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SECTION 011000 – SUMMARY**

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Sustainability requirements.
 - 2. Special work requirements.
 - 3. Separate work.
 - 4. Owner-furnished Contractor installed products.
 - 5. Coordination.
 - 6. Reference standards.
 - 7. Applicable codes.
 - 8. Field engineering.
 - 9. Applications for payment
 - 10. Request for information
- B. This Section applies to all Technical Specification Sections, and supplements the General and Supplemental Conditions.

1.2 SUSTAINABILITY REQUIREMENTS

- A. This Project has been designated to achieve sustainability goals set forth by the Owner. Provide services, documentation, and materials to obtain the required rating. Refer to Owner-requirements for further requirements.

1.3 SPECIAL WORK REQUIREMENTS

- A. Limit use of premises to allow for construction operations, and to allow for Owner occupancy.
- B. Smoking is prohibited on site, except for areas designated by the Contractor. No smoking is allowed within enclosed areas.
- C. Owner Occupancy:
 - 1. Owner will occupy premises during periods of construction, [for the conduct of his normal operations. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations.
 - 2. Coordinate use of premises under direction of Construction Manager.
 - 3. Maintain free and safe passage to and from occupied portions of the existing building, in accordance with Code and the Owner's occupancy requirements.
 - 4. [All occupied areas shall remain operational during normal business hours, unless approved otherwise. Notify the Construction Manager a minimum of 48 hours prior to affecting the normal operation of existing occupied spaces].
 - 5. Perform no utility shutdowns unless approved by the Construction Manager.
 - 6. Perform demolition to minimize interference with adjacent occupied and public spaces.
 - 7. To the greatest extent possible, select materials and sequence work in an area as required so that the work may be completed overnight and returned to use the next day in that area.
 - 8. Unless approved otherwise by the Construction Manager or suitably isolated, do not perform loud, disruptive, dusty, or odor producing work during business hours. Perform such work only during hours that occupied spaces are closed to the public.
- D. Noise Producing Activities:
 - 1. Unless approved otherwise, limit excessive noise producing activities to daylight hours. Coordinate with local jurisdictional authorities.
 - 2. Comply with Section 015000 requirements for sound levels and noise control.
- E. Select materials, utilize personnel, perform preparatory work, and sequence work in an area as required so that the work may be completed in the least amount of time possible.

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1.4 SEPARATE WORK

- A. Items noted "NIC" (Not In Contract) or FOIO (Furnished by Owner, Installed by Owner), will be furnished and installed by Owner.

1.5 OWNER-FURNISHED CONTRACTOR INSTALLED PRODUCTS

- A. Coordinate work to facilitate installation of products furnished by the Owner for Installation by the Contractor, as directed, and as indicated "FOIC," on the Drawings.
- B. Owner's Responsibilities:
 - 1. Arrange for and deliver shop drawings, product data, and samples, to Contractor.
 - 2. Arrange and pay for product delivery to site.
 - 3. Upon delivery, inspect products jointly with Contractor.
 - 4. Submit claims for transportation damage.
 - 5. Arrange for replacement of damaged, defective, or missing items.
 - 6. Arrange for manufacturers' warranties, inspections, and service.
- C. Contractor's Responsibilities:
 - 1. Provide quantity take-offs to Owner allowing sufficient time for ordering, delivery and handling.
 - 2. Indicate submittal and delivery dates for each product in the Progress Schedule.
 - 3. Review shop drawings, product data, and samples.
 - 4. Receive and unload products at site; inspect for completeness, for damage, jointly with Construction Manager.
 - 5. Handle, store, install and finish products.
 - 6. Repair or replace items damaged by Work of this Contract.

1.6 COORDINATION

- A. Coordinate work of the various Sections of Specifications to assure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items installed later.
- B. Verify characteristics of elements of interrelated operating equipment are compatible; coordinate work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Coordinate space requirements and installation of mechanical and electrical work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduits, as closely as practical; make runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. In finished areas, except as otherwise shown, conceal pipes, ducts, and wiring in the construction. Coordinate locations of fixtures and outlets with finish elements.
- E. Execute cutting and patching to integrate elements of Work, uncover ill-timed, defective, and non-conforming work, provide openings for penetrations of existing surfaces, and provide samples for testing. Seal penetrations through floors, walls, and ceilings.

1.7 REFERENCE STANDARDS

- A. For products specified by association or trade standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. The date of the standard is that in effect as of the Bid date, or date of Owner-Contractor Agreement when there are no bids, except when a specific date is specified, or when a specific date is required under the applicable building code.
- C. Obtain copies of standards when required by Contract Documents. Maintain copy at jobsite during progress of the specific work.

1.8 APPLICABLE CODES

- A. Conform to the codes listed on the Drawings.

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1.9 FIELD ENGINEERING

- A. Provide field engineering services; establish grades, lines, and levels, by use of recognized engineering survey practices.
- B. Control points are those shown on Drawings. Locate and protect control and reference points. Notify the Construction Manager if reference points cannot be located.

1.10 APPLICATIONS FOR PAYMENT

- A. Complete and submit Applications for Payment in compliance with General Contractor Contract Administration Handbook

1.11 REQUEST FOR INTERPRETATION

- A. A Request for Interpretation (RFI) is a request from the Contractor directed to the Construction Manager for clarification, interpretation, or direction regarding the Work as described by Contract Documents.
- B. Coordinate and submit in timely manner so as not to impede delivery, work, and other conditions that may be detrimental to construction progress
- C. Use "Request for Interpretation" form as approved by the Construction Manager.
- D. Allow sufficient time in construction schedule for Architect's response to the RFIs.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 012300 – ALTERNATIVES**

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Identification and description of Alternate work.
- B. Related Sections:
 - 1. Owner-Contractor Agreement: Alternates accepted by Owner for incorporation into the Work.
 - 2. Sections of Specifications identified in each Alternate.
- C. This Section supplements the General and Supplementary Conditions.

1.2 PROCEDURES

- A. Alternates will be exercised at the option of Owner.
- B. Coordinate related work and modify surrounding work as required to complete the Work, including changes under each Alternate, when acceptance is designated in Owner-Contractor Agreement.

1.3 ALTERNATE DESCRIPTIONS

- A. Alternates are indicated on the Drawings.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 012900 – PAYMENT PROCEDURES**

SECTION 012900 – PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Procedures for preparation and submittal of Applications for Payment.
- B. Related Sections:
 - 1. Owner-Contractor Agreement: Contract Sum and Unit Prices, Amounts of Progress Payments, and Retainages, and times for submittals.
 - 2. 007200 - General Conditions: Progress Payments, and Final Payment.
 - 3. 011000 – Summary: Abbreviations used in this Section.
 - 4. 013300 - Submittals: Submittal procedures; Schedule of Values.
 - 5. 017700 - Closeout Procedures: Contract Closeout Procedures; Final Payment.
- C. This Section supplements the General and Supplementary Conditions.

1.2 FORMAT

- A. For each item, provide a column for listing: Item Number; Description of work; Scheduled Value, Previous Applications; Work in Place and Stored Materials under this Application; Authorized Change Orders; Total Completed and Stored to Date of Application; Percentage of Completion; Balance to Finish; and Retainage.

1.3 PROGRESS PAYMENT PROCEDURES

- A. Contractor shall request payment via Compass Project Cost Management (PCM).
- B. Type required information.
- C. Execute certification by signature of authorized officer.
- D. Use data on accepted Schedule of Values. Provide dollar value in each column for each line item for portion of Work performed and for stored products.
- E. Project Management Construction (PMC) approves request.
- F. Construction Representative (CR) distributes Payment Application using DocuSign.
- G. CR ensures that all required signatures have been made and all required documents have been received in accordance with the Required Construction Document Checklist (RCDC).
- H. CR releases the approved Payment Application via Compass PCM and files the documents per the RCDC.

1.4 PAYMENT SCHEDULES

- A. Unless otherwise required by Owner Contractor Agreement, provide payment applications in accordance with the following Payment Application Checklist in accordance with Project type:

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Tenant Improvement	Work Completed Through	Payment %	Retainage %	Continuation Sheet	GC Lien Release	Subcontractor Lien Releases	Subcontractor List
Payment Application 1	Rough in & Framing	50%	5%	Y	C	C	Y
Payment Application 2	Casework Installation	75%	5%	Y	C	C, U	Y
Payment Application 3	Balance of contract (if any) except for retention	100%	5%	Y	C	C, U	Y
FINAL Payment	All documents received per RCDC and Punchlist Completed	100% of retainage	0%	Y	U	U	Y

C = Conditional

U = Unconditional

Y = Yes

Major Renovation, Minor Renovation, Initiative	Work Completed Through	Payment %	Retainage %	Continuation Sheet	GC Lien Release	Subcontractor Lien Releases	Subcontractor List
Payment Application 1	Project Completion	100%	5%	Y	C	C	Y
Payment Application 2	Balance of contract (if any) except for retention	100%	5%	Y	C	C, U	Y
FINAL Payment	All documents received per RCDC and Punchlist Completed	100% of retainage	0%	Y	U	U	Y

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SECTION 012900 – PAYMENT PROCEDURES**

Ground Up, Conversion	Work Completed Through	Payment %	Retainage %	Continuation Sheet	GC Lien Release	Subcontractor Lien Releases	Subcontractor List
Payment Application 1	1st day of construction	10%	5%	Y	C	C	Y
Payment Application 2	After 30 days of construction	50%	5%	Y	C	C	Y
Payment Application 3	After 60 days of construction	75%	5%	Y	C	C	Y
Payment Application 4 Change Request	Balance of contract (if any) except for retention	100%	5%	Y	C	C	Y
FINAL Payment	All documents received per RCDC and Punchlist Completed	100% of retainage	0%	Y	U	U	Y

C = Conditional

U = Unconditional

Y = Yes

- B. The Lien Waivers required are Exhibit 1-4 attached to the MSA. No alternative lien waivers will be accepted.

1.5 PROCEDURES FOR CHANGES IN SCOPE OF WORK

- A. All changes in scope will require a Contract Revision in Compass PCM. These revisions must be approved by Starbucks before Contractor can perform the work.
- B. Contractor submits bid for the change in scope via Compass PCM, documenting any change to the scope, contract sum and/or contract schedule.
- C. The PMC reviews the changes ensuring:
1. Work description is as agreed and is not included in the original contract.
 2. Work is not the responsibility of a third party (e.g. Landlord). If the work is the responsibility of a third party, ensure the work is properly documented so that it may be submitted for reimbursement.
 3. Costs provided are acceptable.
 4. Appropriate detail and backup provided to support the costs.
 5. Overhead and profit percentages are per contract.
 6. Appropriate 'reason code' is used to define the reason for change.
- D. Once the change has been approved by PMC, the Contractor may proceed with the work.
- E. Payment for all approved changes will be released via the same process as the Progress Payments

1.6 SUBSTANTIATING DATA

- A. When PMC requires substantiating information, submit data justifying line item amounts in question.
- B. Provide data with cover letter. Show Application number and date, and line item by number and description.

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SECTION 012900 – PAYMENT PROCEDURES**

1.7 FINAL PAYMENT PROCEDURES

- A. Once the Contractor has completed the project in accordance with contract documents, all held retainage of the contract sum will be released to the Contractor.
- B. Prior to releasing the Final Application and Certificate for Payment Owner must receive all documents on the RCDC and the Punchlist must be complete.
- C. Contractor submits request for Final Payment in Compass PCM.
- D. Contractor submits all required documents per the RCDC
- E. After CR and PMC validate that the Punchlist is complete and that all required documents have been received, the Final Payment will be released
- F. Final Payment will be released via the same process as the Progress Payments

PART 2 - PRODUCTS

- A. Not Used.

PART 3 - EXECUTION

- A. Not Used.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 013113 – PROJECT COORDINATION**

SECTION 013113 – PROJECT COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. General coordination provisions.
 - 2. Requirements for coordination of space.
 - 3. Use of coordination drawings.
- B. This Section applies to all Technical Specification Sections, and supplements the General and Supplementary Conditions.

1.2 GENERAL COORDINATION PROVISIONS

- A. Coordinate work of various specification sections to assure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items installed later.
- B. Carefully study and compare Contract Documents before proceeding with fabrication and installation of work. Promptly advise Construction Representative of any error, inconsistency, omission, or apparent discrepancy discovered.
- C. Allot time in construction scheduling for liaison with Construction Representative and Architect. Establish procedures for handling queries and clarifications. Use Contractor's standard "Request for Interpretation" form to initiate clarifications. Allow sufficient time in construction schedule for Architect's response to the request.
- D. In addition to meetings specified in Section 013119, hold coordination meetings and conferences with personnel and subcontractors to assure coordination of the work.
- E. Coordinate scheduling, submittals, and work of various specification sections to ensure efficient and orderly sequence of installation of independent construction elements.
- F. Verify that characteristics of operating equipment are compatible with building utilities and services.
- G. Verify characteristics of elements of interrelated operating equipment are compatible; coordinate work of various specification sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- H. In finished areas, except as otherwise indicated, conceal pipes, conduit and wiring in the construction. Coordinate locations of fixtures and outlets with finish elements.
- I. Execute cutting and patching to integrate elements of work, uncover ill-timed, defective, and non-conforming work, provide openings for penetrations of existing surfaces, and provide samples for testing. Seal penetrations through floors, walls, and ceilings.

1.3 COORDINATION OF SPACE

- A. The Contractor shall be responsible for coordinating the actual layout of plumbing, fire protection, HVAC, electrical, and other similar elements, as necessary to avoid interference, maintain the configurations of architectural elements, maintain minimum ceiling and clearance heights as required by code, and accommodate existing obstructions which are to remain.
- B. Layouts shown on the Drawings are diagrammatic. Follow routings shown for pipes, ducts, and conduit as closely as practical. Where routing changes are required in exposed locations within public spaces, or will affect architectural elements, verify modifications with the Construction Representative prior to proceeding.
- C. Develop coordination drawings, and other preinstallation coordination methods as necessary to coordinate layouts prior to installation. Coordination drawings shall be based on the approved structural steel framing shop drawings, and shall consist of overlay drawings, or other similar methods to graphically indicate plumbing, fire protection, HVAC, electrical, and other similar elements in a single location in order to identify conflicts.

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GUIDE SPECIFICATIONS
SECTION 013113 – PROJECT COORDINATION**

- D. Where coordination drawings, or other preinstallation coordination methods show that available space is inadequate or that modifications will affect architectural elements, request information from the Construction Representative before proceeding with work. No additional payment will be made for installation conflicts which could have been identified by coordination drawings or other preinstallation coordination methods.
- E. Provide clear access to control points, clean-outs, valves, strainers, control devices, and specialty items of every nature to such systems and equipment to obtain maximum head room. Provide adequate clearances as necessary for operation and maintenance.
- F. Make runs parallel with lines of building. Utilize space efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

PART 2 - PRODUCTS

- A. Not Used.

PART 3 - EXECUTION

- A. Not Used.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 013119 – PROJECT MEETINGS**

SECTION 013119 – PROJECT MEETINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Contractor participation in pre-construction conferences.
 - 2. Contractor administration of progress meetings and pre-installation conferences.
- B. This Section applies to all Technical Specification Sections, and supplements the General and Supplemental Conditions.

1.2 GENERAL MEETING REQUIREMENTS

- A. Make physical arrangements for meetings; notify participants, prepare agenda with copies for each attendee.
- B. Take meeting minutes, and distribute copies within 2 days to the Construction Manager, Architect, and all attendees. Distribute copies to other parties as appropriate.
- C. All representatives attending meetings shall be authorized to act on behalf of the entity each represents.

1.3 PRECONSTRUCTION CONFERENCES

- A. The Construction Manager will administer pre-construction conference for execution of Owner-Contractor Agreement and exchange of preliminary submittals.
- B. The Construction Manager will administer site mobilization conference at Project site for clarification of Owner and Contractor responsibilities in use of site and for review of administrative procedures.

1.4 PROGRESS MEETINGS

- A. Schedule and administer progress meetings throughout the Work at interval determined by Owner's Construction Manager.
- B. Attendance: Job superintendent, major subcontractors and suppliers, Construction Manager, and others as appropriate to the meeting agenda.
- C. Suggested Agenda:
 - 1. Review of Work progress.
 - 2. Status of progress schedule and adjustments.
 - 3. Delivery schedules.
 - 4. Submittals.
 - 5. Maintenance of quality standards.
 - 6. Pending changes and substitutions
 - 7. Status of sustainable practices.
 - 8. Other items affecting progress of Work.

1.5 PRE-INSTALLATION CONFERENCES

- A. Where required in a specification Section, schedule and administer a pre-installation conference prior to commencing work of the Section.
- B. Unless otherwise required, notify the Construction Manager a minimum of 7 calendar days prior to each scheduled meeting.
- C. Require the attendance of entities directly affecting, or affected by, the work of the Section.
- D. Review conditions of installation, preparation and installation procedures, and coordination with related work.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 013233 – PHOTOGRAPHIC DOCUMENTATION**

SECTION 013233 – PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Preconstruction photographs.
 - 2. Periodic construction photographs.
- B. Related Requirements:
 - 1. 017700 - Closeout Procedures: Submitting photographic documentation as Project Record Documents at Project closeout.

1.2 SUBMITTALS

- A. Digital Photographs: Submit unaltered, original, full-size image files.
 - 1. Digital Camera: Minimum sensor resolution of 8 megapixels.
 - 2. Identification: Provide the following information with each image description in file metadata tag:
 - a. Name of Project including Store Number.
 - b. Name and contact information for photographer.
 - c. Date photograph was taken.
 - d. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
 - 3. Format: Submit in digital compressed format to appropriate Box folder.

1.3 USAGE RIGHTS

- A. Obtain and transfer copyright usage rights from photographer to Owner for unlimited reproduction of photographic documentation.

PART 2 - PRODUCTS

2.1 PHOTOGRAPHIC MEDIA

- A. Digital Images: Provide images in JPG format, with minimum size of 8 megapixels.

PART 3 - EXECUTION

3.1 CONSTRUCTION PHOTOGRAPHS

- A. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.
- B. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
 - 1. Date and Time: Include date and time in file name for each image.
 - 2. Store Number: Include Store Number in file name for each image.
 - 3. Field Office Images: Maintain one set of images accessible in the field office at Project site, available at all times for reference. Identify images in the same manner as those submitted to Construction Representative.
- C. Periodic Construction Photographs: Take 20 photographs weekly, with timing adjusted to coincide with the progress meetings specified in Section 013119. Select vantage points to show status of construction and progress since last photographs were taken.
- D. Final Completion Construction Photographs: Take minimum 20 color photographs after date of Substantial Completion for submission as Project Record Documents. Construction Representative will inform photographer of desired vantage points.

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SECTION 013233 – PHOTOGRAPHIC DOCUMENTATION

- E. Additional Photographs: Construction Representative may request photographs in addition to periodic photographs specified.
1. Three days' notice will be given, where feasible.
 2. Circumstances that could require additional photographs include, but are not limited to, the following:
 - a. Immediate follow-up when on-site events result in construction damage or losses.
 - b. Photographs to be taken at fabrication locations away from Project site.
 - c. Substantial Completion of a major phase or component of the Work.
 - d. Extra record photographs at time of final acceptance.
 - e. Receipt of damaged products upon delivery prior to unpacking or removal from carton/crate.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 013300 – SUBMITTAL PROCEDURES**

SECTION 013300 – SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Submittal form requirements.
 - 2. Submittal schedule.
 - 3. Contractor responsibilities.
 - 4. Requirements for each type of submittal.
- B. Related Sections:
 - 1. 007200 - General Conditions of the Contract: Additional submittal requirements.
 - 2. 013546 – Sustainable Design Requirements: Sustainability submittals.
 - 3. 016000 - Product Requirements: Substitution submittals.
 - 4. 017700 - Closeout Procedures: Closeout submittals.
- C. This Section applies to all Technical Specification Sections, and supplements the General and Supplementary Conditions.

1.2 SUBMITTAL FORM REQUIREMENTS

- A. Provide the following, as applicable, on each submittal:
 - 1. The Project name and number.
 - 2. Present and Previous submittal dates.
 - 3. Contractor's submittal number.
 - 4. Subcontract identification.
 - 5. The names of:
 - a. Contractor.
 - b. Supplier.
 - c. Manufacturer.
 - 6. Identification of revisions on resubmittals.
 - 7. For each product, reference corresponding specification section and paragraph number.
 - 8. A 3 x 2 inch blank space for Contractor and Architect stamps.
- B. Deliver submittals to the Construction Manager. Include name of contact person identified at the time of Agreement.
- C. Transmit submittals under AIA form G810 or other transmittal form as accepted by the Construction Manager.
- D. Submittals in graphic form shall be clear readable copies with Contractor's original stamp. Facsimile submittals will not be accepted.

1.3 SUBMITTAL SCHEDULE

- A. Make submittals to the Construction Manager as required, causing no delay in the work.
- B. Allow a minimum of 3 working days from receipt, for the Construction Manager to review each submittal. Allow additional time for large and complex submittals representing major portions of the Work, such as fire protection, structural steel, or curtain wall.
- C. Schedule submittals to allow sufficient time for possible revision and resubmittal of the rejected submittals, without affecting the construction schedule.
- D. Make the following submittals to the Construction Manager prior to starting construction and within 10 working days of the Notice to Proceed:
 - 1. Certificates of insurance.
 - 2. List of subcontractors and suppliers.
 - 3. Construction schedule.
 - 4. Submittal log/schedule.

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GUIDE SPECIFICATIONS
SECTION 013300 – SUBMITTAL PROCEDURES**

5. Products list.

E. Submit Schedule of Values prior to first application for payment.

1.4 GENERAL REQUIREMENTS FOR SUBMITTALS

A. Make submittals to the Construction Manager of (3) copies unless otherwise directed.

B. Review submittals prior to submittal to the Construction Manager. Verify specified requirements for products, field measurements, and field construction requirements.

C. Stamp and sign each submittal as certification that the submittal has been reviewed by the Contractor. Submittals not stamped and signed by the Contractor will be returned by the Construction Manager without review for resubmittal.

D. Notify the Construction Manager in writing, at time of submission, of all deviations in the submittals from requirements of the Contract Documents.

E. Make additional copies of approved submittals as necessary to implement the Work.

F. Review and approval of a submittal by either the Construction Manager or the Architect shall not relieve the Contractor from responsibility for the proper fitting, finishing, quantities, and erection of the work in strict accordance with the Contract requirements.

G. Review and approval of a submittal by the Construction Manager or the Architect shall not relieve the Contractor from the responsibility for providing work not indicated on the submittal, but otherwise required for the completion of the work.

H. Do not fabricate or erect work prior to approval of the submittals.

I. Should discrepancies become evident, immediately notify Construction Manager for resolution before proceeding with shop work.

J. Incorporation of substitutions into submittals will be considered cause for rejection of the submittal.

K. Submittals will be reviewed by the Architect for conformance to the design concept, only. Architect's review of vendor designed items shall not relieve the Contractor of responsibility for compliance with specified performance requirements.

L. If the Contractor fails to review Shop Drawings, Product Data, or Samples to determine their responsiveness to the Contract Documents, or fails to substantially respond to Architect's review comments prior to resubmittal, or if the Contractor makes submittals which substantially alter the Contract Documents, the Contractor shall reimburse the Owner for the charges of the Architect for extra services required to review such submittals.

1.5 SUSTAINABILITY SUBMITTALS

A. Make sustainability submittals to the Construction Manager of (3) copies

B. Sustainability submittals are specified in Section 013546 and in the various technical sections.

1.6 CONSTRUCTION SCHEDULE

A. Prepare schedule in the form of a network planning system (CPM) for scheduling and controlling the work. Note the critical path.

B. Show commencement and completion dates proposed for each subdivision of work.

C. Update and submit weekly. Indicate actual start and completion of all completed activities. Graphically indicate changes from previously issued schedule.

D. Incorporate remedial construction into schedule when remedial work is required.

E. Show submittal dates required for shop drawings, product data, and samples, and product delivery dates, including those furnished by Owner.

F. Coordinate with the Owner's schedule, showing all Contract activities to be performed by the Owner including their start, duration, completion, float and critical path.

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SECTION 013300 – SUBMITTAL PROCEDURES

1.7 SUBMITTAL LOG/SCHEDULE

- A. List each type of submittal, and the date that the submittal will be made. Indicate Owner Architect review time proposed.

1.8 PRODUCTS LIST

- A. Complete list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.

1.9 SCHEDULE OF VALUES

- A. Submit Schedule of Values prior to first Application for payment.
- B. Submit schedule on AIA Form G703. Contractor's standard form or media-driven printout will be considered on request.
- C. Format: Table of Contents of this Project Manual. Identify each line item with number and title of the major Specification Sections.
- D. Include in each line item a directly proportional amount of Contractor's overhead and profit.
- E. Revise schedule to list change orders, for each application for payment.

1.10 SHOP DRAWINGS

- A. Submit Shop Drawings required by individual Sections of the Specifications, and as otherwise required for proper performance of the work.
- B. Illustrate fully the requirements of the Specifications and the Contract Drawings, and accurately show quantities, kinds of materials, methods of assembly, and all data required for fabrication, erection, and installation.
- C. Show the relationship of adjoining work, relevant field conditions and dimensions; coordinate with affected subcontractors and suppliers if in conflict. Where specific items such as field dimensions, clearances, adjacent construction, mounting configurations, access requirements, structural calculations, etc. are required by the technical specification Sections, failure to provide such information on the shop drawings may be cause for rejection without review.
- D. Submit to the Construction Manager one electronic copy for review.
- E. Shop drawings will be reviewed for conformance to the design concept, only.
- F. The Construction Manager will return an electronic copy to Contractor with corrections, notations and reviews stamp indicating action to be taken.
- G. In the case of rejected Shop Drawings, the Construction Manager will return the electronic copy to the Contractor for his use in the preparation of revised drawings for resubmittal.
- H. Should discrepancies become evident, immediately notify Construction Manager for resolution before proceeding with shop work.
- I. CADD generated drawings may be obtained from the Owner only for use in preparation of shop drawings for this Project.
 - 1. Release of CADD information will be restricted to the following categories:
 - a. Architectural floor plans.
 - b. RCP's.
 - c. Casework drawings.
 - 2. The CADD drawings will contain only the background information; reference symbols, and other similar data will not be included.
 - 3. The CADD files are generated on PC hardware with REVIT software. Architect and Owner have the capability to develop CADD output of the following file formats:
 - a. AutoCAD (.dwg)
 - b. Drawing Interchange Format (.dxf)
 - c. Revit (.rvt)
 - 4. When requesting CADD drawings, specify the output form required.

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5. Request documents by submitting an executed copy of the Architect's "Agreement Concerning Use Of Electronic Media." Example of the form is bound in this manual following this Section. Use of such documents implies Contractor's and subcontractors' agreement to the terms described on the form. Fully describe requirements for each request.
6. CADD exchange shall only occur one time and will include the architectural floor and ceiling plans.
7. Contractor shall maintain a log of requests and shall submit the final log for review at Project Closeout.

1.11 PRODUCT DATA

- A. Mark each copy to identify applicable products, models, options, and other data. Include manufacturer's printed installation instructions.
- B. Number of copies: One electronic copy. The Construction Manager will return an electronic copy to Contractor with corrections, notations and review stamp indicating action to be taken.
- C. Modify product data and installation instructions to delete information which is not applicable to the work.
- D. Supplement standard information to provide information specifically applicable to the work.

1.12 SAMPLES

- A. Submit samples as specified in the technical Sections.
- B. Include identification on each sample, giving full information.
- C. Submit the number of samples specified in the technical Sections. Where quantity is not specified, submit 3 samples. One will be retained by the Construction Manager.
- D. Unless specified otherwise, submit full range of manufacturers' standard colors, textures, and patterns for Owner's selection.
- E. Submit samples to illustrate functional characteristics of the product, with integral parts and attachment devices. Coordinate submittal of different categories for interfacing work.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS**

SECTION 013544 – CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT

SECTION 013544 – CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Description of the Construction Indoor Air Quality (IAQ) Management Plan
 - 2. IAQ Construction Requirements to meet the sustainability requirements for the Project.
- B. Related sections:
 - 1. 013300 – Submittals
 - 2. 013546 – Sustainable Design Requirements: Sustainable practices requirements.
- C. Construction Indoor Air Quality Requirements:
 - 1. The Owner has set indoor air quality goals for job site operations on project, within the limits of the construction schedule, contract sum, and available materials, equipment, products and services. These goals include:
 - a. Protect workers on the site from undue health risks during construction.
 - b. Install low-VOC materials as specified in Part 2 – Products.
 - c. Prevent residual problems with indoor air quality in the completed building.
- D. This Section applies to all Technical Specification Sections, and supplements the General and Supplementary Conditions.
- E. Substitutions: Substitutions will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

- A. Sheet Metal and Air Conditioning National Contractors Association (SMACNA):
 - 1. IAQ Guideline for Occupied Buildings Under Construction, 1995, Chapter 3.

1.3 SUSTAINABILITY SUBMITTALS

- A. Submit the following in accordance with Section 013300 – Submittals.
- B. Indoor Air Quality Management Plan:
 - 1. Develop and submit a written construction indoor air quality management plan to meet the sustainability goals of the Project.
 - 2. Submit within fourteen days after receipt of Notice to Proceed and prior to beginning any work on the site.
 - 3. The IAQ management plan shall comply with the five requirements of SMACNA *IAQ Guideline for Occupied Buildings under Construction*, 1995, Chapter 3: HVAC protection, source control, pathway interruption, housekeeping, and scheduling and shall include:
 - a. List of IAQ protective measures to be instituted on the site:
 - 1) HVAC system protection during construction.
 - 2) Source control through specification and installation of low-toxic or non-toxic materials.
 - 3) Pathway interruption to isolate work areas where emitting materials are being installed.
 - 4) Housekeeping to protect materials that are stored before installation and to avoid spreading contamination through the Project.
 - 5) Sequencing installation of materials to avoid contaminating absorptive materials during construction.
 - b. Schedule for inspection and maintenance of IAQ measures.
- C. IAQ Documentation: Provide form declaring that the requirements of IAQ Plan have been met. See Section 013546 for these submittal requirements.

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GUIDE SPECIFICATIONS**

SECTION 013544 – CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT

PART 2 - PRODUCTS

2.1 MATERIALS AND PRODUCTS

- A. Low emitting products have been specified in appropriate sections.
- B. If air handlers must be used during construction, filtration media with a Minimum Efficiency Reporting Value (MERV) of 8, as determined by ASHRAE 52.5-1999, must be used at each return air grille.

PART 3 - EXECUTION

3.1 ALL PHASES

- A. Meet or exceed the minimum requirements of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines for Occupied Buildings Under Construction, 1995, as applicable to new buildings. As a minimum, this means:
 - 1. Protect the ventilation system components from contamination:
 - a. Store HVAC equipment in a clean, dry location.
 - b. Seal all HVAC inlets and outlets.
 - c. Seal HVAC components during installation.
 - d. Use a temporary ventilation system during construction.
 - e. Use temporary filtration media.
 - 1) Filtration media shall have a Minimum Efficiency Reporting Value [MERV] of 8 as determined by ASHRAE 52.2-1999) on any return air systems operational during construction. For air intakes into rooms that are very sensitive to dust contamination, such as computer rooms, filtration media should be the best that the HVAC systems fans can handle, up to an MERV rating of 17.
 - 2) Replace all filtration media immediately prior to occupancy.
 - f. Clean air plenums before closing them in.
 - g. Inspect filters regularly.
 - 2. Provide pollution source control:
 - a. Protect on-site stored and installed absorptive materials (such as insulation, drywall, and wood) from moisture damage and from contamination by construction dust, debris, and fumes during all phases of construction, both before and after installation.
 - b. Do not install moisture-damaged materials.
 - c. Ensure that construction detailing will not result in moisture intrusion.
 - d. Use low-emitting products (specified in appropriate sections).
 - e. Provide strategies to avoid tracking pollutants into the work areas (such as walk-off mats).
 - f. Allow high-VOC materials to off-gas prior to installation. For example, all dry furnishing and materials (such as carpet, floor tile, acoustical tile, textiles, office furniture, wood shelving, etc.) shall be allowed to "air-out" in clean environments prior to installation in a building.
 - g. Use the least amount of "wet" materials (such as adhesives, sealants, glazes, caulks, paints, etc.) during construction and product applications while still maintaining installation protocol required to meeting for manufacturer's warrantee requirements.
 - h. Cut and fabricate materials outside whenever possible.
 - i. Use electric tools with vacuum-assist, rather than gas-powered tools.
 - 3. Provide interruption of pollutant pathways.:
 - 4. Use an air barrier or pressure differential to isolate areas at different stages of completion.
 - 5. Practice healthy housekeeping.
 - a. Minimize accumulation of dust and other contaminants.
 - b. Confine dust-generating activities.
 - c. Suppress dust.
 - 1) Use wet sanding for gypsum board assemblies. Exception: Dry sanding allowed subject to Construction Representative approval of the following measures:
 - a) Full isolation of space under finishing
 - b) Plastic protection sheeting is installed to provide air sealing during the sanding
 - c) Closure of all air system devices and ductwork
 - d) Sequencing of construction precludes the possibility of contamination of other spaces with gypsum dust

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GUIDE SPECIFICATIONS**

SECTION 013544 – CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT

- e) Worker protection is provided
 - d. Clean up dust.
 - e. Clean up spills.
 - f. Keep work area dry.
 - g. Seal containers of volatile liquids.
- 6. Schedule construction activities to reduce exposure to VOCs.
 - a. Install porous materials only after closing in the building.
 - b. Account for curing time and off-gassing when scheduling construction activities.
 - c. Allow wet-spray cellulose to dry before covering.
 - d. Install carpeting, acoustical panels, and furnishings after interior finishes have been allowed time to cure/dry in accordance with other good building practices.
 - e. Provide adequate ventilation during curing period.
 - 1) Provide supplemental (spot) ventilation for at least 72 hours after work is completed. Preferred HVAC system operation uses supply air fans and ducts only; exhaust provided through windows. Use exhaust fans to pull exhaust air from deep interior locations. Stair towers and other paths to exterior can be useful during this process.
- B. Use safety meetings, signage, and subcontractor agreements to communicate the goals of the construction indoor air quality management construction plan.
- C. Conduct regular inspection and maintenance of indoor air quality measures including ventilation system protection, and ventilation rate.
- D. Require VOC-safe masks for interior and exterior workers installing VOC-emitting products (products that contain 150 g/L or more VOCs).
- E. Use low-toxic cleaning supplies for surfaces, equipment, and worker's personal use. Options include several soybean-based solvents and cleaning options and citrus-based cleaners. (SoySolv provides several soy-based solvents and cleaning options. Phone 1-800-231-4274 or www.soysoolv.com.)
- F. Smoking is prohibited inside the building once the building is closed in by any means or absorptive materials are located within the structure.

END OF SECTION

STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 013546 – SUSTAINABLE DESIGN REQUIREMENTS

SECTION 013546 – SUSTAINABLE DESIGN REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes general requirements and procedures for compliance with the sustainable design and construction practices required by this Project.
- B. Related sections:
 - 1. General Conditions and other Division 1 Specification Sections apply to this Section.
 - 2. Related Sections include the following:
 - a. 013119 - Project Meetings
 - b. 013300 - Submittal Procedures
 - c. 013544 - Construction Indoor Air Quality Management
 - d. 016000 – Product Requirements: Product options and substitution procedures
 - e. 017421 - Construction Waste Management and Disposal
 - f. Sustainable criteria as noted in Division 2 through 48, including but not limited to other Sections listed in this Section.

1.2 DEFINITIONS

- A. Certificates of Chain-of-Custody: Certificates signed by manufacturers certifying that all tropical woods used to make products was obtained from forests certified by an FSC-Accredited certification body to comply with FSC 1.2, "Principles and Criteria." Certificates shall include evidence that mill is certified for chain-of-custody by an FSC-Accredited certification body.

1.3 SUBMITTALS

- A. Sustainability Action Plans: Provide preliminary submittals within 14 days of date established for the notice to proceed indicating how the following requirements will be met.
 - 1. Construction Waste Management: Waste management plan complying with Division 01 section "Construction Waste Management."
 - 2. Construction IAQ Management Plan, During Construction: Proposed revisions to the construction IAQ Plan Template complying with SMACNA IAQ Guidelines for Occupied Buildings Under Construction, 1995.
- B. Sustainability Documentation Submittals:
 - 1. Construction Waste Management: Comply with Division 01 section "Construction Waste Management."
 - 2. Construction IAQ Management Plan, During Construction:
 - a. Product data for temporary filtration media.
 - b. Product data for filtration media used during occupancy.
 - c. Construction documentation: six photographs at three different occasions during construction along with a brief description of the SMACNA approach employed, documenting implementation of the IAQ management measures, such as protection of ducts and on-site stored or installed absorptive materials.
 - 3. Low-Emitting Materials, Adhesives and Sealants: Product data for adhesives and sealants used inside the weatherproofing system indicating VOC content of each product used. Indicate VOC content in g/l calculated according to 40 CFR 59, Subpart D.
 - 4. Low-Emitting Materials, Paints and Coatings: Product data for paints and coatings used inside the weatherproofing system indicating [chemical composition and] VOC content of each product used. indicate VOC content in g/l calculated according to 40 CFR 59, Subpart D.
 - 5. Low-Emitting Materials, Composite Wood: Product data for products containing composite wood or agrifiber products or wood glues indicating that they do not contain urea-formaldehyde resin.
 - 6. Low-Emitting Materials, Ceiling and Wall Systems: Product data for all gypsum board, insulation, acoustical ceiling systems and wall coverings installed in the building interior showing low emitting certification.
 - 7. Low-Emitting Materials, Flooring Materials: Product data for the following flooring materials indicating that products comply with the California Department of Public Health Standard Method

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SECTION 013546 – SUSTAINABLE DESIGN REQUIREMENTS**

v1.1-2010, using CA Section 01350, Appendix B. Compliance is indicated by certification under the following third-party certification programs:

- a. Resilient flooring – FloorScore
- b. Carpet systems – CRI Green Label Plus.

C. Certified Tropical Wood:

- 1. Submit a copy of a letter provided to all wood products suppliers containing the following:
 - a. A statement that the builder's preference is to purchase products containing tropical wood ONLY if it is Forest Stewardship Council (FSC) certified or USGBC-approved equivalent;
 - b. A request for the country of manufacture of each wood product supplied;
 - c. A request for a list of the FSC-certified tropical wood products the vendor can supply
- 2. If tropical wood is intentionally used (i.e. specified in the construction documents), submit FSC Chain of Custody declaration for any tropical wood products. Reused or reclaimed materials are exempt.
- 3. Provide FSC Chain of Custody and other documentation to demonstrate that any tropical woods (other than reused or reclaimed) are FSC certified.

1.4 CONTRACTOR REQUIREMENTS

- A. Coordinate and assist with sustainability documentation.
- B. Coordinate with all subcontractors per Section 017421.
 - 1. Coordination shall include review of this Section 013546 and related sections.
 - 2. Include subcontractors in related meetings per Section 013119.
- C. Designate a Sustainability Representative, responsible for:
 - 1. Implementation, coordination, and documentation of specified sustainability requirements.
 - 2. Attend sustainability related meetings during construction.
 - 3. Be present on site during times that sustainability related work is in progress.
- D. Submit sustainability information and Final Submittal in electronic format.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Comply with sustainability requirements as noted in Technical Sections. Any Substitution requests must state whether or not proposed change impacts sustainability requirements.

PART 3 - EXECUTION

3.1 SUSTAINABILITY COMPLIANCE - GENERAL

- A. Meet sustainability requirements as identified in the ~~GC Handbook~~ Contract Documents.
- B. Prior to beginning Work of this Contract, verify construction conditions as acceptable to achieve sustainability goals.
 - 1. Do not proceed with Work until unsatisfactory conditions are corrected in a manner acceptable to Sustainability Consultant, Construction Representative, and Architect.
- C. Correct non-conforming work failing to meet sustainability requirements at Contractor's expense.
 - 1. Submit documentation as necessary to show conformance of corrected work.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 014500 – QUALITY CONTROL**

SECTION 014500 – QUALITY CONTROL

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. General requirements.
 - 2. Workmanship.
 - 3. Special installation procedures
 - 4. Manufacturer's instructions.
 - 5. Manufacturer's certificates.
 - 6. Mock-ups.
 - 7. Manufacturers' field services.
 - 8. Testing laboratory services.
 - 9. Contractor tests and inspections.
- B. Related Sections:
 - 1. 011000 - Summary: Applicability of specified reference standards.
 - 2. 013300 - Submittal Procedures: Submittal of manufacturer's instructions.
 - 3. 017421 - Construction Waste Management And Disposal: Mock-Ups.
- C. This Section applies to all Technical Specification Sections, and supplements the General and Supplemental Conditions.

1.2 GENERAL QUALITY CONTROL

- A. Maintain quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.

1.3 WORKMANSHIP

- A. Comply with industry standards, except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.
- B. Perform work with persons qualified to produce workmanship of specified quality.
- C. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and racking.

1.4 SPECIAL INSTALLATION PROCEDURES

- A. Make no attachment to structural concrete or steel members in the building in such a way as to overload or impair the structural integrity of the member.
- B. Steel Decking:
 - 1. Where fastening into bottom of steel decking is required, fasten only into lower flutes.
 - 2. Do not use fasteners in steel deck which penetrate more than 1 inch.
 - 3. Do not use powder driven fasteners into steel roof deck. Where anchorage to structural framing members is impractical, supports for items such as suspended ceiling systems, ductwork, and aluminum conduit 1-1/2 inches or less may be supported from steel roof decking by sheet metal screws, screwed into the bottom flute of the roof deck, and in sufficient quantity to adequately support the load. Equipment supports, hangers for mechanical piping and other items requiring more than incidental support, shall not be secured to the roof decking.
- C. Post Tensioned Slabs:
 - 1. Do not fasten into areas where tendons are located in post tensioned slabs.
 - 2. Provide permanent demarcation system to clearly indicate location of tendons to prevent damage to tendons during subsequent construction operations.

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GUIDE SPECIFICATIONS
SECTION 014500 – QUALITY CONTROL**

1.5 MANUFACTURERS' INSTRUCTIONS

- A. Unless specified otherwise, comply with instructions in full detail, including each step in sequence. Should instructions conflict with Contract Documents, request clarification from Construction Manager before proceeding.

1.6 MANUFACTURERS' CERTIFICATES

- A. When required by individual Specifications Section, submit, in duplicate, manufacturer's certification that products meet or exceed specified requirements.

1.7 MOCK-UPS

- A. Provide mock-ups as specified in the individual specification sections. When the initial mock-up is unacceptable to the Construction Manager, provide additional mock-ups until approval is obtained.
- B. Unless specified or approved otherwise, schedule mock-ups for completion a minimum of 10 working days prior to actual commencement of the work represented by the mock-up.
- C. Notify the Architect and Construction Manager a minimum of 5 working days prior to mock-up.
- D. For each mock-up, provide conditions which will replicate the conditions of the actual installation, including lighting, to the greatest reasonable extent.
- E. Approved mock-up shall be the standard of workmanship and materials for the remainder of the related work.
- F. Contractor may proceed with the work upon Construction Manager's approval of the mock-up.
- G. Obtain Construction Manager's written approval for each mock-up.
 - 1. Allow access to the mock-up for Architect's and Construction Manager's review and for review by manufacturer and trade representatives as the Construction Manager deems appropriate.
 - 2. Proceed with the work upon Construction Manager's approval of the mock-up. Each approved mock-up shall represent the standard of workmanship and materials for the remainder of the related work.
 - 3. Modify and correct mock-up as necessary to obtain Construction Manager's approval; allow time in construction schedule for adjustment or reconstruction of mock-up to obtain approval. Claims for delays due to unacceptable field samples will not be considered.
- H. Maintain mock-up in approved condition, until directed otherwise.
- I. Disposition of Mock-Ups:
 - 1. Rejected mock-ups shall be selectively demolished to accommodate new mock-ups, or completely removed as appropriate.
 - 2. Mock-ups constructed as part of the proposed work, and which have been approved by the Construction Manager, may be incorporated into the work.
 - 3. Unless specified or directed otherwise, approved mock-ups which are not incorporated into the work shall be removed upon project completion.

1.8 MANUFACTURERS' FIELD SERVICES

- A. When specified, require product manufacturer to furnish qualified personnel to observe field conditions and quality of workmanship, and to provide recommendations, certifications, and other specified services.
- B. Representative shall submit written report to Construction Manager listing observations and recommendations.

1.9 TESTING LABORATORY SERVICES

- A. The Construction Manager will arrange for the services of an Independent Testing Laboratory to inspect and test the Work in accordance with regulatory requirements and to verify compliance with the contract documents.

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 014500 – QUALITY CONTROL**

B. Contractor's Responsibilities:

1. Cooperate with Testing Laboratory personnel, and furnish access, tools, samples, certifications, test reports, design mixes, equipment, storage, and assistance as requested by the Testing Laboratory.
2. Notify Construction Manager and Testing Laboratory 48 hours prior to expected time for operations requiring inspection and testing. When tests or inspections cannot be performed, through the fault of the Contractor, reimburse the Owner for the additional costs incurred.
3. Remove and replace all work found not complying with the Contract Documents. Remedies shall be in accordance with the Contract Documents and code requirements.
4. If initial tests and inspections indicate deficient work, the Contractor shall reimburse the Owner for the costs of all subsequent tests and inspections related to the deficiency.
5. All damage which may occur to the work as a result of normal testing operations shall be repaired to match surrounding surfaces.
6. Schedule testing and inspection so that the work of testing and inspection personnel will be as continuous and brief as possible.
7. Reimburse the Owner for travel and lodging expenses incurred for testing and inspection services performed outside a radius of 100 miles of the site.

C. The Owner may have the tests and inspections performed as listed below:

1. Water testing.
2. HVAC balancing and controls.

D. Tests and inspections shall be in accordance with code requirements and as otherwise required to verify conformance to Contract requirements.

1.10 CONTRACTOR TESTS AND INSPECTIONS

- A. Contractor's Convenience Testing:** Inspection and testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor.

END OF SECTION

STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 015000 – TEMPORARY FACILITIES AND CONTROLS

SECTION 015000 – TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. General requirements.
 - 2. Electricity, lighting.
 - 3. Heat, ventilation, cooling.
 - 4. Telephone service.
 - 5. Water.
 - 6. Sanitary facilities.
 - 7. Barriers.
 - 8. Closures.
 - 9. Protection of installed work.
 - 10. Security.
 - 11. Safety.
 - 12. Site water control.
 - 13. Cleaning during construction.
 - 14. Project identification.
 - 15. Field offices and sheds
 - 16. Removal.
- B. Related Sections:
 - 1. 011000 - Summary: Work sequence. Contractor use of premises.
 - 2. 013544 - Construction Indoor Air Quality Management: Indoor air quality management plan and post construction flush-out.
 - 3. 013546 – Sustainable Design Requirements: Sustainability requirements.
 - 4. 017421 – Construction Waste Management and Disposal: Construction waste management plan.
 - 5. 017700 - Closeout Procedures: Final cleaning.
- C. This Section applies to all Technical Specification Sections, and supplements the General and Supplemental Conditions.

1.2 GENERAL REQUIREMENTS

- A. Temporary facilities and controls shall conform to the requirements of the jurisdictional code authorities.

1.3 ELECTRICITY, LIGHTING

- A. Provide service required for construction operations, with branch wiring and distribution boxes located to allow service and lighting by means of construction-type power cords.
- B. Provide lighting for construction operations.
- C. Permanent lighting may be used during construction. Maintain lighting and make routine repairs.

1.4 HEAT, VENTILATION

- A. Provide temporary heating and cooling as necessary to maintain specified conditions for Construction operations, to protect materials and finishes from damage due to temperature or humidity.
- B. Provide temporary ventilation of enclosed areas to cure materials, disperse humidity, and prevent accumulations of dust, fumes, vapors, or gases in accordance with the Construction Indoor Air Quality Management requirements specified in Section 013544.
- C. Prior to operation of permanent facilities for temporary purposes, verify that installation is approved for operation, and that filters are in place.

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SECTION 015000 – TEMPORARY FACILITIES AND CONTROLS

- D. For any piece of HVAC equipment used during construction, clean or replace system filters in compliance with Section 013544 immediately prior to Substantial Completion.
- E. Owner will pay costs of energy used. Provide and pay for maintenance costs during life of construction contract.
- F. Take measures to conserve energy.

1.5 WATER

- A. Provide service required for construction operations. Extend branch piping with outlets located so that water is available by use of hoses.
- B. The Owner will pay the costs for all water used. Conserve water use whenever possible.

1.6 SANITARY FACILITIES

- A. Provide and maintain required portable facilities and enclosures.

1.7 BARRIERS

- A. Provide as required to prevent public entry to construction areas to provide for Owner's use of site, and to protect existing facilities and adjacent properties from damage from construction operations.
- B. Provide 6 foot high fence around construction site; equip with vehicular and pedestrian gates with locks. Construction: Commercial grade chain link fence.
- C. Provide barricades and covered walkways as required by governing authorities for public rights-of-way and for public access to existing building.
- D. Provide barriers around trees and plants designated to remain. Protect against vehicular traffic, stored materials, dumping, chemically injurious materials, and puddling or continuous running water.
- E. Provide barricades around openings in floors and roof decks.

1.8 CLOSURES

- A. Exterior Closures:
 - 1. Provide temporary weather-tight closures as necessary to create proper interior environmental conditions, protection of materials, and to prevent entry of unauthorized persons.
 - 2. Where doors are necessary for access by construction personnel, provide self-closing hardware and locks.
 - 3. Except as necessary for construction access, do not remove exterior closures until permanent construction is ready to be installed and made weathertight.
 - 4. Enclosures shall be constructed to prevent blow off during inclement weather, and shall be sealed to prevent water penetration and excessive air infiltration.
 - 5. Conform to Construction Indoor Air Quality Management requirements specified in Section 013544.
- B. Interior Closures:
 - 1. Provide temporary closures to prevent penetration of dust and moisture into occupied areas separate from work areas, damage to operating systems and components, and to create environmental conditions necessary for the proper installation of materials and systems.
 - 2. Construction: Framing and sheet materials with closed joints and sealed edges at intersections with existing surfaces; STC rating 35 in accordance with ASTM E90; Flame Spread Rating of 25 in accordance with ASTM E84; paint surfaces exposed to view from Owner occupied areas.
 - 3. Conform to Construction Indoor Air Quality Management requirements specified in Section 013544.
- C. Installed construction which has been damaged due to lack of protection shall be replaced or restored to original or new condition. This includes construction required to be protected under Construction Indoor Air Quality Management requirements specified in Section 013544.

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS**

SECTION 015000 – TEMPORARY FACILITIES AND CONTROLS

1.9 PROTECTION OF INSTALLED WORK

- A. Provide temporary protection for installed work, including protection from impact, water, dust contamination, overspray, and similar **damage**. Conform to Construction Indoor Air Quality Management requirements specified in Section 013544.
- B. Secure temporary protections as necessary to prevent blow off during inclement weather.
- C. Provide protective coverings at exposed exterior walls and horizontal surfaces, projections, and window and door openings.
- D. Protect finished surfaces from damage caused by traffic, movement of heavy objects, and storage of materials. Where necessary, control traffic in immediate area as necessary to minimize the risk of impact damage.
- E. Prohibit traffic and storage on waterproofed and roofed surfaces, on lawn and landscaped areas.
- F. Installed construction which has been damaged due to lack of protection shall be replaced or restored to original or new condition.

1.10 SECURITY

- A. Provide security program and facilities to protect Work, materials stored off-site, existing facilities, and Owner's operations from unauthorized entry, vandalism, and theft. Coordinate with Owner's security program.

1.11 SAFETY

- A. Furnish safety program and facilities to protect the safety of workers and other persons affected by the Work.

1.12 SITE WATER CONTROL

- A. Grade site to drain. Maintain excavations free of water. Provide and operate pumping equipment.

1.13 TEMPORARY CONTROLS

- A. Fire Sprinkler Supervision/Control:
 - 1. Prior to the time of installation of finish materials such as carpet, wall panels, delivery of case work to the site, and other similar conditions, provide temporary tamper and water flow supervision monitoring of the fire sprinkler system.
 - 2. System shall be monitored, via temporary telephone lines, by a UL listed central station. Contractor shall be responsible to make arrangements for monitoring the system.
 - 3. Perform temporary monitoring up to time of building acceptance by the Owner, or building turn-over, whichever is later.
- B. Dust Control:
 - 1. Provide positive methods and apply dust control materials to minimize raising dust from construction operations, and provide positive means to prevent airborne dust from dispersing into the atmosphere.
 - 2. Provide temporary dust-proof partitions to protect public areas, occupied spaces, and adjacent mall areas.
- C. Water Control:
 - 1. Comply with applicable jurisdictional requirements regarding water usage, conservation, detention, pollution, and permits.
 - 2. Provide methods to control surface water to prevent damage to the Project, the site, or adjoining properties.
 - 3. Control fill, grading and ditching to direct surface drainage away from excavations, pits, tunnels and other construction areas; and to direct drainage to proper runoff.
 - 4. Provide, operate and maintain pumping equipment of adequate capacity to control surface water, including water accumulated during excavation operations, below grade.
 - 5. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to any portion of the site or to adjoining areas.

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SECTION 015000 – TEMPORARY FACILITIES AND CONTROLS

- D. Construction Waste Control:
 - 1. Maintain all areas under Contractor's control free of debris.
 - 2. Initiate and maintain a specific program to prevent accumulation of debris at construction site, storage and parking areas, or along access roads and haul routes.
 - 3. Schedule periodic collection and disposal of debris to a legal off-site location.
 - 4. Provide additional collections and disposals of debris whenever the periodic schedule is inadequate to prevent excessive accumulation.
 - 5. Clean interior areas prior to start of the finish work. Maintain the areas free of dust and other contaminants during finishing operations.
 - 6. Construction Waste Management: In compliance with Section 017421.
- E. Pollution Control: Provide methods, means and facilities required by law to prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations.
- F. Noise Control:
 - 1. Construction operations must be performed in accordance with local regulations, ordinances, and jurisdictional Code authorities.
 - 2. Use of private radios and other similar portable sound equipment is prohibited.
- G. Smoking, Eating, and Drinking: These activities shall be permitted only in designated locations selected by the Contractor; these activities are not permitted in interior spaces after carpeting and fixtures arrive on site.

1.14 CLEANING DURING CONSTRUCTION

- A. Control accumulation of waste materials and rubbish on a daily basis, and dispose of off-site or in a designated container on site. Conform to Construction Waste Management and Disposal requirements specified in Section 017421.
- B. Clean interior areas prior to start of finish work, maintain areas free of dust and other contaminants during finishing operations.
- C. Remove excess debris from cavities which are to be concealed in the finished Work.
- D. Work areas to remain accessible to the public shall have tools, materials, and construction debris removed, broom cleaned, and prepared to receive floor mopping or other cleaning performed by the Owner's maintenance personnel.

1.15 PROJECT IDENTIFICATION

- A. Provide project signage only as allowed by Construction Manager.
- B. Allow no other signs to be displayed.

1.16 FIELD OFFICES AND SHEDS

- A. Field Office:
 - 1. Office: Weather-tight, with lighting, electrical outlets, heating, cooling, and ventilating equipment, and equipped with furniture. Provide, in addition, space for Project meetings, with table and chairs to accommodate 6 persons.
 - 2. Equipment:
 - a. Copier: Contractor's option; 11 x 17 inch size capability.
 - b. Communication Service
 - 1) An Internet Service Provider (ISP) account.
 - 2) Com ISDN LAN modem or Office Connect
 - 3) Remote Dual Analog Router (analog or ISDN depending on telephone company service), or approved, for use and communication with Internet Service Provider (ISP).
 - c. Computer: Minimum one dual core processor with minimum 8 GB of RAM, including the following.
 - 1) Windows Vista and Microsoft Office 2010, or later; Internet Explorer V6.0 or later.
 - 2) Adobe Acrobat Exchange 6.0, or later, at least one station for initiating documents.
 - 3) Adobe Acrobat Reader.
 - d. Printer: Minimum one with 11x17 inch graphics capability.

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GUIDE SPECIFICATIONS**

SECTION 015000 – TEMPORARY FACILITIES AND CONTROLS

- e. Sheet-feed or flatbed scanner and related software.
- B. Storage Sheds for Tools, Materials, and Equipment: Weather-tight, with heat and ventilation for Products requiring controlled conditions, with adequate space for organized storage and access, and lighting for inspection of stored materials.

1.17 CONTRACTOR DESIGNATED AREAS

- A. The Construction Representative will designate interior and exterior areas of the site which will be available to the Contractor for staging and storage of materials. Exterior storage areas shall be enclosed by a construction chain link fence with a vision barrier.
- B. The Construction Representative will designate areas of the Site for Contractor and employee parking.
- C. Exterior Storage Sheds for Tools, Materials, and Equipment: Weather-tight, with adequate space for organized storage and access, and lighting for inspection of stored materials.

1.18 REMOVAL

- A. Completely remove temporary materials and equipment when their use is no longer required. Conform to Construction Waste Management and Disposal requirements specified in Section 017421.
- B. Clean and repair damage caused by installation or use of temporary facilities. Remove underground installations to a depth of 2 feet; grade site as indicated. Restore existing facilities used during construction to specified, or to original, condition.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 016000 – PRODUCT REQUIREMENTS**

SECTION 016000 – PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Products.
 - 2. Transportation and handling.
 - 3. Storage and protection.
 - 4. General installation requirements.
 - 5. Product options.
 - 6. Substitutions.
- B. Related Sections:
 - 1. 011000 - Summary: Owner-furnished products.
 - 2. 013546 - Sustainable Design Requirements
 - 3. 014500 - Quality Control: Submittal of manufacturers' certificates.
 - 4. 017700 - Closeout Procedures: Systems demonstration, operation and maintenance data, warranties and guarantees, spare parts and maintenance materials.
- C. This Section applies to all Technical Specification Sections, and supplements the General and Supplementary Conditions.

1.2 PRODUCTS

- A. Products include material, equipment, and systems.
- B. Comply with size, make, type, and quality specified, unless otherwise approved in writing by the Construction Manager. Specifications and referenced standards are minimum requirements.
- C. All components required to be supplied in quantity shall be identical, whether furnished under one or several Sections of the specifications.
- D. Unless specified or indicated otherwise, materials employed for construction purposes, such as formwork, scaffolding, and temporary lighting, shall not be incorporated into the work.
- E. Unless indicated or specified otherwise, all products incorporated into the Work shall be of the most suitable grade of their respective kinds for the intended use.
- F. Do not use materials and equipment removed from existing structure, except as specifically required, or allowed, by Contract Documents.

1.3 TRANSPORTATION AND HANDLING

- A. Transport by methods to avoid product damage.
- B. Deliver products in manufacturer's original containers or packaging, with identifying labels intact and legible. Where options exist, select container or packaging systems that can be recycled or reused.
- C. Furnish equipment and personnel to handle products by methods to prevent soiling or damage.
- D. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.
- E. Immediately replace non-conforming products with new conforming products, at no additional cost to the Owner.

1.4 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible.
- B. Store sensitive products in weather-tight enclosures. Maintain within temperature and humidity ranges required by manufacturer's instructions, and as otherwise required to prevent damage.

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SECTION 016000 – PRODUCT REQUIREMENTS

- C. For exterior storage of fabricated products, place on sloped supports above ground. Protect from soiling or staining through ground contact. Cover products subject to deterioration with impervious sheet covering; provide ventilation to avoid condensation.
- D. Store loose granular materials on solid surfaces in a well-drained area; prevent mixing with foreign matter.
- E. Arrange storage of products to furnish convenient access for inspection and inventory.

1.5 GENERAL INSTALLATION REQUIREMENTS

- A. Unless indicated or specified otherwise, install each product in accordance with the product manufacturer's instructions.
- B. Distribute copies of manufacturer's instructions to parties involved in the installation.
- C. Maintain one set of complete instructions at the job site during installation and until completion.

1.6 PRODUCT OPTIONS

- A. Product Specified by Reference Standards or by Description Only: Provide product meeting those standards.
- B. Product Specified by Naming One or More Manufacturers with an "or approved" provision: Use specified product or submit a request for substitution in accordance with the specified substitution requirements. When approved a substitute product may be used.
- C. Product Specified by Naming One or More Manufacturers, without a provisions for Substitution: No substitution will be allowed, except as specified under the Article on Substitutions.

1.7 SUBSTITUTIONS

- A. Timing: Substitution requests will be considered by the Construction Manager until 10 working days prior to bid opening. Substitution requests received less than 10 days prior to bid opening will be considered at the Construction Manager's option. Subsequent substitutions will be considered only for the following reasons:
 - 1. A product becomes unavailable due to no fault of the Contractor.
 - 2. Subsequent information or changes indicate that the specified product will not perform as intended.
 - 3. A substitute product will be in the Owner's best interest.
 - 4. A substitute product will improve the likelihood of meeting the sustainability requirements for the Project.
- B. Substitution requests shall be submitted only through the General Contractor.
- C. Documentation:
 - 1. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
 - 2. Requests for substitution shall be made on a form acceptable to the Construction Manager.
 - 3. Limit each request to one proposed product or system.
 - 4. For substitutions prior to Agreement, signature and projected cost data are not required.
 - 5. Submit product data and other supporting documentation necessary to verify that the proposed product meets the sustainability requirements for the Project.
 - 6. Submit Substitution Request to Construction Manager.
- D. Request for substitution constitutes a representation that the proposer:
 - 1. Certifies that the proposed substitute item has been fully investigated and has been determined to be equal or superior to that specified in all respects.
 - 2. Certifies that the same or greater warranty will be furnished
 - 3. Certifies that required maintenance service and source for replacement parts are available
 - 4. Certifies that incorporation of the proposed substitute item will not affect functional clearances.
 - 5. Warrants that coordination, installation, and changes to the project as necessary to accommodate the proposed substitution shall be the Contractor's responsibility, that use of the substitute item(s) will not delay project completion

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SECTION 016000 – PRODUCT REQUIREMENTS**

6. Warrants that claims for additional costs related to its incorporation which may become subsequently apparent will be borne by the Contractor.
 7. Has verified that the specified product will not adversely affect the LEED rating requirements for the Project.
- E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals.
- F. Review: The Owner will be the judge of the acceptability of the proposed substitution; in the judgment of Owner the product shall meet the following criteria:
1. It is equal or superior in quality and serviceability to the specified product.
 2. Its use will not entail unacceptable changes in details and construction of related work.
 3. Its design and artistic effect complies with design concept.
- G. The Construction Manager will review requests for substitutions with reasonable promptness, and request additional information, documentation, or samples, as necessary for evaluation of the request. Within two weeks of receipt of the completed request, the Construction Manager will take one of the following actions.
1. If the substitution is allowed by the Owner prior to the cutoff date, an Addendum to the Bid Documents will be issued by the Construction Manager.
 2. If the substitution is allowed by the Owner after the cutoff date, the Construction Manager will notify the General Contractor and issue the appropriate Construction Change Authorization, Supplemental Instruction, or Proposal Request.
 3. If the request for substitution is denied, the proposer will be notified of the rejection. If a decision on the substitution request cannot be made or obtained within the time allocated, use the specified product.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 017329 – CUTTING AND PATCHING**

SECTION 017329 – CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Patching of existing construction.
- B. Related Sections:
 - 1. 011000 - Summary: Cutting and patching to remove ill-timed, defective, or non-conforming work.
 - 2. 015000 - Temporary Facilities and Controls: Temporary enclosures, protection of installed work; cleaning during construction.
 - 3. 024119 - Selective Demolition: Removal and storage of products to be reinstalled.
- C. Drawings, the provisions of the Agreement, including bonds and certificates, the General Conditions, and Division 1 specification sections apply to all work of this Section.

1.2 QUALITY ASSURANCE

- A. Unless indicated otherwise, patching, extending, or matching shall be performed as necessary to make the Work complete, with all components matching and consistent.
- B. Patching materials shall meet the requirements of the jurisdictional code authorities.
- C. Major patching procedures shall be reviewed with the Construction Representative, prior to proceeding.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Patching Materials: Match the existing construction, unless approved otherwise.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that demolition is complete and that existing surfaces are ready for patching.
- B. Coordinate installation of new materials with the patching and repair of existing construction.
- C. Beginning of restoration work constitutes acceptance of existing conditions.
- D. Determine type and quality of existing products by inspection or non-destructive testing. Destructive testing may be performed when approved by the Construction Representative. Patch all test locations.

3.2 PREPARATION

- A. Cut, move, or remove items as necessary for access to alterations and renovations work; replace and restore at completion.
- B. Contact the Construction Representative when unsuitable materials not marked for removal - such as rotted wood, rusted metals, and deteriorated concrete and masonry are discovered.
- C. Provide additional construction and materials as required to support patching.
- D. Remove debris and abandoned items from area and from concealed spaces.
- E. Prepare surfaces and remove surface finishes to provide for proper installation of new work and new finishes.

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GUIDE SPECIFICATIONS
SECTION 017329 – CUTTING AND PATCHING**

3.3 PATCHING

- A. Patch and refinish existing surfaces which are damaged, lifted, discolored, missing, or showing other localized imperfections directly or indirectly caused by work under this contract. Patched work shall match existing adjacent work in texture and appearance.
- B. When existing finish cannot be matched, refinish entire surface to nearest intersections. Finish patches to produce uniform finish and texture over entire area.
- C. Provide a neat and smooth transition to new construction. Where finished surfaces are cut so that smooth transition to new work is not possible, terminate existing surface along a straight line at a natural line of division. Review condition with the Construction Representative.
- D. Trim existing doors as necessary to clear new floor finishes; refinish trimmed areas.
- E. Where existing items are indicated as cut or reconfigured, cap and finish all exposed edges to match the existing construction to remain. Provide new or relocated supports spaced to be consistent with the installation.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS**

SECTION 017421 – CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

SECTION 017421 – CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Construction waste management requirements.
- B. Incorporate the work of this section into the Project when the construction waste handlers in the Project area have sufficient capability to implement the specified requirements for the Project. Confirm construction waste management goals with the Construction Manager.
- C. Related Sections:
 - 1. 013546 – Sustainable Design Requirements.
 - 2. 015000 – ~~Construction~~ Temporary Facilities and Controls.
- D. This Section applies to all Technical Specification Sections, and supplements the General and Supplementary Conditions.

1.2 DEFINITIONS

- A. Commingled or Off-site Separation: Collecting all material types into a single bin or mixed collection system and separating the waste materials into recyclable material types in an off-site facility.
- B. Construction, Demolition and Land Clearing Waste (CDL): For purpose of this section, includes all non-hazardous solid wastes such as building materials, packaging, rubbish, debris and rubble resulting from construction, remodeling, alterations, repair, deconstruction, demolition and land clearing.
- C. Deconstruction: The process of removing existing building materials from renovation and demolition projects for the purposes of reuse, and recycling, in as efficient and safe manner as possible.
- D. Hazardous Waste: As defined by the state where the Project is located.
- E. Proper Disposal: As defined by the jurisdiction receiving the waste.
- F. Recyclable Materials: Products and materials that can be recovered and remanufactured into new products.
- G. Recycling: The process of sorting, cleaning, treating and reconstituting materials for the purpose of using the material in the manufacture of a new product. Can be conducted on site (as in the grinding of concrete for reuse on site).
- H. Recycling Facility: An operation that can legally accept materials for the purpose of processing the materials into an altered form for the manufacture of a new product. Recycling facilities have their own specifications for accepting materials.
- I. Salvage and Reuse: Existing usable product or material that can be saved and reused in some manner on the project site. Materials that can be salvaged and reused on site must comply with the applicable technical specifications.
- J. Salvage for Resale: Existing usable product or material that can be saved and removed intact (as is) from the project site to another site for resale to others without remanufacturing.
- K. Source-Separated Materials: Materials that are sorted at the site for the purpose of reuse or recycling.
- L. Sources Separation: Sorting the recovered materials into specific material types with no or a minimum amount of contamination on site.
- M. Time-Based Separation: Collecting waste during each phase of construction or deconstruction that results in primarily one major type of recovered material. The material is removed before it becomes mixed with the material from the next phase of construction.

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SECTION 017421 – CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

- N. Trash: Product or material unable to be salvaged for resale, salvaged and reused, returned, or recycled.
- O. Waste: Excess materials generated by the construction and demolition operations of the Project that are produced on site or brought to the site. Waste includes, without limitation, packaging materials such as banding, crates, pallets, plastic film, polystyrene, and cardboard. Waste does not include excavated soils, rocks, vegetation, and hazardous waste removed from the site

1.3 WASTE MANAGEMENT REQUIREMENTS

- A. Salvage, recycle, and reuse a minimum of 75% of construction and demolition waste material generated by the Project.
- B. Minimize the creation of construction and demolition waste on the job site. Minimize factors that contribute to waste, such as excess packaging, improper storage, ordering errors, poor planning, breakage, mishandling, and unnecessary contamination.
- C. Targeted Salvage Materials: The following existing materials shall be reused in the Project:
 - 1. Existing concrete foundations and masonry shall be broken up and reused as compactible fill material.
 - 2. [Edit for the project].
- D. The following waste materials may be diverted from landfill to the greatest extent possible to meet the specified requirements:
 - 1. Clean dimensional wood, pallet wood, plywood, OSB, and particleboard
 - 2. Asphalt.
 - 3. Concrete
 - 4. Concrete masonry units
 - 5. Brick
 - 6. Ferrous and non-ferrous metals
 - 7. Gypsum products.
 - 8. Acoustical ceiling tile.
 - 9. Glass, both window and bottle.
 - 10. Plastics, including plastic film.
 - 11. Carpet and pad.
 - 12. Cardboard, paper, paper-based packaging
 - 13. Insulation
 - 14. Batteries.
 - 15. Doors, windows frames, relites, hardware, millwork.
 - 16. Equipment and appliances}
 - 17. Non-asbestos roofing}
 - 18. Paint.
- E. Hazardous materials such as paints, solvents, adhesives, batteries, and fluorescent light bulbs and ballasts which cannot be reused shall be disposed of at authorized hazardous waste outlets.

1.4 CONSTRUCTION WASTE MANAGEMENT PLAN

- A. Develop and submit to the Construction Manager a Construction Waste Management Plan narrative in accordance with the sustainability requirements for the Project. Revise and resubmit the Plan until approval is obtained.
- B. Unless approved otherwise, no waste generating construction work may proceed until the Construction Waste Management Plan is approved. Approval of the Contractor's Construction Waste Management Plan will not relieve the Contractor of responsibility for meeting the waste management goals specified.
- C. The Construction Waste Management Plan shall include the following:
 - 1. A list of waste materials that will be salvaged for resale, salvaged for reuse, recycled, and disposed.
 - 2. Estimated quantities of each waste material.

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GUIDE SPECIFICATIONS**

SECTION 017421 – CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

3. Description of waste handling methods to be used, including one or more of the following:
 - a. Requiring subcontractors to take their waste to a recycling facility.
 - b. Contracting with diversion/recycling hauler to haul recyclable waste to an approved recycling or material recovery facility.
 - c. Processing and reusing materials on-site.
 - d. Self hauling to a recycling or material recovery facility.
 4. Name, address and phone number and qualifications of each proposed diversion/recycling hauler that will be used in the Project.
 5. Identification of each recycling or material recovery facility to be utilized.
 6. Description of the method to be employed in collecting, and handling, waste materials, including a description of the methods that will be used to protect recycled materials from contamination.
 7. Description of the means of transportation of waste materials.
 8. Description of methods to communicate waste management plan to personnel and subcontractors.
- D. Calculation shall be done by weight (tons) or by volume (cubic yards) but shall be consistent throughout.
- E. Include the Construction Waste Management Plan with the Submittal Template.
- F. Implement procedures to communicate the construction waste management plan to personnel and subcontractors.

1.5 CONSTRUCTION WASTE MANAGEMENT PROGRESS REPORTS

- A. Submit a Construction Waste Management Progress Report with each Application for Payment. Failure to submit this report renders the Application for Payment incomplete and is grounds for delaying the Progress Payment.
- B. Use the Waste Management Plan template from the Starbucks resource website.
- C. The Waste Management Progress Report shall list the following for the time period covered by the Application for Payment:
 1. Each waste material recycled, salvaged, or reused from the Project.
 2. Quantities for each waste material.
 3. Total quantity of waste removed from the site.
 4. Name of each diversion/recycling hauler or the location and name of each recycling or material recovery facility as appropriate.
- D. Calculations shall be done by weight (tons) or by volume (cubic yards) but shall be consistent throughout.
- E. Attached manifests, weight tickets, receipts or invoices which validate the calculations.

1.6 SUSTAINABILITY SUBMITTALS

- A. Make sustainability submittals as specified in Section 013300.
- B. Construction Waste Management Letter:
 1. Submit a final accounting of activities and procedures taken, as necessary to support successful compliance with construction waste management goals specified.
 2. Include copies of all manifests, weight tickets, receipts or invoices which validate the percentage calculations for waste management.
- C. Submit specified Construction Waste Management Plan.

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS**

SECTION 017421 – CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

1.7 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with applicable requirements of the jurisdictional authorities, local ordinances and regulations concerning management of construction waste, clearing, and inert materials.
- B. Preconstruction Meeting:
 - 1. Prior to beginning work at the site, schedule and conduct a meeting to review the Waste Management Plan and discuss procedures, schedules, coordination and specific requirements for waste materials recycling and disposal.
 - 2. Discuss coordination and interface between Contractor, sub-contractors, architect, engineers, project manager, Construction Manager, and other C&D activities. Identify and resolve problems of compliance with requirements.
 - 3. Record minutes of the meeting, identifying conclusions reached and matters requiring further resolution. Maintain waste management as an agenda item at future construction meetings.
 - 4. Attendees: Contractor and related contractor personnel associated with work of this section, including personnel in charge of the waste management program; C&D Quality Manager; architect; engineers; material and equipment suppliers where appropriate; Construction Manager and such additional Owner personnel as Owner deems appropriate.
 - 5. Plan Revision: Make revisions to C&D Waste Management Plan agreed upon during the meeting and incorporate resolutions agreed to be made subsequent to the meeting. Submit revised plan to the Construction Manager.
- C. Progress Meetings: Waste management goals and issues shall be discussed at regularly scheduled progress meetings as specified in Section 013119 Project Meetings.
- D. Disposal Site, Recyclers and Waste Materials Processors: Use only facilities properly permitted in the State where the Project is located, and/or by local authorities where applicable.

PART 2 - PRODUCTS

2.1 WASTE CONTAINERS

- A. Durable, covered, secured, reusable container for each category or waste.
- B. All recycling containers shall be clearly marked and shall list the materials which can be recycled as well as appropriate materials which cannot.

PART 3 - EXECUTION

3.1 PROJECT / SITE CONDITIONS

- A. Use construction methods that reduce construction waste. When possible:
 - 1. Order materials precut to required size.
 - 2. Order exact quantity required.
 - 3. Use temporary materials and facilities that will be reused at other projects.
- B. Field Measurements: Contractor is to verify that field measurements are as indicated on construction and/or shop drawings before confirming product orders or proceeding with work, in order to minimize waste due to excessive materials.
- C. Protect products from damage during storage, installation and in-place. Materials that become wet, damp or unusable for any reason due to improper storage shall be replaced at the Contractor's expense.
- D. Request or require products delivered to the Site with packing materials that can be returned to sender, reused by others, or easily recycled.
- E. Use detailed take-offs to identify location and uses in structure to reduce risk of unplanned and potentially wasteful cuts.

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SECTION 017421 – CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

3.2 PACKING AND SHIPPING

- A. Shipping: Coordinate the schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- B. Packing: Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.3 CUTTING AND PATCHING

- A. Use on-site waste as primers, sealers, underlayments, supports, backing, blocking, furring, suspension systems, and accessories as required for any purpose in patching existing work.
- B. Provide environmentally benign non-hazardous or recycled content materials for cutting and patching.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 017700 – CLOSEOUT PROCEDURES**

SECTION 017700 – CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Closeout procedures.
 - 2. Punchlist procedures
 - 3. Final cleaning.
 - 4. Project record documents.
 - 5. Operation and maintenance data (Turnover Book).
 - 6. Operation instruction.
 - 7. Manufacturer's warranties.
 - 8. Guaranties.
 - 9. Spare parts and maintenance materials.
 - 10. Closeout sustainability documentation.
 - 11. Required Construction Document Checklist
 - 12. Turnover Book Checklist
 - 13. Document archiving procedures.
 - 14. Walkthrough Assessment Tool
- B. Related Sections:
 - 1. 011000 - Summary: Partial Owner occupancy.
 - 2. 013544 - Construction Indoor Air Quality Management: Indoor air quality management plan and post construction flush-out.
 - 3. 013546 – Sustainable Design Requirements: Sustainable practices goals for the Project.
 - 4. 015000 - Temporary Facilities and Controls: Cleaning during construction.
 - 5. 017421 - Construction Waste Management and Disposal: Construction waste management plan.
 - 6. Division 23 and 26 for special closeout requirements for mechanical and electrical systems.
- C. This Section applies to all Technical Specification Sections, and supplements the General and Supplemental Conditions.

1.2 CLOSEOUT PROCEDURES

- A. Comply with procedures stated in General Conditions of the Contract for Substantial and Final Completion and in these Division 01 sections.
- B. Certain areas may be subject to partial occupancy or use as specified in Section 011000.
- C. Submit all certificates of approval issued by the governing authorities, including, without limitation, the following:
 - 1. Certificate of occupancy.
- D. Prior to final payment, submit the following affidavits using the forms listed below:
 - 1. Contractor's Affidavit of Payment of Debts and Claims AIA Document G706.
 - 2. Consent of Surety to Final Payment AIA Document G707.
 - 3. Contractor's lien release, and lien releases from each subcontractor; Contractor's Affidavit of Release of Liens AIA Document G706A
- E. Submit final Application for Payment identifying total adjusted contract sum, previous payments, and sum remaining due, in compliance with Section 012900 – Payment Procedures.
- F. Submit record documents and building inspection signoff sheets to the Construction Manager.

1.3 PUNCHLIST PROCEDURES

- A. Introduction:

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1. The intent of the Punchlist is to inspect Contractor's, Supplier's and Landlord's Work to ensure conformance to Construction Documents and identify and document any items that need to be corrected or completed.
 2. The Construction Punchlist walk-through occurs the week prior to Retail Turnover therefore, every effort should be made to ensure that all outstanding items noted on the Construction Punchlist are completed prior to that event.
 3. The completed Punchlist must be signed off on by the PMC, FSM, Operations, and the Contractor.
- B. Procedure:
1. Responsibilities at the Punchlist walk-through are assigned according to role and expertise as follows:
 - a. PMC is responsible for documenting all incomplete and/or unsatisfactory work items as identified by all parties at the walk-through on a Punchlist form.
 - b. Operations, FSM and PMC will review the construction documents and note any deficiencies.
 - 1) FSM review will be specifically related to electrical, mechanical, plumbing and equipment for PMC to add to list.
 - 2) Operations and FSM review will focus on quality of finishes, completeness of work and cleanliness of store.
 - c. The Contractor ensures a clear understanding of the work required for all items documented.
 2. PMC schedules date and time for Punchlist walk-through with Contractor, FSM and Operations by e-mail at least two (2) weeks in advance.
 3. Punchlist will indicate who is responsible for completing the item i.e. Contractor, Starbucks Supplier or Landlord.
 4. PMC confirms all required licenses and permits have been received.
 5. All data and phone lines, utilities and dumpster for trash removal should be installed and in working order.
 6. The Contractor, FSM, Operations, District Manager and/or Store Manager all receive a copy of the Punchlist.
 7. Contractor will correct all items assigned to them prior to Retail Turnover.
 8. CR will ensure items assigned to Owner's Suppliers are completed.
 9. Final payment to the Contractor will not be released until all parties sign off on the completed Punchlist.
 10. Completed and signed Punchlist is to be saved on Box in accordance with the RCDC.
 11. Because the Construction Punchlist is a requirement for the Contractor's final payment, the FSM and Operations may not withhold signing off the Construction Punchlist due to missing Starbucks or Landlord Supplied materials and services.
 12. PMC and CR shall be responsible for tracking completion of Starbucks Supplied materials and services.
- C. Guidelines:
1. Punchlist signoff can happen via on-site meeting or electronic signature.
 2. PMC communicates expectations with Contractor prior to Punch date to ensure site readiness.
 - a. PMC may elect to do a separate walk-through with the Contractor prior to the scheduled Punchlist walk-through to identify and resolve any issues.
 - b. PMC should arrive early to confirm conditions with Contractor (paint, furniture, artwork, chair rail, lighting).
 - c. Some regions may request the Landlord attend, to ensure all Landlord items are corrected (i.e. exterior lighting).
- 1.4 FINAL CLEANING**
- A. Execute prior to final inspection.
 - B. Clean interior and exterior surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
 - C. Clean equipment and fixtures to a sanitary condition.

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- D. Clean or replace filters of mechanical equipment.
- E. Clean roofs, gutters, downspouts, and drainage systems.
- F. Clean site; sweep paved areas, rake clean other surfaces.
- G. Power wash hard surfaces and trash enclosure.
- H. Remove waste and surplus materials, rubbish, and construction facilities from the Project and from the site. Conform to Construction Waste Management and Disposal requirements specified in Section 017421.
- I. Cleaning procedures shall be in accordance with Indoor Air Quality Management Plan specified in Section 013544.

1.5 PROJECT RECORD DOCUMENTS

- A. Maintain a complete set of record documents which clearly and neatly indicate, in red pencil/pen, all changes from the Contract Documents, and all uncovered existing conditions which will be subsequently concealed. All noted changes to the original documents shall be “clouded”.
- B. Record documents shall include:
 - 1. Contract drawings.
 - 2. Specifications.
 - 3. Reviewed shop drawings, product data, and samples
- C. Record documents shall be used for no other purpose and shall be stored separate from those used for construction.
- D. Keep documents current; do not permanently conceal any work until required information has been recorded.
- E. Mark specifications legibly in red pencil/pen and record at each Product section a description of actual products installed. Include the manufacturer's name and product model and number.
- F. Drawings shall indicate exact installed locations and dimensions of all concealed work, including, without limitation, conduit, piping, ducts, mechanical and electrical equipment, and foundations. Indicate all changes to details which involve concealed construction.
- G. Prior to approving each Payment Request, the Construction Manager reserves the right to inspect the Record Documents. The Payment Request may not be approved until the record documents are current to the Date of the Payment Request.
- H. At Contract Closeout, submit record documents with transmittal letter containing date, Project title, Contractor's name and address, list of documents, and signature of Contractor.
- I. As-built record documents are to be scanned and uploaded to Box per the Required Construction Document Checklist (RCDC).

1.6 OPERATION AND MAINTENANCE DATA

- A. General:
 - 1. Furnish published operation and maintenance (O&M) information covering all equipment and finish materials installed on the project. Whether specified or not, furnish published information whenever special maintenance procedures are required to assure the proper operation and durability of project material, equipment, and finishes.
 - 2. Organize O&M information into sections that correspond to the applicable specification sections. Include a Table of Contents summarizing O&M information listed in CSI order.
 - 3. Number of copies: Unless otherwise specified, submit four of each at time of project substantial completion.
- B. Contractor is responsible for the collection of all permits, manufacturer cut sheets and/or specifications, supplier, supplier and subcontractor instructional/maintenance manuals, asset information, document supporting warranty or rebates, documents required for Starbucks Sustainability certification and any other information relevant to maintaining equipment. Collectively, these documents need to be presented at Retail Turnover as the Turnover Book.

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C. Turnover Book Procedures:

1. Contractor will assemble and provide the Turnover Book using the Retail Turnover Book Checklist as follows:
 - a. Heavy-duty, 3-ring, vinyl covered, loose-leaf binder, thickness as necessary to accommodate contents and sized to receive 8 ½ x 11" paper
 - b. Provide heavy paper dividers with plastic covered tabs labeled for each separate warranty. Mark the tab to identify the product or installation using the Turnover Book Checklist as a guide.
 - c. Identify and label the front and spine of the binder with Store Name, Store Number and name of Contractor.
 - d. Include table of contents in CSI order and divider tabs to separate data for each component. Include name of Project, Contractor, and the Construction Manager.
 - e. Sample Turnover Book Checklist is bound into this Project Manual at the end of this Section. Digital version is available at Store Development Resource Center (SDRC).
2. PMC confirms Turnover Date with Contractor, FSM, and Operations by e-mail a minimum of two (2) weeks in advance.
3. PMC provides the Construction Punchlist signed by the PMC, Contractor, FSM, and Operations to the FSM.
4. PMC works with the Contractor to ensure completeness of all items below and that the store is ready for occupancy by Operations:
 - a. Store is dusted, polished and cleaned.
 - b. All inspections are completed and passed and the Certificate of Occupancy (C of O) has been issued. In some markets, a Temporary Certificate of Occupancy (TCO) may be issued.
 - c. Exception: PMC should obtain a "Stocking Permit" if a Certificate of Occupancy or TCO has not yet been issued.
 - d. Originals of all permits, inspections, certificates, and licenses are kept on site.
 - e. Operations receives the keys to the store from the Contractor.
 - f. PMC verifies all discrepancies noted on the Construction Punchlist are complete.
5. If PMC and FSM identify incomplete items, PMC is to schedule as appropriate and send a list of these items, including estimated completion dates to FSM.
6. PMC and Operations must negotiate completion of any work remaining as to not interfere with Operations' use of store.
7. Contractor will provide the Turnover Book to Construction PMC at Retail Turnover.

D. Guidelines:

1. The Turnover Book must be received prior to processing the Contractor final payment.
2. Retail Turnover occurs when Operations takes possession of the completed New Store and is the formal transition of a Project from the Construction Team to the Facilities and Operations Team.
3. Every effort must be made to ensure all outstanding items noted on the Construction Punchlist are resolved.
4. During this event, the keys to the store and all documentation needed to operate and maintain the store are provided to the appropriate Operations and Facilities teams.

1.7 OPERATION INSTRUCTION

- A. Prior to Final Completion, instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment and systems. Provide instruction at mutually agreed upon times.
- B. Use experienced personnel trained and experienced in the operation and maintenance of the building equipment or system involved.
- C. Use operation and maintenance manuals for each piece of equipment or system as the basis of instruction. Review contents in detail to explain all aspects of operation and maintenance.
- D. Refer to the individual technical Sections for additional requirements for instruction of Owner's personnel.

1.8 MANUFACTURER'S WARRANTIES

- A. Furnish original and duplicate copies of each manufacturer warranty executed to the Owner.

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- B. Execute Contractor's submittals to the manufacturers, and assemble documents executed by the manufacturers.
- C. Provide table of contents and assemble in binder with durable plastic cover.
- D. Submit material prior to final application for payment in accordance with Section 013300. For equipment put into use with Construction Manager's permission during construction, submit warranty within 10 days after first operation. For items of Work delayed materially beyond Date of Substantial Completion, furnish warranty within ten days after acceptance, listing date of acceptance as start of warranty period.
- E. In addition to binder, scan and upload all warranties to Starbucks file sharing website.

1.9 GUARANTIES

- A. Furnish written guaranty, executed to the Construction Manager, from each subcontractor performing work covered by the additional guaranty requirements specified in the technical sections. The guaranty shall commence on the date of Substantial Completion or the Owner's acceptance of that portion of the work whichever is first.
- B. Transmit through the Construction Manager in accordance with Section 013300.

1.10 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Furnish products, spare parts, and maintenance materials in quantities specified in each Section, in addition to that used for construction of Work. Coordinate with Construction Manager, deliver to Project site and obtain receipt prior to final payment.
- B. Unless specified otherwise, deliver materials in manufacturer's original factory cartons or containers.
- C. Materials shall be clearly labeled, and shall include designations used in the Contract Documents.

1.11 KEYS

- A. Deliver properly identified and tagged keys and hardware maintenance tools to the Construction Manager, including those specified in Sections other than 087100.
- B. Obtain itemized receipt for all keys and tools.

1.12 CLOSEOUT SUSTAINABILITY DOCUMENTATION

- A. Submit all required sustainability documentation prior to Final Payment. Allow sufficient time for review and approval of documentation. Incomplete documentation is grounds for delay of Final Payment.
- B. Obtain required sustainability documentation submittals from each subcontractor prior to final payment to each subcontractor.

1.13 REQUIRED CONSTRUCTION DOCUMENT CHECKLIST

- A. Starbucks retention policy requires certain construction documents be permanently retained. Refer to the Required Construction Document Checklist (RCDC) for specifics. A sample of the RCDC is bound into this Project Manual at the end of this Section.
- B. Procedures: This procedure covers construction contract documents for new, relocation and renovation construction projects.
 - 1. CR will create a RCDC for each project and keep it with their project binder/folder the reference it throughout the project to ensure the Contractor is providing the required documents. Sample of the RCDC is attached at the end of this Section. Digital version is available at Store Development Resource Center (SDRC).
 - 2. Using the RCDC as a guide, the Contractor will submit required documents to CR. The RCDC will indicate whether the document can be submitted directly to Box or if it needs to be submitted via a hard copy.
 - 3. CR must review these documents to ensure they are complete, legible and saved to the correct Box folder before releasing Contractor progress payments or final retention.

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4. At project completion, the CR, PMC and SPM must sign off on the RCDC indicating that all required documents have been received.

1.14 ARCHIVING PROCEDURES

- A. For project documents that can be archived electronically, the RCDC must be uploaded to the Box folder indicated on the RCDC.
- B. For project documents that must be archived in paper format, a signed, hard copy of the RCDC must be printed and attached to the Project Folder, then sent to Iron Mountain:
 1. Purge the folder of any documents that are not required to be archived in paper format.
 2. Ensure the RCDC is inserted as the top page of the folder.
 3. If you are storing hard copies of the As-Builts, fold them per the instructions on the Required Documents Checklist.
 4. Ship via Fedex or UPS ground to Iron Mountain: Iron Mountain - SD RM Project, 21320 66th Ave. S., Kent, WA 98032.
- C. Iron Mountain Archiving Instructions is attached at the end of this Section.

END OF SECTION

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SECTION 019100 – COMMISSIONING

PART 1 - GENERAL

1.1 SUMMARY

- A. The Owner will employ an independent Commissioning Authority. The Commissioning Authority is an independent and knowledgeable third party, hired to verify that the systems work as intended. The Commissioning Authority will inform the Owner of the results of commissioning and provide recommendations for final acceptance of commissioned systems.
- B. Commissioning is the process to verify to the Owner that critical mechanical, plumbing and electrical systems, as well as other special systems, function together properly to meet the facility performance requirements and design intent as described in the Contract Documents. The Contractor shall be responsible for participation in the commissioning process as outlined below, and in references and attachments throughout the Contract Documents. The Contractor shall furnish labor and materials sufficient to meet all requirements of building commissioning under this contract.
- C. The Commissioning Authority, acting on the behalf of the Owner, will be cognizant of the Owner's Facilities Staff's need to be informed and given the opportunity to participate actively in the commissioning process to ensure a complete, thorough turnover of systems once the project is complete. To this end, the Commissioning Authority will ensure that Facilities Personnel are informed of commissioning activity and schedule, and of any coordination issues, such as special testing procedures or opportunity for hands-on training during functional testing.
- D. The Commissioning Authority is not authorized to modify, add to, or revoke the requirements of the Contract Documents. A change in the work can only be made as provided in the General Conditions.

1.2 RELATED WORK

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to the work of this section.
- B. General requirements for testing agencies as specified in Section 014500 – Quality Control.
- C. Applicable Divisions 22 and 23 sections identifying the requirements for plumbing and HVAC systems relating to the installation of mechanical equipment and systems, particularly with respect to equipment and system testing, start-up and performance demonstration/observation. Coordinate with the work of Division 26.
- D. Applicable Division 26 sections specifying the requirements for materials and installation of electrical equipment and systems, particularly with respect to equipment and system testing, start-up and performance demonstration/observation. Coordinate with the work of Divisions 22 and 23.

1.3 TERMS

- A. Acceptable Performance: A component or system being able to meet specified design parameters under actual load, including satisfactory documented completion of all start-up, functional performance tests, control system trending, and resolution of outstanding issues.
- B. Commissioning Authority: An independent and knowledgeable third party hired to verify that the systems achieve acceptable performance.
- C. Commissioning Team: The term used to define the overall group associated with performing commissioning work, including designated representatives of the Owner, Facilities Staff, Design Professionals, Construction Team, and the Commissioning Authority.
- D. Construction Team: The term used to define the overall group responsible for performing the work to complete the work on the Contract Documents, including the Construction Manager, Contractor, the Mechanical Contractor and associated subcontractors, and the Electrical Contractor and associated subcontractors.

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- E. Testing, Adjusting, and Balancing Contractor (TAB): Subcontractor hired by Contractor from list of Owner-approved providers, to provide testing, adjusting and balancing services required in the Documents.
- F. Design Intent: Documentation behind design decisions that were made to meet the Owner's project requirements. The design intent describes the systems, components, conditions and methods to provide a fully functioning building.
- G. Start-up or pre-functional testing: Checks, tests, and demonstrations carried out by the Construction Team as required by the manufacturer or the Commissioning Authority to confirm all commissioned systems, components, and system interfaces are complete and ready for functional performance testing.
- H. Functional Performance Testing (FPT): Full range of checks, tests and demonstrations carried out to determine that all components, sub-systems, systems, and interfaces between the systems function in accordance with the Contract Documents. In this context, function includes all modes and sequences of control operation, all interlocks and conditional control responses, and all specified responses to abnormal emergency conditions.
- I. Owner Project Requirements (OPR): A document developed by the Commissioning Authority, with help of the Owner and Design Team. The OPR details the functional requirements of the project, and the expectations of the buildings use and operation as it relates to the systems being commissioned.

1.4 DUTIES OF CONTRACTOR

- A. Incorporate commissioning activities into the overall construction schedule.
- B. Coordinate participation of the Mechanical, Electrical, Plumbing and Controls, ~~Security, TAB, and Fire Alarm~~ Contractors in the commissioning process.
- C. Collect and provide to the Commissioning Authority information requested for development of a complete commissioning plan, pre-functional test checklists, Commissioning Field Notebook, and functional test procedures.
- D. Review the commissioning plan, project communication reports and test results, and submit comments to the Commissioning Authority.
- E. Provide equipment submittals for systems to be commissioned to the Commissioning Authority.
- F. Coordinate participation of the Mechanical, Electrical and Controls contractor in the commissioning kickoff meeting. This meeting will include the forum to develop final sequences of operations with all of the known equipment submittals.
- G. Manage, track and complete the Commissioning Field Notebook, including prefunctional test checklists, commissioning related specification requirements, and commissioning meeting notes.
- H. Verify that coordination, installation, quality control, and final testing have been completed such that installed systems and equipment comply with construction documents.
- I. Provide Commissioning Authority with controls system wiring diagrams and narrative sequences of operation in time for use in preparing the functional test procedures.
- J. Participate in any efforts to finalize sequences of operations with Owner, Designers, and Commissioning Authority.
- K. In a timely manner, address issues identified during construction that may affect the commissioning process or final system performance.
- L. Participate in commissioning meetings with the Commissioning Authority.
- M. Provide preliminary TAB Report, indicating all actual field values recorded, to the Commissioning Authority prior to initiation of functional testing. These reports shall be incorporated in the Commissioning Field Notebook.
- N. Issue a written notice of readiness for each system to Commissioning Authority upon completion of all systems work, start-up, and prefunctional test requirements by trade Contractors.

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- O. Operate equipment and systems, as required, for functional performance testing. This includes, but is not limited to, manipulating the appropriate controls systems to achieve the expected response for the functional test procedure.
- P. Participate in the fine-tuning or troubleshooting of system performance if either of these measures becomes necessary during FPT.
- Q. Provide training to Owner's personnel for the systems specified.
- R. Correct deferred deficiencies indicated on Punch List.
- S. Provide Turnover Checklist and Required-Construction-Document-Checklist (RCDC) as specified in Section 017700.

1.5 DUTIES OF COMMISSIONING AUTHORITY

- A. Provide Contractor with expected durations of commissioning activities for inclusion in the construction schedule.
- B. Collect and review design intent from the Design Team.
- C. Review the Contract Documents.
- D. Prepare Owner Project Requirements.
- E. Develop the commissioning plan.
- F. Develop pre-functional equipment verification checklists (EVCs) for each piece of commissioned equipment.
- G. Develop the Commissioning Field Notebook for use by the Contractor. Provide supplemental documentation, as necessary, to ensure that all aspects of start-up and testing have been complete and documented prior to functional testing.
- H. Organize a commissioning kickoff meeting and present the commissioning plan to the Commissioning Team. Determine final sequences of operations with all the known equipment submittals.
- I. Review the Contractor submittals relative to the systems to be commissioned.
- J. Review Testing, Adjusting, and Balancing (TAB) Report for compliance with design intent.
- K. Perform construction installation inspections ~~follow installation progress, and~~ to verify system installation quality and readiness for testing.
- L. Observe the start-up activities and initial testing of equipment and systems, as required, and review Contractor start-up documentation. Review of start-up activities and documentation may be remote.
- M. Develop functional test procedures from Contractor submittals, including designer-approved control documentation, and narrative sequences of operation and control diagrams.
- N. Direct and perform functional test with assistance from Contractor.
- O. Provide site observation, functional test and other project reports in a timely manner. Document inconsistencies or deficiencies in system operations and system compliance.
- P. Witness and verify satisfactory completion of equipment and component tests and systems and inter-systems functional performance tests.
- Q. Maintain the commissioning deficiency log. Verify resolution of deficiencies identified through the commissioning process.
- R. Complete a Commissioning Report.
- S. Validate any deferred corrections from either Punch or FPT Report. If an on-site visit is necessary for validation or re-testing, the additional ~~This~~ service will be charged to the Contractor.

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1.6 DUTIES OF PLUMBING, MECHANICAL AND ELECTRICAL SUBCONTRACTORS

- A. Organization of the commissioning program is primarily the responsibility of the Commissioning Authority. Execution of the program is primarily the responsibility of the Contractor with support from the plumbing, mechanical and electrical contractors for, but not limited to, the following:
 - 1. Testing and start-up of the plumbing, mechanical, and electrical equipment.
 - 2. Completion and endorsement of prefunctional equipment verification checklists (EVCs) provided by the Commissioning Authority to assure that equipment and systems are fully operational and ready for functional testing.
 - 3. Providing qualified personnel to assist the Commissioning Authority with functional testing to verify equipment/system performance.
 - 4. Providing equipment, materials, and labor necessary to correct deficiencies found during the commissioning process which fulfill contract and warranty requirements.
 - 5. Providing training for the systems specified in Divisions 22, 23, and 26 with coordination of Owner by the General Contractor. ~~Commissioning Authority.~~
- B. Plumbing, mechanical, and electrical contractors shall cooperate with the Commissioning Authority in the following manner:
 - 1. Allow sufficient time before final completion dates so that test and balance, controls point-to-point checkout, and functional testing can be accomplished.
 - 2. Provide labor and material to make corrections when required without undue delay.
 - 3. Put all plumbing, heating, ventilating, and air conditioning, and electrical systems and equipment into full operation, and continue the operation of the same during each working day of commissioning.

PART 2 - PRODUCTS

2.1 TEST EQUIPMENT

- A. Standard certified test equipment for commissioning will be provided by the Commissioning Authority.
- B. Proprietary test equipment required by the manufacturer shall be provided by the manufacturer of the equipment. Manufacturer shall provide the test equipment, demonstrate its use, and assist the Commissioning Authority in the commissioning process.

PART 3 - EXECUTION

3.1 WORK PRIOR TO COMMISSIONING

- A. Specific pre-commissioning responsibilities of Divisions 22, 23, and 26 are as follows:
 - 1. Normal start-up services required to bring each system into a fully operational state. This includes motor rotational check, cleaning, filling, purging, control sequences of operation, leak testing, full-load and part-load performance, etc.
 - 2. Factory start-up services for key equipment and systems specified in Divisions 22, 23, and 26.
 - 3. Normal testing, adjusting and balancing services required to verify each system is operating at design capacities. Execute functional tests and complete pre-functional equipment verification checklists (EVCs) for all systems. Systems include but are not limited to the following:
 - a. Heat pumps, terminal units, make-up air units, fans
 - b. Auxiliary heating and cooling systems (air conditioning/condensing units, unit heaters, etc.)
 - c. Lighting control, day lighting control and occupancy sensors.
 - d. Portions of mechanical equipment start-up requiring electrical connections and measurements
 - e. Power systems and metering.
 - f. Automated control systems
 - g. Systems on emergency power
 - h. Fuel system
- B. Factory start-up services for key equipment and systems specified in Divisions 22, 23, and 26. The subcontractor shall coordinate this work with the manufacturer and the Commissioning Authority.

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3.2 SUBCONTRACTOR PARTICIPATION IN COMMISSIONING

- A. Subcontractor shall provide skilled technicians to start-up and debug all systems within the work of Divisions 22, 23, and 26. These same technicians shall be made available to assist the Commissioning Authority in completing the commissioning program as it relates to each system and their technical specialty. Work schedules, time required for testing, etc., will be requested by the Commissioning Authority and coordinated by the Contractor. Subcontractor will ensure the qualified technician(s) are available and present during the agreed upon schedules, and of sufficient duration to complete the necessary tests, adjustments and/or problem resolutions.
1. The Commissioning Authority reserves the right to judge the appropriateness and qualifications of the technicians relative to each item of equipment, system, and/or sub-system. Qualifications of technicians include expert knowledge relative to the specific equipment involved, adequate documentation and tools to service/commission the equipment, and an attitude/willingness to work with the Commissioning Authority to get the job done. A liaison or intermediary between the Commissioning Authority and qualified factory representatives does not constitute the availability of a qualified technician for purposes of this work.

3.3 COMMISSIONING PROCESS

- A. Commissioning Schedule
1. Contractor to incorporate commissioning activities into the overall construction schedule. If construction is phased, commissioning activities are to be included in all phases of the schedule. The schedule defines the milestones and conditions that must be achieved before functional testing can commence. The schedule also includes the expected duration of the various tasks. The Commissioning Authority will provide the Contractor with expected durations of commissioning activities.
2. On-site activities within the Commissioning Authority's scope are to be conducted approximately one (1) week prior to the store open date.
3. Commissioning activities to be included in the overall construction schedule include, but are not limited to:
- a. Power to equipment complete
 - b. Mechanical equipment start-up
 - c. Prefunctional test endorsement
 - d. Controls system checkout completion
 - e. Controls system fully operational
 - f. Functional performance testing
 - g. Owner personnel training
- B. Contract Document Review
1. The Commissioning Authority will collect and review design intent information from the designers and verify that it meets the Owner's Project Requirements. Design intent documentation will be used in conjunction with the Contract Documents to develop the commissioning plan, prefunctional tests, and functional performance tests.
- C. Commissioning Plan
1. The Commissioning Authority will develop a commissioning plan for the project. The commissioning plan is a tool through which the commissioning process is described and incorporates the Owner, Designers, Contractor and Commissioning Authority's rolls relative to the commissioning process. The commissioning plan will include the following:
- a. Purpose of commissioning.
 - b. Detail the commissioning process.
 - c. Identify commissioning team members.
 - d. Include a commissioning team organization chart.
 - e. Define commissioning team member responsibilities.
 - f. Describe prefunctional and functional test procedures.
 - g. Outline systems to be commissioned.
 - h. Provide the commissioning schedule.

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- D. Pre-functional Equipment Verification Checklists (EVC)
 - 1. The Commissioning Authority will develop prefunctional test checklists for each piece of commissioned equipment. The prefunctional test checklist will outline required steps for the Contractor to complete prior to functional testing. Prefunctional test checklists verify installation, start-up and operational assessments have been completed for the equipment.
 - 2. Manufacturer start-up forms provided with pieces of equipment will be collected in addition to the prefunctional test checklists.
- E. Commissioning Field Notebook
 - 1. The Commissioning Authority will develop a Commissioning Field Notebook to be used and completed by the Contractor. The notebook will identify and track all pertinent commissioning documentation required during the installation, start-up, and checkout phases. The notebook will be maintained by the Contractor on-site and will be made available to all Subcontractors for their use. The notebook provides a central location for the Subcontractors and Commissioning Authority to identify, copy, and organize all pertinent commissioning information. The Commissioning Field Notebook will contain:
 - a. Summary describing the notebook's contents and use.
 - b. Commissioning plan for Contractor field reference.
 - c. Tabs for each system, with copies of prefunctional and functional test check sheets for pieces of equipment identified as part of that system.
 - d. Commissioning project communication reports, deficiency logs, schedule information, or any other documentation provided by the Commissioning Authority.
- F. Commissioning Kickoff Meeting
 - 1. The commissioning plan will be presented to the Commissioning Team during a commissioning kickoff meeting. The kickoff meeting may be remotely conducted via conference call or web-based platform. The Commissioning Team will review the plan and provide comments to the Commissioning Authority. The Commissioning Authority will incorporate appropriate comments into the plan and a finalized commissioning plan will be distributed to the Commissioning Team.
 - 2. The Commissioning Field Notebook will be presented to the Contractor during the commissioning kickoff meeting. Instruction for its use will be conveyed during the meeting.
 - 3. The Commissioning Team will finalize the controls sequences of operations for all commissioned systems. During this meeting each sequence will be scrutinized to develop operational parameters that meet the needs of the commissioning team.
 - a. If there are any cost changes in this process those changes will be formally tracked through the normal contractual arrangement set forth in Division 1.
 - b. The final agreed to sequences of operations will be documented by the controls contractor and submitted with their controls submittal for Starbucks approval.
- G. Installation Inspections
 - 1. During the course of construction, the Commissioning Authority will perform installation inspections for commissioned equipment and systems. Deficiencies will be noted and conveyed in project communication reports to the appropriate Commissioning Team members.
- H. Prefunctional Test Checklist Completion
 - 1. Using the prefunctional test checklists developed by the Commissioning Authority, the Contractor will verify that the systems they install are in compliance with the construction documents and are fully functional. Functional testing will only begin when checklists are completed by the appropriate subcontractors, initialed, signed, and returned to the Commissioning Authority indicating specific system completion.
 - 2. Contractor will issue a written notice of readiness to the Commissioning Authority upon completion of all systems work, start-up and endorsement of prefunctional tests.
- I. Contractor Submittal Review
 - 1. In preparation for development of functional test procedures, the Commissioning Authority will review Contractor submittals for commissioned equipment and systems.
 - 2. The Contractor will provide copies of the submittals for commissioned systems and equipment to the Commissioning Authority for use in development of functional test procedures. Submittals will be reviewed for conformity with the design intent.

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J. Functional Performance Testing (FPT) Procedures

1. The Commissioning Authority will develop functional test procedures for each piece of commissioned equipment. The functional tests outline the process for testing the building's systems. Functional tests verify the performance of equipment adhere to the design intent.
2. Functional test procedures include, but are not limited to, the following:
 - a. Air-handling systems, make-up air units, heat pumps, terminal units, fans, coils, dampers, valves, motor controllers, fire alarm interface devices, automated control components (HVAC, EMS), exhaust fans, and air curtains.
 - b. Auxiliary heating and cooling equipment, including air conditioning/condensing units; unit heaters, radiant heaters, fire alarm interface devices, and automated control components.
 - c. Domestic water systems, including domestic water heaters and associated pumps, expansion tanks, and automated control components.
 - d. Automated control system, including equipment operational sequences, point-to-point checkout, control component calibration, metering, graphics, alarming, fire alarm interface, and trending.
 - e. Lighting system controls, including switches, photocells, occupancy sensors, timers and other devices affecting lighting system operation.

K. Functional Performance Testing

1. Functional testing is intended to begin upon completion of a system. The Commissioning Authority will not begin the functional testing process until each system is complete and documented. Testing may proceed prior to the completion of systems and/or sub-systems if expediting this work is in the best interests of the Owner.
2. Functional testing is performed by the Contractor and witnessed by the Commissioning Authority to verify proper sequencing, operation, and performance of installed equipment and systems under realistic operating conditions. As tests are successfully completed, systems will be deemed acceptable by the Commissioning Authority.
3. The Contractor is responsible for coordinating participation of Commissioning Authority and Subcontractors in functional testing.
4. For security, and fire alarm, ~~theater sound and theater lighting~~ systems, the installing contractor will be responsible for providing point-to-point documentation and functional test documentation. ~~The Commissioning Authority will witness testing of these systems.~~

L. Commissioning Deficiency Log

1. When acceptable performance cannot be achieved by tested equipment and systems, the cause of the deficiency will be identified. Deficiencies will be collected and tracked in a commissioning deficiency log maintained by the Commissioning Authority.

M. Corrective Measures

1. If acceptable performance cannot be achieved by a piece of equipment or a system, and if the deficiency is caused by installation error by the Contractor, the necessary corrective measures shall be carried out by the Contractor. Once corrective measures have been completed, the equipment or system will be retested by the Commissioning Authority until acceptable performance is achieved.
2. The Contractor will be allowed one retest by the Commissioning Authority after initial testing of the equipment. If acceptable performance is not achieved after the initial retest during functional performance testing, the Contractor shall be financially responsible at standard rates to reimburse the Owner's representatives for the additional time taken to resolve the deficiency.
3. Whereas all members will have input and the opportunity to discuss, debate, and work out problems, Starbucks will have final jurisdiction on the necessary work to be done to achieve performance and/or design intent.

N. Project Communication Reports

1. In addition to the prefunctional test checklists, functional test procedures and the commissioning deficiency log, project communication reports will be delivered for all other commissioning activities performed by the Commissioning Authority. Project communication reports will be issued to the Contractor and key members of the Commissioning Team to document apparent deficiencies identified during examination of design and construction documents, daily activities on-site, installation deficiencies, and successful or unsuccessful functional testing results.

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O. Training

1. A training plan will be developed by the Contractor outlining functionally-tested equipment that requires training, who will perform the training, and when the training will occur. The Owner will provide that the appropriate personnel to attend the training.
2. The Subcontractors for Divisions 22, 23, and 26 will be required to participate in the training of the Owner's engineering and maintenance staff for each functionally-tested system and the related components.

P. Commissioning Report

1. Once acceptable performance is achieved, the Commissioning Authority will complete a commissioning report. The report shall include:
 - a. A commissioning activity executive summary
 - b. The finalized commissioning plan
 - c. The completed Commissioning Field Notebook, including prefunctional test checklists and specified commissioning related documentation
 - d. Completed functional performance testing procedures report
 - e. Commissioning project communication reports
 - f. Up-to-date commissioning deficiency log

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 024119 – SELECTIVE DEMOLITION**

SECTION 024119 – SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Demolition and removal from the site of existing construction to accommodate the new construction.
 - 2. Removal of existing components for reinstallation.
 - 3. Salvaging of existing materials.
 - 4. Capping and identification of utility lines.
 - 5. Contractor design of shoring and bracing.
- B. Related Sections:
 - 1. 011000 - Summary: Contractor's use of the site; Owner occupancy requirements; Special work requirements.
 - 2. 015000 - Temporary Facilities and Controls: Temporary enclosures, guardrails, barriers, barricades, lighting and dust control.
 - 3. 017329 - Cutting and Patching.
 - 4. 017700 - Closeout Procedures: Project record documents.
 - 5. [312000 - Earth Moving: Backfilling and grading of site.]
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.
- D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 SUBMITTALS

- A. Make submittals in accordance with Section 013300, unless specified otherwise.
- B. Submit certification that temporary shoring, support, and restraining systems have been designed by a structural engineer licensed to practice in the State of the Project.

1.3 QUALITY ASSURANCE

- A. Comply with the applicable health and safety regulations of the jurisdictional authorities.
- B. Obtain and pay for all permits required for the demolition work.
- C. Obtain approval of demolition procedures which affect the normal operation of Owner occupied spaces.
- D. The design of shorings, temporary supports, and restraining systems shall be the responsibility of the Contractor. Such elements shall be designed and stamped by a Structural Engineer licensed to practice in the State of the Project.
- E. Pre-bid Inspection: Visit the Site to determine existing conditions, and as much as possible to determine the extent of demolition required.

PART 2 - PRODUCTS

2.1 MATERIALS

NOT USED

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PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, carefully inspect existing conditions and verify that the work of this Section may properly commence. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.
- B. Do not begin demolition until all unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective demolition caused by prior observable conditions.
- C. When unanticipated mechanical, electrical, structural or other elements that conflict with intended function or design are encountered, investigate and ascertain the nature and extent of conflict. Promptly submit a written report to Architect. Perform no further demolition in such areas, unless approved by the Architect.

3.2 PREPARATION

- A. Provide and maintain all temporary barriers and security devices necessary for the demolition work. Conform to requirements of Section 015000.
- B. Provide protection to all surrounding public spaces. Perform work and provide temporary construction as approved by the local jurisdictional code authorities.
- C. Protect existing construction which will not be subject to demolition.

3.3 DEMOLITION

- A. Perform demolition as indicated and as required to accommodate the new work. Demolish in an orderly and careful manner. Where demolition exceeds that indicated, verify such demolition with the Architect prior to proceeding.
- B. Protect existing structural members. Contact the Architect prior to modifying structural members beyond the extent indicated. Cease operations and notify the Architect immediately if continued demolition operations might endanger the existing structure.
- C. Notify the Owner of hazardous materials discovered during demolition operations.
- D. Provide Contractor designed temporary shoring as required to support existing construction against movement or overload during demolition operations, until permanent supports are in place.
- E. Except where noted or specified otherwise, take possession of materials being demolished, and immediately remove from site. Do not overload existing construction to remain with demolished materials. Demolished materials which cannot be recycled or reused shall be disposed of at a legal dump site.
- F. If relics, antiques, corner stones and their contents, commemorative plaques and tablets, or other similar items are discovered, they shall remain the property of the Owner. Notify the Architect prior to removal, and obtain approval on method of removal.
- G. Carefully remove, store, and protect all materials and components to be reused.
- H. Where removal of materials indicated to remain is necessary to facilitate new construction, carefully remove, store, and protect such materials for future reinstallation.
- I. Carefully remove, protect, and turn over as directed, materials and components claimed by the Owner for salvage. Prior to demolition, contact the Owner to determine which items will be claimed.
- J. Where cut edges of the existing construction will be visible in the completed work, cut in uniform straight lines. Concrete and masonry shall be sawcut or coredrilled.
- K. Coring into post-tensioned beams or slabs is not allowed unless x-ray surveying, scanning, or another submitted and approved method has been performed to accurately locate post-tensioned tendons. X-ray surveying at coring locations may be performed by the testing and inspection agency or by another testing agency under the General Contractor's direction. Trades requesting the coring shall

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pay surveying costs. No coring operations shall commence without the prior written approval of the Structural Engineer of Record.

- L. Repair all demolition performed in excess of that required, at no additional cost to the Owner.
- M. Remove all disconnected utility lines. Cap remaining ends. Place markers to indicate location of disconnected utilities. Indicate location of disconnected utilities on the Project Record drawings as specified in Section 017700.
- N. Pay for and coordinate the work performed by public utilities. Notify the affected utility company well in advance of the scheduled work.
- O. Dust producing demolition operations shall be sprinkled in areas not subject to water damage. Provide other approved means of controlling dusting in areas subject to water damage.
- P. Electrical Demolition Requirements:
 - 1. Remove electrical system components as indicated on the electrical drawings
- Q. Plumbing Demolition Requirements:
 - 1. Abandoned underslab piping shall be cut off flush with the floor line and sealed. Patch flush with the floor.
 - 2. Abandoned piping which is exposed and readily accessible shall be removed.
 - 3. Leave abandoned piping which is concealed in existing construction to remain.
- R. Leave site in a condition acceptable to the Owner at all times. Remove demolished materials from site daily as work progresses. Do not overload existing structure with demolished materials.

3.4 CLEANUP

- A. After each demolition phase, leave the area broom clean and ready for the work of other Sections.
- B. Occupied spaces which receive demolition work shall be thoroughly and completely cleaned prior to Owner's daily operations. Cleaning shall include: vacuuming, dusting, stain and dirt removal.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS**

SECTION 030100 – CONCRETE SLAB REPAIR AND RESURFACING

SECTION 030100 – CONCRETE SLAB REPAIR AND RESURFACING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Repairing of existing slab surfaces.
 - 2. Sanding or grinding of existing concrete slab.
 - 3. Application of cementitious underlayments.
 - 4. Application of concrete sealer.
- B. Drawings, the provisions of the Agreement, including bonds and certificates, the General Conditions, and Division 1 specification sections apply to all work of this Section.

1.2 RELATED SECTIONS

- A. 033015 - Concrete Slabs on Grade: Replacement of portions of existing concrete slab.
- B. 033514 – Polished Concrete Flooring System

1.3 SUBMITTALS

- A. Make submittals in accordance with Section 013300.
- B. Product Data: Submit manufacturer's literature for each product listed.
- C. Sustainability Submittals:
 - 1. Make submittals in accordance with Section 013546.
 - 2. Low Emitting Paints and Coatings: Submit product data for interior concrete sealers and curing compounds. Include MSDS sheets.

1.4 QUALITY ASSURANCE

- A. Provide materials for system produced by one manufacturer.
- B. Materials and methods used in patching, repair or resurfacing of concrete slab shall be approved by manufacturer of polished flooring system.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver material to the jobsite in the manufacturer's original, new, unopened packages and containers bearing manufacturer's name and label in good condition.
- B. Store materials not in actual use in tightly covered containers at ambient air temperature range of 40 to 90 degrees F. Storage area should be clean, free of contamination, and in accordance with Data Sheet compliance.

1.6 PROJECT CONDITIONS

- A. Environmental Conditions: Where ambient air temperature does not fall within the range of 40 to 90 degrees Fahrenheit, or in conditions with extremely high relative humidity, special application products and methods may be required. Contact manufacturer for specific job conditions and technical support.
- B. Installer is required to visit site and verify conditions prior to bidding.
- C. Permanent lighting shall be in place and operational prior to commencement of the work of this Section.
- D. Variations in conditions may require modification to preparation and installation requirements; failure to verify modifications may result in an unacceptable finish.

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1.7 WARRANTY

- A. Furnish manufacturer's two-year warranty against failure of the concrete stain system by use of a defective product, in accordance with Section 017700.

1.8 SUBCONTRACTOR GUARANTEE

- A. Furnish Subcontractor Guarantees in accordance with Section 017700.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Concrete Patching Compounds:
 - 1. Ardex Inc. "SD-P" Fast-Setting Underlayment.
 - 2. Laticrete International, Inc. "Laticrete 220 Medium Bed Mortar mixed with "Laticrete 3701 Latex Mortar Admix."
 - 3. Mapei Corporation "Mapacem 100" or "Planitop 10".
 - 4. CTS Cement Manufacturing Corp. (Garden Grove, CA; 800-929-3030) "Rapid Set Cement All" or "CR Concrete Resurfacer" depending on color desired; fast-setting, high-strength, multi-purpose, non-shrink grout.
- B. Self Leveling Underlayment System: Self-leveling, pourable, cement based material, minimum 28 day compressive strength 2,000 psi; minimum bond strength 200 psi; one of the following.
 - 1. Ardex Inc. "K-15" Self-Leveling Underlayment Concrete
 - 2. Laticrete International, Inc. "Laticrete 86 LatiLevel Thin Pour Underlayment."
 - 3. Mapei Corporation "Ultraplan 1".
 - 4. CTS Cement Manufacturing Corp. "TRU Self-Levelling" fast-setting, high-strength underlayment.
- C. Trowelable Underlayment System:
 - 1. Ardex Inc. "SD-P" Fast-Setting Underlayment.
 - 2. Laticrete International, Inc. "Laticrete 220 Medium Bed Mortar mixed with "Laticrete 3701 Latex Mortar Admix."
 - 3. Mapei Corporation "Mapacem 100" or "Planitop 10".
 - 4. CTS Cement Manufacturing Corp. "CR Concrete Resurfacer" fast-setting, high-strength trowelable underlayment.
- D. Primers: As recommended by cement materials manufacturer for conditions.
- E. Penetrating Sealer: Water-based penetrating sealer meeting VOC limits of 100g/L or less.
 - 1. "Consolideck Concrete Protector WB" by Prosoco Inc. (Lawrence, KS; 800-255-4255).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions under which concrete resurfacing will be performed for compliance with requirements for applications of flooring materials. Do not proceed with application until unsatisfactory conditions have been corrected. Start of any of the resurfacing work will be construed as the Applicator's acceptance of the floor and environment conditions.
- B. Condition of Substrate: Verify that all jobsite conditions are within the sealer product manufacturer's Data Sheet parameters. Report discrepancies to the Architect.
 - 1. Surface temperature of slab must be at least 40 degrees F. and no more than 90 degrees F. for crack and joint fillers and coating.
 - 2. If there are any indications of a moisture problem, contact the Architect.

3.2 PREPARATION

- A. Comply with the concrete coating manufacturer recommendations and as follows: Prepared surface shall be smooth and free of ridges and irregularities including those occurring in concrete and from mastics.

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SECTION 030100 – CONCRETE SLAB REPAIR AND RESURFACING

- B. Initial Concrete Slab Preparation: Provide initial preparation of concrete surface as follows.
 - 1. Remove dirt, oil, soap, grease, mastic, and other bond-breaking contaminants.
 - 2. Surface shall be smooth and free of unwanted ridges from by either mastics or concrete.
- C. Surface Repair: Fill holes, spalls, cracks, voids and joints as recommended by the system manufacturer with minimal residue on surrounding surface and as required to provide a smooth, level and even substrate.
 - 1. Spalls 1 to 3 inches in diameter shall be struck flush with patching compound.
 - 2. Spalls larger than 3 inches in diameter and areas requiring leveling or resurfacing shall be filled with trowelable or self-leveling compound.
 - 3. Fill cracks of 3/16 inch in width or wider with patching compound. Strike flush.
 - 4. Cracks between 1/16 to 3/16 inch in width shall be filled with joint sealant specified in Section 079200 following the completion of the Work of this Section.
 - 5. Cracks less than 1/16 inch in width will not be filled.
- D. Final Preparation: Surfaces to be treated shall be clean, dry and absorbent. Confirm surface absorbency with a light water spray. If surface does not wet uniformly, use the appropriate surface preparation method from approved mock-up to remove remaining surface contaminants.

3.3 SANDING/GRINDING

- A. At slabs with glass fiber reinforcing, prepare slab as follows:
 - 1. Prepare slab with a three-step grind process.
 - a. Step 1: Use 150-grit metal or 100-grit puck resin tooling.
 - b. Step 3: Use 200-grit resin pads.
- B. At slabs not glass-fiber reinforced:
 - 1. Sand concrete using an orbital sander with 220-grit.
- C. Remove extraneous materials which could become unbonded during normal traffic, such as gypsum board compound, and other similar materials.
- D. Clean subfloor and ensure that surfaces are dry, hard, and sound.
- E. Provide 2 sanding/grinding passes with each grit, perpendicular to each other.
- F. Sand entire area including inside corners and around columns where trowel-applied or self-leveling underlayments are indicated. Use hand sanders/grinders where necessary to access all areas.
- G. The finished surface shall be clean and porous with abraded roughness of light grit sandpaper.
- H. The sanded floor shall be swept using a fine-bristled push broom. After brooming, vacuum entire floor to remove all dust and debris.
- I. Damp mop and/or wet vacuum as necessary to attain a properly cleaned surface.
- J. Maintain slab free of traffic between sanding and application of concrete coatings.

3.4 APPLICATION OF REPAIR AND RESURFACING MATERIALS

- A. Install trowelable underlayment at locations where slopes are indicated and at other locations as appropriate to installation conditions; install self leveling underlayment at other locations as necessary to correct slab flatness and levelness.
- B. Set screeds, markers, and reference blocks. Set screeds at all construction and control joints to establish weakened plane joints in underlayment.
- C. Install patching compounds in accordance with the manufacturer's recommendations. Where subsequent finishing of the material is required, float to level surface. Do not trowel.
- D. Apply primer to all areas to receive underlayment; repeat application if necessary to achieve proper build.
- E. Mix materials and pour or pump and squeegee into place to achieve appropriate thickness. At areas to receive cork tile flooring, provide fill thickness as necessary to align cork flooring with adjacent floor surfaces.

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- F. Finish to a smooth level surface within tolerances specified for concrete floors.
- G. Cure in accordance with the manufacturer's instructions.
- H. Tolerances: As specified in Section 033000.

3.5 APPLICATION OF SEALER

- A. Do not apply sealer to slabs or portions of slabs indicated to receive polishing system or a finished flooring material.
- B. Remove all dirt, debris, or curing compounds using surface preparation cleaners as recommended by manufacturer for conditions. Allow cleaning waters used in surface preparation to dry.
- C. Application:
 - 1. Apply a single coat of sealer using a low pressure sprayer fitted with a 0.5 gpm spray tip.
 - 2. On most surfaces, apply in a single saturating application.
 - 3. Even out puddles with a microfiber applicator before material has a chance to fully dry.
 - 4. If needed, an additional coat can be applied after material has dried for at least 1 hour. The second coat will require less material.
 - 5. For optimum stain repellency on porous surfaces, apply a saturating coat and allow to dry thoroughly before applying a second saturating coat. Less material will be required on the second application. Over-application may change surface appearance.
- D. Allow treated surfaces to dry.
- E. Remove any dried powder residue using stiff broom, power sweeper or floor scrubbing machine.
- F. Do no subsequent buffing or burnishing of slab.

3.6 CLEAN-UP

- A. During progress of work, remove from site discarded materials, rubbish, cans and rags at end of each work day.
- B. Upon completion of work, clean spattered surfaces. Remove spattered coating by proper method of washing and scraping, using care not to scratch or otherwise damage finished surfaces.

3.7 PROTECTION

- A. Protect completed concrete coating work against damage.
- B. Close application area after completion of each stage for a minimum of 48 hours and longer if required by the manufacturer.
- C. Protect coatings from general construction when tack-free with ¼ inch tempered hardboard, smooth side down. Remove prior to completion of Project.
- D. Correct damage by cleaning, repairing or replacing, and refinishing, as acceptable to the Architect.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 033015 – CONCRETE SLABS ON GRADE**

SECTION 033015 – CONCRETE SLABS ON GRADE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Cast-in-place concrete slabs on grade
 - 2. Concrete accessories.
 - 3. Formwork, shoring, bracing, and anchorage.
 - 4. Concrete reinforcement.
 - 5. Underslab vapor retarder.
 - 6. Concrete sealer.
- B. Related Sections:
 - 1. 003152 - Testing and Inspection Services: Owner paid testing and inspections.
 - 2. 018100 – Sustainable Design Requirements.
 - 3. 079200 - Joint Sealants: Expansion joint fillers.
 - 4. 312000 - Earth Moving: Fill under slabs on grade.
 - 5. 321313 – Concrete Paving
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.
- D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

- A. American Concrete Institute (ACI):
 - 1. 117 - Standard Specification for Tolerances for Concrete Construction and Materials.
 - 2. 301-05 - Specifications for Structural Concrete.
 - 3. 315 - Details and Detailing of Concrete Reinforcement.
- B. American Society for Testing and Materials (ASTM):
 - 1. A615 - Deformed and Plain Billet-Steel for Concrete Reinforcement.
 - 2. C33 - Specifications for Concrete Aggregates.
 - 3. C94 - Specifications for Ready Mixed Concrete.
 - 4. C132 - Test for Slump of Portland Cement Concrete.
 - 5. C150 - Specification for Portland Cement.
 - 6. C156 - Test Method for Water Retention by Concrete Curing Materials.
 - 7. C171 - Specification for Sheet Materials for Curing Concrete.
 - 8. C260 - Specifications for Air-Entraining Admixtures for Concrete.
 - 9. C309 - Specification for Liquid Membrane Forming Compounds for Curing Compounds.
 - 10. C494 - Specifications for Chemical Admixtures for Concrete.
 - 11. C618 - Specification for Fly Ash and Raw or Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete.
 - 12. C939 - Test Method for Flow of Grout for Preplaced-Aggregate Concrete
 - 13. C1107 - Specification for Packaged Dry, Hydraulic-Cement Grout (Non-shrink)
 - 14. C1315 - Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete.
 - 15. D1751 - Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction.
 - 16. E1155 - Standard Test Method for Determining Floor Flatness and Levelness Using the "F Number" System.
- C. U.S. Army Corps of Engineers: CRD-C-621-83 - Specifications for Non-Shrink Grout.

1.3 SUBMITTALS

- A. Make submittals in accordance with Section 013300.

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- B. Product Data: Submit data for each accessory, admixture, and curing material proposed for the work.
- C. Shop Drawings:
 - 1. Reinforcing:
 - a. Detail reinforcing in accordance with ACI 315. Indicate reinforcement sizes, spacings, locations and quantities of reinforcing, bending and cutting schedules, splicing, and supporting and spacing devices.
 - b. Indicate embedded items.
 - 2. Slab Layouts: Dimension locations of control, expansion, and construction joints. Relate to building grid lines.
- D. Quality Control Submittals:
 - 1. Mix Designs: Prior to concrete work, submit mix designs for approval.
 - 2. Test Results: Submit test results per ASTM C311 performed less than 6 months prior to use for approval by Architect.
 - 3. Certifications: Submit mill certificates for cement, aggregates, and reinforcing.
- E. Sustainability Submittals:
 - 1. Make submittals in accordance with Section 013546.
 - 2. Low Emitting Paints and Coatings: Submit product data for interior concrete sealers and curing compounds. Include MSDS sheets.

1.4 QUALITY ASSURANCE

- A. Perform work in accordance with ACI 301.
- B. Concrete work is subject to special testing and inspection as specified in 003152. Notify Construction Manager at least 48 hours before concrete is poured.
- C. Pre-Installation Conference:
 - 1. At least 35 days prior to start of concrete work the Contractor shall hold, in accordance with Section 013119, a meeting to review the detailed requirements of the concrete design mixes and to determine the procedures for producing proper concrete construction.
 - 2. Required in attendance:
 - a. Contractor's superintendent.
 - b. Testing Laboratory representative.
 - c. Concrete subcontractor.
 - d. Ready-mix producer.
 - e. Admixtures manufacturer's representative.
 - f. Architect/Engineer
 - g. All subcontractors with work to be installed in, or affected by, concrete work.
 - 3. Notify Architect 10 days prior to the scheduled date of the meeting.
 - 4. Agenda: Include the following.
 - a. Installation scheduling and coordination; scheduling of mock-up construction and review.
 - b. Classes of concrete required; mix designs; applicable references.
 - c. Formwork.
 - d. Reinforcement and placement.
 - e. Climatic conditions; hot and/or cold weather concreting procedures (as appropriate); unusual placing conditions.
 - f. Substrate preparation; placement methods; construction joints.
 - g. Flatwork; flatness and levelness requirements; finishing; criteria for acceptance; remedies.
 - h. Curing and protection procedures
 - i. Site quality control; inspection and testing requirements.
 - j. Sealers; locations and coverage rates.

PART 2 - PRODUCTS

2.1 FORM MATERIALS

- A. Unless specified otherwise, conform to ACI 301.

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- B. Plywood: APA B-B Plyform Class 1, EXT

2.2 REINFORCING

- A. Reinforcing Steel:
1. ASTM A615, grade [40][60], unless indicated otherwise.
- B. Chairs, Bolsters, Bar Supports, and Spacers: Sized and shaped for strength and support of reinforcement during installation and placement of concrete.
- C. Fibrous Reinforcing:
1. Reinforcing Fibers: Virgin polypropylene reinforcing fibers, designed and manufactured specifically for use in concrete; one of the following.
 - a. Forta Corporation "FORTA CR"
 - b. Fibermesh, Inc. "Fibermesh Fibers"
 2. Furnish fibers in lengths as approved for the application.

2.3 CONCRETE MATERIALS

- A. Cement: ASTM C150, normal - Type 1 Portland, grey color.
- B. Fly Ash: ASTM C618, Class C or F; loss on ignition (LOI) not to exceed 1 percent. Use fly ash from one single source for the whole Project.
- C. Normal Weight Fine and Coarse Aggregates: ASTM C33; severe weather exposure.
- D. Lightweight Aggregates: ASTM C330; expanded shale; 100% passing a 3/4 inch sieve.
- E. Water: ASTM C94, para. 5.1.3

2.4 ADMIXTURES

- A. Air-Entrainment: ASTM C 260; Master Builders Inc. "Micro-Air" or "MBVR", Euclid Chemical Co. "Air Mix," or approved.
- B. Water Reducer Normal: ASTM C 494, Type A; Master Builders Inc. "Pozzolith/Polyheed," Euclid Chemical Co. "Eucon WR 75," or approved.
- C. High Range Water Reducer (Superplasticizer): ASTM C 494, Type F or G and shall be of the second or third generation type. Shall be batch plant added, extend plasticity time, reduce water 20 to 30 percent. Master Builders Inc. "Rheobuild," Euclid Chemical "Eucon 37," or approved.
- D. Accelerator: ASTM C 494, Type C or E, non-corrosive, non-chloride; Master Builders "Pozzutech 20," Euclid Chemical Co. "Accelgard 90," or approved.
- E. Set Retarder: ASTM C494, Type B.
- F. Shrinkage Reducing Admixture: Eclipse by W.R. Grace Company.

2.5 ACCESSORIES

- A. Bonding Agent: Acrylic type; Sonneborn "Sonnocrete", W.R. Grace "Duraweld C", Euclid Chemical Co. "Flex-con", or approved.
- B. Non-Shrink Grouts: ASTM C1107, Grade B; non-shrink non-catalyzed natural aggregate grout; minimum compressive strength of 7000 PSI at 28 days; 25 to 30 second flow when tested in accordance with ASTM C939 at 45 to 90 degrees F; cement gray in color; Master Builders Inc. "Masterflow 928," Euclid Chemical Co. "HiFlow Grout," or approved.
- C. Form Release Coating: Water based type; VOC <150g/l; Nox-Crete "Utility Release," Cresset Chemical Company "Crete-Lease 20-VOC," or approved; non staining.
- D. Curing Materials:
1. Waterproof Sheet Material: Waterproof paper in accordance with ASTM C171; reinforced waterproof kraft paper; white color at exterior applications; Burke Kraft Curing Paper Type I-SK-30, or approved.

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2. Mats and Burlap: Fabric covering composed of quilted polyethylene sheeting laminated to outer covering of burlap, cotton, or other approved fabric; outer covering shall weigh not less than 6 ounces per square yard.
 3. Curing Compound: ASTM C309; clear or translucent with fugitive dye; moisture loss not more than 0.055 gr./sq.cm. when tested in accordance with ASTM C156 and applied in a single coat at the manufacturers recommended rate; maximum VOC content 100 g/L. Curing compounds shall be proven compatible with subsequently applied floor finishing systems including waterproof membranes or removed in its entirety prior to flooring installation.
 4. Curing/Sealing Compound: ASTM C309; water based curing compound; maximum VOC content 100 g/L. W. R. Meadows, Inc., Hampshire IL (800/342-5976); "Sealtight 100-Clear " or approved.
- E. Underslab Vapor Retarder: ASTM E1745, Class A; one of the following:
1. "Stego Wrap 15 Mil Vapor Barrier" by Stego Industries, LLC (877-464-7834).
 2. "Vapor Block 15" by Raven Industries (800-635-3456).
 3. "Griffolyn 15 Mil Green" by Reef Industries, Inc. (800-231-6074).
 4. "Perminator 15 Mil" by WR Meadows, Inc. (847-214-2100)
 5. "Florprufe 120" by WR Grace (866-333-3726).
- F. Prefabricated Slab Construction Joints: Burke by Edoco "Keyed Kold Joint," with splice plates, stakes, and driving accessories, or approved; depth 1/2 inch less than slab thickness, galvanized sheet metal tongue and groove joint form, with knockouts for passing reinforcing bars through.
- G. Preformed Joint Fillers:
1. Non-extruding type; ASTM D1751; Sonneborn "Expansion Joint Filler," WR Meadows "Sealtight Fiber", " Burke by Edoco "Fiber expansion Joint," or approved.
 2. Joint Cap: Strippable plastic type; W.R. Meadows "SealTight Snap-Cap", Burke by Edoco "Joint Cap", or approved; width to match expansion joint filler material.
- H. Finishing Aid: Evaporation retardant for preventing rapid drying during hot windy weather, Master Builders "Confilm."

2.6 CONCRETE MIX

- A. Mix concrete in accordance with ASTM C94, and in accordance with the requirements indicated on the structural drawings.
- B. Concrete at slabs on grade and elevated slabs shall have a maximum water/cement ration of 0.45.
- C. Admixtures:
1. All concrete shall contain the specified water reducing or high range water reducing admixture, except concrete with a required water/cement ratio of 0.45 or lower shall contain a high range water reducing admixture.
 2. All concrete required to be air entrained shall contain air entraining admixture to produce 4% to 6% air.
 3. All concrete placed in ambient temperatures from 40 degrees F to 20 degrees F, and all slab concrete placed in ambient temperatures below 50 degrees F, shall contain an accelerator at the manufacturer's required dosage.
 4. All concrete placed in ambient temperatures of 90 degrees F or above, shall contain a set retarder at the manufacturer's required dosage.
- D. Provide 28 day compressive strengths as indicated on the Structural Drawings. Where not indicated on the Structural Drawings, provide minimum 3000 psi compressive strength unless indicated otherwise.
- E. Fly Ash: A minimum of 15 percent and a maximum of 50 percent by weight of cementitious materials.

2.7 REINFORCEMENT FABRICATION

- A. Fabricate as indicated and in accordance with ACI 315.

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PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this Section may properly commence. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.
- B. Do not begin installation until all unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.

3.2 FORMWORK ERECTION

- A. Verify lines, levels, and measurement before proceeding with formwork. Align form joints.
- B. Use plywood forms, unless other systems are approved by the Architect.
- C. Use form coating on forms in accordance with the manufacturer's recommendations. Verify that form coatings will not affect the bond of subsequent concrete surface treatments.
- D. Coordinate with work of other Sections in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts.
- E. Tolerances: Comply with ACI 117.
- F. Where earth forms are used, hand trim sides and bottoms of earth forms. Remove loose dirt.

3.3 UNDERSLAB VAPOR RETARDER

- A. Place, protect, and repair vapor-retarder sheets according to ASTM E 1643 and manufacturer's written instructions under all interior slabs-on-grade.
- B. Lap and seal all seams a minimum of 6 inches, seal around all penetrations, lap and seal against foundation walls and footings with manufacturer's recommended sealing tape or mastic.

3.4 REINFORCEMENT

- A. Place, support, and secure reinforcement against displacement.
- B. Locate reinforcing splices not indicated on the drawings at points of minimum stress.
- C. Provide laps and concrete cover as indicated in the Drawings.

3.5 PLACING CONCRETE

- A. In accordance with ACI 301.
- B. Bonding Agent: Mix thoroughly and apply strictly in accord with the manufacturer's instructions; do not use when ambient temperature is below 45 degrees F. Place concrete in contact immediately while bonding agent is still tacky.

3.6 SLABS

- A. Expansion Joints for Slabs on Grade:
 - 1. Place expansion joints at locations indicated and where exterior slabs abut concrete walls, the building perimeter, and other fixed objects abutting or within the slab area.
 - 2. Form joints 1/2 inch wide x full depth of slab.
 - 3. Form expansion joints with preformed joint filler. Install strippable joint at joints to receive sealant specified in Section 079200.
 - 4. Tool expansion joints to 1/4 inch radius.
 - 5. Discontinue reinforcing at the expansion joint or use sleeved dowels in accordance with the Structural Drawings.
- B. Control Joints for Slabs on Grade:
 - 1. Make joints straight; perpendicular or parallel to building lines and slab edges, as appropriate.
 - 2. Control joints shall be saw cut or tooled, unless indicated otherwise.
 - 3. Radius tooled control joints to match expansion joints.

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4. Control joints shall penetrate the slab a minimum of 1/4 the thickness of the slab and shall be 3/16 inch in width minimum.
 5. Space control joints at the locations indicated, except when not indicated locate in at 32 times the slab thickness.
 6. Align joints with column lines when ever possible. Joints shall form rectangular panels with the long side less than 1-1/2 times the length of the short side. Provide circular or diamond shaped joint lines around columns. Locate control joints at reentrant corners. Coordinate with placement of joints in tile flooring.
- C. Tooled Joints for Slabs on Grade: Provide tooled joints to match control joints. Tooled joints shall to penetrate the slab no more than 1/4 the depth of the slab.
- D. Construction Joints: Place at either expansion or control joint locations for slab on grade construction.
- E. Curing:
1. Moisture cure all concrete for a minimum of 7 days, unless approved or specified otherwise.
 2. Use curing/sealing compound on concrete slabs scheduled to receive sealer.
 3. Use waterproof sheet material or mats and burlap at surfaces to receive subsequent bonded finish materials. A curing compound may be used on surfaces to receive subsequent bonded finish materials, provided the curing compound is approved in writing by the manufacturer of the adhesive or the bonding finish material. Curing compound may also be used on surfaces to receive subsequent bonded finish materials, provided the curing compound is removed with shot blasting or other approved method prior to installation of bonded materials.
 4. Apply curing compounds and curing/sealing compounds in accordance with the manufacturer's recommendations.
 5. Maintain concrete temperatures above 50 degrees F.
- F. Finishes:
1. Full Trowel finish interior floor slab surfaces, unless specified otherwise.
 2. Light steel trowel finish interior floor slab surfaces scheduled to receive tile or other similar bonded materials.
- G. Curing/Sealing Compound: Apply a second coat of curing/sealing compound to concrete slabs scheduled to receive sealer. Clean floor and apply just prior to substantial completion. Apply in accordance with the manufacturer's recommendations.
- H. Tolerance: Provide Random Traffic floor tolerances as follows, when measured in accordance with ASTM E1155, including those floors to receive subsequent finishes.
1. Slab on Grade at Exposed Architectural Slabs: F_F 40, F_L 30, over test area; F_F 30, F_L 24, minimum local value.
 2. Slabs on Grade to receive thinset flooring and resilient floor covering : F_F 35, F_L 25, over test area; F_F 24, F_L 17, minimum local value.
 3. Slabs on Grade to receive carpet : F_F 25, F_L 20, over test area; F_F 17, F_L 15, minimum local value.
 4. Slabs on Grade at non-public areas, subfloors under concrete topping, and thickset: F_F 20, F_L 15, over test area; F_F 15, F_L 10, minimum local value.
 5. Slopes And Pitches To Drain: F_F 15, minimum local value at each discreet plane as indicated on the Drawings; free from areas subject to puddling.

END OF SECTION

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SECTION 033514 – POLISHED CONCRETE FLOORING SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Surface preparation.
 - 2. Application of clear, colorless, liquid concrete hardener and densifier.
 - 3. Grind and polish floor with bonded-abrasives to desired finish.
 - 4. Application of penetrating densifier and sealer.
- B. Related Sections:
 - 1. 013300 – Submittal Procedures.
 - 2. 017700 – Closeout Procedures.
 - 3. 030100 – Concrete Slab Repair and Resurfacing: Preparation and repair at slabs indicated to receive floor finishes.
 - 4. 033015 - Concrete Slabs on Grade: Installation of concrete slab.
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 01 specification sections apply to the work of this Section.
- D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

- A. ASTM International (ASTM) (www.astm.org):
 - 1. C171 – Standard Specification for Sheet Materials for Curing Concrete
 - 2. D523 – Standard Test Method for Specular Gloss.
 - 3. D1455 - Standard Test Method for 60° Specular Gloss of Emulsion Floor Polish.
 - 4. D2240 – Standard Test Method for Rubber Property Durometer Hardness.
 - 5. E1155 – Standard Test Method for Determining FF Floor Flatness and FL Floor Levelness Numbers.
 - 7. F1869 – Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
 - 8. F2170 – Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
- B. American National Standards Institute (ANSI) / National Floor Safety Institute (NFSI): ANSI/NFSI B101.3-2012. Test Method for Measuring Wet DCOF of Common Hard-Surface Floor Materials.
- C. ASCC Concrete Polishing Council (CPC) (www.ascconline.org/concrete-polishing-council/technical-documents)

1.3 PROJECT CONDITIONS

- A. This specification section is provided as a general description of materials and methods required to provide intended design results. Different projects may require slightly different methods or procedures to obtain desired result.

1.4 SUBMITTALS

- A. Make submittals in accordance with Section 013300.
- B. Submit manufacturer's product data and application instructions for all products proposed for use. Application instructions shall highlight all deviations from this specification including reasons for such deviation.
- C. Installation Instructions: Provide proposed installation methods where they deviate from specified procedures. Installation instructions shall highlight all deviations from this specification including reasons for such deviation.

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- D. Written certification, signed by manufacturer's representative, stating applicator as trained and qualified to perform work of this Section using proposed manufacturer's products, including qualification criteria.
- E. Certifications: Submit certification that finished polished concrete flooring installation successfully passed ANSI B101.3.
- F. Warranty Draft: Concurrent with initial product data submittal, submit draft of manufacturer's warranty for Architect's review of terms. Draft shall include exceptions and inclusions.
- G. Sustainability Submittals:
 - 1. Make submittals in accordance with Section 013546.
 - 2. Low Emitting Paints and Coatings: Submit product data for interior concrete sealers and curing compounds. Include MSDS sheets.
- H. Contract Closeout Submittals: Submit in accordance with Section 017700.
 - 1. Maintenance instructions: Provide polishing system manufacturer's maintenance instructions to the Owner's maintenance personnel.
 - 2. Overage products applicable to maintenance.
 - 3. Slip-resistance Testing, Record Floor Plan.

1.5 QUALITY ASSURANCE

- A. Applicator Qualifications:
 - 1. Artisan specializing in ground and polished concrete flooring systems that are comparable in type, scope, and quality as specified by this Section.
 - 2. Able to document minimum 5 years' experience with minimum 5 successful commercial quality concrete floor finishing projects comparable to work specified for this project.
 - 3. Certified by the proposed floor system manufacturer as qualified to perform work of this Section, prior to Bid date, and accepted by Architect.
- B. Mock-up:
 - 1. Make mock-ups in accordance with Section 014500.
 - 2. Ensure that mock-up is installed by the same equipment and installer's personnel who will perform the actual work.
 - 3. Provide a 40 square foot area of polished concrete slab mock-up at a location away from the finished Work area as designated by the Architect.
 - 4. Apply mock-up to demonstrate surface finish, aggregate distribution, color variations, and level of workmanship.
 - 5. Include saw cut joint between areas with joint filler as specified, showing division of colors at stained and unstained areas.
 - 6. Prior to proceeding with the Work, ensure that mock-up meets the requirements of the Architect or Owner's representative.
 - 7. Maintain approved mock-up during construction in an undisturbed condition as a standard for judging the Work.
- C. Pre-Installation Conference: In accordance with Section 013119.
 - 1. Administer prior to starting the work of this Section.
 - 2. Require in attendance:
 - a. General Contractor.
 - b. Polishing system installer.
 - c. System manufacturer's representative.
 - d. Other parties affected by the work of this Section.
 - 3. Agenda:
 - a. Review Contract Document requirements.
 - b. Review requirements for assessment of sound substrate and subsequent remediation in the case of sub-standard conditions.
 - c. Review requirements for environmental conditions and storage of materials.
 - d. Review system manufacturer's preparation and application instructions including, but not limited to, the following:
 - 1) Details of each step of grinding, honing, and polishing operations.

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- 2) Application of liquid applied products.
 - 3) Protecting concrete topping floor surfaces until polishing begins.
 - 4) Sealing and protecting polished concrete topping floors after polishing is completed.
- e. Review conditions or techniques which would prevent the satisfactory application of the polishing system.
- 4. Reports: Record discussions, including decisions and agreements reached, and furnish copy of record to the Architect and each party in attendance.
- D. Finished installation shall meet the dynamic coefficient of friction requirements specified.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. In accordance with Section 016000 and the system manufacturer's instructions.
- B. Deliver products packaged in manufacturer's packaged and sealed containers with manufacturer's identifying labels intact.
- C. Avoid direct contact with this product as it may cause mild-to-moderate irritation.

1.7 PROJECT CONDITIONS

- A. Comply with the polishing system manufacturer's written instructions for age of cured concrete topping, the substrate temperature and moisture content, ambient temperature and humidity, ventilation, and other conditions affecting the floor finish.
- B. Close areas to traffic during and after polished concrete topping system application for the time period recommended by the system manufacturer.
- C. Do not apply product when air, surface, or material temperatures are expected to fall below 40o F (4o C) within four hours of expected application.
- D. Do not use on highly dense or non-porous surfaces.
- E. Limit and control damage from excessive dust caused by grinding and polishing procedure.
- F. Properly dispose of collected dust from polishing.

1.8 WARRANTY

- A. Submit in accordance with Section 017700.
- B. Furnish manufacturer's standard warranty.

PART 2 - PRODUCTS

2.1 POLISHING SYSTEM

- A. Manufacturers:
 - 1. American Decorative Concrete Supply Co./Ameripolish Systems (Lowell, AR; 800.592.9320) "AmeriPolish" polished concrete system.
 - 2. Prosoco, Inc. (Lawrence, KS; 800-255-4255) "ConsoliDeck" high performance concrete system.
 - 3. Ardex Engineered Cements (Aliquippa, PA; 888-512-7339) Ardex Polished Concrete System "APCS".
 - 4. Laticrete International, Inc. (Bethany, CT; 800-243-4788) "FGS PermaShine" concrete polishing system.
 - 5. SureCrete Design (Dade City, FL; 800-544-8488) polished concrete system.
- B. System Description:
 - 1. Multistep mechanical processes and accessories as specified herein or required by the polishing system manufacturer to provide a complete system and achieve the specified finish.
 - 2. Mechanical bonded abrasive grinding and polishing equipment, concrete repair, and concrete treatment densifiers.
- C. Materials:
 - 1. Surface Patching and Repair Material (when required for slab repair prior to topping):

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- a. Basis of Design: CTS Cement Manufacturing Corp. (Cypress, CA; 800-929-3030) "Rapid Set Cement All" fast-setting, high-strength, multi-purpose, non-shrink grout.
 - b. Acceptable options approved by the polishing system manufacturers specified (subject to compliance with Contract Document requirements and Architect's approval of color, technical parameters, and conformance to design intent) will be considered.
 2. Hardener/Densifier: Low-VOC silicate as furnished by system manufacturer and accepted from mock-up; one of the following:
 - a. "Ameripolish 3D HS" by CTS Cement Manufacturing.
 - b. "Consolideck "LS" by Prosoco.
 - c. Approved alternate.
 3. Finishing Sealer: Matte finish, non-film forming stain and food resistant penetrating sealer designed to be applied to densified and polished concrete which meets the requirements of OSHA for slip resistance as tested by ASTM D 2047.; one of the following:
 - a. "Ameripolish SR2 SB" by CTS Cement Manufacturing
 - b. "Consolideck Polish Guard" by ProSoCo.
 - c. Approved alternate.
- D. Equipment:
1. Field Grinding and Polishing Equipment:
 - a. Multiple-head, variable speed machine equipped with planetary, counter-rotating concrete grinding heads; ride on or walk behind machines, of various size and weights, with bonded abrasive pads affixed to heads for grinding concrete and polishable topping.
 - b. Equipped with heavy-duty industrial HEPA filtration vacuum to capture and prevent concrete dust from escaping into interior spaces. Provide mandatory pre-separator for all metal bond cuts when grinding dry.
 - c. Grinding and polishing equipment shall generate minimum 600 lbs (270 kg) head pressure.
 2. Edge Grinding and Polishing Equipment: Hand-held or walk-behind machines which produces same results, without noticeable differences as field grinding and polishing equipment, designed to access areas adjacent to vertical surfaces and inside corners.
 3. Burnishing Equipment: High speed walk-behind machines capable of generating 1000 to 2000 revolutions per minute and with sufficient head pressure of not less than 20 pounds (9 kg) to raise floor temperature by 20 degrees F (-7 deg.C).
 4. Diamond Tooling:
 - a. Definition: Abrasive tools that contain industrial grade diamonds within a bonded matrix (such as metallic, resinous, and ceramic) attached to rotating heads to refine the concrete topping surface.
 - b. Allowable Grinding/Polishing Diamonds (or approved equivalents):
 - 1) Metal Bonded Diamond Grit Sizes: 40, 80, and 150.
 - 2) Hybrid Style Diamond: 30, 50, 100 or approved equivalent.
 - 3) Resin Bonded, Phenolic Diamond Grit Sizes:
 - a) 100, 200, and 400 (or manufacturer's equivalent designations) as needed to achieve specified sheen.
 - c. Progression of all polishing steps shall include sequential grit sizes that are not greater than twice the previous grit used.

2.2 ACCESSORIES

- A. Neutralizing Agent: Tri-sodium phosphate or baking soda.
- B. Water: Clear and potable.
- C. Divider Strips:
 1. Steel/Zinc Combination:
 - a. Approved Manufacturer's:
 - 1) Manhattan American Terrazzo Strip Co. (Staley, NC; 919-622-4247).
 - 2) National Metal Shapes (Delaware, OH; 800-837-9559).
 - b. Type: L-shaped, galvanized sheet metal steel angle with 1/8 inch wide zinc top strip; 3/8 inch high; 6 foot minimum lengths.
 - c. Applications: Straight runs in which rigidity is preferred.
 2. Solid Zinc:

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- a. Type: 'L'-shapes; 1/8 inch wide, 3/8 inch high; 6 foot minimum lengths.
 - b. Custom-bent to radii indicated on the drawings.
 - c. Applications: Curves in which flexibility is preferred.
- D. Kraft Curing Paper: Conforming to ASTM C171, Type 1.1.1, non-staining, moisture retentive, as specified by the system manufacturer.
- E. Semi-Rigid Joint Sealant: Rapid setting, two-component polyurea polymer liquid of 100% solids content with a minimum hardness of Shore A 75 (ASTM D2240) as recommended by the polishing system manufacturer; color as selected by the Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this Section may properly commence. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.
- B. Do not begin installation until unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.
- C. Concrete Substrate:
 - 1. Clean, smooth, and flat conforming to specified floor tolerances specified by Section 033000
 - 2. Free of chemicals, acids, curing compounds and other substances that may inhibit application of products specified by this section, including penetration of dyes.
 - 3. Required Tests:
 - a. Measure pH according to method indicated in ASTM F 710. Notify the Architect of pH results lower than 8 and higher than 10.
 - b. Perform relative humidity test using in situ probes in accordance with ASTM F 2170. Notify the Architect of results higher than 75 percent.
 - c. Perform anhydrous calcium chloride test in accordance with ASTM F 1869. Notify the Architect of results higher than 8 pounds per 1000 square feet in 24 hours (MVER).
 - 4. Test results that are determined to be out of conformance with the polishing system manufacturer's acceptable limits shall be remedied to levels needed to attain warranty certification.
- D. Interior gypsum board and similar work capable of damaging work of this Section has been either completed or delayed until the final polish has been sealed and covered with protection material.

3.2 PREPARATION

- A. Clean concrete substrate of dirt and other particulates and remove oil, stains, grease, adhesives, water repellants, and other substances that may be detrimental to work of this Section.
- B. Where extensive repair of slab is indicated, comply with requirements of Section 030100.
- C. Protect adjacent concrete surfaces not receiving the work of this Section.
- D. Dust Control: Seal off adjacent building areas and cover adjacent work to limit air-borne dust migration from settling on surfaces and polluting other parts of building.
- E. Conform to the system manufacturer's instructions and provisions of the Contract Documents to achieve appearance conforming to accepted mock-ups.

3.3 INSTALLATION

- A. These installation requirements are necessarily general in nature and may be revised by installer to accommodate existing conditions, including slab age and surface condition, in order to provide finished floor meeting design and performance requirements. Submit proposed revisions to Construction Manager in accordance with "Submittals" Article.

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- B. Finished flooring system shall meet dynamic coefficient of friction requirements specified. Dynamic Coefficient of Friction shall be not less than 0.42 in accordance with ASNI B101.3.
- C. Install polished concrete floor system materials in accordance with system manufacturer's instructions and the recommendations of the topping manufacturer.
- D. Complete all joint filling work a minimum of 72 hours prior to commencement of any grinding or polishing. Fill movement joints and active cracks with semi-rigid joint sealant.
- E. Perform polishing procedures to ensure a consistent appearance from wall to wall in accordance with established appearance criteria as approved in the mock-up.
- F. Clean floor thoroughly after each grinding pass using dust extraction equipment properly fitted with squeegee attachment or walk behind auto scrubber suitable to remove all visible loose debris and dust.

3.4 INITIAL GRINDING

- A. Begin grinding in one direction using sufficient size grit pad.
- B. Make sequential passes with each pass perpendicular to previous pass using finer grit pad with each pass, up to 150 grit.
- C. Bring floor into desired flatness and smoothness using metal bonded diamond grinding equipment.
- D. Achieve maximum refinement with each pass until floor is scratch pattern free and before proceeding to finer grit pads.
- E. Hand-grind and polish as necessary to bring floor finish flush with walls and other vertical surfaces.
- F. Continue grinding until aggregate exposure matches approved field mock-ups.
- G. Fill pin holes with patching compound as recommended by the polishing system manufacturer.
- H. Remove dry dust or wet slurry prior to proceeding on to treatment stage.

3.5 HARDENER/DENSIFIER

- A. Apply to point of rejection in accordance with the system manufacturer's instructions.
- B. Remove excess material in a timely manner, in accordance with the system manufacturer's instructions, to prevent surface clouding or haze formation.
- C. Dispose of excess materials in a proper manner approved by the authority having jurisdiction (AHJ).

3.6 HONING

- A. Use grinding equipment with hybrid or resin bonded grinding pads.
- B. Grind concrete topping, making as many sequential passes required to remove scratches, each pass perpendicular to previous pass, up to 400 grit pad reaching maximum refinement with each pass before proceeding to finer grit pads.
- C. Auto scrub or vacuum floor using squeegee vacuum attachment after each pass.

3.7 FINAL FINISHING AND SEALING

- A. Apply the specified sealer in accordance with manufacturer's instructions.

3.8 CLEANING

- A. Leave area clean, free from spillage, overspray, tracking, and other residue resulting from work of this Section.

3.9 FIELD QUALITY CONTROL

- A. Field Testing: Engage a qualified walkway auditor to perform field testing to determine if in-place floor finish complies with specified coefficient of friction.
- B. Slip Resistance Measurements:

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1. Take slip resistance measurements prior to Owner Possession.
2. Test Method shall conform to ANSI/NFSI B101.3-2012.
3. Provide a minimum of 2 tests for every 1000 sf (90m²) of polished concrete floor area, with a maximum dimension between tests locations of 30 feet o.c. (9m); provide even distribution of testing throughout.
4. Collect and record slip resistance measurements on Floor Plan and submit with closeout documents as specified
5. Within 24 hours of testing, notify the Architect of all non-conforming measurements.

3.10 PROTECTION

- A. Cover to protect concrete topping with clean, unwrinkled kraft curing paper during curing, as instructed by manufacturer.
- B. Do not lay non-permeable films, membranes, or covers, including polyethylene, over finished floor.
- C. Protect finished floor from traffic for the duration required by the polishing system manufacturer.

3.11 MAINTENANCE

- A. Instruct the Owner's maintenance personnel on the avoidance of cleaners that are acidic or otherwise incompatible with the surface and cause a residual stain.

END OF SECTION

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SECTION 061000 – ROUGH CARPENTRY**

SECTION 061000 – ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Miscellaneous sheathing.
 - 2. Blocking, nailers, and curbing.
 - 3. Plywood terminal back boards.
- B. Related Sections:
 - 1. 054000 - Cold-Formed Metal Framing: Structural lightgauge metal framing.
 - 2. 076200 - Sheet Metal Flashing and Trim.
 - 3. 092200 – Lightgauge Metal Support Framing: Support framing; metal backing.
 - 4. 092900 - Gypsum Board:
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.
- D. Substitutions: Substitutions will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

- A. American Plywood Association (APA)
- B. American Society for Testing and Materials (ASTM):
 - 1. D2898 - Test Method for Accelerated Weathering of Fire-Retardant Treated Wood for Fire Testing.
 - 2. E84 - Test Method for Surface Burning Characteristics of Building Materials.
- C. American Wood Preservers' Association: Book of Standards (AWPA).
- D. National Lumber Grading Authority of Canada (NLGA).
- E. Product Standard (PS): PS-20 - American Softwood Lumber Standard.
- F. Southern Pine Inspection Bureau (SPIB)].
- G. West Coast Lumber Inspection Bureau (WCLB): Standard Grading Rules for West Coast Lumber.
- H. Western Wood Products Association (WWPA).

1.3 SUBMITTALS

- A. Make submittals in accordance with Section 013300.
- B. Product Data: Submit complete technical and product data on the following:
 - 1. Preservative and fire retardant wood treatments.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Work shall conform to the requirements of the currently enforced International Building Code as adopted by the jurisdiction.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store and protect products under provisions of Section 016000.

STARBUCKS COFFEE COMPANY
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SECTION 061000 – ROUGH CARPENTRY

PART 2 - PRODUCTS

2.1 DIMENSION LUMBER

- A. Lumber shall be manufactured in accordance with PS 20, and shall be stamped and graded in accordance with WWPA, WCLB, NLGA, or SPIB grading rules.
- B. Moisture Content: Kiln dried to 19% maximum moisture content, except for material whose least dimension is 4 inches thick or greater.
- C. Species: Hem-Fir, Spruce-Pine-Fir (SPF), or Douglas Fir Larch, unless indicated or specified otherwise.
- D. Structural Lumber Grades: As indicated on the Structural Drawings.
- E. Architectural Lumber Grades: Unexposed non-structural wood framing and blocking indicated on the Architectural Drawings shall be graded as follows:
 - 1. Blocking and Nailers: "Utility - Light Framing," or better.

2.2 PANEL MATERIALS

- A. Miscellaneous Sheathing: APA Rated Sheathing; Structural I; CD grade; Exterior; unless approved otherwise; thicknesses as indicated.
- B. Terminal Backboards: APA AC grade exterior; fire retardant treated.

2.3 ACCESSORIES

- A. Fasteners:
 - 1. Hot-dipped galvanized steel for exterior, high humidity, and fire treated wood locations.
 - 2. For Use With Preservative Treated Wood: 300 Series stainless steel.
 - 3. Screws: Self tapping; countersunk or low profile head.

2.4 WOOD TREATMENT

- A. Wood Preservative (Pressure Treatment):
 - 1. Preservative treat all exterior lumber, including roofing nailers, curbs and other wood in contact with concrete, masonry, and moist conditions.
 - 2. For above ground use, use AWWA certified Ammonium Copper Quaternium (ACQ) or Copper Hydroxide Sodium Dimethyldithiocarbamate (CDDC) waterborne preservative with 0.25 pounds per cubic foot of wood retention.
 - 3. Treated lumber shall be kiln dried to a maximum moisture content of 19%; treated plywood shall be kiln dried to a maximum moisture content of 15%.
 - 4. Treated lumber shall bear the quality stamp of an inspection agency approved by the jurisdictional code authorities.
- B. Fire Retardant Treatment:
 - 1. Fire retardant treat all interior concealed lumber and plywood, and other wood as indicated or specified. Provide exterior fireproofing at rooftop blocking, nailers, curbs, sheathing, and other locations subject to wetting during construction operations.
 - 2. All fire retardant treated wood materials shall bear a UL "FR-S" label, or a label from an approved inspection agency certifying that the material meets the requirements of AWWA C-20 Type A for lumber and AWWA C-27 Type A for plywood.
 - 3. Treated lumber shall be kiln dried to a maximum moisture content of 19%; treated plywood shall be kiln dried to a maximum moisture content of 15%.
 - 4. Exterior fire retardant treated wood shall be treated by means of a system which has been demonstrated to exhibit no increase in fire hazard classification in accordance with ASTM E84 test after having been subjected to accelerated weather conditioning in accordance with ASTM D2898.

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SECTION 061000 – ROUGH CARPENTRY**

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this Section may properly commence. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.
- B. Do not begin installation until all unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.

3.2 SHEATHING

- A. Install sheathing as indicated.
- B. Secure sheathing with edges on firm bearing. Provide solid edge blocking between sheets.

3.3 BLOCKING, NAILERS, AND CURBS

- A. Provide blocking, nailers, and curbs for sheathing, roof construction, metal flashing, and other construction as indicated, and as necessary for firm support. Unless otherwise indicated, solid wood backing shall be minimum 2 inch nominal thickness; plywood shall be minimum 3/4 inch thick, except that sloped parapet caps may be 1/2 inch thick.
- B. Blocking: Install wood blocking to receive mechanical fasteners for support of plumbing and electrical fixtures and equipment, shelving, cabinets, door stop plates, millwork, wainscots, coat hooks, toilet and bath accessories, kitchen equipment, and all other wall and ceiling mounted components.
- C. Screw fasten wood components to metal framing and support elements.
- D. For attachment of plywood backing, kerf plywood 1/4" (3/8", maximum if required for heavy gage studs) to receive flange return (or crimp the return closed); provide supplementary sheet metal angle attached to back of stud where necessary to support backing. Screws into edge of plywood are unacceptable.

3.4 PLYWOOD TERMINAL BACKBOARDS

- A. Provide a fire retardant treated plywood terminal backboard for telephone systems and data racks where indicated on the drawings.
- B. Mechanically apply directly over gypsum backing board.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 064000 – ARCHITECTURAL WOODWORK**

SECTION 064000 – ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Installation of Owner furnished casework and millwork.
 - 2. Statements of required quantities of Owner-furnished millwork.
 - 3. Transportation of casework and millwork from warehouse to jobsite.
 - 4. Substrate preparation.
 - 5. Coordination and installation of carpeted base to display casework.
 - 6. Accessories.
- B. Related Sections:
 - 1. 061000 - Rough Carpentry: Blocking for finish carpentry.
 - 2. 081400 - Wood Doors: Flush doors.
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.
- D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

- A. American National Standards (ANSI)
 - 1. ANSI A208.1 - Standard for Particleboard
 - 2. ANSI A208.2 - Standard for Medium Density Fiberboard (MDF)
- B. American Society for Testing and Materials (ASTM)
 - 1. C1036 Standard Specification for Flat Glass
 - 2. E84 Test Method for Surface Burning Characteristics of Building Materials
- C. American Plywood Association (APA)
- D. Architectural Woodwork Institute (AWI): Architectural Woodwork Quality Standards, Guide Specifications and Quality Certification Program (Current Edition).
- E. Business Institutional Furniture Manufacturer's Association (BIFMA)
- F. West Coast Lumber Inspection Bureau (WCLB): Standard Grading Rules No. 16.
- G. U.S. Product Standard (PS) PS 1 Product Standard for Construction and Industrial Plywood.

1.3 QUANTITY STATEMENTS

- A. Casework and millwork, including pertinent installation information will be furnished by Owner.
- B. Quantities of millwork purchased will be based on the approved Quantity Statement furnished by the Contractor for the exact amount required for the installation. Overage quantities will be added separately by the Owner for each type of millwork.
- C. Types and locations of each type of casework and millwork shall be as scheduled and indicated on the Owner's Purchase Order; base bid on special requirements for each woodwork type, including requirements for special veneer and pattern matching.
- D. Contractor shall be responsible for accuracy of quantity statements. In the event that insufficient quantity is discovered after order has been placed, proceed as follows:
 - 1. Immediately notify the Owner in writing of the additional quantities required, whereupon the Owner will, at his cost, obtain the additional quantities.
 - 2. Install additional quantities at no additional cost to the Owner.
 - 3. Pay for unusual transportation costs incurred in obtaining additional materials.

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GUIDE SPECIFICATIONS
SECTION 064000 – ARCHITECTURAL WOODWORK**

1.4 DEFINITIONS

- A. Exposed Portions of Casework: Those surfaces visible when doors and drawers are closed, including edges of doors and drawers, edges of cabinet boxes visible between doors and drawers, backs of hinged doors, interiors behind glass doors, and interiors in open cabinets.
- B. Semi-Exposed Portions of Casework: Those areas not defined as exposed, but visible when solid (not glazed) doors and drawers are opened.
- C. Concealed Portions of Casework: All remaining areas not defined as exposed or semi-exposed.

1.5 SUBMITTALS

- A. Make submittals in accordance with Section 013300.
- B. Submittals Prior to Sub-bid:
 - 1. List of proposed bidders.
 - 2. For each proposed bidder, include evidence of compliance with installer qualification requirements.
- C. Submittal With Sub-Bid:
 - 1. Submit preliminary quantity statements for millwork from each prospective subcontractor. Base quantity statements on Drawings. Do not include overages in Quantity Statement.
 - 2. Architect will return acceptable quantity statements to the Contractor. Only sub-bidders with acceptable quantity statements shall be considered for subcontract.
- D. Submit following within 30 days after award of architectural woodwork subcontract:
 - 1. Quantity statements indicating proposed adjustments.
- E. Guarantee Drafts: Concurrent with initial product data submittal, submit draft of installers guarantee for Architect's review.

1.6 QUALITY ASSURANCE

- A. Fabricator: A minimum of 5 years experience in the fabrication of custom architectural woodwork of the type specified.
- B. All Architectural Woodwork shall be under the responsibility of a single fabricator.
- C. Qualifications of Installers: Use only journeyman finish carpenters who are thoroughly trained and skilled in the work, and who are completely familiar with the materials and quality standards specified. No allowance will be made for lack of skill on the part of workmen.
- D. Conform to AWI Custom grade standards except use premium grade standards for clearances and tolerances, unless specified or indicated otherwise.
- E. Solid Surfacing Fabricator Qualifications: Certified by the solid surfacing materials manufacturer.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Comply with provisions of Section 016000.
- B. Owner furnished materials will be delivered to the Owner's warehouse facility; refer to Section 015000. Transport materials from the warehouse to the site.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Finished Millwork Lumber: Furnished by Owner.
- B. Panel Products:
 - 1. Finished Millwork Paneling: Furnished by Owner.
 - 2. Accessory Panel Products:
 - a. Softwood Plywood: DOC PS 1; 3/4 inch thick AC exterior grade unless indicated or specified otherwise; touch sanded where plastic laminate veneers are to be applied

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- b. Veneer-Faced Panel Products (Hardwood Plywood):
 - 1) HPVA HP-1, made with adhesive containing no urea formaldehyde.
 - 2) Wood Veneer Flitches: AWI Grade AA; American Black Walnut; plain sliced; hand selected for limited sapwood.
- C. Pre-finished Board: Low pressure melamine over particle board, MDF, or hardboard core; formaldehyde free; colors as selected from manufacturer's standard.
- D. Plastic Laminate:
 - 1. Brands and colors as scheduled on Drawings.
 - 2. Exposed: NEMA LD-3; general and vertical grade,
 - 3. Backing Sheets: NEMA LD-3; backing grade; undecorated.
- E. Solid Surfacing:
 - 1. Product as listed in the Finish Legend.
 - 2. Fabricate solid surface elements to the configurations indicated in accordance with the manufacturer's recommendations.

2.2 ACCESSORY MATERIALS

- A. Cabinet Hardware: As scheduled on the Drawings.
- B. Closet Hardware:
 - 1. Closet Rod: Knappe & Vogt # 770 5; 1-5/16 inch diameter; chrome finish.
 - 2. End Flanges: Knappe & Vogt # 764/766; chrome finish.
- C. Wall Shelf Hardware:
 - 1. Brackets: Knappe & Vogt # 185 Anochrome finish; length as appropriate for shelving indicated.
 - 2. Standards: Knappe & Vogt # 85 Anochrome finish.
- D. Counter Support Brackets:
 - 1. Manufacturer/Source
 - a. Oodles of Parts Plus (Patchogue, NY; 800-286-5471)
 - b. A&M Hardware Inc. (Manheim PA; 888-647-0200)
 - c. Steelcase
 - d. Herman Miller
 - 2. Bracket: "Work Station Bracket"; 1/8" steel; 24" x 24" size unless otherwise indicated; prime paint finish.
- E. Hanging Hardware: Brooklyn Hardware LLC (Portland OR; 888-232-1151) "Panelclip," Doug Mockett and Company (Manhattan Beach CA.; 800-523-1269) ZC3 "Z-Clips," or approved; interlocking aluminum clip.
- F. Contact Bond Adhesive: Water based low VOC.
- G. Plastic Laminate Faced Countertops:
 - 1. Fabricate to AWI Custom grade.
 - 2. Fabricate countertops from particle board and general purpose grade plastic laminate in the shapes indicated.
 - 3. Where countertops are indicated with sinks, use moisture resistant MDF in lieu of particle board.
- H. Wall and Closet Shelf Fabrication:
 - 1. Fabricate from prefinished board; edge banded with matching PVC edging unless indicated otherwise.
 - 2. Provide minimum 3/4 inch thick shelves, except provide thicker shelves as required to support the loads and spans indicated without significant deflection.
- I. Hardware:
 - 1. Unless otherwise shown or specified, all drawers shall be equipped with standard full extension slides.
 - 2. Install hardware straight and true and in perfect alignment horizontally and vertically with adjacent casework and hardware.

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3. Carefully fit and securely attach cabinet hardware in accordance with manufacturers' printed instructions, and exercise caution not to mar or injure finish surfaces.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this Section may properly commence. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.
- B. Do not begin installation until all unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.

3.2 PREPARATION

- A. Coordinate the installation of blocking and other supports required for the installation of architectural woodwork elements.

3.3 STANDING AND RUNNING TRIM INSTALLATION

- A. Jointing: Make all joints to conceal shrinkage; miter all exterior corners; cope all interior corners, miter or scarf all end-to-end joints; install all trim pieces as long as possible, jointing only where solid support is obtained. Make no joints closer than 4 feet to corners.
- B. Lengths of Material: Use random lengths and show typical joint locations on shop drawings. The minimum length shall be 8 feet, except where short lengths are required by installation conditions.
- C. Fastening:
 1. Install all items straight, true, level, plumb, and firmly anchored in place; where blocking or backing is required, coordinate as necessary with other trades to ensure placement of all required backing and blocking in a timely manner.
 2. Fasten trim with finish nails or screws of proper dimension to hold the member firmly in place without splitting the wood.
 3. On exposed finish work, set all nails and screws; fill to match adjacent finish.
 4. Align exposed fasteners for uniform pattern; random or "shotgun" patterns will not be accepted.
- D. Select and arrange standing and running trim so that abutting members have a similar grain and color match to the greatest extent possible

3.4 VENEER PANELING

- A. Install paneling as indicated in accordance with AWI Section 500C Premium grade standards.
- B. Install wood paneling over wall surfaces by concealed clips, hangers, or blind fasteners, unless approved otherwise.
- C. Cut and fit each panel to its particular position including cutting around items which cannot be remounted to panel face, and predrilling for holes for wire access for electrical devices to be mounted on the panel face.

3.5 CASEWORK INSTALLATION

- A. Coordinate casework installation with work of other trades for final electrical and mechanical connections.
- B. Install all casework accurately, plumb, square, and level, and permanently secured in precise position as indicated on the Drawings. Casework shall be scribed to adjacent surfaces as follows:
 1. Countertops and splashes to wall surfaces.
 2. Cabinet endwalls and other exposed surfaces to walls.
 3. Cabinet bases to floors.
- C. The casework installation shall be made complete with all required fastenings, clip angles, braces, anchors, shims, and other fittings as required to render the work rigid and secure.

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- D. All fasteners securing casework shall be in concealed or semi-concealed locations, unless approved otherwise.
- E. Avoid damaging finished surfaces. Repair or replace all damaged materials and surfaces in a manner approved by the Architect.
- F. Upon completion of work, demonstrate hardware to work freely as intended.

3.6 CLEANING UP

- A. Keep the premises in a neat, safe, and orderly condition at all times during execution of this portion of the work, free from accumulation of sawdust, cut-ends, and debris.
- B. At the end of each working day, or more often if necessary, thoroughly sweep and/or vacuum surfaces. Remove the refuse to the area of the job site set aside for its storage.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 079200 – JOINT SEALANTS**

SECTION 079200 – JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Cleaning and preparation of joint surfaces.
 - 2. Sealant and backing materials.
 - 3. Sustainable design requirements.
- B. Related Sections:
 - 1. 013546 - Sustainable Design Requirements.
 - 2. 076200 - Sheet Metal Flashing and Trim: Sealants, furnished and installed as part of flashing and sheet metal work.
 - 3. 078400 - Firestopping: Fire penetration sealants.
 - 4. 088000 - Glazing: Glazing sealants.
 - 5. 093000 - Tiling: Grout color samples; mock-up.
 - 6. 098100 - Acoustic Insulation: Acoustical sealant.
 - 7. 321313 - Concrete Paving: Expansion joint fillers.
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.
- D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. C1193 - Guide for Use of Joint Sealants.

1.3 SUBMITTALS

- A. Make submittals in accordance with Section 013300.
- B. Product Data: Submit for each sealant material used. Include manufacturer's surface preparation, priming, and installation instructions for each proposed sealant.
- C. Samples:
 - 1. Submit cured samples of each sealant type and color proposed for the work.
 - 2. For each sealant type indicated for "color as selected," or for which no color is indicated, submit color card indicating available stock colors from manufacturer's complete line of pre-formulated colors for each type of sealant.
 - 3. For custom colors, request color selection from the Architect prior to sample submittal. Custom colors to match grout joints in tile shall match the sample submitted from the tile installer as specified in Section 093000.
- D. Quality Control Submittals:
 - 1. Schedule of sealant types, colors and respective locations.
- E. Sustainable Design Submittal:
 - 1. MSDS Sheets: Submit MSDS sheets for interior sealant systems to meet submittal sustainable design requirements.

1.4 QUALITY ASSURANCE

- A. Installers:
 - 1. Use only skilled workmen specially trained in the techniques of sealing, and familiar with the published recommendations of the manufacturers of the sealants being used.
- B. Verify that sealants are compatible with the substrates and accessory materials provided under other Sections.

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GUIDE SPECIFICATIONS
SECTION 079200 – JOINT SEALANTS**

1.5 ENVIRONMENTAL CONDITIONS

- A. Unless recommended otherwise by the manufacturer, install sealant systems as follows:
 - 1. Do not apply sealant when ambient temperatures are below 40 degrees F, or expected to fall below 40 degrees F before sealant cure is complete.
 - 2. Do not apply sealant to substrates or accessories that are moist.

1.6 GUARANTEE

- A. Furnish guarantees in accordance with Section 017700.
- B. Furnish a 2 year installer's guarantee covering defects in installation.
- C. Furnish Type S sealant manufacturer's 20 year material guarantee.

PART 2 - PRODUCTS

2.1 SEALANTS

- A. Type S - Neutral Cure Silicone Sealants:
 - 1. Dow Corning, 790 Silicone Building Sealant, or "795 Silicone Structural Glazing and Weatherproofing Sealant."
 - 2. Pecora "890 Architectural Silicone Sealant."
 - 3. Spectrem 3 by Tremco Incorporated.
 - 4. General Electric Co. "Ultrapruf II SCS-2900."
 - 5. General Electric Co. "Silpruf."
- B. Type P: ASTM C920, Type M, grade NS, Class 25; Tremco "Dymeric," Chem-Calk 500, Pecora "Dynatrol II," Sonneborn "Sonalastic NP-II", PRC "Permapol RC-2," or approved.
- C. Type PT: ASTM C920, Type M, Grade P, class 25; Tremco "THC 900", Sonneborn/ChemRex "Sonolastic SL 2", Pecora "Urexpan NR-200", or approved; standard colors as selected.
- D. Type PTNS: ASTM C920, Type M, grade NS, Class 25, Use T; Pecora "Dynatred," Tremco "THC901," Sika "Sikaflex-2c NS TG," or approved; custom colors to match the Architect's samples.
- E. Type A:
 - 1. Sealants shall meet the requirements of the Southern California South Coast Air Quality Management District (SCAQMD) Rule 1168. (maximum VOC content of 250 grams/liter)
 - 2. "AC20+Silicone" by Pecora (800-523-6688). Select standard color to match adjacent finishes as close as possible.
- F. Type SM: Mildew Resistant Silicone Sealant:
 - 1. Sealants shall meet the requirements of the Southern California South Coast Air Quality Management District (SCAQMD) Rule 1168. (maximum VOC content of 250 grams/liter)
 - 2. "898 Silicone" by Pecora (800-523-6688), or approved. Select standard color to match adjacent finishes as close as possible; clear color, except use white at white fixtures.

2.2 COMPRESSIBLE FOAM TAPE

- A. Precompressed self-adhesive open cell polyurethane foam tape; grey or black color; "Greyflex" by Emseal Joint Systems, Ltd., "Will-Seal" by Illbruck., or approved.
- B. Furnish tape in thickness recommended by the manufacturer for widths of joints to be filled.

2.3 ACCESSORY MATERIALS

- A. Primer:
 - 1. Non-staining type, recommended by sealant manufacturer to suit application.
 - 2. Primers for interior sealants shall meet the requirements of the Southern California South Coast Air Quality Management District (SCAQMD) Rule 1168. (maximum VOC content of 250 grams/liter for non-porous surfaces; 750 grams/liter for other surfaces)
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

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GUIDE SPECIFICATIONS
SECTION 079200 – JOINT SEALANTS**

- C. Backer Rod: Closed or open cell foam as recommended by the sealant manufacturer for the application; round profile; thickness approximately 130 percent of joint width.
- D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this Section may properly commence. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.
- B. Do not begin installation until all unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.
- C. Verify joint dimensions and conditions are acceptable to receive the work of this Section.

3.2 PREPARATION

- A. Clean and prepare joints in accordance with manufacturer's instructions. Remove any loose materials and other foreign matter which might impair adhesion of sealant.
- B. Apply masking tightly around joints to protect adjacent surfaces from excess sealant.
- C. Prime as required for proper bond to substrate materials.
- D. Backing Materials:
 - 1. Place backer rod to achieve proper sealant width/depth ratios and to prevent sealant sag.
 - 2. Use bond breaker where there is insufficient depth to use joint filler.
 - 3. Do not use backer rod and bond breaker at joints to receive Type PTNS sealant.

3.3 COMPRESSIBLE FOAM TAPE INSTALLATION

- A. Install in accordance with manufacturer's recommendations.
- B. Install sufficiently deep to accommodate the installation of the Type S sealant.

3.4 INSTALLATION

- A. Perform work in accordance with ASTM C1193, unless specified otherwise or recommended otherwise by the sealant manufacturer.
- B. Apply sealant within recommended temperature ranges.
- C. Joint Profile:
 - 1. Sealant beads shall have a sectional width to depth ratio of 2 to 1, unless specified otherwise or recommended otherwise by the sealant manufacturer.
 - 2. Install Type PTNS sealant full depth in tile expansion joints with no backer rod.
- D. Tooling:
 - 1. Tool joints concave, unless indicated or specified otherwise. Finish to uniform profile and depth, free of air pockets, embedded matter, ridges, and sags.
 - 2. Tool type PTNS sealant to match grout joint profile.

3.5 CLEANUP

- A. Clean adjacent surfaces free of excess sealant as the work progresses. Use cleaning agents recommended by the sealant manufacturer.
- B. Upon completion, remove and dispose of masking.

3.6 PROTECTION

- A. Protect sealant in joints subject to dirt, moisture, and traffic during the sealant curing process. Protection shall be able to resist traffic while remaining securely in position.

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SECTION 079200 – JOINT SEALANTS**

3.7 SCHEDULE

- A. Type S: Provide at all exterior joints, unless specified otherwise; colors as selected from manufacturer's complete line for each type of sealant.
- B. Type P: Provide at all exterior joints in concrete or masonry, unless specified otherwise; standard colors as selected from manufacturer's complete line of pre-formulated colors.
- C. Type PT: Provide at all exterior and interior horizontal joints subject to traffic and abrasion, unless specified otherwise; standard colors as selected from manufacturer's complete line of pre-formulated colors.
- D. Type PTNS: Provide at all expansion joints in tile; custom colors to match grout samples submitted by the tile installer.
- E. Type A: Provide at all interior joints, unless specified otherwise.
- F. Type SM: Provide at joints around countertops in kitchen or coffee areas.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 081113 – HOLLOW DOORS AND FRAMES**

SECTION 081113 – HOLLOW DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Rolled steel doors and frames.
 - 2. Interior sidelite and window frames.
 - 3. Accessories.
- B. Related Sections:
 - 1. 081400 - Wood Doors: Doors for metal frames.
 - 2. 087100 - Door Hardware.
 - 3. 087300 - Door and Hardware Installation: Installation of doors and related hardware.
 - 4. 088000 - Glazing: Glazing in doors and frames.
 - 5. 092200 - Lightgage Metal Support Framing: Bracing for frame installation.
 - 6. 099013 – Exterior Painting and Coating: Field painting of doors and frames.
 - 7. 099023 – Interior Painting and Coating: Field painting of doors and frames.
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to work of this Section.
- D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

- A. American National Standards Institute (ANSI): A250.8 - SDI-100 Recommended Specifications for Standard Steel Doors and Frames.
- B. American Society for Testing and Materials (ASTM)
 - 1. A167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
 - 2. A366 - Specification for Steel, Carbon, Cold Rolled Sheet, Commercial Quality.
 - 3. A569 - Specification for Steel, Carbon (0.15 Maximum Percent), Hot Rolled Sheet and Strip, Commercial Quality.
 - 4. A653 - Specification for Steel Sheet, Zinc-coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by Hot-Dip Process.
- C. International Building Code (IBC)
- D. National Fire Protection Association (NFPA): NFPA 80 - Fire Doors and Windows.
- E. Steel Door Institute (SDI): SDI-105 - Recommended Erection Instructions for Steel Frames.

1.3 SUBMITTALS

- A. Make submittals in accordance with Section 013300.
- B. Product Literature: Submit manufacturer's published literature for doors and frames.
- C. Shop Drawings:
 - 1. Frames: Indicate configuration, anchor types and spacings, location of cutouts for hardware, reinforcement, and finish.
 - 2. Doors: Indicate elevations, internal reinforcement, closure method, and cutouts for hardware, glazing and louvers.

1.4 QUALITY ASSURANCE

- A. Conform to requirements of ANSI A250.8.
- B. Regulatory Requirements:
 - 1. Installed frame and door assembly shall conform to NFPA 80 for fire rated class indicated.

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2. Where doors are noted with an hourly fire resistance rating, provide door and frame assemblies labeled by Underwriter's Laboratory, or any other testing laboratory approved by the local code authorities, to meet the hourly fire rating noted. Assemblies shall meet IBC requirements for positive pressure.
3. Where a hollow metal frame is used as a glazed opening in an interior fire rated wall assembly, the frame shall be labeled to match the fire rating required for a door assembly in the fire rated wall, except in a 1 hour rated exit corridor wall assembly, the glazed frame shall be labeled to a 45 minute rating. In a 1 hour fire rated corridor wall assembly, where the door frame is integral with the glazed frame, the frame shall have a 45 minute rating.
4. Include "S" label on fire rated door assemblies which are located at 1 hour rated exit corridors.
5. Fire rated assemblies shall comply with local jurisdictional requirements.

1.5 DELIVERY, STORAGE AND HANDLING

- A. In accordance with Section 016000.
- B. Protect doors and frames with factory installed protective packaging. Maintain protective packaging until installation commences.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Members of the Steel Door Institute and of the National Association of Architectural Metal Manufacturers, subject to compliance with the specified requirements.

2.2 MATERIALS

- A. Steel Sheet: Cold rolled ASTM A366, or hot rolled pickled and oiled sheet conforming to ASTM A569, except ASTM A167, Type 304 stainless steel at locations scheduled.

2.3 DOORS

- A. ANSI A250.8; Seamless.
- B. Minimum 18 gage face sheets for interior doors; minimum 16 gage face sheets for exterior doors.
- C. Core:
 1. Interior Doors: Vertical steel stiffeners with sound deadening fill between stiffeners, or resin impregnated kraft paper honey comb core.
 2. Exterior Doors: Polystyrene or polyurethane foam core.
- D. Provide continuously welded seamless edges.
- E. Close top edges of exterior doors flush with steel filler cap; seal joints watertight.
- F. Cut mortises for butts using appropriate templates; universal non-handed preparation of doors is not acceptable.

2.4 FRAMES

- A. Design: Double rabbet, unless indicated otherwise; fully welded. Fabricate frames with throat dimensions as indicated. Provide 1 inch returns at exterior frames as detailed.
- B. Gages:
 1. Exterior Frames: Minimum 14 gage.
 2. Interior Frames: Minimum 16 gage for frames of door openings up to and including 4 feet in width; 14 gage for frames greater than 4 feet in width.
- C. Provide mortar guard boxes at masonry construction.

2.5 ACCESSORIES

- A. Glazing Stops: Rolled steel channel shape, butted corners; prepared for countersink style tamperproof screws.

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2.6 FINISH

- A. Exterior Units:
 - 1. A60 hot dip galvanized coating conforming to ASTM A653; factory un-primed.
 - 2. Include reinforcing and other internal components.
 - 3. Use zinc rich primer to touch-up galvanized coatings damaged during fabrication or handling.
 - 4. Shop prime galvanized surfaces with Sherwin Williams "DTM Wash Primer [B71Y00001](#)"; self-crosslinking acrylic primer; color similar but not identical to finish coat. One coat in compliance with manufacturer's instructions for surface preparation and application.
 - 5. Shop finish primed surfaces with Sherwin Williams "Acrolon 218 HS Acrylic Polyurethane"; 2 coats in compliance with manufacturer's instructions
- B. Interior Units: Manufacturer's standard rust inhibitive primer.
- C. Stainless Steel Frames: No. 4 satin finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this Section may properly commence. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.
- B. Do not begin installation until unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.

3.2 INSTALLATION OF FRAMES

- A. Install frames in accordance with SDI-105 and in accordance with labeling requirements.
- B. Coordinate with wall construction for anchor placement.
- C. Coordinate installation of glass and glazing.
- D. Install accessories.
- E. Install roll formed steel reinforcement channels between two abutting frames. Anchor to structure and floor.
- F. Installation Tolerances; Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.
- G. Door and hardware installation is specified in Section 087300.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 081400 – WOOD DOORS**

SECTION 081400 – WOOD DOORS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Wood doors.
 - 2. Door accessories.
- B. Related Sections:
 - 1. 013543 - Sustainable Design Requirements: Project Performance criteria.
 - 2. 064000 - Architectural Woodwork: Wood door frames.
 - 3. 081113 - Hollow Metal Doors and Frames: Steel frames.
 - 4. 087100 - Door Hardware.
 - 5. 088000 - Glazing: Vision lites.
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to work of this Section.
- D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

- A. Architectural Woodwork Institute (AWI): Architectural Woodwork Quality Standards, Guide Specifications, and Quality Certification Program; current edition.
- B. International Building Code (IBC)
- C. NFPA 80 - Fire Doors and windows.
- D. Window and Door Manufacturing Association (WDMA): Industry Standard I.S.1-A current edition.

1.3 SUBMITTALS

- A. In accordance with Section 013300.
- B. Product Data: Submit manufacturer's product literature for each type of door.
- C. Shop Drawings: Indicate door sizes and thickness, materials, stile and rail reinforcement, internal blocking for hardware attachment, cutouts for glazing and louvers, louver details and glazing stops.
- D. Samples: Submit two 8 x 10 inch samples of each transparent finish species and finish combination proposed.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. Installed frame and door assembly shall conform to NFPA 80 for fire rated class indicated.
 - 2. Where doors are noted with an hourly fire resistance rating, provide door and frame assemblies labeled by Underwriter's Laboratory, or any other testing laboratory approved by the local code authorities, to meet the hourly fire rating noted. Assemblies shall meet IBC requirements for positive pressure.
 - 3. Include "S" label on fire rated door assemblies which are located at 1 hour rated exit corridors.
- B. Urea-Formaldehyde Free: All materials used to manufacture the door shall be urea-formaldehyde free.

1.5 DELIVERY, STORAGE, AND PROTECTION

- A. In accordance with Section 016000.
- B. Package, deliver, and store doors in accordance with AWI requirements.

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GUIDE SPECIFICATIONS
SECTION 081400 – WOOD DOORS**

1.6 WARRANTY

- A. Furnish manufacturer's standard warranty under provisions of Section 017700.

PART 2 - PRODUCTS

2.1 DOORS

- A. Solid Core Flush Doors:
1. Approved Manufacturers: One of the following.
 - a. Algoma Hardwoods, Inc. (Algoma WI; 920-487-5221; 800-678-8910).
 - b. Marshfield Door Systems (Marshfield, WI 800-869-3667).
 - c. Eggers Industries (Two Rivers WI; 920-793-1351).
 2. AWI Section 1300, PC-5 or PC-7 (5 or 7 ply construction; bonded core); Premium grade.
 3. Core: Solid particleboard, unless required otherwise for fire labeling requirements; formaldehyde free.
 4. Furnish labeled doors as required to meet the hourly fire rating indicated.
 5. Face Veneer:
 - a. For Transparent Finish: AWI Grade AA; Yellow Birch, Select White; rotary cut; minimum 1/50" thickness for panels; minimum 1/8 inch thick at stiles and rails; slip matched at panels.
 - b. Paint Grade Veneer: Medium density overlay or paint grade birch. .
 6. 1-3/4 inch thick, unless scheduled otherwise.
 7. Where intumescent seals are required to meet positive pressure labeling requirements, provide concealed edge sealing system built into the door edge.
 8. At transparent finish doors, edges shall be wood to match face veneer; no finger joints will be permitted except at paint grade doors.

2.2 ACCESSORIES

- A. Glass Stops: Wood type, except as required to conform to labeling requirements; finished to match door finish.

2.3 FABRICATION

- A. Fabricate doors to the configurations indicated, in accordance with the AWI standards specified, and to fire rated labeling requirements. Attach fire and smoke rating labels.
- B. Bevel lock and hinge edges 1/8 inch in 2 inches on single acting doors.
- C. Bond edge banding to solid core with hot melt or RF cured adhesive.
- D. Prefit and premachine doors in accordance with AWI 1300-S-6. Premachine for hardware specified in Section 087100.
- E. Doors shall be factory prefinished as scheduled to match Architect's sample; AWI Premium Grade U-V Cured Polyurethane.
- F. Factory pre-glaze doors.
- G. Flush Door Blocking: For flush doors, provide solid lock blocks and special blocking as required for the hardware components specified elsewhere. Blocking for fire rated doors shall meet the door manufacturer's labeling requirements.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Door and hardware installation is specified in Section 087300.
- B. Install doors in accordance with manufacturer's instructions, and the fire rated labeling requirements.

3.2 INSTALLATION TOLERANCES

- A. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 081400 – WOOD DOORS**

3.3 ADJUSTING AND CLEANING

- A. Adjust for smooth and balanced door movement.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 083483 – IMPACT DOORS**

SECTION 083483 – IMPACT DOORS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Impact doors and hardware.
- B. Related Section:
 - 1. 081113 - Hollow Metal Doors and Frames: Stainless steel knock-down frames.
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.
- D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 SUBMITTALS

- A. Make submittals in accordance with provisions of Section 013300.
- B. Product Data: Submit manufacturer's product data and installation instructions.
- C. Shop Drawings: Indicate door elevations, hardware locations, vision lite locations and sizes, frame reinforcement requirements, and finishes.

PART 2 - PRODUCTS

2.1 IMPACT DOORS

- A. Basis of Design: Eliason Corporation, Easy Swing Door Division (Kalamazoo, MI; 800-828-2655)
- B. Type: Medium weight solid core doors, with self centering double swing pivot sets; configuration as indicated.
- C. Construction:
 - 1. Core: 3/4 inch exterior grade AB plywood, sanded.
 - 2. Faces: Plastic laminate, colors as scheduled.
 - 3. Vision Lites: 15"x20" for single leaf doors, 9"x20" in each leaf at pair of doors, 3/16 inch clear acrylic; secure in place with manufacturer's standard black rubber molding.
- D. Accessories:
 - 1. Edge Caps: Formed stainless steel channels, 18 gage, minimum; typical at side and top edges.
 - 2. Base (kick) Plates: 18 gage satin finish stainless steel; door width x 18 inches high; fastened with stainless steel rivets.
 - 3. Pivots: "Easy Swing" hinge mechanism; stainless steel.
 - 4. Jamb Guards: Approximately 9 inches high, fabricated from 1/4 inch thick steel plate, all welds ground smooth, corners eased; galvanized after fabrication.
 - 5. Fasteners: As required for complete installation of doors and accessories.
 - 6. Spring Guards: Manufacturer's standard black thermoplastic spring bumpers, 12 inches high. Locate at bottom of each door, both sides.

2.2 TOLERANCE

- A. Maximum Diagonal Distortion: 1/4 inch measured with straight edge, corner to corner.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Prior to installation, verify that frames are prepared and ready to receive work of this Section.

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 083483 – IMPACT DOORS**

3.2 INSTALLATION

- A. Install doors, hardware, and accessories in accordance with shop drawings and manufacturer's instructions.
- B. The bottom pivot assembly shall be secured to the frame only. Do not secure the bottom flange of the pivot assembly to the floor with fasteners as indicated in manufacturer's standard installation instructions as the fasteners will penetrate the waterproof membrane installed beneath the finish flooring.

3.3 ADJUST AND CLEAN

- A. Repair damage to doors and accessories to match fabricator's original finish.
- B. Adjust mechanism so moving parts operate smoothly.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 087100 – DOOR HARDWARE**

SECTION 087100 – DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Finish hardware requirements.
 - 2. Requirements for bidder-supplied hardware schedule.
- B. General Requirements:
 - 1. Contractor shall provide complete hardware schedule including all pieces of hardware required at each opening as specified herein and indicated in the Drawings.
 - 2. Allowed hardware manufacturers shall be as directed by Owner. Where specific model numbers are provided, it is for the purpose of establishing basis for quality and design only. Contractor shall provide alternate products or functions as necessary to meet requirements of Drawings and specifications.
 - 3. Manufacturer substitutions are not permitted.
 - 4. Obtain each type of hardware from single manufacturer.
 - 5. Review Drawings, Door Schedule, and requirements of this Section thoroughly and provide required hardware for all openings, including openings which may have been inadvertently omitted from Door Schedule.
 - 6. Should an opening be omitted or an opening not indicated in Door Schedule, provide hardware of same quality, design and function as specified for similar openings.
 - 7. Furnish hardware complete with brackets, plates, fittings, and other accessories required for installation.
 - 8. Provide screws, nuts, bolts, through-bolts, washers, grommets, and other fastening devices necessary for proper installation of hardware; match finish of hardware being attached. Non-ferrous or corrosion resistant type required where exposed to exterior atmosphere.
- C. Related Sections:
 - 1. 017700 - Closeout Procedures: Submittal of keys.
 - 2. 081113 - Hollow Metal Frames.
 - 3. 081400 - Wood Doors.
 - 4. 083100 – Access Doors and Panels
 - 5. 084228 – All-Glass Partition Systems
 - 6. 087300 - Door and Hardware Installation.
- D. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to work of this Section.
- E. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 SUBMITTALS

- A. Make submittals in accordance with Section 013300.
- B. Manufacturer's Data: Submit 3 copies of manufacturer's data for each item of finish hardware.
- C. Samples: Within 35 days after award of the Contract, submit 3 samples each of Push Plates and Kick Plates in colors as selected for approval.
- D. Schedules: Upon award of hardware contract, submit 3 copies of the finish hardware schedule, organized into "hardware sets" and indicating complete designation of every item required for each door or opening. List in vertical form. Review of hardware schedules does not fulfill project requirements in accordance with Contract Documents.

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SECTION 087100 – DOOR HARDWARE**

- E. Templates: Furnish hardware templates to door and frame fabricators, and hardware installers. Upon request, check shop drawings of such other work to confirm that adequate provisions were made for the proper installation of hardware.

1.3 QUALITY ASSURANCE

- A. Supplier Qualifications: Finish hardware shall be supplied by recognized builders' hardware supplier who has been furnishing hardware in the same area as the project for a period of not less than two years. The supplier's organization shall include a member of the American Society of Architectural Hardware Consultants who is available at all reasonable times during the course of the work to meet with the Owner, Architect or Contractor for project hardware consultation.
- B. Regulatory Requirements:
 - 1. Conform to requirements of the jurisdictional code authorities.
 - 2. Where openings are noted with an hourly fire resistance rating, provide hardware components labeled by Underwriter's Laboratory, or other testing laboratory approved by the local code authorities, to meet the hourly fire rating noted.
 - 3. Hardware shall conform to NFPA 80 for fire rated class indicated.
 - 4. Comply with provisions of Americans with Disabilities Act (ADA), including ADA Accessibility Guidelines and ANSI A117.1, and additional accessibility requirements of the jurisdictional code authorities.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Deliver all hardware in manufacturers' original unopened undamaged packages, clearly identifying manufacturer, brand name, and contents.
- B. Replacements: In the event of damage, immediately make all repairs and replacements necessary.
- C. Mark each item of hardware as to description and location of installation in accordance with approved hardware schedule.
- D. Protection: Use all means necessary to protect the finish on hardware before, during and after installation.

1.5 GUARANTEES

- A. Furnish 5-year unconditional guarantees for all door closers, under provisions of Section 017700.

1.6 MAINTENANCE

- A. Factory representatives for door closers, exit bolts, and locksets shall be available during the construction to instruct the Contractor on the proper method of installation of their materials. They shall inspect and adjust their materials at the completion of the work, and supply proper maintenance manuals to the Owner.
- B. Furnish two (2) sets of special tools for installation and maintenance of hardware. Tools for maintenance and adjustments are to be delivered to the Owner upon completion of the work.

PART 2 - PRODUCTS

2.1 HARDWARE

- A. Furnish hardware items as scheduled in approved bidder-supplied hardware schedule.
- B. Except as listed in the following paragraphs, no substitutions of materials will be allowed unless approved by the Architect.

2.2 HARDWARE MATERIALS AND FABRICATION

- A. Furnish fasteners for installation with each hardware item. Furnish Phillips head fasteners, countersunk oval, flat head, or undercut head as appropriate for material to be installed. Furnish door closers and exit devices applied to wood composite or mineral core doors with sex bolts sized to the thickness of the door.

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SECTION 087100 – DOOR HARDWARE**

- B. Compatibility: Provide fasteners which are compatible with both unit fastened and substrate, and which will not cause corrosion or deterioration of hardware, base material, or fastener.

2.3 HARDWARE FINISHES

- A. General: Unless specifically indicated otherwise in the Landlord's "Tenant's Design and Construction Manual", provide architectural hardware in the following finishes.
 - 1. General: US26D, Satin Chrome Plated, except:
 - 2. Push Plates, Door Pulls, Kickplates: US32D, Satin Stainless Steel
 - 3. Door Closers: 689/Sprayed Aluminum.

2.4 KEYING

- A. All locksets and deadbolts shall be keyed as directed by the Owner.
- B. Construction master-key all locksets and cylinder items; provide 12 construction masterkeys.
- C. Locksets, exit devices, deadlocks, padlocks, and cylinders (all standard cylinder items) shall be:
 - 1. Grand masterkeyed and/or masterkeyed in sets as required.
 - 2. Individually keyed in strict accordance with Owner's instructions.
 - 3. Keying shall be established specifically for the Owner by the manufacturer.

2.5 HARDWARE GROUPS

- A. As indicated on Drawings.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Installation of doors and hardware is specified in Section 087300.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 087300 – DOOR AND HARDWARE INSTALLATION**

SECTION 087300 – DOOR AND HARDWARE INSTALLATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Installation of hardware specified in Section 087100.
 - 2. Installation of wood doors.
 - 3. Installation of hollow metal doors.
- B. Related Sections:
 - 1. 081113 - Hollow Metal Doors and Frames.
 - 2. 081400 - Wood Doors.
 - 3. 083100 - Access Doors and Panels.
 - 4. 083326- Overhead Coiling Grilles.
 - 5. 084000 - Aluminum-Framed Entrances, Storefronts and Windows.
 - 6. 087100 - Door Hardware.
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.

1.2 REFERENCES

- A. Hollow Metal Manufacturer's Association (HMMA): 840 - Installation and Storage of Hollow Metal Doors and Frames.
- B. National Fire Protection Association (NFPA): 80 - Fire Doors and Windows.
- C. American National Standards Institute (ANSI): A250.8 - SDI-100 Recommended Specifications for Standard Steel Doors and Frames.
- D. The Door and Hardware Institute (DHI): Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames.
- E. The Door and Hardware Institute (DHI): Recommended Locations for Architectural Hardware for Wood Flush Doors.

1.3 QUALITY ASSURANCE

- A. Installers of doors and finish hardware shall be skilled mechanics experienced in this type of work.
- B. Fire rated doors and hardware shall be installed in accordance with the labeling requirements.

1.4 ENVIRONMENTAL CONDITIONS

- A. Do not subject wood doors to abnormal heat, dryness, or humidity, or sudden changes thereof. Condition doors to average prevailing humidity prior to hanging.

PART 2 - PRODUCTS

2.1 DOORS, FRAMES, AND HARDWARE

- A. Doors, frames and hardware are specified in other sections.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this Section may properly commence. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.

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SECTION 087300 – DOOR AND HARDWARE INSTALLATION**

- B. Do not begin installation until all unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.

3.2 DOOR INSTALLATION

- A. Install doors in accordance with the door manufacturer's printed instructions.
- B. Install doors plumb and square in associated frames maintaining specified clearances.
- C. Except where specified otherwise in the respective door sections, maintain clearances of 1/8 inch at jambs and heads, 1/8 inch at meeting stiles for pairs of doors, and 1/2 inch from bottom of door to top of decorative floor finish or covering, except where threshold is shown or scheduled provide 1/4-inch clearance from bottom of door to top of threshold.
- D. Install hollow metal doors in accordance with ANSI A250.8 and HMMA 840.
- E. Install fire rated doors in accordance with NFPA 80.
- F. Install doors to operate freely, but not loosely, free from hinge bound conditions, sticking or binding. Do not install in frames which would hinder operation of doors.
- G. Ensure doors are free from rattling when in latched position.

3.3 FINISH HARDWARE INSTALLATION

- A. Install hardware plumb, level and true to line in accordance with manufacturer's templates, printed instructions and Project conditions.
- B. Install fire rated hardware in accordance with NFPA 80.
- C. Where cutting and fitting is required on substrates to be field painted or similarly finished, install, fit, remove and store hardware prior to finishing. Reinstall hardware after finishing operations are completed.
- D. Do not install surface mounted items until finishes have been completed on the substrate.
- E. For substrates which are not factory prepared for hardware:
 - 1. Mortise work to correct size and location without gouging, splintering or causing irregularities in exposed finish work.
 - 2. Fit faces of mortised components snug and flush without excessive clearance.
- F. Coordinate installation of electronic hardware with electrical service and fire alarm system as applicable.
- G. Hardware Locations: The following is a general listing and may contain items which do not apply to this Project.
 - 1. Butt Hinges:
 - a. Top: 5 inches from inside head of frame down to top of hinge.
 - b. Bottom: 10 inches from finish floor to bottom of hinge.
 - c. Intermediate: Equally spaced between top and bottom hinges.
 - 2. Pivots:
 - a. Top and Bottom: According to manufacturer's templates.
 - b. Intermediate: Equally spaced between top and bottom pivots.
 - 3. Locksets and Latchsets: 38 inches from finish floor to centerline of knob or lever.
 - 4. Dummy Trim: Backset and height to match locks and latches.
 - 5. Deadlocks and Deadlatches: 48 inches from finish floor to centerline of cylinder.
 - 6. Push/Pull Latches: 45 inches from finish floor to centerline of latchbolt.
 - 7. Exit Devices: 38 inches from finish floor to centerline of cross bar or touch bar.
 - 8. Emergency Access Door Stops: 60 inches from finish floor to centerline to stop.
 - 9. Door Closers:
 - a. Degree of door swing as indicated in Hardware Schedule approved by Architect, or if not indicated, locate to permit maximum door swing.
 - b. Locate on interior side of exterior doors.
 - c. Locate on stair side of doors at stairways.

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- d. Locate on room side for doors in public areas, corridors and other similar areas.
- 10. Push/Pull Bar Sets:
 - a. Horizontal push bar centered at 42 inches above finish floor, extending full width from centerline to centerline of door stiles.
 - b. Vertical pull bar centered on door stile centerline at 4 inches from door edge with top mounting at 45 inches above finish floor and equipped with stud to pass through door for concealed set screw mounting of push bar on opposite side.
- 11. Push Plates and Pulls (Back to Back): Centerline 42 inches above finish floor. Center plate between door edge and glazed opening, or 2 inches from plate edge to door edge if door is not glazed. Pull centered in relationship to plate size.
- 12. Door Pulls (Mounted Independently): Centerline of grip at 42 inches above finish floor, centered between door edge and glazed opening, or centerline of pull 3 inches from door edge if door is not glazed.
- 13. Push Plates (Mounted Independently): Centerline 45 inches above finish floor, centered between door edge and glazed opening, or 2 inches from plate edge to door edge if door is not glazed.
- 14. Combination Push/Pull Plates: Bottom edge 40 inches above finish floor, centered between door edge and glazed opening, or 2 inches from plate edge to door edge if door is not glazed.
- 15. Wall Stops: Place on adjacent wall at height to contact knob, lever or pull.
- 16. Wall Stop/Holders: Place on adjacent wall immediately above base materials positioned such that door will strike bumper and prevent door hardware from hitting wall. Place within 3 inches of latch edge of door.
- 17. Floor Stops and Floor Stop/Holders: Place to permit maximum swing of door and to prevent door hardware from hitting wall. Place within 3 inches of latch edge of door, and out of foot traffic.
- 18. Kick Plates and Armor Plates: Mount on push side, 1/8 inch above bottom edge and centered.
- 19. Stretcher Plates: Mount on push side, top edge 36 inches above finish floor and centered.
- 20. Mop Plates: Mount on pull side, 1/8 inch above bottom edge and centered.
- 21. Existing Frames: Hardware locations to match existing conditions where new doors are installed in existing frames.

3.4 ADJUSTMENT AND CLEANING

- A. Adjust and check each operating item of hardware and each door to ensure proper operation of function of every unit.
- B. Lubricate moving parts with graphite type lubricant unless otherwise recommended by the hardware manufacturer.
- C. Ensure weatherstripping and seals do not inhibit closing and positive latching of door.
- D. Replace defective materials or units which cannot be adjusted to operate as intended. Reinstall items found improperly installed.
- E. Replace or re-hang doors which are hinge bound and do not swing or operate freely.
- F. Remove and replace doors which are warped, twisted or which are not in true planes.
- G. Replace factory finished doors damaged during installation.
- H. Prior to date of Substantial Completion, readjust and relubricate hardware items as necessary.

3.5 FINAL ADJUSTMENT

- A. Wherever hardware installation is made more than 30 calendar days prior to date of Substantial Completion of a space or area, return to the work during the week prior to acceptance or occupancy and make a final check and adjustment of all hardware items in such space or area. Clean and lubricate operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment, spring power, back check, closing and latching speeds, and handicap requirements.
- B. Instruct Owner's personnel in proper adjustment of hardware during the final adjustment of hardware.

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END OF SECTION

STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 092220 – LIGHTGAGE METAL SUPPORT FRAMING

SECTION 092220 – LIGHTGAGE METAL SUPPORT FRAMING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Interior partition framing.
 - 2. Steel backing.
 - 3. Ceiling and soffit framing.
 - 4. Furring and resilient channels.
- B. Related Sections:
 - 1. [054000 - Cold-Formed Metal Framing: Lightgauge metal framing [in exterior load-bearing conditions] [indicated on the structural drawings].]
 - 2. 055000 - Metal Fabrications: Partial height wall bracing.
 - 3. 061000 - Rough Carpentry: Wood blocking; [framing and sheathing].
 - 4. 072100 - Thermal Insulation: Insulation between framing members.
 - 5. [078100 - Applied Fireproofing: Coordination.]
 - 6. 078500 - Fire Rated Joint Assemblies: Special requirements for partition heads at fire rated partitions.
 - 7. 095113 – Acoustical Panel Ceilings: Proprietary overhead framing system.
 - 8. 098100 - Acoustic Insulation: Insulation between framing members.
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to work of this Section.
- D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. A641 - Zinc-Coated Galvanized) Carbon Steel Wire.
 - 2. C635 - Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.
 - 3. C645 - Non-Loadbearing Steel Studs, Runners, and Rigid Furring Channels.
 - 4. C754 - Installation of Steel Framing Members to Receive Screw-Attached Gypsum Wallboard, Backing Board, or Water-Resistant Backing Board.
- B. Underwriters Laboratories (UL): Standard 2079 - Tests for Fire Resistance of Building Joint Systems.

1.3 SYSTEM DESCRIPTION

- A. Structural Design:
 - 1. Structural design of overhead lightgauge metal framing systems shall be furnished by the Contractor.
 - 2. Select framing systems, gages, supports, bracing, and connections as necessary to meet the structural requirements specified.
 - 3. Partition framing shall conform to the widths indicated, unless approved otherwise. Provide thicker gages and decreased stud spacing as necessary to meet the design requirements.
 - 4. Select framing members based on the manufacturer's published span tables.
- B. Design Loads:
 - 1. Interior Ceiling Assemblies: 5 pounds per square foot uniform live load, plus dead loads.
 - 2. Exterior Soffit Assemblies: 30 psf positive and negative uniform live load, plus dead loads.
 - 3. Interior Partitions without Wall Mounted Casework: 5 pounds per square foot uniform live lateral load.
 - 4. Interior Partitions with Wall Mounted Casework: 5 pounds per square foot uniform live lateral load, casework dead load, and casework live load of 25 PSF of shelf area.

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- 5. Seismic Loads: Conform to the requirements of currently enforced edition of the jurisdictional code authorities.

C. Deflection Requirements:

- 1. Maximum deflection of 1/240 for flexible finish materials such as gypsum board and veneer plaster.
- 2. Maximum deflection of 1/360 for rigid finish materials including gypsum plaster, cement plaster, ceramic tile, maximum 3/8" thick stone tile, or mirrors.

1.4 SUBMITTALS

- A. Make submittals in accordance with Section 013300.

B. Shop Drawings:

- 1. Indicate typical and special framing sections and details. Indicate fastening systems, gages, framing spacing, bracing configurations and locations, anchorage to acoustical ceiling grid, metal backing, attachment to overhead structure, and similar conditions.
- 2. Submit shop drawings for special overhead stud framed conditions. Indicate typical fastening systems, adjacent construction, gages, framing spacing, bracing configurations, and locations. Shop drawings shall bear designing structural engineer's stamp.

C. Quality Control Submittals:

- 1. Certification: Submit certification that the overhead framing systems have been designed in accordance with the specified requirements.

D. Closeout Submittal:

- 1. In accordance with Section 017700.

1.5 QUALITY ASSURANCE

- A. Unless indicated or specified otherwise, perform work in accordance with ASTM C754.

B. Code Requirements:

- 1. Provide assemblies meeting the hourly fire ratings indicated and specified. Assemblies shall be tested in accordance with ASTM E119, and shall be approved by the local jurisdictional code authorities. Coordinate installation of other materials which are a part each assembly.
- 2. Fire rating requirements take precedence over the construction requirements indicated. In the event of conflict, notify the Architect, and do not begin construction in the area of conflict until the conflict has been resolved.
- 3. Provide calculations, drawings, product data, and other verification as required by the jurisdictional code authority to obtain approval of the lightgauge metal framing installation.

- C. Structural Design: Non-prescriptive and non-proprietary overhead framing systems shall be designed by a structural engineer licensed to practice in the state where the Project is located.

- D. The work of this Section is subject to special fire rated construction joint assembly requirements specified in Section 078500.

- E. System components shall be in compliance with requirements of local jurisdictional authorities for lightgauge metal support framing and ceiling suspension systems, as applicable

PART 2 - PRODUCTS

2.1 NON-LOAD BEARING LIGHT GAGE METAL FRAMING:

A. Base Steel (all stud types):

- 1. ASTM C645; G40 galvanized; non-compliant materials will not be accepted.

B. General:

- 1. Furnish "C" shaped studs, depth as scheduled, with return lip and not less than 1-1/4 inch flanges; prepunched openings for the installation of stiffening channels and mechanical and electrical items.
- 2. Furnish U shaped tracks (runners), hat and "Z" shaped furring channels, and other sizes and shapes as indicated on the Drawings, and required by the referenced standards.

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SECTION 092220 – LIGHTGAGE METAL SUPPORT FRAMING

3. Minimum 25 gage unless indicated or specified otherwise; and as follows:
 - a. Furnish gages as necessary to meet deflection requirements, unless indicated or specified otherwise.
 - b. Top runner for partitions extending only to the acoustical ceiling grid shall be 20 gage.
 - c. Provide minimum 20 gage for full height partition framing extending from structure to structure.
 - d. Provide minimum 20 gage studs at jambs of doors and interior relites.
 4. Fire Rated Track: As specified in Section 078500.
 5. Partition Head Compensating Channel (Non-Fire Rated): Design for minimum $\pm 1/2$ inch deflection. Profiles as indicated; one of the following.
 - a. 20 gage deep leg track; 2 inch legs.
 - b. Proprietary compensating channel system; Contractor's option.
- C. Standard Gage Metal Framing:
1. Formed from minimum 36 KSI steel.
- D. "EQ Stud" Type Metal Framing:
1. Formed from minimum 50 KSI steel.

2.2 OTHER FRAMING SYSTEMS

- A. Channels: Hot or cold rolled channels; rust inhibitive paint coating; sizes in accordance with ASTM C754.
- B. [Resilient Channels: Unimast Inc. "RC Deluxe Resilient Channel"; 25 gage x 1/2" x 2-1/2"; provide 3/8" x 3" slots at 4 inches o.c. in web.]
- C. Proprietary Ceiling Suspension System:
1. Manufacturer:
 - a. As specified: Chicago Metallic (Los Angeles CA; 800-323-7164).
 - b. Acceptable Substitutions:
 - 1) USG Interiors, Inc. (Chicago, IL; 800-874-4968).
 - 2) Armstrong (800-207-2321).
 2. Suspension System: Similar to System 650, or 670; ASTM C635 heavy duty classification.
- D. Accessories:
1. Screws: Self tapping; low profile head; galvanized.
 2. Hanger wire: ASTM A641; Class 1 zinc coating; soft temper; prestretched; 12 gage.
 3. Resilient Channels: USG "RC-1," or approved.
 4. Special Proprietary Backing: Dietrich Industries (Pittsburgh PA; 412-281-2805; Renton, WA; 425-251-1497) "Danback Flexible Wood Backing Plate," model in accordance with stud spacing; fire treated.
 5. Partition Clips (for attachment of head channel to acoustical ceiling suspension system): "The Revoe Clip" by Revoe Manufacturing Ltd. (Calgary, AB; 403-225-2170; 800-665-9419); "Donn Partition Attachment Clip" by USG Corporation (Chicago IL; 877-874-4200), or approved; style to accommodate edge design of acoustical tile specified in Section 095113.
- E. Other Framing Materials: Provide other framing materials in accordance with ASTM C754.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this Section may properly commence. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.
- B. Do not begin work until unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.

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SECTION 092220 – LIGHTGAGE METAL SUPPORT FRAMING

3.2 GENERAL INSTALLATION REQUIREMENTS

- A. Steel Decking:
 - 1. Where fastening into bottom of steel decking is required, fasten only into lower flutes.
 - 2. Do not use fasteners in steel deck which penetrate more than 1 inch.
- B. Verify location of conduit in poured concrete construction before making attachments.

3.3 INTERIOR PARTITION FRAMING

- A. Runners:
 - 1. Secure runners with fasteners at maximum 24 inches oc.
 - 2. At concrete floors, use powder driven fasteners or drilled in concrete anchors.
 - 3. [Where indicated, attach top track to acoustical ceiling grid with two staggered #12-14 screws at 24 inches on center. Provide spacer strip between runner and ceiling suspension system to allow tegular or reveal edge acoustical panels to clear partition. Use minimum 20 gage top track.]
 - 4. [Where indicated, attach top track to acoustical ceiling grid using specified partition clip at 24 inches on center. Provide spacer strip between runner and ceiling suspension system to allow tegular or reveal edge acoustical panels to clear partition. Use minimum 20 gage top track.]
 - 5. Top Runner: Secure head track to structure with allowance for structural deflection.
 - a. Non Rated Partitions: Use proprietary compensating channel or deep leg track at Contractor's option, as necessary to accommodate building deflection.
 - 6. Unless approved otherwise, at fire rated partition assemblies, use fire rated tracks, furnished from Section 078500. Install fire rated tracks in accordance with the fire rated assembly requirements.
 - 7. Align to tolerances specified.
- B. Unless indicated otherwise, install studs vertically at 16 inches oc, and not more than 2 inches from abutting construction, at each side of openings, and at corners.
- C. Fit runners under and above openings; secure intermediate studs at spacing of wall studs.
- D. Brace partition framing system and make rigid. Provide diagonal stud bracing at maximum 8 ft on center at framing which does not extend to structure. At partitions attached to acoustical ceiling grid with partition clip, screw attach bracing to clip. Brace shall allow placement of acoustical tile without cutting.
- E. Install double studs continuous from floor to ceiling track at the jamb of each door frame and cased opening. Studs shall be no less than 20 gage. Provide diagonal steel stud bracing to structure at each jamb at partitions which do not extent to structure.
- F. Install minimum 20 gage studs at partitions indicated for support of modular wall-mounted casework and counter support brackets. Install double studs and wood blocking at counter support brackets.
- G. Where control joints are indicated in fire rated partitions, provide double stud and gypsum board backing or other tested assembly in accordance with manufacturer's recommendations or Warnock-Hersey WHI-651-0318-1. Coordinate with Section 092900.
- H. Coordinate erection of studs with installation of service utilities. Align stud web openings.
- I. Coordinate installation of bucks, anchors, blocking, electrical, and mechanical work to be placed in or behind stud framing.
- J. Coordinate erection of stud system with requirements of door and window frames, fire extinguisher cabinets, recessed toilet accessories, access doors, acoustical insulation, and other construction within partition.
- K. Coordinate the installation of framing with the gypsum board installer to ensure support at board edges. Provide framing immediately either side of expansion joints.
- L. Stud splicing not permissible.
- M. At non-load bearing full height partitions subject to compression caused by overhead structural deflection, and where proprietary compensating channel system is not used, cut studs 1/2 inch short from full height. Do not rigidly connect stud to top runner.

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N. Furring at Rigid Insulation:

1. Space "Z" furring channels at a maximum of 16 inches on center, and no more than 3 inches from corners.
2. Provide shims as required to meet tolerance requirements specified. Anchor to concrete with powder driven fasteners spaced not more than 24 inches on center
3. Coordinate installation of framing to allow installation of rigid insulation as specified in another Section.

O. Resilient Channels: Install channels at 24 [16]inches o.c. with screws through pre-punched holes into framing.

P. Stud Bridging:

1. At interior partitions greater than 4 feet in length, and with rigid facing material on one stud flange only, provide 3/4" bridging channels in horizontal rows at a maximum of 5'-0" on center for the full height of the partition.
2. Interior full height partitions (studs extending from the floor to the structure above) with rigid facing material stopping 3'-0" or more below top of studs - Provide one row 3/4" bridging channel horizontally at termination of gypsum board material, and one additional row for each 5'-0" of exposed studs.
3. Install stud bridging channels in long lengths, wire tying and lapping the joints a minimum of 12 inches. Attach bridging channel to each stud as shown in manufacturer's printed instructions.

3.4 BACKING

- A. Provide steel or fire treated wood backing, unless indicated otherwise, for the support of wall mounted items, including wood trim, casework, and toilet accessories.
- B. Unless indicated otherwise, steel backing shall consist of minimum 4 inch wide 16 gage steel plate screwed rigidly to the studs.
- C. Provide only wood blocking at handrails, guardrails and grab bars.

3.5 CEILING, SOFFIT, AND FASCIA FRAMING

- A. Coordinate locations of hangers and supports with the work of other Sections.
- B. Ceiling framing shall consist of stud and runner framing or suspended framing, unless indicated or specified otherwise.
- C. Stud and Runner Framing:
 1. Secure runners to structure above with fasteners at a maximum of 24 inches on center. Size fasteners and use reinforcements as necessary to support the dead loads applied.
 2. Screw fasten framing at each flange joint.
 3. Space studs at 16 inches on center at horizontal locations.
 4. Select members to meet the structural requirements specified.
- D. Lightgage Suspended Framing:
 1. Install in accordance with ASTM C754, unless indicated or specified otherwise.
 2. Suspend ceiling from overhead structural elements only. Do not support from any electrical, HVAC, plumbing, or sprinkler system components.
 3. Space carrying channels 4 feet on center with splices lapped 12 inches and tied.
 4. Support cold rolled carrying channels with hanger wires spaced at 3 feet on center for lath and plaster ceilings and 4 feet on center for gypsum board ceilings. Loop hanger wire around support element and tightly wrap around vertical wire 3 times; cut off neatly.
 5. Space furring channels 16" o.c. with splices lapped 12", minimum and tied; clip or saddle tie to runner channels with 16-gage tie wire.
 6. Where overhead obstructions prevent the regular spacing of hangers, provide secondary carrying members for indirect support of the suspension system, or reinforce the nearest adjacent hangers and related framing components as required to span the required distance.
- E. Proprietary Suspended Framing: Install in accordance with manufacturer's recommendations.

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- F. Stabilize suspended ceiling, soffit, and fascia framing against lateral movement by means of diagonal bracing. At locations where partitions extend to ceiling, only, install supplementary bracing at maximum 8'-0" o.c. along length of partition, and above each door hinge and strike jamb.
- G. Form openings in ceilings and frame openings for recessed light fixtures, air diffusers, access doors, hatches, etc.
- H. Install supplementary hanger wires for support of ceiling mounted equipment, such as speaker support bracket, as required and as detailed.

3.6 TOLERANCES

- A. Install members to provide surface plane with maximum variation of 1/8 inch in 10 feet in any direction.
- B. Locate assemblies within 1/4 inch of required locations.
- C. Locate framing on the center of the joint between gypsum board panels, within a tolerance of 1/4 inch.

3.7 FIELD QUALITY CONTROL

- A. The structural design engineer [for the overhead framing systems] or an authorized representative shall visit the site to inspect the work. Verify and certify that the installation has been installed in accordance with the structural requirements.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 092900 – GYPSUM BOARD**

SECTION 092900 – GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Interior gypsum board.
 - 2. Gypsum soffit board.
- B. Related Sections:
 - 1. 054000 - Cold-Formed Metal Framing: Exterior support framing.
 - 2. 061000 - Rough Carpentry: Wood framing.
 - 3. 072100 – Thermal Insulation.
 - 4. 078500 - Fire Rated Joint Assemblies: Special requirements for partition heads at fire rated partitions.
 - 5. 092200 – Lightgauge Metal Support Framing: Support framing for gypsum board; tolerance requirements.
 - 6. 092843 - Gypsum Sheathing.
 - 7. 093000 - Tiling: Finish materials; tile backer board.
 - 8. 098100 - Acoustic Insulation.
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to work of this Section.
- D. Substitutions: Substitutions will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. C475 - Joint Treatment Materials for Gypsum Wallboard Construction.
 - 2. C557 - Adhesives for Fastening Gypsum Wallboard to Wood Framing.
 - 3. C931 - Standard Specification for Exterior Gypsum Soffit Board
 - 4. C1002 - Steel Drill Screws for the Application of Gypsum Board.
 - 5. C1177 Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
 - 6. C1278 - Specification for Fiber Reinforced Gypsum Panels.
 - 7. C1395 - Specification for Gypsum Ceiling Board
 - 8. C1396 - Specification for Gypsum Board
 - 9. D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
- B. Gypsum Association (GA):
 - 1. GA-214 - Recommended Levels of Gypsum Board Finish]
 - 2. GA-216 - Recommended Specifications for the Application and Finishing of Gypsum Board.

1.3 SUBMITTALS

- A. Make submittals in accordance with Section 013300.
- B. Submit complete manufacturer's product literature and installation instructions for each of the materials used.
- C. Shop Drawings: Submit shop drawings showing locations of control joints.

1.4 QUALITY ASSURANCE

- A. Perform work in accordance with GA 216, unless specified otherwise, or required otherwise to meet fire rating requirements.

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SECTION 092900 – GYPSUM BOARD**

- B. Regulatory Requirements:
 - 1. Provide assemblies meeting the hourly fire ratings indicated and specified. Assemblies shall be approved by the local jurisdictional authorities.
 - 2. Fire rating requirements take precedence over the construction requirements indicated. In the event of conflict, notify the Architect, and do not begin construction in the area of conflict until the conflict has been resolved.
- C. Assembly Instructions: Contractor shall keep at the site and make available to installers a copy of the following:
 - 1. Installation requirements for each fire rated assembly.
 - 2. GA 216.
- D. The work of this Section is subject to special fire rated construction joint assembly requirements specified in Section 078500.

PART 2 - PRODUCTS

2.1 GYPSUM BOARD MATERIALS

- A. Furnish boards of maximum permissible length for type of installation indicated, tapered edge for boards to be exposed, taped and finished; square edge for boards in concealed applications; 5/8 inch thick unless noted or specified otherwise; furnish type X for fire rated partitions.
- B. Types:
 - 1. Standard Board, Backing Board, Exterior Water Resistant Soffit Board: ASTM C1396; 5/8 inch thickness unless otherwise indicated.
 - 2. Water Resistant Board: ASTM C1396.
 - 3. Ceiling Board: ASTM C1395; sag resistant.
 - 4. Abuse Resistant / Mold Resistant Board: ASTM C1278; USG Corporation "Fiberock Aqua-Tough Interior Panels"; Georgia Pacific "DensArmor Fireguard Interior Guard", National Gypsum Co. "Gold Bond Brand XP Fire-Shield Wallboard," or approved; 5/8 inch thickness; Type X; surfaces shall be resistant to mold and mildew growth; score of 10 when tested in accordance with ASTM D3273.

2.2 ACCESSORIES

- A. Interior Gypsum Trim:
 - 1. Conform to GA 216, unless indicated or specified otherwise.
 - 2. Concealed flange crimp-on or tape-on type; metal or PVC at Contractor's option.
 - 3. Control Joint Trim: USG 093 or approved.
 - 4. Reveal Moldings: Fry Reglet Co. , Pittcon Industries, Inc., Gordon Inc, or approved; aluminum extrusions with taping flanges; shapes as indicated.
- B. Joint Compound, Tape, and Finishing Compound: ASTM C475; furnish setting type joint compound for use at water resistant and exterior soffit board.
 - 1. Typical: USG "SHEETROCK Brand Taping, All-Purpose, and/or Topping Compound," or approved.
 - 2. Setting Type: USG "SHEETROCK Brand Easy Sand Setting-Type Joint Compound," or approved.
- C. Proprietary Skim Coat: USG "Tuff-Hide Sheetrock Brand Primer-Surfacer."
- D. Screws: ASTM C1002; galvanized or polymer coated at exterior locations; maximum 1 inch length for attachment to resilient channels.
- E. Fire Rated Joint Compound: As specified in Section 078500.

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SECTION 092900 – GYPSUM BOARD**

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this Section may properly commence. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.
- B. Do not begin work until unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.

3.2 GYPSUM BOARD INSTALLATION

- A. Install gypsum board in accordance with GA 216, and fire rated assembly requirements.
- B. Erect wallboard so that edges and corners are firmly supported.
- C. Use screws to fasten gypsum board to metal furring or framing. Adhesive application of gypsum board may be used if it is in accordance with the manufacturer's recommendations and meets fire rating requirements.
- D. For screwing wallboard into resilient furring, use 1 inch screws. Do not drive screws into framing.
- E. Double Layer Applications:
 - 1. Use backing board or standard board for first layer.
 - 2. Offset joints of second layer from joints of first layer.
- F. Trim:
 - 1. Use longest practical lengths, with no piece less than 2 feet long for continuous runs greater than 8 feet. Securely fasten and align trim ends at joints.
 - 2. Place concealed flange corner beads at external corners. At angles other than 90 degrees, bend the flange to conform to the angle.
 - 3. Place concealed flange type L trim where gypsum board abuts dissimilar materials.
 - 4. Use J trim at exposed gypsum board edges, and at joints where sealant is indicated.
- G. Allow a 1/2 inch gap where gypsum board extends to overhead structure and deflection provisions are incorporated into lightgauge metal framing. Do not fasten gypsum board to top runner. Where the ceiling is exposed in the finished work, finish top edge with a casing bead, and caulk with acrylic sealant as specified in Section 079200.
- H. Sealant Joints:
 - 1. Coordinate installation of firestopping and sealants at concealed joints between partitions and structure at fire rated and acoustically insulated partitions.
 - 2. Where sealant joints are indicated at ends or edges of wallboard, install for uniform 1/8 inch joint, unless otherwise indicated. Installation of sealant in exposed locations is specified in Section 079200.
- I. Provide water resistant gypsum board as a substrate where tile is indicated to be installed over gypsum board surfaces. Cement board backing for tile surfaces is specified in Section 093000.
- J. Provide water resistant gypsum board at walls in restrooms, toilets, shower rooms, janitor closets and other areas subject to similar damp conditions, unless cement board backing is indicated.
- K. Install required number of layers of wallboard behind panel boards, fire extinguisher cabinets, and other recessed elements as necessary to maintain fire rating of walls.
- L. Fire Rated Construction:
 - 1. At heads of fire rated metal stud and gypsum board partitions, install gypsum board in accordance with the fire rated assemblies specified in Section 078500.
 - 2. Fill joints between gypsum board surfaces and adjacent construction with fire rated joint compound in accordance with the requirements of the fire rated construction joint assembly manufacturer.

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3. Provide continuous fire rated assemblies. Where adjacent construction interrupts fire rated assemblies, provide additional construction as necessary to maintain the continuity of fire rated assemblies.

3.3 CONTROL JOINTS

- A. Discontinue gypsum board and use control joint trim at control joints.
- B. Coordinate with the framing installer to ensure that framing is installed immediately on either side of each control joint.
- C. Space control joints as indicated. When not indicated, locate as follows:
 1. At maximum 30 foot intervals along continuous wall planes.
 2. At maximum 50 foot intervals at continuous ceilings with perimeter relief.
 3. At maximum 30 foot intervals at continuous ceilings without perimeter relief.
 4. At locations where expansion or control joints occur in the building structure.
 5. Locate control joints to form rectangular or square sections, in "L," "U," "T," or other irregularly shaped areas.
 6. Position control joints to intersect light fixtures, air diffusers, door openings, and other areas of stress concentration.
 7. Coordinate with Section 092200 for special requirements at fire rated assemblies.
- D. Verify location with the Architect prior to installation. Give the Architect a minimum of 48 hours notice.

3.4 FINISHING

- A. Provide finishing in accordance with GA 214.
- B. Where necessary to sand, do so without damaging the face of the gypsum board.
- C. Levels of Finish:
 1. Level 5: Provide at the following locations:
 - a. Surfaces perpendicular and adjacent to or near (within 24 inches of) exterior windows and surface mounted light fixtures.
 - b. Surfaces to receive deep tone colors.
 2. Level 4: Typical, unless indicated or specified otherwise.
 3. Level 3: Provide at the following locations:
 - a. Surfaces to receive fabric wall covering.
 4. Level 2: Provide at the following locations:
 - a. Storage rooms.
 - b. Mechanical rooms.
 - c. Janitors closets.
 - d. Surfaces to receive tile or other thick finish materials applied to gypsum board surfaces.
 5. Level 1: Provide at the following locations:
 - a. Surfaces of fire rated assemblies concealed from view in the finished work ("fire-taping").
 - b. Surfaces of acoustical assemblies concealed from view in the finished work
 6. Level 0: Provide at surfaces of non-fire rated assemblies concealed from view in the finished work, including surfaces to be covered by casework, wood paneling,
- D. Level 4 and 5 finishes: Return to the site after primer is applied, and touch-up surface defects.
- E. Proprietary skim coat material may be used in lieu of joint compound as skim coat at surfaces indicated for Level 5 finish.

3.5 TOLERANCES

- A. Install gypsum board with 1/8 inch in 10 feet maximum variation from plane in any direction.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 093000 – TILING**

SECTION 093000 – TILING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Interior wall tile.
 - 2. Interior floor tile.
 - 3. Reinforced waterproof membranes.
 - 4. Crack isolation membranes.
 - 5. Tile backing board.
 - 6. Screeds.
 - 7. Sealer.
- B. Related Sections:
 - 1. 033000 - Cast-In-Place Concrete: Substrate.
 - 2. 079200 - Joint Sealants: Expansion joint fillers.
 - 3. 092900 - Gypsum Board: Substrate.
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to work of this Section.
- D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

- A. American National Standards Institute (ANSI):
 - 1. A108.1 - Ceramic Tile Installed with Portland Cement Mortar.
 - 2. A108.5 - Installation of Ceramic Tile With Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar.
 - 3. A108.6 - Installation of Ceramic Tile With Chemical-Resistant, Water Cleanable Tile-Setting and Grouting Epoxy.
 - 4. A108.10 - Installation of Grout in Tilework.
 - 5. A108.13 - Installation of Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone.
 - 6. A118.3 - Chemical Resistant Water Cleanable Tile-Setting and Grouting Epoxy.
 - 7. A118.4 - Latex-Portland Cement Mortar.
 - 8. A118.10 - Standard for Load Bearing, Bonded, Waterproof Membranes for Thin-set Ceramic Tile and Dimension Stone Installation.
 - 9. A137.1 - Ceramic Tile
 - 10. B101.3 - Test Method for Measuring Wet DCOF of Common Hard-Surface Floor Materials.
- B. [American Society for Testing and Materials (ASTM):
 - 1. C144 - Aggregate for Masonry Mortar.
 - 2. C150 - Portland Cement.
 - 3. C206 - Finishing Hydrated Lime.
 - 4. C207 - Hydrated Lime for Masonry Purposes.
- C. Tile Council of North America (TCNA):
 - 1. Handbook of for Ceramic Tile Installation, current edition.
 - 2. 137.1- Recommended Standard Specifications for Ceramic Tile.

1.3 DEFINITIONS

- A. Expansion Joints: Unless otherwise detailed, expansion joints in tile fields are sealant-filled joints to accommodate expansion and contraction of tile and possible substrate movement at slab control and construction joints.

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- B. Reinforced Waterproofing Membrane: Proprietary waterproofing membrane system installed in combination with tile application, as part of the ceramic tile work.

1.4 SUBMITTALS

- A. Make submittals in accordance with Section 013300.
- B. Product Data: Submit for each type of tile, grout, adhesive, additive, accessory, and membrane specified.
- C. Samples:
 - 1. Tile: Submit samples of each type and color of tile. Include representative range of colors and finishes to be expected.
- D. Certifications:
 - 1. For each type of tile indicated, submit master grade certificates prior to the arrival of the shipment to the job site.
 - 2. For each type of tile indicated, submit certification that tile has successfully passed ANSI B101.3.
 - 3. Where required by jurisdictional authorities, for each type of tile indicated, submit certification that tile has successfully passed ANSI 137.1 test method for measuring dynamic coefficient of friction.

1.5 QUALITY ASSURANCE

- A. Conform to ANSI Standard Specifications for the Installation of Ceramic Tile.
- B. Pre-Installation Conference:
 - 1. In accordance with Section 013119, schedule and administer a meeting to review and discuss the tile installation a minimum of one week (7 calendar days) prior to start of setting tile.
 - 2. Require in attendance, the tile installer, and other parties affected by work of this Section.
 - 3. Agenda: Address installation scheduling and procedures, coordination, preparation and protection requirements, grout and expansion joint locations, tile quantities required, material and installation tolerances, overage required for waste, overage for maintenance stock, sealant joint locations.
- C. Tile backing board shall be in compliance with requirements of local jurisdictional authorities.
- D. Finished tile floor shall meet the dynamic coefficient of friction requirements specified.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. In accordance with Section 016000.

1.7 GUARANTY

- A. In accordance with Section 017700, furnish from the tile installer, a two year written guaranty, executed to the Owner, against defects in workmanship and materials.

1.8 MAINTENANCE

- A. Extra Stock: Furnish extra stock as required by Construction Manager.

PART 2 - PRODUCTS

2.1 TILE

- A. Tile Types:
 - 1. Furnish tile manufactured in accordance with ANSI A137.1.
 - 2. Dynamic Coefficient of Friction: Not less than 0.42 in accordance with ANSI B101.3.
 - 3. Types as indicated on the drawings.
- B. Special Shapes: Unless otherwise indicated or specified, furnish special shapes as standard with the tile manufacturer for uniform transitions and concealed edges in the finished installation. Special shapes include bullnoses, double bullnoses, corner bullnoses, and cove assemblies.

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2.2 ACCESSORY MATERIALS

A. Setting Materials:

1. Thinset Mortar: Latex modified; "Kerabond" with "Universal Keralastic" by Mapei Corp., "211 Crete Filler Powder" with "4237 Latex Thin-set Mortar Additive," by Laticrete International, Inc., Hydroment "Tile-Mate Premium" with "447 Flex-a-lastic" by Bostik, or approved.
2. Rapid-Set Thin Bed Mortar: Latex modified; "Grani/Rapid" with "KER 318" Flexible Admixture" by Mapei Corp., Hydroment "Single Flex FS," by Bostik, or "211 Crete Filler Powder" with "4237 Latex Thin-set Mortar Additive" and "101 Rapid Set Latex"(proportions as recommended by the manufacturer for the setting time required)," by Laticrete International, Inc..
3. Medium Bed Mortar: "Grani/Rapid" by Mapei Corp., Hydroment "Medium Bed Mortar" by Bostik, or "226 Thick Bed Mortar Mix" with "3701 Latex Mortar Admix," by Laticrete International, Inc., or approved.
4. Rapid Set Medium Bed Mortar: "Grani/Rapid" by Mapei Corp., or "211 Crete Filler Powder" with "3701 Latex Mortar Admix" and "101 Rapid Set Latex"(proportions as recommended by the manufacturer for the setting time required), by Laticrete International, Inc., or approved.

B. Cementitious Sanded Grout:

1. Fast Setting: "Ultra/Color" by Mapei Corp., "Floor Joint and Grout Filler" with "3701 Latex Mortar Admixture" and "101 Rapid Set Latex", by Laticrete International, Inc. (proportions as recommended by the manufacturer for the setting time required); sanded, except unsanded at joints scheduled at 1/16 inch wide.
2. Standard Grout: "Keracolor S" by Mapei Corp., or "1500 Series Sanded Grout" with "1776 Grout Admix Plus;" "101 Rapid Set Latex", by Laticrete International, Inc., Hydroment "Ceramic Tile Grout /Joint Filler" with "425 Flexible Grout Admixture" by Bostik; sanded, except unsanded at joints scheduled at 1/16 inch wide.
3. Colors: As selected by the Architect from the manufacturer's standard line.

C. Cementitious Unsanded Grout:

1. Standard Grout: "Keracolor U" by Mapei Corp., or "1600 Series Unsanded Grout" with "1776 Grout Admix Plus" or "101 Rapid Set Latex", by Laticrete International, Inc., Hydroment "Ceramic Tile Grout /Joint Filler" with "425 Flexible Grout Admixture" by Bostik.
2. Colors: As selected by the Architect from the manufacturer's standard line.

D. Epoxy Grout: Mapei "Kerapoxy," Bostik Hydroment "100% Solids Epoxy Grout," Laticrete International Inc. "Latapoxy SP100," or approved. Colors as selected from manufacturer's standard.

E. Tile Waterproofing Membrane: Conform to ANSI 118.10; one of the following.

1. "NobleSeal TS," by The Noble Company; reinforced CPE sheet membrane.
2. "DalSeal TS." By Dal-Tile Corp.
3. "Mapelastic" ("PRP 315") by Mapei Corp.

F. Crack Isolation Membrane: One of the following.

1. "NobleSeal CIS," by The Noble Company; reinforced CPE sheet membrane; 36" width; NobleBond 21 adhesive.
2. "Dal-Seal CIS." By Dal-Tile Corp.
3. "ECB Membrane," by N.A.C. Products Inc.; self bonding reinforced modified asphalt sheet membrane; 36" width.
4. "Mapelastic SM" by the Mapei Corp.

G. Tile Backing Board and Accessories:

1. Cementitious Backing Board:
 - a. 1/2 inch nominal thickness aggregated portland cement panel, reinforced with glass fiber mesh;
 - b. "Durock Brand Cement Board" by USG (800-874-8968, "Wonderboard" by Custom Building Products (800-272-8786), or approved.
2. Gypsum Backing Board: Georgia Pacific (800-225-6119) "DensShield," or approved; 5/8 inch thickness.
3. Joint Tape: Open weave glass mesh joint tape, self-adhesive; 2-1/2 inches wide.

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- 4. Fasteners: As recommended by the backing board manufacturer; thread forming self-drilling wafer head screws; polymer coated or zinc plated; USG "Durock Screws," "Rock-On," or approved.
- H. Grout Release: High-performance water-soluble; one of the following or approved:
 - 1. "Ultra Care Grout Release" by Mapei.
 - 2. "aqua Mix Grout Release" by Custom Building Products.
- I. Metal Screed: As manufactured by Schlüter Systems, Inc. (800/225-8902), Ceramic Tool Company, (800/236-5230), or Blanke Corporation (800/787-5055); anodized aluminum tile edging trim; sizes as required for installation of top of screed flush with top of tile, as detailed.
- J. Curing Paper: Fortifiber "All Purpose Building Paper," or approved; do not use polyethylene or products containing bituminous materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this Section may properly commence. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.
- B. Do not begin installation until unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.
- C. Verify that locations of expansion joints, control joints, and construction joints in substrate correspond to tile expansion joint locations.
- D. Where cementitious backing board is indicated as substrate for wainscot, shim as necessary to align with gypsum board above.

3.2 PREPARATION

- A. Clean substrate surfaces free of grease, dirt, dust, organic impurities, and other materials which would impair bond. Where curing agents have been used mechanically abrade or shotblast substrate surface.

3.3 TILE BACKING BOARD INSTALLATION

- A. Use cementitious backing board, except where gypsum backing board is indicated.
- B. Install in accordance with the manufacturer's installation instructions.
- C. Install units with edges firmly supported.
- D. Screw attach units with 1 inch long drywall screws spaced 6 inches on center along framing.
- E. Install fiberglass reinforcing tape at joints between panels. Completely embed in a thin set mortar bed. Trowel mortar smooth with adjacent surfaces.

3.4 SLAB LEVELING

- A. Prior to installation of thinset floor tile, where local irregularities in the substrate surface would prevent level installation of the tile, the substrate shall be brought to plane surface with variations not to exceed 1/8 inch in 4 feet (cumulative) and 1/4 inch in 10 feet (non-cumulative). Smooth abrupt changes in plane.
- B. Use thinset mortar or other cementitious filler for slab leveling. Other fillers are subject to endorsement by the setting mortar manufacturer. Submit manufacturer's letter of approval to the Architect, and the Owner's Representative.
- C. Screed or float to appropriate thickness and specified surface tolerance. Allow to set prior to proceeding with installation. Do not exceed the maximum thicknesses for thin bed mortar as recommended by the manufacturer.

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3.5 CRACK ISOLATION MEMBRANE

- A. Install crack isolation membrane in accordance with the manufacturer's instructions, unless indicated or specified otherwise.
- B. Provide crack isolation membrane at following locations:
 - 1. At control and construction joints in concrete floors.
 - 2. At changes in substrate materials.
 - 3. On each side of building floor joint cover assemblies installed in grouted pockets; extend a minimum of 12 inches beyond grouted pocket.
 - 4. Shrinkage cracks 1/16 inch or larger in slabs.
- C. Extend a minimum of 12 inches each side of crack or joint.
- D. Do not apply crack isolation membrane at joints which will be reflected as expansion joints in the tile.
- E. Omit crack isolation at floors indicated for waterproof membrane.
- F. Substrate Examination:
 - 1. Substrates are subject to examination by the Owner and the Architect prior to installation of tile or slab leveling materials. Furnish a minimum of 7 days notice.
 - 2. The examination will determine the need for additional crack isolation membrane at shrinkage cracks and other special conditions.
 - 3. Provide additional crack isolation membrane in locations as directed, in accordance with provisions of Section 012200.

3.6 TILE WATERPROOF MEMBRANE INSTALLATION

- A. Install waterproof membranes in strict accordance with manufacturer's installation instructions and in accordance with ANSI A108.13.
- B. Install waterproof membranes at all locations with occupied space below, or when required by landlord in a leased property.
- C. At slab on grade locations, install waterproof membranes only along the perimeter of tile areas. Extend the membrane up the wall and a minimum of 12 inches out onto the floor surface.
- D. At above grade locations, install waterproof membrane completely over floor surfaces indicated, and up the wall.
- E. Where the waterproof membrane is extended up the wall, extend to one tile height. Do not expose the waterproof membrane to view.
- F. Protect waterproof membrane from damage until after tile installation is complete.
- G. Install waterproof membrane into clamping ring of floor drain when applicable.

3.7 INSTALLATION OF TILE

- A. Interior Floor Application - Thinset over Concrete Substrate and Concrete Substrates with Waterproof or Crack Isolation Membrane.
 - 1. TCNA System: F113 or F122 at Waterproof Membranes.
 - 2. Installation Standard: ANSI A108.5.
 - 3. Setting Materials: Thinset mortar; 3/32 inch minimum thickness.
 - 4. Use cementitious sanded grout unless indicated otherwise.
 - 5. Use epoxy grout at service areas behind counters.
- B. Interior Floor Application - Thickset Over Concrete Substrate:
 - 1. TCNA System: F112.
 - 2. Installation Standard: ANSI A108.1.
 - 3. Bond Coat: Thinset mortar over thickset mortar bed; 3/32 inch minimum thickness.
 - 4. Slope the mortar bed evenly to the floor drains.
 - 5. Use cementitious sanded grout unless specified otherwise.
 - 6. Use epoxy grout at service areas behind counters.

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- C. Wall Application - Gypsum Board Substrate:
 - 1. TCNA System: Similar to W243.
 - 2. Installation Standard: ANSI A108.5.
 - 3. Setting Materials: Thinset mortar.
 - 4. Use cementitious sanded grout unless indicated otherwise.
- D. Wall Application - Tile Backing Board:
 - 1. TCNA System: Similar to W244.
 - 2. Installation Standard: ANSI A108.5.
 - 3. Setting Materials: Thinset mortar.
 - 4. Use cementitious sanded grout unless indicated otherwise.
- E. Joint Pattern:
 - 1. Lay out tile pattern prior to commencing tile installation.
 - 2. Accurately locate grout joints on lines indicated; where not indicated, adjust grout joints within specified tolerances to minimize use of cut tiles at field edges.
 - 3. Where cut tiles are necessary, position tile such that cut tile at each edge of each rectilinear field is not less than half of a full size unit, unless indicated otherwise.
- F. Tiles which exhibit directional patterns shall be set with grain direction as indicated on the shop drawings, or, if not indicated, as directed by the Architect.
- G. Install tiles aligned with adjacent finishes, where indicated. Provide mortar fill as necessary for proper alignment.
- H. Clean joints of mortar to minimum depth of 1/4 inch to allow subsequent grout installation.
- I. Provide temporary setting buttons and shims as necessary to maintain wall tiles in position until setting mortar has set.
- J. Tolerances:
 - 1. Joint Width Variation: Plus or minus 25% of the proposed joint width.
 - 2. Taper: Plus or minus 25 percent from one end to the other.
 - 3. No portion of a tile surface shall vary more than 1/16 inch above or below an adjacent tile surface.
 - 4. Install tile fields level to within tolerance specified for finished substrate.
- K. Special Requirements for Large Format Tiles (8 x 8 inch size or larger):
 - 1. Wash backs of each tile to remove dust and soil that would compromise adhesion.
 - 2. Dampen substrate as necessary to prevent excessive suction.
 - 3. Key the mortar into the substrate with the flat side of the trowel.
 - 4. Comb mortar over the previously keyed substrate in one direction using the notch side of the trowel.
 - 5. Firmly press each tile into the mortar. Press down and move the tile back and forth perpendicularly across the ridges approximately 1/8 to 1/4 inch to flatten the ridges and fill in the valleys of the combed mortar.
 - 6. Set tiles in accurate alignment.
- L. Screed Installation:
 - 1. Install screeds at tile field edges at the locations indicated.
 - 2. Accurately cut to length for flush tightly butted joints. Provide miter cut angle joints. Remove burrs at field cuts.
 - 3. Install in longest possible lengths, except that no screed section shall be longer than 12 feet or shorter than 4 feet in length for continuous runs greater than 16 feet.
 - 4. Install screeds free from waves and variations in height, flush with top of adjacent tile surfaces.
 - 5. Set screeds directly in setting bed as the tile installation proceeds. Comply with screed manufacturer's instructions to achieve mortar tightly compacted between screed and tile edge.
 - 6. Grind screed joints as necessary to correct minor misalignment and to ease sharp outside corners.

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3.8 EXPANSION JOINTS

- A. Place expansion joints at maximum 30 foot intervals for interior installations.
- B. Place expansion joints at control and expansion joints in concrete slabs, and at intersections with walls and columns.
- C. Joint Sizes: Set to match width of typical grouted joint; but in no case less than 1/4".
- D. Leave expansion joints free of mortar.
- E. Sealant materials and installation are specified in Section 079200.

3.9 GROUTING

- A. Comply with provisions of ANSI A108.10.
- B. Apply grout release to tiles prior to grouting. Use on all natural stone, non-glazed porcelain/ceramic tiles, masonry and quarry tiles. Use also at rough, textured and other difficult-to-grout surfaces. Use at all epoxy grout installations.
- C. Mix grouts in accordance with manufacturer's instructions.
- D. Grout joints, except expansion joints, in accordance with the manufacturer's recommendations. Float joints to a slightly concave profile.
- E. Remove excess grout from tile surfaces in accordance with the grout and tile manufacturer's recommendations. Do not use excess amounts of water.
- F. Protect adjacent surfaces from damage caused by cleaning agents. Do not use cleaners which would damage tile or grout surfaces.
- G. Do not grout joints indicated to receive sealants, including inside right angle corner joints between floors and walls of column bases. Grout joints perpendicular to expansion joints shall be finished flush with tile edges.
- H. Remove grout release from affected tiles in accordance with manufacturer's instructions.
- I. Cured grout joints shall be made free of efflorescence, prior to sealing.
- J. Only use epoxy grout behind counters in service areas.

3.10 CURING

- A. Cure installation in accordance with the grout manufacturer's recommendations. Protect tile and grout during curing operations.
- B. Protect tile surfaces during curing. Keep traffic off tile surfaces for a minimum of 4 days, unless recommended otherwise by the grout or mortar manufacturer.
- C. Do not allow the operation of walk-in coolers and freezers for a minimum of 14 days after tile installation in these areas.

3.11 PROTECTION

- A. Protect tile installations from damage, in accordance with Section 015000.
- B. Replace damaged tiles.

3.12 CLEANING

- A. In accordance with Section 015000 and Section 017700.
- B. Coordinate final cleaning with work of Section 079200. Do not begin cleaning operations until tile expansion joints sealants are fully cured.
- C. Where grout staining has occurred, clean tile in accordance with manufacturer's instructions.
- D. Prior to substantial completion, wash and thoroughly rinse tile. Leave tile surfaces clean.

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SECTION 093000 – TILING**

END OF SECTION

STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 095113 – ACOUSTICAL PANEL CEILINGS

SECTION 095113 – ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Suspended acoustical ceilings.
- B. Related Sections:
 - 1. 092200 – Lightgauge Metal Support Framing: Adjacent overhead structure.
 - 2. 092900 - Gypsum Board: Adjacent wall and ceiling surfaces.
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.
- D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000. Requests for substitution of ceiling panels shall be accompanied by samples of each proposed panel.

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. A641-98 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
 - 2. E84 - Test Method for Surface Burning Characteristics of Building Materials.
- B. International Building Code (IBC)
- C. Ceilings & Interior Systems Construction Association (CISCA)
 - 1. Recommendations for Direct Hung Acoustical Tile and Lay-in Panel Ceilings – Seismic Zones 0-2.
 - 2. Guidelines for Seismic Restraint Direct Hung Acoustical Tile and Lay-in Panel Ceilings – Seismic Zones 3&4.

1.3 SUBMITTALS

- A. Make submittals in accordance with Section 013300.

1.4 QUALITY ASSURANCE

- A. Conform to the requirements of IBC, seismic design category B, CISCA 0-2, and the requirements of the jurisdictional code authorities.
- B. Suspension system components shall be in compliance with requirements of local jurisdictional authorities for ceiling suspension systems, as applicable

1.5 ENVIRONMENTAL REQUIREMENTS

- A. Maintain temperature of 60 degrees F, minimum, and humidity of 70 percent, maximum, prior to, during, and after installation.

1.6 SEQUENCING/SCHEDULING

- A. Do not install acoustical ceilings until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Schedule installation of acoustic units after interior wet work is dry.

1.7 EXTRA STOCK

- A. Furnish 5 percent extra quantity of acoustical panel units under provisions of Section 017700.
- B. Store above ceiling in Workroom.

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SECTION 095113 – ACOUSTICAL PANEL CEILINGS**

PART 2 - PRODUCTS

2.1 SUSPENSION SYSTEMS

- A. Exposed T System: ASTM C635, intermediate duty classification; direct hung; exposed "T" design; factory baked on finish to match acoustical panels. Furnish stabilizer bars, splices, edge and wall moldings, and other items as necessary to complete suspended ceiling grid system.
 - 1. Wall Moldings: 2 inch flange.
 - 2. Furnish stabilizer bars, splices, edge moldings, and other items as necessary to complete suspended ceiling grid system.

2.2 ACOUSTICAL PANELS

- A. Acoustic panels are scheduled on the Drawings.
- B. Panels shall meet a flame spread of 25 or less when tested in accordance with ASTM E84.

2.3 ACCESSORIES

- A. Suspension Accessories:
 - 1. Hanger Wire: ASTM A641; soft temper; prestretched; 12 gage; zinc coated.
 - 2. Carrying Channels: 16 ga x 1-1/2" cold rolled steel; galvanized.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this Section may properly commence. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.
- B. Do not begin installation until all unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.

3.2 PREPARATION

- A. Coordinate the location of hangers with other work. Ensure hangers are located to accommodate fittings and units of equipment which are to be placed after the installation of ceiling grid system.

3.3 INSTALLATION OF SUSPENDED CEILING SYSTEMS

- A. Install after major above-ceiling work is complete.
- B. Install system in accordance with IBC as amended by local jurisdictional authorities, Cisca 0-2as applicable, the manufacturer's instructions, and as supplemented in this Section.
- C. Install grid to produce finished ceiling true to lines and levels indicated, within the specified tolerances.
- D. Install suspension systems in a manner to support all superimposed loads, with maximum permissible deflection of 1/270 of span. At locations where partitions extend to ceiling, only, install supplementary diagonal bracing to structure at maximum 8'-0" o.c. along length of partition, and above each door hinge and strike jamb
- E. Hang system independent of walls, columns, ducts, pipes and conduit. Where ducts or other equipment prevent the regular spacing of hangers, provide secondary carrying members for indirect support of the suspension system, or reinforce the nearest adjacent hangers and related carrying channels as required to span the required distance.
- F. Center system on room axis according to reflected ceiling plans.
- G. Anchorage:
 - 1. Provide all anchors required for the installation of the ceiling system.
 - 2. Do not fasten to the upper flutes of metal decking. Do not use fasteners in steel deck which penetrate more than 1 inch.
 - 3. Verify location of all conduit in poured concrete construction before making attachments.

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SECTION 095113 – ACOUSTICAL PANEL CEILINGS**

- H. Install edge molding at intersection of ceiling and vertical surfaces, using longest practical lengths. Miter corners. Provide edge moldings at junctions with other interruptions. Fabricate edge moldings to fit the surfaces encountered.
- I. Form expansion joints as detailed. Maintain visual closure.
- J. Fit acoustic lay-in panels in place, free from damaged edges or other defects detrimental to appearance and function. Fit border units neatly against abutting surfaces. Scribe and mill recessed tegular edge into partial border units supported at edge by wall molding.
- K. Adjust sags or twists which develop in the ceiling system and replace parts which are damaged or defective.
- L. Install hold-down clips to retain panels tight to grid system within 20 ft of an exterior door.
- M. Tolerances:
 - 1. Variation from Flat and Level Surface: 1/8 inch in 12 ft.
 - 2. Variation from Plumb of Grid Members Caused by Eccentric Loads: Two degrees maximum.

3.4 CLEAN-UP

- A. Remove fingerprints and soil from ceiling materials. Use cleaning materials recommended by the manufacturer of the ceiling materials.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 097200 – WALL COVERINGS**

SECTION 097200 – WALL COVERINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Wall coverings.
- B. Related Sections:
 - 1. 092900 - Gypsum Board: Substrate.
 - 2. 099023 – Interior Painting and Coating: Primer for substrates to receive wall covering.
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.
- D. Substitutions: Substitutions will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM): E84 - Test Method for Surface Burning Characteristics of Building Materials.

1.3 SUBMITTALS

- A. Make submittals in accordance with Section 013300, unless specified otherwise.
- B. Product Data:
 - 1. Submit product data on proposed adhesives and accessories.
 - 2. Provide MSDS sheets or other evidence that shows compliance to sustainability requirements for adhesives.
- C. Samples: Submit minimum 12 x 12 inch samples of each wall covering proposed.
- D. Quality Control Submittals:
 - 1. Certification: Submit certification that all fabric which does not meet flame spread requirements has been fire retardant treated to meet the requirements specified.
- E. Contract Closeout Submittals: Submit product information and maintenance instructions as a part of Operation and Maintenance Data submittals specified in Section 017700.

1.4 QUALITY CONTROL

- A. Wall Covering Installer: Minimum of 3 years experience in wall covering installations of similar size and scope. Able to show evidence of experience when requested by the Architect.
- B. Pre-installation Meeting:
 - 1. In accordance with Section 013119.
 - 2. Schedule a conference a minimum of 10 calendar days prior to the installation of the wall covering.
 - 3. Review installation, including locations of each fabric type, substrate requirements, installation procedures and methods, and scheduling. Address all conditions and situations which would adversely affect the wall covering application.
 - 4. Attendance: Contractor, wall covering installer, and all other parties affected by the work of this section.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. In accordance with Section 016000.
- B. Store wall covering materials flat, not upright, in a dry area. Maintain temperature of storage area at a minimum of 45 degrees F., unless a higher temperature is recommended by wall covering manufacturer.

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SECTION 097200 – WALL COVERINGS**

1.6 ENVIRONMENTAL CONDITIONS

- A. Temperature:
 - 1. Do no wall covering work until surfaces and materials have been maintained at 60 degrees F. minimum, or higher if recommended by wall covering manufacturer, for 3 days before work begins.
 - 2. Maintain minimum or above temperatures during the entire installing time and until adhesives have fully dried or cured.
- B. Lighting: During installation, maintain minimum lighting level of 15 foot-candles on the surfaces to receive wall covering. Use temporary lighting, if necessary, to attain specified level.
- C. Ventilation: Provide adequate continuous ventilation during the work and until adhesives have fully dried or cured.

1.7 MAINTENANCE

- A. Maintenance Materials: Furnish extra stock as required by the Construction Manager.

PART 2 - PRODUCTS

2.1 WALL COVERING

- A. Types as scheduled on the Drawings.
- B. All wall coverings shall have a maximum flame spread of 75 or less when tested in accordance with ASTM E84. Fire retardant treat all nonconforming wall covering. Treatment shall not alter the appearance of the fabric.

2.2 ACCESSORIES

- A. Adhesives:
 - 1. Use adhesives as recommended by the wall covering manufacturer for the application.
 - 2. Sustainability Requirements: Adhesives shall meet the requirements of the Southern California South Coast Air Quality Management District (SCAQMD) Rule 1168. (maximum VOC content of 250 grams/liter, using the method of dividing the weight of the solvent in the adhesive by the volume of the material, less water).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrate and notify the Construction Manager of unacceptable conditions which would prevent a satisfactory installation. Unacceptable conditions include, without limitation, cracks, voids, ridges, oils, grease, moisture, porosity, indelible and water soluble crayon, ball or felt tip pen marks, and foreign materials.
- B. Do not begin installation until all unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.
- C. Ensure that surfaces to receive wall covering have received a coat of wall size as specified in Section 099023.

3.2 PREPARATION

- A. Schedule work such that the subsequent work of other sections will not damage the work of this section.
- B. Verify the type, pattern, color, and quantity of each type wall covering for each location scheduled to receive wall covering.
- C. Remove electrical outlet and switch plates, mechanical diffusers, escutcheons, registers, surface hardware, fittings, and fastenings prior to starting work; store during and replace after work.

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- D. Protection: Provide sufficient drop cloths, shields, and protective equipment to prevent wall covering materials from fouling adjacent surfaces, and in particular at storage and preparation areas.
- E. At existing painted surfaces, evenly roughen with a medium grit garnet paper, wash with well-diluted household detergent, wipe clear water, allow to dry, and size with wall covering adhesive.

3.3 WALL COVERING INSTALLATION

- A. Mix and apply adhesives in strict accordance with the adhesive manufacturer's directions for the type of material being applied.
- B. Install wall covering secure, smooth, clean, and without wrinkles, gaps or overlaps.
- C. Extend wall covering continuously behind such items as mirrors, and other items which are close to but not touching walls.
- D. Install wall covering where scheduled in strict accordance with the wall covering manufacturer's recommendations.
- E. Provide double-cut seams on nonmatch patterns; butt seams on match patterns.
- F. Install wall covering oriented vertically, unless otherwise indicated. Horizontal seams are not permitted.
- G. Corner Seams: Make no seams within 6 inches of an inside or outside corner, except where a color or pattern change is indicated. Lap wall coverings at inside corner seams to prevent substrate show through.
- H. Fabrics:
 - 1. Use fabric rolls in consecutive numerical sequence of manufacture.
 - 2. Place fabric sections consecutively in exact order in which they are cut from the roll including filling all spaces above or below windows, doors, or similar penetrations.
 - 3. Trim patterned fabrics which are not factory pretrimmed on a work table with a straight edge and an industrial razor blade for exact pattern match.

3.4 CLEANUP

- A. Remove all adhesives, and other contaminants in a manner which will not damage the surface from which it is removed.
- B. Remove debris and leave areas neat and clean.
- C. Replace all removed wall plates and other accessories.
- D. Repair to like-new condition, or replace as directed by the Construction Manager, all surfaces damaged by work of this Section.

3.5 EXCESS YARDAGE

- A. Notify the Construction Manager prior to removing excess yardage from the job. The Construction Manager will select the materials which are to be retained by the Owner.
- B. Carefully wrap the excess yardage selected to be retained. Deliver to a location as directed by the Construction Manager. Remove remainder from the site and dispose of legally.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS**

SECTION 097733 – REINFORCED PLASTIC PANEL WALL COVERINGS

SECTION 097733 – REINFORCED PLASTIC PANEL WALL COVERINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Reinforced plastic panel wall covering.
 - 2. Adhesives, sealants, and related accessories.
- B. Related Sections:
 - 1. 064000 – Architectural Woodwork: Honeycombed resin panels
 - 2. 092900 - Gypsum Board: Substrate.
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.
- D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM): E84 - Test Method for Surface Burning Characteristics of Building Materials

1.3 SUBMITTALS

- A. Make submittals in accordance with Section 013300.
- B. Product Data:
 - 1. Product literature on adhesives and sealants to be used in conjunction with panel system installation.
 - 2. Manufacturer's product literature for system components.
- C. Samples:
 - 1. Three samples of wall paneling material proposed for the work; 3 x 4 inch minimum size.
 - 2. One each of each cap, corner, and division molding proposed for the work; minimum 4 inches in length.

1.4 QUALITY ASSURANCE

- A. Panel system shall be USDA approved for use in food preparation and service areas.

1.5 SUBCONTRACTOR GUARANTEE

- A. Furnish Subcontractor Guarantees in accordance with Section 017700.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Comply with requirements of Section 016000.

1.7 ENVIRONMENTAL CONDITIONS

- A. Maintain a minimum temperature of 60 degrees F and relative humidity as prescribed by the adhesive manufacturer, during installation, and until installed adhesive is fully cured.
- B. Allow no containers of adhesive to be opened until all potential sources of flame or spark have been shut down or extinguished and until warnings against their ignition during adhesive application have been posted.
- C. Provide ventilation to disperse fumes during application of solvent based adhesive.

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS**

SECTION 097733 – REINFORCED PLASTIC PANEL WALL COVERINGS

PART 2 - PRODUCTS

2.1 PANEL SYSTEM COMPONENTS

- A. Panel Material:
 - 1. Manufacturer/Type:
 - a. Marlite Brand Class I/A Fire Rated FRP by Marlite (Dover, OH 330/343-6621); color as scheduled in the Finish Legend.
 - b. Fire-X Glasbord with Surfaseal, by Kemlite Company (Joliet, IL 800/435-0080); color as scheduled in the Finish Legend.
 - 2. Panel Type: Fiberglass reinforced polyester panels, with embossed textured face.
 - 3. Thickness: 3/32 inch.
 - 4. Size: 48 inches x length required for conditions indicated.
 - 5. Fire Rating: Maximum 25/450 flame spread / smoke developed in accordance with ASTM E84.
- B. Moldings: Manufacturer's standard PVC cap, corner, and division moldings; color to match panels.
- C. Adhesive:
 - 1. Sustainability Requirements: Adhesives shall meet the requirements of the Southern California South Coast Air Quality Management District (SCAQMD) Rule 1168. (maximum VOC content of 250 grams/liter, using the method of dividing the weight of the solvent in the adhesive by the volume of the material, less water).
 - 2. For Panel Installation: Marlite Brand C-375 or C-551 Construction Adhesive by Marlite, or 444 Non-Flammable F.R.P. Panel Adhesive by W. W. Henry Company,
 - 3. For Molding Installation: Marlite Brand C-375 C-551 Adhesive by Marlite, or 444 Non-Flammable F.R.P. Panel Adhesive by W. W. Henry Company.
 - 4. Furnish adhesive spreaders with 3/16 inch V-notches, 5/16 inch apart for application of adhesive to panels.
- D. Sealant: Flexible waterproof sealant for bedding panel edges, Marlite Brand Silicone Sealant MS-251 by Marlite, or Silicone Sealant S255C by Kemlite Company.

PART 3 - EXECUTION

3.1 CONDITION OF SURFACES

- A. Substrate: Verify that drywall substrate is clean, dry, solid, straight, and free from projections.
- B. Where conditions require installation of paneling prior to installation of flooring, coordinate with other trades to establish accurate location of top of base.
- C. Do not start work until other work requiring penetration of wall covering has been completed, or accurately located.
- D. Commencement of plastic paneling wall covering work constitutes installer's acceptance of the substrate.

3.2 CUTTING AND FITTING

- A. Cut panels accurately to size with proper allowance for expansion and moldings.
- B. Sand or file all edges smooth without chipping.
- C. Cut openings for penetrations in accurate location with approximate 1/8 inch clearance around penetrations.

3.3 INSTALLATION

- A. Install base molding to wall at proper elevation, in solid bed of adhesive. Allow adhesive to set thoroughly prior to installation of paneling.
- B. Seal base molding to top of wall base.

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SECTION 097733 – REINFORCED PLASTIC PANEL WALL COVERINGS

- C. Establish centerline of each distinct flat area to be covered. Trim division moldings to mate with base moldings; install in solid bed of adhesive, either on centerline, or offset 24 inches from center, as necessary to maximize panel widths at corners. Molding shall be installed straight and plumb.
- D. Cut top cap and division or corner moldings to shape, with edges trimmed to fit to adjacent moldings.
- E. Apply sealant into installed moldings in sequence with panel installation.
- F. Apply adhesive to backs of panels in accordance with the manufacturer's recommendations.
- G. Maintain lines and levels of panel edges and moldings.
- H. Allow 1/8 inch gap between top cap, corner, or division molding posts, and panel edge; all edges shall be firmly bedded to the moldings in sealant.
- I. Promptly remove sealant squeeze out with a damp cloth, as work progresses; remove adhesive with appropriate solvent.
- J. Install sealant behind flanges and at penetrations through paneling, and between top cap of panel and substrate.

3.4 CLEANING

- A. Inspect surfaces of paneling and remove excess adhesive from face of laminate using solvent recommended by manufacturer.
- B. Promptly remove unused cut pieces from the site.
- C. Prior to substantial completion of each area where reinforced plastic panel wall covering is installed, clean all surfaces of plastic panels, using procedures recommended by the manufacturer.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 098100 – ACOUSTIC INSULATION**

SECTION 098100 – ACOUSTIC INSULATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Acoustical insulation in walls and ceilings.
 - 2. Acoustical sealant.
- B. Related Sections:
 - 1. 072100 - Thermal Insulation: Thermal batt and blanket insulation.
 - 2. 078400 - Firestopping: Fire rated penetration seals.
 - 3. 078500 - Fire Rated Joint Assemblies: Fire rated joint assemblies at acoustical construction.
 - 4. 092200 – Lightgage Metal Support Framing: Support framing.
 - 5. 095123 – Acoustical Panel Ceilings.
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.
- D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. C665 - Mineral Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
 - 2. E84 - Test Method for Surface Burning Characteristics of Building Materials.

1.3 SUBMITTALS

- A. Make submittals in accordance with Section 013300.
- B. Product data for each product.

1.4 QUALITY ASSURANCE

- A. Acoustical insulation shall be in compliance with local jurisdictional authorities as applicable.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Acoustical Insulation: ASTM C665, Type I; unfaced glass fiber batts, blankets, or rolls; minimum fire hazard classification rating of 25/50 per ASTM E84; minimum 3-1/2-inch thick, unless required otherwise to meet the STC requirements indicated or specified; formaldehyde free.
 - 1. For Installation in Stud Walls: Widths to friction-fit between studs
- B. Acoustical Sealant: Non-hardening, low-shrinkage; for use in conjunction with gypsum board; similar to USG "Sheetrock Brand Acoustical Sealant," Tremco "Acoustical Sealant 30CTG," Quiet Solution (Sunnyvale CA; ; 408-541-8000) "QuietSeal QS-350," or approved; maximum VOC content 250g/L.
- C. Accessories: Furnish other accessories such as fasteners and retainers, not specifically described, but required for a complete installation.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this Section may properly commence.

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SECTION 098100 – ACOUSTIC INSULATION

- B. Notify the Construction Manager in writing of conditions detrimental to the proper and timely completion of the work.
- C. Do not begin work until all unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.

3.2 PREPARATION

- A. Verify that adjacent materials are secure, properly spaced, dry, and ready to receive installation.
- B. Verify that mechanical and electrical services within spaces to insulated have been installed and tested.
- C. Furnish acoustical insulation to hollow metal installer for installation in hollow metal frames in acoustical partitions.

3.3 INSTALLATION

- A. Install insulation in stud cavities in accordance with manufacturer's instructions, and as indicated. Coordinate with other trades as necessary to complete acoustical barriers at wall penetrations.
- B. Install insulation without gaps or voids.
- C. Trim insulation neatly to fit spaces. Use insulation materials free of damage.
- D. Acoustical Insulation at Ceilings:
 - 1. Lay acoustical insulation over each acoustically insulated partition which terminates at the ceiling. Insulation shall extend a minimum of 48" each side of the centerline of the acoustical partition
 - 2. Acoustical insulation batts shall be tightly butted.
 - 3. Cut and fit neatly around mechanical and sprinkler drops.
 - 4. Fill spaces between wall batts (at top plate line) and ceiling batts to ensure complete sound closure.
 - 5. Omit insulation over tops of recessed fluorescent light fixtures; and within 2 inches of recessed incandescent fixtures.
- E. Sealant:
 - 1. Install acoustical sealant continuously around perimeter of all acoustically insulated partitions; one continuous bead at each side of framing member interface with substrate.
 - 2. Except for penetrations in fire rated construction to receive firestopping or fire rated construction joint assemblies, seal all penetrations through acoustical assemblies, including cutouts for lighting fixtures, cabinets, pipes and plumbing, HVAC ducts, and electrical boxes.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 099023 – INTERIOR PAINTING AND COATING**

SECTION 099023 – INTERIOR PAINTING AND COATING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Site applied interior paint coatings.
- B. Related Sections:
 - 1. 051200 - Structural Steel: Preprimed metal surfaces.
 - 2. 055000 - Metal Fabrications: Pre-primed metal surfaces.
 - 3. 064000 - Architectural Woodwork: Shop finished materials.
 - 4. 081113 - Hollow Metal Doors and Frames: Preprimed metal surfaces.
 - 5. 081400 - Wood Doors: Prefinished doors.
 - 6. 097200 - Wall Coverings: Finish material over primed surfaces.
 - 7. 099013 - Exterior Painting And Coating
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.
- D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

- A. Master Painters Institute (MPI): Architectural Painting Specification Manual
- B. Steel Structures Painting Council (SSPC).

1.3 DEFINITIONS:

- A. Sheen: Degree of luster of the dried paint film. Where terms such as "gloss," "semi-gloss," "low-gloss," "matte," "satin," "eggshell," or "flat," are used, it shall be subject to the Owner's Representative's interpretation, regardless of manufacturer's nomenclature for any particular sheen level. The Owner's Representative reserves the right to select from any of manufacturer's published sheen levels for each paint system, if sheen of initial paint finish sample is not approved.

1.4 SUBMITTALS

- A. Make submittals in accordance with Section 013300.
- B. Contract Closeout Submittals: Record Paint Samples: In accordance with Section 017700, submit three 8"x10" samples of each paint and color used, indicating paint manufacturer and formula number; bind in identical sets. Deliver to on site location as directed.
- C. Sustainability Submittals:
 - 1. Make submittals in accordance with Section 013546.
 - 2. Low-Emitting Materials – Paints and Coatings:
 - a. Submit a list of paints and coatings used inside the building. Include product name, manufacturer, and VOC content.
 - b. For each product submit cut sheets, MSDS sheets, or letters from product manufacturers clearly indicating VOC content.

1.5 QUALITY ASSURANCE

- A. Applicator: Company specializing in commercial painting and finishing with a minimum of three years documented experience.
- B. Environmental Requirements for Solvent Based Paints: Comply with the Environmental Protection Agency (EPA) requirements for volatile solvents content limitations, as applicable to each classification of coating.

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SECTION 099023 – INTERIOR PAINTING AND COATING**

1.6 DELIVERY, STORAGE, AND HANDLING

- A. In accordance with Section 016000.
- B. Delivery: Deliver paint materials to the jobsite in sealed, original, labeled containers, each bearing manufacturer's name, type of paint, brand name, color designation, and instructions for mixing and/or reducing.
- C. Storage: Store paint materials at a minimum ambient temperature of 45 degrees F. in a well ventilated area.
- D. Toxic, acidic, and combustible materials: Take all necessary precautionary safety measures as recommended by the material manufacturers and governing regulations.
- E. Place cotton waste, cloths, and material which may constitute a fire hazard in closed metal containers and daily remove from the site.

1.7 SITE CONDITIONS

- A. Temperature:
 - 1. Do no painting work when surface and air temperatures are below 40 degrees F or below those temperatures recommended by the manufacturer for the material type used.
 - 2. Minimum temperatures for latex finishes: 45 degrees F for interior work and 50 degrees F. for exterior work, unless approved otherwise.
- B. Lighting: Maintain a lighting level of minimum 50 foot-candles on the surfaces to be painted or finished.
- C. Ventilation: Provide adequate continuous ventilation.

PART 2 - PRODUCTS

2.1 PRODUCTS

- A. Unless specified otherwise, furnish manufacturer's highest grade coating systems by one of the following nationally available manufacturers:
 - 1. Benjamin Moore Paint Company.
 - 2. Pittsburgh Paints.
 - 3. Pratt & Lambert.
 - 4. The Sherwin-Williams Company.
 - 5. ICI Paints North America.

2.2 INTERIOR PAINT SYSTEMS

- A. Interior CMU Substrate - One of the following; colors as scheduled on the Drawings.
 - 1. Manufacturer: Benjamin Moore Paint Company
 - a. Block Filler: Super SpecMasonry Int/Ext Hi-Build Block Filler (206)
 - b. Finish: Ultra Spec 500 Zero VOC Interior Eggshell Finish (N538)
 - 2. Manufacturer: ICI Dulux
 - a. Block Filler: "Bloxfil 4000 Interior/Exterior Heavy Duty Acrylic Block Filler" (52901)
 - b. Finish: LM9300 "Lifemaster 2000" Eggshell.
 - 3. Manufacturer: Sherwin-Williams
 - a. Block Filler: "Heavy Duty Block Filler" B42W46
 - b. Finish: " Harmony 0 VOC B9 Series"
- B. Interior Gypsum Board Substrate: One of the following; colors as scheduled on the Drawings.
 - 1. Manufacturer: ICI Devoe
 - a. Primer: DR3160 "Wonderpure Primer."
 - b. Finish: DR3249 "Wonderpure Eggshell."
 - 2. Manufacturer: ICI Dulux
 - a. Primer: LM9116 "Lifemaster 2000" primer."
 - b. Finish: LM9300 "Lifemaster 2000" Eggshell."
 - 3. Manufacturer: Sherwin-Williams

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- a. Primer: Harmony Primer 0 VOC B11W900
- b. Finish: Harmony 0 VOC B9 Series; Eggshell sheen
- 4. Manufacturer: Benjamin Moore Paint Company
 - a. Primer: Ultra Spec 500 Zero VOC Interior Latex Primer (N534)
 - b. Finish: Ultra Spec 500 Zero VOC Interior Eggshell Finish (N538)
- C. Interior Trim Systems – Metal Substrate: One of the following.
 - 1. Manufacturer: ICI Devoe
 - a. Metal Primer: "Mirrolac" DP 8502 WB; DTM waterborne primer.
 - b. Finish: DR3349 "Wonderpure SG."
 - 2. Manufacturer: ICI Dulux
 - a. Metal Primer: "Devflex" 4020 DTM waterborne primer.
 - b. Finish: LM9200 "Lifemaster 2000" S.G.
 - 3. Manufacturer: Sherwin-Williams
 - a. Metal Primer: ["Pro Industrial Pro-Cryl B66" Universal Acrylic Primer](#); 2.5 – 5.0 mils dft 138 g/l VOC
 - b. Finish: Pro Classic Waterborne Semi-gloss dft 157 g/l VOC
 - c. Metal Primer: (DTM waterborne). Super Spec HP D.T.M. Acrylic Semi-Gloss Enamel (P29)
 - d. Finish: (Semi-Gloss) Super Spec HP D.T.M. Acrylic Semi-Gloss Enamel (P29)
 - 4. Manufacturer: Ameron International.
 - a. Metal Primer: "Amercoat 148," Waterborne Acrylic Primer.
 - b. Finish: "Amercoat 220," Waterborne Acrylic Topcoat; semigloss.
- D. Interior Latex Dry-Fall System: One of the following; color matches as scheduled.
 - 1. Manufacturer: Benjamin Moore Paint Company
 - a. Finish: Coronado Super Kote 5000 Dry Fall Latex Semi-Gloss (112)
 - 2. Manufacturer: ICI Devoe
 - a. Finish: "Devflex 4206 Interior/Exterior Waterborne Acrylic Semi-Gloss Enamel."
 - 3. Manufacturer: Sherwin-Williams
 - a. Finish: "Waterborne Acrylic Dryfall (B42 Series)" Egg-Shell finish.
- E. Acrylic Wall Size: One of the following.
 - 1. ICI Devoe "Wonderprime" DR51701 vapor barrier primer/sealer.
 - 2. ICI Dulux "Ultra-Hide" 1060 vapor barrier primer/sealer.
 - 3. Sherwin-Williams "Harmony Primer 0 VOC" B11W900 .
 - 4. Benjamin Moore Paint Company Super Spec Latex vapor Barrier Primer Sealer (0260)
 - 5. Parker Paint Mfg. Co., Inc. "Perm Gard" Interior Latex Vapor Barrier.
 - 6. Zinsser Co, Inc. (Somerset NJ; (732) 469-8100) "Shieldz Universal Pre-Wall Covering Primer"; acrylic primer/sealer
- F. Interior Waterborne Epoxy Systems: One of the following.
 - 1. Manufacturer: Tnemec Company, Inc.
 - a. Gypsum Board Primer: "Series "151 Elasto-Grip"
 - b. Metal Primer: "Series 115 Unibond DF"
 - c. Finish Coat: "Series 113 Tnemec-Tufcoat".
 - 2. Manufacturer: ICI Dulux
 - a. Gypsum Board Primer: "Ultra-Hide Aquacrylic Gripper Stain Killer Primer-Sealer 3210-1200."
 - b. Metal Primer: "Tru-Glaze-WB 4030 Waterborne Epoxy Primer"
 - c. Finish Coat: "Tru-glaze 4406 Waterborne Acrylic Epoxy Semi-Gloss."
 - 3. Manufacturer: Sherwin-Williams
 - a. Gypsum Board Primer: "Preprite Classic Primer."
 - b. Metal Primer: "Procryl Primer"
 - c. Finish Coat: "Epo-plex Multi-mil WB Epoxy".

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SECTION 099023 – INTERIOR PAINTING AND COATING**

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, inspect installed work of other trades and verify that such work is complete to the point where work of this Section may properly commence. Perform adhesion tests on factory primed items. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.
- B. Do not begin installation until all unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.

3.2 MOISTURE CHECK

- A. Check for excess moisture using an electronic moisture meter. Do not paint materials with moisture levels which would impair the bonding of finish coatings.

3.3 PROTECTION

- A. Adequately protect surfaces not to be painted, from spills, drips, over painting, and other damage caused by this work. Include surfaces within the paint storage and preparation areas.
- B. Hardware and Miscellaneous Items:
 - 1. Remove electrical outlet and switch plates, mechanical diffusers, escutcheons, surface hardware, and fittings prior to starting work.
 - 2. Store, clean and reinstall these items upon completion of work in each area. Use materials and techniques as necessary to prevent damage to finishes on such items.

3.4 SURFACE PREPARATION

- A. Prepare surfaces by removing dirt, dust, grease, oil, moisture, and other contaminants which would impair finish adhesion.
- B. Ferrous Metal Shop Primed under other Sections: Solvent clean to remove oil and grease. Remove loose rust, and blistered and peeling paint to bare metal by scraping, sanding, and wire brushing in accordance with SSPC-SP2 and SP3. Immediately retouch damaged or abraded surfaces with compatible primer. Lightly sand all shop prime painted surfaces to receive paint finish.
- C. Wood - Transparent Finish: In accordance with Section 099300.
- D. Concrete and Concrete Masonry Units: Remove all contaminants by washing and wire brushing. Sandblast if necessary.
- E. Existing Finished Surfaces To Be Repainted:
 - 1. Remove loose, blistered, scaled, or crazed finishes to bare substrate; feather new work into existing work. Prepare surfaces to the nearest break line if necessary to blend new finishes with old finishes.
 - 2. Wash and rinse surfaces with trisodium phosphate and water or other solution required to remove remaining film, wax, oil, grease, or foreign matter which would impair bond or cause bleed through.
 - 3. Lightly sand, or apply a liquid deglosser on existing semi-gloss and high-gloss finishes before refinishing.

3.5 GENERAL APPLICATION REQUIREMENTS

- A. Unless specified or indicated otherwise, follow paint manufacturer's label directions for general application procedures and coverage rates.
- B. Do not apply finishes on surfaces that are not sufficiently dry. Make sure each coat of finish is dry and hard before a following coat is applied unless the manufacturer's directions state otherwise.
- C. Tint filler to match stain when clear finishes are specified; work filler well into grain and, before it has set, working perpendicularly to the grain, wipe the excess from the surface.

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- D. Opaque Finishes:
 - 1. Apply number of coats scheduled for each application, except that additional finish coats shall be applied as necessary for complete hiding of substrate colors.
 - 2. Apply primer coats untinted. Where more than one coat of paint is required, tint each succeeding coat up to the final coat similar in tint, but slightly lighter in value (shade).
- E. Rollers for application and backrolling of latex paints shall have a nap of 3/8 inch or less.
- F. Where roller texture is scheduled for application to gypsum board surfaces, finish coats may be roller-applied, or spray applied and backrolled at Contractor's option.
- G. Factory Primed Surfaces: Apply scheduled finish system, less primer coat, except at metal fabrications scheduled for low VOC Acrylic/Polyurethane System or as necessary for patching damage to factory prime coating.

3.6 INTERIOR PAINTING AND FINISHING SYSTEMS

- A. Gypsum Board, Gypsum Plaster, and GFRG - Latex System:
 - 1. System: Three coats - first coat latex primer sealer (untinted), second and third coat latex paint.
 - 2. Sheen: Roller texture, satin sheen, except provide flat sheen at light coves, ceilings, skylight areas, clerestory areas, interior fascias, and other light sensitive surfaces. Verify locations of each sheen with Architect before proceeding with work.
 - 3. Application:
 - a. Use on all exposed gypsum board, plaster, and GFRG surfaces, including the exposed portions of wall surfaces between adjacent fabric covered panels and mirrors.
 - b. Provide prime coat only behind permanently mounted mechanically anchored mirrors, fabric panels, and similar elements.
 - c. Do not apply primer or paint coatings to surfaces to receive adhesively mounted mirrors or tile.
- B. Gypsum Board - Surfaces to Receive Wall covering: Apply one coat of acrylic wall size.
- C. Gypsum Wall Board - Epoxy System:
 - 1. System: Three coats - first coat manufacturer's recommended primer sealer, and second and third coats epoxy coating.
 - 2. Sheen: Semi-Gloss, unless indicated otherwise.
 - 3. Application: Gypsum board wall surfaces as scheduled on the Drawings.
- D. Ferrous Metal and Galvanized - Acrylic System:
 - 1. System: Three coats; first coat acrylic DTM primer; second and third coats latex finish. The primer may be omitted at factory primed surfaces unless otherwise indicated, except as necessary to recoat damaged or abraded preprimed surfaces.
 - 2. Sheen: Semi-gloss, unless indicated otherwise.
 - 3. Application: Interior ferrous metal surfaces including hollow steel metal doors and frames, overhead doors and frames, access doors and panels, and fire extinguisher cabinets.
- E. Ferrous Metal and Galvanized - Acrylic System:
 - 1. System: Three coats; first coat acrylic DTM primer; second and third coats latex finish. The primer may be omitted at factory primed surfaces, except as necessary to recoat damaged or abraded preprimed surfaces.
 - 2. Sheen: Semi-gloss, unless indicated otherwise.
 - 3. Application: Interior ferrous metal surfaces including hollow steel metal doors and frames, overhead doors and frames, access doors and panels, and fire extinguisher cabinets.
- F. Ferrous Fabrications Primed under Other Sections: Acrylic/Polyurethane System (Low VOC):
 - 1. System: Three coats; first coat acrylic primer (tie-coat); second and third coats latex finish.
 - 2. Sheen: Semi-gloss, unless indicated otherwise.
 - 3. Application: High performance coatings at interior ferrous metal surfaces including architecturally exposed structural steel (AESS) or handrails and guardrails indicated to receive painted finish.
- G. Concrete Masonry Units - Latex System:
 - 1. System: 2 coats - first coat alkyd or latex primer or block filler, second coat exterior latex.

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SECTION 099023 – INTERIOR PAINTING AND COATING**

2. Sheen: Semi-gloss sheen, unless indicated otherwise.
3. Application: Interior exposed CMU walls, except as specified otherwise.

3.7 CLEANUP

- A. As the work proceeds and on completion of the work, promptly remove all sealers, primers, paints and finishes where spilled, splashed or splattered in a manner not to damage the surface from which it is removed.
- B. Remove masking.
- C. Clean, or replace with new, all lamps and electrical fixtures damaged by overspray; replace with new identical components all lighting fixture louvers and reflectors damaged by overspray.

3.8 COLOR SCHEDULE

- A. Provide paint colors to match those indicated on the drawings. Where a paint color is listed from a specific manufacturer, paint products from other approved manufacturers may be used, provided the color exactly matches the specified color, and the paint system meets the specified requirements. Where no paint color is indicated, provide color and sheen as selected by the Architect.

END OF SECTION

**STARBUCKS COFFEE COMPANY
GUIDE SPECIFICATIONS
SECTION 104400 – FIRE PROTECTION SPECIALTIES**

SECTION 104400 – FIRE PROTECTION SPECIALTIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Fire extinguishers.
 - 2. Cabinets.
- B. Related Sections:
 - 1. 092200 – Lightgauge Metal Support Framing: Rough framing.
 - 2. 092900 - Gypsum Board: Adjacent finishes.
 - 3. 099023 – Interior Painting and Coating: Field paint finish.
- C. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.
- D. Substitutions: Substitute products will be considered only under the terms and conditions of Section 016000.

1.2 REFERENCES

- A. National Fire Protection Association (NFPA): NFPA 10 - Portable Fire Extinguishers.
- B. Underwriter's Laboratory (UL).

1.3 QUALITY ASSURANCE

- A. Conform to NFPA 10 requirements for extinguishers.
- B. Extinguishers shall be Factory Mutual approved and UL listed.
- C. Provide fire extinguishers, cabinets, and accessories from a single manufacturer.

1.4 SUBMITTALS

- A. Make submittals in accordance with Section 013300.
- B. Product Data: Submit product literature for fire extinguisher brackets, fire extinguisher cabinets, and each type of extinguisher proposed for the work. Indicate valve and standpipe sizes and configurations as appropriate for valve cabinets.
- C. Contract Closeout Submittal: Submit manufacturer's operation and maintenance data under provisions of Section 017700. Include test, refill or recharge schedules, procedures, and re-certification requirements.

PART 2 - PRODUCTS

2.1 APPROVED MANUFACTURERS

- A. Larsen's Manufacturing Company (Minneapolis, MN; 612-571-1181).
- B. J.L. Industries Inc. (Commerce, CA; 323-726-9070).
- C. Potter Roemer (Santa Ana, CA; 714-430-5300, 800-366-3473).
- D. Williams Brothers Corporation (Scarborough, Ontario; 540-636-4444; 800-255-5515).

2.2 EXTINGUISHERS

- A. Multi-Purpose Dry Chemical Type (FE): Heavy Duty DOT Steel tank; UL rating 2A-10B: C, 5 lb capacity, with pressure gage; red enamel finish; metal valves and siphon tubes.

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- B. Wet Chemical Type:
 - 1. UL Class K: J.L. Industries "Saturn 25", Amerex 262, or Larsen WC Series; 2-1/2 gallon capacity, approximately 7 inch diameter x 25 inch high, stainless steel shell or approved.
 - 2. Agent: Potassium acetate base.

2.3 TYPICAL INTERIOR CABINETS

- A. Semi-recessed models in locations as indicated on the Drawings. All cabinets shall be semi-recessed unless otherwise indicated.
- B. Furnish sizes as necessary to accommodate extinguishers, at locations indicated on the Drawings.
- C. Trim: Formed Sheet Steel, minimum 20 gage; 1-1/4 to 1-3/4 inches wide face; square edge configuration.
- D. Door: Formed Sheet Steel, minimum 20 gage; reinforced for flatness and rigidity; satin zinc or aluminum pull, roller catch, and continuous hinge; clear glass vision panel.
- E. Cabinet Finishes:
 - 1. Cabinet Trim and Door: Manufacturer's standard primed finish to receive paint coatings as specified in Section 099000.
 - 2. Cabinet Interior: Manufacturer's standard white epoxy or white baked enamel.
- F. Signage: Pressure sensitive letters "FIRE EXTINGUISHER"; color and font as directed by the Construction Manager or jurisdictional requirements; vertical ascending.
- G. Fire Extinguisher Brackets: Wall mount type, appropriate to the size of the extinguisher, equipped with strap and quick release clip.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this section may properly commence. Notify the Construction Manager, in writing of conditions detrimental to the proper and timely completion of the work.
- B. Do not begin installation until all unsatisfactory conditions are resolved. Beginning work constitutes acceptance of conditions as satisfactory.

3.2 INSTALLATION

- A. Install cabinets plumb and level in wall openings and secured to framing in locations as indicated. Unless otherwise indicated, install 30 inches from finished floor to inside bottom of cabinet.
- B. Coordinate with Section 099000 for installation of signage on cabinets.
- C. Install fire extinguisher in each fire extinguisher cabinet by brackets mounted at back of cabinet.
- D. Where fire extinguishers are indicated for wall mounting, secure bracket to wall through finish to framing or blocking.
- E. Fire extinguishers shall be installed, charged, tagged, and dated, not more than 30 days prior to Substantial Completion.

END OF SECTION