

## SECTION 01 33 00 - SUBMITTAL PROCEDURES

## PART I - GENERAL

## I.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division I Specification Sections, apply to this Section.

## I.2 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
  - 1. Division I Section "Payment Procedures" for submitting Applications for Payment and the schedule of values.
  - 2. Division I Section "Substitutions".
  - 3. Division I Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
  - 4. Division I Section "Operation and Maintenance Data" for submitting operation and maintenance manuals.
  - 5. Division I Section "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
  - 6. Division I Section "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.

## I.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- ~~C.~~ Basis-of-Design: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

~~D.C.~~

- ~~E.D.~~ File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP

site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.

F.E. **Portable Document Format (PDF):** An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

#### I.4 ACTION SUBMITTALS

- A. **Submittal Schedule:** Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
  2. **Initial Submittal:** Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
  3. **Final Submittal:** Submit concurrently with the first complete submittal of Contractor's construction schedule.
    - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
  4. **Format:** Arrange the following information in a tabular format:
    - a. Scheduled date for first submittal.
    - b. Specification Section number and title.
    - c. Submittal category: Action; informational.
    - d. Name of subcontractor.
    - e. Description of the Work covered.
    - f. Scheduled date for Architect's final release or approval.
    - g. Scheduled date of fabrication.
    - h. Scheduled dates for purchasing.
    - i. Scheduled dates for installation.
    - j. Activity or event number.

#### I.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. **Architect's Digital Data Files:** Electronic digital data files of the Contract Drawings may be provided by Architect for Contractor's use in preparing submittals.
1. Architect will furnish each Contractor requesting one set of digital data drawing files of the Contract Drawings for use in preparing Shop Drawings and Project record drawings.
    - a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.

- b. Contractor shall execute a data licensing agreement in the form of Agreement provided by the Architect.
    - c. Digital data will not be processed into a different format/version/etc than that in which it was originally documented.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
  1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule. Incomplete submittals will be returned not reviewed.
  3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
  4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
    - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
  1. Initial Review: Allow 12 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
  2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
  3. Resubmittal Review: Allow 10 days for review of each resubmittal.
  4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 days for initial review of each submittal.
  5. Concurrent Consultant Review: With Architect's approval submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 12 days for review of each submittal. Submittal will be returned to Architect before being returned to Contractor.
- D. Paper Submittals: Place a permanent label or title block on each submittal item for identification.
  1. Indicate name of firm or entity that prepared each submittal on label or title block.
  2. Provide a space approximately **6 by 8 inches** on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
  3. Include the following information for processing and recording action taken:
    - a. Project name.
    - b. Date.
    - c. Name of Architect.
    - d. Name of Contractor.
    - e. Name of subcontractor.
    - f. Name of supplier.

- g. Name of manufacturer.
  - h. Submittal number or other unique identifier, including revision identifier.
    - 1) As directed by Architect.
  - i. Number and title of appropriate Specification Section.
  - j. Drawing number and detail references, as appropriate.
  - k. Location(s) where product is to be installed, as appropriate.
  - l. Other necessary identification.
4. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
- a. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Architect.
5. Transmittal for Paper Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return without review submittals received from sources other than Contractor.
- a. Transmittal Form for Paper Submittals: Use AIA Document G810.
  - b. Transmittal Form for Paper Submittals: Provide locations on form for the following information:
    - 1) Project name.
    - 2) Date.
    - 3) Destination (To:).
    - 4) Source (From:).
    - 5) Name and address of Architect.
    - 6) Name of Construction Manager.
    - 7) Name of Contractor.
    - 8) Name of firm or entity that prepared submittal.
    - 9) Names of subcontractor, manufacturer, and supplier.
    - 10) Category and type of submittal.
    - 11) Submittal purpose and description.
    - 12) Specification Section number and title.
    - 13) Specification paragraph number or drawing designation and generic name for each of multiple items.
    - 14) Drawing number and detail references, as appropriate.
    - 15) Indication of full or partial submittal.
    - 16) Transmittal number, numbered consecutively.
    - 17) Submittal and transmittal distribution record.
    - 18) Remarks.
    - 19) Signature of transmitter.
6. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
7. Name file with submittal number or other unique identifier, including revision identifier.
- a. File name shall use project identifier and Specification Section number followed by a dash and then a sequential number (e.g., G-00-0000-01-A). Resubmittals shall include an

alphabetic suffix after another decimal point (e.g. G-00-0000-01-B ). The beginning letter will designate the Prime Contract (G=General, M=Mechanical, E=Electrical, P=Plumbing, F=Fire Protection)

8. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
- E. Options: Identify options requiring selection by Architect.
- F. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
  2. Note date and content of revision in label or title block and clearly indicate extent of revision.
  3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
- H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- I. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.
- J. Rejected Submittals: The Architect shall not be required to make exhaustive reviews of incorrect or incomplete shop drawings and submittals. If shop drawings or submittals are returned "Rejected" or "Revise and Resubmit" 3 times then the time to review each subsequent submission will be charged to the Contractor at the Architect's hourly rates. These charges will be executed as deduct change order(s) to the Contractor's contract with the Owner, with payment remitted by the Owner to the Architect.

## PART 2 - PRODUCTS

### 2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
1. Action Submittals: Submit PDF of each submittal unless otherwise indicated. If the submittal is larger than 11"x17" then also provide 1 full size paper copy. Architect will return a PDF with action indicated.
  2. Informational Submittals: Submit PDF of each submittal unless otherwise indicated. Architect will not return a PDF unless requested.
  3. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

- a. Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated.
  - b. Provide a notarized statement on original paper copy certificates and certifications where indicated.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
  1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
  2. Mark each copy of each submittal to show which products and options are applicable.
  3. Include the following information, as applicable:
    - a. Manufacturer's catalog cuts.
    - b. Manufacturer's product specifications.
    - c. Standard color charts.
    - d. Statement of compliance with specified referenced standards.
    - e. Testing by recognized testing agency.
    - f. Application of testing agency labels and seals.
    - g. Notation of coordination requirements.
    - h. Availability and delivery time information.
  4. For equipment, include the following in addition to the above, as applicable:
    - a. Wiring diagrams showing factory-installed wiring.
    - b. Printed performance curves.
    - c. Operational range diagrams.
    - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
  5. Submit Product Data before or concurrent with Samples.
  6. Submit Product Data in the following format:
    - a. PDF electronic file.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based on Architect's digital data drawing files is otherwise permitted.
  1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    - a. Identification of products.
    - b. Schedules.
    - c. Compliance with specified standards.
    - d. Notation of coordination requirements.
    - e. Notation of dimensions established by field measurement.
    - f. Relationship and attachment to adjoining construction clearly indicated.
    - g. Seal and signature of professional engineer if specified.
  2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least **8-1/2 by 11 inches**, but no larger than **30 by 42 inches**.
  3. Submit Shop Drawings in the following format:

- a. PDF file. If submittal is larger than 11"x17" then also provide 2 full size paper set (one to architect).
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
  1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
  2. Identification: Attach label on unexposed side of Samples that includes the following:
    - a. Generic description of Sample.
    - b. Product name and name of manufacturer.
    - c. Sample source.
    - d. Number and title of applicable Specification Section.
    - e. Specification paragraph number and generic name of each item.
  3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
  4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
    - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
    - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
  5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
    - a. Number of Samples: Submit 2 full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
  6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
    - a. Number of Samples: Submit 2 sets of Samples. Architect will retain one Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a project record sample.
      - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.

- 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
  2. Manufacturer and product name, and model number if applicable.
  3. Number and name of room or space.
  4. Location within room or space.
  5. Submit product schedule in the following format:
    - a. Three paper copies of product schedule or list unless otherwise indicated. Architect will return two copies.
- F. Coordination Drawing Submittals: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
- G. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- H. Application for Payment and Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."
- I. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Division 01 Section "Quality Requirements."
- J. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures."
- K. Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."
- L. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- M. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- N. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- O. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.



- P. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- Q. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- R. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- S. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
  - 1. Name of evaluation organization.
  - 2. Date of evaluation.
  - 3. Time period when report is in effect.
  - 4. Product and manufacturers' names.
  - 5. Description of product.
  - 6. Test procedures and results.
  - 7. Limitations of use.
- T. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- U. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- V. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- W. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

## 2.2 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
  - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit three paper copies of certificate, signed and sealed by the responsible design

professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

- I. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

## PART 3 - EXECUTION

### 3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Division I Section "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

### 3.2 ARCHITECT'S ACTION

- A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Submittals not required by the Contract Documents may be returned by the Architect without action.

END OF SECTION 01 33 00

## SECTION 01 34 00 - COORDINATION DRAWINGS

## PART I – GENERAL

## I.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division I Specification Sections, apply to this Section.

## I.2 SUMMARY

- A. Coordination of the Work, and production of Coordination Drawings, are contractual obligations of the Construction Manager, and as delegated to the subcontractors. The Owner will not compensate any for conflicts arising during installation, should they be the result of improper coordination between Prime Contractors. Nor will the Owner extend the Contract duration, due to delays caused by improper coordination. Each Contractor shall be solely responsible to recover any and all construction time lost as a result of such delays.
- B. Coordination drawings are in addition to a separate shop drawings to be submitted at the conclusion of the coordination process by each Prime Contractor (as required by other specification sections).

## I.3 SUBMITTALS

- A. Time of submission of Coordination Drawings shall be determined at the initial job conference, and shall be included as a milestone on the Construction Schedule. The General Construction Contractor (Project Coordinator) shall initiate this action and acquire the necessary dates from the other Prime Contractors as part of their overall scheduling responsibilities.
- B. All Prime Contractor{s} shall jointly develop and submit dimensioned Coordination Drawings indicating the arrangement of General Construction, Mechanical (HVAC), Plumbing, Electrical and Fire Protection work, including but not limited to: all ducts, air-handling equipment, control equipment, piping, conduits, raceways, junction boxes, fixtures, panels, and all associated equipment, which must be coordinated with the General Construction and other equipment or distribution lines. The Coordination Drawings must be signed and dated by all Prime Contractors, indicating concurrence, and transmitted to the Project Coordinator (in accordance with the construction schedule), for submission.
- C. The Owner's receipt of Coordination Drawings does not in any way constitute approval, or relieve the Prime Contractors of the responsibility to accurately coordinate and install their work.
- D. The Project Coordinator shall submit completed, signed, and dated Coordination Drawings as follows:
  - I. The Architect and CM – one (1) copy of each Coordination Drawing and one (1) PDF file containing each drawing.
- E. Note: If determined necessary, Coordination Drawings may be formulated and submitted in partial submittals to facilitate the construction schedule and sequence of work within the Project. This must be

jointly discussed and agreed to by all Prime Contractors at the initial job conference, and a priority of sequence must be established that has the concurrence of all parties (including the Owner).

- F. The Project Coordinator shall keep all coordination drawings on-site at all times and updated regularly through the entire construction duration. These drawings will become part of the as-built drawing package.

#### I.4 COORDINATION OF WORK

- A. Construction Manager shall coordinate its construction operations with those of all Contractors and entities to ensure efficient and orderly installation for each part of the Work. The Construction Manager shall:
  - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
  - 2. Coordinate installation of all components to ensure adequate accessibility/clearance for required maintenance and service.
  - 3. Make provisions to accommodate items scheduled for later installation.
- B. Each Prime Contractor shall clearly show, and coordinate with the other Prime Contractors, the following:
  - 1. Arrange for pipe spaces, chases, slots, sleeves, and openings with general construction work, and arrange in building structure during progress of the Work, to allow for and facilitate distribution line and equipment installation.
  - 2. Coordinate installation of required supporting devices for ductwork, piping, and conduit, as well as sleeves, and other structural components, as they are constructed.
  - 3. Coordinate requirements for access panels and doors for HVAC, Plumbing, Fire Protection and Electrical items requiring access where concealed behind finished surfaces.
  - 4. Coordinate electrical connections to equipment provided by all Contractors.
  - 5. Sequence, coordinate, and integrate installing materials and equipment for efficient flow of the Work. Coordinate installing large items of equipment requiring positioning before closing in the building.

#### I.5 COORDINATION DRAWINGS

- A. Format: All Coordination Drawings shall include “X, Y & Z” coordinates for all distribution and equipment, which will allow a three-dimensional coordination plan to be created.
  - 1. Indicate ducts, pipes and conduits of dimensions greater than 6” by double lines.
  - 2. Circle and clearly note all deviations from the Contract Documents, with reason for deviation stated.
  - 3. Use scale not less than ¼” = 1’-0”. Detail complex areas at larger scale.

4. Each different system shall be drawn in a different color.
5. The Mechanical Contractor shall prepare a title box on each drawing which allows space for the signature of the authorized individual from the Prime Contractor's firms, with the statement below:

“The undersigned individuals certify by their signatures that they have coordinated their work with all other work noted on this drawing and the contract documents and shall be held responsible for any costs arising out of their respective inability to fully coordinate their work.”

B. Coordination Procedure:

1. The Project Coordinator is responsible for acquiring from all the other Prime Contractors and assembling scaled coordination drawings indicating all new and existing architectural finishes, as well as the locations of all ductwork, piping, conduit, system devices, associated equipment, etc. for this Project.
2. The Project Coordinator shall prepare the basic background drawings, showing the existing conditions as well as the new construction items to be installed by this Contractor. The Project Coordinator may either:
  - a. Produce the required base drawings itself,
  - b. Obtain them from the Architect, at a cost not to exceed 1.2 times the cost of reproduction, or
  - c. Via e-mail, obtain electronic files from the Architect of the floor plans and reflected ceiling plans for a fee of \$250.00, payable to the Architect. A Letter of Indemnification will need to be signed by any contractor using the electronic files.
3. After producing its own background drawings or obtaining background drawings from the Architect, the Project Coordinator shall put the following information on the Coordination Drawings: Architectural backgrounds, structural work, ceiling systems, and any special work, such as theatre/stage/rigging work. The Lead Contractor shall call attention on the Coordination Drawings to particular areas of conflict, which may affect the architecture or the structure.
4. After adding its specific requirements to these reproducible background drawings, the Project Coordinator shall place his signature on each sheet and give the Coordination Drawings to the HVAC Contractor.
5. The HVAC Contractor shall put the following information on the Coordination Drawings: HVAC Contract Work, including Control Systems.
6. After adding its specific requirements to these reproducible background drawings, the HVAC Contractor shall place his signature on each sheet and give the Coordination Drawings to the Plumbing Contractor.
7. The Plumbing Contractor shall put the following information on the Coordination Drawings: Plumbing Contract Work, including Sprinkler/ Fire Protection Systems.
8. After adding its specific requirements to these reproducible background drawings, the Plumbing Contractor shall place his signature on each sheet and give the Coordination Drawings to the Fire Protection Contractor.
9. The Fire Protection Contractor shall put the following information on the Coordination Drawings: Fire Protection Contract Work, including Sprinkler/ Fire Protection Systems.

10. After adding its specific requirements to these reproducible background drawings, the Fire Protection Contractor shall place his signature on each sheet and give the Coordination Drawings to the Electrical Contractor.
11. The Electrical Contractor shall put the following information on the Coordination Drawings: Electrical Contract Work, including fire alarm, telecommunications and security systems, major conduit runs, lighting and panel locations, and conduit embeds in floor slabs and underground.
12. The Electrical Contractor shall place his signature on each sheet and give the Coordination Drawings to the next Prime Contractor (if there are other Prime Contractors not mentioned here), or otherwise return the Coordination Drawings to the Project Coordinator, for Submission to the Owner and Architect.
13. Discrepancies between the Prime Contractors shall be settled by the Project Coordinator, if no design modifications are required. Where design modifications are required, affected Contractor(s) shall submit them to the Architect for review and resolution, or initiate a Request For Information (RFI).
14. The Prime Contractors, together, are solely responsible for the accuracy and completeness of all Coordination Drawings.
15. The Mechanical/Electrical Coordinator shall lead in the resolution of the final coordination drawing to be initialed (certifying that they have met, reviewed and agreed) by all contractors and submitted to the Architect within 65 days after the start of construction for review. Other contractors shall finalize their shop drawings and submittals in accordance with the coordination drawings.

C. Distribution:

- I. Upon receipt of all fully-coordinated and signed Coordination Drawings from the other Prime Contractors, the Project Coordinator shall make proper distribution, as defined above

D. Review:

- I. Architect will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make changes as directed and resubmit.

## I.06 SPECIFIC REQUIREMENTS

A. General Construction/Structural Work Information Required:

1. Openings and sleeve locations required in slabs, walls, beams, and other structural elements, including required openings not indicated on the Contract Documents.
2. Slab edge locations.
3. Embed locations, as described above. Note embedded steel angles at edges of sump and sewage ejector pits, to accept basin covers.
4. Wall and chase spaces for housing HVAC, Plumbing, Fire Protection, or Electrical items.

5. All site work and utilities
6. Other specific/critical conditions unique to this Project, not noted above but necessary to assure proper coordination.

B. HVAC Work Information Required:

1. Sizes and bottom elevations of rectangular ductwork, including angle bracing, flanges, and support systems.
2. Sizes and centerline elevations of round ductwork, piping and conduit runs
3. Acoustical lining in ductwork.
4. Identification of ductwork pressure class.
5. Dimensions of major components, such as dampers, valves, diffusers, registers, cleanouts, coils, VAV boxes, HVAC equipment, and electrical distribution equipment.
6. Fire-rated enclosures around ductwork.
7. Access panels required.
8. Geothermal well field
9. Other specific/critical conditions unique to this Project, not noted above but necessary to assure proper coordination.

C. Plumbing and Fire Protection Information Required:

1. Sizes and centerline elevations of piping runs.
2. Locations of plumbing valves, equipment, and fixtures.
3. Locations of standpipes, floor control assemblies, fire hose valves, mains, piping, branch lines, pipe drops, sprinkler heads, fire pumps/controllers, and jockey pumps.
4. Other specific/critical conditions unique to this Project, not noted above but necessary to assure proper coordination.

D. Electrical Work Information Required:

1. Runs of vertical and horizontal conduit, 1 ¼" diameter and larger.
2. Light fixture locations.
3. Exit light locations.
4. Smoke detector and other fire alarm locations.
5. Panelboards, switchboards, switchgear, transformers, busways, generators and motor control center, exit signs, and emergency battery pack locations.

6. Locations of pull boxes and junction boxes, dimensioned from column centerlines.
7. Access panels required.
8. Site electric
9. Other specific/critical conditions unique to this Project, not noted above but necessary to assure proper coordination.

E. Ceiling Systems and Plenum Space Information Required:

1. For HVAC, plumbing, fire protection, fire alarm, electrical, controls, and telecommunications Work penetrating acoustical ceilings, show locations of each item (including sprinkler heads, diffusers, grilles, access doors, light fixtures, smoke detectors, exit signs, speakers, and other visible ceiling-mounted devices) relative to the acoustical ceiling grid.
2. Locate components within ceiling plenums to accommodate layout of light fixtures indicated on Drawings. Clearly indicate areas of conflict between light fixtures and other components on Coordination Drawings.
3. Other specific/critical conditions unique to this Project, not noted above but necessary to assure proper coordination.

I.07 ORGANIZATION OF DRAWINGS

- A. Organize Coordination Drawings into a set, as follows: Floor Plans, Wall and Building Sections, Mechanical/Plumbing/Electrical Rooms, Structural Penetrations, Imbeds, Curbs, Pads, and Floor Depressions.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01 34 00