TO THE FOOD SERVICE SHEETS FOR ADDITIONAL INFORMATION PERTAINING TO KITCHEN EQUIPMENT NOT SHOWN ON THESE SHEETS.
F	PLUMBING CONTRACTOR SHALL COORDINATE WITH THE KITCHEN EQUIPMENT SUPPLIER FOR THE COMPLETE INSTALLATION AND SERVICE CONNECTIONS OF ALL KITCHEN EQUIPMENT.
G	REFER TO ARCHITECTURAL AND MILLWORK DRAWINGS FOR DETAILS OF COUNTERTOPS, CASEWORK, AND OTHER FIXTURES, SHOWING EXACT LOCATION OF OPENINGS FOR PLUMBING ITEMS BEING INSTALLED. COORDINATE THE COMPLETE INSTALLATION WITH THE GENERAL CONTRACTOR.
H	PLUMBING CONTRACTOR TO ARRANGE AND PAY FOR ALL REQUIRED FEES, PERMITS, AND MISCELLANEOUS COSTS ASSOCIATED WITH THE PLUMBING WORK PER LOCAL PLUMBING CODES.
I	BEFORE ANY USE OF THE WATER SYSTEM IS MADE FOR DOMESTIC PURPOSES, IT SHALL BE STERILIZED BY SLOWLY FILLING WITH WATER TO WHICH A STERILIZING AGENT HAS BEEN APPLIED, AT A RATE GIVING 50 PPM OF CHLORINE, AS DETERMINED BY RESIDUAL CHLORINE TEST AT EXTREMITIES OF THE LINE. AFTER LINES HAVE BEEN FILLED FOR A PERIOD OF THREE (3) HOURS, TESTS FOR RESIDUAL CHLORINE SHALL SHOW NOT LESS THAN 50 PPM. IF LESS THAN 50 PPM IS INDICATED, DRAIN OR FLUSH OUT THE LINE AND REPEAT STERILIZATION TREATMENT UNTIL TESTS INDICATE AT LEAST 50 PPM OF RESIDUAL CHLORINE AFTER THREE (3) HOURS. THE LINES SHALL BE FLUSHED UNTIL ALL TRACES OF CHEMICAL HAVE BEEN REMOVED.
J	PLUMBING CONTRACTOR TO FLUSH AND SANITIZE ALL WATER LINES PRIOR TO THE INSTALLATION OF THE FILTRATION SYSTEM.
K	PLUMBING CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF UTILITIES AND PIPING PRIOR TO ANY NEW CONSTRUCTION. COORDINATE WITH CIVIL DRAWINGS AND LOCAL UTILITIES PRIOR TO NEW INSTALLATION.
L	ALL WALL PIPING STUB-OUTS SHALL BE SECURELY TIED TO THE STRUCTURE WITH SUFFICIENT BACKING TO ELIMINATE ANY MOVEMENT.
M	ALL FIXTURES AND EQUIPMENT SHALL BE INSTALLED WITH WATER SUPPLY STOP VALVES IN ACCESSIBLE LOCATIONS. SUPPLY PIPING TO SINKS AND EQUIPMENT SHOULD BE INSTALLED COMPLETE WITH 1/4 TURN BALL VALVES.
N	FINAL CONNECTIONS TO SINKS IN THE KITCHEN SHALL BE HARD PIPED.
O	ALL PENETRATIONS IN FIRE RATED WALL ASSEMBLIES SHALL BE SEALED WITH UL LISTED FIRE STOPPING MATERIAL.
P	HOT WATER SUPPLY DISCHARGE FROM RESTROOM LAV'S, BAR AND KITCHEN HAND SINKS SHALL BE TEMPERED TO 110°F MAX.
Q	PROVIDE PRESSURE REDUCING VALVE CONFORMING TO ASSE 1003 FOR INCOMING DOMESTIC SERVICE IF PRESSURE EXCEEDS 75 P.S.I. PROVIDE PRESSURE REDUCING VALVE AT DISHWASHER AS RECOMMENDED BY MANUFACTURER.
R	PROVIDE INDIVIDUAL BACKFLOW PROTECTION FOR ALL WATER OUTLETS CONNECTING DIRECTLY TO ANY MIXING, BREWING, DISPENSING APPLIANCE, SODA, FILTER, ICE MAKER, DEVICE OR APPARATUS AS REQUIRED BY FBC (PLUMBING) 608.3 AND 608.15.
S	PROVIDE A SHUT-OFF VALVE ON THE WATER SUPPLY LINE FOR HOSE BIBBS. COMPLY WITH FBC (PLUMBING) 606.2(2).

KEYNOTES - P2.2

1	2" DOMESTIC WATER SERVICE. REFER TO THE CIVIL DWG PACKAGE FOR CONNECTION TO SITE UTILITIES.
2	FIRE SPRINKLER CONTRACTOR SHALL ROUGH-IN 6" FIRE SERVICE TO THE MECHANICAL ROOM, COMPLETE WITH 6" GATE VALVE AT THE RISER BASE AND BACKFLOW ASSEMBLY PER JURISDICTIONAL REQUIREMENTS. THE FIRE RISER ASSEMBLY SHALL BE INSTALLED BY A DULY LICENSED FIRE PROTECTION CONTRACTOR. 4'X2' RISER FOOTPRINT SHOWN FOR AVAILABLE CLEARANCE.
3	INSTALL CHECK AND SHUT-OFF VALVES ABOVE CEILING TO ALL FIXTURES IN KITCHEN AREA.
4	ROUTE 1/2" HW & CW DOWN IN WALL TO HAND WASHING FIXTURE. INSTALL SUPPLIES COMPLETE WITH HOT WATER TEMPERING VALVE.
5	1/2" CW BELOW FLOOR, FROM TRAP PRIMER TO FLOOR DRAIN RECEPTOR.
6	PROVIDE INLINE HOT WATER RECIRCULATION PUMP AND CHECK VALVE ASSEMBLY IN THE MECHANICAL ROOM.
7	ALL WATER PIPING IN THE COOKLINE WALL SHALL BE INSTALLED AS RIGID COPPER PIPE. NO PLASTIC TUBING ALLOWED.
8	WATER PIPING SHALL BE FIELD INSTALLED LOW IN PREFABRICATED COOKLINE WALL, BELOW PASS THROUGH WINDOWS. REFER TO KITCHEN PLANS FOR ROUGH-IN INFORMATION.
9	3/4" HW ECOLAB CONNECTION WITH RPZ AND PRESSURE REDUCING VALVE.
10	ROUTE 3/4" COLD WATER UP THRU ROOF WITHIN SEPARATION WALL AND TERMINATE WITH HOSE BIBB. REFER TO SHEET P3.1 FOR CONTINUATION ON THE ROOF.
11	DISHWASHER BY ECOLAB, TABLE BY KITCHEN EQUIPMENT SUPPLIER. DISHWASHER WATER CONNECTION AFTER BOOSTER HEATER TO BE AT 6'-0" AFF AND MAKE CONNECTION WITH HOT WATER BOOSTER HEATER EQUIPMENT SUPPLIED BY ECOLAB INSTALLED BY PLUMBING CONTRACTOR.
12	PLUMBING CONTRACTOR SHALL EXTEND THE 2" DOMESTIC WATER SERVICE TO THE MECHANICAL ROOM. COMPLETE WITH BACKFLOW ASSEMBLY AND MAIN SHUT OFF VALVE AT THE RISER BASE.
13	FIELD COORDINATE PLACEMENT OF THE HOT WATER EXPANSION TANK. WATER PIPE SHALL BE FULL SIZE OF THE EXPANSION TANK CONNECTION.
14	ROUTE WATER DISTRIBUTION PIPING IN BAR DIE WALL, 12" A.F.F.
15	PROPOSED ELECTRICAL PANEL LOCATION. NO PIPING SHALL BE INSTALLED ABOVE OR BELOW THE CEILING AT THIS LOCATION.
16	INSTALL WATER FILTERS AND ASSOCIATED BACKFLOW DEVICE AND SHUT-OFFS AT APPROXIMATELY 6' A.F.F.
17	EXTEND THE 4" FIRE WATER SERVICE UNDERGROUND FROM THE FIRE RISER TO THE REMOTE FIRE DEPARTMENT CONNECTION ON SITE. REFER TO THE CIVIL UTILITY DRAWING FOR PROPOSED ROUTING AND FDC LOCATION.
18	ICE MACHINE WATER PRECOOLER SYSTEM. THE PIPING OUTSIDE THE WALK-IN COOLER SHALL BE INSULATED PER DOMESTIC SERVICE WATER PIPING INSULATION CRITERIA. THE PIPING INSIDE THE WALK-IN COOLER SHALL BE UNINSULATED TYPE L COPPER. REFER TO WATER FILTER PROVISION SCHEMATIC ON SHEET P1.3.

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CHEDDARS SCRATCH KITCHEN
PROTO 18

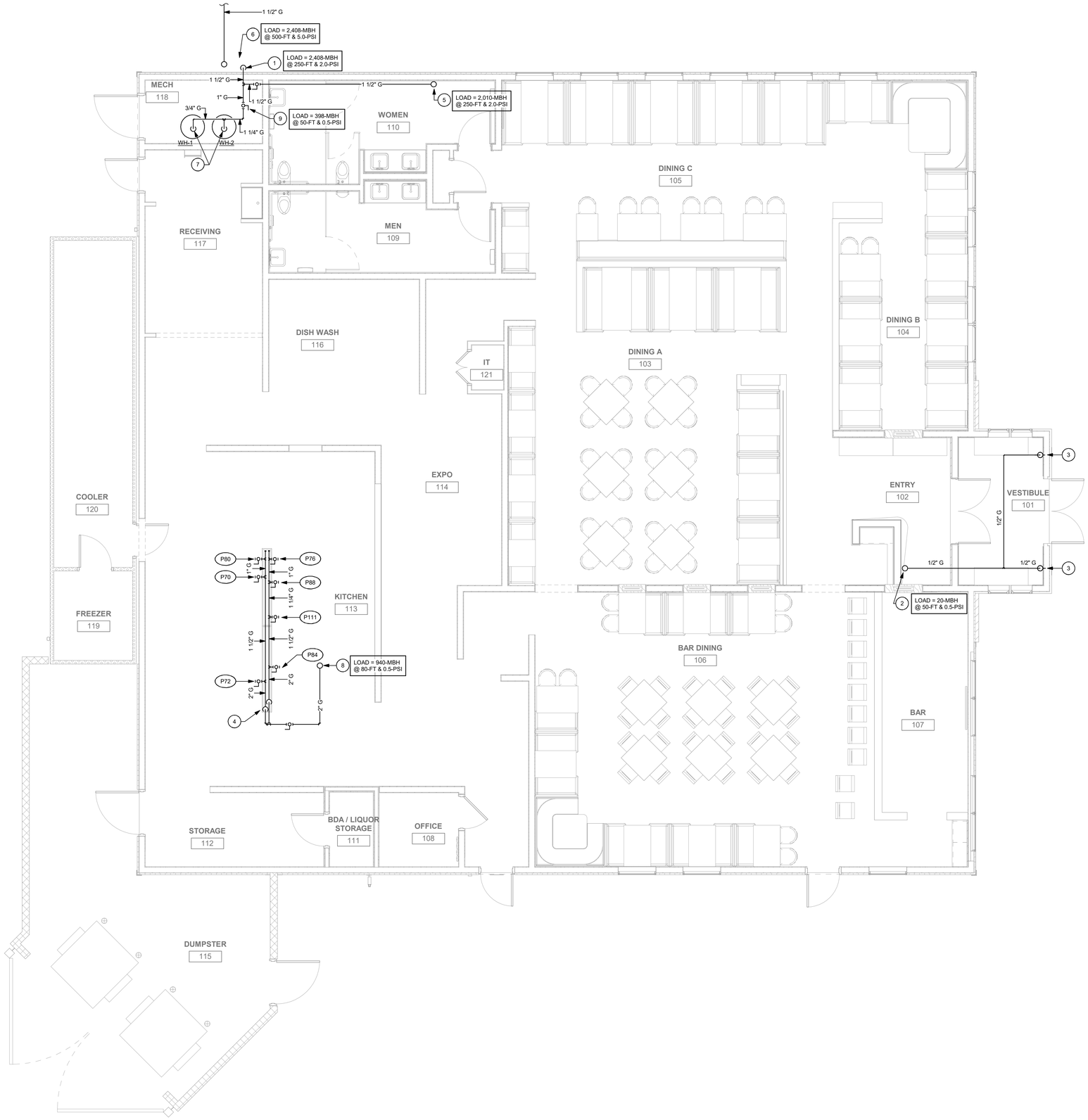
BLOOMINGDALE AVE & GORNTO LAKE RD

RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:
PLUMBING WATER FLOOR PLAN

P2.2



PLUMBING GAS FLOOR PLAN 1
1/4" = 1'-0"

GENERAL NOTES - PLUMBING GAS PLAN

A	ELECTRICAL GAS SHUT-OFF VALVE FOR HOOD FIRE PROTECTION SYSTEM TO BE MOUNTED AT +12" ABOVE FINISHED CEILING TILE. PROVIDE A LOCATION DECAL ON THE CEILING TILE INDICATING "HOOD VALVE".
B	ALL PIPING INSTALLED ABOVE THE FINISHED CEILINGS SHALL BE INSTALLED AS TIGHT AS POSSIBLE TO THE BOTTOM OF THE ROOF STRUCTURE, FOR CLEARANCE WITH THE MECHANICAL DUCTWORK.
C	THE INSTALLATION OF THE PLUMBING SYSTEMS SHALL BE COORDINATED WITH ALL ELECTRICAL AND MECHANICAL EQUIPMENT, AND STRUCTURAL SLAB AND FRAMING.
D	ALL WALL PIPING STUB-OUTS SHALL BE SECURELY TIED TO THE STRUCTURE WITH SUFFICIENT BACKING TO ELIMINATE ANY MOVEMENT.
E	REFER TO THE KITCHEN DRAWINGS PREPARED BY THE KITCHEN EQUIPMENT DESIGNER FOR ADDITIONAL INFORMATION NOT SHOWN ON THIS SHEET.
F	PROVIDE 16GA. CARBON STEEL STRIKER PLATE AT EACH STUD WITH A GAS PIPING PENETRATION FOR PUNCTURE PROTECTION OF GAS PIPING IN WALL.
G	PROVIDE PIPE SUPPORTS AND EXPANSION LOOPS AS REQUIRED.
H	ALL ROOF MOUNTED NATURAL GAS PIPING EXPOSED TO WEATHER SHALL HAVE A PRIMER COAT OF ZINC RICH GALVANIZING PAINT FOR CORROSION PROTECTION. FINAL PAINT FINISH SHALL BE DONE BY PLUMBING CONTRACTOR.
I	ELLIPTICAL SYMBOLS WITH NUMBERS CORRESPOND TO KITCHEN EQUIPMENT TAGS SHOWN IN KITCHEN PLAN SHEETS. REFER TO FOOD SERVICE SHEETS FOR SUPPLEMENTAL INFORMATION.
J	ALL INTERIOR NATURAL GAS PIPING SHALL BE INSTALLED AS THREADED PIPE, OR SHALL BE RUN CONTINUOUSLY SLEEVED. INSTALLED NATURAL GAS PIPING SHALL COMPLY WITH APPLICABLE PLUMBING CODES.
K	ALL COOKING APPLIANCES SHALL BE INSTALLED COMPLETE WITH FLEXIBLE HOSE CONNECTIONS QUICK DISCONNECTS AS FURNISHED BY THE KEC AND INSTALLED BY THE PLUMBING CONTRACTOR.
L	ALL PENETRATIONS IN FIRE RATED WALL ASSEMBLIES SHALL BE SEALED WITH UL LISTED FIRE STOPPING MATERIAL.
M	PLUMBING CONTRACTOR TO ARRANGE AND PAY FOR ALL REQUIRED FEES, PERMITS, AND MISCELLANEOUS COSTS ASSOCIATED WITH THE PLUMBING WORK PER LOCAL PLUMBING CODES.

KEYNOTES - P2.3

1	ROUTE GAS LINE UP EXTERIOR WALL AS SHOWN. PIPE TO PENETRATE EXTERIOR WALL AND ENTER BUILDING ABOVE CEILING.
2	GAS PIPING DOWN FROM ROOF TO SERVE VESTIBULE GAS WALL SCONCES. CONCEAL PIPING ABOVE CEILING OR IN ARCHITECTURAL CHASE.
3	GAS PIPING ROUTED CONCEALED IN WALL TO SERVE VESTIBULE GAS WALL SCONCES. TRANSITION PIPE AS NECESSARY TO MATCH FIXTURE CONNECTION SIZE. PROVIDE WITH ACCESSIBLE SHUT-OFF VALVE IN WALL.
4	EXTEND GAS LINE DOWN FROM CEILING AND ROUTE DOWN IN WALL TO THE COOKING LINE. PROVIDE WITH LINE SIZED VERTICALLY INSTALLED ELECTRIC SOLENOID GAS SHUT-OFF VALVE.
5	GAS PIPING UP THRU ROOF.
6	FURNISH AND INSTALL GAS METER ASSEMBLY. INCOMING GAS SERVICE IS ESTIMATED TO BE 5.0-PSI. REDUCE GAS PRESSURE AT METER TO 2.0-PSI AND ROUTE GAS PIPING TO BUILDING. CONTRACTOR TO MAINTAIN A 3' FOOT CLEARANCE OF GAS REGULATOR ASSEMBLY FROM ELECTRICAL EQUIPMENT. COORDINATE WITH ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION.
7	GAS (0.5 PSI) DOWN TO WATER HEATER COMPLETE WITH GAS COCK, UNION & 6" DIRT LEG.
8	GAS PIPING DOWN FROM ROOF TO SERVE KITCHEN COOKING LINE. CONCEAL PIPING ABOVE CEILING.
9	FURNISH UPSTREAM SHUT-OFF VALVE AND REGULATOR ASSEMBLY TO TRANSITION FROM 2.0-PSI DOWN TO 0.5-PSI. VENT REGULATOR DIRECTLY TO THE EXTERIOR.

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PROJECT NUMBER
DCH22007

CLIENT:

DARDEN RESTAURANTS, INC.
1000 DARDEN CENTER DR.
ORLANDO, FL 32837
PHONE: 407.245.4000
www.darden.com

cheddar's SCRATCH KITCHEN

Issue Date:	02.15.2023
REVISION INFORMATION	
1 CITY COMMENTS	04.04.2023
2 COORDINATION COMMENTS	04.05.2023

Restaurant #: 21K0037

CHEDDARS SCRATCH KITCHEN
PROTO 18

BLOOMINGDALE AVE & GORNTO LAKE RD

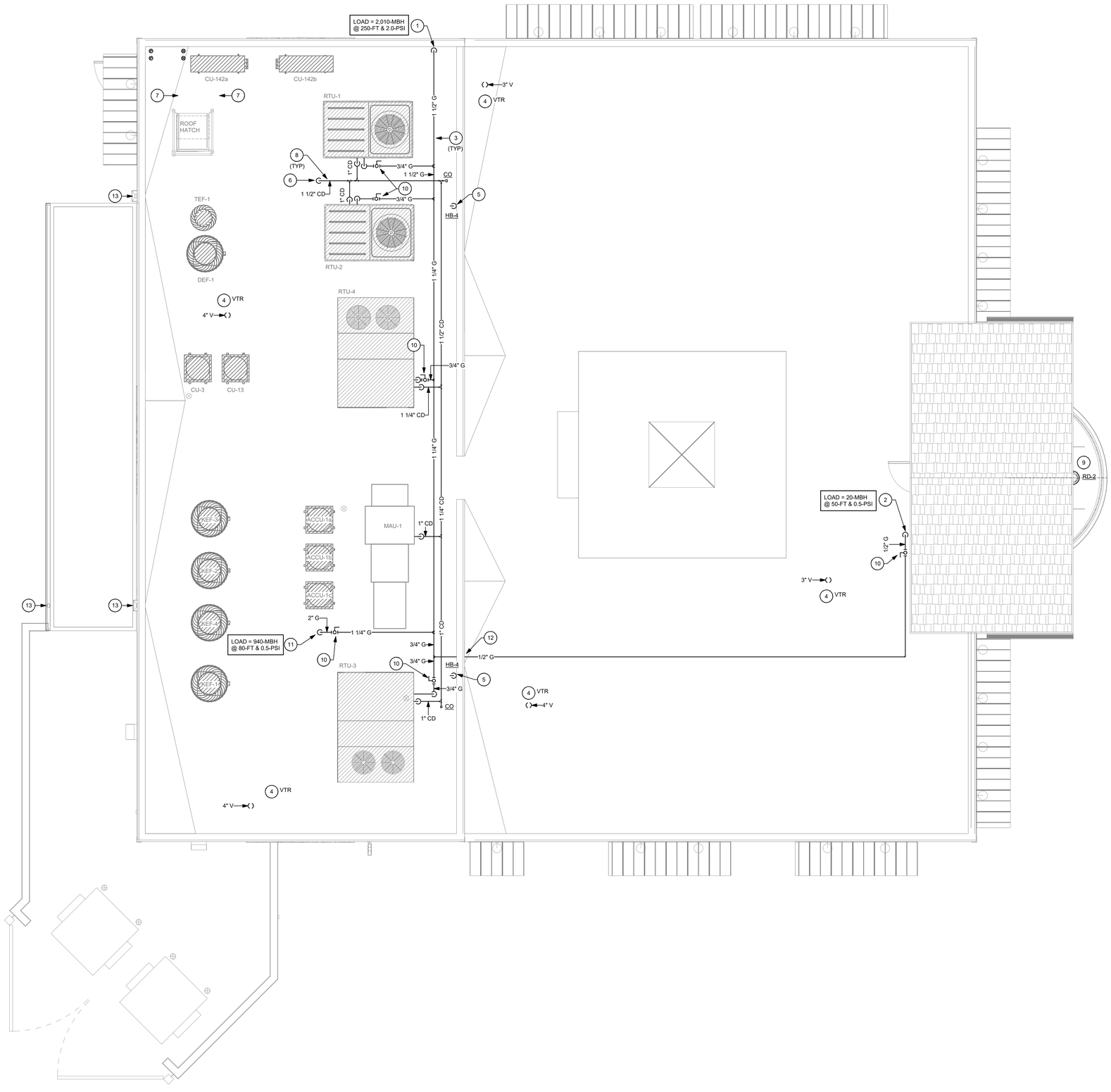
RIVERVIEW, FL 33578

RIVERVIEW, FL

Drawing:

PLUMBING GAS FLOOR PLAN

P2.3



PLUMBING ROOF PLAN
1/4" = 1'-0"
1

GENERAL NOTES - PLUMBING ROOF PLAN

1	ALL PIPING INSTALLED ON THE ROOF SHALL BE SUPPORTED WITH PRE-MANUFACTURED ADJUSTABLE PIPE SUPPORTS AT MAXIMUM 5'-0" ON CENTER AND EVERY CHANGE OF DIRECTION.

KEYNOTES - P3.1

1	GAS PIPING SHALL BE ROUTED DOWN THROUGH THE ROOF. REFER TO GAS PLUMBING PLAN FOR CONTINUATION OF GAS PIPING BELOW THE ROOF.
2	GAS PIPING TO THE VESTIBULE GAS WALL SCONCES SHALL ROUTE DOWN THROUGH ROOF. REFER TO GAS PLUMBING PLAN FOR CONTINUATION OF GAS PIPING BELOW THE ROOF.
3	GAS PIPING TO THE MECHANICAL UNIT SHALL BE ROUTED ON THE ROOF AS SHOWN. PROVIDE WEATHER TIGHT SEAL AT PIPE PENETRATION.
4	ROOF MOUNTED VENT THROUGH ROOF, SIZED AS SHOWN. INSTALLED LOCATION SHALL BE A MINIMUM OF 10'-0" FROM ANY OUTDOOR AIR INTAKE. TOP OF VTR STACK SHALL BE EVEN WITH ANY NEARBY PARAPET WALL.
5	ROUTE 3/4" COLD WATER UP IN WALL TO CONNECT TO HOSE BIBB MOUNTED ON THE SIDE OF WALL 10" ABOVE THE FINISHED ROOF DECK TO AVOID CONFLICT WITH THE SINGLE PLY ROOFING MEMBRANE. REFER TO THE WATER AND GAS PLUMBING PLAN FOR CONTINUATION OF PIPING BELOW THE ROOF.
6	2" CONDENSATE PIPING DOWN THRU ROOF, REFER TO PLUMBING SANITARY PLAN FOR PIPING CONTINUATION.
7	COMBUSTION AIR INTAKE AND EXHAUST FLUE VENT FOR GAS FIRED WATER HEATERS, FURNISHED AND INSTALLED BY THE PLUMBING CONTRACTOR. COORDINATE ROOF PENETRATION, FLASHING AND COUNTER-FLASHING WITH THE GENERAL CONTRACTOR.
8	CONDENSATE DRAIN PIPING FROM THE HVAC UNIT SHALL BE ROUTED ON ROOF, AS SHOWN, AT A MINIMUM PITCH OF 1/4" PER FOOT IN THE DIRECTION OF FLOW. REFER TO THE PLUMBING SHEET P2.1 FOR CONTINUATION OF CONDENSATE DRAINAGE PIPING TO APPROVED RECEPTACLE.
9	2" CANOPY DRAIN. REFER TO P2.1 FOR CONTINUATION.
10	FURNISH UPSTREAM SHUT-OFF VALVE AND REGULATOR ASSEMBLY TO TRANSITION FROM 2.0-PSI DOWN TO 0.5-PSI.
11	GAS PIPING DOWN THROUGH ROOF TO SERVE COOKING LINE. REFER TO GAS PLUMBING PLAN FOR CONTINUATION.
12	GAS PIPING TO PASS THROUGH LOW WALL OPENING. COORDINATE WITH ARCHITECTURE TO ENSURE PIPING DOES NOT IMPEDE STORM DRAIN FLOW THROUGH OPENING.
13	STORM DRAIN TO BE PROVIDED VIA ARCHITECTURAL GUTTERS AND DOWNSPOUTS. COORDINATE WITH ARCHITECTURE TO ENSURE GUTTER DOWNSPOUTS ARE AT MINIMUM SIZE OF 6"x4" OR 6"Ø.

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RIVERVIEW, FL 33578

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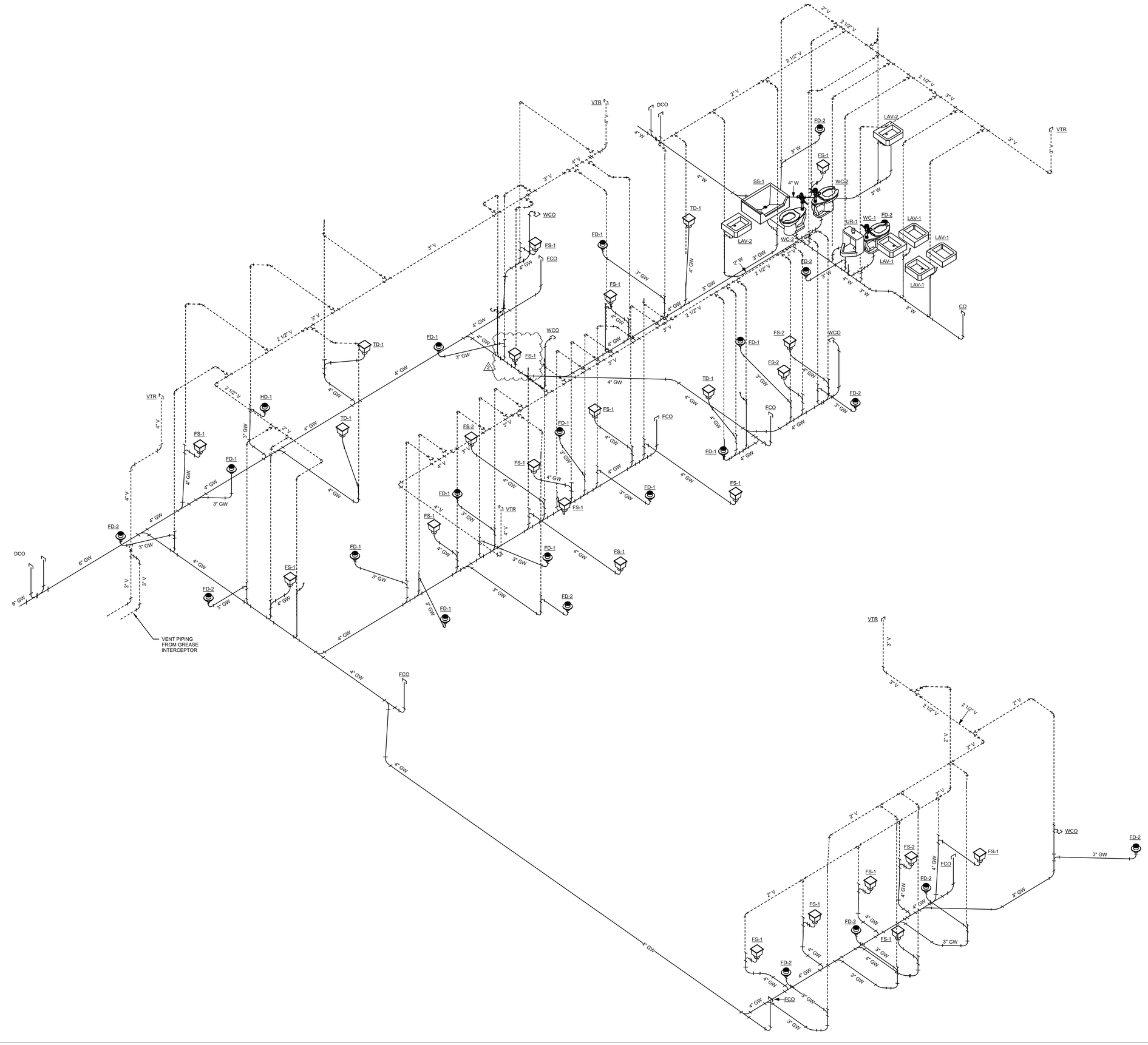
Drawing:
PLUMBING ROOF PLAN

P3.1



WASTE & VENT ISOMETRIC RISER DIAGRAM 1

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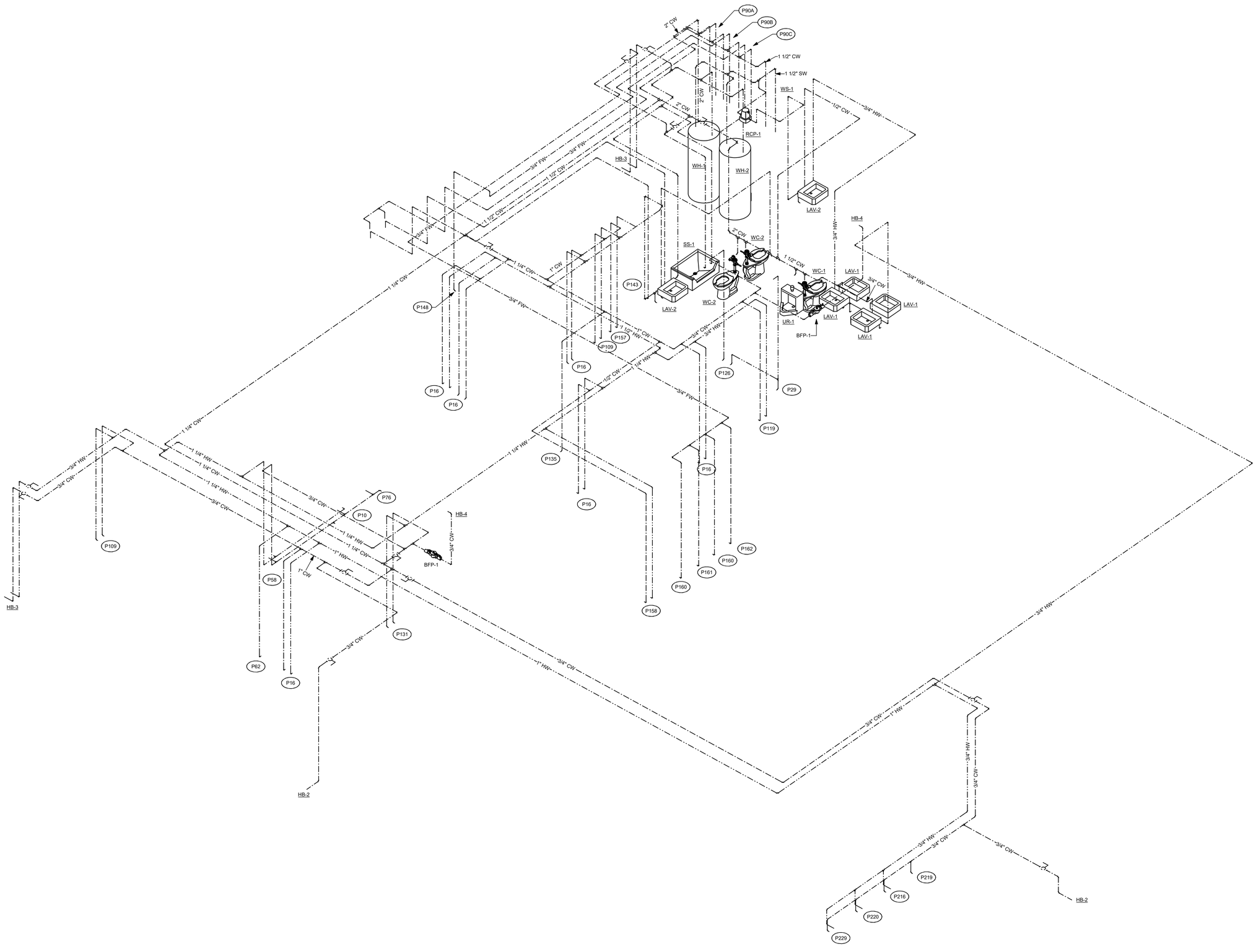
RIVERVIEW, FL

Drawing:

PLUMBING DWV ISOMETRIC RISER DIAGRAM

P4.1



WATER ISOMETRIC RISER DIAGRAM 1

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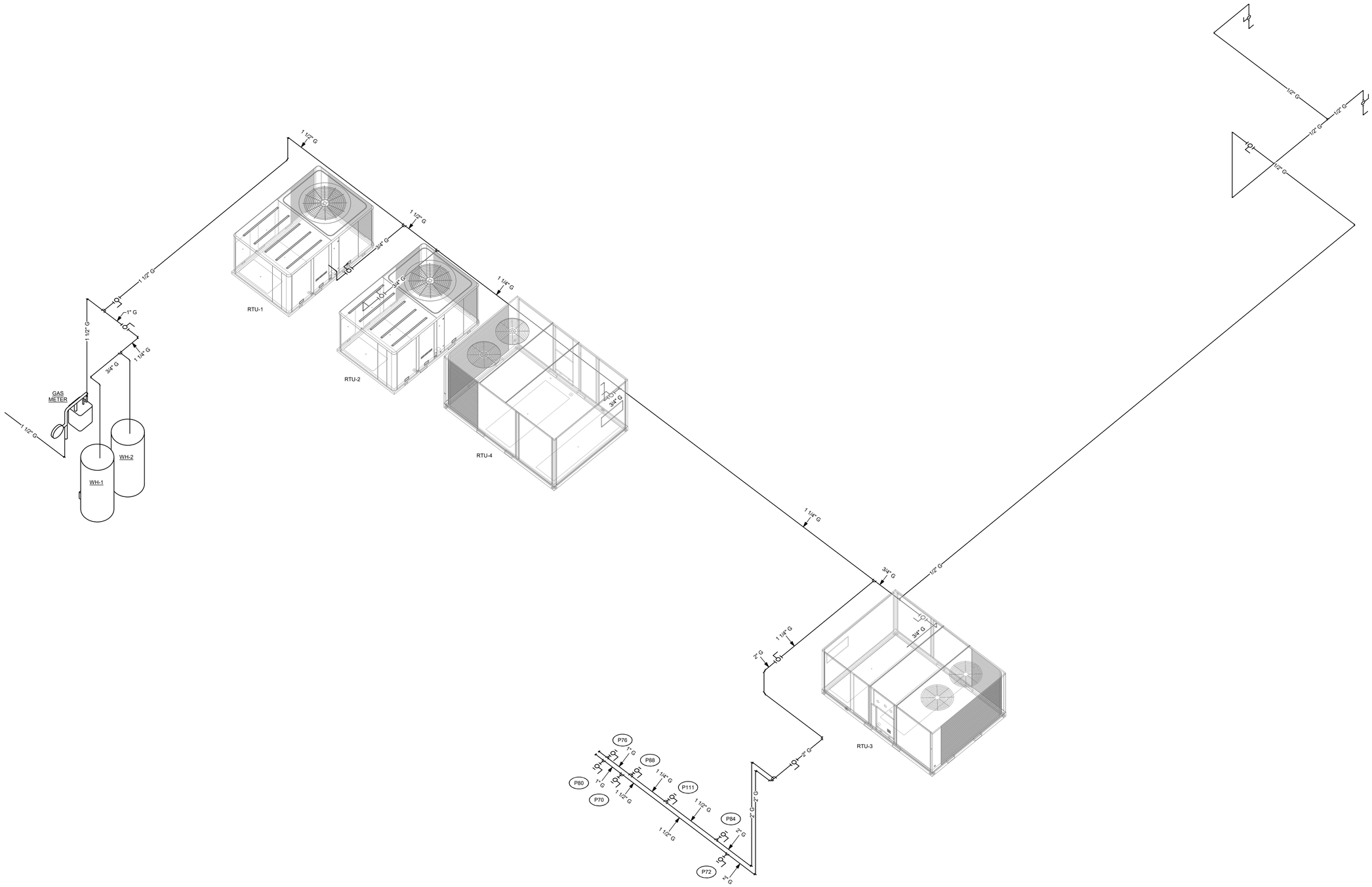
RIVERVIEW, FL

Drawing:

PLUMBING WATER ISOMETRIC RISER DIAGRAM

P4.2



GAS ISOMETRIC RISER DIAGRAM 1

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Drawing:

PLUMBING GAS ISOMETRIC RISER DIAGRAM

P4.3