

**PRECONSTRUCTION CONFERENCE**

After award and prior to the issuance of the "Notice to Proceed", a preconstruction conference will be held with representatives from the awarded Bidder, CEI Team (if applicable), Engineering Team, City of Doral, various utility companies, and other stakeholders, for the purpose of coordinating the Work. The City will discuss requirements of such matters as project supervision and inspections, progress schedules and reports, Contract Change Orders, insurance, safety, and other items pertinent to the Project. The time and place of the meeting shall be set by the City's project manager.

In some cases, the preconstruction conference may be held after the start work date stated in the written "Notice to Proceed". This may be due to difficulty with coordination of all parties concerned, or other similar reasons. Such delays in holding the preconstruction meeting shall not relieve the Contractor of any responsibilities hereunder and will not be an acceptable reason for him to request additional work completion time beyond that provided since he will be able to begin obtaining permits, mobilizing his equipment and forces, preparing submittals, ordering materials, performing minor work, or other work if approved by the Engineer, during the interim period.

Prior to the preconstruction conference, the Contractor shall prepare the construction schedule and provide copies of the same to others in attendance. The construction schedule shall include the place of beginning, the proposed order of progression, together with the estimated times for beginning and completing the various items of work. In addition, the Contractor shall prepare on electronic media, a critical path method (CPM) with emphasis made to "construction time and completion", Early/Late Start, Early/Late Finish, and clearly present Float Time as associated with activity and project duration with no activity duration longer than 4 calendar weeks unless approved by the Engineer.

The City shall discuss requirements of such matters as description of project, Contract important dates, project contact information, permitting, site and location access, utility coordination, maintenance of traffic (MOT), review of plans and special requirements, testing requirements, erosion control, project supervision and inspections, progress schedules and reports, Contract Change Orders, insurance, safety, special provisions, warranty and other items pertinent to the Project.

All parties to this conference shall be prepared to discuss any problems anticipated with the execution of the Work under this Contract. Contractor will be presented with a link to the copy of the preconstruction power point and a hard copy for his/her execution.

The following submittals will be required from the Contractor at Preconstruction Conference

- i. Construction Schedule
- ii. Pre-Construction photos and video
- iii. Chain of Authority letter
- iv. Hurricane Preparedness Plan (Site Specific)
- v. Emergency Contact Information letter
- vi. Competent Person Information letter
- vii. Labor Burden Declaration letter (Exhibit K) from CPA

## **SITE CONDITIONS**

### **SITE INVESTIGATION AND REPRESENTATION**

The Contractor acknowledges that he has satisfied himself as to the nature and location of the work, the general and local conditions, particularly those bearing upon availability of transportation; disposal, handling and storage of materials; availability of labor, water, electric power, roads; disposal of water from construction; uncertainties of weather; the conformation and conditions at the ground; the type of equipment and facilities needed preliminary to and during the prosecution of the work and all other matters which can in any way affect the work or the cost thereof under this Contract.

The Contractor further acknowledges that he has satisfied himself as to the character, quality, and quantity of surface and subsurface materials to be encountered from inspecting the site, making whatever site investigations he deems diligent or prudent, and from evaluating information derived from exploratory work that may have been done by the City of Doral or included with these Contract Documents. Any failure by the Contractor to acquaint himself with all the available information will not relieve him from responsibility for properly estimating the difficulty or cost thereof under this Contract.

The Contractor acknowledges that by personal field observation or other means satisfactory to himself, performed prior to the Bid, he has included in the prices bid all costs for dealing with all construction problems created by observable above or on grade features on or adjacent to the site of the work whether or not these features are shown on the Plans or described in the Specifications. In instances where the observable features indicate subsurface conditions which may affect the Project work, as for example, a pavement patch or catch basin gratings indicating respectively a utility or storm sewer not shown on the Plans, the Contractor acknowledges that he has made timely, diligent, inquiry of the Engineer or by other means fully satisfied himself prior to the Bid as to the nature of, and costs created by, the subsurface condition and included all costs therefore in the prices bid.

### **INFORMATION ON SITE CONDITIONS**

All information obtained by the City of Doral regarding the site conditions, topography, subsurface information, ground water elevations, existing construction of site facilities as applicable, and similar data will be available for inspection at the office of the Engineer upon request. Such information is offered as supplementary information only. Neither the Engineer nor the City of Doral assumes any responsibility for the completeness or for the Contractor's interpretation of such supplementary information. The interpretation of the record and the conclusions drawn there from as to the actual existence of surface conditions are the sole responsibility of the Contractor. Prior to bidding and after written approval from the City of Doral, the bidder may make his own survey investigations to satisfy himself with site conditions at his own cost. Any estimates of quantities of work or materials, based on set borings, test excavations and other subsurface investigations are not warranted by the City to indicate the true conditions or distribution of quantities unless the Contractor is expressly directed to rely on such information to prepare and submit his Bid.

### **SUBSURFACE INFORMATION**

Subsurface investigations, including test borings, have been made to indicate subsurface conditions at particular locations. All information regarding subsurface conditions and all available soil samples recovered from test borings at the project site that the City of Doral may have, may be examined by all prospective bidders prior to the receipt of proposals. Appointment for the examination of such information or soil samples shall be made with the City of Doral.

#### **BIDDERS SUBSURFACE INVESTIGATION**

Prospective bidders are advised, at their own expense, to make such subsurface investigation, by boring or test hole excavation, as may be desirable. However, such work is to be scheduled by appointment with the Engineer if on a City of Doral site or by notification to the City of Doral.

#### **DIFFERING SUBSURFACE CONDITIONS**

In the event subsurface or latent physical conditions are found materially different from those indicated in these Documents, and differing materially from those ordinarily encountered and generally recognized as inherent in the character of work covered in these Contract Documents, promptly, and before such conditions are disturbed, notify the Engineer in writing of such changed conditions.

The Engineer and/or the Engineer of Record will investigate such conditions promptly and following this investigation, the Contractor shall proceed with the work, unless otherwise instructed by the Engineer. If the Engineer and/or the Engineer of Record find that such conditions do so materially differ as to cause an increase or decrease in cost and time considered reasonable by the Engineer, the City of Doral will make the final decision regarding any adjustment in cost or time for completion.

In the event that site conditions differ from those expected by the Contractor, the Contractor shall proceed to complete the work as contemplated by the Plans and Specifications at his own cost and expense. If in the discretion of the Engineer, the difference in site conditions renders completion of the work as described by the Plans and Specifications impossible, the Engineer may alter the work, in accordance with the terms of the Solicitation, whereupon the Contractor shall be compensated for any extra work pursuant to the terms of the Solicitation; the Engineer shall not alter the work where the site conditions render the work more difficult or costly to perform, if such work is otherwise still possible as described in the Contract Documents.

#### **EXISTING UTILITIES AND LOCATION SERVICES**

Known utilities and structures adjacent to or encountered in the work are shown on the Drawings. The locations shown are taken from existing records and the best information available from existing plans; however, it is expected that there may be some discrepancies and omissions in the locations and quantities of utilities and structures shown. Those shown are for the convenience of the Contractor only, and no responsibility is assumed by the City of Doral, the Engineer, and/or the Engineer of Record for their accuracy or completeness.

No request for additional compensation or Contract time (except for a non-compensable time extension at the sole discretion of the Engineer, whose decision shall be final) resulting from encountering utilities or structures not shown, or differing in location or elevation from that shown, will be considered. The Contractor shall explore sufficiently ahead of the Work to allow time for any necessary adjustments without delay to the progress of the installation. Costs due to delays occasioned by encountering underground utilities or structures which could have or should have been discovered by timely exploration ahead of the Work shall rest solely with the Contractor.

#### **Contractor'S RESPONSIBILITY FOR UTILITY PROPERTIES AND SERVICE**

Where the Contractor's operation could cause damage or inconvenience to railway, telephone, fiber optic, television, electrical power, oil, gas, water, sewer, irrigation system, or any other utility, the Contractor shall make all arrangements necessary for the protection of these utilities and services.

Notify all utility companies that are affected by the construction operation at least 48 hours in advance. Under no circumstance expose any utility without first obtaining permission from the appropriate agency. Once

permission has been granted, locate, expose, and provide temporary support for all existing underground utilities and utility poles where necessary. Absolutely no extra compensation will be allowed for construction problems created by utility poles of whatever size, overhead electric, telephone or other lines, whether shown on the Plans or not. The Contractor is solely responsible for discerning such items in the field prior to bidding and including all costs for such work in the prices bid.

The Contractor and his Subcontractors shall be solely and directly responsible to the City and operators of such properties for any damage, injury, expense, loss, inconvenience, delay, suits, actions, or claims of any character brought because of any injuries or damage which may result from the construction operations under this Contract. Neither the City of Doral nor its officers or agents shall be responsible to the Contractor for damages as a result of the Contractor's failure to protect utilities encountered in the work.

In the event of interruption to domestic water, sewer, storm drain, or other utility services as a result of accidental breakage due to construction operations, promptly notify the proper authority. Cooperate with said authority in restoration of service as promptly as possible and bear all costs of repair. In no event shall interruption of any utility service be allowed unless granted by the City or the utility. In the event water service lines that interfere with trenching are encountered, the Contractor may, by obtaining prior approval of the water utility, cut the service, dig through, and restore the service with similar and equal materials at the Contractor's expense and as approved by the Engineer.

Contractor shall further replace, with material approved by the Engineer, at Contractor's expense, any and all other materials, existing utilities or structures removed or damaged during construction, unless otherwise provided for in these Contract Documents and as approved by the Engineer.

#### INTERFERING STRUCTURES

Take necessary precautions to prevent damage to existing structures whether on the surface, above ground, or underground. An attempt has been made to show major structures on the Drawings. While the information has been compiled from the best available sources, its completeness and accuracy cannot be guaranteed, and is presented as a guide. The Contractor is solely responsible for field verification of all locations and information provided and to determine the type, location, elevation and extent of any utilities which may not have been shown on the Plans.

#### FIELD RELOCATION

During the process of construction, it is expected that minor relocations of the work may be necessary. Such relocations shall be made only by the direction of the Engineer at the Contractor's expense. If existing structures are encountered that will prevent construction as shown, notify the Engineer before continuing with the work in order that the Engineer may make such field revisions as necessary to avoid conflict with the existing structures. If the Contractor fails to notify the Engineer when an existing structure is encountered, and proceeds with the work despite this interference, the Contractor does so at his own risk.

#### LAND FOR CONSTRUCTION PURPOSES

The Contractor shall limit his operations, temporary facilities and storage of equipment and materials to on-site areas to be designated by the City.

Should the Contractor require additional space he shall make his own arrangements for storage of materials and equipment in locations off the construction site. For the allocated space, submit to the City for approval, proposed plan and layout for all temporary sanitary facilities, offices, storage facilities, temporary water service and

distribution, and temporary power service and distribution. Prior to commencing any new construction remove, relocate and protect where necessary all existing underground and above ground facilities, pipelines, utility systems, plantings and all other existing installations. All of these existing features shall be restored to their initial or better than initial conditions.

#### ELEVATIONS AND LOCATIONS OF EXISTING INSTALLATIONS

The elevations and locations of existing installations, including piping, equipment, etc., shown on the Plans are approximate. Be responsible for verifying the accuracy of these locations and elevations prior to commencement of any work which is to be connected to the existing installation and immediately bring to the attention of the Engineer any and all discrepancies discovered.

The Contractor shall verify these locations and elevations sufficiently ahead of the Work to allow time for any necessary adjustments without delay to the progress of the installation. Costs due to delays occasioned by locations and/or elevations differing from those shown on the Plans which could have or should have been discovered by timely verification ahead of the Work shall rest solely with the Contractor. No request for additional compensation or Contract time (except for a non-compensable time extension at the sole discretion of the Engineer, whose decision shall be final) resulting from encountering interfering installations not shown, or existing installations differing in location or elevation from that shown, will be considered.

### **HURRICANE PREPAREDNESS**

The Contractor shall submit a "Site Specific" Hurricane Preparedness Plan to the City and Engineer at the Pre-construction Conference. The Plan shall outline the necessary measures that the Contractor proposes to perform at no additional cost to the City in case of a hurricane watch and a hurricane warning.

During such periods of time as designated by the United States Weather Bureau or local authorities as being a hurricane alert, the Contractor shall perform all precautions as necessary to safeguard the work and property, including the removal of all small equipment and materials from the site, lashing all other equipment and materials to each other and to rigid construction, and any other safety measures as may be directed by the Engineer and the City.

Upon Notification of a Hurricane Watch, Contractor shall prepare and submit for approval a Plan of Action for the specific actions to be taken on this project.

Upon Notification of a Hurricane Warning, Contractor shall:

1. Implement the approved Plan of Action to protect the Project and the public; and
2. Backfill all open trenches, remove all construction equipment and materials from the right-of-way, remove unnecessary traffic barricades and signs, secure remaining barricades by "half burial" or "double sandbags".

**PROTECTION OF EXISTING FACILITIES, VEGETATION, STRUCTURES, UTILITIES, AND  
IMPROVEMENTS**

The Contractor shall preserve and protect existing vegetation such as trees, shrubs, and grass on or adjacent to the work site which are not indicated to be removed and which do not unreasonably interfere with the construction work and he shall replace in kind the vegetation, shrubs and grass damaged by him at his own expense.

The Contractor shall protect from damage all utilities, foundations, walls or other parts of adjacent, abutting or overhead buildings, railroads, bridges, structures, surface and subsurface structures at or near the site of the Work and shall repair or restore any damage to such facilities, except utilities, resulting from failure to comply with the requirements of the Contract or the failure to exercise reasonable care in the performance of the Work. If, after receipt of notification from the Architect/Engineer, the Contractor fails to or refuses to repair any such damage promptly, the Owner may have the necessary Work performed and charge the cost thereof to the Contractor.

At points where the Contractor's operations are adjacent to utility facilities, damage to which might result in expense, loss, disruption of service or other undue inconvenience to the public or to Owners, Work shall not be commenced until all arrangements necessary for the protection thereof have been made by the Contractor. The Contractor shall be solely and directly responsible to the Owners and operators of such utilities for any damage, injury, expense, loss, inconvenience, or delay, caused by the Contractor's operations.

Where public utilities or their appurtenances interfere with permanent construction, unless otherwise specified, work involved in permanently relocating or otherwise altering such public utilities and their appurtenances will not be a part of this Contract but will be done by utility Owners at no cost to the Contractor. If the Contractor wishes to have utilities temporarily relocated, he shall make necessary arrangements with utility Owners and reimburse them at his own expense for cost of the Work. The Contractor shall keep the Architect/Engineer advised of temporary relocation arrangements.

The Contractor shall not repair or attempt to repair utility damage but shall immediately contact the utility Owner. The Contractor shall obtain the name, address and telephone number of each utility company that the work will affect and the person in such utility company to contact. He shall submit to the Architect/Engineer said names, addresses and telephone numbers.

The Contractor shall comply with the latest version of the Florida Building Code or the Code under which the Contract Documents were approved, whichever is applicable at the time of the Work is performed.

In order to safeguard the Owners and tenants of abutting property and at the same time prevent unjust or fraudulent claims against the Contractor the Government, State, the Owner and the Architect/Engineer in respect thereto, the Contractor shall cause a detailed examination of abutting property to be made before construction is begun. The Owner or tenant of each parcel or structure or his or their duly authorized representative will be invited to be present during the examination by a notice in writing delivered by the Contractor to a person in charge of the premises or structures, or by the mailing of the notice to the Owner at the premises. The Architect/Engineer will attend while the Contractor makes the detailed examination. A complete record including photographs of the existing conditions of each parcel or structure shall be made in triplicate, signed by the Contractor, Owner and the Architect/Engineer and one copy will be delivered to the Owner, one to the Architect/Engineer and one copy will be retained by the Contractor. At such time as the Architect/Engineer may direct, or upon the filing of the verified statement by the Owner, tenant, lessee, operator or occupant of the

building structure, and in any event, upon the completion of any work that in the opinion on the Architect/Engineer might affect the abutting property, the Contractor will make another detailed examination of such abutting property. A complete record of the then existing conditions of said property will be made in triplicate, signed by the Contractor and one copy will be delivered to the Owner, one to the Architect/Engineer and one will be retained by the Contractor. In any action, which may be brought by any Owner, tenant, lessee, operator or occupant of abutting property to recover under the provisions of this article or any paragraph hereof, the record of the existing conditions of each parcel will be prima facie evidence of the conditions thereof at the time of the making of the examination.

The Contractor shall maintain access to fire hydrants and fire alarm boxes throughout the prosecution of the Work. Hydrants, alarm boxes and standpipe connections shall be kept clear and visible at all times unless approved otherwise. If visibility cannot be maintained, the Contractor shall provide clearly visible signs showing the location of the fire hydrant, fire alarm box or standpipe connection. The Contractor shall promptly notify the authority having jurisdiction of any impairment to any fire systems.

### **INTERFERENCE WITH EXISTING UTILITIES**

Attention of the Contractor is specifically directed to the need for careful control of all aspect of his work to prevent damage to cables, ducts, water mains, sewers, fire mains, telephone cables, fuel lines, radar cables, and any other existing overhead or underground utilities and structures.

Before commencing work in any given area, the Contractor shall contact utility companies to identify any potential conflicts. Further, the Contractor shall also carefully review the Plans, survey and search the site for utility locations, and determine possible utility conflicts. All known above and underground utilities, including, but not limited to , electrical, telephone, communications, lighting cables, fuel lines, sewer, drainage and water pipes, and other existing structures are shown on the Plans for reference purposes only, but no guarantee is expressed or implied that the information is accurate. It shall be the sole responsibility of the Contractor to ascertain and/or verify the location of any and all such utilities or structures using magnetic and electronic detector and by hand excavation or other appropriate measures before performing any work that could result in damage to such existing utilities or structures. The Contractor shall make a thorough search of the particular location for underground utilities or structures whether or not shown on the drawings, before excavation work is commenced in any particular location. To this end of the Contractor shall provide and maintain throughout the term of the Contract, electronic and magnetic detecting devices capable of locating underground utilities or structures. The Contractor shall, after locating primary and critical existing utilities, mark their location with indelible material or other means satisfactory to the Field Representative and maintain above ground physical identification during the work.

In the event of damage to, or accidental disruption of utilities or other facilities as a result of the Contractor's operations, the Contractor shall take immediate steps to repair or replace all damage and to restore all services. Further, the Contractor shall engage any additional outside services which may be necessary to prosecute repairs on a continuous "around the clock" basis until services are restored. The Contractor shall also provide and operate any supplemental temporary services to maintain uninterrupted use of the facilities. All costs involved in making repairs and restoring disrupted service resulting from the Contractor's work shall be borne by the Contractor and the Contractor shall be fully responsible for any and all claims resulting from the damage.

**ENVIRONMENTAL PROTECTION AND SPECIAL CONTROLS**

PART 900 - GENERAL

900.1 SUMMARY

A. Section Includes:

1. Minimizing the pollution of air, water, or land; control of noise, the disposal of solid waste materials, and protection of deposits of historical or archaeological interest.

B. Related Specification Sections include but are not necessarily limited to:

1. Division 00 - Front Ends Documents.
2. Division 01 - General Requirements.

900.2 SUBMITTALS

A. Shop Drawings:

1. See Specification Section 01340 for requirements for the mechanics and administration of the submittal process.
2. Prior to the start of any construction activities submit:
  - a. A detailed proposal of all methods of control and preventive measures to be utilized for environmental protection.
  - b. A drawing of the work area, haul routes, storage areas, access routes and current land conditions including trees and vegetation.
  - c. A copy of the NPDES permit for storm water discharges from construction activities.
  - d. A copy of the approved pollution prevention plan.

900.3 - PRODUCTS – (NOT APPLICABLE TO THIS SPECIFICATION SECTION)

900.4 - EXECUTION

900.4.1 INSTALLATION

A. Employ and utilize environmental protection methods, obtain all necessary permits, and fully observe all local, state, and federal regulations.

B. Land Protection:

1. Except for any work or storage area and access routes specifically assigned for the use of the Contractor, the land areas outside the limits of construction shall be preserved in their present condition.
  - a. Contractor shall confine his construction activities to areas defined for work within the Contract Documents.
2. Manage and control all borrow areas, work or storage areas, access routes and embankments to prevent sediment from entering nearby water or land adjacent to the work site.
3. Restore all disturbed areas including borrow and haul areas and establish a permanent type of locally adaptable vegetative cover.
4. Unless earthwork is immediately paved or surfaced, protect all side slopes and backslopes immediately upon completion of final grading.
5. Plan and execute earthwork in a manner to minimize duration of exposure of unprotected soils.

6. Except for areas designated by the Contract Documents to be cleared and grubbed, the Contractor shall not deface, injure or destroy trees and vegetation, nor remove, cut, or disturb them without approval of the Engineer.

a. Any damage caused by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition at the Contractor's expense.

C. Surface Water Protection:

1. Utilize, as necessary, erosion control methods to protect side and backslopes, minimize and the discharge of sediment to the surface water leaving the construction site as soon as rough grading is complete.

a. These controls shall be maintained until the site is ready for final grading and landscaping or until they are no longer warranted, and concurrence is received from the Engineer.

b. Physically retard the rate and volume of run-on and runoff by:

1) Implementing structural practices such as diversion swales, terraces, straw bales, silt fences, berms, storm drain inlet protection, rocked outlet protection, sediment traps and temporary basins.

2) Implementing vegetative practices such as temporary seeding, permanent seeding, mulching, sod stabilization, vegetative buffers, hydroseeding, anchored erosion control blankets, sodding, vegetated swales or a combination of these methods.

3) Providing Construction sites with graveled or rocked access entrance and exit drives and parking areas to reduce the tracking of sediment onto public or private roads.

2. Discharges from the construction site shall not contain pollutants at concentrations that produce objectionable films, colors, turbidity, deposits or noxious odors in the receiving stream or waterway.

D. Solid Waste Disposal:

1. Collect solid waste on a daily basis.

2. Provide disposal of degradable solid waste to an approved solid waste disposal site.

3. Provide disposal of nondegradable solid waste to an approved solid waste disposal site or in an alternate manner approved by Engineer and regulatory agencies.

4. No building materials wastes, or unused building materials shall be buried, dumped, or disposed of on the site.

E. Fuel and Chemical Handling:

1. Store and dispose of chemical wastes in a manner approved by regulatory agencies.

2. Take special measures to prevent chemicals, fuels, oils, greases, herbicides, and insecticides from entering drainage ways.

3. Do not allow water used in onsite material processing, concrete curing, cleanup, and other waste waters to enter a drainage way(s) or stream.

4. The Contractor shall provide containment around fueling and chemical storage areas to ensure that spills in these areas do not reach waters of the state.

F. Control of Dust:

1. The control of dust shall mean that no construction activity shall take place without applying all such reasonable measures as may be required to prevent particulate matter from becoming airborne so that it remains visible beyond the limits of construction.

a. Reasonable measures may include paving, frequent road cleaning, planting vegetative groundcover, application of water or application of chemical dust suppressants.

b. The use of chemical agents such as calcium chloride must be approved by the State of Florida DOT.

2. Utilize methods and practices of construction to eliminate dust in full observance of agency regulations.

3. The Engineer will determine the effectiveness of the dust control program and may request the Contractor to

provide additional measures, at no additional cost to Owner.

G. Burning:

1. Do not burn material on the site.
2. If the Contractor elects to dispose of waste materials by burning, decide for an off-site burning area and conform to all agency regulations.

H. Control of Noise:

1. Control noise by fitting equipment with appropriate mufflers.

I. Completion of Work:

1. Upon completion of work, leave area in a clean, natural looking condition.
2. Ensure all signs of temporary construction and activities incidental to construction of required permanent work are removed.

J. Historical Protection:

1. If during the course of construction, evidence of deposits of historical or archaeological interests is found, cease work affecting find and notify Engineer.
  - a. Do not disturb deposits until written notice from Engineer is given to proceed.
2. The Contractor will be compensated for lost time or changes in construction to avoid the find based upon normal change order procedures.

## **CONTAMINATED SOIL/GROUNDWATER**

### **PART 1 - GENERAL**

The purpose of this section is to provide basic guidelines for properly working (i.e., excavation, handling, transportation, disposal, etc.) with contaminated soil/groundwater during construction and/or any other activities that require the excavation of soil and/or exposure of groundwater, to prevent negative environmental impacts such as cross contamination, spreading out existing contamination that is already contained, etc. All excavation shall be conducted in accordance with the contract and construction documents. The contractors and all subcontractors shall comply with all applicable federal, state and local environmental laws and regulations including but not limited to US Environmental Protection Agency (EPA), Florida Department of Environmental Protection (FDEP), South Florida Water Management District (SFWMD) and Miami-Dade County Department of Environmental Resources Management (DERM).

### **PART 2 - CLASSIFICATIONS**

For the purpose of these specifications the following classifications are used:

1. Clean Fill Soils: These soils meet the DERM defined clean fill criteria and can be reused anywhere without restrictions.
2. Residential Soils: These soils meet the DERM defined residential criteria and upon DERM approval can be reused on site without tracking requirements.
3. Industrial Soils: These soils meet the DERM defined industrial criteria and upon DERM approval can be reused. These soils require tracking from origin to final disposition.
4. Environmentally Non-Reusable Soils (ENR): These soils exceed the DERM defined industrial or the Federal hazardous levels and cannot be reused on site. These soils require proper disposal offsite.
5. Suspect Soils: Soils from any area pre-designated by DERM as an area where the requirements of this Standard Technical Specification shall be implemented, pursuant to the results of the pre-construction assessment or designated during field activities by City of Doral/Miami Dade County or its designated representatives.

### **PART 3 HEALTH AND SAFETY**

The contractors and all subcontractors working with contaminated soil/groundwater shall conform to all applicable laws, regulations, and guidelines such as, but not limited to, EPA Hazardous Waste Operations and Emergency Response (HAZWOPER), US Occupational Safety and Health Agency (OSHA) and National Institute of Occupational Safety and Health (NIOSH).

### **PART 4 CONSTRUCTION METHODS**

#### ***CONTAMINATED SOIL/ GROUNDWATER DETECTION***

If contaminated groundwater, visible stains in the soil, free floating product, sheen on groundwater, or odor in soil/groundwater are detected during the normal course of construction activities, the Contractor shall immediately:

1. Notify the Architect/Engineer (A/E).
2. Notify the City of Doral
3. Notify DERM at (305) 372-6789.
4. Proceed with the work in accordance to the contract and construction documents and the provisions of these guidelines. To avoid miscommunication, any directives from City of Doral and/or DERM shall be given through the A/E to the Contractor.

#### *STOCKPILING OF SUSPECTED AND ENR SOIL*

Prior to the excavation of suspected and ENR soil, the Contractor shall prepare a suitable area previously approved by the A/E Firm for stockpiling such soil in accordance with the contract and construction documents. The Contractor shall take due care during the stockpiling operation to prevent the spread of any further contamination. The stockpile shall not exceed twelve (12) feet in height. The Contractor shall regularly inspect the stockpile area and restore its protection membranes to their original required condition and maintain them throughout the entire construction contract period.

After the Contractor has safely completed the stockpiling, (A/E Firm) shall collect soil samples (by volume) from the stockpile and send the samples to a laboratory certified by Miami Dade County and the State of Florida to be analyzed for applicable environmental criteria. Once a stockpile has been sampled, it cannot be altered in any way. Therefore, the (A/E Firm) shall mark the stockpile with a yellow flag, indicating that the final disposition of the stockpile is pending the analytical results from the laboratory. Once the analytical results are available, DERM shall determine the final disposition of the soil. If according to the analytical results, DERM determines that the soil can be reused on site, (A/E Firm) shall remove the yellow flag and replace it with a green flag, indicating that the stockpile has been approved for reuse on site. If according to the analytical results, DERM determines that the soil cannot be reused and therefore it must be properly disposed of, (A/E Firm) shall remove the yellow flag and replace it with a red flag, indicating that the stockpile cannot be reused. Unless otherwise specified by the (A/E Firm), the Contractor shall handle, transport and properly dispose of all ENR soils.

Prior to the excavation of suspected soil, the Contractor shall prepare a suitable area (previously approved by the A/E) for stockpiling soil on an impervious surface, away from any drainage and/or active utility structures. If an impervious surface is not available, the Contractor shall create it by laying down two (2) layers of polyethylene film (each a minimum of four (4) mils thick) on a flat horizontal surface with a twelve (12) inch high berm around its perimeter. The stockpile area shall be free of any sharp materials and debris that could accidentally puncture the polyethylene film. The area selected for stockpiling must be free from water ponding. Once the stockpile is completed, a single layer of the same polyethylene film material shall be placed over the stockpile and secured properly. Rainwater must be directed outside the berm-contained area. Any rainwater collected inside the berm-contained area, must be collected, stored and treated as directed by the A/E. Continued inspection of the stockpile area is required to ensure the polyethylene film is intact and secure and to maintain proper drainage and drainage collection as stated herein.

#### *TRANSPORTATION/ HAULING OF SOIL*

The Contractor shall transport the ENR soil in accordance with all applicable laws and regulations. Haulers shall be certified to transport the soil as classified.

#### *DISPOSAL OF NON-HAZARDOUS SOIL AT LANDFILL*

If the soil is to be disposed of in a landfill, the Contractor shall dispose of all non-hazardous soils in an approved landfill licensed to handle the soil as classified. The Contractor shall conduct disposal activities in accordance with all applicable laws and regulations.

#### *INCINERATION OF SOIL*

If the soil is to be incinerated, the Contractor shall transport the soil to a certified incineration facility licensed to handle the soil as classified. The Contractor shall conduct the transportation and handling activities in accordance with all applicable laws and regulations.

#### *DISPOSAL OF HAZARDOUS SOIL*

If soil is classified as hazardous, the Contractor shall prepare, transport and dispose of the soil in accordance with all applicable laws and regulations such as, but not limited to, the Code of Federal Regulations (CFR), EPA, FDEP, DERM, etc., at a licensed hazardous material disposal facility.

#### *REMOVAL/DISPOSAL OF FREE-FLOATING HYDROCARBON PRODUCT (FFHP)*

Contractor shall remove/dispose of FFHP and/or sheen in accordance with all applicable laws and regulations.

#### *TRANSPORTATION/DISPOSAL MANIFESTS*

The Contractor shall provide copies of all the manifests for the proper transportation/disposal of contaminated soil and/or free-floating product to the A/E and the City of Doral.

#### *DEWATERING/TREATMENT OF CONTAMINATED DEWATERING GROUNDWATER*

City of Doral encourages, whenever possible, that construction activities be carried out in the wet. If dewatering in areas of groundwater contamination is absolutely necessary for construction purposes, the Contractor shall apply for and obtain the dewatering permit(s) from the appropriate regulatory agencies. Once the permit(s) has(have) been obtained, the Contractor shall comply with all the permit conditions during the entire course of the dewatering activities. If the permit(s) expire(s) before the dewatering activities are completed, the Contractor shall obtain a permit renewal within the stipulated time frame. The Monthly Pumpage Report required by the dewatering permit shall be submitted to the City of Doral no later than the 5th day of the following month.

#### *SUBMITTALS*

Contractor shall submit information and samples to the City for review as follows. The information shall include:

1. Detailed description of the proposed methods for temporary stockpiling, transportation, and disposal of all contaminated soils and groundwater.
2. Copies of permits for all disposal facilities.
3. Copies of all manifest and documentation for handling and disposing of all contaminated soil and groundwater in full compliance with local, state and federal requirements. This documentation must be provided prior to requesting payment under this Bid item.
4. Copies of all laboratory analyses required for transportation and disposal of all contaminated soils and groundwater in full compliance with local, state and federal requirements.
5. Names, addresses and contact numbers of all subcontractors.
6. Copy of Contractor's Health and Safety Plan and training certificates of personnel who will be handling the contaminated material in accordance with OSHA requirements.

#### PART 5 MEASUREMENT AND PAYMENT

Dedicated Allowance shall be as determined by the City's Architecture and Engineering firm.

**CLEARING AND GRUBBING / LANDSCAPING / SITE CLEANLINESS**

**PART 1        GENERAL**

**1.01 WORK INCLUDED**

A. Clear and grub the areas to be occupied by the facilities or utility systems to be constructed, including all areas to be excavated, filled, paved or planted as shown on the Plans and as specified herein.

**1.02 DEFINITIONS**

A. Clearing shall consist of the cutting, removal and disposal of all trees, stumps, brush, shrubs, rubbish and any other objectionable material within the designated areas.

B. Grubbing shall consist of the removal and disposal of all stumps larger than 1-1/2 inches in diameter and other objectionable material to a depth of at least 12 inches below the ground surface.

**1.03 QUALITY ASSURANCE**

A. In the course of the work, it may become necessary to remove trees if they interfere with the work. City of Doral and various municipalities have ordinances regulating the removal, relocation and pruning of trees in the public right-of-way; these ordinances shall be strictly adhered to. The Contractor shall obtain a permit from City of Doral, Miami-Dade County, Public Works and Waste Management County and/or other regulatory agencies having jurisdiction over the work area before removing, relocating and/or pruning any tree. The Contractor shall comply with all requirements and conditions of the permit at no additional cost to the City of Doral.

**PART 2        PRODUCTS**

NOT USED

**PART 3        EXECUTION**

**3.01 CLEARING AND GRUBBING**

A. The Contractor shall remove and replace, where required all existing shrubbery, trees, grass, sprinklers, fences, signs, mailboxes, structures, roadways, sidewalks, curbs and similar items or structures in the way of all excavation necessary for the construction of the Project.

**3.02 PROTECTION OF ADJACENT AREAS**

A. The Contractor shall protect areas shown on the Plans or designated by the Engineer to remain protected from damage by construction operations by erecting suitable barriers or other acceptable means.

**3.03 DISPOSAL OF WASTE MATERIALS**

A. All roots, vegetation and other refuse removed from the site during clearing and/or grubbing operations shall be legally disposed of by the Contractor. Burning of any material on site will not be permitted.

B. The Contractor shall provide the Engineer tickets indicating proof of legal disposal of unsuitable backfill material. If the unsuitable material has beneficial use, the transport destination needs to be reported to the Engineer. Payment for disposal of the unsuitable material shall not be made until the City of Doral has proof of legal disposal at a particular destination.

### 3.04 LANDSCAPING

A. General: Existing plants, trees and grassed areas damaged or destroyed by the Contractor's operations shall be restored or replaced by the Contractor, at his expense to equal or better than original condition, and to the satisfaction of the Engineer.

#### B. Solid Sod:

1. Solid sod shall be planted in the unpaved areas abutting the structures and extending to the limits shown on the Drawings.

2. When solid sod is to be placed adjacent to or in close proximity to existing sod or grass, the Contractor is to use similar sod or grass and obtain approval from the Engineer prior to installation. In public areas and rights-of-way the Contractor is also required to comply with Governmental Agency requirements and provide the City with written approval of said agency prior to installation of grass and sod.

3. All areas to be grass sodded shall first be leveled, and debris, rocks, and other undesirable matter removed. Topsoil shall then be placed to a minimum depth of 3", with all larger lumps broken up. The mixture shall be well worked and raked to a uniform surface and then hand tamped, or lightly rolled. The topsoil shall be moistened with water prior to placing sod.

4. The sod shall be placed with closely abutting joints and shall completely cover the disturbed areas. The top of the new sod shall coincide with the top of the existing grass. The sod shall be covered with a light top dressing of topsoil and shall then be thoroughly watered.

5. The Contractor shall weed and water the grassed areas until the Project is accepted by the City; however, the minimum period of this maintenance shall not be less than 60 days even if it extends beyond said acceptance. Any portions of the grassed areas which die or appear to have succumbed to the shock of transplanting, before the acceptance by the City, or expiration of the minimum 60-day maintenance period, shall be replaced by the Contractor at his expense.

6. Solid sod shall be certified bitter blue St. Augustine Floratam. The sod shall be firm touch texture having a compact growth of grass with good root development. It shall contain no weeds or other objectionable vegetation.

7. Where sodding is used in drainage ditches, the setting of the pieces shall be staggered to avoid a continuous seam along the line of flow. Along the edges of such staggered areas, the offsets of individual strips shall not exceed 6-inches. In order to prevent erosion caused by vertical edges at the outer limits, the outer pieces of sod shall be tamped to produce a featheredge effect.

8. Sodding shall not be performed when weather and soil conditions are, in the Engineer of Record's

opinion, unsuitable for proper results.

C. Watering:

The areas on which the sod is to be placed shall contain sufficient moisture, as determined by the Engineer, for optimum results. After being placed, the sod shall be kept in a moist condition to the full depth of the rooting zone for at least 2 weeks. Thereafter, the Contractor shall apply water as needed until the sod roots and starts to grow for a minimum of 60 days (or until final acceptance whichever is latest).

### 3.05 SITE CLEANLINESS

A. The Contractor shall at all times during the execution of this Contract keep the work site free and clear of all rubbish and debris. As soon as the work is completed, the accumulated rubbish or surplus materials shall be promptly removed. The Contractor shall also restore in an acceptable manner all property, both public and private, which has been displaced or damaged during the prosecution of the work and shall leave the site and vicinity unobstructed and in a neat and presentable condition.

B. In the event of delay exceeding two days after written notice is given to the Contractor by the Engineer to remove such rubbish or materials or to restore displaced or damaged property, the Engineer may employ such labor and equipment as he may deem necessary for the purpose, and the cost of such work, together with the cost of supervision, shall be charged to the Contractor and shall be deducted from any monies due him. The Project shall not be considered as having been completed until all rubbish and surplus materials have been removed.

**CONCRETE DRIVEWAY, SIDEWALK, AND CURB AND GUTTER REMOVAL AND REPLACEMENT**

Work covered under this Section covers the furnishing of all labor, equipment and material required for cutting, removing, protecting and replacing all existing concrete driveways, sidewalks, and curb and gutter of the various types encountered, removed or damaged under this Contract.

**General Requirements**

A. Contractor shall be responsible for the protection from damage from his construction operations, all concrete driveways, sidewalk, and curb and gutter within the work area. If payment items are established in the Proposal for the removal and replacement of concrete driveway, sidewalk, and curb and gutter, payment will be made only if such items are encountered within the limits of the trench width plus 2 feet (shoulders) An concrete driveway, sidewalk, or curb and gutter beyond those limits, damaged as a result of the Contractor's operation, shall be restored in accordance with the applicable requirements of these Specifications, and to the satisfaction of the Engineer, at no additional cost to the City. In order to protect himself from being held liable for any existing damaged concrete driveways, sidewalks or curb and gutter, the Contractor is advised to notify in writing the authority having jurisdiction over the street where such damage exists prior to proceeding with any work in the vicinity. A copy of all such notices shall be forwarded to the Engineer.

B. No payment will be made for removal and replacement of concrete driveway, sidewalk, or curb and gutter which falls outside the above-described limits required for thrust blocks, and other appurtenant items, and the cost for such work shall be included in the price bid for the applicable item.

C. If payment items have not been established in the Proposal for the removal and replacement of concrete driveways, sidewalks, and curb and gutter, the cost for such work shall be included in the overall Project cost bid. No other compensation will be provided.

D. No form shall be set higher than the elevation of the adjacent concrete surface.

E. As used herein, "driveway" shall mean concrete driveway, and "curb and gutter" shall mean free standing curb, gutter, or combination curb and gutter.

F. All concrete shall be treated with a liquid curing compound, and in some cases, concrete colorant shall be required in order to match the color of the existing concrete being replaced. In each such case the curing compound, the colorant, and the color, shall meet with the approval of the Engineer and the municipality having jurisdiction over the work area. All additives to the concrete shall be applied in strict conformance with the recommendations of the manufacturer.

G. The Contractor shall provide adequate means to protect each driveway, sidewalk, and curb and gutter installation from damage from vandals, animals, weather or other causes, until the concrete is hard. Should damage occur from such causes, the Contractor shall remove and replace the damaged item at his own expense.

**Concrete Driveways**

A. Concrete driveways, and sidewalks crossing driveways, shall be restored in full sections or blocks rather than trench width plus two feet (shoulders), if the original construction was divided into such sections or blocks. The existing driveway (or sidewalk) shall be cut with an abrasive disc saw to trim the edges to straight and true

lines, with edges parallel and rectangular in plan. The interior concrete shall then be broken up and removed from the site.

B. Driveways, and sidewalks crossing driveways, shall be replaced with a concrete slab having a minimum thickness of 6 inches. Steel reinforcement is not required unless the existing driveway (or sidewalk) is so reinforced, in which case the replaced driveway shall also be reinforced to match the existing.

C. Such forms as are necessary shall be set up and the subgrade regarded for a slab 6 inches thick. The subgrade shall be thoroughly compacted and wet down prior to placing the concrete. The surface shall be given a surface and edging to match, as nearly as possible, that of the existing driveway (or sidewalk). The finish and edging shall be obtained through the use of screeds, trowels, edges and any other tool normally required by the trade in performing this kind of work.

D. All forms for driveways (or sidewalks) including those for expansion joints, shall be metal and shall be clean and well-oiled prior to placing concrete. The forms shall be set in place far enough in advance of concrete placing for the Engineer to check line and grade. Abrupt changes in line and grade will not be permitted, and forms shall be set to insure smooth curvature and alignment both vertically and horizontally. Forms shall be left in place for a minimum of 24 hours after concrete has been placed.

E. Replacement driveways (and sidewalks) shall match the elevation and alignment of existing driveways (and sidewalk) wherever a connection is made.

#### Sidewalks

A. Sidewalks shall be restored in full section rather than trench width plus 2 feet (shoulder).

B. Removal of existing sidewalk, installation of forms, preparation of subgrade, and the final finish shall be performed as specified hereinabove for driveways, except that the minimum thickness of the sidewalk shall be 4 inches thick.

#### Curb and Gutter

A. Curb and gutter shall be restored in lengths equal to trench width plus 2 feet (shoulders), or 10 feet, whichever is greater, unless otherwise permitted or ordered by the Engineer.

**EXCAVATION / TRENCH STABILIZATION / TRENCH OVERCUT / COMPACTED BACKFILL**

910.1 EXCAVATION

A. The Contractor shall remove and replace, where required, all existing shrubbery, trees, grass, sprinklers, fences, signs, mail boxes, structures, roadways, sidewalks, curbs and similar items or structures in the way of the pipeline and shall make all excavation necessary for the construction of the connections to the lines and grades shown on the Drawings. Weeded areas shall be restored to their original condition in an acceptable manner. Where pavements or sidewalks are cut, they shall be cut by means of a mechanical pavement saw to form true and straight edges which shall in general be either parallel or at right angles with the centerline of the pipe. Unless specific bid items are provided in the Proposal form, the cost of removing and replacing any plantings or existing structures shall be included in the price bid for pipes, structures, and concrete appurtenances. In order to protect Contractor from being held liable for any existing damaged pavement, including detour routes, the Contractor is advised to notify in writing the authority having jurisdiction over the street where such defective pavement exists prior to proceeding with any work in the vicinity. A copy of all such notices shall be forwarded to the Engineer.

B. All cleared materials shall be promptly removed from the work area and disposed of in an area provided by the Contractor, at no additional cost to City. Accumulation of debris or stockpiling along the route of the work will not be allowed.

C. The Contractor shall excavate solid pipe trenches to a minimum of six inches below the outside bottom of the proposed pipe barrel to provide for the installation of the bedding material or as dictated by design drawings; whichever is more stringent.

D. Not more than 100 feet of trench shall be opened ahead of pipe laying operations at one time unless a greater length of open trench is approved by the Engineer.

E. If, in the opinion of the Engineer, the soil at that depth is unsatisfactory as foundation material because it contains marl, muck, organic matter, or other unsuitable material, the excavation shall be continued two (2) feet deeper, except if a suitable foundation material is exposed at a lesser depth, further excavation will not be required. The cost of this extra excavation, and backfilling with select backfill material, shall be included in the price for pipe laying and no additional payment will be made for this work.

F. If the soil is still unsuitable after the additional excavation as prescribed above, and the Engineer authorizes "Overcut", the trench bottom shall be excavated further in one-foot increments and paid for as "Trench Overcut". See Section 910.3, "Trench Overcut".

G. Trench widths; Refer to Plans provided and as details shown.

H. For excavations five (5) feet deep or less, sheeting and shoring shall be installed where necessary to control trench width, protect the workmen and the general public, and prevent damage to this or adjacent work, or structures. When an excavation is in excess of five (5) feet deep, the Contractor shall comply with the provisions of the State of Florida "Trench Safety Act". Method(s) of compliance used shall protect the workmen and the general public, prevent damage to this or adjacent work, structures, utilities, pavements, sidewalks, curbs, gutters and similar improvements both public and private, and provide for proper maintenance of traffic. The trench width may vary to accomplish this and to comply with the Trench Safety Act, but only from a point

one (1) foot above the top of the pipe.

I. Where wood sheeting or certain designs of steel sheeting are used, the City may require that the sheeting be cut off at a level two (2) feet above the top of the installed pipe and that portion below that level be left in place. If ordered left in place, sheeting and shoring shall be paid for under the appropriate Proposal Item.

J. If interlocking steel sheeting is used, the City may permit its complete removal in lieu of the cut-off, providing removal can be accomplished without disturbing the bedding, pipe or pipe alignment. Any damage to the pipe bedding, pipe or pipe alignment shall be cause for rejection of the affected portion of the work.

K. A substantially and safely constructed moveable shield or box, as approved by the Engineer, may be used in place of sheeting when the trench is opened immediately behind the shield as pipe laying proceeds inside the shield. All construction in conjunction with using such a shield must be as approved by the Engineer, including excavation, installation of pipe and backfilling and compaction.

L. Excavation for other piping and appurtenances shall be sufficient to leave at least 12 inches clear between their outer surfaces and the embankment or sheeting that may be used to protect them.

M. Materials removed from the trenches shall be stored and disposed of in such a manner that they will not interfere unduly with traffic on public streets and sidewalks and they shall not be placed on private property. In congested areas, such materials cannot be stored adjacent to the trench or used immediately as backfill; these materials shall be removed to convenient places of storage. If any material is creating a public hazard or other unsafe condition, in the opinion of the Engineer, it shall be removed immediately by the Contractor to a storage area at no cost to the City.

N. The trench wall shall be kept at a stable angle of repose to maintain trench widths within the limits hereinafter specified or shown on the Drawings.

O. The trench, when in rock, shall be excavated to a width within the limits of the top of the pipe and the trench bottom so as to provide a clearance on each side of the pipe barrel, measured to the face of the excavation, of 12 inches. Rock or removal in the excavation shall be considered a part of the excavation and as such no additional payment shall be made, therefore. Where excavation is in silt, the width of trench bottom shall be pipe O.D. plus 2- feet with the trench walls being kept at a stable angle of repose. All pipe trenches shall be excavated to a level at least 12 inches below the outside bottom of the proposed pipe barrel.

P. The Contractor shall perform all excavation of every description and of whatever substances encountered, to the dimensions and depth shown on the Drawings, or as directed by the Engineer. All excavations shall be made by open cut. Any existing utilities such as pipes, cables, etc., shall be carefully supported and protected from damage, and in case of damage, they shall be restored at no cost to the City.

Q. The Contractor shall temporarily store excavated material suitable for backfill in full compliance with the provisions of the permits. All mud, silt, debris and other material unsuitable for backfilling the trench shall be removed and legally disposed of offsite by the Contractor. The Contractor shall make his own arrangements regarding stock piling of excavated suitable material and storage and assembly space to properly and safely carry out the construction. Any agreements entered into by the Contractor and property Owners shall hold the City harmless. Storage of excavated material shall not cause environmental problems and shall be performed at no additional cost to the City.

## 910.2 TRENCH STABILIZATION

A. No claim for extras or additional payment will be considered for cost incurred in the stabilization of trench bottoms which are rendered soft or unstable as a result of construction methods, such as improper or inadequate sheeting, dewatering or other causes. In no event shall pipe be installed when such conditions exist, and the Contractor shall correct such conditions to provide proper bedding or foundations for the proposed installation at no additional cost to the City.

## 910.3 TRENCH OVERCUT

A. Trench Overcut provisions herein shall be used only under direct authorization by the Engineer. Since the amount of trench overcut that may be required is usually unknown until the actual work begins, trench overcut may be established in the Proposal on a contingent basis. A Contingent Item may or may not be used at the option of the City, and any provisions contained within the Contract Documents for quantity overruns or underruns will not be applicable.

B. If, after excavating the trench to a depth of 2 feet 6 inches below the outside bottom elevation of the proposed pipe barrel, and the soil at that depth is still unsatisfactory as foundation material because it contains marl, muck, organic matter, or other unsuitable material, and the Engineer authorizes overcut, the pipe trench shall be excavated further in one-foot increments until either a suitable foundation material is found, or the Contractor is directed by the Engineer to stop trench overcut operation and begin backfilling. In no case will trench overcut be more than 6 feet in depth, i.e., to a point 8.5 feet below the bottom of the pipe.

B. Selected backfill, as defined in Section 910.4, "Compacted Backfill", shall then be compacted in 6-inch layers up to the bottom of the proposed 6 inches of pipe bedding.

## 910.4 COMPACTED BACKFILL

A. When mains are to be installed within existing street areas, the Contractor shall limit the amount of ditch open at any one time to one block (approximately 600 feet). The work in each block including excavation, pipe laying, backfilling, compaction and temporary paving, shall be completed before proceeding with the work in the next block. The Contractor may employ more than one installation crew on the Project, but not less than 1,200 feet shall separate any two open trench sections.

B. Backfilling and compaction shall be kept up with the rate of pipe laying. Backfill consisting of the specified material shall be placed and properly compacted, to the degree specified hereinafter. Unless otherwise ordered or approved by the Engineer, in writing, no temporary fill, refill, or uncompacted fill shall be installed. Under no circumstances shall backfill material other than that specified or an approved equal be installed. Backfill shall be placed and compacted immediately after installation of piping.

C. Backfill Material: Shall be clean and free from all organic material, clay, marl or unstable materials, debris, lumps or broken paving. No rocks or stones larger than 6 inches in diameter shall be allowed in any backfill. Material for backfill may be material resulting from trench excavation, if suitable in the opinion of the Engineer.

D. Select Backfill Material: Specified in these Specifications or required by the Drawings shall meet all of the general requirements for backfill material set forth above, and, in addition, shall be free of any rocks or stones larger than 2 inches in diameter. Select backfill material may be material resulting from trench excavation, if suitable in the opinion of the Engineer, carefully selected to comply with these requirements.

E. Backfilling and compaction of trenches will not be allowed until the work has been inspected by the Engineer, and the Engineer indicates that backfilling and compaction may proceed. Any work covered up or concealed without the knowledge or consent of the Engineer may be required to be uncovered or exposed at no cost to the Department.

F. The Contractor shall backfill and compact all trenches and other excavations made in the process of installing the pipe. The cost of all backfilling and compaction shall be included in the price bid under the various Items. The Contractor shall maintain the surface of the backfill free from major irregularities and potholes. Backfill to a point at least one foot above the pipe shall be select backfill material not exceeding 2 inches in diameter. Above this point, backfill shall be of material not exceeding 6 inches in diameter.

G. Backfilling and compacting of material under and around the pipe and to one foot above the crown shall be in layers not exceeding 6 inches in thickness. Each layer shall be thoroughly compacted to at least 90 percent of maximum density as determined by AASHTO Standard No T-180-74, "Moisture-Density Relations of Soils using a 10-lb. (4.54 Kg.) Rammer and an 18 in. (457 mm) Drop." The material in the ditch may be compacted by either hand tamper or a mechanized power tamper, provided the results obtained meet the continued approval of the Engineer.

H. Backfilling and compacting of material lying above a point one foot above the crown of the pipe and below the pavement base or the surface of the ground if out of pavement shall be accomplished in layers not exceeding 9 inches in thickness. Each layer shall be thoroughly compacted with a powered hand tamper or a mechanized power tamper to at least 98 percent of maximum density as determined by AASHTO Specification T-180-74 or such greater density as may be required by the governing authority over the area in which the work is performed.

I. Backfill and compaction shall be kept up with the rate of pipe laying. The backfill up to the spring line of the pipe shall be placed and compacted as soon as practical after the laying of the pipe.

J. On parts of the line where ground water level may be high enough to float the pipe, the placing of the backfill and the rate of pumping the trench shall be so controlled as to prevent the pipe from floating or moving from the line and grade shown on the Drawings.

K. In the event that sufficient suitable material is not available at any point to properly backfill the trench, the Contractor shall transport suitable material from points of the line where such material is available or shall otherwise furnish suitable material at no additional cost to the City.

L. Suitable material in excess of all backfill requirements shall be removed from the work and disposed of by the Contractor. The cost for removal shall be included in the overall Project cost bid.

M. Where cuts have been made through unpaved, stabilized rock roadways, driveways and parkways, surface restoration shall consist of 3 inches of compacted lime rock overlaid by 3 inches of gravel or graded and washed rock with a maximum diameter of 1/2-inch except as otherwise directed by the Engineer. The rock shall be installed over the entire width of the disturbed area and shall closely match the existing rock at each location. Several grades of rock may be required to attain this end, but it is not anticipated that more than one grade will have to be used at any one location. The cost for replacement of gravel or rock stabilized driveways and roadways shall be included in the overall Project cost bid unless a specific Bid Item is established in the Proposal.

N. Backfill material shall consist of the suitable excavated material being stored for this purpose. Backfill material placed within 1-foot of piping and appurtenances shall not contain any stones or rocks larger than 2 inches in diameter, and no stones or rocks larger than 6 inches in diameter will be permitted in any backfill. Backfill material containing mangrove muck or other unsuitable materials shall not be used.

O. During the backfilling operation, care shall be taken to preserve the alignment and gradient of the installed pipe.

**SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES**

**PART 1 GENERAL**

**1.01 SCOPE OF WORK**

A. Before proceeding with the erection of the construction plan, including the setting or placing thereof, and the erection of other temporary structures, the Contractor shall furnish the Engineer with such information and plans as City may require.

B. Shop Drawings shall be submitted prior to any project construction activity. In a timely fashion, well before the contemplated ordering for fabrication of special order or long-lead items or construction use of any standard element of the work, the Contractor shall furnish Shop Drawings for the review and approval of Engineer of Record and City.

C. It is the Contractor's sole responsibility, upon the first occasion of submittal of a particular element of the work, to submit Shop Drawings of an element which match and fulfill the requirements and intent of the Plans and Specifications. Any delays or costs caused, either directly or indirectly, by non-timely submissions; submission of items differing significantly from the intent of the Plans and/or Specifications; repeated submission of, or argument over, rejected elements or changes required for acceptance; arguments with the criteria or requirements of the Plans or Specifications; or any other such similar activities shall be at the expense of the Contractor.

D. It is the intent of the Contract Documents that the Contractor shall, in the first instance, submit Shop Drawings of elements which meet or exceed the requirements of the Contract Documents and fit with the other elements of the work and the existing conditions. Activities such as those mentioned in Article 1.01 C, which are inimical to this intent will not be tolerated and may, at the sole discretion of the Engineer, subject the Contractor to costs for any delays, costs, damages or penalties suffered by the City due to such activities to include but not be limited to; extra engineering and overhead costs together with any liquidated or actual damages.

**1.02 DESCRIPTION OF WORK**

A. Submit to the Engineer for review and approval, Shop Drawings, test reports and data on materials, equipment, and material samples as required for the proper control of work, and as specified in the Specification sections. Shop Drawings shall be submitted for all materials and equipment to be furnished.

B. Within fifteen (15) calendar days after the effective date of the Contract, submit to the Engineer a complete list of preliminary data on items for which Shop Drawings are to be submitted. Included in this list shall be the names of all proposed manufacturers furnishing specified items. Review of this list by the Engineer shall in no way expressed or implied relieve the Contractor from submitting complete Shop Drawings and providing materials, equipment, etc., fully in accordance with the Specifications. This procedure is required in order to expedite final review of Shop Drawings.

C. Maintain an accurate updated Shop Drawing submittal log which shall include the following items:

1. Submittal Description and Number Assigned
2. Specification Section
3. Plans Sheet Number

4. Date to Engineer
5. Date Returned to Contractor (from Engineer)
6. Status of Submittal (Approved, Approved as Noted, Rejected/Resubmit)
7. Date of Resubmittal and Return (as Applicable)
8. Date Material Release (for Fabrication)
9. Projected Date of Fabrication
10. Projected Date of Delivery to Site
11. Status of O & M Manuals Submittal

#### 1.03 CONTRACTOR'S RESPONSIBILITY

A. Furnish the Engineer with a schedule of Shop Drawings submittals, fixing the respective dates for the submission of Shop Drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment. This schedule shall indicate those that are critical to the progress schedule.

B. Submit to the Engineer all plans and schedules sufficiently in advance of construction requirements to provide maximum time for checking and appropriate action from the time the Engineer receive them.

C. It is the duty of the Contractor to check and approve all plans, data and samples prepared by or for him before submitting them to the Engineer for review. Each and every copy of the Plans and data shall bear Contractor's stamp showing that they have been checked and approved. Shop Drawings submitted to the Engineer without the Contractor's stamp and approval shall be returned to the Contractor for conformance with this requirement before Engineer's review. Shop Drawings shall indicate any deviations in the submittal from requirements of the Project Documents and the Contractor shall state the reason why a deviation is required.

D. All submittals shall be accompanied by a transmittal letter prepared in duplicate containing the following information:

1. Date
2. Project Title and Number
3. Contractor's name and address
4. The number of each Shop Drawing, Data, and Sample submitted
5. Notification of Deviations from Project Documents
6. Submittal Log Number conforming to and referring to Specification Section Numbers. Submit three copies of Shop Drawings and of descriptive or product data submittals necessary to complement Shop Drawing. The Engineer will retain two sets.

F. After receiving approval by the Engineer, the Contractor shall be responsible for submitting the Shop Drawings to the Building Department. Shop Drawings of all premanufactured items and all other Shop Drawings are required to obtain approval prior to manufacturing or installing the submitted items. The Contractor shall also be responsible for contesting any interpretations by the Building Department that City considers non-acceptable. The Contractor shall include in the bid prices, all costs for permits, fees and expenses associated with the submittals, including resubmittals (if any) of Shop Drawings to the Building Department. The Building Department as used in this paragraph shall be taken to mean the Miami-Dade County Building Department and/or other governing building authority appropriate to this project.

G. Do not begin any of the work covered by a drawing, data, or a sample returned as "Rejected/Resubmit" until

a revision or correction thereof has been reviewed and returned to the Contractor, by the Engineer, with approval or approval "As Noted". Be responsible for and bear all costs of damages which may result from the ordering of any material or from proceeding with any part of work prior to receiving Engineer's approval or approval "As Noted" of the necessary Shop Drawings.

H. Be fully responsible for observing the need for and for making any changes in the arrangement of piping, connections, wiring, manner of installation, etc., which may be required by the materials/equipment the Contractor proposes to supply, both as they pertain to the Contractor's own work, work of others, or of other Divisions herein or Trades and clearly show such changes on the Shop Drawings.

I. When substitutions in materials or equipment are allowed, the Contractor shall make all necessary changes in adjacent or connected structures and equipment at his expense. Where contemplated changes, substitutions or appurtenant work require engineering design, in the opinion of the Engineer, the Contractor shall have such design services performed at his expense. Said engineering design services shall be of an extent satisfactory to the Engineer whose word shall be final and shall be performed by a Registered Professional Engineer licensed to practice in the State of Florida.

J. When substitutions in materials or equipment are allowed, the Contractor shall be solely responsible for all costs and time required by any differences in construction methods, fabrication or assembly required and no additional time will be allowed.

K. The Miami-Dade Building Department requires that any changes made during construction which result in differences between the as constructed arrangement/elements and the arrangement/elements shown on the permitted plans be reconciled by re-permitting of the plan sheet or sheets affected by the construction changes prior to inspection. Thus, the plan sheet or sheets must be redrawn to reflect the construction change, signed, sealed, dated and re-submitted by the Engineer of Record for re-permitting.

L. When a construction change, initiated by the Contractor or resulting from a change made by the Contractor, requires re-permitting as discussed in the preceding paragraph, the Contractor shall be responsible for all labor, material and equipment required to redraw the Plan sheet or sheets affected by the change to the satisfaction of the Engineer of Record and City. The costs for all work of this sort and all costs of re-permitting shall be borne by the Contractor and no extra compensation will be allowed.

M. Determine and verify:

1. Field measurements
2. Field construction criteria
3. Catalog numbers and similar data
4. Conformance with specifications
5. That installation and maintenance clearances are sufficient particularly when equipment or arrangement changes have been made

#### 1.04 ENGINEER'S REVIEW OF SHOP DRAWINGS

A. Engineer's review of plans, data and samples, submitted by the Contractor will cover only general conformity to the Drawing and Specifications. The Engineer's review will not constitute an approval of dimensions, quantities, and details of the material, equipment, device, or item shown. The review of plans and schedules will

be general, and shall not be construed:

1. As permitting any departure from the Contract requirements
2. As relieving the Contractor of responsibility for any errors, including detail, dimensions, and materials
3. As approving departures from details furnished by the Engineer, except as otherwise provided herein

#### B. Variations

1. If the plans or schedules, as submitted, describe variations per paragraph 1.03 C, and show a departure from the Contract requirements which Engineer finds to be in the interest of the City and to be so minor as not to involve a change in Contract price or time for performance, the Engineer may return the reviewed plans without noting an exception.
2. If the plans or schedules, as submitted, describe variations and show a departure from the Contract requirements which the Engineer finds to be minor enough to be corrected by redlining the submittal, the engineer will mark and return the submittal marked "Approved as Noted." The redlined corrections shall be as binding on the Contractor as would be a resubmission embodying the same corrections.

C. When reviewed by the Engineer, each of the Shop Drawings shall be stamped and dated to indicate it had been reviewed. Shop Drawings stamped "Revise and Resubmit" and with required corrections shown will be returned to the Contractor for correction and resubmittal.

D. Resubmittals will be handled in the same manner as first submittals. On resubmittals the Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, to revisions and corrections required by the Engineer on previous sub- missions. The Contractor shall make any corrections required by the Engineer.

E. If the Contractor considers any correction indicated on the Shop Drawings to constitute a change to the Project Plans or Specifications, the Contractor shall give written notice thereof to the Engineer who will render a decision which shall be final. After the decision has been made, the Contractor shall without delay, provide the corrections to the plans.

F. When the Shop Drawings have been approved by the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.

G. No partial submittals will be reviewed. Submittals not complete will be returned to the Contractor for resubmittal. Unless otherwise specifically permitted by the Engineer, all submittals shall be made in groups containing all associated items for systems, processes or as indicated in specific specifications sections. All plans, schematics, manufacturer's product data, certifications and other Shop Drawing submittals required by a system specification shall be submitted at one time as a package to facilitate interface checking.

#### 1.05 SHOP DRAWINGS

A. When used in the Project Documents, the term "Shop Drawings" shall be considered to mean Contractor's plans for materials and equipment which become an integral part of the Project. These Shop Drawings shall be complete and detailed. Shop Drawings shall consist of fabrication, erection and setting drawings and schedule drawings, manufacturer's scale drawings, and wiring and control diagrams. Cuts, catalogs, pamphlets, descriptive literature, and performance/test data shall be considered only as supportive to required Shop

Drawings as defined above.

B. Manufacturer's catalog sheets, brochures, diagrams, illustrations and other standard descriptive data shall be clearly marked to identify pertinent materials, product or models. Information which is not applicable to the Work shall be deleted by striking or cross hatching.

C. Each Shop Drawing shall have a blank area 3½ inches by 3½ inches, located adjacent to the title block. The title block shall display the following:

1. Project Title and Number
2. Name of Project Building or Structure
3. Number and Title of the Shop Drawing
4. Date of Shop Drawing or Revision
5. Name of Contractor and Subcontractor Submitting Drawing
6. Supplier/Manufacturer
7. Separate Detailer when Pertinent
8. Specification Title and Number
9. Specification Section
10. Application Project Drawing Number

D. If plans show variations from Contract requirements because of standard shop practice or for other reasons, describe such variations in the letter of transmittal. If no explanation of these variations is provided, the Contractor shall not be relieved of the responsibility for executing the work in accordance with the Contract, even though such plans have been reviewed and approved.

E. For all mechanical and electrical equipment furnished, provide a list including the equipment name, address of and telephone number of the manufacturer's representative and service company so that service and/or spare parts can be readily obtained.

F. All manufacturers or equipment suppliers who propose to furnish equipment or products shall submit an installation list to the Engineer along with the required Shop Drawings. The installation list shall include at least five installations where identical equipment has been installed and has been in operation for a period of at least five years, unless otherwise specified. Manufacturers and/or equipment which fails to meet the specified experience period will be considered if the manufacturer or supplier provides a bond or cash deposit which will guarantee replacement of the equipment or process in the event of failure or unsatisfactory service.

G. Only the Engineer will utilize the color "red" in marking Shop Drawing submittals.

#### 1.06 REQUIRED INFORMATION

A. Submit, as applicable, the following for all prefabricated or manufactured structural, mechanical, electrical, plumbing, process system, and equipment work:

1. Shop Drawings or equipment drawings, including dimensions, size and location of connections to other work, and weight of equipment
2. Catalog information and cuts
3. Installation or placing plans for equipment, drives, and bases

4. Supporting calculations, signed and sealed by a Florida Registered Engineer when required, for equipment and associated supports, or hangers required or specified to be designed by equipment manufacturers.
5. Signed and sealed calculations and plans by in-house Florida Registered Professional Engineer for structural systems, indicating compliance to the structural design criteria specified in the Plans.
6. Complete manufacturer's specifications, including materials description and paint system.
7. Performance data and pump curves
8. Suggested spare parts with current price information
9. List of special tools required for testing, checking, parts replacement, and maintenance. (Special tools are those which have been specially designed or adapted for use on parts of the equipment, and are not customarily and routinely carried by maintenance mechanics)
10. List of special tools furnished with the equipment
11. List of materials and supplies required for the equipment prior to, and during startup
12. List of materials or supplies furnished with the equipment
13. Special handling instructions
14. Requirements for storage and protection prior to installation
15. Requirements for routine maintenance required prior to equipment startup
16. List of all requested exceptions to the Project Documents

#### 1.07 SUBMITTAL REQUIRED FOR FOREIGN MANUFACTURED ITEMS

A. In addition to the submittal requirements stated above, suppliers of foreign manufactured items shall submit the names and addresses of companies within the United States that maintain technical service representatives and a complete inventory of spare parts and accessories for each foreign-made item proposed for incorporation into the Work. Failure to prove these capabilities shall be cause for rejection of the foreign manufactured items.

B. Foreign manufactured equipment and materials shall in all cases be clearly and permanently marked with the manufacturer's name and country of origin of the item. The name of the U.S. importing/supplying firm is not acceptable. Shop Drawing submittals of foreign-made items shall be accompanied by written information to include name and location (i.e. country, City, and street address) of the manufacturer. This requirement shall also apply to the foreign made elements of items assembled in this country from parts wholly or partially manufactured overseas.

1. The words, "Permanently Marked" as used in this paragraph shall mean; die stamped, cast-in, welded, or otherwise marked such that the removal of the marking by any mechanical or chemical means will result in obvious permanent damage to the surface marked. These markings shall be on surfaces which are not hidden by assembly.

C. Where specified elsewhere herein or at the sole discretion of the Engineer, whose word shall be final, supply verification of quality, suitability, or other aspects, as directed by the Engineer, from a Professional Engineer licensed to practice in the State of Florida or the state where the supplying U.S. firm is located. The verification shall be signed, sealed, and dated. All costs for this verification shall be at the sole expense of the Contractor and no extra compensation will be allowed. Verification by foreign-based engineers, firms, manufacturers, etc. will not be acceptable. Verification by means of a very stringent foreign testing agency/standard (for example ISO 9000 series) may be acceptable. However, this shall again be at the sole discretion of the Engineer and the full burden of proof and satisfaction of City shall rest with the Contractor. No extra time will be permitted due to the requirement for verification and the Contractor has the sole responsibility to make his submittals with all

necessary information in a timely fashion.

D. Items which are fabricated (i.e. assembled in this country from partially or wholly foreign manufactured parts) may also be required to have verification of their foreign made elements as specified for wholly foreign made items in the preceding paragraph.

E. Any items in contact with or being added to potable water shall conform with NSF/ANSI 61 or 60, as appropriate.

#### 1.08 SAMPLES

A. Furnish for the approval of the Engineer, samples required by the Project Documents or required by the Engineer. Samples shall be delivered to the Engineer as specified or directed. The Contractor shall prepay all shipping charges on samples. Materials or equipment for which samples are required shall not be used in work until approved by the Engineer.

B. Samples shall be of sufficient size and quantity to clearly illustrate:

1. Functional characteristics of the product, with integrally related parts and attachment devices
2. Full range of color, texture and pattern
3. A minimum of two samples of each Item shall be submitted

C. Each sample shall have a label indicating:

1. Name of Project
2. Material or Equipment Represented
3. Name of Producer and Brand (if any)
4. Location in Project

D. Prepare a transmittal letter in triplicate for each shipment of samples containing the information specified herein in Paragraph 1.06 A. Enclose a copy of this letter with the shipment and send a copy of this letter to the Engineer. Approval of a sample shall be only for the characteristics or use specified and shall not be construed to change or modify any Contract requirements.

E. Approved samples of the hardware in good condition will be marked for identification and may be used in the work. Materials and equipment incorporated in work shall match the approved samples. Samples which failed testing or were not approved shall be returned to the Contractor at his expense, if so, requested at time of submission.

#### 1.09 SUBSTITUTIONS

A. Changes in products, materials, equipment, and methods of construction required by the Contract Documents, which are proposed by the Contractor after award of the Contract, are considered to be requests for substitutions. Where the Plans and/or Specifications designate the products of a particular manufacturer, the product specified has been found suitable for the intended use. Articles or products of similar characteristics may be offered for the approval of the Engineer, whose decision shall be final. Copies of complete descriptive data shall be furnished regarding all materials furnished by the Contractor, consisting of Dimension drawings, catalog references, product data, cost, and other information necessary to clearly identify and evaluate each article.

When substitutions are permitted, the Contractor shall make all necessary changes in adjacent, connected, or other structures and equipment at his expense.

B. Where engineer-recommended changes, substitutions or appurtenant work require engineering design, the Contractor shall have such design services performed. Those engineering design services shall be of an extent satisfactory to the Engineer, whose decision shall be final. Engineering services for engineer-recommended changes, substitutions or appurtenant work, shall be performed by a Registered Professional Engineer licensed to practice in the State of Florida.

C Unless specifically authorized by the Engineer in writing, no additional contract time will be allowed, and a decrease in time may be appropriate.

**Project Specifics**

**A. Shop Drawings, Submittals, and Final As-Builts**

1. Furnish to Engineer and City two (2) sets of shop drawings unless otherwise directed by the City.
2. At the completion of the Project and prior to final payment the Contractor shall provide to City two (2) complete sets of As-Builts Documents as well as an electronic copy with drawings in both CADD and PDF formats. The City will also require all documentation for all equipment and at City's request arrange for manufacturer's representative to meet with the City. Contractor will prepare a manual for City to include maintenance and operation of equipment. At the completion of construction, the Contractor will provide training in proper operations, and maintenance schedules.
3. Contractor must adhere to all requirements listed on MDC Class III Permit.

**B. Warranty and Inspection of Defects**

1. The Contractor will warranty all materials, workmanship, and equipment for a minimum period of one (1) year from the date of final completion.
2. Manufacturer's standard warranties on materials and equipment which exceed the minimum one (1) year warranty period will be assigned by the Contractor to the City for its benefit prior to final payment.
3. The Contractor warrants the material and equipment with respect to performance as specified in the specifications. If the Contractor fails to meet performance warranties, it shall be liable and shall have the obligation, at its sole expense, to make adjustment or replacement to meet guarantees. All transportation, supervision, labor, and other costs incidental to the adjustment or replacement shall be borne by the Contractor.
4. The Contractor guarantees that sound engineering, construction principles, and practices in the performance of the work shall be used.
5. The Contractor guarantees that it shall provide the City with the degree of skill, care, judgment, and supervision necessary to assure that the work shall be of the highest quality, with workmanship proper fit, suitable, and sufficient for the purpose contemplated and in accordance with the best trade practices.
6. All parts of the work, throughout the time of performance of the contract, are subject to inspection and testing by the City or such of its agents, employees, or representatives as it may designate, the Engineer's staff, and the authorized representatives of any public authority having jurisdiction. The Contractor shall provide all such persons with safe and proper facilities for access to and inspection of the work both at the construction site and any subcontractor's plant or other source of supply where any equipment, material, or other part of it may be located. The Contractor shall give the City written notice of readiness of the work or any part of the work for any special inspection or test which may be required by the specifications or other contract documents or by any applicable law or public regulation. No part of the work as to which any specific inspection is required shall be covered up until such inspection has been completed. If such work is covered, then it shall be uncovered and replaced at the Contractor's expense.

7. All parts of work shall, during time of contract, be subject to inspection and test by the City or its representatives. Approval for all work will be by the City or its representatives. When poor workmanship or improperly specific materials are reason for rejection, correction will be at the Contractor's expense.

#### C. Construction Services

1. All work shall be performed in strict accordance with the approved specifications, plans, and drawings. The specifications, plans, and drawings and all other similar documents which are a part of the contract are supplementary and complementary to each other and intended to provide for all labors, materials, equipment, services, and other things necessary for the satisfactory completion of the work. Anything called for by any one of such documents shall be required to the same extent as if called for by all of them, and the work shall be complete in every detail whether or not every item is particularly mentioned.
2. After notification of award and prior to the start of any work, the Contractor shall submit their detailed construction schedule to City for approval. The schedule shall be written in sufficient detail to show the chronological relationship of all major aspects of the project, including estimated starting and completion dates of various activities, procurement of materials, and scheduling of equipment. The schedule is subject to approval by the City. Contract shall also provide an explanation of how it handles rain days in the schedule. A rain day for definition in this purpose shall mean a day in which rain or other inclement weather at the site is sufficient to prevent the Contractor from performing critical path activities for a period greater than three hours.
3. Notwithstanding the other items stated under previous sections, the Contractor shall be responsible for:
  - a. Shop drawings, submittals and other work customarily performed by a Contractor.
  - b. Contractor to respond to request for Information from subcontractors.
  - c. Contractor to request and obtain all inspections from agencies having jurisdiction over the project.
  - d. Notifying Florida Power and Light ("FPL") of commencement of project, obtaining approval, and executing any required documentation required by FPL for performing work near their facilities.

#### D. Permitting

1. The Contractor will be responsible to apply and obtain permit from the City of Doral and any other agencies having jurisdiction. If the contractor intends to use a permit expeditor, the cost of those services shall be included in the base bid.
2. The City will be responsible for payment of direct permit fees levied by the City of Doral and/or any other agencies having jurisdiction.

**FORM OF BID BOND**

STATE OF                    )  
COUNTY OF                )

KNOW ALL MEN BY THESE PRESENTS, that we, \_\_\_\_\_, as Principal, and \_\_\_\_\_, as Surety, are held firmly bound unto the City of Doral, a municipal corporation of the State of Florida in the sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_), lawful money of the United States, for the payment of which sum and truly to be made, we bind ourselves, our heirs, executors, administrators and successors jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that the Principal has submitted the Bid dated \_\_\_\_\_, 20\_\_ for: \_\_\_\_\_.

WHEREAS, it was a condition precedent to the submission of said Bid that a or Bid Bond in the amount of five percent (5%) of the Base Bid be submitted with said Bid as a guarantee that the BIDDER would, if awarded the Contract, enter into a written Contract with the City for the performance of said Contract, within ten (10) consecutive calendar days after written notice having been given of the Award of the Contract.

NOW, THEREFORE, the conditions of this obligation are such that if the Principal within ten (10) consecutive calendar days after written notice of such acceptance, enters into a written Contract with the City of Doral and furnishes the Performance and Payment Bonds, satisfactory to the City, each in an amount equal to one hundred percent (100%) of the Contract Price, and provides all required Certificates of Insurance, then this obligation shall be void; otherwise the sum herein stated shall be due and payable to the City of Doral and the Surety herein agrees to pay said sum immediately, upon demand of the City, in good and lawful money of the United States of America, as liquidated damages for failure thereof of said Principal.

IN WITNESS WHEREOF, the above bonded parties have executed this instrument under their several seals this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the name and the corporate seal of each corporate party being hereto affixed and these presents being duly signed by its undersigned representative.

IN PRESENCE OF:

\_\_\_\_\_  
(Individual or Partnership Principal)

\_\_\_\_\_ (SEAL)  
(Business Name)

\_\_\_\_\_  
(Business Address)

ATTEST:  
\_\_\_\_\_  
(Corporate Surety)

\_\_\_\_\_  
(City/State/Zip)  
\_\_\_\_\_  
(Business Phone)

**FORM OF PAYMENT BOND**

STATE OF                    )  
COUNTY OF                )

KNOW ALL MEN BY THESE PRESENTS, that pursuant to the requirements of Florida Statute 255.05, we, as Principal, hereinafter called Contractor, and                   , as Surety, are bound to the City of Doral, Florida as Obligee, hereinafter called City, in the amount of Dollars (\$ ) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, Contractor has by written agreement entered into a Contract, ITB NO. XXXX-XX, awarded the                   day of           , 20\_\_\_\_, with the City of Doral for [project name] in accordance with specifications prepared by the City of Doral which Contract is by reference made a part hereof, and is hereafter referred to as the Contract;

THE CONDITION OF THIS BOND is that if the Contractor:

1. Indemnifies and pay Obligee all losses, damages (including, but not limited to, damages for delay (specifically, liquidated damages as per section 00710 – General Conditions of the ITB and section 3.4 of the Construction Contract) and actual damages caused or arising out of the acts, omissions or negligence of Contractor), expenses, costs, and attorney's fees including attorney's fees incurred in appellate proceedings, that Obligee sustain because of default by Contractor under the Contract; and

2. Promptly makes payments to all claimants as defined by Florida Statute 255.05(1) supplying Contractor with all labor, materials and supplies used directly or indirectly by Contractor in the prosecution of the Work provided for in the Contract, then this obligation shall be void; otherwise, it shall remain in full force and effect subject, however, to the following conditions:

2.1 A claimant, except a laborer, who is not in privity with the Contractor and who has not received payment for their labor, materials, or supplies shall, within forty-five (45) days after beginning to furnish labor, materials, or supplies for the prosecution of the Work, furnish to the Contractor a notice that they intend to look to the Bond for protection.

2.2 A claimant who is not in privity with the Contractor and who has not received payment for their labor, materials, or supplies shall, within ninety (90) days after performance of the labor, or after complete delivery of the materials or supplies, deliver to the Contractor and to the Surety, written notice of the performance of the labor or delivery of the materials or supplies and of the non-payment.

2.3 No action for the labor, materials, or supplies may be instituted against Contractor or the Surety unless the notices stated under the preceding paragraphs 2.1 and 2.2 have been given.

2.4 Any action under this Bond must be instituted in accordance with the Notice and Time Limitations provisions prescribed in Section 255.05(2), Florida Statutes.

The Surety hereby waives notice of and agrees that any changes in or under the Contract Documents and compliance or noncompliance with any formalities connected with the Contract or the changes do not affect the Surety's obligation under this Bond.

IN WITNESS WHEREOF, the above bonded parties have executed this instrument under their several seals this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_, the name and the corporate seal of each corporate party being hereto affixed and these presents being duly signed by its undersigned representative.

IN PRESENCE OF:

\_\_\_\_\_  
(Individual or Partnership Principal)

\_\_\_\_\_ (SEAL)  
(Business Name)

\_\_\_\_\_  
(Business Address)

ATTEST:

\_\_\_\_\_  
(Corporate Surety)

\_\_\_\_\_  
(City/State/Zip)

\_\_\_\_\_  
(Business Phone)

**FORM OF PERFORMANCE BOND**

STATE OF                    )  
COUNTY OF                )

KNOW ALL MEN BY THESE PRESENTS, that pursuant to the requirements of Florida Statute 255.05, we, as Principal, hereinafter called Contractor, and , as Surety, are bound to the City of Doral, Florida, as Obligee, hereinafter called City, in the amount of Dollars (\$) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, Contractor has by written agreement entered into a Contract, ITB NO. XXXX-XX, awarded the day of, 20\_\_, with City of Doral for [project name] in accordance with drawings (plans) and specifications which Contract is by reference made a part hereof, and is hereafter referred to as the Contract;

THE CONDITION OF THIS BOND is that if the Contractor:

1. Fully performs the Contract between the Contractor and the City for: [project name] as scheduled after the date of Contract commencement as specified in the Notice to Proceed and in the manner prescribed in the Contract; and bid specifications.
2. Indemnifies and pay Obligee all losses, damages (including, but not limited to, damages for delay (specifically, liquidated damages as per section 00710 – General Conditions of the ITB and section 3.4 of the Construction Contract) and actual damages caused or arising out of the acts, omissions or negligence of Contractor), expenses, costs, and attorney's fees including attorney's fees incurred in appellate proceedings, that Obligee sustain because of default by Contractor under the Contract; and
3. Upon notification by the City of Doral, corrects any and all defective or faulty Work or materials which appear within ONE (1) YEAR.
4. Performs the guarantee of all Work and materials furnished under the Contract for the time specified in the Contract, then this Bond is void, otherwise it remains in full force. Whenever Contractor shall be, and declared by City to be, in default under the Contract, the City having performed their obligations thereunder, the Surety may promptly remedy the default, or shall promptly:
  - 4.1 Complete the Contract in accordance with its terms and conditions; or
  - 4.2 Obtain a Bid or Bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the best, lowest, qualified, responsible and responsive BIDDER, or, if the City elects, upon determination by the City, and Surety jointly of the best, lowest, qualified, responsible and responsive BIDDER, arrange for a Contract between such BIDDER and City, and make available as Work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the Contract Price." as used in this paragraph, shall mean the total amount payable by City of Doral to Contractor under the Contract and any amendments thereto, less the amount properly paid by City of Doral to Contractor.

No right of action shall accrue on this Bond to or for the use of any person or Corporation other than the City named herein.

Surety hereby waives notice of and agrees that any changes in or under the Contract Documents and compliance or noncompliance with any formalities connected with the Contract or the changes do not affect Surety's obligation under this Bond.

Signed and sealed this day of, 20\_\_.

IN WITNESS WHEREOF, the above bonded parties have executed this instrument under their several seals this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the name and the corporate seal of each corporate party being hereto affixed and these presents being duly signed by its undersigned representative.

IN PRESENCE OF:

_____	_____ (SEAL)
(Individual or Partnership Principal)	(Business Name)
	_____
	(Business Address)
ATTEST:	_____
_____	(City/State/Zip)
(Corporate Surety)	_____
	(Business Phone)