



University of the Philippines OPEN UNIVERSITY

BIDS AND AWARDS COMMITTEE

21 April 2026

SUPPLEMENTAL BID BULLETIN NO. 26-004

This Supplemental Bid Bulletin No. 26-004 is to amend or modify items in the Bid Documents and in response to the queries raised during the pre-bid conference conducted 14 April 2026 for the project "Supply, Delivery and Installation of Lightning Protection System at the International Convention Center" to wit:

Item	Response/s		
1. Clarification regarding down conductor specification for the E.S.E. Lightning Arrester	Updated OUTLINE SPECIFICATIONS FROM 26.2.1 Medium-Voltage Lightning Arrester Shall be Early Stream Emission (E.S.E) type lightning arrester with coaxial shielded down conductor and strike counter panel by approved brand. Apply exothermic welding process for copper clad ground rods connection. TO 26.2.1 Medium-Voltage Lightning Arrester Shall be Early Stream Emission (E.S.E) type lightning arrester with 60mm² soft drawn bare copper wire in 50mm dia PVC conduit and strike counter panel by approved brand. Apply exothermic welding process for copper clad ground rods connection.		
2. Clarification on Division 01	See attached <u>Division 01</u> for reference.		
3. Updates on Section III. Bid Data Sheet. ITB Clause 16.1. Bid Security	FROM <table> <tr> <td style="vertical-align: top; width: 100px;">16.1</td><td> The Bid Security shall be in the form of a Bid Securing Declaration, and choose at least two (2) from any of the following: a. The amount of not less than ₱28,500.00 (2%) of ABC, if bid security is in cash, cashier's/manager's check; b. The amount of not less than ₱71,250.00 (5%) of ABC if bid security is in bank draft, guarantee, irrevocable Letter of Credit or Surety Bond. </td></tr> </table>	16.1	The Bid Security shall be in the form of a Bid Securing Declaration, and choose at least two (2) from any of the following: a. The amount of not less than ₱28,500.00 (2%) of ABC, if bid security is in cash, cashier's/manager's check; b. The amount of not less than ₱71,250.00 (5%) of ABC if bid security is in bank draft, guarantee, irrevocable Letter of Credit or Surety Bond.
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	TO 16.1 The Bid Security shall be in the form of a Bid Securing Declaration, OR any of the following: a. The amount of not less than ₱28,500.00 [2% of ABC], if bid security is in cash; b. The amount of not less than ₱71,250.00 [5% of ABC], if bid security is Surety Bond and submit also a certification issued by the Insurance Commission as authorized to issue such security.
4. Updates on the Checklist of Technical and Financial Documents, specifically letter (e) Bid Security	FROM (e) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission; or Original copy of Notarized Bid Securing Declaration; and TO (e) Bid Security: Original copy of Notarized Bid Securing Declaration or Cash, or if in the form of a Surety Bond (submit also a certification issued by the Insurance Commission as authorized to issue such security); and - Updated Checklist of Technical and Financial Documents is attached.

For the guidance and information of all concerned bidders.


FINAFLOR F. TAYLAN, DProfSt.
Chair, BAC 

Received by the Bidder:

_____ Date: _____
Signature over printed name

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE (Original and Copy 1)

Class "A" Documents

Legal Documents

- (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages) in accordance with Section 20.2.9 of the IRR;

Technical Documents

- (b) Statement of the bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; **and**
- (c) Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules. The SLCC should be at least 50% of the ABC.; **and**
- (d) Philippine Contractors Accreditation Board (PCAB) License: **Small B (min. size range); General Building/Specialty-Electrical Work; Category C or D (min. license category)** or Special PCAB License in case of Joint Ventures **and** registration for the type and cost of the contract to be bid; **and**
- (e) Bid Security: Original copy of Notarized Bid Securing Declaration or Cash, or if in the form of a Surety Bond (submit also a certification issued by the Insurance Commission as authorized to issue such security); **and**
- (f) Project Requirements, which shall include the following:
- Organizational chart for the contract to be bid;
 - Key personnel's (1) Letter Certificate to Procuring Entity to be assigned to the contract to be bid, (2) Bio-Data, and (3) Certificate of Employment:

<u>Key Personnel</u>	<u>General Experience</u>
1. Registered Electrical Engineer (with valid license)	Minimum of 5 yrs
2. Electrician	Minimum of 5 yrs w/ valid NC2 (Electrical Installation and maintenance)
3. CAD Operator	Minimum of 2 yrs

- c. List of contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be; **and**

A. Tools	No. of Units
1. Calibrated Clamp/Multimeter	Minimum 1 unit
2. Hand tools	
a. Grinder	Minimum 1 unit
b. Hammer Drill	Minimum 1 unit
B. Others	No. of Units
1. PPE (Personal Protective Equipment) - includes hard hat, safety vest, safety shoes, safety gloves	Minimum of 5pcs per item

- (g) Original duly signed Omnibus Sworn Statement (OSS); **and** if applicable, Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; **or** Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Financial Documents

- (h) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC).

Class "B" Documents

- (i) If applicable, duly signed joint venture agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence. **or** duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.
- (j) Affidavit of Site Inspection

I. FINANCIAL COMPONENT ENVELOPE (Original and Copy 1)

- (k) Original of duly signed and accomplished Bid Form; **and**
- (l) Duly signed Detailed Construction Estimates Worksheet (DCEW); **and**
- (m) Duly signed Summary of Breakdown of Total Lump Sum Bid Prices; **and**
- (n) Cash Flow by Quarter and Payments Schedule.

Notes:

The prescribed documents in the checklist are mandatory to be submitted in the Bid.

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2.1 Section includes requirements for temporary utilities, support facilities and security and protection facilities.

1.2.2 Temporary Facilities shall include but not limited to the following:

- a. Temporary water service and distribution.
- b. Temporary electric power and lighting services.
- c. Temporary heating, cooling and ventilation.
- d. Temporary telephone and service data.
- e. Temporary facilities including drinking water.
- f. Storm and sanitary sewer.
- g. Storm water pollution control.

1.2.3 Support facilities include but shall not be limited to the following:

- a. Field Office – General Contractor
- b. Storage and Fabrication sheds.
- c. Dewatering facilities and drains.
- d. Temporary enclosure.
- e. Temporary stairs, lifts and hoists.
- f. Temporary project identification signs.
- g. Temporary exterior lighting.
- h. Collection and disposal of waste and clearing.
- i. Temporary environmental controls.
- j. Temporary barracks for on-site laborers/man power.

1.2.4 Security and protection facilities include, but not limited to the following:

- a. Temporary fire protection.
- b. Security for site and agency.
- c. Barricades, warning signs and lights.
- d. Enclosure fence.
- e. Environmental protection and traffic ways.

1.3 USE CHARGES

Installation and removal and use charges for temporary facilities shall be included in the General Conditions cost unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, occupants of the project, testing agencies, and authorities having jurisdictions. Hoisting equipment and permanent elevators are exempted from this provision.

1.4 INFORMATIONAL SUBMITTALS

- 1.4.1** Site Plan: The contractor shall submit shop drawings showing temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- 1.4.2** Implementation and Termination Schedule: Within twenty-one (21) days of the date established for commencement of the Work, the contractor shall submit a schedule indicating implementation and termination of each temporary utility.
- 1.4.3** Fire Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate contractor personnel responsible for management of fire-prevention program.
- 1.4.4** Moisture Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage.
 - a. Describe delivery, handling and storage provisions for materials subject to water absorption or water damage.
 - b. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed work, and replacing water-damage work.
 - c. Indicating sequencing of work that requires water, such as sprayed fire-resistive materials, plastering and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
- 1.4.5** Dust and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust and HVAC control measures proposed for use, proposed locations and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate.

1.5 QUALITY ASSURANCE

- 1.5.1** Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
 - a. Building and fire code requirements.
 - b. Health and safety regulations.
 - c. Utility company regulations.
 - d. Police, fire department, and rescue squad rules.
 - e. Environmental protection regulations.
- 1.5.2** Standards: Comply with NFPA 241 "Standard for Safeguarding Construction, Alteration, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA 200 "Recommended Practice for Installing and Maintaining Temporary Electric Power at Construction Sites."
- 1.5.3** Electrical Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 "National Electric Code."
- 1.5.4** Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.6 PROJECT CONDITIONS

- 1.6.1** Temporary Utilities: Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable

to the Owner, the Owner's Representative will direct the change over from use of temporary service to use of permanent service.

- 1.6.2** Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.

PART 2 PRODUCTS

2.1 MATERIALS

- 2.1.1** General: Provide new materials. If acceptable to the Architect, the General Contractor may use undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended.
- 2.1.2** Lumber and Plywood: Comply with requirements in Division 06 Section 06 10 00 "Rough Carpentry."
- 2.1.3** For signs and directory boards, provide 3/4-inch exterior grade, Grade A-B Fir plywood. Mount sign on preservative treated Fir posts.
- a. Project sign shall be 4' x 8' painted and supported on 4-inch x 4-inch posts, of a design to be provided by the Owner via the Project Architect.
 - b. Vision Barriers: Provide minimum 1/2-inch thick exterior plywood.
 - c. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8-inch thick exterior plywood.
- 2.1.4** Paint: Comply with requirements of Division 09 Section 099100 "Painting."
- a. For sign and directory boards applying graphics, provide exterior-grade alkyd gloss enamel over exterior primer unless otherwise indicated.
- 2.1.5** Tarpaulins: Provide waterproof, fire-resistant, tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
- 2.1.6** Water: Provide potable water approved by local health authorities.
- 2.1.7** Enclosure Fencing: Provide G.A. 26 pre-painted roofing sheets for walls with 100mm diameters G.I. pipe for columns/post coated with water-based epoxy paint.

2.2 EQUIPMENTS

- 2.2.1** General: Provide new equipment. If acceptable to the Architect, the Construction Manager may use undamaged, previously used equipment in serviceable condition. Provide equipment suitable for use intended.
- a. The General Contractor shall furnish tools, apparatus and appliances, hoists and/or cranes and power for same, scaffolding, runways, ladders, temporary supports and bracing and similar work or material necessary to insure convenience and safety in the execution of the Contract except where this is otherwise specified in any Specification Section. All such items shall meet the approval of the Owner but responsibility for design, strength and safety shall remain with the General Contractor. All such items shall comply with local regulations and applicable codes, statutes, rules and regulations, including compliance with the requirements of the Accident Prevention in the Construction under the Labor Code of the Philippines.

- b. Staging, exterior and interior, required for the execution of this Contract, shall be furnished, erected, relocated if necessary and removed by the General Contractor. Staging shall be maintained in a safe condition without charge to and for the use of all trades as needed.
- 2.2.2 Water Hoses:** Provide 3/4-inch, heavy-duty, abrasion-resistant, flexible rubber hoses with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge and backflow preventers.
- 2.2.3 Electrical Outlets:** Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-Volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.
- 2.2.4 Electrical Power Cords:** Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
- 2.2.5 Lamps and Light Fixtures:** Provide general service CFL/Fluorescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures where exposed to breakage. Provide exterior fixtures when exposed to moisture.
- 2.2.6 Temporary Field Offices:** Provide prefabricated or mobile units with lockable entrances, operable windows, and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading.
- 2.2.7 Temporary Toilet Units:** The Owner will allow the toilets located in [submit shop drawings for approval of location] for General Contractor's use. If others are needed, provide self-contained, single-occupant toilet units of the chemical, aerated recirculation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- 2.2.9 Fire Extinguishers:** Provide hand-carried, portable, UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.
 - a. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

2.3 TEMPORARY FACILITIES MATERIALS SPECIFICATION

2.3.1 Temporary Field Office

- 2.3.1.1 Container Van** - Shall be 20 ft. x 8ft x 8.6ft container van, elevated from existing natural grade line @ 300mm height (minimum).
- 2.3.1.2 Windows** – Shall be 6mm thick clear annealed sliding glass windows on a tubular type aluminum framing complete with hardware and accessories.
- 2.3.1.3 Doors** – Shall be 800mm x 2100mm steel doors complete with door knob, hardware and accessories.
- 2.3.1.4 Flooring** – Shall be 1.5mm thick x 300mm x 300mm asbestos-free vinyl composition tile made of organic vinyl resins, plasticizers and additives as binders and natural limestone as fillers.

- 2.3.1.5 Ceiling** – Shall be 12mm-13mm thick recessed edge, sag resistant plasterboard, coated with plain, matte finish 100% water-based acrylic latex paint with excellent hiding, durability and dirt pick-up resistance on a light steel framing system. Provide 50mm thick fiberglass insulation.
- 2.3.1.6 Wall** – Shall be G.I. steel plate wall (container van wall) coated with water-based acrylic epoxy paint finish.
- 2.3.1.7 Air Conditioning System** - Shall be 1Hp, 11,000 BTU/H, wall mounted of quiet operation type, complete with thermostatic controls, vibration isolators and other standard accessories.
- 2.3.1.8 Lighting Fixtures** - Shall be 3 sets of 1-36 watts T-8 daylight linear fluorescent lamp, electronic ballast and lamp holder, energy saving type.
- 2.3.2 Temporary Toilet Facilities**
 - 2.3.1.1 Windows** - Shall be 6mm thick clear annealed jalousie glass windows on aluminum framing complete with hardware and accessories.
 - 2.3.1.2 Doors** - Shall be 600mm x 2100mm polyvinyl chloride PVC doors with bottom louvers complete with door knob, hardware and accessories.
 - 2.3.1.3 Flooring** – Shall be 7mm thick x 200mm x 200mm ceramic tiles with medium resistance to abrasion.
 - 2.3.1.4 Ceiling** - 12mm-13mm thick recessed edge, sag and moisture resistant plasterboard, coated with plain, matte finish 100% water-based acrylic latex paint with excellent hiding, durability and dirt pick-up resistance on a light steel framing system.
 - 2.3.1.5 Wall** – Shall be 150mm thick CHB interior cement plaster finish coated semi-gloss latex paint.
 - 2.3.1.6 Roofing** – Shall be gauge 24, corrugated G.I. roofing sheet.
 - 2.3.1.7 Lighting Fixture** – Shall be surface mounted 15 watts CFL bulb with ungrounded receptacle.
 - 2.3.1.8 Toilet Fixtures**
 - a. *Water Closet* - Shall be vitreous porcelain, floor mounted, closed-coupled elongated front single flush button-type water closet with seat cover, pre-installed tank fittings and two-bolt caps, complete with anti-bacterial technology fittings and accessories.
 - b. *Urinal* - Shall be white vitreous china, washout flush action wall hung urinal with flushing rim extending from wall, back inlet, push button flush valve and widened sides, complete with fittings and accessories.
 - c. *Lavatory* - Shall be white vitreous porcelain wall mounted wash basin, regular color, with half pedestal cover, complete with chrome plated brass P-trap, angle valve and pop-up drain.
 - d. *Floor Drain* - Shall be 100mm x 100mm Polished Stainless Steel with lift-up cover.

PART 3 EXECUTION

3.1 INSTALLATION

- 3.1.1** Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

3.1.2 Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.1.3 Storm Water Pollution Control:

- a. Assume responsibility for storm water pollution control; conform to the permit requirements.
- b. Conform to the Storm water Pollution Control Plan included in the Contract Documents or use another plan, prepared at the General Contractor's expense, which has been approved by the Owner and the Local Building officer.
- c. Sign and cause to be signed by each appropriate subcontractor, the Certification Statement required by the General Permit.
- d. Provide, maintain, and monitor a rain gauge on the site; monitoring shall include maintaining a log of the readings. The rain gauge shall remain the property of the General Contractor.

3.2 TEMPORARY UTILITY INSTALLATION

3.2.1 General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with company recommendations.

- a. Arrange with company and existing users for a time when service can be interrupted, if necessary, to make connections for temporary services.
- b. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
- c. Obtain easements to bring temporary utilities to the site where the Owner's easements cannot be used for that purpose.
- d. Use Charges: If cost or use charges for temporary facilities are specified by this section to be borne by the Owner the cost or use charges for temporary facilities will be borne not longer than 30 days after final acceptance of the project.

3.2.2 Temporary Water Service and Distribution:

- a. Install water service and distribution piping of sizes and pressures adequate for construction until permanent water service is in use.
Sterilization: Sterilize temporary water piping prior to use.
- b. Water for construction purposes may be taken from the existing service. The General Contractor shall provide connections, approved backflow prevention device, meter and pipe to the water main or nearest hydrant, subject to the approval of the Owner. Upon completion of work, the General Contractor shall remove the temporary connections and backfill if necessary. If new water service is installed before construction is complete, the new system may be used provided it is returned to the Owner in as-new condition. The General Contractor shall pay for the water used, as metered.
- c. Connect to existing facilities, through an approved backflow prevention device; extend branch piping with outlets so that water is available by use of hoses. Owner will pay for water used. The General Contractor shall not waste water or use faulty equipment. The General Contractor shall provide, at his own expense, all connections, extensions and other apparatus required

for use of such services. Upon completion of the Contract, the General Contractor shall disconnect temporary extensions and return utility to its original condition.

3.2.3 Temporary Electric Power and Lighting Services:

- a. Power and lighting may be taken from the power company's nearest pole with temporary poles, if needed, to extend the line to project. If permanent power lines have been installed before beginning project, then temporary lines can be brought in from the last pole.
- b. Provide service required for construction with branch wiring and distribution boxes located to provide power and lighting by construction-type extension cords. Meter shall be provided and installed by the General Contractor.
- c. The General Contractor shall pay all costs of temporary power and light.
- d. Power Distribution System: Install wiring overhead and rise vertically where least exposed to damage. Where permitted, wiring circuits not exceeding 125 Volts, ac 20 Ampere rating, and lighting circuits may be nonmetallic sheathed cable where overhead and exposed for surveillance.
- e. Temporary Lighting: When overhead floor or roof deck has been installed, provide temporary lighting with local switching. Install and operate temporary lighting that will fulfill security and protection requirements without operating the entire system. Provide temporary lighting that will provide adequate illumination for construction operations and traffic conditions.

3.2.4 Temporary Telephone Service and Data:

Provide temporary telephone service throughout the construction period for all personnel engaged in construction activities. Install telephone on a separate line for each temporary office and first aid station. General Contractor shall provide telephone service in his office. It is preferred that the General Contractor use a cellular phone. Basic service and local calls will be paid for by the General Contractor. Toll calls will be paid for by the respective users.

- a. Separate Telephone Lines: Provide additional telephone lines for the following:
Where an office has more than two (2) occupants, install a telephone for each additional occupant or pair of occupants.
Provide dedicated telephone lines for a separate fax machine.
- b. At each telephone, post a list of important telephone numbers.

3.2.5 Temporary Sanitary Facilities, Including Drinking Water:

Temporary sanitary facilities include temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.

- a. Provide toilet tissue, wash basins with water, soap and paper towels, paper cups, and similar disposable materials for each facility. Provide covered waste containers for used material. The General Contractor shall maintain the facilities in a sanitary condition.
- b. Toilets: Use of pit-type privies will not be permitted. Provide separate facilities for male and female personnel.

3.2.6 Storm and Sanitary Sewer:

If sewers are available, provide temporary connections to remove effluent that can be discharged lawfully.

- a. Filter out excessive amounts of soil, construction debris, chemicals, oils, and similar contaminants that might clog sewers or pollute waterways before discharge.
- b. Connect temporary sewers to the municipal system, as directed by sewer department officials.
- c. Maintain temporary sewers and drainage facilities in a clean, sanitary condition. Following heavy use, restore normal conditions promptly.

3.2.7. Storm Water Pollution Control: Provide earthen embankments and similar barriers in and around excavations and sub-grade construction, sufficient to prevent flooding by runoff of storm water from heavy rains.

3.3 SUPPORT FACILITIES INSTALLATION

3.3.1 General: Locate field offices, storage sheds, and other temporary construction and support facilities in designated area as shown on the Contract Documents. The location of the trailers on the Drawings is diagrammatic in nature. Final placement of the trailers is to be approved by the Owner's Representative.

- a. Maintain support facilities until Final Completion. Remove prior to Final Completion with permission from the Owner.
Field Offices: Provide insulated, weather tight temporary offices of sufficient size to accommodate required office personnel at the Project Site. Keep all offices clean and orderly, sweep weekly and remove rubbish on a daily basis.
Furnish and equip offices as follows:

3.3.2 The General Contractor shall provide an office for their own use and a method to contact them by e-mail and telephone at any point and time.

3.3.3 General Contractor Provided Field Offices/Equipment: The General Contractor shall provide an office for their own use and a method to contact them by e-mail and telephone at any point and time. The General contractor shall supply the Owner's Representative and the Owner office or trailer with a water cooler for hot and cold water.

3.3.4 Storage and Fabrication Sheds:

Install storage and fabrication sheds sized, furnished, and equipped to accommodate materials and equipment involved, including temporary utility service. Sheds may be open shelters or fully enclosed spaces within the building or elsewhere on-site.

- a. Storage sheds for tools, materials and equipment shall be weather tight with heat, lighting and ventilation for products requiring controlled conditions.
- b. Remove temporary materials, equipment services and construction before Substantial Completion.
- c. Clean and repair damage caused by installation or use of temporary facilities. Restore existing facilities used during construction to specified or original condition.

3.3.5 Temporary Roads and Paving:

- a. Provide paving for pedestrian access and parking for field office.
- b. Coordinate temporary paving development with sub-grade grading, compaction, installation and stabilization of sub-base and installation of base and finish courses of permanent paving.
- c. Install temporary paving to minimize the need to rework the installations and to result in permanent roads and paved areas without damage or deterioration when occupied by the Owner.

- d. Extend temporary paving in and around the construction area as necessary to accommodate delivery and storage of materials, equipment usage, administration, and supervision.
- 3.3.6** Dewatering Facilities and Drains: For temporary drainage and dewatering facilities and operations not directly associated with construction activities included under individual Sections, comply with dewatering requirements of applicable Division 31 Sections. Where feasible, utilize the same facilities. Maintain the site, excavations, and construction free of water.
- 3.3.7** Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.
 - a. Install tarpaulins securely, with incombustible wood framing and other materials. Close openings of 25-sq ft or less with plywood or similar materials.
 - b. Close openings through floor or roof decks and horizontal surfaces with load-bearing, wood-framed construction.
 - c. Where temporary enclosure exceeds 100-sq ft in area, use UL-labeled, fire-retardant-treated material for framing and main sheathing.
- 3.3.8** Temporary Lifts, Hoists and Elevator Use:
 - a. Provide facilities for hoisting materials and employees. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
 - b. Refer to Division 14 Sections for elevators.
- 3.3.9** Temporary Project Identification Signs: Prepare project identification and other signs of size indicated. Install signs where indicated to inform the public and persons seeking entrance to the Project. Support on posts or framing of preservative-treated wood or steel. Do not permit installation of unauthorized signs.
- 3.3.10** Project Sign: Engage an experienced sign painter to apply graphics. Comply with details to be furnished by the Owner's Representative.
 - a. Temporary Tripod Frame: For groundbreaking ceremonies only, provide a temporary tripod for the sign illustrated and described below. Make the tripod of 12 ft long 2" x 4"s (Stud Grade), beveled and bolted at the top. Provide approximately 5-ft between legs at grade. Provide a 6-ft long, 2" x 4" seat for the sign; locate 5-ft above grade and nail in place. Nail sign at four (4) places where edges intersect tripod legs. Drive a 24" long, pointed 2" x 4" stake into the earth next to each leg and nail to legs.
 - b. Project Sign: The General Contractor shall contact the Owner's Representative for the proper wording for the project sign.
- 3.3.11** Temporary Exterior Lighting: Install exterior yard and sign lights so signs are visible when Work is being performed.
- 3.3.12** Collection and Disposal of Waste and Cleaning:
 - a. Collect waste within the contract limit line from construction areas daily. Provide separate containers for proper waste recycling. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than seven (7) days during normal weather or three (3) days when the temperature is expected to rise above 80° degrees F. Handle hazardous, dangerous, or

unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.

- b. Maintain areas under General Contractor control free of waste materials, debris and rubbish. Maintain in a clean and orderly condition.
- c. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces and other closed or remote spaces before closing the space.
- d. Periodically clean interior areas before start of surface finishing and continue cleaning on an as-needed basis.
- e. Control cleaning operations so that dust and other particulates will not adhere to wet or newly coated surfaces.

3.3.13 Temporary Environmental Controls: Construction Manager is to provide the following controls.

- a. Rodent and Pest Control: Before deep foundation work has been completed, retain a local exterminator or pest control company to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests. Employ this service to perform extermination and control procedures at regular intervals so the Project will be free of pests and their residues at materials.
- b. Dust Control (construction and demolition).
- c. Noise Control.
- d. Erosion and Sediment Control.
- e. Pollution Control.
- f. Traffic Control.

3.3.14 Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate. Cover finished permanent stairs with a protective covering of plywood or similar material so finishes will be undamaged at the time of acceptance.

3.4 SECURITY PROTECTION AND FACILITIES INSTALLATION

3.4.1 Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to permanent facilities until Substantial Completion, or longer, as requested by the Owner.

3.4.2 Temporary Fire Protection: Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations."

- a. Provide and locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.
- b. Store combustible materials in containers in fire-safe locations.
- c. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire-exposure areas.
- d. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
- e. The General Contractor, during construction, shall be responsible for loss or damage by fire to the work of the Contract until completion. Any fire used within the structure for working purposes shall be extinguished when not in

use. Bitumen or tar shall be melted on the ground only. No flammable material shall be stored in the structure in excess of amounts allowed by the authorities. No gasoline shall be stored in or close to the building at any time. The General Contractor shall assign a responsible employee to be in charge of fire protection measures.

- f. If an EPDM or other single-ply roof is included in the work that requires cleaning of mating surfaces of laps with gasoline, limit amount of gasoline on roof to two (2) gallons which shall be in UL listed containers. Also provide one 30 B:C fire extinguisher within 75 feet of any point on the roof.

3.4.3 Permanent Fire Protection: At the earliest feasible date in each area of the Project, complete installation of the permanent fire-protection facility, including connected services, and place into operation and use. Instruct key personnel on use of facilities.

3.4.4 Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.

- a. Provide covered walkways as required by governing authorities for public rights-of-way and for public access to existing buildings.
- b. Provide temporary, insulated, weather tight closures at openings to the exterior to provide acceptable working conditions and protection for materials, to allow for temporary heating and to prevent entry of unauthorized persons. Provide doors with self-closing hardware and locks.
- c. Barriers and enclosures shall be in conformance with code requirements. Do not block egress from occupied buildings unless necessary to further the work of the Contract. In this case, secure the Owners approval of an alternate egress plan.

3.4.5 Enclosure Fences: Before excavation begins, install an enclosure fence with lockable entrance gates. Locate where indicated on the Construction Documents, or enclose the entire site or the portion determined sufficient to accommodate construction operations. Install in a manner that will prevent people, dogs, and other animals from easily entering the site, except by the entrance gates.

3.4.6 Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Provide keys to the Owner's Representative.

- a. Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.

3.4.7 Protection:

- a. Protect buildings, equipment, furnishings, grounds and plantings from damage. Any damage shall be repaired or otherwise made good at no expense to the Owner.
- b. Provide protective coverings and barricades to prevent damage. The General Contractor shall be held responsible for, and must make good at his own

- expense, any water or other type of damage due to improper coverings. Protect the public and building personnel from injury.
- c. Provide temporary protection for installed products. Control traffic in immediate area to minimize damage.
- d. Provide protective coverings for walls, projections, jambs, sills and soffits of openings. Protect finished floors and stairs from traffic, movement of heavy objects and storage. Prohibit traffic and storage on waterproofed and roofed surfaces and on lawn and landscaped areas.
- e. Provide temporary partitions and ceilings to separate work areas from Agency-occupied areas to prevent penetration of dust and moisture into Agency-occupied areas and equipment. Erect framing and sheet materials with closed joints and sealed edges at intersections with existing surfaces.

3.4.8 Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result.

3.5 OPERATION, TERMINATION AND REMOVAL

3.5.1 Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.

3.5.2 Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.

- a. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a twenty-four (24) hour basis where required to achieve indicated results and to avoid possibility of damage.
- b. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.

3.5.3 Termination and Removal: Unless the Architect/OR requests that it be maintained longer, remove each temporary facility when the need has ended, when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

- a. Materials and facilities that constitute temporary facilities are the General Contractor's property. The Owner reserves the right to take possession of project identification signs.
- b. Remove temporary paving not intended for or acceptable for integration into permanent paving. Where the area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil in the area. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at the temporary entrances, as required by the governing authority.
- c. At Substantial Completion, clean and renovate permanent facilities used during the construction period including, but not limited to, the following:

Replace air filters and clean inside of ductwork and housings.
Replace significantly worn parts and parts subject to unusual operating conditions.
Replace lamps burned out or noticeably dimmed by hours of use.

END OF SECTION