

Section 01504

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary facilities and necessary controls for project including utilities, telephone, sanitary facilities, storage sheds and building, safety requirements, first aid equipment, fire protection, security measures, protection of Work and property, access roads and parking, environmental controls, pest and rodent control and disposal of trash, debris and excavated material.
- B. Facilities and controls specified in this section are considered minimum for Project. Provide additional facilities and controls for proper execution of Work and to meet Contractors responsibilities for protection of persons and property.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices:
 - 1. No payment will be made for this item. Include the cost of Temporary Facilities and Controls in associated items for this project.
 - 2. No separate payment will be made for construction fencing.
- B. Stipulated Price (Lump Sum). If Contract is a Stipulated Price Contract, payment for Work in this Section is included in total Stipulated Price.

1.03 CONTRACTORS RESPONSIBILITY

- A. Comply with applicable requirements specified in other sections of Specifications.
- B. Maintain and operate temporary facilities and systems to assure continuous service.
- C. Modify and extend systems, as Work progress requires.
- D. Completely remove temporary materials and equipment when no longer required.
- E. Restore existing facilities used for temporary services to specified or to original condition.

PART 2 PRODUCTS

2.01 TEMPORARY UTILITIES

- A. Obtaining Temporary Service:

1. Make arrangements with utility service companies for temporary services.
2. Abide by rules and regulations of utility service companies or authorities having jurisdiction.
3. Be responsible for utility service costs until Work is substantially complete. Included are fuel, power, light, heat, and other utility services necessary for execution, completion, testing, and initial operation of Work.

B. Water:

1. Provide water required for and in connection with Work to be performed and for specified tests of piping, equipment, devices, or for other use as required for proper completion of Work.
2. Water may be drawn from public fire hydrants. Obtain transit meter from City of Tomball, Department of Public Works and Engineering, Taps and Meters Section. Deposit based on rates established by latest ordinance will be required.
3. Provide and maintain adequate supply of potable water for domestic consumption by Contractor personnel and City Engineer.

C. Electricity and Lighting:

1. Provide electric powered service required for Work, including testing of Work. Provide power for lighting, operation of equipment, or other use.
2. Electric power service includes temporary power service or generator to maintain plant operations during scheduled shutdown.
3. Minimum lighting level shall be 10-foot candles for open areas; 20-foot candles for stairs and shops. Provide minimum of one 300-watt lamp for each 200 square feet in work area.

D. Temporary Heat and Ventilation:

1. Provide temporary heat as necessary for protection or completion of Work.
2. Provide temporary heat and ventilation to assure safe working conditions; maintain enclosed areas at minimum of 50 degrees F.

E. Telephone:

1. Provide emergency telephone service at Project Site for use by Contractor personnel and others performing work or furnishing services at site.

2. Provide Tomball-Metro lines, allowing unlimited calls, without charge in Greater Houston Metropolitan area with "call waiting" and "call forwarding" options. Provide one telephone answering machine with beeper less remote message retrieval capability.

F. Sanitary Facilities:

1. Provide and maintain sanitary facilities for persons on job site; comply with regulations of State and local departments of health.
2. Enforce use of sanitary facilities by construction personnel at job site. Enclose sanitary facilities. Pit-type toilets will not be permitted. No discharge will be allowed from these facilities. Collect and store sewage and waste so as not to cause nuisance or health problem. Haul sewage and waste off-site and properly dispose in accordance with applicable regulation.
3. Locate toilets near Work site and secluded from view insofar as possible. Keep toilets clean and supplied throughout course of Work.

2.02 STORAGE SHEDS AND BUILDINGS

1. Provide adequately ventilated, watertight storage facilities with floor above ground level for materials and equipment susceptible to weather damage.
2. Storage of materials not susceptible to weather damage may be on blocks off ground.
3. Store materials in neat and orderly manner. Place materials and equipment to permit easy access for identification, inspection and inventory.
4. Fill and grade site for temporary structures to provide drainage away from temporary and existing buildings.

2.03 SAFETY REQUIREMENTS

1. At preconstruction conference submit and follow safety program in accordance with Document 00700 - General Conditions. Include documented response to trench safety requirements as specified in Document 00804 - Trench Safety System.
2. Conduct operations in strict accord with applicable Federal, State and local safety codes and statutes and with good construction practice. Establish and maintain procedures for safety of all work, personnel and equipment involved in Project.
3. Observe and comply with Texas Occupational Safety Act (Art. 5182a, V.C.S.) and with all safety and health standards promulgated by Secretary of Labor under Section 107 of Contract Work Hours and Standards Act, published in 29 CFR Part 1926 and adopted by Secretary of Labor as occupational safety and health standards under Williams-Steiger

Occupational Safety and Health Act of 1970, and to other legislation enacted for safety and health of Contractor employees. Safety and health standards apply to subcontractors and their employees as well as to Contractor and its employees.

4. Observance of and compliance with regulations is solely and without qualification responsibility of Contractor without reliance or superintendence of or direction by City Engineer. Immediately advise City Engineer of investigation or inspection by Federal Safety and Health Inspectors of Contractor or subcontractor's work or place of work on job site under this Contract, and after investigation or inspection, advise City Engineer of results. Submit one copy of accident reports to City Engineer within 10 days of occurrence.
5. Protect areas occupied by workmen using best available devices for detection of lethal and combustible gases. Test devices frequently to assure functional capability. Constantly observe infiltration of liquids into Work area for visual or odor evidences of contamination, immediately take appropriate steps to seal off entry of contaminated liquids to Work area.
6. Implement safety measures, including but not limited to safety personnel, first-aid equipment, ventilating equipment and other safety equipment, as specified or detailed on Drawings.
7. Maintain required coordination with City's Police and Fire Departments during entire period covered by Contract.
8. In safety plan include project safety analysis. Itemize major tasks and potential safety hazards. Plan to eliminate hazards or protect workers and public from each hazard.

2.04 FIRST AID EQUIPMENT

1. Provide first aid kit throughout construction period. List telephone numbers for physicians, hospitals, and ambulance services in each first aid kit.
2. Have at least one person thoroughly trained in first aid and CPR procedures present on site whenever Work is in progress. Contractor to conform to protocols and requirements for training and protection against blood borne pathogens@.

2.05 FIRE PROTECTION

1. Conform to specified fire protection and prevention requirements established by Federal, State, or local governmental agencies and as provided in Safety Program.

2.06 SECURITY MEASURES

1. Protect all Work materials, equipment, and property from loss, theft, damage, and vandalism. Duty to protect property of City Engineer used in connection with performance of Contract.
2. If existing fencing or barriers are breached or removed for purposes of construction, provide and maintain temporary security fencing equal to existing.

2.07 PROTECTION OF UTILITIES AND PIPELINES

1. Prevent damage to existing utilities during construction. Utilities shown on Drawings are at approximate locations. Pre-locate, by whatever means may be required (metal detection equipment, probes, excavation, survey), underground utilities before excavating. Perform investigative work and repairs required after investigation. Contractor is responsible for damages caused by failure to locate and preserve these underground utilities. Give owners of utilities at least 5 days notice before commencing Work in area, for locating utilities during construction, and for making adjustments or relocation of utilities when they conflict with proposed Work. Include cost for temporary relocation of utilities necessary to accommodate construction in unit cost for utility construction unless otherwise noted on Drawings. Bypassing of sanitary waste to storm drainage facilities is not allowed. Utility service lines are not shown on Drawings. Anticipate service lines exist and repair them when damaged due to construction activity. No separate payment will be made for repair work. Include payment in unit price for work in appropriate sections.
2. Utilize Utility Coordinating Committee One Call System, telephone number, (713) 223-4567, which must be called 48 hours in advance. Toll free telephone number is 1-800-669-8344, Texas One Call System.
3. Prior to abandonment of utility, make arrangements with City Engineer and utility owner to terminate service, remove meters, transformers, and poles as required.
4. When excavating near pipelines and prior to start of excavation, request representative of pipeline company to come to construction site(s) to meet representatives of Contractor and City Engineer to discuss actual procedures that will be used. Request pipeline company's representative to probe and locate pipelines in at least three locations: one at each side of proposed excavation and one at centerline of proposed utility. Representative of pipeline company and City Engineer must be present to observe activities of Contractor at all times when excavation is being conducted within 15 feet of pipeline.

2.08 PROTECTION OF WORK AND PROPERTY

A. Preventive Actions:

1. Take precautions, provide programs, and take actions necessary to protect Work, public and private property from damage.
2. Take action to prevent damage, injury or loss, including, but not limited to, the following:
 - a. Store apparatus, materials, supplies, and equipment in orderly, safe manner that will not interfere with progress of Work or Work of others.
 - b. Provide suitable storage for materials subject to damage by exposure to weather, theft, breakage, or otherwise.
 - c. Place upon Work or any part thereof only safe loads.
 - d. Frequently clean up refuse, rubbish, scrap materials, and debris caused by construction operations, keeping Project site safe and orderly.
 - e. Provide safe barricades and guard rails to protect pedestrian and vehicular traffic around openings, scaffolding, temporary stairs and ramps, excavations, elevated walkways, and other hazardous areas.
3. Obtain written consent from proper parties before entering or occupying privately-owned land except on easements provided for construction.
4. Assume full responsibility for preservation of public and private property on or adjacent to site. When direct or indirect damage is done by or on account of any act, omission, neglect, or misconduct in execution of Work by Contractor, restore to condition equal to or better than that existing before damage was done.

B. Barricades and Warning Signals: Where Work is performed on or adjacent to any roadway, right-of-way, or public place, furnish and erect barricades, fences, lights, warning signs, and danger signals; and take other precautionary measures for protection of persons or property and of the Work. Paint barricades to be visible at night. From sunset to sunrise, furnish and maintain at least one light at each barricade. Erect sufficient barricades to keep vehicles and pedestrians from being driven on or into Work under construction. Maintain barricades, signs, lights, and provide watchmen until Project is accepted by City Engineer. Whenever Work creates encroachment on public roadways, station flagmen to manage traffic flow in accordance with approved traffic control plan.

C. Protection of Existing Structures:

1. Underground Structures:

1. Underground structures are defined to include, but not be limited to, sewer, water, gas, and other piping, manholes, chambers, electrical signal and communication conduits, tunnels, and other existing subsurface installations located within or adjacent to limits of Work.
 2. Known underground structures including water, sewer, electric, and telecommunication service connections are shown on Drawings. This information is not guaranteed to be correct or complete.
 3. Explore ahead of trenching and excavation work and sufficiently uncover obstructing underground structures to determine their location, to prevent damage to them and to prevent interruption of utility services. Restore damage to underground structure to original condition at no additional cost to City.
 4. Necessary changes in location of Work may be made by City Engineer to avoid unanticipated underground structures.
 5. If permanent relocation of underground structure or other subsurface installations is required and not otherwise provided in Contract, City Engineer will direct Contractor in writing to perform Work, which is paid for under provisions for changes in Contract Price as described in Document 00700 - General Conditions.
2. Surface Structures: Surface structures are defined as existing buildings, structures and other constructed installations above ground surface. Included with structures are their foundations or extension below the surface. Surface structures include, but are not limited to buildings, tanks, walls, bridges, roads, dams, channels, open drainage, piping, poles, wires, posts, signs, markers, curbs, walks, guard cables, fencing, and other facilities visible above ground surface.
3. Protection of Underground and Surface Structures:
1. Support in place and protect from direct or indirect injury underground and surface structures located within or adjacent to limits of Work. Install supports carefully and as required by party owning or controlling structure. Before installing structure supports, satisfy City Engineer that methods and procedures have been approved by owner of structure.
 2. Avoid moving or changing property of public utilities or private corporations without prior written consent of responsible official of that service or public utility. Representatives of these utilities reserve the right to enter within limits of this Project for purpose of maintaining their properties, or of making changes or repairs to their property that may be considered necessary by performance of this Contract.

3. Notify owners and/or operators of utilities and pipelines of the nature of construction operations and dates when operations will be performed. When construction operations are required in immediate vicinity of existing structures, pipelines, or utilities, give minimum of 5 working days advance notice. Probe and flag location of underground utilities prior to commencement of excavation. Keep flags in place until construction operation reaches and uncovers utility.
4. Assume risks attending presence or proximity of underground and surface structures within or adjacent to Work including but not limited to damage and expense for direct or indirect injury caused by his work to structure. Immediately repair damage.
5. Employ structural engineer to ensure safety and integrity of structures and facilities.

D. Protection of Installed Products:

1. Provide protection of installed products to prevent damage from subsequent operations. Remove protection facilities when no longer needed, prior to completion of Work.
2. Control traffic to prevent damage to equipment, materials, and surfaces.
3. Provide coverings to protect equipment and materials from damage. Cover projections, wall corners, jambs, sills, and exposed sides of openings in areas used for traffic and passage of materials in subsequent work.

2.09 ROADS AND PARKING

1. Prevent interference with traffic and City operations on existing roads.
2. Designate temporary parking areas to accommodate construction and city personnel. When site space is not adequate, provide additional off-site parking. Locate as approved by City Engineer.
3. Minimize use by construction traffic of existing streets and driveways.
4. Do not allow heavy vehicles or construction equipment in existing parking areas.

2.10 ENVIRONMENTAL CONTROLS

1. Provide and maintain methods, equipment, and temporary construction as necessary for controls over environmental conditions at construction site and adjacent areas.
2. Comply with statutes, regulations, and ordinances which relate to proposed Work for prevention of environmental pollution and preservation of natural resources, including but

not limited to National Environmental Policy Act of 1969, PL 91-190, Executive Order 11514.

3. Work to minimize impact to surrounding environment. Adopt construction procedures that do not cause unnecessary excavation and filling of terrain, indiscriminate destruction of vegetation, air or stream pollution, nor harassment or destruction of wildlife.
4. Recognize and adhere to environmental requirements of Project. Limit disturbed areas to boundaries established by Contract. Avoid pollution of "on-site" streams, sewers, wells, or other water sources.
5. Burning of rubbish, debris or waste materials is not permitted.

2.11 POLLUTION CONTROL

1. Provide methods, means, and facilities required to prevent contamination of soil, water or atmosphere by discharge of noxious substances from construction operations.
2. Provide equipment and personnel to perform required emergency measures to contain spillage, and to remove contaminated soils or liquids. Excavate and dispose of contaminated earth off-site, and replace with suitable compacted fill and topsoil.
3. Provide systems for control of atmospheric pollutants.
 1. Prevent toxic concentrations of chemicals.
 1. Prevent harmful dispersal of pollutants into atmosphere.
 4. Use equipment that conforms to current Federal, State, and local laws and regulations.
 5. Install or otherwise implement positive controls to prevent hazardous materials migrating from Work area.

2.12 PEST AND RODENT CONTROL

1. Provide rodent and pest control as necessary to prevent infestation of construction or storage areas.
2. Employ methods and use materials, which will not adversely affect conditions at site or on adjoining properties.

2.13 NOISE CONTROL

- A. Provide vehicles, equipment, and construction activities that minimize noise to greatest degree practicable. Conform noise levels to latest OSHA standards and local Noise and

Sound Level Regulation, Code of Ordinances, City of Tomball, Texas. Do not permit noise levels to interfere with Work or create nuisance in surrounding areas.

- B. Conduct construction operations during daylight hours except as approved by City Engineer.
- C. Select construction equipment to operate with minimum noise and vibration. When in opinion of City Engineer, objectionable noise or vibration is produced by equipment, rectify conditions without additional cost to City. Sound Power Level (PWL) of equipment shall not exceed 85 dbA (re: 10^{-12} watts) measured 5 feet from piece of equipment, or levels prescribed by City Ordinances, whichever is lower. Explicit equipment noise requirements are specified with equipment specifications.

2.14 DUST CONTROL

- A. Control objectionable dust caused by operation of vehicles and equipment. Apply water or use other methods, subject to approval of City Engineer, to control amount of dust generated. City Engineer will direct how often to apply water or other approved method.

2.15 WATER RUNOFF AND EROSION CONTROL

- A. Comply with National Pollutant Discharge Elimination system (NPDES) permit as stated in Federal Register, Vol.57, No.175 when required.
- B. In addition to NPDES requirements:
 1. Provide methods to control surface water, runoff, subsurface water, and water from excavations and structures to prevent damage to Work, site, or adjoining properties.
 2. Control fill, grading and ditching to direct water away from excavations, pits, tunnels, and other construction areas; and to direct drainage to proper runoff courses so as to prevent erosion, sedimentation or damage.
 3. Provide, operate, and maintain equipment and facilities of adequate size to control surface water.
 4. Dispose of drainage water in manner to prevent flooding, erosion, or other damage to portion of site or to adjoining areas and in conformance with environmental requirements.
 5. Retain existing drainage patterns external to construction site by constructing temporary earth berms, sedimentation basins, retaining areas, and temporary ground cover as needed to control conditions.
 6. Plan and execute construction and earthwork by methods to control surface drainage from cuts and fills, and from borrow and waste disposal areas, to prevent erosion and sedimentation.

1. Minimize area of bare soil exposed at one time.
2. Provide temporary control measures, as berms, dikes, and drains.
7. Construct fills and waste areas by selective placement to eliminate erosion of surface silts or clays.
8. Inspect earthwork periodically to detect evidence of start of erosion. Apply corrective measures as required to control erosion.

PART 3 EXECUTION - Not Used

END OF SECTION