

PART 3 – GENERAL CONDITIONS

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PART 1 - GENERAL

1.01 SCOPE

When used in this publication the following underlined terms shall have meaning as hereinafter defined:

- A. The masculine pronoun shall include the feminine and neuter, and the singular shall include the plural;
- B. "And" shall also mean "or" and "or" shall also mean "and", wherever the context or purpose so requires;
- C. "Person" shall mean and include any individual, combination of individuals, partnership, society, association, joint stock company, corporation, estate, receiver, trustee, assignee, referee or any other person acting in a fiduciary or representative capacity, whether appointed by a court or otherwise;
- D. "Town" or "Medley" shall mean Town of Medley, located in Miami Dade County of Florida, and its underlying departments including Water and Sewer Department, which is the party hereto and for which this Contract is to be performed;
- E. "Engineer" shall mean the authorized representative for the Town;
- F. "Inspector" shall mean any person designated by the Engineer to examine and inspect materials and work for the purpose of insuring compliance by the Contractor with all requirements of the Plans and Specifications;
- G. "Developer" shall mean the person, who has entered into an agreement with the Town to construct a Project.
- H. "Contractor" shall mean the party of the second part to the contract. The person, firm, or corporation, holding a current Certificate of Competency applicable to the type of work to be performed, with whom a contract has been made directly or through accredited representatives, that may have entered into a contract with the Town and who is primarily liable for the acceptable performance of the work for which he has contracted and also for the payment of all legal debts pertaining to the work, or Contractor shall mean any person engaged by the Developer to supply labor, materials or equipment for use in the fulfillment of the project.
- I. "Subcontractor" shall mean any person engaged by the Contractor to supply labor, materials or equipment for use in the fulfillment of the Project;
- J. "Engineer of Record" shall mean the Florida-certified professional engineer engaged by the Developer or the Town to design the proposed Project.

- K. "Project" shall mean and include all construction for which the Contractor is responsible under the Contract Documents, or shall mean and include all construction for which the Developer or Engineer of Record is responsible under the agreement with the Town.
- L. "Plans" shall mean construction drawings prepared by the Developer or Engineer of Record for the proposed Project.
- M. "Standards Details" or "Standards" the Town's latest published standard construction details, copies of which are bound herein.
- N. "Equal" or "Approved Equal" shall mean only that material or product which is specifically approved by the Engineer as being an acceptable substitute for a material or product designated in the Specifications or by a trade name or the name of the manufacturer.
- O. "Domestic" when applied to materials, shall mean materials or products produced within the continental limits of the United States.
- P. "Water level" or "water table" shall mean the top elevation of the natural ground water table as it exists in the trench at any particular site and time during the installation.
- Q. "Surveyor" shall mean a professional surveyor registered in the State of Florida to engage in the practice of surveying.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

(Not Used)

END OF SECTION

PART 1. SECTION 01010 – SUMMARY OF WORKGENERAL

1.01 SCOPE OF WORK

- A. Work Included: This Section describes the project in general, and provides an overview of the extent of the work to be performed under this Contract. Detailed requirements and extent of work is stated in the applicable Specification sections and shown on the Contract Plans. The Contractor shall, except as otherwise specifically stated herein or in any applicable parts of the Contract Documents, provide and pay for all labor, materials, equipment, tools, construction equipment, and other facilities and services necessary for proper execution, testing, and completion of the work under this Contract.

1.02 SPECIFICATIONS

- A. The Specifications included in these Contract Documents establish the minimum performance and quality requirements for materials and equipment together with the minimum standards for quality of workmanship and appearance. Generally, there has been no attempt to separate the Specification sections into groups for the work of separate subcontractors, or for work to be performed by the various trades. Should there be any question as to the interpretation of any particular Specification section or part of Specification section, such question should be directed to the Town prior to the submittal of a proposal for the work under this Contract.
- B. The work shown on the Plans is intended to be comprehensive and descriptive, not an exact and complete representation of the actual finished work. Installed work shall include fittings, joints, supports, nuts, bolts, and all other accessories required to provide complete and satisfactory systems as specified, even though some items may not be specifically shown on the Plans.
- C. It is the intent of the Town to obtain a complete, functional, and satisfactory installation under this project, and any items of labor, equipment or materials which may be reasonably assumed as necessary to accomplish this end shall be supplied whether or not they are specifically shown on any plans which may be supplied or stated herein. The Contractor shall provide all materials for the project unless they are specifically called out in these specifications as being supplied by the Town. The Contractor shall also supply all sheeting, shoring, bracing and all other labor, material or equipment required to preclude damage to, or loss of functionality of, any existing facility or system.
- D. 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.

1.03 REASONABLY IMPLIED PARTS OF THE WORK SHALL BE DONE THOUGH ABSENT

FROM SPECIFICATIONS

- A. Any part of the work which is not mentioned in the Specifications but is shown on the Plans, or any part not shown on the Plans but described in the Specifications, or any part not shown on the Plans nor described in the Specifications, but which is necessary or normally required as a part of such work, or is necessary or required to make each installation satisfactorily and legally operable, shall be performed by the Contractor as incidental work without extra cost to the Town, as if fully described in the Specifications and shown on the Plans, and the expense thereof shall be included in the applicable unit prices or lump sum bid for the work.

1.04 DESCRIPTION OF WORK

- A. The work consists of furnishing all materials, labor, and equipment necessary to the Town of Medley's Emergency Repair of Pump Station 100 (WS-0115), as shown in the Plans. Work includes, but is not limited to, the procurement and rehabilitation of existing pump station PS-100 located at the intersection of N.W. 74th Avenue and N.W. 77th Terrace in Medley, Florida. Rehabilitation shall include: by-pass system operation in accordance with the General Notes in the Drawings; demolition of the existing pump station components as shown in the Drawings/General Notes; sandblasting and re-lining of the concrete dry pit walls; installation of centrifugal pump/motor assemblies, associated piping, valves, fittings, electrical wiring, and concrete pedestal as outlined in the Drawings/General Notes; aesthetic and landscaping renovations as outlined in the Drawings/General Notes; cleaning of the wet well as described in the General Notes; and disposal of all construction debris, unused excavated material, and all unsuitable material.

1.05 TESTING

- A. Testing procedures shall be submitted to the Engineer as shop drawings and will be subject to review and approval. The Town reserves the right to require test procedure and equipment changes and revisions to the extent considered appropriate by the Engineer whose decision shall be final. The Contractor is advised that all testing shall be carried out in accordance with the best practices of the trade, Best Management Practices (BMP) and as recommended in writing by the Engineering/technical/test staff of the manufacturer of the equipment and he should plan and price his test work accordingly. In no case will test recommendations of a manufacturer's sales or management groups be considered sufficient. All necessary temporary power sources, load banks, test materials, test instrumentation, qualified test personnel including manufacturer's representatives, fuels and lubricants shall be provided by the Contractor and shall be as approved by the Engineer and, if not approved, the Contractor shall change the item(s) to the satisfaction of the Engineer. Where required by the Engineer, testing shall be carried out utilizing Contractor-supplied power sources and load banks prior to any connection with FPL. The Contractor shall include in his prices bid all costs for testing and no extra compensation will be allowed.
- B. Factory testing of equipment is in all cases required and test data from these tests shall be provided to the Engineer prior to shipment. At times the Town will want witnessed testing by Town personnel or representatives and at other times this will not be required. To establish a base line for pricing, the Bidder will assume that any piece of

equipment with an invoice cost to the Contractor of twenty thousand dollars (\$20,000.00) or more will require witnessed testing. The Town will try in all cases to note which items in the Specifications will require witnessed testing. However, absent such list the Bidder shall use the \$20,000 level for pricing purposes. In all cases during the cost breakdown process, the Contractor shall agree with the Engineer on the amount of a credit to the Town for each item to be witness tested in the instance such test is canceled. All costs for factory testing will be included in the prices bid and no extra compensation will be allowed.

- C. On site testing shall conform with the protocol previously approved by the Engineer and shall include testing and calibration prior to energizing of individual cubicles followed by testing and calibration as a whole system or group of systems. The Contractor shall supply via his own resources all material, equipment, power, time, and fully qualified specialist personnel to perform all system integration work as necessary to provide systems that talk to one another and correctly react to one another, including systems that must communicate with and react to existing systems and systems, being or to be, installed by others. It is an absolute requirement that upon completion, all systems installed in the Work be able to correctly communicate and react to one another and to systems, in existence, being, or to be, installed external to the Work. Final testing and calibration will be performed with the equipment energized and will only take place when the Engineer is satisfied with the results of earlier tests. Full written reports of tests and results shall be furnished by the Contractor to the Town. All costs for this testing, calibration, system integration and reporting including the costs for factory and specialist personnel required during testing, calibration and system integration shall be included in the prices bid and no extra compensation will be allowed. Any delays or costs occasioned by test procedures or results not being satisfactory to the Engineer shall rest solely with the Contractor and no extra time or compensation will be allowed. All on site testing shall be witnessed by the Town and the Contractor shall make timely arrangements and fully coordinate tests with the Engineer.
- D. After installation is completed, the Contractor shall provide records of non-destructive electrical insulation tests performed by a certified institution and approved by the Engineer, witnessed by Town personnel and attesting that the dielectric condition of the equipment and wiring is acceptable.

PART 2. PRODUCTS – NOT USED

PART 3. EXECUTION – NOT USED

END OF SECTION

SECTION 01011 - SITE CONDITIONS

PART 1 GENERAL

1.01 SITE INVESTIGATION AND REPRESENTATION

- A. 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.
- B. 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 Town 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.
- C. 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.

1.02 INFORMATION ON SITE CONDITIONS

- A. All information obtained by the Town regarding the site conditions, topography, 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 Town assumes any responsibility for the completeness or for the Contractor's interpretation of such supplementary information. Prior to bidding and after written approval from the Town, bidder may make his own survey investigations to satisfy himself with site conditions at his own cost.

1.03 EXISTING UTILITIES AND LOCATION SERVICES

- A. 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 Town, 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.**

1.04 CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTIES AND SERVICE

- A. 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.
- B. 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.**
- C. The Contractor and his subcontractors shall be solely and directly responsible to the owner 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.
- D. Neither the Town 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.
- E. 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 owner of the utility.
- F. 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.

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

1.05 INTERFERING STRUCTURES

- A. 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.

1.06 FIELD RELOCATION

- A. 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.
- B. Representatives of utility companies, the railroad companies, the traffic and transportation authorities, etc., shall be notified in accordance with the provisions set forth in the relevant sections of the Specifications and the permitting documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01016- SAFETY REQUIREMENTS AND PROTECTION OF PROPERTY

PART 1 GENERAL

1.01 CONTRACTOR'S RESPONSIBILITY FOR SAFETY

- A. Conduct whatever work is necessary for safety and be solely and completely responsible for conditions of the job site, including safety of all persons (including employees) and property during the Contract period. This requirement shall apply continuously and not be limited to normal working hours.
- B. Neither the Professional activities of the Design Professional, nor the presence of the Design Professional nor his or her employees and subconsultants at a construction site, shall relieve the Contractor and any other entity of their obligations, duties and responsibilities including but not limited to, construction means, methods, sequence techniques or procedures necessary for performing, superintending, or coordinating all portions of the Work of construction in accordance with the Project Documents and any health and safety precautions required by any regulatory agencies.

1.02 FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS

- A. Safety provisions shall conform to the Federal and State Departments of Labor Occupational Safety and Health Act (OSHA), and all other applicable Federal, State, County, and local laws, ordinances, codes, the requirements set forth herein, and any regulations that may be specified in other parts of these Project Documents. Where any of these are in conflict, the more stringent requirements shall be followed. Contractor's failure to thoroughly familiarize himself with the aforementioned safety provisions shall not relieve him from compliance with the obligations and penalties set forth therein.

1.03 SAFE ACCESS BY FEDERAL, STATE, AND LOCAL GOVERNMENT OFFICIALS

- A. The Contractor shall at all times provide proper facilities for safe access to the Work by authorized government officials.

1.04 CONSTRUCTION SAFETY PROGRAM

- A. Develop and maintain for the duration of this Contract, a safety program that will effectively incorporate and implement all required safety provisions. The Contractor's Manual of Safety Practices outlining the firms policies on field safety procedures for employees shall be submitted to the Engineer for review before "Notice to Proceed" will be issued. The Contractor shall appoint an employee who is qualified and authorized to supervise and enforce compliance with the safety program.

- B. Certain products specified in these specifications contain warnings by the manufacturers that under certain conditions, if instructions for use are not followed, a hazardous condition may exist. It is the Contractor's responsibility to instruct his workmen in the safe use of the product, or any product substitution.
- C. The duty of the Engineer to conduct construction review of the Contractor's performance is not intended to include a review or approval of the adequacy of the Contractor's Safety Supervisor, the safety program, or any safety measures taken in, on, or near the construction site.

1.05 SAFETY EQUIPMENT

- A. As part of the safety program, maintain at an office or other well-known place at the jobsite, safety equipment applicable to the Work as prescribed by the governing safety authorities, all articles necessary for giving first-aid to the injured, and establish the procedure for the immediate relocation to a hospital or a doctor's care of any person who may be injured on the jobsite.
- B. Perform all necessary work to protect all personnel and the general public from hazards, including, but not limited to, surface irregularities or unramped grade changes, and trenches or excavations. Furnish barricades, lanterns, and proper signs to safeguard all persons and work.
- C. The performance of all work and all completed construction, particularly with respect to ladders, platforms, structure openings, scaffolding, shoring, logging, machinery guards and the like, shall be in accordance with the applicable governing safety authorities.
- D. During construction, construct and at all times maintain satisfactory and substantial temporary chain link fencing, solid fencing, railings, barricades or steel plates, as applicable, at all openings, obstructions, or other hazards. All such barriers shall have adequate warning lights as necessary, or required, for safety.
- E. There shall be no oil dripping from equipment or oil spills.

1.06 STORAGE OF HAZARDOUS MATERIALS

- A. The material shall be stored and handled in a proper and safe manner and upon its use, immediately dispose of the containers, cans, rags and remnants of the material in a manner approved by the Department of Environmental Resources Management (DERM) at the Contractor's sole cost. The Contractor is not allowed to store empty containers at the site. In case of any violation, the Engineer will report such violation to DERM and the Contractor shall be subject to all penalties and fines as required by State and County regulations.
- B. The Contractor is hereby cautioned that he cannot store any environmentally hazardous materials such as solvents, greases, lubricants or any other type of chemical substances at the Pump Station site. The Contractor shall be allowed to keep only such materials at the site for immediate use.

1.07 ACCIDENT REPORTS

- A. If death, serious injuries, or serious damages are caused, report the accident immediately by telephone or messenger to the Engineer. In addition, the Contractor must promptly report in writing to the Engineer and the Town all accidents whatsoever arising out of, or in connection with, the performance of the work whether on, or adjacent to, the site, giving full details and statements of witnesses.
- B. If a claim is made by anyone against the Contractor or any subcontractor on account of any accident, promptly report the facts in writing to the Engineer and the Town, giving full details of the claim.

1.08 TRAFFIC SAFETY AND ACCESS TO PROPERTY

- A. Comply with all rules and regulations of the city, state, and county authorities regarding closing or restricting the use of public streets or highways. No public or private road shall be closed, except by express permission of the Town and the controlling authority. Conduct the work so as to assure the least possible obstruction to traffic and normal commercial pursuits. Protect all obstructions within traveled roadways by installing approved barricades, signs, and lights where necessary for the safety of the public. The convenience of the general public and residents and the protection of persons and property are of prime importance and shall be provided for in an adequate and satisfactory manner.
- B. Supply flagmen and guards or Police when they are required by regulation, when deemed necessary for safety, or required by the Engineer. Flagmen and Guards shall be furnished with approved orange wearing apparel and other regulation traffic control devices.

1.09 FIRE PREVENTION AND PROTECTION

- A. Perform all work in fire-safe manner. Furnish and maintain on the site adequate fire-fighting equipment capable of extinguishing incipient fires. Comply with applicable federal, local, and state fire-prevention regulations. Where these regulations do not apply, applicable parts of the National Fire Prevention Standard for Safeguarding Building Construction Operations (NFPA No. 241) shall be followed.

1.10 HURRICANE PREPAREDNESS

- A. During such periods of time as are designated by the United States Weather Bureau 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.
- B. After Notice to Proceed: The Contractor shall submit for approval, a Plan of Action for the specific actions to be taken on their particular projects during a hurricane watch warning.
- C. Upon Notification of a Hurricane Warning
 - 1. Formal notification to the Contractors to implement their approved Plan of Action to protect the project and the public.

2. A copy of the notifications will be provided to the Engineer. The Engineer may notify the Construction Superintendent of any assistance he may need for the Contractor in order to secure the Pump Station.

1.11 JOINT SURVEY TO ESTABLISH AUTHENTICITY OF POSSIBLE DAMAGE CLAIMS

- A. The Contractor shall maintain vertical and horizontal survey control points on all structures and improvements, located in the vicinity of the work prior to beginning work, and shall periodically check the points for movements with copies provided to the Engineer, of the survey notes for each survey and a copy of the layout of the survey control points.
- B. After the contract is awarded and before commencement of work, the Contractor shall perform a thorough examination of existing buildings, structures, and other improvements in the vicinity of the work, as applicable, which might be damaged by his operations.
 1. Examinations of existing structures, buildings, and other improvements in the vicinity of the work shall be done by the Contractor. The scope of the examination shall include cracks in the structures, settlement, leakage, and similar conditions. The Town assumes no responsibility for pre-existing conditions of the structure.
 2. Records in triplicate of all observations shall be prepared by the Contractor, photographs shall be taken by the Contractor signed and dated, with descriptive information and in the manner specified above. One signed copy of every document and photograph will kept on file in the office of the Engineer. Video recording also required.
 3. The above records are intended to be used as indisputable evidence in ascertaining the extent of any damage which may occur as a result of the Contractor's operations and are for the protection of the Contractor and the Town, and will be a means of determining whether and to what extent damage, resulting from the Contractor's operations, occurred during the Contract work.
- C. In order to protect himself 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 Town.

PART 2 PRODUCTS NOT USED

PART 3 EXECUTION NOT USED

END OF SECTION

SECTION 01018 - ENVIRONMENTAL CONTAMINATION

PART 1 - GENERAL

1.01 ENVIRONMENTAL CONSIDERATIONS

- A. For any work conducted in a contaminated area within the project boundaries where hazardous materials or hydrocarbons have been encountered, were previously known to exist, or is suspected by the Contractor or the Town's Inspector, the Contractor must comply with all applicable requirements of OSHA, EPA, FEDP and Miami-Dade County DERM.

1.02 Not Used

1.03 SPECIALIZED CONSTRUCTION AREA

- A. Specialized construction areas are defined as areas where contaminants are discovered and require construction by personnel qualified by training and equipped for such work.
- B. Work in specialized construction areas shall be carried out by personnel qualified by training and equipped for such activities. These personnel shall be either subcontractors with licensing and certification as specialists in this type of construction or the Contractor's own personnel who have taken and been certified as having passed the required training course(s). Licensing and certifications shall be submitted to the Town for verification and shall in all cases be satisfactory to both the Town and other authorities with jurisdiction. The field Health and Safety Technician furnished by the Certified Industrial Hygienist (CIH) shall be present on the site during all construction in specialized construction areas unless the nature of the work is non-hazardous such that either the Site Specific Health and Safety Plan or the CIH authorizes his absence.
- C. Disposal of any contaminated soils and/or groundwater must comply with all applicable federal, state and local requirements.

PART 2 - PRODUCTS

- 2.01 The Engineer of Record shall consult with the Town regarding its requirement for material type (including pipe, fitting, gasket, valve interior coating, and the like) to be installed in contaminated areas.

PART 3 – EXECUTION - NOT USED

END OF SECTION

SECTION 01031- GRADES, LINES AND LEVELS

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. This work of this Section comprises the establishing of grades, lines and levels.

1.02 RELATED WORK

- A. Section 01720 - Project Record Documents.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Furnish all stakes, templates and other materials necessary for establishing and maintaining of the lines and grades necessary for control and construction of the Work and all incidental labor necessary for the prosecution of the Work.

PART 3 EXECUTION

3.01 LAYOUT OF THE WORK

- A. As provided in Section 4 of the General Covenants and Conditions, the Contractor through the services of a Florida Registered Land Surveyor, shall establish the line and bench marks and other reference points for the installation of the pipeline or structure.
- B. For structures, this will consist of base lines, stakes at corners, centers and centerlines, auxiliary lines and a bench mark from which to establish the elevations.
- C. The Contractor shall supply the Town Inspector with a copy of the Registered Land Surveyor's layout of the Work immediately upon its availability to his own forces.
- D. The Contractor shall make his equipment and men available to the Inspector for spot checking the accuracy of the Work. The Inspector shall require the Work to be brought within the tolerances specified elsewhere before the construction is otherwise hidden.

3.02 RECORD DRAWINGS

- A. During the entire construction operation, the Contractor shall retain the services of a State of Florida Registered Land Surveyor who shall maintain records of the installation, including all deviations from the plans and specifications by obtaining "As-built" dimensions and elevations.
- B. The surveyor shall prepare therefrom, record as-built drawings showing correctly and accurately all changes and deviations made during construction, including approved

construction variances to reflect the Work as it was actually constructed.

- C. Refer to Section 01720 - Project Record Documents for Department's Criteria for developing record as-built drawings.

END OF SECTION

SECTION 01090 - REFERENCE STANDARDS

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. Comply with the requirements of the specification or standard which is current on the date of Advertisement for Bids. In case of conflict between the referenced specifications or standards, the one having the more stringent requirements shall govern.
- B. In case of conflict between the referenced specifications or standards and the Contract Documents, the Contract Documents shall govern.

1.02 ABBREVIATIONS

AA	Aluminum Association
AAMA	Architectural Aluminum Manufacturer's Association
AASHTO	American Association of State Highway & Transportation Officials
ACI	American Concrete Institute
AGMA	American Gear Manufacturers Association
AIEE	American Institute of Electrical Engineers(Now IEEE)
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
APA	American Plywood Association
APWA	American Public Works Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWI	Architectural Woodwork Institute

AWPA	American Wood Preservers Association
AWPB	American Wood Preservers Bureau
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builder's Hardware Manufacturer's Association
CISPI	Cast Iron Soil Pipe Institute
CRSI	Concrete Reinforcing and Steel Institute
CS	Commercial Standard
DOT or FDOT	Standard Specification for Road and Bridge Construction Florida Department of Transportation
FED SPEC	Federal Specifications
FS	Federal Standard
HI	Hydraulic Institute
ICEA	Insulated Cable Engineer's Association
IEEE	Institute of Electrical and Electronic Engineers
IPCEA	Insulated Power Cable Engineers Association
ISA	Instrument Society of America
JIC	Joint Instrument Conferences of Hydraulic Manufacturers
NBS	National Bureau of Standards
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NESC	National Electric Safety Code
NFPA	National Fire Protection Association
NLMA	National Lumber Manufacturer's Association
NSF	National Sanitation Foundation

NWMA	National Woodwork Manufacturer's Association
OSHA	U.S. Department of Labor, Occupational Safety and Health Association
PS	Product Standards Section - U.S. Dept. of Commerce
SAE	Society of Automotive Engineers
SFBC	South Florida Building Code
SMACNA	Sheet Metal & Air Conditioning Contractor's Association
SSPC	Steel Structures Painting Council
UL	Underwriter's Laboratories, Inc

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01100 - SPECIAL PROJECT PROCEDURES

PART 1 GENERAL

1.01 EXISTING JOB SITE

- A. The work of this Project is to be performed on the site of an existing pump station, PS-100, which must be maintained operational for the entire duration of the Project. PS-100 is currently under the operation of an emergency bypass pump, which will become the responsibility of the contractor. Within 15 days of the NTP, the Contractor shall have entered into a new agreement with the current bypass operator and taken control of the operation/maintenance of the bypass pump. Coordinate all work with the Town's Utilities & Stormwater Department, Director, Mr. Jorge C. Soto at (305) 889-1915 ext. 224, to insure the safety of the personnel.
- B. Work that will affect Station performance must be performed at night during times of minimum flow. This night work forms an ordinary part of the work of this Contract and no extra compensation will be allowed. Do not restrict access of the operating personnel to pump station facilities for the purposes of the operation and maintenance, and exercise extreme care to prevent damage to the existing facilities, particularly when making interconnections thereto. Provide all required labor, material and equipment to maintain all operational functions of existing facilities or systems except as otherwise specifically permitted by the Town during construction; including providing all temporary telephone, control, water, gas or electrical service and power to any station facilities or systems or associated elements to maintain their operational status if they are deprived of these services due to construction work; and including providing all sheeting, shoring, bracing and all other labor, material or equipment required to preclude damage to, or loss of functionality of, any existing facility or system.
- C. Protection of existing utilities, structures and other facilities: The underground pipes, utilities and structures shown on the Plans are located according to the best information available, but may vary from both the position and elevation shown. The Contractor shall explore far enough ahead of his work to determine the exact location and condition of such utilities, structures or facilities so that, before the material or equipment is installed, the Engineer may make the appropriate changes, should that become necessary to avoid a conflict. Should this exploration reveal that adjustments to the work are necessary; the Contractor shall immediately notify the Engineer and coordinate with him to adjust the work in a timely fashion avoiding delays to construction. **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 adjustment without delay 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.**

- D. All cost for changing the location of the proposed item in question in order to clear obstructions located differently than shown on the Plans, or to clear obstructions located differently than shown on the Plans but the location of which could have become known or should have become known by proper observation of field conditions or the proper exploratory procedure, shall be included in the prices bid under the various items of the Proposal and no additional compensation will be allowed.
- E. All pipes, sewers, drains and other pipe, cables, or conduits, and all other obstructions, whether or not shown, shall be temporarily removed from, or supported during the work. It is intended that wherever piping systems or utilities such as water, waste water, air, chemical, electrical or other service lines must be crossed, deflection of the pipe within recommended limits and cover shall be used to satisfactorily clear the obstruction unless otherwise indicated on the plans. The Contractor shall be held responsible for any damage to such installations and shall restore them to service immediately.
- F. Relocation of existing utilities: The relocation of existing utilities, as noted on the Plans, or for the convenience of the Contractor shall be the responsibility of the Contractor. This work shall be completed by either the existing utility or the Contractor at the discretion of the responsible utility. If the work is to be performed by the Contractor, all work shall be done in accordance with the utility company's requirements. Under no circumstances shall the Contractor be authorized extra payment for this work, and all cost for the relocation shall be the responsibility of the Contractor.
- G. The Contractor shall also be responsible for the coordination of all existing utility relocations with the appropriate utilities. Where temporary supports or protective encasements are required during the construction, the Contractor shall be responsible for this work at no additional cost.
- H. Any conflicts between the field investigation and the information shown on the Plans shall be brought to the immediate attention of the Engineer.

1.02 LAND FOR CONSTRUCTION PURPOSES

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

1.03 PUMP STATION OPERATION INTERFERENCE

- A. The work under this Contract shall be performed with a minimum of interruption to the operation of the existing facilities. PS-100 is currently under the operation of an emergency bypass pump, which will become the responsibility of the contractor. Within 15 days of the NTP, the Contractor shall have entered into a new agreement with the current bypass operator and taken control of the operation/maintenance of the bypass pump.
- B. The work schedule submittals shall reflect the Contractor's coordination with the Town's Utilities & Stormwater Department, Director, Mr. Jorge C. Soto at (305) 889-1915 ext. 224. After approval, no deviation from the approved schedule shall be made without prior approval of the Town.
- C. In the event the Contractor's operation interferes with work at the Pump Station, he shall at his own cost immediately make all repairs and replacements and do all work necessary to restore the Pump Station to the satisfaction of the Engineer. Such work shall progress continuously to completion on a 24 hour, 7 work-day week basis.
- D. Provide all required labor, material and equipment to maintain all operational functions of existing facilities or systems except as otherwise specifically permitted by the Town during construction.
- E. Provide all temporary telephone, control, water, gas or electrical services and power to any station facilities or systems or associated elements to maintain their operational status if they are deprived of these services due to construction work.
- F. Provide all sheeting, shoring, bracing and all other labor, material or equipment required to preclude damage to, or loss of functionality of, any existing facility or system.

1.04 PRE-CONSTRUCTION MEETING

- A. Prior to commencement of construction, a pre-construction meeting will be held to discuss and approve the previously reviewed Contractor's construction progress schedule, proposed sequence of construction and proposed construction methods relative to existing facilities and to establish procedures for handling Shop Drawings and other submittals and to establish a working understanding between the parties as to the Project.
- B. Prior to the preconstruction conference, the Contractor shall prepare the construction schedule, which 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) Construction Progress Schedule with emphasis made to "construction time and completion". Town reserves the right to make changes to the sequence as necessary to facilitate the work or to minimize any conflict with facility operation.

- C. The Engineer will discuss requirements of such matters as Project supervision and inspection progress schedules and reports, insurance, safety, and other items pertinent to the Project.
- D. All parties to this conference should be prepared to discuss any problems anticipated with the execution of the work under this Project.

1.05 SAFETY REQUIREMENTS

- A. Comply with all applicable provisions of the Occupational Safety and Health Act (OSHA). The Contractor's Manual of Safety Practices, dealing with the firm's policies on field safety procedures for employees shall be submitted to the Engineer for his review before Notice to Proceed will be issued.
- B. Conduct operations in such a manner, utilizing warning devices, such as traffic cones, barricades and warning lights, that traffic and pedestrians are given adequate warning of hazards of the work site as may be deemed necessary by the Town and/or the Engineer.
- C. Certain products specified in these Specifications contain warnings by the manufacturer that under certain conditions, if instructions for use of the product are not followed, a hazardous condition may develop. It is the Contractor's responsibility to instruct his workmen in the safe use of the product, or any product substitution.
- D. The Contractor shall familiarize himself with the "Underground Facility Damage Prevention and Safety Act", Florida Statute 556. The Contractor shall contact the Sunshine State One Call Center of Florida (SSOCCOF), at 1-800-432-4770, forty-eight hours prior to any excavation. Failure to familiarize himself with the obligations and the penalties set forth herein shall not relieve the Contractor from any responsibility.
- E. The Contractor shall appoint a "competent person", which shall mean one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
- F. Do not store any environmentally hazardous materials such as solvents, greases, lubricants or any other type of chemical substances at the Work site. The Contractor is permitted to keep such materials at the site as are for immediate use only. Store and handle the materials in a safe manner and upon their use immediately dispose of the cans, containers, rags and remnants of the materials in a manner approved by the Town and Department of Environmental Resources Management (DERM) at the Contractor's expense. Do not store empty containers at the site. In case of any violation, the Engineer will report such a violation to DERM and the Contractor shall be subject to all the penalties and fines established by State and County regulations.
- G. The Contractor's personnel will be in the vicinity of raw sewage. For his own protection, as well as for protection of his employees, he shall check with the Miami-Dade County Health Department and, based upon their recommendation, shall have his personnel properly immunized against disease, if required.

1.06 ELEVATIONS AND LOCATIONS OF EXISTING INSTALLATIONS

- A. 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.
- B. **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.**
- C. Do not proceed with the work affected until permission is received in writing from the Engineer indicating all modifications required, if any.

1.07 CONNECTIONS TO EXISTING PIPING

- A. Perform in such a manner that no damage and minimal interruption is caused to existing installations. Any damage caused to existing installations shall be repaired or replaced by the Contractor at no additional cost to the Town.
- B. Coordinate operations with the Town and notify the Town's Utilities & Stormwater Department at least 7 days in advance of any activity which may interfere with traffic or other on-site operations.
- C. All connections to existing mains of the Town shall be made under the direct supervision of the Town's Utilities & Stormwater Department personnel. Under no circumstances shall any valves be operated by the Contractor's personnel.
- D. Any proposed length of pipe, fitting or valve to be installed as an integral part to an active water main, shall be swabbed on the inside with calcium hypochlorite, HTH, Perchloron, or approved equal, mixed in solution with water. The quantity of hypochlorite shall in all cases be subject to the approval of the Town whose representative shall be present at all times while this phase of the work is in progress.

1.08 MATERIALS AND EQUIPMENT FURNISHED BY THE TOWN

- A. The Town will furnish water at a charge for all construction activities unless otherwise specifically made an exception in the Project Specifications or specifically made an exception by the Engineer in writing.
- B. Consumption for the following activities shall be determined by Town personnel who

shall be provided with a minimum of 72- hour advance notification. Failure of the Contractor to provide advance notification and/or have Town personnel on site to witness and verify consumption for the following activities could result in his being fined and/or a citation being issued against him in accordance with the rules and regulations of the Town's Tampering Section.

- C. Pigging:
 - 1. Flushing, only if and when approved by the Engineer:
 - 2. Chlorination, if applicable:
 - 3. To fill mains being pressure tested, excluding make-up water during test: and
 - 4. When and where directed or approved by the Engineer.
- D. Water for construction activities listed above will be furnished from the most convenient water source. In instances where no Town-owned source of water is available, the Contractor shall make his own arrangements with the municipality or other controlling authority and include the cost of all water required during construction in his overall construction cost. No reimbursement will be made.
- E. Water used in construction for purposes other than those listed above, including make up water pumped into the pipe during hydrostatic testing, will be furnished by the Town at a charge. This water will be supplied from the most convenient source through the existing piping; however, all water used must be metered through a Town meter. The Contractor will be billed by the Town based on water usage recorded by the floating meter. Failure of the Contractor to meter the water could result in his being fined and/or a citation being issued against him in accordance with the rules and regulations of the Town's Tampering Section.
- F. When the project is occurring in Unincorporated Dade County, the Contractor shall present a Dade County Fire Department Permit during application with New Business Office.
- G. All piping, fittings, valves and equipment, including pumps and power, required for handling the water shall be furnished by the Contractor. Care shall be exercised in the use of the water and provision shall be made to protect the water supply from contamination and indiscriminate use by unauthorized persons. The Contractor shall use only potable water unless otherwise specifically called out elsewhere herein and then only in the case of sewage force mains, reclaim water mains, or raw water mains.
- H. Under no circumstance shall the Contractor utilize a water source, including existing piping, until such source or piping has been approved for use by the Town.

1.09 MATERIALS AND EQUIPMENT FURNISHED BY THE CONTRACTOR

- A. In addition to the detailed specifications for materials and equipment, the general requirements listed below shall apply for all materials and equipment furnished under the Contract.
- B. All materials and equipment furnished by the Contractor for use in the work shall be

new and of recent domestic manufacture, and shall be the products of reliable manufacturers who, unless otherwise specified, have been regularly engaged in the manufacture of such material and equipment for at least five years. All components shall, wherever possible, be standard stock articles of well-known domestic manufacturers. Where the Plans and Specifications designate the product of a particular manufacturer, the product specified has been found suitable for the intended use, but, unless otherwise provided, articles or products of similar characteristics may be offered for the approval of the Engineer. A minimum of six copies (more if so required elsewhere herein) of complete descriptive data shall be furnished regarding all articles furnished by the Contractor. The descriptive data shall consist of dimension plans, catalog references and other information necessary to clearly identify and evaluate each article. When substitutions are allowed, the Contractor shall make all necessary changes in adjacent or connected structures and equipment at his expense and 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. Any re-permitting together with all cost and work associated therewith shall be performed by the Contractor and no additional compensation or time will be allowed.

- C. 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.
- D. Unless otherwise specified or noted on the Plans, all steel bolts, nuts, washers and other miscellaneous ferrous metal items (except cast iron or stainless steel) furnished by the Contractor shall be hot-dip galvanized in accord with ASTM A123, Zinc (Hot-Dip Galvanized) Coatings for Iron and Steel Products, or ASTM A153, Zinc Coating (Hot-Dip) on Iron and Steel Hardware. Where the word galvanized or its abbreviation is used on the Plans or in the Specifications, it shall mean hot-dip galvanized. Fabricated items shall be hot-dip galvanized after fabrication. Internal threads shall be tapped or re-taped after galvanizing.
- E. The Contractor shall procure extended manufacturer's warranties on equipment furnished by him. These warranties shall be kept in force and extended such that the Town will be provided a manufacturer's warranty with at least one year to run beyond the date of final acceptance of the Project. A copy of the warranty with these provisions clearly stated or with an attached letter of certification from the manufacturer to this effect shall be delivered with the equipment and no payment or partial payment for said equipment will be made until such warranty/certification is delivered to the Engineer.
 - 1. The warranty shall specifically cover the case where the equipment warranted has been replaced by a newer model. In such instance the warranty shall either provide spare parts and service to repair or replace in its entirety the original model, or in lieu of this; provide a complete new model unit to replace the warranted and failing equipment. Should the failing equipment be replaced by a new model, the Contractor shall be responsible for making all necessary

- changes to adjacent and/or connected equipment at no extra cost to the Town and to the satisfaction of the Engineer who's decision shall be final.
2. As a part of final inspection, the Contractor shall deliver to the Town in a form satisfactory to the Engineer, either warranties or certifications of warranty extensions showing the warranties to be in effect at least one year beyond the planned date of final acceptance.
 3. All costs for procuring, maintaining and extending these warranties shall remain with the Contractor, even in cases where the contract construction time for completion has been extended. These costs shall be included in the Contractor's bid price and no further compensation will be allowed.
 4. In instances where the Town puts an item of equipment into full productive service prior to final acceptance, the warranty shall still be extended to at least one year past final acceptance. However, the Town will reimburse the Contractor for the prorated cost of the extended warranty from the time when the equipment was placed in full productive service to the date of final acceptance based upon the manufacturer's invoice to the Contractor for this cost. Only the warranty cost will be reimbursed, no overhead or other costs will be allowed.
 5. The Contractor shall care for and protect against loss or damage all material to be incorporated in the construction, for the duration of the Contract, and shall repair or replace any damaged or lost materials. He shall be relieved of such responsibility only upon final acceptance of all the work by the Engineer.
- F. All valves, piping, structural steel and miscellaneous materials and equipment shall be stored on blocks or racks. As far as possible, no materials or equipment shall be stored so that it is in direct contact with the ground. All metal shall be thoroughly cleaned before being placed in the work. Storage and protection measures shall be subject to approval of the Engineer whose decision shall be final. The Contractor shall immediately protect materials by different methods, materials or to a greater extent if so directed by the Engineer in the field.
- G. Any salvageable pipe, fitting, or other miscellaneous material or equipment, removed during construction and not reused in the work shall be cleaned, hauled to and stored by the Contractor at his expense, where directed by the Engineer, and shall remain the property of the Town. All other material and equipment shall be legally disposed of by the Contractor at his own expense.
- H. To ensure satisfactory and successful final painting of materials and equipment to be furnished, it is essential that the paints applied in the shop and in the field be mutually compatible. To this end, the Contractor shall require that the shop paint applied to the materials and equipment be compatible with the paint proposed to be used in the field, or shall determine what shop paints have been used and select field paints compatible therewith, all as approved by the Engineer.

1.10 MANUFACTURER'S EXPERIENCE RECORD

- A. When a manufacturer's experience record is required by these specifications, the following may be provided in lieu of the specified record:

1. Manufacturers and/or equipment which does not meet the specified experience period will be considered if the manufacturer or supplier provides a bond or cash deposit valid for five years less his years of experience, which will guarantee replacement of the equipment or process in the event of failure or unsatisfactory performance or service.

1.11 BY-PASS PUMPING AND PIPING

- A. PS-100 is currently under the operation of an emergency bypass pump, which will become the responsibility of the contractor. Within 15 days of the NTP, the Contractor shall have entered into a new agreement with the current bypass operator and taken control of the operation/maintenance of the bypass pump.
- B. Perform in such a manner that no damage and minimal interruption is caused to existing installations. Any damage caused to existing installations shall be repaired or replaced by the Contractor at no additional cost to the Town.
- C. Coordinate operations with and notify the Town's Utility and Stormwater Department at least 7 days in advance of any activity which may interfere with the Pump Station operation. Only the Director of the Town's Utility and Stormwater Department can authorize partial Pump Station shutdowns and the Contractor shall, under no circumstances, interfere with any Pump Station component without the Director's and Construction Management's authorization and supervision.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01340- SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. Submit to the Engineer for review and approval, such shop drawings, test reports and data on materials, equipment, and material samples as are 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 and in accordance with the requirements of Section 9 of the General Covenants and Conditions.
- B. Within twenty (12) 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. Drawings 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.

1.02 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 drawings and schedules sufficiently in advance of construction requirements to provide maximum time for checking and appropriate action from the time the Engineer receives them.
- C. It is the duty of the Contractor to check and approve all drawings, data and samples prepared by or for him before submitting them to the Engineer for review. Each and every copy of the Drawings and data shall bear Contractor's stamp showing that they

have been so checked and approved. Shop drawings submitted to the Engineer without the Contractor's stamp and approved will 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 Contract 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 drawings, data, and sample submitted.
 - 5. Notification of deviations from Contract Documents.
 - 6. Submittal Log Number conforming to and referring to Specification Section Numbers.
- E. Submit seven (7) copies of shop drawings and of descriptive or product data submittals necessary to complement shop drawing. The Engineer will retain five (5) sets.
- F. After receiving approval of the shop drawings by the Engineer, the Contractor shall be responsible for submitting to the Town shop drawings of all pre-manufactured items and all other shop drawings as required and obtain their approval prior to the manufacturing or installation of the submitted items. The successful bidder shall also be responsible for contesting any interpretations by the Town that the Town considers non-acceptable. The Contractor shall include in the prices bid, all costs for permits, fees and expenses associated with the submittals, including resubmittals (if any) of such shop drawings to the Town.
- 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 him, 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 he proposes to supply, both as they pertain to his own work, work of others, or of other Divisions herein or Trades and clearly show such changes on the shop drawings.
- I. Determine and verify:
 - 1. Field measurements.
 - 2. Field construction criteria.
 - 3. Catalog numbers and similar data.
 - 4. Conformance with Specifications.
 - 5. Installation and Maintenance clearances.

1.03 ENGINEER'S REVIEW OF SHOP DRAWINGS

- A. The review by the Engineer of drawings, 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 drawings 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 details, dimensions, and materials;
 - 3. As approving departures from details furnished by the Engineer, except as otherwise provided herein.

- B. Variations:
 - 1. If the drawings or schedules as submitted describe variations per paragraph 1.02G, and show a departure from the Contract requirements which Engineer finds to be in the interest of the Town and to be so minor as not to involve a change in Contract Price or time for performance, the Engineer may return the reviewed drawings without noting an exception.
 - 2. If the drawings 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, he shall do so 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 will be identified as having received such review, being so stamped and dated. 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 other than the corrections requested by the Engineer on previous submissions. 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 Contract Drawings or Specifications, the Contractor shall give written notice thereof to the Engineer.

- 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 drawings, 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.

1.04 SHOP DRAWINGS

- A. When used in the Contract 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 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 and 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. Delete information which is not applicable to the Work by striking or cross-hatching.
- C. Each shop drawing shall have a blank area 3-1/2 inches by 3-1/2 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 Contract Drawing Number.
- D. If drawings show variations from Contract requirements because of standard shop practice or for other reasons, describe such variations in the letter of transmittal. If the Contractor fails to describe such variations, he shall not be relieved of the responsibility for executing the work in accordance with the Contract, even though such drawings 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.

1.05 REQUIRED INFORMATION

- A. Submit, as applicable, the following for all prefabricated or manufactured structural, mechanical, electrical, plumbing, process system, and equipment:
 - 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 drawings 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 drawings by in-house Florida Registered Professional Engineer for structural systems, indicating compliance to the structural design criteria specified in the Drawings.
 - 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 Contract Documents.

1.06 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 the foregoing 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 said 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.

- C. Where specified elsewhere herein or at the sole discretion of the Engineer, who's 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 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 the Town 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 have AWWA/NSF 61 or 60, as appropriate, certification and acceptance.

1.07 SAMPLES

- A. Furnish, for the approval of the Engineer, samples required by the Contract Documents or requested 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 required in paragraph 1.05.A above. 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 named in such approval 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 will be returned to the Contractor at his expense, if so requested at time of submission.

1.08 **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 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 decision shall be final. Engineering services for contemplated changes, substitutions or appurtenant work, shall be performed by a Registered Professional Engineer licensed to practice in the State of Florida.

- C. In some instances a credit may be due the Town. Unless specifically authorized by the Engineer in writing, no additional contract time will be allowed, and a decrease in time may be appropriate.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01600 – MATERIAL AND EQUIPMENT SHIPMENT, HANDLING, STORAGE, AND PROTECTION

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. This shall include both Town and Contractor supplied material and equipment.
- B. The Contractor is to inform all subcontractors, suppliers, and manufacturers of the requirements herein specified and shall include expenses for the following services in his costs for compliance with the requirements herein after specified.

1.02 PREPARATION FOR SHIPMENT

- A. When practical, equipment shall be factory assembled. The equipment parts and assemblies that are shipped unassembled shall be furnished with assembly plan and instructions. The separate parts and assemblies shall be factory match-marked or tagged in a manner to facilitate assembly. All assemblies are to be made by the Contractor at no additional cost to the Town.
- B. Generally, machined and unpainted parts subject to damage by the elements shall be protected with an application of a strippable protective coating, or other approved protective method.
- C. Equipment shall be packaged or crated in a manner that will provide protection from damage during shipping, handling, and storage.
- D. The outside of the package or crate shall be adequately marked or tagged to indicate its contents by name and equipment number, if applicable; approximate weight; state any special precautions for handling; and indicate the recommended requirements for storage prior to installation.

1.03 PACKING AND DELIVERY OF SPARE PARTS AND SPECIAL TOOLS

- A. Properly mark to identify the associated equipment by name, equipment, and part number. Parts shall be packaged in a manner for protection against damage from the elements during shipping, handling, and storage. Ship in boxes that are marked to indicate the contents. Delivery of spare parts and special tools shall be made prior to the time associated equipment is scheduled for the initial test run.

1.04 SHIPMENT

- A. All equipment and material shall be shipped with freight and shipping paid, FOB jobsite.
- B. The Contractor shall request a 7-day advance Notice of Shipment from manufacturers, and, upon receipt of such notice, provide the Engineer with a copy of the current delivery information concerning equipment items and material items of critical importance to the project schedule.

1.05 RECEIVING

- A. The Contractor shall unload and record the receipt of all equipment and materials at the jobsite.
- B. All costs for receiving, inspection, handling, storage, insurance, inventory control, and equipment maintenance for both the Contractor-Supplied and Town-Supplied materials and equipment shall be included in the prices bid and no extra compensation will be allowed.

1.06 INSPECTION

- A. Immediately upon receipt of equipment and materials at the jobsite, the Contractor shall inspect for completeness and any evidence of damage during shipment. Town's supplied equipment and material shall be inspected and inventoried together with Town's inspector. Should there appear to be any shortage or damage, the Engineer shall be immediately notified; and the Contractor shall be fully responsible for informing the manufacturers and the transportation company of the extent of the shortage or damage. If the item or items require replacing or supplying missing parts, the Contractor shall take the necessary measures to expedite the replacement or supply the missing parts.

1.07 HANDLING

- A. Equipment and materials received for installation on this Project shall be handled in accordance with the manufacturer's recommendations, and in a manner that will prevent damage.

1.08 STORAGE

- A. Equipment and materials shall be stored prior to installation as recommended by the manufacturer. Generally, materials such as pipe shall be stored off the ground in approved storage yards. Items subject to the damage by the elements, vandalism, or theft shall be stored in secure buildings. Items requiring environmental control for protection shall be provided with the necessary environmentally controlled storage facilities at no cost to the Town.

1.09 INSURANCE

- A. The Contractor's insurance shall adequately cover the value of materials delivered but not yet incorporated into the work. The Contractor and the Town shall be named as co-insured insofar as their respective interests may appear. Proof of this coverage must be submitted to the Engineer at the time request for progress or partial payments.

1.10 INVENTORY CONTROL

- A. Equipment and materials shall be stored in a manner to provide easy access for inspection and inventory control. The Contractor shall keep a running account of all materials in storage to facilitate inspection and to estimate progress payments for materials delivered but not installed in the work.

1.11 EQUIPMENT MAINTENANCE PRIOR TO TOWN'S ACCEPTANCE

- A. Provide the required or manufacturer's recommended maintenance during storage, during the installation, and until such time as the Town accepts the equipment for full-time operation.

1.12 SALVABLE EQUIPMENT

- A. Any salvable pipe, fitting, or other miscellaneous material or equipment removed during construction and not reused in the work shall be cleaned, hauled, and stored by the Contractor at his own expense, where directed by the Engineer, and shall remain the property of the Town. All other material shall be disposed of by the Contractor at his own expense.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED.

END OF SECTION

SECTION 01710 – CLEANING

PART 1 GENERAL

1.01 DESCRIPTION

- A. This Section specifies the maintenance of the work site in a clean, orderly, hazard-free condition.

1.02 QUALITY ASSURANCE

- A. Conduct cleaning and disposal operations in accordance with local ordinances and anti-pollution laws. Rubbish, volatile wastes, and other construction wastes shall be neither burned nor buried on the work site, and shall not be disposed of into storm drains, sanitary drains, streams or other waterways.
- B. Final cleaning shall be accomplished either by workmen experienced in cleaning operations or by professional cleaners.

PART 2 PRODUCTS

2.01 ON-SITE WASTE CONTAINERS

- A. Provide on-site waste containers for collection of waste materials, debris and rubbish. See Section 01016, Subsection 1.06 regarding Safety Requirements for environmentally hazardous materials.

2.02 CLEANING MATERIALS

- A. Cleaning materials shall be as recommended by the manufacturer of the surface to be cleaned.

PART 3 EXECUTION

3.01 SAFETY REQUIREMENTS

- A. Maintain work site in accordance with local ordinances and anti-pollution laws applicable to work site cleanliness, and in a neat, orderly and hazard-free condition until final acceptance of the work. Catwalks, accessible underground structures, work site sidewalks and walkways adjacent to the work site shall be kept free from hazards caused by construction activities.
- B. Store volatile wastes including rags in covered metal containers, and remove from work site daily.
- C. Prevent accumulations of wastes which create hazardous conditions.

- D. Artificially ventilate spaces which are not naturally ventilated when volatile or noxious substances are present in those spaces.

3.02 INTERIM CLEANING

- A. Perform cleaning every workday for duration of the Work. Structures, grounds, and areas of the work site and public and private properties shall be maintained free from accumulations of waste materials and rubbish caused by construction operations on the work site. Place waste materials and rubbish in on-site containers.
- B. Remove or secure loose material on open decks and on other exposed surfaces at end of each day's work or more often to maintain work site in hazard-free condition. Prevent dislodgement of materials due to wind and other forces.
- C. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- D. Empty on-site waste containers whenever necessary so that trash overflow does not occur. Legally dispose of contents at either public or private dumping areas.
- E. Vacuum-clean interiors of buildings which are ready to receive finish painting. Continue vacuum-cleaning on an as-needed basis, until area is ready for final acceptance.
- F. Control the handling of materials, debris and rubbish; do not drop or throw from heights.
- G. Immediately remove spillages of fuels or oil or of construction-related materials from hauling routes or the site.
- H. Perform cleaning operations so dust and other contaminants resulting from cleaning processes will not fall on wet, newly painted surfaces.

3.03 FINAL CLEANING

- A. In addition to the cleaning performed above, in preparation for final inspection, remove grease, dust, dirt, rust stain on concrete floors, labels, fingerprints and other foreign materials from exposed interior and exterior finished surfaces. Flush down all parking level areas and stairs leaving such surfaces clean of all sand, laitances, etc.
- B. In preparation for final acceptance or occupancy, conduct final inspection and cleaning of exposed interior and exterior surfaces, and of concealed spaces.
- C. Maintain cleaning operations until project has been finally accepted.

END OF SECTION

SECTION 01720 - PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 DESCRIPTION

- A. Scope of Work: For contracts where the work is performed at an on-site location maintain one record copy of:
 - 1. Record Drawings
 - 2. Record Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modification of the contract.
 - 5. Engineer's written orders or instructions.
 - 6. Approved Shop Drawings, Product Data and Samples.
 - 7. Field Test records.
 - 8. Construction photographs.
 - 9. As-built locations, dimensions, and elevations as recorded by the Contractor's Florida Registered Land Surveyor (FRLS).
- B. The records listed above are to be made available to the Engineer at all times for all projects.
- C. Related Requirements Described Elsewhere:
 - 1. Section 01340: Shop Drawings, Product Data and Samples.

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Maintain documents in a clean dry, legible, condition and in good order. Do not use record documents for construction purposes.

1.03 RECORDING

- A. During the life of the Contract the Contractor shall retain the services of a FRLS who shall maintain records of the installation, including all deviations from Plans and Specifications.
- B. Measure and Record all information for all projects concurrently with construction progress.
- C. **Submit redlines, partially completed as-built plan sheets and fully complete as-built Plan sheets, all as required by and satisfactory to, the Engineer as prerequisite for the acceptance of monthly payment applications.**
- D. Label each document "PROJECT RECORD" in neat large printed letters.
 - 1. Record all information for on-site projects concurrently with construction progress.

2. Do not conceal any work until as-built information is recorded by the Contractor's surveyor, and if so required, by the Town.
3. All locations for future connections or tie-ins shall be left unburied and uncovered until the Contractor's FRLS measures and records the as-built information.
 - a. All as-built and inspector information is to be made available to the Engineer on a daily basis for inclusion in the Town records.
4. Restrained pipe, end line valves, thrust blocks shall be left uncovered for the last complete length. Inline valves and tees shall be left exposed for 1 length on both sides plus the face end. Measure and record the elevation, horizontal and vertical alignment, and the inclination for these items.
5. For all projects, the Contractor's FRLS shall maintain exact and extensive records of any deviations from Drawings and Specifications. These records shall be satisfactory to the Engineer, whose decision shall be final, and sufficient to allow the production of accurate as built Plans which correctly and completely portray the work as constructed.
6. For all projects, the Contractor's FRLS shall record data as follows during the entirety of construction.
 - a. For facility (e.g. a water or sewage plant, pumping station, or similar site,) projects, record as-built dimensions and elevations every twenty-five feet (25') or portion thereof along pipeline and at every abrupt change in direction of the new line.
 - b. In all cases, record locations and elevations for each valve, fitting, service line, fire hydrant, water sampling point, utility poles adjacent to the proposed line, overhead wires crossing the ditch line (approximate height above grade) and other appurtenances along the pipeline.
 - c. Specific locations and elevation of equipment, the buildings and miscellaneous items installed inside them shall be recorded as applicable and as required by the Engineer.
 - d. Without exception, where the substitution of another piece of equipment for that shown on the Plans has been allowed, the footprint, clearance, and elevation dimensions shall be recorded by the Contractor's FRLS, and these changes shall be accurately and thoroughly portrayed on the as-built plans.
 - e. Contractor's Licensed Surveyor shall prepare from the field data, as-built record drawings showing correctly, completely, and accurately the installation, embracing all changes and deviations made during construction, including all construction variances, to reflect the work as it was constructed.
 - f. Record Drawings shall be prepared as specified hereinafter.
 - g. Record Drawings and three (3) blue line copies shall be signed and sealed by the Surveyor and shall be submitted to the Town for the Engineer's review within ten (10) calendar days following the completion date of successful pressure testing of all mains and appurtenances under this Contract.
 - h. If the Engineer determines that the Drawings are not acceptable, they will be returned to the Contractor with a cover letter noting the deficiencies and/or reasons for the disapproval. Contractor shall have ten (10)

calendar days to correct all exceptions taken by the Engineer and resubmit as-built record drawings to the Engineer for final acceptance.

1.04 DRAWINGS

- A. During the life of the Contract, maintain records of all deviations from the Plans and Specifications and prepare therefrom As-Built Record Drawings showing correctly and accurately all changes and deviations made during construction to reflect the work as it was actually constructed. It is the responsibility of the Contractor to check the As-Built Record Drawings for errors and omissions prior to submittal to the Town and certify in writing that the As-Built Record Drawings are correct and accurate, including the actual location of all piping, exposed and internal piping, and electrical/signal conduits in or below the concrete floor. Indicate the size, depth and voltage in each conduit.
- B. Legibly Mark To Record Actual Construction: All data as previously specified for all installations by the Contractor's FRLS. For on-site structures and facilities work the Contractor's Florida Registered Land Surveyor shall record:
1. Depths of various elements of foundation in relation to finish first floor and datum plane.
 2. All exposed and underground piping and ductwork with elevations and dimensions and locations of valves, pull boxes, etc. Changes in location. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent reference points, plant survey grids, property lines and similar.
 3. Location of internal utilities and appurtenances concealed in the construction shall be referenced to visible and accessible features of the structure. Air conditioning ducts with locations of dampers, access doors, fans and other items needing periodic maintenance.
 4. Field changes in dimensions and details.
 5. Changes made by Engineer's written instructions or by Change Order.
 6. Details not on original Contract Drawings.
 7. Equipment and piping relocations.
 8. Major architectural and structural changes in structures, including tanks.
 9. Architectural schedule changes according to Contractor's record and shop drawings.
 10. Record Drawings shall be prepared as specified hereinafter.
- C. Specifications and Addenda: Legibly mark each section to record:
1. Manufacturer, trade name, catalog number and Supplier of each product and item of equipment actually installed.
 2. Changes made by Engineer's written instructions or by Change Order.
- D. Approved Shop Drawings: Provide record copies for system diagrams and drawings together with each element of process equipment, piping, electrical system and instrumentation system.

1.05 SUBMITTALS

- A. Accompany submittal with transmittal letter in duplicate, containing:
1. Date
 2. Project title and number
 3. Contractor's name and address
 4. Title and number of each Record Document
 5. Signature of Contractor or his authorized representative.
- B. Record Drawings with five (5) blue line copies which have been signed and sealed by the surveyor shall be submitted to the Engineer for review. Drawings shall conform to recognized standards of drafting and the minimum technical standards as set forth by the Board of Professional Surveyors and Mappers, shall be neat, legible and on 24-inch by 36-inch bond paper. These materials shall be submitted for the Engineer's review as a prerequisite for payment during the course of construction as previously specified and final, complete sets of documents within ten (10) calendar days following the completion date of successful testing of all mains, equipment and appurtenances under this Contract. Final payment will not be made until the five (5) sets of as-built record drawings (with AutoCAD file) and five (5) sets of blue-line prints have been approved and accepted by the Engineer.
1. In cases where a portion of a process system are put into service, the above conditions shall apply for the in-service portion and monthly payments shall be withheld until the as-built drawings are accepted by the Engineer.
 2. As-Built Record Drawings, as prepared by the Contractor's Florida Registered Land surveyor and submitted by the Contractor, shall comply with following criteria and standards:
 - a. Title block must show the Contract or Project Title (as applicable); Contract number; CIP number; Contractor's name; Engineer of Record's name; Surveyor's name and address; date; location; and where appropriate to the work, size and type (i.e. water main, sanitary gravity main, sanitary force main) of main.
 - b. Baselines or centerlines must be tied to section corners, monument line and right-of-way lines.
 - c. Pipeline must be tied to baseline or centerline with stations and offsets.
 - d. Baselines or centerlines must show bearings or deflection angles, or delta, radius, chord and arc length for curves.
 - e. Show all horizontal curve data, including point of curvature (PC) and point of tangency (PT) stations or radial bearing.
 - f. Stationing must be the same as shown on construction drawings and must be tied to Section corners, centerline intersections and all other pertinent control points within the Project. All such pertinent points shall have their stationing shown and where there is dual stationing for a point, both stations shall be called out.
 - g. Identify all streets by name or number and show stationing at all intersecting streets.
 - h. Refer to vertical datum plane and identify the location, elevation and source supplying the bench mark used.
 - i. Tie easement lines to survey baseline or platted centerline and right-of-ways.
 - j. Show horizontal and vertical locations of all fittings, deflections, or at any significant change of direction, and at a maximum of 100-foot intervals

along the pipeline for off-site (e.g. in the public right-of-way) and at maximum 25- foot intervals for on-site (e.g. on a facility such as a pump station or plant work.

- k. Manhole rim and valve box rim elevations must be shown.
 - l. Show all invert and bottom elevations in manholes and valve vaults or boxes. Show all invert and bottom elevations together with pipe size, and where it can be determined, pipe material, for existing structures having pipes which cross the pipe line being constructed.
 - m. Locations and elevations together with diameter, thickness and material of all casings.
 - n. Location, top and bottom elevations of all sheeting left in place.
 - o. Coordinate values used inside facilities shall be the local, Town established coordinate systems referenced to the property boundary.
 - p. State plane coordinate values for all new valves and manholes; on existing valves and manholes at points of connection or closest to the point of connection and the point of connection itself.
3. Certification: The Contractor shall certify on as-built record drawings all other actual constructed details and information as may be required by the Town, including but not limited to:
- a. Valves shall be identified by size, type, end condition;
 - b. Show calculated pipeline percent of grade between manholes of gravity systems.
 - c. Types and sizes of sheeting and piling together with measured and complete; location, dimensional, and elevation data on any pile caps, tie backs, anchors, whalers or other appurtenant structures left in place.
- C. Drawings on Magnetic Media: The Town requires the submittal of as-built drawings in AutoCAD for Windows Release 14 format or later. Graphical information contained on magnetic media shall be the same as provided on plan sheets. Magnetic media shall be delivered to the Town Engineer's Office, Town of Medley at 7777 NW 72nd Avenue, Medley, FL, 33166. A letter of transmittal shall be provided, containing a list of all files and data being provided.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SECTION 01730 - OPERATING AND MAINTENANCE INSTRUCTIONS

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Prepare Operating and Maintenance (O & M) Manuals covering all equipment and systems provided under this Contract.
- B. Instruct Town's personnel in the operation and maintenance of equipment provided under this Contract.
- C. This Section covers the services of the manufacturer's representatives and special coordinating services required of the Contractor that shall apply during construction, facilities startup, and training of the Town's personnel for facilities operation.
- D. The Contractor shall inform all subcontractors and manufacturers of the requirements herein and include the following services in his costs for the work specified in these Contract Documents. Where a minimum amount of time is stated in the Technical Specifications for manufacturer's services, any additional time required to perform the specified services shall be at no additional cost to the Town.

1.02 SUBMITTALS

- A. Not later than 30 days after the start of construction, submit for review and approval by the Engineer two (2) copies of a preliminary draft of the O & M Manual, showing the proposed format and an outline of the contents.
- B. Throughout construction, prepare O & M sections for equipment and systems when such equipment and systems, and shop drawings and technical data therefore, are approved. Within 30 days following receipt of the Engineer's approval of the final shop drawing submittal, submit, in duplicate, draft of complete O & M Manual for review and approval of Engineer.
- C. Within 30 days after receipt of Engineer's review comments, make required revisions and submit in final form two (2) copies of the O & M Manual for final approval.
- D. Simultaneously with the Application for Final Payment and Project record Documents, Contractor shall deliver to the Engineer six (6) sets of the approved O & M Manuals. The Final Payment Application will not be processed until receipt of the O & M Manuals by the Town.
- E. Upon start-up and completion of instruction of Town's personnel, submit, in the form of an addendum, six (6) copies of all necessary amendments to the O & M Manual, together with all required certificates for incorporation in the Manuals.

1.03 FORM, FORMAT AND SUBMITTALS CONTENTS

- A. Operating and Maintenance manuals will be used for training of and use by the Town's

personnel in the operation and maintenance of the various systems. Prior to completion of project, Contractor shall arrange training seminars for the Town's personnel using these manuals as the basis for instructions in all procedures involving operations and maintenance.

B. The Contractor shall furnish the Town with one (1) set of any special tools required for servicing for each type of equipment actually furnished.

C. Prepare data in the form of an instructional manual for use by the Town's personnel.

D. Format:

1. Size: 8½ in. x 11 in.
2. Paper: 20-pound minimum, white, for typed pages.
3. Text: Manufacturer's printed data or neatly typewritten.
4. Drawings:
 - a. Provide reinforced punched binder tab, bind in with text.
 - b. Fold larger drawings to the size of the text paper.
5. Provide fly-leaf for each separate product, or each piece of operating equipment.
 - a. Provide typed description of product, and major component parts of equipment.
 - b. Provide indexed tabs.
6. Cover: Identify each volume with typed or printed title "OPERATING AND MAINTENANCE INSTRUCTIONS".
7. List:
 - a. Title of Project.
 - b. Identify of separate structure as applicable.
 - c. Identity of general subject matter covered in the manual.

E. Binders:

1. Commercial quality three-ring binders with durable and cleanable plastic covers.
2. Maximum ring size: As required (Minimum 1½-inches).

F. Content of Manual:

1. Neatly typewritten table of contents, arranged in a systematic order.
 - a. Contractor, name of responsible principal, address and telephone number.
 - b. A list of each product required to be included, indexed to the content of the volume.
 - c. List, with each product, the name, address and telephone number of:

- 1) Subcontractor or installer.
- 2) Maintenance contractor, as appropriate.
- 3) Identify the area of responsibility of each.
- 4) Local source of supply for parts and replacement.
- 5) Identify each product by product name and other identifying symbols as set forth in Contract Documents.

G. Product Data:

1. Include only those sheets which are pertinent to the specific product.
2. Annotate each sheet to:
 - a. Clearly identify the specific product or part installed.
 - b. Clearly identify the data applicable in the installation.
 - c. Delete references to inapplicable information.

H. Drawings:

1. Supplement product data with drawings as necessary to clearly illustrate:
 - a. Relations of component part of equipment and system.
 - b. Control wiring, schematic wiring, and flow diagram.
2. Coordinate drawings with information in Project Record Documents to assure correct illustration of completed installation.
3. Do not use Project Record Documents as maintenance drawings.

I. Written text, as required to supplement product data for the particular installation:

1. Organize in a consistent format under separate headings for different procedures.
2. Provide a logical sequence of instructions for each procedure.

J. Copy of each warranty, bond and service contract issued.

1. Provide information sheet for Town's personnel, which includes:
 - a. Proper procedures in the event of failure.
 - b. Instances which might affect the validity of warranties or bonds.

1.04 MANUAL FOR EQUIPMENT AND SYSTEMS

A. Content, for each unit of equipment and system, as appropriate:

1. Description of unit and component parts.
 - a. Function, normal operating characteristics, and limiting conditions.
 - b. Performance curves, engineering data and tests.
 - c. Complete nomenclature and commercial number of all replaceable parts.

2. Operating Procedures:
 - a. Start-up, break-in, routine and normal operating instructions.
 - b. Regulation, control, stopping, shut-down, and emergency instructions.
 - c. Special operating instructions.
3. Maintenance Procedures:
 - a. Routine operations.
 - b. Guide to "trouble shooting".
 - c. Disassembly, repair, and reassembly.
 - d. Alignment, adjusting, and checking.
4. Servicing and lubrication schedule.
 - a. List of lubricants required.
5. Manufacturer's printed operating and maintenance instructions.
6. Description of sequence of operation by control manufacturer.
7. Original manufacturer's parts list, illustration, as drawings and diagrams required for maintenance.
 - a. Predicted life of parts subject to wear.
 - b. Items recommended to be stocked as spare parts.
8. As installed control diagrams by controls manufacturer.
9. Each contractor's coordination drawings.
 - a. As-installed color coded piping diagrams.
10. Charts of valve tag numbers, with the location and function of each valve.
11. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
12. Other data as required under pertinent sections of specifications.

B. Content, for each electric and electronic system, as appropriate:

1. Description of system and component parts.
 - a. Function, normal operating characteristics, and limiting conditions.
 - b. Performance curves, engineering data and tests.
 - c. Complete nomenclature and commercial number of replaceable parts.
2. Switchgear, transformers, and motor control centers.
 - a. Coordination summary.
 - b. Relay settings.
 - c. Relay and control curves, and instruction data.
 - d. Transformer data and relay controls.
 - e. High voltage switch instructions.

- f. High voltage cable termination and splice instructions.
 - g. Motor control center wiring.
 - h. Synchronizing procedures.
- 3. As-installed color coded wiring diagrams of all switchgear units.
- 4. Operating procedures:
 - a. Routine and normal operating instructions.
 - b. Sequences required for synchronizing.
 - c. Special operating instructions.
- 5. Maintenance procedures:
 - a. Routine operations.
 - b. Guide to "trouble-shooting."
 - c. Disassembly, repair and reassembly.
 - d. Adjust and checking.
- 6. Manufacturer's printed operating and maintenance instructions.
- 7. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
- 8. Other data as required under pertinent sections of specifications.
- C. Prepare and include additional data when the need for such data becomes apparent during instruction of Town's personnel.
- D. Additional requirements for operating and maintenance data: The respective sections of Specifications.

1.05 SUBMITTAL OF MANUALS

- A. Submittal of three (3) draft copies of the complete operating and maintenance manual shall be submitted for review by the Engineer within 30 calendar days after approval of all shop drawings. One (1) copy will be returned to the Contractor within 30 days after receipt by the Engineer.
- B. Submit six (6) copies of the final operating and maintenance manuals at least fifteen (15) days prior to the Instruction Seminar of Town's Personnel. This submittal to be made with or prior to application for final payment.

1.06 POSTED OPERATING INSTRUCTIONS

- A. General: Operating instructions and diagrams shall be prepared for posting near the equipment. Posted operating instructions shall be photographic or equal non-fading reproductions framed under glass encased in non-discoloring plastic and shall be mounted in location directed. Copies of the posted operating instructions shall also use the operating and maintenance manuals as a basis in training employees in the operation and maintenance of systems and related equipment installed.

- B. Contents: Posted operating instructions shall consist of simplified, consolidated equipment, control and power diagrams graphically representing the entire system and actual equipment installed, including concise written instructions on how to start and stop systems, what settings and conditions are to be observed and what control adjustments are to be made or maintained by the operation.

1.07 TRAINING

- A. The Contractor shall train the Town's representative(s) in the operation and maintenance of all mechanical equipment and systems.
- B. Coordination shall be maintained with the Engineer in the development of training techniques and materials. Thirty (30) days prior to completion of the project, submit for approval the proposed training schedule and scope of materials and techniques.
- C. Training shall not commence until the final operating and maintenance manual has been submitted to the Town.
- D. The Contractor shall provide training by qualified installation and maintenance personnel for a period of not less than one (1) week.
- E. Furnish three (3) copies of a signed acknowledgement that the Town's representative(s) have received the specified training.

1.08 SUBSTITUTION OF EQUIPMENT

- A. Contractor shall be fully responsible for coordinating space requirements, mounting arrangement and service connections when substitute equipment is furnished instead of the one used as a basis for design.
- B. Contractor shall be responsible for any expenses generated by substitution of equipment.

1.09 MANUFACTURER'S NAMEPLATES

- A. Each major component of equipment to have manufacturer's name, address, model number and rating on a plate securely affixed in a conspicuous place. Nameplate of a distributing agent will not be acceptable in lieu of manufacturer's nameplate.
- B. Nameplate shall be die-stamped, engraved, or etched to guarantee long term legibility. Nameplate shall be brass, bronze, aluminum, or stainless steel as required for corrosion resistance in the environment where the equipment is located.

1.10 GUARANTY/WARRANTY

- A. The Contractor shall guarantee that all new equipment has the capacity specified and that it will operate without excess noise or vibration.
- B. Contractor shall furnish a written guarantee covering all workmanship and materials for a period of one (1) year, from the date of acceptance. This shall include an agreement

to repair or replace, at his expense, all defects that may appear in that time, which in the opinion of the Engineer, are due to defective workmanship or materials. All items not having a successful five-year operating history shall have the same guarantee as above but extended for five years less their successful operating period.

- C. Copies of factory warranties on all equipment furnished shall be submitted with the above described, written guarantee, and included in maintenance manuals.

1.11 OPERATION AND MAINTENANCE RESPONSIBILITY

- A. Contractor shall provide all required service and maintenance on all equipment installed under this contract for one (1) year following final acceptance or the beginning of beneficial use by the Town. The starting date of one (1) year service period shall be determined by the Engineer. Included in the service and maintenance to be provided during this one (1) year period, shall be the following:
 - 1. Twelve (12) monthly inspections of all systems installed doing all required lubrication, adjusting belt tensions, eliminating excessive noise and vibration, correcting all electrical and mechanical faults, recording all permanent installed gauge meter and temperature readings, and other general services items.
 - 2. Answer all service calls required by the Town to keep equipment in good working condition including providing all materials and labor.
 - 3. Town's Inspections: Periodic inspections and year-end inspection to determine if the maintenance services have been properly performed will be made by the Engineer; evidence of improper performance of service will result in prompt notification of the Contractor's bonding company.
 - 4. Monthly inspection reports shall be forwarded to the Town within five (5) days of making of inspection. Report shall list all items requiring other than routine maintenance.

1.12 MANUFACTURER'S SERVICES

A. Definitions:

- 1. Construction Period: Time period from the Contractor's equipment purchase order date to the date of certification from the manufacturer that the equipment is installed correctly and is ready for startup and operation.
- 2. Startup Period:
 - a. Startup of the entire facility of any portion thereof includes coordinated operation of the facilities by the Contractor, his subcontractor, Town's operating personnel, and manufacturer's representatives for equipment items and systems.
 - b. Startup of the entire facility of any portion thereof shall be considered complete when, in the opinion of the Engineer, the facility or designated portion has operated successfully for seven (7) continuous days without significant interruption. This 7-day period is in addition to any training, functional, or performance test periods specified elsewhere.
- 3. Operation Period: The operation period shall be considered initiated when the

facility has been successfully started up as defines under paragraph "Startup Period".

4. Man-Day: Equals one person for eight (8) hours straight time, exclusive of Saturday, Sunday, or holidays.

B. Fulfillment of Specified Minimum Services:

1. Only those manufacturer's services receiving prior approval by the Engineer shall act to fulfill the specified minimum man-day requirements for such manufacturer's services. All requests to the Engineer for prior approval shall [1] be in writing, [2] be submitted not less than ten (10) calendar days prior to the providing of the subject services, [3] state the services to be provided, and [4] state the reason(s) why the timing of the service is appropriate. Requests made to the Engineer less than ten (10) calendar days prior to the providing of manufacturer's services may not receive consideration and response prior to the times the services are provided. The Contractor is advised that the Engineer reserves the right to disapprove the above requests for fulfillment of the specified minimum man-day requirements. All responses to the Contractor, approving or disapproving requests for prior approval, will be in writing. Visits of manufacturers and their representatives to the jobsite or training classroom without prior approval as provided herein will not act to fulfill the specified minimum man-day requirements.

C. Services During Construction:

1. General: Competent and experienced technical representatives shall represent the manufacturers of all equipment and systems as many days as may be necessary to resolve assembly or installation problems at the worksite which are attributable to, or associated with, the equipment furnished. This requirement applies to manufacturers of all equipment furnished, whether or not specifically set forth in the Technical Specifications.
2. Manufacturer's Certificate of Proper Installation: Where called for in the Technical Specifications, the manufacturer's representative shall provide a certificate stating that the equipment or system has been installed in accordance with the manufacturer's recommendation and has been inspected by a manufacturer's authorized representative, that it has been serviced with the proper initial lubricants, that applicable safety equipment has been properly installed, and that the proper electrical and mechanical connections have been made.

D. Functional Testing Assistance:

1. Where functional (or run) testing is called for on the Technical Specifications, the manufacturer's representative shall assist with the initial test, which shall include checking for proper rotation, alignment, speed, excessive vibration, and noisy operation. Initial equipment and system adjustment and calibrations shall be performed in the presence of and with the assistance of the manufacturer's representative. The previously specified Manufacturer's Certificate of Proper Installation shall include the statement that proper adjustment has been made and that the equipment or system is ready for plant startup and operation.

2. The Contractor, as applicable to the equipment furnished, shall state in writing that all necessary hydraulic structures, piping systems, and valves have been successfully tested; that all necessary equipment systems and subsystems have been checked for proper installation, started, and successfully tested to indicate that they are all operational; that the systems and subsystems are capable of performing their intended functions; and that the facilities are ready for startup and intended operation.

E. Performance Testing and Plant Startup Services:

1. Where performance testing and startup services are called for in the Specifications, or when technical assistance is necessary due to any malfunction of the equipment or system furnished, the manufacturer's representative shall provide such service. He shall also conduct and/or assist with final performance and demonstration testing, as required by the Specifications. These services shall continue until such time as the applicable equipment or system has been successfully tested for performance and has been accepted by the Town for full-time operation.
2. The equipment cannot be adequately performance tested until after the remainder of the facility has been put into operation. The final acceptance of such equipment or systems will follow the successful operation of the entire facility.

F. Contractor Responsibilities During Plant Startup

1. Designate and provide one or more persons to be responsible for coordination and expediting startup duties. The person or persons shall be present during all pre-startup meetings and shall be available to the Town's personnel at all times during the startup period.
2. When facility startup has commenced, the Contractor shall schedule his remaining work so as not to interfere with or delay the completion of the startup. The Contractor shall support the startup activities with adequate staff to prevent delays, process upsets, etc. This staff shall include, but not be limited to, major equipment and system manufacturers' representatives, subcontractors, electricians, instrumentation personnel, millwrights, pipefitters, plumbers, etc.
3. Where facility startup services are called for in the Specifications, the Contractor shall supply and coordinate the specified manufacturers' services for the startup period.
4. Conduct equipment startup and field performance tests on all equipment, systems, and subsystems. These tests shall meet all requirements specified in other sections of the Contract Documents.
5. The Contractor shall be responsible for the safety and well-being of all personnel under his employ.
6. The Contractor shall be responsible for adjustments, repairs, and corrections necessary to complete facility startup.
7. After the facility is operating, continue the performance testing of those items of equipment, systems, and subsystems which could not be or were not adequately or successfully tested prior to facility startup.
8. The Contractor shall provide and pay for all necessary fuel, chemicals, and other consumables to be used during facility startup. The Contractor shall coordinate the procurement and delivery of such items with the Town.

G. Training of Owner's Personnel

1. Where called for in the Specifications, the manufacturer's representative shall provide detailed instructions to the Town's personnel for operation and maintenance of the specified equipment. These training services shall include pre-startup classroom and onsite equipment instruction and/or post-startup classroom and onsite equipment instruction, as stated in the Specifications.
2. The Town shall have the right to videotape the training sessions.
3. Procedure:
 - a. Designate and provide one or more persons to be responsible for coordinating and expediting training duties. The person or persons shall be present at all training meetings with the Town.
 - b. Submit to the Town a Complete Installation Schedule, to be used by the Town for scheduling the training of operating personnel by equipment manufacturers. This schedule shall list the estimated completion dates for the installation of all equipment and systems requiring the services of manufacturers' representatives, as stated in the Specifications.
 - c. Submit the Complete Installation Schedule not less than 21 calendar days prior to the time the associated equipment is installed and in a condition suitable for use in training the Town's personnel.
 - d. Coordinate the pre-startup training periods with the Town's operating personnel and manufacturer's representatives. All pre-startup training shall be completed 14 days prior to the actual facility startup.
 - e. Where post-startup training is called for in the Specifications, supply and coordinate the specified manufacturers services and Contractor personnel for post-startup training of the Town's operating personnel.

PART 2 **PRODUCTS**

NOT USED

PART 3 **EXECUTION**

NOT USED

END OF SECTION

SECTION 01740 – PERMITS

PART 1 GENERAL

1.01 GENERAL

- A. Where the Town has obtained various permits for this Project, copies will be appended at the rear of the Specifications.
- B. The Contractor shall familiarize himself with, and comply with, all requirements of these permits. All other necessary permits shall be obtained by the Contractor and be paid for as specified below in 1.01, G.
- C. Unless otherwise specifically stated elsewhere in the Contract Documents, Supply Plans and Calculations for work not designed by the Town that is preponderantly of a structural nature signed and sealed by a Professional Engineer registered in the State of Florida as stated in the Florida Building Code; Section 104.2.1, Section 104.2.2 , and Chapter 2 Definitions, which each read as follows:
 - 1. All information, drawings, specifications and accompanying data shall bear the name and signature of the person responsible for the design.
 - 2. Design Professional: If the design professional is an architect or engineer legally registered under the law of this state regulating the practice of architecture or engineering, then he/she shall affix his official seal to said drawings, specifications, and accompanying data, as required by Florida Statute.
 - 3. Engineer: A Florida registered Engineer.
- D. The Contractor's particular attention is called to any Special Conditions of the permits relating to construction procedures, excavation and backfill requirements, open trench restrictions, turbidity control and all other general and special conditions, including 1:10 cement mix and pavement details. In the event any of the conditions of the permits are in conflict with the requirements of these Specifications, the more stringent conditions of the permits shall take precedence. The Contractor is to conform to all regulations of the governmental agencies having jurisdiction over this work, whether or not included in the permit.
- E. Any deviations from the Plans, Specifications or permits appended thereto, must first be approved by the Engineer even if approval for the change has been given by the permitting agency.
- F. The Contractor shall assume throughout the life of the Contract all obligations and responsibilities imposed on the Town as permittee of the above-mentioned permits. All expenses necessary for compliance with the regulations and requirements of each permitting agency and its permit shall be borne by the Contractor, and shall be included in his overall bid price.
- G. The cost of any fees such as impact fees, inspection fees, etc. and the cost of obtaining all required permits shall be borne by the Town. The Contractor shall pay the required

fees, obtain the permit(s) and then upon submission of proof of cost to the Town, be reimbursed for said cost out of the Allowance Account(s). This shall apply only to required permits and fees. Permits obtained or fees paid for the advantage of the Contractor or non-required permits obtained for whatever reason shall not be reimbursed. The necessity or non-necessity of a permit or fee shall be determined by the Engineer whose word shall be final. As specified in the paragraph above, all costs of compliance with the permit(s) shall be borne by the Contractor and included in his bid price.

- H. All surveying required by the Project permits shall be done by the Contractor's Florida Registered Land Surveyors. This includes staking out limits of construction.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION