

SECTION 013100

SEQUENCE OF CONSTRUCTION AND MILESTONES

PART 1 - GENERAL

1.1 STIPULATIONS

- A. The specifications sections "General Conditions of the Construction Contract", "Special Conditions", and "Division 1 - General Requirements" form a part of this Section by this reference thereto, and shall have the same force and effect as if printed herewith in full.

1.2 GENERAL REQUIREMENTS

- A. Before beginning work, the Contractor will be required to prepare a Project Schedule in consultation with the Department. The work must be carried out in full accordance with the schedule. The Contractor shall arrange to perform the work without any unnecessary interference with the Institution's operation.
- B. The Project Schedule shall be developed in conformance with Article 8 of the General Conditions of the Contract, except as modified and/or augmented by this Section.
- C. The detailed Project Schedule shall be developed in accordance with the Contract Documents. The submission of the Project Schedule, and all subsequent updates, shall be done in eBuilder utilizing the scheduling software native file as well as in PDF format (including all requested sorts and arrangements, utilizing color print). The attachments in e-Builder shall include all unlocked data files in the scheduling software system used to develop the schedule. The start date on the schedule shall be the Initial Job Conference and end with the Contract Completion Date. The final detailed Project Schedule must be submitted in eBuilder for Professional and Departmental acceptance within forty-five (45) calendar days of the Effective Date of the Contract or the date directed in the Letter of Intent to Contract.
- D. The use of float suppression techniques, such as preferential sequencing (arranging the critical path through activities more susceptible to Client Agency or Department caused delays), special lead/lag logic restraints, zero total or free float constraints, extended activity times or imposing constraint dates other than as required by the contract, shall be cause for the rejection of the submitted project schedule or its updates. The use of Resource Leveling (or similar software features) used for the purpose of artificially adjusting activity durations to consume float and influence the critical path is expressly forbidden.
- E. The Contractor shall also track submissions, ordering dates and delivery of materials in the Project Schedule.
- F. A large sized copy of the accepted Project Schedule shall be maintained and posted in the DGS Construction Coordinators field office for access and monitoring of the progress of the work activities. At the direction of the Department, large-sized copies of monthly schedule updates shall also be provided, posted and maintained in the DGS Construction Coordinators field office.

1.3 CRITICAL MATERIALS AND EQUIPMENT

- A. The Contractor is cautioned that all necessary and required critical materials and equipment shall be ordered as quickly as possible, in order that the shipping will not delay the progress of the work or completion of the project. The accepted Project Schedule shall also incorporate the milestones outlined in this Specification Section as well as additional milestones to ensure the timely completion of the project.
- B. Listed Critical/Long Lead items in this Section are not an all-inclusive list of required Critical/Long Lead submittals. All Contractors are required to perform their own review of the documents and make submissions as necessary so as not to delay the project. The Contractor shall recognize and acknowledge that all critical materials and equipment shall be ordered immediately after receipt of approved shop drawings to ensure that lead time and shipping will not delay the progress of the work or completion of the project. Any costs necessary to expedite manufacturing and/or delivery of materials and equipment to maintain the project schedule shall be the responsibility of the Contractor. No additional costs will be paid by the Department.

1.4 CRITICAL ITEMS TO BE NOTED AS MILESTONES

- A. Refer to the General Conditions, Article 8 'Project Schedule', regarding construction progress Milestones to be established by the Lead Contractor and completion times in calendar days after the Initial Job Conference:
 - 1. GENERAL CONSTRUCTION (DGS C-0948-0101 1.1)
 - a. Completion of demolition of existing spiral stair.
 - b. Delivery on site of all materials/equipment for the new elevator.
 - c. Completion of new elevator.
 - d. Completion of demolition of existing escalators.
 - e. Completion of new monumental stair.
 - f. Completion of all work in cafeteria.
 - 2. HVAC CONSTRUCTION (DGS C-0948-0101 1.2)
 - a. Completion of new mini-split cooling system for elevator machine room.
 - b. Completion of all work in cafeteria.
 - c. Completion of dishwasher exhaust work.
 - 3. PLUMBING AND FIRE PROTECTION CONSTRUCTION (DGS C-0948-0101 1.3)
 - a. Completion of drain and piping for elevator pit.
 - b. Completion of modifications to sprinkler system at cafeteria.
 - 4. ELECTRICAL CONSTRUCTION (DGS C-0948-0101 1.4)
 - a. Completion of all work associated with new elevator.
 - b. Completion of all work within cafeteria.
- B. Time is of the essence for this contract.

1. If the Contractor fails to meet milestones, the Department shall assess the Contractor, as Liquidated Damages, not as a penalty for such failure, the sum stipulated within the bid documents per calendar day, until all milestones are met, and all work is completed and accepted by the Department. Liquidated Damages are also applicable and assessable for noncompliance with the dates listed in the accepted Project Schedule.
- C. The milestones listed are intended only to assist the bidders in understanding the potential flow of the work and enumerate some of the critical milestones that will be incorporated into the Project Schedule. The Contractor will be responsible for determining the actual order of the required milestones and the logic of the Project Schedule as required to complete the project the time-period indicated in the bid documents.
- D. The Contractor is advised that the schedule may require multiple crews to work concurrently in all areas of the building(s). When multiple areas are worked concurrently, the Contractor is required to supervise, staff and equip the job accordingly.
- E. It shall be understood that there shall be a number of independent work activities occurring by other means of procurement and by other contractors and vendors outside this project. The other work activities shall commence prior to the Final Inspection and/or Closeout Inspection for this project. As such, the Contractor shall have an affirmative duty to accommodate this effort while working with and cooperating with all these other entities, individually or collectively, as well as with the Department and Client Agency. The Milestones denoted in this Section are established to define the anticipated sequence and identify the areas (as well as time frames) that must be completed to facilitate this effort. The Contractor shall provide the necessary additional supervision, project management and overall coordination necessary to expedite the work being performed by these other entities. The Contractor shall consider this condition and include any costs associated with this effort in their bids.

1.5 SEQUENCING OF CONSTRUCTION AND OTHER REQUIREMENTS

- A. The overall project must be fully completed and ready for a Final Inspection within 423 calendar days from the date of the Initial Job Conference. There are numerous events that occur in the facility. All work by the Contractor must be thoroughly and properly coordinated with the facilities event schedule to achieve a timely completion of the project. In addition to the milestones shown in this Section, the Contractor must develop their own milestones, which must be incorporated into the Project Schedule. This Section of the specifications includes a brief narrative of the specific milestones that will be incorporated into the Project Schedule as contractual obligations, along with special requirements and constraints. The Contractor shall be responsible for reviewing these requirements to determine the effect, as it relates to their scope of work, temporary protection, material deliveries, manpower schedule, shift work, equipment required, etc.”
- B. When the Work of this Project includes longer than industry standard lead-times for materials or equipment for which all other tasks on the Project Schedule become dependent, the Department may issue a notice of a temporary suspension of the Work. If temporarily suspended, the Contractor must notify the Department at least thirty (30) days prior to the delivery date of the materials or equipment. Upon such notice, the Department will terminate the suspension and direct resumption of the Work to occur on or about the delivery date. The Contractor, in consultation with the Department, will evaluate the length of time needed to complete the project and a non-compensatory Extension of Time Change Order may be submitted by the Prime Contractor(s), which the Department will review in accordance with the Administrative Procedures governing Extensions of Time. During the temporary suspension, the Contractor will be responsible to maintain all installed temporary facilities.

1.6 CONSTRUCTION PROGRAM

- A. The entire scope of work for the Project (as indicated on the Drawings and Specifications, including all bulletins, addenda and modifications thereto) shall be completed within the time-period outlined in this Section of the specifications and in accordance with the hereinafter-specified requirements. It shall be the responsibility of the Contractor to inform all suppliers and subcontractors (of any tier) of the construction program procedures. Due to the event schedule of the Pennsylvania Farm Show Complex, work activities shall be performed concurrently; thereby creating accelerated work and inefficient conditions. The Contractor shall recognize and acknowledge that these working conditions will exist as contractually inherent features of this Project. The Contractor shall account for these conditions in their bid. No additional compensation will be paid for failing to include all requirements as set forth in the construction program.
- B. Time is of the essence for this Contract. The Contractor and all their subcontractors (of any tier) shall employ a sufficient number of qualified employees, supervision/management, equipment and project resources, required to meet the milestones and completion date established for this Project. It may be necessary for all activities to be performed concurrently such that required completion dates (including completion of punch list and obtaining Pennsylvania Department of Labor & Industry [L&I] Certificate of Occupancy/Utilization) are met as identified in this Section. The Contractor is required to employ multiple crews with necessary manpower, equipment, materials, supervision/management, etc., to perform the aforementioned concurrent work activities. If the Contractor elects to perform work off-shift, proper supervision must be provided for all work activities. No work shall be covered or concealed during off-shift work activities in such a manner that it cannot be observed the morning of the next work shift. See Paragraph 1.6F of this Section regarding L&I inspections.
- C. Preinstallation meetings are required for many items and systems. The preinstallation meeting shall be held the same dates as the regularly schedule bi-weekly job conferences. The Prime Contractor shall coordinate with the Department any preinstallation meeting scheduling requirements to avoid delays in the installation of any items or systems requiring a preinstallation meeting. The Contractor shall request the meeting a minimum of four weeks prior to the scheduled installation of the item or system. Failure to request a preinstallation meeting in the required time-period will not relieve the Contractor of their responsibility to comply with all contract documents including, but not limited to, the Project Schedule. No additional compensation or extension of time will be granted by the Department to the Contractor for their failure to schedule or attend any of the required preinstallation meetings.
- D. The Contractor shall coordinate with the Department any scheduling requirements to avoid disruption of programs, events or activities, as well as to coordinate the location of the various structures to be such as, but not limited to, temporary construction fences, temporary roof access, etc. All work performed under this Project shall be done in a manner that will not disrupt normal activities in and around the facility.
- E. The Contractor may work outside of normal work hours as necessary, in shifts and on weekends, to maintain the Project Schedule. The Contractor is to comply with noise level restrictions in accordance with all local ordinances and the Client Agency.
- F. The Contractor shall coordinate and schedule inspections as required by the provisions of the Building Permit issued by L&I. The L&I inspectors will be available during the day shift. L&I inspector availability does not constitute a delay to the progress of the project and shall be considered by the Prime Contractor when scheduling and completing the work of this project.
- G. It is understood that during the duration of the Project, changes may be made to the Project Schedule without the Department incurring additional costs or granting extensions of time to the Contract.

- H. Change Orders shall occur on this project to address unforeseen conditions, errors and/or omissions in the documents and other potential conflicts. It shall be mandatory that the Contractor (along with all their subcontractors of any tier) provides necessary additional work forces to accommodate these changes in a manner to eliminate any delays to milestones or the overall project schedule. The Department will issue no Extension of Time for performance of Change Order work; all time must be recovered in the affected work activities.
- I. The Department reserves the right to delay or suspend any work, without compensation due the Contractor, if the Department determines that any work would disrupt activities in or around the facility.
- J. In the event that:
 - 1. The Contractor fails to achieve any interim milestones established for the building program in accordance with the Contract Documents and the Project Schedule.
 - 2. Any schedule update showing the work behind schedule and in jeopardy of meeting the accepted milestone dates.

The Department will notify the Contractor that they are in default of the contract. The defaulting Contractor will be given three (3) calendar days to correct the deficiency. In the event the defaulting Prime Contractor fails to correct the deficiency within three (3) calendar days or fails to staff the job properly or work the required shifts/overtime/weekends necessary to maintain the schedule and achieve the milestones; in addition to liquidated damages the Department may take necessary actions to ensure that the Project Schedule is maintained. All costs and fees associated with such supplementation shall be deducted from the defaulting Contractor's contract value.

- K. Unless directed otherwise by the Department, immediately upon the issuance of the Letter of Intent to Contract, the Contractor shall begin the submittal process and shall have all critical submittal items for the project submitted to the Professional within fourteen (14) calendar days after the issuance date of the Letter of Intent to Contract (in accordance with Paragraph 1.3 of this Section). The Contractor shall submit their Priority Submittal Schedule to the Professional with seven (7) calendar days of the issuance date of the Letter of Intent to Contract. The Contractor shall have all remaining submittal items submitted to maintain the construction schedule. The above shall not be considered justification for delay or claim by the Contractor.
- L. While time is of the essence, the Contractor (as well as each of their subcontractors of any tier) shall not compromise the safety of any individuals while performing any of their work. Contractors shall take all the necessary precautions to maintain safety during the progress of the work including, but not limited to, fall protection, shoring, barricades, signage, safety tape and rails, temporary ramps, temporary roads, temporary partitions, fencing, etc.

1.7 FURTHER CLARIFICATIONS

- A. By submitting a Bid, the Contractor acknowledges that this abbreviated list of milestones for construction work (as provided in this Section) was provided for informational purposes, and to ensure the Contractor understands the critical mandatory completions/durations necessary to accommodate the requirements and sequence of completion to meet the needs of the client Agency. It constitutes a proposed sequence of events based on standard construction practices and will not form the basis for any claims for inefficiency, acceleration or delays. The coordinated Project Schedule will be developed in accordance with the Section and the Contract Documents by the Contractor and the actual milestone dates for the project will be agreed upon by the Contractor based on the accepted schedule.

- B. If there is a conflict between what is stated in this Section and the General Conditions of the Contract, the contract specifications, the contract drawings or the Administrative Procedures, the most stringent requirement within any of these documents shall prevail.

1.8 WORK IN OCCUPIED BUILDING

- A. The scope of work for this project includes work inside the East Wing of the Pennsylvania Capitol. The building will be occupied during the construction period. The following shall apply:

1. The Contractors may start onsite actual work beginning on July 1, 2024. Prior to this date Contractors may mobilize, start shop drawings for long lead items, etc., but no actual work may take place before July 1, 2024.
2. The Contractors shall schedule and coordinate the interior work with the Client Agency's Event Schedule.
3. The following activities shall be scheduled during the Legislative Summer Recess (July 1, 2024 thru September 6, 2024).

- a. All work in Dining/Cafeteria 61E.
- b. Replacement of the dishwasher exhaust in Kitchen 1 M73E.

- 1) Cutting of the new opening in the concrete deck and installation of the exhaust elbow, flashing watertight, etc. by the .1 Contractor is not subject to being scheduled during the Summer Recess, but cutting and demolition activities are subject to "after hours" requirements included in Section 010400 "Coordination and Control."

4. The Client Agency will remove and then reinstall all loose furniture (tables and chairs) at Cafeteria/Dining 61E and the .1 Contractor shall coordinate accordingly with the Client Agency.
5. The contractor shall provide the appropriate protections to avoid damage to adjacent surfaces and finishes.

- a. The .1 Contractor shall provide temporary partitions around the work areas for the following:

- 1) Demolition of existing spiral stair.
- 2) Construction of the new elevator.
- 3) Demolition of the existing escalator.
- 4) Construction of the new monumental stair.
- 5) Closing the two openings between the north end of Dining/Cafeteria 61E. Refer to drawings for location.

- b. Minimum requirements for temporary partitions:

- 1) Floor to ceiling:
 - a) Anchors for floor track shall be drilled type and located in quarry tile joints. Holes shall be patched to match existing after temporary partitions are removed.
 - b) Anchors for top track shall be drilled type into plaster metal lath. Holes shall be patched to match existing after temporary partitions are removed.
- 2) 6-inch x 20-gauge metal studs at 24" o.c.
- 3) Rockwool acoustical insulation 6.2 lbs/cu. ft. minimum density between studs.

- 4) Interior side (facing construction area) 5/8" GWB with tight joints and removable duct tape. Duct Brand 528183 or equivalent over all joints.
 - 5) Exterior side (facing away from construction area) 1/2" A/C plywood A face out, painted with two coats of flat white paint. All joints over studs shall be tight. Joints between studs shall be 1/8" and caulked with latex paintable sealant.
 - 6) Each area of temporary partitions shall include a door with a padlock.
 - a) Key all padlocks alike and provide seven (7) keys to the Client Agency.
 - b) Provide signage at each door stating "DANGER CONSTRUCTION AREA KEEP OUT."
 - c. All collateral damage to adjacent surfaces and finishes shall be repaired to match preconstruction conditions and approved by the Professional at no cost to the Department.
 - d. Temporary partitions shall not be required around work areas within Parking Garage Levels P-1 and P-2. However, the .1 Contractor shall provide barricades around work area, such as temporary construction fence panels and signage to direct pedestrians around the work area.
6. Material Storage and Existing Elevator use:
- a. Storage locations for materials on site is limited as stipulated in this Section and on Drawings G-202 and G-203. Storage shall be coordinated with the Department and approved by the Client Agency.
 - 1) All Prime Contractors shall mutually share the material storage areas.
 - 2) The .1 General Contractor shall be responsible to coordinate and schedule the use of the storage areas among itself and the other Prime Contractors.
 - b. The Client Agency will permit use of their loading area (truck tunnel) at Level P-1, which is accessible from North Street. Deliveries to the loading area shall be scheduled and coordinated with the Client Agency and Department 3 business days in advance of the schedule delivery.
 - c. The Client Agency will permit the use of the existing freight elevators for transporting construction materials from Level P-1 to the Concourse Level. All Prime Contractors shall mutually cooperate with one another and share the use of the freight elevators.
 - 1) All uses of the freight elevator shall be scheduled and coordinated with the Client Agency and the Department three (3) days in advance.
 - d. There shall be no construction use of the passenger elevators within the East Wing.
 - e. There shall be no construction use of the escalators within the East Wing.
- B. The work areas inside the building shall be cleaned by the Contractor before its employees leave the area at each shift.
 - C. Coordinate storage location with the Department.
 - D. Refer to each section for specific delivery, handling and storage instructions of items specified.

1.9 CONSTRUCTION SEQUENCE

A. The Work shall be conducted in continuous sequences as follows:

1. The demolition of the existing spiral stair and construction of the new elevator shall be completed prior to commencing demolition of the existing escalators.
2. Once the new elevator has passed inspection by the Pennsylvania Department of Labor & Industry Elevator Division, demolition of the existing escalators and construction of the new horizontal stair may commence.
3. Construction of the following scope items may be concurrent with construction of the elevator:
 - a. Demolition and removal of the ceiling and light fixtures in the cafeteria.
 - b. Providing a new ceiling and light fixtures in the cafeteria.
 - c. Upgrades to the HVAC system serving the cafeteria.
 - d. Replacement of the exhaust fan and exhaust duct for the dishwasher.
 - e. Removal of the non-functional neon lighting at the Rotunda and replacement with new LED light fixtures.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100