

DIVISION III
GENERAL CONSTRUCTION REQUIREMENTS

SECTION 30

GENERAL

30.1 GRADES, SURVEY LINES, AND PROTECTION OF MONUMENTS

30.1.1 GRADE

All WORK shall be constructed in accordance with the lines and grades shown on the PLANS. The full responsibility for keeping alignment and grade shall rest upon the CONTRACTOR.

Elevation bench marks and horizontal control points shall be established prior to beginning work. The CITY shall not be responsible for providing horizontal or vertical survey controls. Reference marks for lines and grades as the work progresses will be located to cause as little inconvenience to the prosecution of the work as possible. The CONTRACTOR shall so place excavation and other materials as to cause no inconvenience in the use of the reference marks provided. The CONTRACTOR shall remove any obstructions placed contrary to this provision.

30.1.2 SURVEYS

The CONTRACTOR shall furnish and maintain, at his own expense, stakes and other such materials and give such assistance, including qualified helpers, for setting reference marks to the satisfaction of the CITY and the ENGINEER. The CONTRACTOR shall check such reference marks by such means as he may deem necessary and, before using this, shall call the CITY's attention to any inaccuracies. The CONTRACTOR shall, at his own expense, establish all working or construction lines and grades as required from the reference marks and shall be solely responsible for the accuracy thereof. The CONTRACTOR shall, however, be subject to the check and review of the CITY.

30.1.3 MONUMENT PRESERVATION

Property corners and survey monuments shall be preserved using care not to disturb or destroy them. If a property corner or survey monument is disturbed or destroyed during construction, whether by accident, careless work, or required to be disturbed or destroyed by the construction work, said property corner or survey monument shall be restored by a land surveyor registered in the State of Florida. All costs for this work shall be paid for by the CONTRACTOR.

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30.2 UTILITY COORDINATION

30.2.1 LOCATION OF UTILITIES

Prior to proceeding with trench excavation, the CONTRACTOR shall contact the CALL SUNSHINE one call system at 1-800-432-4770 and all non-member utility companies in the area to aid in locating their underground services. It shall be the CONTRACTOR's responsibility to contact utility companies at least forty eight (48) hours before starting construction. The CONTRACTOR shall proceed with caution in the excavation and preparation of the trench so that the exact location of underground utilities may be determined.

The CONTRACTOR shall take all reasonable precautions against damage to existing utilities. However, in the event of a break in an existing water main, gas main, sewer, or underground cable, the CONTRACTOR shall immediately notify the responsible official of the organization operating the interrupted utility. The CONTRACTOR shall lend all possible assistance in restoring services. The responsibility for all costs, charges, or claims connected with the interruption and repair of such services shall be determined in accordance with Florida Statutes.

30.2.2. DEVIATIONS OCCASIONED BY STRUCTURES OR UTILITIES

Wherever obstructions are encountered during the progress of the WORK and interfere to such an extent that an alteration in the PLANS is required, the CITY shall have the authority to order a deviation from the line and grade or arrange with the owners of the structures for the removal, relocation, or reconstruction of the obstructions. Where gas, water, telephone, electrical, steam, or other existing utilities are an impediment to the vertical or horizontal alignment of the proposed pipe line, the CITY shall order a change in grade or alignment or shall direct the CONTRACTOR to arrange with the owners of the utilities for their removal. If a change in line or grade of a gravity sewer is necessary, the CITY will require the addition of any manholes needed to maintain the integrity of the sewer system.

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30. 2. 3 TEST PITS

Test pits for the purpose of locating underground pipeline, utilities, or structures in advance of the construction shall be excavated and backfilled by the CONTRACTOR. Test pits shall be backfilled immediately after their purpose has been satisfied and maintained in a manner satisfactory to the CITY. The costs for such test pits shall be borne by the CONTRACTOR.

30. 3 MAINTENANCE OF TRAFFIC AND CLOSING OF STREETS

Where required by the CITY, the CONTRACTOR shall provide a Maintenance of Traffic Plan to the CITY for approval prior to the start of any construction activities. The CONTRACTOR shall carry on the WORK in a manner which will cause a minimum of interruption to traffic.

Where traffic must cross open trenches, the CONTRACTOR shall provide suitable bridges at street intersections and driveways. The CONTRACTOR shall post suitable signs indicating that a street or sidewalk is closed and necessary detour signs for the proper maintenance of traffic. Prior to closing of any streets or sidewalk, the CONTRACTOR shall notify and obtain the approval of responsible authorities and the CITY.

Unless permission to close a street or sidewalk is received in writing from the proper authority (the CITY, Seminole County, FDOT, etc.), all construction operations shall be conducted so that vehicular and pedestrian traffic may be maintained at all times. If the CONTRACTOR's operations cause traffic hazards, he shall repair the road surface, provide temporary ways, erect wheel guards or fences, or take other measures for safety satisfactory to the CITY.

Detours around construction will be subject to the approval of the authority having jurisdiction and the CITY. Where detours are permitted, the CONTRACTOR shall provide all necessary barricades and signs as required to divert the flow of traffic. While traffic is detoured, the CONTRACTOR shall expedite construction operations. Periods when traffic is being detoured will be strictly controlled by the CITY.

It shall be the sole responsibility of the CONTRACTOR to take precautions to prevent injury to the public due to open trenches. Night watchmen may be required where special hazards exist, or police protection provided for traffic while work is in progress. The CONTRACTOR shall be fully responsible for damage or injuries whether or not police protection has been provided.

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30.4 PROTECTION OF PUBLIC AND PROPERTY

30.4.1 BARRICADES, GUARDS, AND SAFETY PROVISIONS

The CONTRACTOR shall be solely responsible for adhering to the rules and regulations of OSHA and appropriate authorities regarding safety provisions. To protect persons from injury and to avoid property damage, adequate barricades, construction signs, lights, and guards as required shall be placed and maintained by the CONTRACTOR at his expense during the progress of the WORK and until it is safe for traffic to use the roads and streets. All material piles, equipment, and pipe, which may serve as obstructions to traffic, shall be enclosed by fences or barricades and shall be protected by proper lights when the visibility is poor.

All signage and barricades shall be in accordance with the MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, the TRAFFIC CONTROL AND SAFE PRACTICES MANUAL, and the Florida Department of Transportation's Roadway and Traffic Design Standards.

30.4.2 PROTECTION OF UTILITY STRUCTURES

Temporary support, adequate protection, and maintenance of all underground and surface utility structures, including drains, sewers, manholes, hydrants, valves, valve covers, power poles, and miscellaneous other utility structures encountered in the progress of the WORK shall be furnished by the CONTRACTOR at his expense. Any such structures which may have been disturbed shall be restored upon completion of the WORK.

30.4.3 OPEN EXCAVATION

The CONTRACTOR shall comply with the Florida Trench Safety Act. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights, and other means to prevent accidents to persons and damage to property. The CONTRACTOR shall, at his own expense, provide suitable and safe bridges with hand railings and other crossings for accommodating travel by pedestrians and workmen. Bridges provided for access to private property during construction shall be removed when no longer required. The length of open trench will be controlled by the particular surrounding conditions, but shall be limited to 300 feet unless otherwise approved by the CITY.

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If the excavation becomes a hazard, or if it excessively restricts traffic at any point, the CITY may require special construction procedures, such as limiting the length of open trench, fencing, prohibiting excavated material in the street, and requiring that the trench shall not remain open overnight. The CONTRACTOR shall take precautions to prevent injury to the public due to open trenches. All trenches, excavated material, equipment, or other obstacles which could be dangerous to the public shall be well lighted at night.

30.4.4 PROTECTION OF TREES AND SHRUBS

All trees and shrubs not shown to be removed on the PLANS shall be protected by the CONTRACTOR at his expense. No excavated materials shall be placed so as to injure such trees or shrubs. Trees or shrubs destroyed by negligence of the CONTRACTOR or his employees shall be replaced by him with new stock of similar or equivalent size and age at the sole expense of the CONTRACTOR. The caliper of all trees shall be measured at four and one half (4 1/2) feet from the ground.

30.4.5 PROTECTION OF LAWN AREAS

Lawn areas shall be left in as good or better condition as before starting of the WORK. Where sod is to be removed, it shall be carefully restored with new sod of the same type.

30.4.6 RESTORATION OF PRIVATE PROPERTY IMPROVEMENTS

Fences and other private property improvements, or any part thereof, that is damaged or removed during the course of the WORK shall be replaced or repaired by the CONTRACTOR and shall be left in as good or better condition as before the starting of the WORK. The manner in which the improvement is repaired or replaced and the materials used shall be subject to the approval of the CITY and the property owner.

30.4.7 PROTECTION AGAINST SILTATION AND BANK EROSION

The CONTRACTOR shall arrange his operations to minimize siltation and bank erosion on construction sites and on existing or proposed water courses and drainage ditches. Silt barriers and protective measures shall be used when the CONTRACTOR is working adjacent to wetlands and other sensitive areas. The CONTRACTOR, at his own expense, shall remove any siltation deposits and restore to original grade.

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30.5 ACCESS TO THE PUBLIC SERVICES

Neither the materials excavated nor the materials or equipment used in the construction of the WORK shall be so placed as to prevent free access to public services. All excavated material shall be piled in a manner that will not endanger the WORK and that will avoid obstructing streets, sidewalks, and driveways. Excavated material suitable for backfilling shall be stockpiled separately on the site. No material shall be placed closer than 2 feet from the edge of an excavation. Fire hydrants under pressure, valve pit covers, valve boxes, curb stop boxes, or other utility controls shall be left unobstructed and accessible until the WORK is completed. Gutters shall be kept clear or other satisfactory provisions made for street drainage. Natural water courses shall not be obstructed or polluted. Surplus material and excavated material unsuitable for backfilling shall be transported and disposed of off the site in disposal areas obtained by the CONTRACTOR.

30.6 PUBLIC NUISANCE

The CONTRACTOR shall not create a public nuisance including but not limited to encroachment on adjacent lands, flooding of adjacent lands, or excessive noise or dust. The CONTRACTOR shall control noise to the extent practicable at all times.

30.7 CONSTRUCTION HOURS

No WORK that requires CITY inspection shall be done between the weekday hours of 4:00 p.m. and 7:00 a.m., Saturdays, Sundays, or CITY recognized holidays unless the proper and efficient prosecution of the WORK requires operations during these hours. In the event that such work hours are necessary, the CONTRACTOR shall reimburse the CITY for all costs associated with inspection staff overtime. Written notification for doing the WORK shall be provided to the CITY a minimum 48 hours before starting WORK within the above restricted hours and shall be subject to the availability of the inspection staff.

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30.8 CONSTRUCTION IN EASEMENTS AND RIGHTS-OF-WAY

30.8.1 CONSTRUCTION IN EASEMENTS

In easements across private property, the CONTRACTOR shall confine all operations within the easement area and shall be responsible and liable for all damage outside of the easement area. Trees, fences, shrubbery, or other type of surface improvements located in easements shall be protected during construction. Precautions shall be taken by adequate sheeting or other approved method to prevent any cave-in or subsidence beyond the easement limits or damage to improvements within the easement. In general, the easement area is intended to provide reasonable access and working area for efficient operation by the CONTRACTOR. Where easement space for efficient operation is not provided, the CONTRACTOR shall be responsible for organizing his operations to perform within the restrictions shown on the PLANS. The CONTRACTOR shall be responsible for fully restoring all disturbed property to its pre-construction condition up to and including resodding with similar type grass, replacing fences, etc.

30.8.2 CONSTRUCTION IN FLORIDA DEPARTMENT OF TRANSPORTATION AND SEMINOLE COUNTY RIGHT-OF-WAY

The CONTRACTOR shall strictly adhere to the requirements of the Florida Department of Transportation and Seminole County where construction work is in a right-of-way under either jurisdiction and shall take care to avoid any unreasonable traffic conflicts due to the WORK in said right-of-way.

30.8.3 CONSTRUCTION IN CITY RIGHT-OF-WAY

WORK done within the CITY's rights-of-way shall be governed by the City of Sanford's right-of-way utilization regulations and this MANUAL.

30.9 SUSPENSION OF WORK DUE TO WEATHER

During inclement weather, all WORK which might be damaged or rendered inferior by such weather conditions shall be suspended. During suspension of the WORK from any cause, the WORK shall be suitably covered and protected so as to preserve it from injury by the weather or otherwise. Partially installed pipe shall be plugged and restrained to prevent flotation.

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30.10 USE OF CHEMICALS

All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant, or of other classification, must show approval of either the United States Environmental Protection Agency or United States Department of Agriculture and be applied by a State of Florida licensed individual. Use of all such chemicals and disposal of residues shall be in strict conformance with label instructions.

30.11 COOPERATION WITH OTHER CONTRACTORS AND FORCES

During construction progress, it may be necessary for other contractors and persons employed by the CITY to work in or about the site. The CITY reserves the right to put such other contractors to work and to afford such access to the construction site and at such times as the CITY deems proper. The CONTRACTOR shall not impede or interfere with the work of such other contractors and shall cooperate with the other contractor(s) for proper prosecution of the work.

30.12 SUBSURFACE EXPLORATION

The CONTRACTOR shall make such subsurface explorations as he believes necessary to perform the WORK.

30.13 CLEANING

30.13.1 DURING CONSTRUCTION

During construction, the CONTRACTOR shall, at all times, keep the construction site and adjacent premises as free from material, debris, and rubbish to the extent practicable and shall remove the same from any portion of the site if, in the opinion of the CITY, such material, debris, or rubbish constitutes a nuisance or is objectionable.

30.13.2 FINAL CLEANING

At the conclusion of the WORK, all tools, temporary structures, and materials belonging to the CONTRACTOR shall be promptly taken away. The CONTRACTOR shall remove and promptly dispose of all water, dirt, rubbish, or any other foreign substances.

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30.14 SALVAGE

Any existing CITY-owned equipment or material, including but not limited to valves, pipes, fittings, couplings, bricks, curbing, structures, etc., which are removed or replaced as a result of construction may be designated as salvage by the CITY and, if so, shall be carefully excavated if necessary and delivered to the CITY at a location within the CITY.

30.15 SHOP DRAWINGS AND SAMPLES

For projects that are to remain private, the CONTRACTOR shall submit one (1) copy of all shop drawings, unless otherwise requested by the DIRECTOR, reviewed and signed by the DEVELOPER'S ENGINEER, to the CITY prior to the start of construction. The CITY shall receive for approval, prior to the start of construction, four (4) copies of said documents for projects that are to be dedicated to the CITY. The data shown on the shop drawings shall be complete with respect to dimensions, design criteria, materials of construction, and the like to enable review of the information as required.

The CONTRACTOR shall, if requested by the CITY, furnish certificates, affidavits of compliance, test reports, or samples for check analysis for any of the materials not specified in this MANUAL.