

SUMMARY OF WORK SECTION 01 11 00

PART 1 GENERAL

1.01 SUMMARY

- A. Inclusions:
 - 1. Provisions set forth in Divisions 0 and 1;
 - 2. Work by Owner;
 - 3. Owner Furnished Products;
 - 4. Future Work;
 - 5. Owner Occupancy;
 - 6. Base Bid Scope of Work.

1.02 WORK BY OWNER

- A. Items noted "NIC" (Not in Contract) including, but not limited, to moveable cabinets, furnishings, minor equipment, etc. will be furnished and installed by Owner.

1.03 OWNER FURNISHED PRODUCTS

- A. Owner's Responsibilities:
 - 1. Arrange for and deliver Owner-reviewed shop drawings, product data and samples to Contractor.
 - 2. Arrange and pay for product delivery to site.
 - 3. On delivery, inspect products jointly with Contractor.
 - 4. Submit claims for transportation damage and replace damaged, defective or deficient items.
 - 5. Arrange for manufacturer's warranties, inspections and service.
- B. Contractor's Responsibilities:
 - 1. Review Owner-reviewed shop drawings, product data and samples.
 - 2. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
 - 3. Handle, store, install and finish products.
 - 4. Repair or replace items damaged after receipt.
 - 5. Cooperate with Owner to minimize conflict with Owner's rights to occupy substantially completed building(s).

1.04 FUTURE WORK

- A. Refer to Architectural Site Plan Sheet for areas designated for completion in the future.
 - 1. Contract work installed for future facilities shall be tagged and a description provided to the Owner of locations for future connection.

**SUMMARY OF WORK
SECTION 01 11 00**

1.05 OWNER OCCUPANCY

A. Partial Occupancy:

1. Owner reserves the right to occupy, place and install equipment as necessary in substantially completed buildings. Cooperate with Owner to minimize conflict and facilitate Owner's operations.

B. Acceptance of Work:

1. Partial occupancy does not constitute acceptance of work. Refer to General Conditions, Article 53 "Contract Closeout" and Article 54 "Completion".

1.06 BASE BID SCOPE OF WORK

A. The "Project", of which the "Work" of this contract is a part, is titled "Name of Project".

B. The "Work" of this contract is defined by the Contract Documents and is defined to include all site improvements, utilities, building amenities for a new modular kindergarten building.

1. This section describes the scope of work of the BASE BID for this project.

a. The Work shall include but not be limited to:

- 1) Selective site demolition (concrete, etc.)
- 2) Selective building demolition (structure, foundations, ramps, utilities, etc.)
- 3) Earthwork/grading
- 4) Site concrete (walks, slab and wall foundations)
- 5) Concrete block walls and reinforcing
- 6) Landscaping (seeding, irrigation and benches)

2. Contractor shall commence with the on-site activities on June 1, 2021.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 01 11 00

**ADMINISTRATIVE REQUIREMENTS
SECTION 01 30 00**

PART 1 GENERAL

1.01 SUMMARY

A. Inclusions:

1. Provisions set forth in Divisions 0 and 1;
2. General administrative requirements;
3. Electronic document submittal service;
4. Preconstruction meeting;
5. Site mobilization meeting;
6. Progress meetings.
7. Construction progress schedule.
8. Contractor's daily reports.
9. Coordination drawings.
10. Submittals for review, information, and project closeout.
11. Number of copies of submittals.
12. Requests for Interpretation (RFI) procedures.
13. Submittal procedures.

B. Related Sections:

1. Section 01 60 00: Product Requirements
 - a. General product requirements.
2. Section 01 70 00: Execution and Closeout Requirements
 - a. Additional coordination requirements.

1.02 GENERAL ADMINISTRATIVE REQUIREMENTS

- A. Conform to requirements of Section 01 70 0 "Execution and Closeout Requirements" for coordination of execution of administrative tasks with timing of construction activities.
- B. Make the following types of submittals to Architect:
1. Requests for Interpretation (RFI).
 2. Requests for substitution.
 3. Shop drawings, product data, and samples.
 4. Test and inspection reports.
 5. Design data.
 6. Manufacturer's instructions and field reports.
 7. Applications for payment and change order requests.
 8. Progress schedules.
 9. Coordination drawings.
 10. Correction Punch List and Final Correction Punch List for Notice of Completion.
 11. Closeout submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

2.01 ELECTRONIC DOCUMENT SUBMITTAL PROCESS

- A. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF, MS Word, or MS Excel) format, as appropriate to the document, and transmitted via an email system.
 - 1. Besides submittals for review, interpretation and closeout, this procedure applies to Requests for Interpretation (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders), applications for payment, field reports and meeting minutes, Contractor's correction punchlist, and any other document any participant wishes to make part of the project record.
 - 2. Contractor and Architect are required to use this process.
 - 3. It is Contractor's responsibility to submit documents in allowable format.
 - 4. Subcontractors, suppliers, and Architect's consultants are to be permitted to use the service at no extra charge.
 - 5. Users of the process need an email address, internet access, and PDF review software that includes ability to mark up and apply electronic stamps (such as Adobe Acrobat, www.adobe.com, or Bluebeam PDF Revu, www.bluebeam.com), unless such software capability is provided by the service provider.
 - 6. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.
- B. Project Closeout: Architect will determine when to terminate the service for the project and is responsible for obtaining archive copies of files for Owner.

2.02 PRECONSTRUCTION MEETING

- A. Attendance Required:
 - 1. Owner
 - 2. Architect
 - 3. Contractor
- B. Agenda:
 - 1. Execution of Owner-Contractor Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.
 - 4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
 - 5. Designation of personnel representing the parties to Contract, Contractor and Architect.

6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 7. Scheduling.
- C. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

2.03 SITE MOBILIZATION MEETING

- A. Architect will schedule meeting at the Project site prior to Contractor occupancy.
- B. Attendance Required:
1. Owner.
 2. Contractor.
 3. Architect.
 4. Contractor's superintendent.
 5. Major subcontractors.
- C. Agenda:
1. Use of premises by Owner and Contractor.
 2. Owner's requirements and occupancy prior to completion.
 3. Construction facilities and controls provided by Owner.
 4. Temporary utilities provided by Owner.
 5. Survey and building layout.
 6. Security and housekeeping procedures.
 7. Schedules.
 8. Application for payment procedures.
 9. Procedures for testing.
 10. Procedures for maintaining record documents.
 11. Requirements for start-up of equipment.
 12. Inspection and acceptance of equipment put into service during construction period.
- D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

2.04 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the work at maximum bi-monthly intervals.
- B. Make arrangements for meetings, prepare agenda with copies for participants and preside at meetings.

- C. Attendance Required:
 - 1. Contractor's project manager.
 - 2. Owner.
 - 3. Architect.
 - 4. Contractor's superintendent.
 - 5. Major subcontractors.
- D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems that impede, or will impede, planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Maintenance of progress schedule.
 - 7. Corrective measures to regain projected schedules.
 - 8. Planned progress during succeeding work period.
 - 9. Maintenance of quality and work standards.
 - 10. Effect of proposed changes on progress schedule and coordination.
 - 11. Other business relating to work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

2.05 CONSTRUCTION PROGRESS SCHEDULE

- A. If preliminary schedule requires revision after review, submit revised schedule within ten (10) days.
- B. Within ten (10) days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- C. Within 10 days after joint review, submit complete schedule.
- D. Submit updated schedule with each Application for Payment.

2.06 DAILY CONSTRUCTION REPORTS

- A. Include only factual information. Do not include personal remarks or opinions regarding operations and/or personnel.
- B. Prepare a daily construction report recording the following information concerning events at Project site and project progress:
 - 1. Date.
 - 2. High and low temperatures and general weather conditions.
 - 3. List of subcontractors at Project site.

4. List of separate contractors at Project site.
5. Material deliveries.
6. Safety, environmental or industrial relations incidents.
7. Meetings and significant decisions.
8. Stoppages, delays, shortages, and losses. Include comparison between scheduled work activities (in Contractor's most recently updated and published schedule) and actual activities. Explain differences, if any. Note days or periods when no work was in progress and explain the reasons why.
9. Testing and/or inspections performed.
10. List of verbal instruction given by Owner and/or Architect.
11. Signature of Contractor's authorized representative.

2.07 COORDINATION DRAWINGS

- A. Provide information required by Project Coordinator for preparation of coordination drawings.
- B. Update record drawings on a monthly basis as required as a release for progress payments.
- C. Review drawings prior to submission to Architect.

2.08 REQUESTS FOR INTERPRETATION (RFI)

- A. Definition: A request seeking one of the following:
 1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in the Contract Documents.
 2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of the Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
 1. Prepare a separate RFI for each specific item.
 - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
 - b. Do not forward requests which solely require internal coordination between subcontractors.
 2. Prepare in a format and with content acceptable to Owner.
 3. Prepare using an electronic version of the form appended to this section.
 4. Combine RFI and its attachments into a single electronic file. PDF format is preferred.

- C. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
1. Include in each request Contractor's signature attesting to good faith effort to determine from the Contract Documents information requiring interpretation.
 2. Unacceptable Uses for RFIs: Do not use RFIs to request the following:
 - a. Approval of submittals (use procedures specified elsewhere in this section).
 - b. Approval of substitutions (see Section 01 60 00 "Product Requirements")
 3. Improper RFIs: Requests not prepared in conformance to requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response, with an explanatory notation.
 4. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, the Contract Documents, with no additional input required to clarify the question. They will be returned without a response, with an explanatory notation.
- D. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
1. Official Project name and number, and any additional required identifiers established in Contract Documents.
 2. Owner's, Architect's, and Contractor's names.
 3. Discrete and consecutive RFI number and descriptive subject/title.
 4. Issue date and requested reply date.
 5. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
 6. Annotations: Field dimensions and/or description of conditions which have engendered the request.
 7. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
- E. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- F. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
1. Indicate current status of every RFI. Update log promptly and on a regular basis.
 2. Note dates of when each request is made, and when a response is received.
 3. Highlight items requiring priority or expedited response.
 4. Highlight items for which a timely response has not been received to date.
 5. Identify and include improper or frivolous RFIs.

- G. Review Time: Architect will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 3:00 PM will be considered as having been received on the following regular working day.
1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
 2. Architect will review RFI and return a response to the Contractor within a maximum of seven (days) unless specifically requested at the time of request.
- H. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
1. Response may include a request for additional interpretation, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
 2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
 3. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.
 4. Notify Architect within seven calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

2.09 SUBMITTAL SCHEDULE

- A. Submit to Architect for review a schedule for submittals in tabular format.
1. Submit at the same time as the preliminary schedule.
 2. Coordinate with Contractor's construction schedule and schedule of values.
 3. Format schedule to allow tracking of status of submittals throughout duration of construction.
 4. Arrange information to include scheduled date for initial submittal, specification number and title, submittal category (for review or for information), description of item of work covered, and role and name of subcontractor.
 5. Account for time required for preparation, review, manufacturing, fabrication and delivery when establishing submittal delivery and review deadline dates.

2.10 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
1. Product data.
 2. Shop drawings.
 3. Samples for selection.
 4. Samples for verification.

- B. Submit to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 70 00 "Execution and Closeout Requirements".

2.11 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 - 1. Design data.
 - 2. Certificates.
 - 3. Test reports.
 - 4. Inspection reports.
 - 5. Manufacturer's instructions.
 - 6. Manufacturer's field reports.
 - 7. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for Owner.

2.12 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit Correction Punch List.
- B. Submit Final Correction Punch List for Notice of Completion/Owner occupancy.
- C. When the following items are specified in individual sections, submit them at project closeout in conformance with this section and the General Conditions, Article 53 "Contract Closeout":
 - 1. Project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. Bonds.
 - 5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

2.13 NUMBER OF COPIES OF SUBMITTALS

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.

- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
 - 1. After review, produce duplicates.
 - 2. Retained samples will not be returned to Contractor unless specifically so stated.

2.14 SUBMITTAL PROCEDURES

- A. General Requirements:
 - 1. Use a separate transmittal for each item.
 - 2. Submit separate packages of submittals for review and submittals for information, when included in the same specification section.
 - 3. Transmit using approved form.
 - a. Use form included at the end of this Section.
 - 4. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
 - 5. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
 - 6. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
 - a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
 - 7. Deliver each submittal on date noted in submittal schedule unless an earlier date has been agreed to by all affected parties and is of the benefit to the project.
 - a. Upload submittals in electronic form to Electronic Document Submittal process.
 - 8. Schedule submittals to expedite the Project, and coordinate submission of related items.
 - a. For each submittal for review, allow 21 calendar days excluding delivery time to and from the Contractor.
 - b. For sequential reviews involving Architect's consultants, Owner, or another affected party, allow an additional 7 days.
 - 9. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
 - 10. Provide space for Contractor and Architect review stamps.
 - 11. When revised for resubmission, identify all changes made since previous submission.
 - 12. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
 - 13. Incomplete submittals will not be reviewed unless they are partial submittals for distinct portion(s) of the work and have received prior approval for their use.
 - 14. Submittals not requested will be recognized and will be returned "Not Reviewed".

- B. Product Data Procedures:
 - 1. Submit only information required by individual specification sections.
 - 2. Collect required information into a single submittal.
 - 3. Submit concurrently with related shop drawing submittal.
 - 4. Do not submit (Material) Safety Data Sheets for materials or products.
- C. Shop Drawing Procedures:
 - 1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting the Contract Documents and coordinating related work.
 - 2. Do not reproduce the Contract Documents to create shop drawings.
 - 3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.
- D. Samples Procedures:
 - 1. Transmit related items together as single package.
 - 2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.

3.15 SUBMITTAL REVIEW

- A. Submittals for Review: Architect will review each submittal, and approve, or take other appropriate action.
- B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken.
- C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
- D. Architect's and his consultants' actions on items submitted for review:
 - 1. Authorizing purchasing, fabrication, delivery, and installation:
 - a. "Reviewed" or language with same legal meaning.
 - b. "Reviewed and Corrected" resubmission not required, or language with same legal meaning.
 - 1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
 - 2. Not-Authorizing fabrication, delivery, and installation.
 - a. "Revise and Resubmit", or language with same legal meaning.
 - b. "Not Acceptable" or language with same legal meaning.
- E. Architect's and his consultants' actions on items submitted for information:
 - 1. Items for which no action was taken:
 - a. "Received" - to notify the Contractor that the submittal has been received for record only.
 - 2. Items for which action was taken:
 - a. "Reviewed" - no further action is required from Contractor.

END OF SECTION 01 30 00

**QUALITY REQUIREMENTS
SECTION 01 40 00**

PART 1 GENERAL

1.01 SUMMARY

- A. Inclusions:
 - 1. Submittals.
 - 2. Quality assurance.
 - 3. References and standards.
 - 4. Testing and inspection agencies and services.
 - 5. Control of installation.
 - 6. Tolerances
 - 7. Defect Assessment.
- B. Related Sections:
 - 1. Section 01 30 00: Administrative Requirements
 - a. Submittal procedures.
 - 2. Section 01 42 16: Definitions.
 - 3. Section 01 42 19: Reference Standards.
 - 4. Section 01 60 00: Product Requirements
 - a. Requirements for material and product quality.

1.02 REFERENCE STANDARDS

- A. ASTM C1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants; 2008 (Reapproved 2014).
- B. ASTM C1077 - Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation; 2016.
- C. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2012a.
- D. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection; 2014a.
- E. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing; 2015.
- F. IAS AC89 - Accreditation Criteria for Testing Laboratories; 2010.

1.03 SUBMITTALS

- A. See Section 01 30 00 "Administrative Requirements" for submittal procedures.
- B. Design Data: Submit for Architect's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.
- C. Test Reports: After each test/inspection, promptly submit two copies of report to Architect and to Contractor.
 - 1. Include:
 - a. Date issued.
 - b. Project title and number.
 - c. Name of inspector.
 - d. Date and time of sampling or inspection.
 - e. Identification of product and specifications section.
 - f. Location in the Project.
 - g. Type of test/inspection.
 - h. Date of test/inspection.
 - i. Results of test/inspection.
 - j. Conformance with Contract Documents.
 - k. When requested by Architect, provide interpretation of results.
- D. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
 - 1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
 - 2. Certificates may be recent or previous test results on material or product but must be acceptable to Architect.
- E. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- F. Erection Drawings: Submit drawings for Architect's benefit as contract administrator or for Owner.
 - 1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
 - 2. Data indicating inappropriate or unacceptable Work may be subject to action by Architect or Owner.

1.04 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until the Notice of Completion.
- E. Should specified reference standards conflict with Contract Documents, the Contractor shall request clarification from Architect before proceeding.
- F. Neither the contractual relationships, duties nor responsibilities of the parties in the Contract nor those of Architect shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.05 TESTING AND INSPECTION AGENCIES AND SERVICES

- A. Owner will employ and pay for services of an independent testing agency to perform other specified testing.
- B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

PART 2 PRODUCTS – NOT APPLICABLE

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step-in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, the Contractor shall request clarification from Architect before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

- E. Work shall be performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, the Contractor shall request clarification from Architect before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

3.03 TESTING AND INSPECTION

- A. Testing Agency Duties:
 - 1. Test samples of mixes submitted by Contractor.
 - 2. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
 - 3. Perform specified sampling and testing of products in accordance with specified standards.
 - 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 5. Promptly notify Architect and Contractor of observed irregularities or non-conformance of Work or products.
 - 6. Perform additional tests and inspections required by Architect.
 - 7. Attend preconstruction meetings and progress meetings.
 - 8. Submit reports of all tests/inspections specified.
- B. Limits on Testing/Inspection Agency Authority:
 - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Agency may not approve or accept any portion of the Work.
 - 3. Agency may not assume any duties of Contractor.
 - 4. Agency has no authority to stop the Work.

C. Contractor Responsibilities:

1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
2. Cooperate with laboratory personnel and provide access to the Work and to manufacturers' facilities.
3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c. To facilitate tests/inspections.
 - d. To provide storage and curing of test samples.
4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.

D. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Architect.

E. Re-testing required because of non-conformance to specified requirements shall be paid for by Contractor.

3.04 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not conforming to specified requirements.

END OF SECTION 01 40 00

**REGULATORY REQUIREMENTS
SECTION 01 41 00**

PART 1 GENERAL

1.01 LAWS AND REGULATIONS

- A. The project shall be constructed under the jurisdiction of all laws of the State of California governing the construction of public buildings including:
 - 1. California Code of Regulations, Title 8.
 - 2. California Code of Regulations, Title 19, Public Safety, State Fire Marshal Regulations.
 - 3. California Code of Regulations, Title 24:
 - a. 2019 California Building Standards Administrative Code (Part 1);
 - b. 2019 California Building Code Volumes 1 and 2 (Part 2);
 - c. 2019 California Fire Code (Part 9);
 - d. 2019 California Green Building Standards Code (Part 11);
 - e. 2019 California Referenced Standards Code, Title 24 C.C.R. (Part 12)
 - 4. Occupational Health and Safety Act.
 - 5. Interpretive Manuals, Code Rules, and Safety Orders of:
 - a. Division of Industrial Safety.
 - b. Department of Industrial Relations.
 - c. Other Agencies.
 - 6. San Joaquin Valley Air Quality Management District
- B. Nothing in the plans or specifications is to be construed to permit work not in conformance with any applicable code or regulation.
- C. Other Regulatory Requirements and General Conditions:
 - 1. T-24, Parts 1-5 must be kept on site during construction.
 - 2. If any conflicts or inconsistencies exist between the specifications and the drawings (including the General Notes), the drawings and General Notes shall take precedence.
 - 3. The Project Inspector (2019 CBC Part 1, Section 4-333(b)) and testing lab (2016 CBC Part 1, Section 4-335.1) must be employed by the owner and approved by the following:
 - a. Architect/Engineer of Record

PART 2 PRODUCTS NOT USED

PART 3 EXECUTION NOT USED

END OF SECTION 01 41 00

DEFINITIONS
SECTION 01 42 16

PART 1 GENERAL

1.01 SUMMARY

- A. Inclusions:
1. This section supplements the definitions contained in the General Conditions.
 2. Other definitions are included in individual specification sections.

1.02 DEFINITIONS

- A. Furnish: To supply, deliver, unload, and inspect for damage.
- B. Install: To unpack, assemble, erect, apply, place, finish, cure, protect, clean, start up, and make ready for use.
- C. Product: Material, machinery, components, equipment, fixtures, and systems forming the work result. Not materials or equipment used for preparation, fabrication, conveying, or erection and not incorporated into the work result. Products may be new, never used, or re-used materials or equipment.
- D. Project Manual: The book-sized volume that includes the procurement requirements (if any), the contracting requirements, and the specifications.
- E. Provide: To furnish and install.
- F. Supply: Same as Furnish.

PART 2 PRODUCTS NOT USED

PART 3 EXECUTION NOT USED

END OF SECTION 01 42 16

REFERENCE STANDARDS SECTION 01 42 19

PART 1 GENERAL

1.01 SUMMARY

- A. Inclusions:
 - 1. Requirements relating to referenced standards.
 - 2. Reference standards full title and edition date.

1.02 QUALITY ASSURANCE

- A. For products or workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard of date of issue specified in this section, except where a specific date is established by applicable code.
- C. Obtain copies of standards when required by the Contract Documents.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Date of Notice of Completion.
- E. Should specified reference standards conflict with Contract Documents, the Contractor shall request clarification from the Architect before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the Architect shall be altered by the Contract Documents by mention or inference otherwise in any reference document.

1.03 CONSTRUCTION INDUSTRY ORGANIZATION DOCUMENTS

- A. ACI -- AMERICAN CONCRETE INSTITUTE INTERNATIONAL
 - 1. ACI 117 - Standard Specifications for Tolerances for Concrete Construction and Materials; 2010 (Reapproved 2015).
 - 2. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; 1991 (Reapproved 2009).
 - 3. ACI 301 - Specifications for Structural Concrete; 2016.
 - 4. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000 (Reapproved 2009).
 - 5. ACI 305R - Guide to Hot Weather Concreting; 2010.
 - 6. ACI 306R - Cold Weather Concreting; 2010.
 - 7. ACI 308R - Guide to Curing Concrete; 2001 (Reapproved 2008).
 - 8. ACI 347R - Guide to Formwork for Concrete; 2014.

B. ASTM INTERNATIONAL

1. ASTM A449 - Standard Specification for Hex Cap Screws, Bolts and Studs, Steel, Heat Treated, 120/105/90 ksi Minimum Tensile Strength, General Use; 2014.
2. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2013.
3. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2016.
4. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.
5. ASTM A884/A884M - Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement; 2014.
6. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete; 2017.
7. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2016.
8. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2016b.
9. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2016a.
10. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2015a.
11. ASTM C150/C150M - Standard Specification for Portland Cement; 2016.
12. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2016.
13. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete; 2010a (Reapproved 2016).
14. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2015.
15. ASTM C685/C685M - Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing; 2014.
16. ASTM C834 - Standard Specification for Latex Sealants; 2014.
17. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2014a.
18. ASTM C1059/C1059M - Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete; 2013.
19. ASTM C1087 - Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems; 2016.
20. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink); 2014a.
21. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016.
22. ASTM C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants; 2008 (Reapproved 2012).
23. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types); 2004 (Reapproved 2013).
24. ASTM D2103 - Standard Specification for Polyethylene Film and Sheeting; 2015.

- 25. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts, Steel and Alloy Steel, Heat Treated, 120 ksi (830 MPa) and 150 ksi (1040 MPa) Minimum Tensile Strength, Inch and Metric Dimensions; 2015a.
- 26. ASTM G155 - Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials; 2013.

C. FM -- FACTORY MUTUAL GLOBAL

- 1. FM (AG) - FM Approval Guide; current edition.

D. SMACNA -- SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION, INC.

- 1. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

E. SWRI -- SEALANT, WATERPROOFING AND RESTORATION INSTITUTE

- 1. SWRI (VAL) - SWR Institute Validated Products Directory; Current Listings at www.swrionline.org.

F. UL -- UNDERWRITERS LABORATORIES INC.

- 1. UL (DIR) - Online Certifications Directory; current listings at database.ul.com.
- 2. UL (FRD) - Fire Resistance Directory; current edition.

1.04 UNITED STATES GOVERNMENT AND RELATED AGENCIES DOCUMENTS

A. UNITED STATES CODE

- 1. Title 7, United States Code, 136 through 136y - Federal Insecticide, Fungicide and Rodenticide Act; 1947 (Revised 2001).

B. CFR -- CODE OF FEDERAL REGULATIONS

- 1. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- 2. CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.
- 3. CFR 37 - Transportation Services for Individuals with Disabilities (ADA); current edition.

C. ATBCB -- US ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD (THE ACCESS BOARD)

- 1. ATBCB PROWAG - Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way; 2011.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION 01 42 19

TEST AND INSPECTIONS

SECTION 01 45 23

PART 1 GENERAL

1.01 SUMMARY

A. Inclusions:

1. Provisions set forth in Divisions 0 and 1;
2. Tests and inspections of materials;
 - a. Earthwork:
 - 1) Inspection of sub-grade improvement operations, compacted fill, and field density tests.
 - b. Concrete Work:
 - 1) Testing and certification of concrete ingredients, compression cylinders, reinforcing steel, and placement inspections.

1.02 QUALITY ASSURANCE

A. Owner's Inspector:

1. An inspector employed by the Owner in accordance with the requirements of State of California Code of Regulations, Title 24, will be assigned to the work.
 - a. Duties are specifically defined in Title 24, Part I, Section 4-342.
 - b. The work of construction in all stages of progress shall be subject to the personal continuous observation of the inspector.
 - c. They shall have free access to any or all parts of the work at any time.
 - d. The Contractor shall furnish the inspector reasonable facilities for obtaining such information as may be necessary to keep him fully informed respecting the progress and manner of the work and the character of the materials.
 - e. Inspection of the work shall not relieve the Contractor from any obligation to fulfill this Contract.

1.03 SPECIAL PROVISIONS

A. Laboratory shall be approved by Owner and Architect.

B. Laboratory shall be in the employ of the Owner.

C. Duties of Testing Laboratory:

1. Inspect stock, mark identified stock, select and mark test specimens, perform required tests, inspections as specified, furnish required reports and certificates.

D. Reports:

1. Reports are to be executed immediately upon conclusion of each procedure and forwarded to:
 - a. Architect;
 - b. Contractor;
 - c. Owner;
 - d. Project Inspector;
2. Verification of Test Reports:
 - a. Each testing agency shall submit to the Architect a verified report in duplicate covering all of the tests which are required to be made by that agency during the progress of the project.
 - b. Such report shall be furnished each time that work on the project is suspended, covering the tests up to that time, and at the completion of the project, covering all tests.
3. Payment:
 - a. The Owner shall pay for all tests, except costs of concrete mix design.
 - b. When in the opinion of the Architect or the Division of the State Architect, additional tests are required, then such tests and inspection shall be paid for by the Owner, but the amount paid shall be deducted from the Contract Price.
 - c. Examples of such additional tests are:
 - 1) Tests of material substituted for previously accepted materials, unidentified materials, re-tests made necessary by the failure of materials to comply with the requirements of the specifications, and load tests necessary because certain portions of the structure have not fully met specification or plan requirements.
4. Selection of Samples:
 - a. All samples and specimens for testing shall be selected by the inspector or by the testing laboratory, but not by the Contractor.
 - b. The Contractor shall, at his own expense, furnish, package, mark, and deliver all samples to be tested, when so directed by the inspector, testing laboratory, or as required by the specifications.
 - c. Delivery of samples to the testing laboratory shall be made in ample time to allow tests to be made without delaying construction.
 - d. No extra time will be allowed for the completion of the work by reason of delay in testing samples.
 - e. The Contractor shall allow free access at all times to the representatives of the testing laboratory to the sources from which samples are taken.
5. Preparation of Specimens:
 - a. Taken by, and at expense of fabricator, under direction of testing laboratory and machined or prepared to conform to appropriate ASTM specification.
 - b. Cost of machining specimens is considered part of the testing.

6. Architect reserve the right to demand for test and special examination of any materials, or part thereof, to insure compliance with specifications, and may reject for satisfactory replacement, any material, or part judged defective, as a result thereof.
 - a. This also applies to materials or sources of same substituted for those previously approved.
 - b. Such tests or examinations, even though not specified, shall be performed as and when required.
 - c. Costs paid for by Owner, but the amount paid shall be deducted from the Contract;
7. Owner's Right to Waive Tests and Inspections:
 - a. The Owner reserves the right to waive any part, or all of the tests and inspections, subject to the approval of the Architect.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 SEQUENCING AND SCHEDULING

- A. Coordinate work with that of other trades in time to avoid delays to the overall work progress.
- B. Laboratory shall cooperate with all trades whose work affects or is affected by the tests and inspections.
- C. Contractor to cooperate with and provide testing laboratory opportunity and assistance in taking samples, making field tests, and making inspections.

3.02 TESTS AND INSPECTIONS

- A. All special inspections shall conform to the requirements of 2016 CBC, Part 2, Chapter 17A "Special Inspections and Tests".

3.03 EARTHWORK (Refer to Section 31 22 00)

- A. Excavations and Foundations:
 1. Chapter 17A:
 - a. Inspections:
 - 1) Earth fill compactions: 1705A.6 and Table 1705A.6
 2. Testing Agency:
 - a. Any required foundation consultation, examination, or testing shall be done by an approved Foundation Engineer.
 - b. Costs paid by Owner.

- B. Consultation or Procedures for this part of the work shall be only as requested by the Architect at the time work on the site is commenced and may consist of the following:
1. Examination of building sub-grade resulting from the cutting operation, including field density tests if considered necessary.
 2. Verify completed foundation excavations.
 3. Periodic inspection of any required filling and backfilling, including field density tests if considered necessary.
 4. Imported or Native Fill Material: Approved material, perform suitability tests for compaction, qualities, and optimum moisture if required.
 5. Provide Continuous Inspection Supervision during removal and re-compaction of existing soil and placement of fill.
 6. Inspect and approve completed footing excavations.
 7. Field Density Tests shall be made on samples from material in place as required to verify proper compaction densities of fills and backfills.
- C. Densities and Method:
1. Densities specified relate to ASTM Designation D1557 Procedure A.

3.04 CONCRETE WORK (Refer to Section 03 31 00)

- A. Inspections:
1. Job Site Inspection: 1705A.3.3
 2. Batch Plant or Weighmaster Inspection: 1705A.3.3.
 3. Reinforcing Bar Welding Inspection: 1705A.3.1 and 1705A.2.5.
 4. Notification:
 - a. The Contractor shall notify the following people, giving advance notice prior to commencing the designated work:
 - 1) Person Notified: Architect and Construction Manager
 - a) Advance Notice: Two Business Days
 - b) Prior to Commencing: Form Work
 - c) For Inspection: Excavation
 - 2) Person Notified: Architect, Construction Manager, and Inspector
 - a) Advance Notice: Two Business Days
 - b) Prior to Commencing: Pouring Concrete
 - c) For Inspection: Forms and Steel
 - 3) Person Notified: Governing Agency
 - a) Advance Notice: Three Business Days
 - b) Prior to Commencing: Pouring Concrete
 - c) For Inspection: Forms and Steel

5. Bonded Weighmaster Certificates
 - a. Non-structural concrete such as floor slabs on grade, walks, curb & gutter, etc., shall not require continuous batch plant inspection, but instead, a bonded weighmaster shall furnish notarized affidavits certifying that quantities and quality of all materials used in the concrete instead, a bonded weighmaster shall furnish notarized affidavits certifying that quantities and quality of all materials used in the concrete are in accordance with these specifications and the approved mix design.
6. Batch Plant Inspections: When transit mixed concrete is used, continuous inspection shall be maintained at the plant by a qualified concrete technician who shall issue tickets certifying that quantities and quality of all materials used in the concrete are in accordance with these specifications and the approved design mix.
 - a. The Owner will pay the costs of this inspection.
 - b. This inspection will not be required for non-structural concrete as indicated in C.B.C. Section 1705A.3 (exception).
7. No concrete shall be poured except in the presence of the Owner's Inspector and only after the forms and reinforcing steel have been approved by the Architect or his representative.

B. Tests:

1. All concrete materials to be tested and reported prior to any use of same.
2. Cementitious materials shall conform to the requirements of ACI 318, CBC Section 1903A, and ASTM C150.
 - a. One sample shall be taken for each 100 tons of cement, except that when used in bulk loading ready mix plants where separate bins for pre-tested cement are not available, grab samples shall be taken for each shipment of cement placed in the bin with not less than one sample being taken for each day's pour and such samples shall be subsequently tested if required by the Architect, Structural Engineer, or the Division of the State Architect.
3. Aggregate shall be in conformance with ACI 318, as modified by CBC Section 1903A.5.
4. Reinforcing Steel is to be tested prior to use for compliance with CBC Section 1910A.2 and ASTM A615 requirements.
 - a. Samples: To be selected by representative of testing laboratory from material at the building site or place of distribution, to consist of two (2) pieces, each 18 inches (18") long of each size, furnished, cut, and prepared for testing by Contractor, marked and delivered by representative of testing laboratory.
 - b. Tests: One (1) tension and one (1) bend test shall be made of each size of reinforcing steel, including wire fabric. One (1) series of tests shall be made for each ten (10) tons, or fraction thereof, of each size of reinforcing steel if the bundles, as delivered, can be identified as to heat number and the mill analysis accompanies the report. If they cannot be identified as to heat number, then one (1) series of tests shall be made from each two and one-half (2-1/2) tons or fraction thereof.

5. Cylinder Tests shall comply with CBC Section 1905A.1.16.
 - a. Three (3) cylinders of concrete shall be made for each fifty (50) cubic yards of each grade of concrete, or fraction thereof, being placed each day. Each cylinder shall be dated, given a number, the point in the structure from which the sample was taken noted thereon, and the slump noted thereon.
 - b. Test cylinders shall be made at the job and stored in the testing laboratory in accordance with ASTM C31. At the end of twenty-four (24) hours after making, the cylinders shall be stored under moist curing conditions at approximately 70 degrees F. and maintained therein until tested. The cylinders shall be tested in accordance with ASTM C39. The cylinders shall develop the following minimum ultimate compressive strengths:
 - 1) Design Strength: 3000 psi
 - a) 7 Day Test: 1800 psi
 - b) 28 Day Test: 3000 psi
 - 2) Design Strength: 4000 psi
 - a) 7 Day Test: 2300 psi
 - b) 28 Day Test: 4000 psi
 - c. If the strengths of the first two-cylinder tests are satisfactory, the third cylinder shall not be tested, but destroyed. The third cylinder shall be tested if the strengths of the first two cylinders are not satisfactory.
 - d. If the strength of the cylinders does not meet the minimum as mentioned above, core tests of the hardened concrete shall be made as per CBC Section ACI 318, Section 5.5.5.2 and ASTM C42. If the core tests show the concrete strength to be deficient, the concrete shall be deemed defective and removed. The Contractor shall pay all costs of these core tests.
- C. Laboratory Designed Mixes: See Proportioning of Concrete Mixes, Section 03 30 00, "Structural Concrete Work".

3.05 CONCRETE UNIT MASONRY (Refer to Section 04 22 00)

- A. Inspections:
 1. Masonry Inspection: (CBC Section 1705A.4).
 - a. All structural masonry work shall be continuously inspected during laying and grouting by an Inspector specially approved for that purpose by the DSA. The Inspector shall assist the testing agency in making test samples, and perform such tests as are required, and shall check the materials, details of construction, and construction procedures.
 - 1) The special masonry Inspector shall furnish a verified report that, of his own personal knowledge, the work covered by the report has been performed and materials used and installed in every material respect in compliance with the duly approved plans and specifications.

2. Reinforcing Bar Welding Inspection: CBC 1705A.3.1 and 1705A.2.5, AWS D1.4.
 3. Notification: The Contractor shall notify the following people, giving advance notice prior to commencing the designated work:
 - a. Person Notified: Architect, Construction Manager, and Inspector
 - 1) Advance Notice: Two Business Days
 - 2) Prior to Commencing: Grouting Wall (each lift), Laying of Concrete Block
 - 3) For Inspection: Block Work and Steel
 - b. Person Notified: Architect, Construction Manager, Inspector, and DSA
 - 1) Advance Notice: Three Business Days
 - 2) Prior to Commencing: Masonry and Footing
 - 3) For Inspection: Masonry and Footing
 4. Grout Placement:
 - a. No grout shall be placed, except in the presence of the Owner's Inspector (if one is employed on the job) and only after the block work and reinforcing steel have been approved by the Architect or his representative.
 5. All masonry shall be continuously inspected during laying and grouting by an inspector specially approved for that purpose by DSA.
 - a. Special inspection is required during all High-Lift Grouting of concrete block, as required per DSA IR 21-2.13.
- B. Tests:
1. Concrete block shall be tested using the methods and procedures ASTM C140. It shall be tested and approved before any concrete block is laid. Linear shrinkage tests shall conform to ASTM C426.
 2. Mortar and Grout (Comply with CBC Section 2105A.3):
 - a. Test Samples:
 - 1) At the beginning of all masonry work, field sampling shall be done in accordance with the ASTM C1586 and C1019; one (1) set of the mortar and grout shall be taken on three (3) successive working days and at least at one-week intervals thereafter. The samples shall be continuously stored in moist air until tested, for each test given in Table 1 below. All samples shall meet the minimum strengths given therein.
 - a) Additional samples shall be taken whenever any change in materials or job conditions occur, or change in materials or job conditions occur, or whenever in the judgment of the Architect, the Owner's Inspector, or DSA, such tests are necessary to determine the quality of the material.
 - 2) Mortar test specimens shall be taken from the unit soon after spreading. After molding, the molds shall be carefully protected by a covering which shall be kept damp for at least twenty-four (24) hours, after which the specimens shall be stored and tested as required for concrete cylinders.

- 3) In making grout test specimens, the masonry unit molds shall be broken away after the grout has taken its set, but before it has hardened. If an absorbent paper liner is used, the mold may be left in place until the specimen has hardened. The prisms shall be stored as required for concrete cylinders. They shall be tested in the vertical position.
- b. Masonry Core Tests (2016 CBC Section 2105A.4):
 - 1) Not less than two (2) cores having a diameter of six (6) inches shall be taken from each project. Two (2) cores shall be taken from each building for each 5,000 square feet of the greater of the wall area, or the floor area or fraction thereof. The Architect or Structural Engineer in responsible charge of the project or the Inspector shall select the areas for sampling. One half of the number of cores taken shall be tested in shear. The shear wall loadings shall test both joints between the grout core and the outside wythes of the masonry. Core samples shall not be soaked before testing. Materials and workmanship shall be such that for all masonry, when tested in compression, cores shall show an ultimate strength at least equal to 1,500 psi. When tested in shear, the unit shear on the cross section of the core shall be not less than 97 psi.
 - 2) Shear testing apparatus shall be of a design approved by DSA. Visual examination of all cores shall be made to ascertain if the joints are filled.
 - 3) The testing agency shall inspect the coring of the masonry walls and shall prepare a report of coring operations for the testing laboratory files and mail one copy to DSA, plus provide copies to the Contractor, Inspector, Construction Manager, and Architect. Such reports shall include the total number of cores cut, the location, and the condition of all cores cut on each project, regardless of whether or not the core specimens failed during cutting operation. All cores shall be submitted to the laboratory for examination.
 - 4) Note:
 - a) Contractor shall restore walls from which cores are taken with whole face shells or complete units, as approved by Architect.
- c. Cement: Refer to Concrete Work of this Section.
- d. Aggregates: Test samples of the aggregates to be used in the grout and mortar shall be taken and tested in accordance with ASTM C404.
- e. Reinforcing Steel: Refer to 3.04 Concrete Work of this Section.

TABLE 1

MINIMUM MORTAR AND GROUT STRENGTHS COMPRESSION TESTS

1. Specimen: Mortar on 2 inch x 4 inch cylinders
 - a. At 7 Days: 1100 psi
 - b. At 28 Days: 1800 psi
2. Specimen: Grout in typical prism
 - a. At 7 Days: 1200 psi
 - b. At 28 Days: 2000 psi

QUICK REFERENCE GUIDE FOR TESTS AND INSPECTIONS (AS APPLICABLE)

TITLE 24, PART 2 (2016 CBC) VOLUME 2 **TESTS AND INSPECTIONS REQUIREMENTS**

A. SOILS AND FOUNDATIONS (CHAPTER 18A):

1. Quality:
 - a. Compaction Control Testing of Earth Fill 3304.1, 1803A
 - b. Soils 1705A.6

B. CONCRETE (CHAPTER 19A):

1. Materials:
 - a. Portland Cement 1705A.3.2, 1910A.1
 - b. Concrete Aggregates 1903A.5
 - c. Reinforcing Bars 1705A.3.2, 1910A.2
2. Quality:
 - a. Proportions of Concrete ACI 318, 1905A
 - b. Strength Tests of Concrete 1913A.4
3. Inspection:
 - a. Jobsite 1905A
 - b. Batch Plant 1705A.3.3
 - c. Waiver of Batch Plant 1705A.3.3.1
 - d. Reinforcing Bar Placement 1705A.3.5
 - e. Post-Install Anchors in Concrete 1910A.5
 - f. Concrete Preplacement 1705A.3.5

C. MASONRY (CHAPTER 21A)

1. Materials:
 - a. Concrete Masonry Units 2103.A.1, 1705A.4
 - b. Portland Cement, Lime 2103A
 - c. Mortar and Grout Aggregates 2103A.2.1
 - d. Reinforcing Bars 2103A.13.3

- 2. Quality:
 - a. Portland Cement Tests 1903A.1
 - b. Mortar and Grout Tests 2015A.3
 - c. Masonry Prism Tests 2015A.3
 - d. Masonry Core Tests 2015A.4
 - e. Masonry Unit Tests 2015A.2.2.2.1
 - f. Reinforcing Bar Tests 1910A.2
- 3. Inspection:
 - a. Reinforcing Masonry 1705A.4
- D. Reinforcing Bar Welding 1705A.3.1, AWS D1.4

E. SAFEGUARDS DURING CONSTRUCTION (CHAPTER 33)

END OF SECTION 01 45 23

TEMPORARY FACILITIES AND CONTROLS

SECTION 01 50 00

PART 1 GENERAL

1.01 SUMMARY

- A. Inclusions:
 - 1. Temporary sanitary facilities.
 - 2. Security requirements.
 - 3. Waste removal facilities and services.
 - 4. Project identification sign.

1.02 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2016.
- B. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009 (Reapproved 2016).

1.03 TEMPORARY UTILITIES

- A. Owner will provide the following:
 - 1. Electrical power and metering, consisting of connection to existing facilities.
 - 2. Water supply, consisting of connection to existing facilities.

1.04 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Use of existing facilities is not permitted.
- C. Maintain daily in clean and sanitary condition.

1.05 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.

- C. Provide protection for plants designated to remain. Replace damaged plants.
- D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.06 FENCING

- A. Provide 6-foot-high fence around construction site; equip with vehicular and pedestrian gates with locks.

1.07 SECURITY

- A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

1.08 VEHICULAR ACCESS AND PARKING

- A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
- B. Coordinate access and haul routes with governing authorities and Owner.
- C. Provide and maintain access to fire hydrants, free of obstructions.
- D. Provide means of removing mud from vehicle wheels before entering streets.
- E. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

1.09 WASTE REMOVAL

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site periodically.
- C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- D. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.10 PROJECT IDENTIFICATION

- A. Provide project identification sign of design and construction indicated on Drawings.
- B. Erect on site at location established by Architect.
- C. No other signs are allowed without Owner permission except those required by law.

1.11 FIELD OFFICES

- A. Office: Weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture, drawing rack, and drawing display table.
- B. Provide space for Project meetings, with table and chairs to accommodate six (6) persons.
- C. Provide separate private office similarly equipped and furnished, for use by Owner Project Inspector.
- D. Locate offices a minimum distance of 30 feet from existing and new structures.

1.12 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities and materials prior to Final Application for Payment inspection.
- B. Remove underground installations to a minimum depth of 2 feet. Contractor shall grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to original condition.
- E. Restore new permanent facilities used during construction to a specified condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 01 50 00

**PRODUCT REQUIREMENTS
SECTION 01 60 00**

PART 1 GENERAL

1.01 SUMMARY

- A. Inclusions:
 - 1. Provisions set forth in Divisions 0 and 1;
 - 2. General product requirements.
 - 3. Transportation, handling, storage and protection.
 - 4. Product option requirements.
 - 5. Substitution limitations.
 - 6. Maintenance materials, including extra materials, spare parts, tools, and software.
- B. Related Sections:
 - 1. Section 01 40 00: Quality Requirements
 - a. Product quality monitoring.

1.02 REFERENCE STANDARDS

- A. 16 CFR 260.13 - Guides for the Use of Environmental Marketing Claims; Federal Trade Commission; Recycled Content; Current Edition.

1.03 SUBMITTALS

- A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. Submit within 35 days after date of Notice of Contract Award.
- C. For products specified only by reference standards, list applicable reference standards.
- D. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- E. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

F. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

1.04 QUALITY ASSURANCE

A. Manufacturer's Inventory of Product Content: Publicly available inventory of all ingredients identified by name and Chemical Abstract Service Registration Number (CAS RN).

B. For ingredients considered a trade secret or intellectual property, the name and CAS RN may be omitted, provided the ingredient's role, amount, and GreenScreen Benchmark are given.

C. Recycled Content: Determine percentage of post-consumer and pre-consumer (post-industrial) content separately, using the guidelines contained in 16 CFR 260.13.

D. Previously used, reused, refurbished, and salvaged products are not considered recycled.

E. Wood fabricated from timber abandoned in transit to original mill is considered reused, not recycled.

F. Determine percentage of recycled content of any item by dividing the weight of recycled content in the item by the total weight of all material in the item.

G. Determine value of recycled content of each item separately, by multiplying the content percentage by the value of the item.

H. Acceptable Evidence:

1. For percentage of recycled content, information from manufacturer.
2. For cost, Contractor's cost data.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

A. Provide new products unless specifically required or permitted by the Contract Documents.

B. DO NOT USE products having any of the following characteristics:

1. Made using or containing CFC's or HCFC's.
2. Containing lead, cadmium, asbestos.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.03 MAINTENANCE MATERIALS

- A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 TRANSPORTATION AND HANDLING

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.02 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- G. Comply with manufacturer's warranty conditions, if any.
- H. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- I. Prevent contact with material that may cause corrosion, discoloration, or staining.
- J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION 01 60 00

**EXECUTION AND CLOSEOUT REQUIREMENTS
SECTION 01 70 00**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Inclusions:
 - 1. Examination, preparation, and general installation procedures.
 - 2. Pre-installation meetings.
 - 3. Cutting and patching.
 - 4. Surveying for laying out the work.
 - 5. Cleaning and protection.
 - 6. Demonstration and instruction of Owner personnel.
 - 7. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.
 - 8. General requirements for maintenance service.
- B. Related Requirements
 - 1. Section 01 11 00: Summary of Work:
 - a. Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
 - 2. Section 01 30 00: Administration Requirements
 - a. Submittals procedures, Electronic document submittal service.
 - 3. Section 01 40 00: Quality Requirements
 - 4. Section 01 45 23: Tests and Inspections
 - a. Testing and inspection procedures.
 - 5. Section 01 51 00: Temporary Facilities and Controls
 - a. Temporary exterior enclosures and interior partitions.
 - 6. Individual Product Specification Sections:
 - a. Advance notification to other sections of openings required in work of those sections.
 - b. Limitations on cutting structural members.

1.02 REFERENCE STANDARDS

- A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2013.

1.03 SUBMITTALS

- A. See Section 01 30 00 "Administration Requirements" for submittal procedures.

- B. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.
 - 1. On request, submit documentation verifying accuracy of survey work.
 - 2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in conformance with Contract Documents.
 - 3. Submit surveys and survey logs for the project record.
- C. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - a. Structural integrity of any element of Project.
 - b. Integrity of weather exposed or moisture resistant element.
 - c. Efficiency, maintenance, or safety of any operational element.
 - d. Visual qualities of sight exposed elements.
 - e. Work of Owner or separate Contractor.
- D. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.04 QUALIFICATIONS

- A. For survey work, employ a land surveyor registered in the State in which the Project is located and acceptable to Architect. Submit evidence of Surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate.
- B. For field engineering, employ a professional engineer of the discipline required for specific service on Project, licensed in the State in which the Project is located.

1.05 PROJECT CONDITIONS

- A. Use of explosives is not permitted.
- B. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- C. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.
- D. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- E. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
 - 1. Provide dust-proof enclosures to prevent entry of dust generated outdoors.
 - 2. Provide dust-proof barriers between construction areas and areas continuing to be occupied by Owner.

- F. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
 - 1. Minimize amount of bare soil exposed at one time.
 - 2. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.
 - 3. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.
- G. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
- H. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.06 COORDINATION

- A. See Section 01 11 00 "Summary of Work" for occupancy-related requirements.
- B. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- C. Notify affected utility companies and comply with their requirements.
- D. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- E. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- F. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- G. Coordinate completion and clean-up of work of separate sections.
- H. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 60 00 "Product Requirements".

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or mis-fabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 PRE-INSTALLATION MEETINGS

- A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
 - 1. Review conditions of examination, preparation and installation procedures.
 - 2. Review coordination with related work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 LAYING OUT THE WORK

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify Architect of any discrepancies discovered.
- C. Owner will locate and protect survey control and reference points.
- D. Control datum for survey is that indicated on drawings.
- E. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- F. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- G. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.
- H. Utilize recognized engineering survey practices.
- I. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes and invert elevations.
 - 2. Grid or axis for structures.
 - 3. Building foundation, column locations and ground floor elevations.

- J. Periodically verify layouts by same means.
- K. Maintain a complete and accurate log of control and survey work as it progresses.
- L. On completion of foundation walls and major site improvements, prepare a certified survey illustrating dimensions, locations, angles, and elevations of construction and site work.

3.05 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.06 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work.
 - 2. Fit products together to integrate with other work.
 - 3. Provide openings for penetration of mechanical, electrical, and other services.
 - 4. Match work that has been cut to adjacent work.
 - 5. Repair areas adjacent to cuts to required condition.
 - 6. Repair new work damaged by subsequent work.
 - 7. Remove samples of installed work for testing when requested.
 - 8. Remove and replace defective and non-conforming work.
- C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- D. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

- E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- F. Restore work with new products in accordance with requirements of Contract Documents.
- G. Fit work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. Patching:
 - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 - 2. Match color, texture, and appearance.
 - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.07 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.08 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Protect finished slabs, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

3.09 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
 - 1. Clean areas to be occupied by Owner prior to final completion before Owner occupancy.
- B. Use cleaning materials that are nonhazardous.
- C. Clean site; sweep paved areas, rake clean landscaped surfaces.
- D. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.10 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
 - 1. Provide copies to Architect and Owner.
- B. Accompany Architect and Project Inspector on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's comprehensive list of items to be completed or corrected.
- C. Notify Architect when work is considered ready for Architect's Final Construction Compliance Inspection.
- D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Notice of Completion inspection.
- E. Owner will occupy portions of the building as specified in Section 01 11 00 "Summary of Work".
- F. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.
- G. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.
- H. Notify Architect when work is considered finally complete and ready for Architect's Construction Compliance final inspection.

3.11 MAINTENANCE

- A. Provide service and maintenance of components indicated in specification sections.
- B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the Date of Notice of Completion or the length of the specified warranty, whichever is longer.

- C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the Owner.

END OF SECTION 01 70 00

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL SECTION 01 74 00

PART 1 GENERAL

1.01 CONSTRUCTION WASTE MANAGEMENT

A. Waste Management Requirements:

1. California Green Building Standards Code (Title 24, Part 11), Section 5.408.1 requires this project recycle and/or salvage for reuse a minimum of 65% of the non-hazardous construction and demolition waste and demolition waste.
2. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination or other factors.
3. Required Recycling, Salvage and Reuse: The following may not be disposed of in landfills or by incineration:
 - a. Aluminum and plastic beverage containers.
 - b. Corrugated cardboard.
 - c. Wood pallets.
 - d. Clean dimensional wood: May be used as blocking or furring.
 - e. Land clearing debris, including brush, branches, logs and stumps.
 - f. Concrete: May be crushed and used as riprap, aggregate, sub-base material or fill if acceptable to the Soils Engineer.
 - g. Bricks: May be used on project if whole, or crushed and used as landscape cover, sub-base material or fill.
 - h. Concrete masonry units: May be used for erosion control or landscape features.
 - i. Precast concrete panels: May be used for erosion control or landscape features.
 - j. Asphalt paving: May be recycled into paving for project.
 - k. Metals, including packaging banding, metal studs, sheet metal, structural steel, piping, reinforcing bars, door frames, and other items made of steel, iron, galvanized steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.
 - l. Plastic buckets.
 - m. Paint.
 - n. Plastic sheeting.
4. Certification for this project is dependent on diversion of 65 %, by weight, of potential landfill trash/waste by recycling and/or salvage.
5. The following recycling incentive programs are mandatory for this project: Contractor is responsible for implementation:
 - a. _____: Revenue or savings accrue to Contractor.
 - b. _____: Rebates and credits must be applied for by Owner and shall accrue to Owner.

6. Owner has made arrangements for salvage of the following materials by others:
 - a. _____: Recipient will provide containers and pick up.
 - b. _____: Contractor shall deliver to recipient's location at _____ weekly.
7. Contractor shall develop and follow a Waste Management Plan designed to implement these requirements.
8. The following sources may be useful in developing the Waste Management Plan:
 - a. State Recycling Department, at _____.
 - b. Recycling Haulers and Markets: The attached list contains local haulers and markets for recyclable materials. This list is provided for information only and is not necessarily comprehensive; other haulers and markets are acceptable.
 - c. Recycling Economics Information: The attached list contains information that may be useful in estimating the costs or savings or recycling options.
9. Methods of trash/waste disposal that are not acceptable are:
 - a. Burning on the project site.
 - b. Burying on the project site.
 - c. Dumping or burying on other property, public or private.
 - d. Other illegal dumping or burying.
 - e. Incineration, either on- or off-site.
10. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1.02 RELATED REQUIREMENTS

- A. Section 01 11 00 "Summary": List of items to be salvaged from the existing building for relocation in project or for Owner.
- B. Section 01 30 00 "Administrative Requirements": Additional requirements for project meetings, reports, submittal procedures, and project documentation.
- C. Section 01 50 00 "Temporary Facilities and Controls": Additional requirements related to trash/waste collection and removal facilities and services.
- D. Section 01 60 00 "Product Requirements": Waste prevention requirements related to delivery, storage, and handling.
- E. Section 01 70 00 "Execution and Closeout Requirements": Trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

1.03 DEFINITIONS

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris and rubble resulting from construction, remodeling, repair and demolition operations.
- C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.
- D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.
- E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.
- H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- I. Return: To give back reusable items or unused products to vendors for credit.
- J. Reuse: To reuse a construction waste material in some manner on the project site.
- K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- N. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.

- P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

1.04 SUBMITTALS

- A. See Section 01 30 00 "Administrative Requirements", for submittal procedures.
- B. Waste Management Plan: Include the following information:
1. Analysis of the trash and waste projected to be generated during the entire project construction cycle, including types and quantities.
 2. Landfill Options: The name, address, and telephone number of the landfill(s) where trash/waste will be disposed of, the applicable landfill tipping fee(s).
 3. Landfill Alternatives: List all waste materials that will be diverted from landfills by reuse, salvage, or recycling.
 4. Meetings: Describe regular meetings to be held to address waste prevention, reduction, recycling, salvage, reuse, and disposal.
 5. Materials Handling Procedures: Describe the means by which materials to be diverted from landfills will be protected from contamination and prepared for acceptance by designated facilities; include separation procedures for recyclables, storage, and packaging.
 6. Transportation: Identify the destination and means of transportation of materials to be recycled; i.e. whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler.
 7. Recycling Incentives: Describe procedures required to obtain credits, rebates, or similar incentives.
 8. Recycling Incentive Programs:
 - a. Where revenue accrues to Contractor, submit copies of documentation required to qualify for incentive.
 - b. Where revenue accrues to Owner, submit any additional documentation required by Owner in addition to information provided in periodic Waste Disposal Report.

END OF SECTION 01 74 00