SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
   1. Project meetings.
   2. BIM 3D Coordination requirements.

B. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.

C. Related Sections include the following:
   1. Division 1 Section "Submittal Procedures" for electronic submittals.
   2. Division 1 Section "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
   3. Division 1 Section "Execution Requirements" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
   4. Division 1 Section "Closeout Procedures" for coordinating closeout of the Contract.

1.3 COORDINATION

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
   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 different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
   3. Make adequate provisions to accommodate items scheduled for later installation.
   4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.
9. Project closeout activities.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

1.4 SUBMITTALS

A. Submit electronic submittals directly to extranet specifically established for Project.

1.5 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
4. Frequency of Attendance by Architect: Limited by Architect/Owner Contract.

B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following:

a. Tentative construction schedule.
b. Phasing, if any.
c. Critical work sequencing and long-lead items.
d. Designation of key personnel and their duties.
e. Procedures for processing field decisions and Change Orders.
f. Procedures for RFIs.
g. Procedures for testing and inspecting.
h. Procedures for processing Applications for Payment.
i. Distribution of the Contract Documents.
j. Submittal procedures.
k. Preparation of Record Documents.
l. Use of the premises and existing building.
m. Work restrictions.
n. Owner's occupancy requirements.
o. Responsibility for temporary facilities and controls.
p. Construction waste management and recycling.
q. Parking availability.
r. Office, work, and storage areas.
s. Equipment deliveries and priorities.
t. First aid.
u. Security.
v. Progress cleaning.
w. Working hours.

3. Minutes: Record and distribute meeting minutes electronically.

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
a. The Contract Documents.
b. Options.
c. Related RFIs.
d. Related Change Orders.
e. Purchases.
f. Deliveries.
g. Submittals.
h. Review of mockups.
i. Possible conflicts.
j. Compatibility problems.
k. Time schedules.
l. Weather limitations.
m. Manufacturer's written recommendations.
n. Warranty requirements.
o. Compatibility of materials.
p. Acceptability of substrates.
q. Temporary facilities and controls.
r. Space and access limitations.

s. Regulations of authorities having jurisdiction.
t. Testing and inspecting requirements.
u. Installation procedures.
v. Coordination with other work.
w. Required performance results.
x. Protection of adjacent work.
y. Protection of construction and personnel.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Progress Meetings: Conduct progress meetings at regular intervals. Coordinate dates of meetings with preparation of payment requests.
1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
1) Review schedule for next period.
b. Review present and future needs of each entity present, including the following:
1) Interface requirements.
2) Sequence of operations.
3) Status of submittals.
4) Deliveries.
5) Off-site fabrication.
6) Access.
7) Site utilization.
8) Temporary facilities and controls.
9) Work hours.
10) Hazards and risks.
11) Progress cleaning.
12) Quality and work standards.
13) Status of correction of deficient items.
14) Field observations.
15) RFIs.
16) Status of proposal requests.
17) Pending changes.
18) Status of Change Orders.

19) Pending claims and disputes.
20) Documentation of information for payment requests.

3. Minutes: Record the meeting minutes electronically.
4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
   a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

1.6 RFIs:

A. General:
1. Contractor may submit a RFI to the Architect seeking clarification or interpretation of the contract documents. If in the Contractor's opinion the nature of the RFI requires a discussion, rather than simply an answer, the Contractor shall call the Architect to have such a discussion. The results of that discussion as well as all other RFI's must be presented in writing on a form approved in advanced by the Architect along with any supporting information or data, as well as the Contractor's recommended resolution. An oral RFI or a RFI presented on an unapproved form, or without adequate supporting information and Contractor's recommended solution, will be attributed solely to the contractor. Architect's review of or responses to RFI's shall not constitute an approval, direction, or procedure related to the construction means, methods, techniques, sequences, or procedures of the Contractor.
2. Architect's review of or responses to RFI's shall not constitute an approval, direction, or procedure related to the construction site safety precautions, procedures, or methodology of the Contractor.
3. The use of a RFI is limited to clarification of the contract documents. Contractor will limit each RFI to a single issue. Information which is discernable from the contract documents; construction means and methods; product substitution submittals; product submittals; and construction site safety will not be addressed by the Architect in responding to a RFI.
4. Architect's response to a RFI is not a change order or directive authorizing an increase in construction cost or time.

B. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.
1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

C. Electronic RFIs: Follow Procore software instruction.
1. Attachments shall be electronic files in Adobe Acrobat PDF format.

D. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow 7 days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
   a. Requests for approval of submittals.
   b. Requests for approval of substitutions.

c. Requests for coordination information already indicated in the Contract Documents.
d. Requests for adjustments in the Contract Time or the Contract Sum.
e. Requests for interpretation of Architect's actions on submittals.
f. Incomplete RFIs or RFIs with numerous errors.

2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.
3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 1 Section "Contract Modification Procedures."
   a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.

E. RFI Log: Prepare, maintain, and submit as instructed by electronic submittal vendor.

1.7 BIM 3D COORDINATION REQUIREMENTS

A. Construction Team BIM Manager:

1. Individual assigned to serve as the main point of contact for the Construction Team for BIM related issues. This individual shall have sufficient BIM experience required for the size and complexity of the project and shall have relevant proficiency in the BIM authoring and coordination software. Responsibilities include the following:

a. Overall responsibility for the Construction Teams BIMs coordinating creation and information developed during construction.
b. Coordinates software training and establishes protocol software for Construction Team for efficient delivery of project.
c. Acts as the main point of contact for BIM and related issues between the Construction Team, subcontractors, Owner and the Design Team and others as required.
d. Coordinates construction sequencing and scheduling activities, and assures they are integrated with the Construction Team BIMs.
e. Facilitates use of composite trade models in construction coordination/clash detection meetings and provides detection reports by the identification and resolution of all hard and soft collisions.
f. Communicates with the Design Team, coordinates the data extraction sets required by the construction trades and ensures that these requests are met.
g. Coordinates with the Design Team to facilitate design changes in the field have been documented and are updated in the BIMs in a timely manner.
h. Prior to approval and installation, works with Lead Fabrication Modelers to integrate 3D fabrication models with the updated design model to ensure compliance with design intent.
i. Coordinates update to the Record BIM deliverable included as-constructed conditions as indicated in the "Recorded Field Data".

B. Clash Detection/Coordination:

1. It is the Construction Teams responsibility to conduct and manage an adequate and thorough Clash Detection process so that all major interferences between building components will have been detected and resolved before construction. It shall be the goal of the Construction Teams to reduce the number of changes during construction due to major building interferences to zero before construction starts.

2. **The Construction Teams BIM Managers shall assemble a composite BIM from all of the BIMs of each subcontractor discipline for the purpose of performing a visual check of the building design for spatial and system coordination. Vertical shafts should also be reviewed to ensure that adequate space has been allocated for all of the vertical mechanical systems and that all of the shafts line up floor to floor. Prior to each scheduled coordination meeting, an updated clash report will be issued by the Construction Teams BIM Manager to the project team.**
3. **On a multistory project, the BIMs may need to be split on a level by level basis for MEPF coordination. Typically, 3D clash detection /coordination continues on a single floor until building systems are fully coordinated, and then continues on up to the next floor level.**
4. **Coordination software (Navisworks or other approved software) shall be used for assembling the various design BIMs to electronically identify, collectively coordinate resolutions, and track and publish interference reports between all disciplines. The technical disciplines shall be responsible for updating their BIMs to reflect the coordinated resolution.**
5. **The Project Team shall review the model and the Clash Reports in coordination meetings on a regular as-needed basis until all spatial and system coordination issues have been resolved.**
6. **During the construction phase, the accuracy of fabrication models shall be verified and approved, prior to submittal and fabrication. Fabrication contractors shall submit their BIMs to the Construction Teams BIM Manager for integration and Clash Detection /coordination and resolution.**
7. **Internal Clash Resolution – Subcontractors who are responsible for multiple scopes of work are expected to coordinate the clashes between those scopes prior to providing those models to the Construction Teams BIM Manager for spatial and system coordination.**
8. **Change due to coordination: No change order will be acceptable for minor routing of ducts, pipes and other elements as a result of such coordination, minor changes are considered items resulting in less than 5% of total value of items affected. Contractor to strive to minimize changes due to coordination. Major changes above the limit above, that may result in change orders or field conflicts shall be provided to design team for review and approval prior to finalizing coordination, and should be fully resolved before construction or fabrication starts.**
9. **Updated BIM mode: The Construction Team will provide the Design Team with an updated BIM model incorporating all coordination changes to be used for subsequent RFI, ASI, and change directive.**

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 FORMS

A. Use form provided by Procore software.

END OF SECTION 013100