

**SPECIFICATIONS
FOR
LIFT STATION NO. 31 IMPROVEMENTS**

FOR:

City of Naples
Utilities Department
380 Riverside Circle
Naples, FL 34102

ENGINEER:

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ABB PN:

20-0025

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I. Project Description

The proposed project consists of:

- The removal of the existing top slab
- Rehabilitation of the existing lift station wet well, and subsequent installation of all associated appurtenances
- Connection of the Lift Station to the existing Force Main
- Existing Lift Station No. 31 dry well to be backfilled and abandoned
- Installation of new top slab
- Restoration of project area
- Demolition and replacement of stairs
- Demolition/removal of existing storage tank and backfill area
- Removal and replacement of 8in clay sewer main connecting manhole to wet well

II. Measurement and Payment

DESCRIPTION

- A. This section describes the method used to determine quantities of Work performed or materials supplied for which a price is given in the Bid. It establishes the basis upon which payment will be made for Payment Items.
- B. Subject to the provisions in General Conditions, all Work and payment for the Work is represented by Payment Items and associated unit prices.

PAYMENT

- A. Subject to all other contract requirements, the Contractor shall be paid for "as built" quantities of Work for which a price is given in the bid.
- B. Quantities on the Bid Schedule are estimated and may be increased or decreased without limit.
- C. No separate payment will be made for one Payment Item as Work incidentally required to complete the Work of another.
- D. Payment for Work performed shall be made in accordance with the unit prices in the Bid.

MEASUREMENT FOR PAYMENT

A. Methods of Measurement:

1. Measurements of lengths, widths, slope angles, and depths or elevations shall be made to determine "as-built" quantities of lengths, areas and volumes pertinent to Payment Items.
 - a. Unless otherwise specified, all lengths shall be horizontal distances.
 - b. Slope angles and elevations shall be measured using land surveying equipment.

2. Graphic representations of measured quantities shall be drafted to scale using the Drawings where convenient and appropriate. Additional drawings shall be drafted if required.
 - a. Irregular shapes representing areas and volumes shall be measured using a compensating polar planimeter or a computer digitizer.
 - b. Regular shapes shall be scaled.
3. Use of Drawings:
 - a. Unless otherwise agreed upon between the Contractor and Owner, the Drawings shall be used as the basis to establish existing grades and other existing topographic features.

PAYMENT ITEMS

- A. No separate payment will be made for the following Work, and its cost shall be included in the Bid Price of the Payment Item to which it is associated:
 1. Trench excavation, sheeting, shoring and bracing.
 2. Utility locating.
 3. De-watering.
 4. Fill, backfill and grading.
 5. Removal, replacement and restoration of driveways, mailboxes, sod, seed, and plantings.
 6. Cleanup.
 7. Testing, including all materials and equipment.
 8. Maintenance of utility service.
 9. Removal and replacement of fencing and other structures.
 10. Saw cutting.
 11. Coordination with other contractors.
 12. Coordination of service interruptions.
 13. Unsuitable material removal and disposal, including rock.
- B. Measurement and Payment Items as listed in the Bid Schedule:
 - 1. Pre-Construction Video & Photographs**
 - a. Measurement for various items covered under Pre-Construction Video & Photographs will not be made for payment, and all items shall be included in the contract lump sum price.
 - b. Payment for providing Pre-Construction Videos and photographs will be made at the full lump sum contract price for the item, which price and payment shall be full compensation to document pre-construction wet and dry conditions, including, but not limited to, sod type and right-of-way and limits of construction condition. Preconstruction videos and pictures must be provided to the City a minimum of 10 days prior to beginning construction.

2. New Lift Station & Associated Appurtenances

- a. Measurement for the installation of the New Lift Station except as otherwise specified, will not be made for payment, and all items shall be included in the contract lump sum price.
- b. Payment for providing the New Lift Station will be made at the contract lump sum price for the item, which price shall be full compensation for furnishing and installing all items associated with the proposed lift station including the wet well, control panel, lockable single leaf hatch, piping, fittings, installation in locations indicated on the Construction Drawings, all pipe fittings joint restraints, pipe identification tape, insulated conducting wire, pipe supports, connections to existing water main including restraint of existing pipe on both sides of the tie in as required, fencing, concrete slabs, bypass pumping, all material required for bypass pumping, FPL coordination; and piping from the pumps (riser pipes) through the above grade valve assembly to the below grade 90 bend immediately following the above grade valve assembly. Note: the City of Naples will supply (the Contractor will install) the two (2) submersible pumps, float racks, floats, transducer conduit, pump bases, guide rails, guide rail mounts, and conduit to/from control panels. The City will supply and install all electrical components, including control panel, RTU, Antenna, FPL transformer, meter, power service, sensors and control cables, conduit and junction boxes to/from control panel, floats, and pump discharge connection. Work shall include all material, labor and equipment as necessary to complete the lift station including installing City supplied material/equipment and furnishing and installing all other items; and all concrete work, excavation (including rock, and other inorganic and organic unsuitable material), installation, compacted gravel or crushed stone bedding; compaction, shoring, dewatering, tree trimming, vegetation removal and replacement, pipe supports, hiring of power company to relocate power pole as required; testing and startup, sidewalk/paver area removal and replacement, sign removal and replacements, fence and gate, access improvements, piping, valves, caps, and associated appurtenances; restoration, maintaining the wastewater collection system in operation at all times, bypass pumping, plugs, and pumper/vacuum trucks as necessary; and connections to the mains.

3. Wet Well Rehabilitation

- a. Measurement for the wet well rehabilitation, except as otherwise specified, will not be made for payment, and all items shall be included in the contract lump sum price.
- b. Payment for rehabilitating the wet well will be made at the contract lump sum price for the wet well successfully constructed and accepted, including the 10in reinforced concrete top slab, (4) concrete steps, removal of 8in clay pipe and replace with 8in SDR-26 PVC, all fill, sandblast & epoxy grout leaks & cracks, sewer coat dry well & wet well, concrete, flow channel construction, backfilling, compacted gravel or crushed stone bedding, sheeting, shoring,

dewatering, sawing, maintaining the wastewater collection system in operation at all times, bypass pumping, plugs, and pumper/vacuum trucks as necessary; protection of adjacent utilities and facilities, manhole frames and covers adjustment as needed, coatings and linings, manhole joints, bottom channels, restoration, and sanitary sewer connections.

4. Existing Lift Station Rehabilitation & Dry Well Abandonment

- a. Measurement for various items covered under Existing Lift Station Rehabilitation and Dry Well Abandonment will not be made for payment, and all items shall be included in the contract lump sum price.
- b. Payment for Existing Lift Station Rehabilitation and Dry Well Abandonment will be made at the appropriate Contract Unit price per lump sum. This item includes all mobilization, labor and materials required for complete removal of all designated fences, concrete pads, piping, pumps, electrical components, valves, and covers, backfilling dry well in lifts, and abandoning the remaining portion of dry well. Also included are cleanup, sign removal and replacements, surface restoration including grading, sodding, landscaping, paver and sidewalk replacement complete with broom finish. Please note that the Contractor is responsible for the upkeep and maintenance of all sod and landscaping during construction, including maintaining existing irrigation systems in service. New sod and landscaping which is damaged or destroyed during construction shall be replaced at no additional cost to the City of Naples. All landscaping damaged or removed as part of the Contractor's operations must be replaced unless directed otherwise in writing by the City of Naples. Additionally, the Contractor must repair and replace all private and public irrigation facilities that are damaged or destroyed during construction. Any and all costs incurred by private parties from damaged irrigation lines shall be paid for by the Contractor.

5. General Restoration/ Sitework

- a. Measurement for various items covered under General Restoration will not be made for payment, and all items shall be included in the contract lump sum price.
- b. Payment for General Restoration will be made at the appropriate Contract Unit price per lump sum. This item includes all labor and materials required for complete restoration of all areas disturbed by the Contractor, not included in a separate bid item, including clean-up, grading, replacement of grass, sod, landscaping, and other surface materials not specifically designated in the Bid. Please note that the Contractor is responsible for the upkeep and maintenance of all sod and landscaping during construction, including maintaining existing public and private irrigation systems in service. New sod and landscaping which is damaged or destroyed during construction shall be replaced at no additional cost to the City. All landscaping damaged or removed as part of the Contractor's operations must be replaced unless directed otherwise in writing by the City of Naples.

6. S.W. Pollution Prevention/ Erosion and Sedimentation Control

- a. Measurement for various items covered under Erosion and Sedimentation Control will not be made for payment, and all items shall be included in the contract lump sum price.
- b. Payment of the lump sum amount bid for stormwater pollution prevention, erosion, and sedimentation control shall be full compensation for all stormwater pollution prevention, erosion, sedimentation control, and turbidity screening control per the City of Naples, South Florida Water Management, and FDOT standards and as specified herein. Includes silt fence around entire disturbed area.

7. Remove & Backfill Storage Tank

- a. Measurement for various items covered under Remove & Backfill Storage Tank Control will not be made for payment, and all items shall be included in the contract lump sum price.
- b. Payment of the lump sum amount bid for the removal and Backfill of the existing storage tank and shall be full compensation for all labor and materials required for the removal of the storage tank, backfilling, sod restoration, and complete restoration of all areas disturbed by the Contactor, not included in a separate bid item, including clean-up, grading, replacement of grass, sod, landscaping, and other surface materials not specifically designated in the Bid.

8. Mobilization & MOT

- a. Measurement for various items covered under Mobilization/Demobilization will not be made for payment, and all items shall be included in the lump sum price.
- b. Payment for Mobilization/Demobilization shall include preparatory work and operations in mobilizing for beginning work on the Project and demobilizing for ending work on the Project. The establishment of field offices, safety equipment, and first aid supplies (if required); sanitary and other facilities, as required by these specifications; State and local laws and any other preconstruction expense necessary for the state of the Work; the cost of field engineering, including permits and fees; maintenance of traffic, on-site meetings, construction schedules, shop drawings, temporary facilities, lay down storage area, construction aids, work associated with Contractor support during Owner/Engineer testing, reviews and inspection, re-inspection and any rework resulting from same, cleaning, project records documents, operating and maintenance data. The Contractor shall submit invoices substantiating the cost of mobilization with each pay request. Fifteen percent (15%) of the cost for mobilization and demobilization will be withheld until substantial completion acceptance. This pay item cannot exceed 10% of the associated Phase total.

III. Supplemental Project Requirements

1. This project will require coordination between the City of Naples, the Engineer, and the Contractor. The awarded Contractor shall work with all parties throughout the duration of the project to ensure minimal disturbance to those affected.
2. The City of Naples will supply (the Contractor will install) the two (2) submersible pumps, float racks, floats, transducer conduit, pump bases, guide rails, and guide rail mounts. The City will supply and install all electrical components, including control panel, RTU, Antenna, FPL transformer, meter, power service, sensors and control cables, conduit and junction boxes to/from control panel, floats, and pump discharge connection. All other material, components, and appurtenances will be furnished and installed by the Contractor.
3. No service interruptions will be permitted through the duration of this project. Contractor shall provide to the City for review and approval a bypassing plan and contingency plan to accomplish the installation of the new lift station and wet well conversion. The plan must include assurance that the proposed bypass pumping system can meet the peak hour pumping condition of **445 gpm** at **28 ft TDH**. Wastewater containment and cleanup as a result of the Contractor's work shall be the responsibility of the Contractor.
4. All pressure piping shall be installed with a 12# AWG locating tone wire and metallic identification tape. Prior to final acceptance and payment, the contractor shall verify that all piping has at least one detectable tone locating wire with the City inspector or designee.
5. Work shall be permitted to 7:00 AM to 7:00 PM Monday through Saturday. No work shall be permitted outside these hours are allowed without prior approval.
6. All utility construction shall be supplied and completed in accordance with the City of Naples Utilities Specifications and Standards Manual, available at the following link: <http://www.naplesgov.com/DocumentCenter/View/60515>
In the event of a conflict between the City Utility Standards and these specifications and drawings, the more stringent requirement shall apply.
7. All required FDEP testing for gravity sewer, force main piping, and the lift station shall be completed and a clearance letter received from the FDEP before being placed into service.
8. Water from dewatering operations shall be maintained onsite and not enter Gulf Shore Blvd. N or any drainage system.
9. Clearing and grubbing shall be limited to work areas only. Contractor shall be responsible for restoring all areas disturbed by his work. All disturbed areas shall be restored to pre-construction conditions. Contractor shall be required to water vegetation replaced until established/rooted.
10. Trees and shrubs within the work area shall be removed/trimmed only if allowed by the City of Naples.
11. In accordance with the City of Naples requirements, a pre-construction video shall be taken with copies provided to the City and Engineer. Contractor shall supplement these videos with still photographs as necessary to reflect existing conditions.

12. Contractor shall field verify the location (horizontal and vertical), size, and material of all utilities (public and private) within the limits of the project and all utility mains which connections are to be made. Contractor shall conduct pot-holing of all areas a minimum of one (1) week prior to any work in an area. The existing private and public utilities shall be pot-holed to verify location (horizontal and vertical). This shall be reviewed with the City and Engineer to allow adjustment of mains as required to minimize conflicts.
13. Contractor shall be responsible for all construction layout and preparation of Record Drawings in accordance with City requirements. This shall include but not be limited to wet well dimensions, location, valves, and piping.
14. Contractor shall contact all utility suppliers, including City of Naples, Collier County Traffic Operations, Comcast, Florida Power & Light, and CenturyLink for locating of these facilities. Contractor shall coordinate with these utilities for protection and adjustment of their facilities as needed. All costs shall be included in individual bid items.
15. Contractor shall be responsible for all costs associated with installing and testing of all compact fill materials to avoid future settlement. For paved areas, compaction shall be per detail U-02 as required at spacing not to exceed 100 feet apart and on each compacted layer. For unpaved areas, compaction shall be per detail U-03 and testing shall take place a minimum of every 500 feet, or a minimum of one test per every section of pipe laid. Compaction testing density shall be per ASTM D 1557.
16. Contractor shall be responsible for the cost of all material testing as required.
17. Contractor shall be responsible for all inspection and testing unless otherwise specified. For tests to be made by the Contractor, the testing personnel shall make the necessary inspections, furnish all material and equipment to properly perform the testing, and furnish all results to the City of Naples for acceptance of all equipment and installation as required.
18. During construction, the Contractor shall keep both lanes of traffic open at all times on all affected roads. Flagmen shall be utilized to assist traffic through the construction zone when two lanes of travel are not provided. Access onto existing streets and drives shall be maintained to local traffic, emergency vehicles, school buses, school traffic, delivery vehicles, postal vehicles, public transportation, solid waste and recycling vehicles, and property owners. At all times, access must be provided to existing fire hydrants, valves, manholes, and cleanout.
19. Contractor shall be responsible for all Maintenance of Traffic for the project. Maintenance of Traffic shall be in accordance with the FDOT Standard Index and the Manual of Uniform Traffic Control Device (MUTCD, Part VI).
20. The Contractor shall be responsible for obtaining equipment and material storage areas and all necessary permits, ROW, and temporary construction access. Where private storage areas are utilized, the Contractor shall provide a copy of the Agreement to the City.
21. The Contractor shall be responsible for maintaining all work areas in a safe and clean manner as identified in the City of Naples Utilities Standards Manual. This shall include but not be limited to daily sweeping of roadway and sidewalk surfaces.

22. All excavation shall be unclassified with no additional payment to be made for rock or dewatering. The Contractor shall be responsible for making his own site observations and exploration to determine site conditions prior to bidding.
23. The Contractor shall prepare and provide for review by the City and Engineer a MOT Plan, Tropical Storms and Hurricanes Plan, and Safety Program/Risk Management Program.

City of Naples
Lift Station No. 31 Improvements
Bid Tabulation

DESCRIPTION	QUANTITY	UNIT	UNIT COST \$	SUB TOTAL \$
1.) Pre-Construction Video & Photographs	1	LS		
2.) New Lift Station & Associated Appurtenances	1	LS		
3.) Wet Well Rehabilitation	1	LS		
4.) Existing Lift Station Rehabilitation & Dry Well Abandonment (Backfill estimated 950 CF)	1	LS		
5.) General Restoration/Sitework	1	LS		
6.) S.W. Pollution Prevention/Erosion & Sedimentation Control	1	LS		
7.) Remove & Back Fill Storage Tank (Assumed +/- 6ft deep, Estimated 700 CF)	1	LS		
8.) Mobilization & MOT	1	LS		
Total:				