

MISSISSIPPI STATE UNIVERSITY
Office of Planning Design and Construction Administration

SECTION 01 500 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Scope: Work required under this section consists of all temporary construction facilities, services and related items to complete the work indicated on the drawings and described in the Project Manual.
- B. Standards:
 - 1. Conform to or exceed all temporary construction requirements stated in the current edition of the International Building Code.
 - 2. Refer to Article 10.1.1 in Section 00700 entitled General Conditions.
- C. Materials: All materials required by the Work of this section shall be as specified in the respective sections.

1.2 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Erosion- and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
- C. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage.
 - 1. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage.
 - 2. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.
 - 3. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, 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.

1.3 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

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- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

PART 2 - PRODUCTS

2.1 FACILITIES AND CONTROLS

- A. Access: The Prime General Contractor shall provide an adequate access and/or roads to the site of the structure, if required for the prosecution of work; and, should also provide and maintain at least one (1) temporary, or permanent, access to each working elevation to be permanently occupied.
- B. Hoisting Facilities: The Prime General Contractor shall be responsible for providing suitable capacity and hoisting facilities for all people and materials. The use of the hoisting facilities shall be by mutual agreement of the Prime General Contractor and the individual Contractor.
- C. Sanitation Facilities: The Prime General Contractor is responsible for furnishing adequate temporary toilet facilities on the job site.
- D. Drinking Water: The Prime General Contractor shall provide at all times sanitary drinking water facilities for all workmen on the job including ice, when required, and paper cups, etc..
- E. Fire Protection: The Prime General Contractor shall provide general temporary fire protection. Subcontractors will be responsible for their own.
- F. Storage: The Prime General Contractor shall coordinate the allocation of storage areas to the various Sub- contractors.
- G. Temporary Heat: The Prime General Contractor shall provide heat, fuel and services, as necessary, to protect all work from dampness and cold until final acceptance. If in the late stages of the construction, mechanical and electrical installations will permit, the mechanical and electrical facilities may be used to provide heat and ventilation. However, the Owner is saved harmless of any costs of operation or responsibility as to acceptance of mechanical and/or electrical installations.
- H. Utilities: The Prime General Contractor shall make arrangements for and furnish all water, electricity (lighting and power) and other utilities necessary for construction purposes. A written agreement must be reached on how all utilities (water and electricity) will be furnished and the rates the Contractor will be charged. A copy of the final agreement signed by the Contractor and MSU must be forwarded to MSU. If the written agreement is not filed with MSU, the Contractor waives all rights as to the rates charged. MSU will then determine all utility rates and assess the charges before final payment is rendered.
- I. Project Sign:
 - 1. The Prime General Contractor shall erect on adequate supports and maintain one (1) neatly constructed and painted 3/4” thick plywood sign approximately four (4) feet by

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eight (8) feet. The Professional will provide colors, lettering, layout and location of the sign.

2. No other signs shall be displayed on the job site without permission of the Professional. The display of sign advertisements is strictly prohibited.

J. Construction Site Fence:

1. General

- a. Site Enclosure Fence: The contractor is required to install a construction fence, as shown in the plans, to be maintained, as needed, throughout the duration of the project. The site enclosure fence should be kept in a manner that will prevent people and animals from easily entering the site except by entrance gates.
 - 1) Extent of Fence: As indicated on Drawings.
 - 2) Maintain security by limiting number of keys and restricting distribution to authorized personnel. Allow owner to interlock their lock as necessary.
 - 3) The Contractor shall call Mississippi One-Call System, Inc., before driving any posts for the fencing.
 - 4) Signs shall not be posted on the fence system except: "Caution: Construction Area Authorized Personnel Only" signs may be installed at 50 foot intervals; safety related signs required by OSHA; and visitor site entry rules as required by the Contractor. Advertising signage is strictly prohibited.
 - 5) The Contractor shall keep plant growth from around the base of the fence by either trimming or chemical treatment.
 - 6) Fence shall be maintained for the duration of the project, and shall not be removed without the Owner's permission.

2. Fence Design And Materials

- a. The minimum height for all temporary fencing shall be 8 feet.
- b. The fencing shall be of galvanized 11-1/2 ga. chain-link construction with a minimum of 1-5/8" O.D. tubular steel posts and top rails, and bottom tension wire.
- c. Privacy netting to screen construction activities shall be used on all projects unless specified otherwise in the contract documents.
- d. Privacy screen material shall be knitted high density polyethylene with no fillers, 90% privacy, 6' tall, black, seamed reinforced hems at all edges and grommets a maximum of 24" on center, custom MSU logo printed every 25' (file to be provided by Owner), equal to Fence Screen's (fencescreen.com) Builder Logo Roll - 111 Series. Logo to be 5' wide and 3' tall. Contractor to provide art of custom printed windscreen to Owner/Architect for approval.
- e. Unless indicated on the site plan, portable or panel fencing is only allowed in special circumstances and requires approval by the Owner in advance.

3. Gates

- a. Limit entrance/exit to no more than two locations, unless otherwise approved by the Owner.
- b. Gates shall be a minimum of 12 feet in width to allow access for emergency vehicles.

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- c. Where other transportation authorities need to review gate locations and operation, communication with those authorities will be coordinated through the Owner.
- d. Gates shall be closed and locked at all times the site is not occupied, unless otherwise directed by the Owner where emergency vehicle passage through the site is needed to access existing occupied buildings.

2.2 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly. Furnish and equip offices as follows:
 - 1. Furniture required for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
 - 2. Conference room of sufficient size to accommodate meetings of 10 individuals. Provide electrical power service and 120-V ac duplex receptacles, with no fewer than one receptacle on each wall. Furnish room with conference table, chairs, and 4-foot- square tack and marker boards.
 - 3. Drinking water and private toilet.
 - 4. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F.
 - 5. Lighting fixtures capable of maintaining average illumination of 20 fc at desk height.
 - 6. Adequate audio/video equipment for virtual meetings. Include web camera, microphone and speakers.
 - 7. All mobile trailer units (prime contractor and subcontractors) must have vinyl skirting.
- C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
 - 1. Store combustible materials apart from building.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART 3 - EXECUTION

3.1 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:

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1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
 2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- 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, fire department connections, PIVs and any other fire suppression system components.
- C. Parking:
1. Provide temporary parking areas for construction personnel within project's fenced-in area.
 2. If parking is required outside the project's fenced-in area or if the project location does not allow a fenced-in parking/laydown area, then the Contractor may purchase permits from MSU Parking & Transit Services.
 - a. Vendor Permits: These can be purchased by any non-MSU organization conducting business on campus.
 - b. Time-Limited Permits: Contractor shall verify quantity and cost of time-limited permits that can be purchased prior to bidding the project. Time limited permits can only be used for specific parking locations.
 3. Visit <https://www.parkingservices.msstate.edu/> for more information.
- D. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. 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. Remove snow and ice as required to minimize accumulations.
- 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 01730 "Execution."
- F. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate.
- G. Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

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3.2 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 and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
 - 1. Comply with work restrictions specified in Section 011000 "Summary."
- C. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- D. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings.
 - 1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant- protection zones.
 - 2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
 - 3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.
 - 4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.
 - 5. If temporary erosion and sedimentation control is not adequately maintained, then Contractor is responsible for cleaning and/or removing sediment for affected storm drain systems.
- E. Storm water Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of storm water from heavy rains.
- F. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.
- G. Barricades, Warning Signs, and Lights: Provide as indicated in the Contract Documents and comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

3.3 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.

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- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
1. Protect porous materials from water damage.
 2. Protect stored and installed material from flowing or standing water.
 3. Keep porous and organic materials from coming into prolonged contact with concrete.
 4. Remove standing water from decks.
 5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 2. Keep interior spaces reasonably clean and protected from water damage.
 3. Periodically collect and remove waste containing cellulose or other organic matter.
 4. Discard or replace water-damaged material.
 5. Do not install material that is wet.
 6. Discard, replace, or clean stored or installed material that begins to grow mold.
 7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
 2. Use permanent HVAC system to control humidity.
 3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
 - a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.
 - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
 - c. Remove materials that cannot be completely restored to their manufactured moisture level within 48 hours.

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.

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1. 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, if necessary, 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. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. 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 temporary entrances, as required by authorities having jurisdiction.
 3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 01710 "Cleaning."

***** End of Section *****