

Southern A&E, LLC  
7951 Troon Circle  
Austell, Georgia 30168  
(770)-819-7777



Project Name: Tennis Court Replacement for Ridgeland High School and  
Tennis Court Replacement for LaFayette High School  
Project Number: 01-920-023 / 024  
Client: Walker County Schools  
City/State: LaFayette, GA.

Addendum Date: May 09, 2022  
Bid Date: May 31, 2022

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#### TO REGISTERED HOLDERS OF BID DOCUMENTS

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#### **INFORMATION CONTAINED IN THIS ADDENDUM SUPERSEDES PREVIOUS INFORMATION CONTAINED IN BID DOCUMENTS**

#### CHANGES TO SPECS:

- 1) Section 01 26 00 Contract Modification Procedures
  - a. Add this section in its entirety. Copy attached.
- 2) Section 01 29 00 Payment Procedures
  - a. Add this section in its entirety. Copy attached
- 3) Section 01 29 01 Statutory Affidavit
  - a. Add this section in its entirety. Copy attached
- 4) Section 01 29 02 Warranty by General Contractor
  - a. Add this section in its entirety. Copy attached
- 5) Section 01 31 00 Project Management and Coordination
  - a. Add this section in its entirety. Copy attached
- 6) Section 01 32 00 Construction Progress Documentation
  - a. Add this section in its entirety. Copy attached
- 7) Section 01 40 00 Quality Requirements

- a. Add this section in its entirety. Copy attached
- 8) Section 01 50 00 Temporary Facilities and Controls
- a. Add this section in its entirety. Copy attached
- 9) Section 01 56 39 Temporary Tree and Plant Protection
- a. Add this section in its entirety. Copy attached

ATTACHMENTS:

Revised Specifications: 01 26 00 Contract Modification Procedures, 01 29 01 Statutory Affidavit, 01 29 02 Warranty by General Contractor, 01 31 00 Project Management and Coordination, 01 32 00 Construction Progress Documentation, 01 40 00 Quality Requirements, 01 50 00 Temporary Facilities and Controls, 01 56 39 Temporary Tree and Plant Protection

END OF ADDENDUM NO. 1  
01-920-014

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 00 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
  - 1. Section 01 25 00 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after bidding and Contract award.

## 1.3 MINOR CHANGES IN THE WORK

- A. Architect/Engineer will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on Architect's Field Report or on AIA Document G710, "Architect's Supplemental Instructions."

## 1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect/Engineer will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
  - 1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
  - 2. Within at earliest possible date but in no case later than **15** days after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include costs of labor and supervision directly attributable to the change.
    - d. Include an updated construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor/Construction Manager-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor/Construction Manager may initiate a claim by submitting a request for a change to Architect.
  - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
  - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
  - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
  - 4. Include costs of labor and supervision directly attributable to the change.
  - 5. Include an updated construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
  - 6. Comply with requirements in Section 01 25 00 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.

## 1.5 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 01 21 00 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Unit-Price Adjustment: See Section 01 22 00 "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

## 1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Changes Proposal Request, Architect/Engineer will issue a Change Order for signatures of Owner and Contractor/Construction Manager on **AIA Document G701**.

## 1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect/Engineer may issue a Construction Change Directive on **AIA Document G714**. Construction Change Directive instructs Contractor/Construction Manager to proceed with a change in the Work, for subsequent inclusion in a Change Order.
  - 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 26 00**

01 920 023 / 024

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
  - 1. Section 01 21 00 "Allowances" for procedural requirements governing the handling and processing of allowances.
  - 2. Section 01 22 00 "Unit Prices" for administrative requirements governing the use of unit prices.
  - 3. Section 01 26 00 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
  - 4. Section 01 32 00 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the construction schedule.

## 1.3 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's/Construction Manager's construction schedule.
  - 1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:
    - a. Application for Payment forms with continuation sheets.
    - b. Submittal schedule.
    - c. Items required to be indicated as separate activities in the construction schedule.
  - 2. Submit the schedule of values to Architect/Engineer at earliest possible date, but no later than **ten** days before the date scheduled for submittal of initial Applications for Payment.
  - 3. Subschedules for Phased Work: Where the Work is separated into phases requiring separately phased payments, provide subschedules showing values coordinated with each phase of payment.
  - 4. Subschedules for Separate Design Contracts: Where the Owner has retained the Architect/Engineer under separate project contracts and Architect/engineer will provide separate payment certifications for each project, provide subschedules showing values coordinated with the scope of each design contract.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
  - 1. Arrange schedule of values consistent with format of **AIA Document G703**.
  - 2. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents.
  - 3. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
    - a. Differentiate between items stored on-site and items stored off-site, if off-site storage has been approved by the Owner. Include evidence of insurance.
  - 4. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
  - 5. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity.
  - 6. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
    - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
  - 7. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

## 1.4 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications as certified by Architect/Engineer and paid for by Owner.
- B. Payment Application Times: The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Application for Payment Forms: Use **AIA Document G702 and AIA Document G703 and Georgia DOE Form 0263, Revised June 2010** as forms for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor/Construction Manager. Architect will return incomplete applications for correction, without action.

1. Entries shall match data on the schedule of values and construction schedule. Use updated schedules if revisions were made.
  2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
  3. Include amounts of Change Orders and Construction Change Directives issued and/or approved before last day of construction period covered by application.
- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site, if off-site storage has been approved by the Owner.
1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
  2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
  3. Provide summary documentation for stored materials indicating the following:
    - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
- F. Transmittal: Submit **five** signed and notarized original copies of each Application for Payment to Architect/Engineer by a method ensuring receipt **within 48 hours**. One copy shall include waivers of lien and similar attachments if required.
- G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage on each item.
  2. When an application shows completion of an item, submit conditional final or full waivers.
  3. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
  4. Owner reserves the right to designate which entities involved in the Work must submit waivers.
- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
  2. Schedule of values.
  3. Construction schedule (preliminary if not final).
  4. Submittal schedule (preliminary if not final).
  5. List of Contractor's/Construction Manager's staff assignments.
  6. Copies of building permits, authorizations and licenses for performance of the Work.
  7. Initial progress report.
  8. Report of preconstruction conference.
  9. Certificates of insurance and insurance policies.
  10. Performance and payment bonds.
- I. Application for Payment at Substantial Completion: After Architect/Engineer issues the Certificate of Substantial Completion, submit an Application for Payment for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
- J. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements including completion of all Punch List items.
  2. Receipt by Owner and Architect/Engineer of all required project construction records including As-Build Drawings.
  3. Removal of all temporary facilities, services, surplus materials and rubbish.
  4. Change-over of all door locks and other Contractor/Construction Manager access provisions to the Owner.

5. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
6. Updated final statement, accounting for final changes to the Contract Sum.
7. Receipt of conditional final lien waivers from all entities lawfully entitled to a lien.
8. AIA Document G706A, "Contractor's/Construction Manager's Affidavit of Release of Liens."
9. AIA Document G707, "Consent of Surety to Final Payment."
10. Receipt by Architect/Engineer of Statutory Affidavit (attached).
11. Receipt by Architect/Engineer of Contractor's/Construction Manager's Warranty (attached).
12. Receipt by Architect/Engineer of Roofing Guarantee (attached) and Roofing Weathertightness Warranty.
13. Evidence that claims have been settled.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 29 00**

01 920 023 / 024

STATUTORY AFFIDAVIT

State of Georgia, County of \_\_\_\_\_

From: \_\_\_\_\_

To: \_\_\_\_\_

Re: Contract entered into on the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, between the above mentioned parties for the construction of \_\_\_\_\_ at \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS

1. The undersigned hereby certifies that all work required under the above contract has been performed in accordance with the terms thereof, that all materialmen, subcontractors, mechanics, and laborers have been paid and satisfied in full, and that there are no outstanding claims of any character arising out of the performance of the contract which have not been paid and satisfied in full.
2. The undersigned further certifies that to the best of his knowledge and belief there are no unsatisfied claims or damages resulting from injury or death of any employees, subcontractors, or the public at large arising out of this performance of the contract, or any suits or claims for any other damage of any kind, nature, or description which might constitute a lien upon the property of the Owner.
3. The undersigned makes this affidavit as provided by law and for the purpose of receiving final payment in full settlement of all claims arising under or by virtue of the contract, and acceptance of such payment is acknowledged as a release of the Owner from any and all claims arising under or by virtue of the contract.

IN WITNESS THEREOF, the undersigned has signed and sealed this instrument this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

By: \_\_\_\_\_  
\_\_\_\_\_

Personally appeared before the undersigned, \_\_\_\_\_ and \_\_\_\_\_ who after being duly sworn, deposed(s) and say(s) that the fact stated in the above affidavit are true.

\_\_\_\_\_  
Notary Public

\_\_\_\_\_ County, Georgia

This \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

My commission expires \_\_\_\_\_



WARRANTY BY GENERAL CONTRACTOR/CONSTRUCTION MANAGER

Owner: \_\_\_\_\_

Project Name: \_\_\_\_\_

Project Address: \_\_\_\_\_

County of: \_\_\_\_\_

State of: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_, as Contractor/Construction Manager on the above construction project, do hereby guarantee that all work executed under the plans and specifications will be free from defects in materials and/or workmanship for a period of **one year** beginning on \_\_\_\_\_ and ending on \_\_\_\_\_, and that all defects occurring within the warranty period shall be replaced or repaired at no cost to the Owner.

This guarantee covers all work shown on the plans and specified in the Project Manual and Contract Documents.

Nothing in the above shall be deemed to imply that this guarantee shall apply to any work which has been abused or neglected by the Owner.

Legal Name of Contractor/Construction Manager:

\_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

This \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

**END OF SECTION 01 29 02**

01 920 023 // 024

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. General coordination procedures.
  - 2. Coordination drawings.
  - 3. Requests for Information (RFIs).
  - 4. Project Web site.
  - 5. Project meetings.
  - 6. Section 01 73 00 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
  - 7. Section 01 77 00 "Closeout Procedures" for coordinating closeout of the Contract.
  - 8. Section 01 91 13 "General Commissioning Requirements" for coordinating the Work with Owner's Commissioning Authority.

## 1.3 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
  - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
  - 2. Number and title of related Specification Section(s) covered by subcontract.
  - 3. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: At least **seven** days prior to starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.
  - 1. Post copies of list in project meeting room, in temporary field office. Keep list current at all times.

## 1.4 GENERAL COORDINATION PROCEDURES

- 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 to ensure maximum performance and accessibility for required maintenance, service, and repair.
  - 3. Make adequate provisions to accommodate items scheduled for later installation.
- 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. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
  - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

## 1.5 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
  - 1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
    - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
    - b. Coordinate the addition of trade-specific information to the coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
    - c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.

- d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
- e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
- f. Indicate required installation sequences.
- g. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

#### 1.6 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor/Construction Manager shall prepare and submit an RFI containing information listed below.
  1. Architect/Engineer will return RFIs submitted to Architect/Engineer by other entities controlled by Contractor/Construction Manager with no response.
  2. Coordinate and submit RFIs promptly to avoid delays in the Work.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
  1. Project name and Architect's project number.
  2. Date.
  3. Name of Contractor/Construction Manager.
  4. RFI number, numbered sequentially.
  5. Specification Section number and title and related paragraphs, as appropriate.
  6. Drawing number and detail references, as appropriate.
  7. Field dimensions and conditions, as appropriate.
  8. Contractor's/Construction Manager's suggested resolution. If suggested resolution impacts the Contract Time or the Contract Sum, state impact in the RFI.
  9. Contractor's/ Construction Manager's signature.
  10. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
- C. Architect/Engineer's Action: Architect/Engineer will review each RFI, determine action required, and respond. Allow **seven** working days for Architect/Engineer's response for each RFI. RFIs received by Architect/Engineer after 1:00 p.m. will be considered as received the following working day.
  1. The following Contractor/Construction Manager generated RFIs will be returned without action:
    - a. Requests for approval of submittals or substitutions.
    - b. Requests for approval of Contractor's/Construction Manager's means and methods.
    - c. Requests for coordination information already shown in the Contract Documents.
    - d. Requests for adjustments in the Contract Time or the Contract Sum.
    - e. Requests for interpretation of Architect/Engineer's actions on submittals.
    - f. Incomplete RFIs or inaccurately prepared RFIs.
  2. Architect/Engineer's action may include a request for additional information, in which case Architect/Engineer's time for response will date from time of receipt of additional information.
  3. Architect/Engineer'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 Section 01 26 00 "Contract Modification Procedures."
    - a. If Contractor/Construction Manager believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect/Engineer in writing within **10** days of receipt of response.
- D. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log **weekly**. Include the following:
  1. Project name.
  2. Name and address of Contractor/Construction Manager.
  3. RFI number including RFIs that were returned without action or withdrawn.
  4. RFI description.
  5. Date the RFI was submitted.
  6. Date Architect/Engineer's response was received.
- E. On receipt of Architect/Engineer's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect/Engineer within **seven** days if Contractor/Construction Manager disagrees with response.

#### 1.7 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site.

1. Attendees: Inform Owner and Architect and other participants whose presence is required, of date and time of each meeting.
  2. Agenda: Prepare and distribute the agenda to all invited attendees.
  3. Minutes: Record all discussions and agreements. Distribute the meeting minutes to everyone concerned, including Owner and Architect/Engineer, within three days of the meeting.
- B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect/Engineer, but no later than **10** days after execution of the Agreement.
1. Attendees: Authorized representatives of Owner, Architect/Engineer, and their consultants; General Contractor/Construction Manager and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. 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:
    - a. Tentative construction schedule.
    - b. Phasing.
    - c. Critical work sequencing and long-lead items.
    - d. Designation of key personnel and their duties.
    - e. Lines of communications.
    - f. Procedures for processing field decisions and Change Orders.
    - g. Procedures for RFIs.
    - h. Procedures for testing and inspecting.
    - i. Procedures for processing Applications for Payment.
    - j. Distribution of the Contract Documents.
    - k. Submittal procedures.
    - l. Preparation of record documents including As-Built Drawings.
    - m. Use of the premises.
    - n. Work restrictions.
    - o. Working hours.
    - p. Owner's occupancy requirements.
    - q. Responsibility for temporary facilities and controls.
    - r. Procedures for moisture and mold control.
    - s. Procedures for disruptions and shutdowns.
    - t. Construction waste management and recycling.
    - u. Office, work, and storage areas.
    - v. Equipment deliveries and priorities.
    - w. First aid.
    - x. Security.
    - y. Progress cleaning.
- C. Pre-installation Conferences: Conduct a pre-installation 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 Owner and Architect/Engineer of scheduled meeting dates.
  2. Review progress of other construction activities and preparations for the particular activity under consideration.
  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 other parties requiring information.
  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 weekly intervals.
1. Attendees: Representatives of Owner, Architect/Engineer, each contractor, subcontractor, supplier, and other entity concerned with current progress of the Work.
  2. Agenda: Review 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 Manager'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 Manager'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.
- b. Review present and future needs of each entity present that are required to insure completion of each entity's portion of the Work on schedule.
- 3. Minutes: Record and distribute the meeting minutes to each party present and to parties requiring information.
  - a. Schedule Updating: Revise 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.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 31 00**

01 920 023 / 024

**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
  - 1. Construction schedule.
  - 2. Construction schedule updating reports.
  - 3. Daily construction reports.
  - 4. Material location reports.
  - 5. Site condition reports.
  - 6. Special reports.
- B. Related Requirements:
  - 1. Section 01 12 00 "Multiple Contract Summary" for preparing a combined construction schedule.
  - 2. Section 01 33 00 "Submittal Procedures" for submitting schedules and reports.
  - 3. Section 01 40 00 "Quality Requirements" for submitting a schedule of tests and inspections.

**1.3 DEFINITIONS**

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
  - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
  - 2. Predecessor Activity: An activity that precedes another activity in the network.
  - 3. Successor Activity: An activity that follows another activity in the network.
- B. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- C. Event: The starting or ending point of an activity.
- D. Float: The measure of leeway in starting and completing an activity.
  - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor/Construction Manager, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
  - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
  - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.

**1.4 INFORMATIONAL SUBMITTALS**

- A. Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
- B. Construction Schedule Updating Reports: Submit with Applications for Payment.
- C. Daily Construction Reports: Submit at weekly intervals.
- D. Special Reports: Submit at time of unusual event.

**1.5 QUALITY ASSURANCE**

- A. Scheduler's Qualifications: An experienced specialist in CPM scheduling and reporting, with capability of producing CPM reports and diagrams.

**1.6 COORDINATION**

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.
  - 1. Secure time commitments for performing critical elements of the Work from entities involved.
  - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

**PART 2 - PRODUCTS****2.1 CONSTRUCTION SCHEDULE, GENERAL**

- A. Time Frame: Extend schedule from date established for the Notice of Award or the Notice to Proceed to date of final completion.
- B. Activities: Treat each building wing, story or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
  - 1. Activity Duration: Define activities in the shortest practicable time segments.
  - 2. Procurement Activities: Include procurement process activities for long lead time items and all major items of the Work.

3. Submittal Review Time: Include review and resubmittal times indicated in Section 01 33 00 "Submittal Procedures" in schedule. Coordinate submittal review times in construction schedule with submittal schedule.
  4. Startup and Testing Time: Include sufficient days for startup and testing.
  5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect/Engineer's administrative procedures necessary for certification of Substantial Completion.
  6. Punch List and Final Completion: Include not more than **45** days for completion of punch list items and final completion.
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. Phasing: Arrange list of activities on schedule by phase.
  2. Work under More Than One Contract: Include a separate activity for each contract.
  3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
  4. Products Ordered in Advance: Include a separate activity for each product. Include delivery date.
  5. Owner-Furnished Products: Include a separate activity for each product. Include delivery date.
  6. Work Restrictions: Show the effect of the work restrictions itemized in 01 10 00 "Summary".
  7. Work Stages: Indicate stages of construction for each major portion of the Work.
  8. Construction Areas: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities.
- D. Milestones: Include milestones in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.
- E. Cost Correlation: Superimpose a cost correlation timeline, indicating planned and actual costs. On the line, show planned and actual dollar volume of the Work performed as of planned and actual dates used for preparation of payment requests.
1. See Section 01 29 00 "Payment Procedures" for cost reporting and payment procedures.
- F. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor/Construction Manager intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, equipment required to achieve compliance, and date by which recovery will be accomplished.
- 2.2 CONSTRUCTION SCHEDULE (GANTT CHART)
- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart-type, construction schedule within 14 days of date established for commencement of the Work. Base schedule on the startup construction schedule and additional information received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.
- 2.3 REPORTS
- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
1. List of subcontractors at Project site.
  2. List of separate contractors at Project site.
  3. Approximate count of personnel at Project site.
  4. Equipment at Project site.
  5. Material deliveries.
  6. High and low temperatures and general weather conditions.
  7. Accidents.
  8. Meetings and significant decisions.
  9. Unusual events (see special reports).
  10. Stoppages, delays, shortages, and losses.
  11. Meter readings and similar recordings.
  12. Emergency procedures.
  13. Orders and requests of authorities having jurisdiction.
  14. Change Orders received and implemented.
  15. Construction Change Directives received and implemented.
  16. Services connected and disconnected.
  17. Equipment or system tests and startups.
  18. Partial completions and occupancies.
  19. Substantial Completions authorized.

- B. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 3 - EXECUTION

3.1 CONSTRUCTION SCHEDULE

- A. Scheduling Consultant: Employ experienced personnel to provide planning, evaluation, and reporting using Gantt chart or CPM scheduling.
- B. Construction Schedule Updating: Update schedule monthly to reflect actual construction progress. Issue schedule one week before regularly scheduled progress meeting.
  - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
  - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
  - 3. As the Work progresses, indicate final completion percentage for each activity.
- C. Distribution: Distribute copies of approved schedule to Architect/Engineer, Owner, separate contractors, testing and inspecting agencies, and other parties with a need-to-know schedule responsibility.
  - 1. Post copies in Project meeting rooms and temporary field offices.
  - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations.

**END OF SECTION 01 32 00**

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**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor/Construction Manager of responsibility for compliance with the Contract Document requirements.
  - 1. Specified tests and inspections do not limit Contractor's/Construction Manager's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
  - 2. Requirements for Contractor/Construction Manager to provide quality-assurance and quality-control services required by Architect/Engineer, Owner or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Requirements:
  - 1. Section 01 21 00 "Allowances" for testing and inspecting allowances.
  - 2. Section 01 41 00 "Structural Tests and Special Inspections" for IBC Chapter 17 required tests and inspections and as indicated on "Statement of Special Inspections".

**1.3 DEFINITIONS**

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect/Engineer.
- C. Mockups: Full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
- D. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- E. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- F. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

**1.4 CONFLICTING REQUIREMENTS**

- A. Referenced Standards: If compliance with two or more standards is specified and they establish different or conflicting requirements, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect/Engineer for a decision before proceeding.

**1.5 INFORMATIONAL SUBMITTALS**

- A. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

**1.6 CONTRACTOR'S/CONSTRUCTION MANAGER'S QUALITY-CONTROL PLAN**

- A. Quality-Control Personnel Qualifications: Engage qualified full-time personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.
  - 1. Project quality-control manager may also serve as Project superintendent.
- B. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
- C. Testing and Inspection: In quality-control plan, include a comprehensive schedule of Work requiring testing or inspection, including the following:
  - 1. Contractor/Construction Manager performed tests and inspections including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor/Construction Manager elected tests and inspections.
  - 2. Owner-performed tests and inspections indicated in the Contract Documents.
- D. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types

of corrective actions to be required to bring work into compliance with standards of workmanship established by Contract requirements and approved mockups.

- E. Monitoring and Documentation: Maintain testing and inspection reports including log of approved and rejected results. Include work Architect/Engineer has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

#### 1.7 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sampling, testing and inspecting.
11. Professional's opinion on whether Work complies with the Contract Documents.
12. Name and signature of tester or inspector.
13. Recommendations on retesting and reinspecting.

- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, and telephone number of technical representative making report.
2. Statement on condition of substrates and their acceptability for installation of product.
3. Statement that products at Project site comply with requirements.
4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
6. Statement whether conditions, products, and installation will affect warranty.
7. Other required items indicated in individual Specification Sections.

- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, and telephone number of factory-authorized service representative making report.
2. Statement that equipment complies with requirements.
3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
4. Statement whether conditions, products, and installation will affect warranty.
5. Other required items indicated in individual Specification Sections.

- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

#### 1.8 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

- D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated.

- F. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
- G. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products indicated for this Project.
- H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are indicated for this Project.
- I. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
  - 1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect/Engineer.
  - 2. Notify Architect/Engineer seven days prior to mockups being constructed.
  - 3. Demonstrate the proposed range of aesthetic effects and workmanship.
  - 4. Obtain Architect/Engineer's and Owners approval of mockups before starting work.
  - 5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
  - 6. Demolish and remove mockups when directed unless otherwise indicated.

#### 1.9 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services..
  - 1. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor/Construction Manager and the Contract Sum will be adjusted by Change Order.
- B. Contractor/Construction Manager Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's/Construction Manager's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements and those required by authorities having jurisdiction, whether specified or not.
  - 1. Engage a qualified testing agency to perform these quality-control services.
  - 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
  - 3. Submit a certified written report, in duplicate, of each quality-control service.
  - 4. Testing and inspecting requested by Contractor/Construction Manager and not required by the Contract Documents are Contractor's/Construction Manager's responsibility.
  - 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.
- D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's/Construction Manager's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
  - 1. Access to the Work.
  - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
  - 3. Adequate quantities of material samples for testing and inspecting.
  - 4. Facilities for storage and field curing of test samples.
  - 5. Preliminary design mix proposed for use for materials that require control testing.
  - 6. Security and protection for samples and for testing and inspecting equipment.
- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
  - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

## PART 2 - PRODUCTS (Not Used)

## PART 3 - EXECUTION

## 3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
  - 1. Date test or inspection was conducted.
  - 2. Description of the Work tested or inspected.
  - 3. Date test or inspection results were transmitted to Architect/Engineer.
  - 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect/Engineer's reference.

## 3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
  - 1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 01 73 00 "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's/Construction Manager's responsibility, regardless of the assignment of responsibility for quality-control services.

**END OF SECTION 01 40 00**

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## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Requirements:
  - 1. Section 01 10 00 "Summary" for work restrictions and limitations on utility interruptions.
  - 2. Section 31 20 00 "Earth Moving" for dewatering and disposal of ground water at Project site.
  - 3. Section 32 12 16 "Asphalt Paving" for construction and maintenance of asphalt pavement for temporary roads and paved areas.
  - 4. Section 32 13 13 "Concrete Paving" for construction and maintenance of cement concrete pavement for temporary roads and paved areas.

## 1.3 USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum. Allow other entities including Owner, Architect, testing agencies and authorities having jurisdiction to use temporary services and facilities without cost.
- B. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- C. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

## 1.4 QUALITY ASSURANCE

- A. Electric Service: Comply with ANSI A10.6, NECA's "Temporary Electrical Facilities", NEMA, NFPA 70 and 241 and UL standards and regulations for temporary electric service.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

## 1.5 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

## PART 2 - PRODUCTS

## 2.1 MATERIALS

- A. Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top rails.

## 2.2 TEMPORARY FACILITIES

- A. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment specified to be kept in dry locations.

## 2.3 EQUIPMENT

- A. Drinking Water: Provide containerized or bottled water units, including paper cup supply.

## PART 3 - EXECUTION

## 3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities. Change from temporary service to permanent service at earliest possible date.

## 3.2 SUPPORT FACILITIES INSTALLATION

- A. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations.
- B. Traffic Controls: Comply with requirements of authorities having jurisdiction.
  - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
  - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- C. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction and applicable Division 31 Sections. Maintain Project site, excavations, and construction free of water.
  - 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.

2. Before permanent storm drainage piping system is operational, provide temporary roof drainage piping to storm water control structures.
  - D. Project Identification Signs: Provide two-sided Project identification signs as indicated. Do not permit installation of unauthorized signs.
    1. Temporary Signs: Provide temporary directional signs for visitors.
  - E. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 01 73 00 "Execution."
  - F. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate.
- 3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION
- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
  - B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations.
  - C. Temporary Erosion and Sedimentation Control: Comply with requirements specified in Section 31 10 00 "Site Clearing."
  - D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
  - E. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
  - F. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.
    1. Extent of Fence: As required to accommodate construction operations or as indicated on Drawings.
    2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. If requested, furnish one set of keys to Owner.
  - G. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
  - H. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- 3.4 OPERATION, TERMINATION, AND REMOVAL
- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
  - B. Maintenance: Maintain facilities in good operating condition until removal.
    1. Keep temporary services and facilities neat, clean and in good working order.
    2. Relocate temporary services and facilities as required by progress of the Work.
    3. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
  - C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
  - D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
    1. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 01 77 00 "Closeout Procedures."

**END OF SECTION 01 50 00**

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## GENERAL

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. Section includes general protection and pruning of existing trees and plants that are affected by execution of the Work, whether temporary or permanent construction.
- B. Related Sections:
  - 1. Section 01 50 00 "Temporary Facilities and Controls" for temporary site fencing.
  - 2. Section 31 10 00 "Site Clearing" for removing existing trees and shrubs.

## 1.3 DEFINITIONS

- A. Caliper: Diameter of a trunk measured by a diameter tape at **6 inches** above the ground for trees up to, and including, **4-inch** size; and **12 inches** above the ground for trees larger than **4-inch** size.
- B. Plant-Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction, and indicated on Drawings.
- C. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and defined by a circle concentric with each tree with a radius 1.5 times the diameter of the drip line unless otherwise indicated.
- D. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

## 1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified arborist and tree service firm.
- B. Certification: From arborist, certifying that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged.
- C. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.
- D. Existing Conditions: Documentation of existing trees and plantings indicated to remain, which establishes preconstruction conditions that might be misconstrued as damage caused by construction activities.
  - 1. Use sufficiently detailed photographs or videotape.
  - 2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plants designated to remain.

## 1.5 QUALITY ASSURANCE

- A. Arborist Qualifications: Licensed arborist in jurisdiction where Project is located.
- B. Tree Service Firm Qualifications: An experienced tree service firm that has successfully completed temporary tree and plant protection work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site during execution of the Work.

## 1.6 PROJECT CONDITIONS

- A. The following practices are prohibited within protection zones:
  - 1. Storage of construction materials, debris, or excavated material.
  - 2. Parking vehicles or equipment.
  - 3. Erection of sheds or structures.
  - 4. Impoundment of water.
  - 5. Excavation or other digging unless otherwise indicated.
  - 6. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
- B. Do not direct vehicle or equipment exhaust toward protection zones.
- C. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones and organic mulch.

## PART 2 - PRODUCTS

## 2.1 MATERIALS

- A. Topsoil: Natural or cultivated top layer of the soil profile or manufactured topsoil; containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than **1 inch** in diameter; and free of weeds, roots, and toxic and other nonsoil materials.
  - 1. Obtain topsoil only from well-drained sites where topsoil is **4 inches** deep or more; do not obtain from bogs or marshes.
- B. Topsoil: Stockpiled topsoil from location shown on Drawings.
- C. Organic Mulch: Free from deleterious materials and suitable as a top dressing for trees and shrubs, consisting of one of the following:
  - 1. Type: Ground or shredded bark.
  - 2. Size Range: **3 inches** maximum, **1/2 inch** minimum.
  - 3. Color: Natural.
- D. Protection-Zone Fencing: Fencing fixed in position and meeting the following requirements.

1. Plastic Protection-Zone Fencing: Plastic construction fencing constructed of high-density extruded and stretched polyethylene fabric with **2-inch** maximum opening in pattern and weighing a minimum of **0.4 lb/ft.**; remaining flexible from **minus 60 to plus 200 deg F**; inert to most chemicals and acids; minimum tensile yield strength of **2000 psi** and ultimate tensile strength of **2680 psi**; secured with plastic bands or galvanized-steel or stainless-steel wire ties; and supported by tubular or T-shape galvanized-steel posts spaced not more than **8 feet** apart.
  - a. Height: **4 feet**.
  - b. Color: High-visibility orange, nonfading.
- E. Protection-Zone Signage: Shop-fabricated, rigid plastic or metal sheet with attachment holes prepunched and reinforced; legibly printed with nonfading lettering and as follows:
  1. Size and Text: As shown on Drawings.
  2. Lettering: **3-inch-** high minimum, black characters on white background.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Erosion and Sedimentation Control: Examine the site to verify that temporary erosion- and sedimentation-control measures are in place. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- B. For the record, prepare written report, endorsed by arborist, listing conditions detrimental to tree and plant protection.

#### 3.2 PREPARATION

- A. Locate and clearly identify trees, shrubs, and other vegetation to remain or to be relocated. Flag each tree trunk at **54 inches** above the ground.
- B. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.

#### 3.3 TREE- AND PLANT-PROTECTION ZONES

- A. Protection-Zone Fencing: Install protection-zone fencing along edges of protection zones before materials or equipment are brought on the site and construction operations begin in a manner that will prevent people and animals from easily entering protected area except by entrance gates. Construct fencing so as not to obstruct safe passage or visibility at vehicle intersections where fencing is located adjacent to pedestrian walkways or in close proximity to street intersections, drives, or other vehicular circulation.
  1. Posts: Set or drive posts into ground one-third the total height of the fence without concrete footings. Where a post is located on existing paving or concrete to remain, provide appropriate means of post support acceptable to Architect.
- B. Protection-Zone Signage: Install protection-zone signage in visibly prominent locations in a manner approved by Architect. Install one sign spaced approximately every **35 feet** on protection-zone fencing, but no fewer than four signs with each facing a different direction.
- C. Maintain protection zones free of weeds and trash.
- D. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Architect.
- E. Maintain protection-zone fencing and signage in good condition as acceptable to Architect and remove when construction operations are complete and equipment has been removed from the site.
  1. Do not remove protection-zone fencing, even temporarily, to allow deliveries or equipment access through the protection zone.
  2. Temporary access is permitted subject to preapproval in writing by arborist if a root buffer effective against soil compaction is constructed as directed by arborist. Maintain root buffer so long as access is permitted.

#### 3.4 EXCAVATION

- A. General: Excavate at edge of protection zones and for trenches indicated within protection zones according to requirements in Section 31 20 00 "Earth Moving."
- B. Trenching near Trees: Where utility trenches are required within protection zones, hand excavate under or around tree roots or tunnel under the roots by drilling, auger boring, or pipe jacking. Do not cut main lateral tree roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots as required for root pruning.
- C. Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in a moist condition. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.

#### 3.5 REGRADING

- A. Lowering Grade: Where new finish grade is indicated below existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.



- B. Lowering Grade within Protection Zone: Where new finish grade is indicated below existing grade around trees, slope grade away from trees as recommended by arborist unless otherwise indicated.
  - C. Minor Fill within Protection Zone: Where existing grade is 2 inches or less below elevation of finish grade, fill with topsoil. Place topsoil in a single uncompacted layer and hand grade to required finish elevations.
- 3.6 FIELD QUALITY CONTROL
- A. Inspections: Engage a qualified arborist to direct plant-protection measures in the vicinity of trees, shrubs, and other vegetation indicated to remain and to prepare inspection reports.
- 3.7 REPAIR AND REPLACEMENT
- A. General: Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Architect.
    - 1. Submit details of proposed root cutting and tree and shrub repairs.
    - 2. Have arborist perform the root cutting, branch pruning, and damage repair of trees and shrubs.
    - 3. Treat damaged trunks, limbs, and roots according to arborist's written instructions.
    - 4. Perform repairs within 24 hours.
    - 5. Replace vegetation that cannot be repaired and restored to full-growth status, as determined by Architect.
  - B. Trees: Remove and replace trees indicated to remain that are more than 66 percent dead or in an unhealthy condition before the end of the corrections period or are damaged during construction operations that Architect determines are incapable of restoring to normal growth pattern.
    - 1. Provide new trees of same size and species as those being replaced for each tree that measures 6 inches or smaller in caliper size.
    - 2. Provide two new tree(s) of 4-inch caliper size for each tree being replaced that measures more than 6 inches in caliper size.
      - a. Species: Species selected by Landscape Architect.
    - 3. Plant and maintain new trees as specified in Section 32 93 00 "Plants."
- 3.8 DISPOSAL OF SURPLUS AND WASTE MATERIALS
- A. Disposal: Remove excess excavated material, displaced trees, trash and debris, and legally dispose of them off Owner's property.

END OF SECTION 01 56 39

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