

**Erie County Sewer District No. 8
Geneva Road Pumping Station and
Sanitary Sewer Extension Project
Contracts 11A and 11D
ADDENDUM No. 2**

All bidders must fax this sheet to Erie County Department of Environment and Planning/Division of Sewerage Management (Attn: Edward A. Paolini, P.E. at 716-858-6257) stating that your company has received Addendum No. 2 to the Erie County Sewer District No. 8 Geneva Road Pumping Station and Sanitary Sewer Extension Project Contracts 11A and 11D.

Received: _____

By: _____

Date: _____

All bidders must incorporate Addendum No. 2 including all attachments when submitting bids for this contract. Bidders are also advised to acknowledge Addendum No. 2 in the Addendum Acknowledgement section of the Proposal. On Page P-5 and endorse the special notice page attached hereto and made part of Addendum No. 2.

**ADDENDUM NO. 2
COUNTY OF ERIE
DEPARTMENT OF ENVIRONMENT AND PLANNING
ERIE COUNTY SEWER DISTRICT NO. 8
GENEVA ROAD PUMPING STATION AND
SANITARY SEWER EXTENSION PROJECT
CONTRACTS 11A AND 11D**

BIDS DUE: JUNE 25, 2012 at 11:00 a.m.

Minutes of the Pre-Bid Meeting for this contract, conducted on June 19, 2012 are included as an attachment hereto (Attachment I) and must be complied with in the bidding and construction of the Contract.

The attention of all holders of bid documents is directed to the following changes to the Contract Documents:

- **ADD** - Attached DELETE/ADD list into the Technical Specifications included in Divisions 15 and 16 of the Specifications and incorporate requirements when submitting bids. (Attachment II)
- **ADD** - Stilling Well Installation Detail to contract documents. General contractor to provide stilling well for pumping station as part of Contract Requirements, and include cost in Bid Item No. 29. (Attachment III)
- **ADD** - Electrical Service Drop Detail to contract documents. Electrical contractor to install service drop per detail as part of contract requirements, and include cost in Bid Item No. D-1. (Attachment IV)
- **ADD** - Specific Contract Conditions - Field trailers and easements to contract documents. General Contractor to include cost for Specific Contract Condition into Bid. (Attachment V)
- **DELETE/ADD** - Delete pages: P-7A-3 and P-7A-4 and P-7A-7 in their entirety from the Proposal section of the Contract Specifications and from the separately bound Proposal booklet, and insert pages P-7A-3R, P-7A-4R, and P-7A-7R in their place in the proposal section of the Contract Specifications and the separately bound Proposal booklet. (Attachment VI) General contractor to include cost for revised Proposal pages into Bid.

SPECIAL NOTICE

Addendum 2, including the attachments shall be inserted into the Contract Documents, submitted with the Bid and shall be signed by the Bidder in the space provided below.

COUNTY OF ERIE

**Joseph L. Fiegl, P.E.
Deputy Commissioner
Department of Environment and Planning**

Signature of person, firm, or corporation making bid:

Signature

Title

(Seal if bid by a corporation)

Attachments:

- I Minutes of Pre-Bid Meeting June 19, 2012**
- II – Delete/Add List Division No. 15 and 16**
- III – Still Well Detail**
- IV – Service Drop Detail**
- V – Specific Contract Conditions – Field trailer and Easement condition**
- VI - Proposal Section Revision**

ATTACHMENT I
MINUTES OF PRE-BID MEETING
JUNE 19, 2012

**Erie County Sewer District No. 8
Geneva Road Pumping Station and
Sanitary Sewer Extension Project
Contract No. 11A and 11D**

Minutes of PRE BID MEETING

June 19, 2011 at 2:00 p.m.
Erie County Rath Building
95 Franklin St. Room 1004
Buffalo, New York 14202

1) **INTRODUCTION**

Edward A. Paolini opened the meeting at 2:00 p.m. by introducing the project and the Erie County Department of Environment and Planning, Division of Sewerage Management participants as follows:

Edward A. Paolini, P.E. will be the Project Manager.
Daniel Skowronski will assist the Project Manager
James A. Carr, P.E. is the Sewer Construction Administrator

The minutes of this meeting and the attendee list will be made a part on the Contract Documents by Addendum.

2) **PROPOSAL REQUIREMENTS**

Sealed proposals for the construction of Contracts No. 11A and 11D, Geneva Road Pumping Station and Sanitary Sewer Extension Project, will be received until 11:00 a.m., June 25, 2012 in Room 1034 of the Rath Building, 95 Franklin Street, Buffalo, NY 14202 at such time the bids will be opened and read aloud in Room 1004 of the Rath Building.

Contract No. 11A and 11D is located in Erie County Sewer District No. 8 (ECSD No. 8), in the Town of Aurora. The work consists of installation of a 6 feet diameter concrete wet well and valve chamber with duplex submersible non-clog pumps and 380 LF of 4 inch diameter forcemain and approximately 1800LF of 8 inch diameter sanitary sewer, manholes, restoration pavement repair, laterals, cleanouts and all other related work.

Plans are on file and can be purchased at the office of Erie County Department of Environment and Planning, Division of Sewerage Management, Room 1034, 95 Franklin Street, Buffalo, New York 14202. The deposit for each set of contract documents shall be \$100.00 in the form of cash, two checks or money orders, each in the amount of one-half the deposit and made payable to the Erie County Director of Budget and Finance.

The envelope containing the bid must be sealed, addressed to the Erie County Commissioner of Environment and Planning, and must be clearly and correctly designated as "Erie County Sewer District No. 8, Contract No. 11A, or 11D". Any bids not delivered in person shall be mailed to the Erie County Commissioner of Environment and Planning, 95 Franklin Street, Buffalo, New York 14202, and received before the time set for the bid opening.

Erie County Sewer District No. 8 is an exempt organization under the Tax law and is exempt from payment of sales and compensation use taxes. These taxes are not to be included in the bid.

Each proposal must be accompanied by a certified check payable to the Erie County Director of Budget and Finance or by a bid bond from a Surety Company acceptable to the County Attorney, in an amount not less than five percent (5%) of the total base bid, as surety for execution of the contract. Should any bid be rejected, such bond will be forthwith returned to the bidder, and should any be accepted, such bond will be returned upon proper execution and securing of the contract.

Attention of the bidder is called particularly to the requirements with respect to conditions of employment to be observed and minimum wage rates to be paid under the contract and further to the Minority Business Enterprise Utilization Commitment. Bidders are advised that Pages P-19 through P-25 must be submitted with the Bid.

The attention of the bidder is called to the provisions of Article 5A of the General Municipal law, which requires the bidder to execute a certificate of non-collusion, and to conform to the other provisions of Article 5A outlined in the specifications. A form for such certification accompanies the bid form on Page P-9. Unless it is properly executed, the bid will not be accepted.

The right to reject any and all bids, to waive any informalities, or to make any award to other than the low bidder, should it be deemed to be in the best interest of Erie County Sewer District No. 8 and in accordance with law, are herewith reserved.

The successful bidder will be required to furnish a Payment and Performance Bond each in an amount equal to 100 percent of the contract award. Further, the bidders are required to complete the Performance Bond information form on page P-16 of the proposal section.

No bidder may withdraw his bid within 45 days after the bid opening date, but may withdraw it anytime before the schedule time for opening bids.

As evidence of his ability to perform the work, the low bidder will be required to submit statements concerning:

- A. Qualifications
- B. Experience
- C. Staffing and Equipment Availability
- D. Detailed Financial and Ownership Status

Also, as part of your bid package, we ask that you complete a short form entitled "Certificate of Experience" which is contained on Page P-15 of the proposal.

All questions concerning interpretation of contract documents must be submitted in writing to Edward A. Paolini, P.E., Room 1034, 95 Franklin Street Buffalo New York 14202 before (Thursday) June 21, 2012.

Completion time: 180 calendar days from the Notice to Proceed. This includes time for shop drawing submission and review, installation of the sewers, testing, paving and final restoration. It is expected that this contract will be awarded in July and a Notice to Proceed issued in August. Failure to complete the improvements within the stated time frame will cause penalties to the Contractor in the amount of \$400.00 per day in liquidated damages and/or additional engineering inspection costs.

3) GENERAL COMMENTS

Before preparing and submitting his bid, each bidder should:

- * Carefully examine all contract documents
- * Make a thorough investigation of the site
- * Familiarize yourself with all Federal, State and local laws, ordinances, regulations and permits which apply
- * Carefully integrate all these observations into the bid proposal.

Each Bidder's bid proposal package must contain the following completed items:

- * Insert Contract Number and Title (P-2)
- * Addenda Acknowledgement (P-5)
- * Insert Mailing Address (P-5)
- * Answer Non-Discrimination Question (P-5)
- * Proposal Execution (P-6)
- * Bid Proposal Items P7A-1 thru P7A-12 for General Contract and P7D-1 for Electrical Contract Please check your figures and math and be sure to submit bids for all items.
- * Certificate of Non-Collusion (P-9)
- * Waiver of Immunity Certification (P-10)
- * Confined Space Program Certification (P-11)
- * NYS Training Program Certification and Plan (P-12)

- * Anti-Lobbying Certification (P-13)
- * Uniform Certificate of Acknowledgement (P-14)
- * Certificate of Experience (P-15)
- * Performance Bond Information Form (P-16)
- * Certified Check or Bid Bond in the amount not less than 5% of total bid amount (P-17 - 18)
- * Agreement to abide by Equal Employment Opportunity Policy Statement Requirements (P-19)
- * Disadvantage Business Enterprise Program (DBE) Subcontractor Participation Form (P-20-21)
- * Disadvantage Business Enterprise Program (DBE) Subcontractor Performance Form (P-22-23)
- * Disadvantage Business Enterprise Program (DBE) Subcontractor Utilization Form (P-24-25)

Request for permission to make surveys and/or subsurface investigations (test pits) at the project site must be submitted in writing to the Erie County Department of Environment and Planning, Division of Sewerage Management, Room 1034, 95 Franklin Street, Buffalo, New York, 14202; Attention: Edward A. Paolini, P.E.

4) **CONFINED SPACE REQUIREMENTS**

Bidders are advised that the project is subject to OSHA Regulations with respect to Working in Confined Spaces. Therefore, Bidders must submit a completed Confined Space Program Certification with their proposal. The confined space program Certificate is included in Page P-11 of the proposal. The bid will not be accepted unless the Certification is completed and properly endorsed.

5) **LABOR AND PROGRESS PAYMENTS**

No workman, laborer, or mechanic may be employed in excess of eight hours in any one day or five days in any one calendar week unless an "Application for Dispensation of Hours" (Form PW-30) has been submitted and approved by Erie County and the State Department of Labor. It is not expected that overtime will be allowed on this project. A stipulation of overtime being granted is that the Contractor would be responsible for the additional inspection cost during the overtime hours. The contractor will be responsible for the inspector's overtime cost for work performed that is deemed to be non-emergency by the engineer.

Weekly certified payroll reports for general and all subcontractors must be submitted on Form WH-347(U.S. Department of Labor). It is the general Contractor's responsibility

to make sure all subcontractor's comply. This will be monitored closely. Progress payments will not be made unless certified payrolls are up to date.

Contractors will be required to abide by the Davis Bacon Act which requires Contractors to pay the higher of the wage rates between the State and Federal Rates.

Interviews will be conducted to verify wage rates and Contractor must post the Davis Bacon Act Poster (WH1321) conspicuously at jobsite.

This project has a goal of 10.6 – 13.2% for Minority and 6.9% Female Utilization for the prime contractor and all subcontractors. Monthly Utilization Reports must be submitted by the 15th of each month on U.S. Department of Labor Form 257.

All progress payments, change orders, award of contract and final acceptance must be presented and approved by the Erie County Sewer District No. 8 Board of Managers.

Bidders are advised that the Deputy Commissioner of the Division of Sewerage Management is the only person authorized to approve change orders up to \$20,000.00. Change orders greater than \$20,000.00 must be approved by the Erie County Legislature. The construction observer and the resident engineer have no authority to negotiate Change Orders.

Contractor must provide a Superintendent or Foreman to make decisions and supervise his crew and any subcontractors.

6) **MINORITY AND WOMEN BUSINESS ENTERPRISE UTILIZATION GOALS**

This contract is funded by NYS Environmental Facilities Corporation (EFC) and subject to a 9% MBE and 5% WBE goals. MBE's and WBE's utilized must be chosen from the NYS List of Disadvantaged Business Enterprise and the Contractors Program must be accepted by the Erie County Minority Business Officer (MBO) Jessie Burnette in order for their participation to be counted towards this goal. Contractors shall note the following:

- Field checks will be performed
- The list of certified DBE's is available online at: www.esd.ny.gov/mwbe
- Questions concerning the EEO and/or MBE/WBE requirements should be directed to Jessie Burnette at 858-8604.
- If the MBE/WBE monthly report form has not been submitted on time and is not up to date it will delay the monthly payment to the Contractor. **NOTE:** Bidders must submit the DBE participation information requested on page P-19 through P-25 of the Proposal with their Bid.

The following New York State Environment Facilities Corporation (NYSEFC) Program forms must be submitted after award. Forms are available online at www.nysefc.ny.gov/mwbe

- Utilization Plan or Waiver
- EEO Work Force Utilization Report
- Joint Venture/Teaming Arrangement Form
- MWBE Monthly Report (when construction commences)

Reports must be submitted directly to Erie County Department of Environment and Planning/Division of Sewerage Management.

LOCAL LAW NO. 2, NEW YORK STATE CERTIFIED WORKER TRAINING PROGRAM

Local Law No. 2 pertaining to the requirement of having a certified apprentice training Program applies for this project. Contractor shall carefully review Local Law No. 2 and the Rules and Regulations found in the Instruction to Bidders. As part of the bid requirements as noted on P-12 of the Proposal Section, the contractor shall attach to their bid a copy of a current certification of the Worker Training Program by the Dept. of Labor that will be utilized on this contract, a written plan that demonstrates how apprentices will be utilized by the Bidder's commitment towards acceptable achievement of the workforce and diversification goal. Bidders may provide with their Proposal a written statement as to the inapplicability of the apprenticeship participation for the Bidder as allowed by the Rules and Regulations.

7) SPECIFIC COMMENTS

Bidders are advised of the following items and comments pertaining to the proposal:

- A. The Contractor must utilize a trench sheeting box at all times during construction.
- B. A construction schedule is required to be submitted within five (5) days from the Notice to Proceed. Any slippage by the Contractor in his schedule shall cause the contractor to promptly adopt such means as necessary to make up lost time. See General Contract Conditions pertaining to construction schedules.
- C. Bidders are advised that a 1-year maintenance bond to Erie County Sewer Dist. No. 8 will be required to cover all project improvements.
- D. The Contractor must comply fully with the contract specifications regarding the maintenance and control of traffic including the adequate use of traffic barriers, signs, flagmen, etc. as necessary. Prior approval must be secured from the Town of Aurora for Geneva Road and Village of Aurora for South Street if they are restricted during construction of the improvements. Traffic control shall follow

NYSDOT MUTCD. The cost to obtain roadwork permits and any conditions that may be a part of the permits are the responsibility of the Contractor and should be included in the bid. The Contractor must secure a written letter of approval from the Town and Village of Aurora for the road restoration.

- E. Contractors are advised that their operations are restricted to the highway right of way and the easements as shown on the plans.**
- F. Before actual on site construction will be allowed to begin, the Contractor must have the following completed:
 - Construction schedule submitted**
 - List of emergency phone numbers submitted**
 - Preconstruction photographs**
 - Shop drawings approved**
 - Test Pits completed**
 - Road Permits obtained**
 - Field Trailer set up and properly equipped****
- G. Only No. 1 crushed stone meeting the requirements of the specifications will be allowed for pipe bedding material. No bank run gravel will be allowed for select fill material.**
- H. In determining this bid, the Contractor shall consider his expected trench width during construction and take into account all damage that will occur outside the pay limits. All costs associated with damage to lawns, driveways, roads, existing utilities, etc., which require additional restoration or repair should be incorporated into the bid. No additional compensation will be considered for areas outside the stipulated pay limits.**
- I. Bidders are advised that the Specific Contract Condition section of the Specification Contract additional requirements for the project sign, GCC No. 64. Project sign cost should be included in the Bid.**
- J. Bidders are advised to review the Specific Contract Conditions Pages (Attachment V) for additional requirements for GCC No. 63, Field Trailer, and for Special Easement Conditions. All costs associated with the Specific Contract Conditions and Special Easement Conditions should be included in the bid. No additional compensation will be considered.**
- K. Bidders are advised that all lawn and field areas are to be restored utilizing the hydroseed method of application in accordance with Section 02820. Hand spreading of seed, mulch, etc. will not be permitted. All costs for restoring lawn areas by the hydroseed method shall be included in Bid Item No. 2 and 3.**

- L. Plans for existing sewers in the area are available for review in the office of the ECDEP/DSM – 10th. Floor, 95 Franklin Street, Buffalo, New York, 14202.
- M. Various other utilities exist in the project areas. The existing utilities have standard requirements for addressing any repair of service and etc. Bidders are advised that they must comply with the utility company requirements for repair of any existing utilities in the project area.
- N. Contractors are advised that they must control dust, and the roadways must be kept clean by whatever means are necessary during construction. Use of Calcium Chloride for dust control is prohibited.
- O. Contract No. 11A - Bidders are advised that there is a contingency item allowance (Bid Item No.43) of \$20,000.00 that must be included in their bid.
- P. Contract No. 11D Bidders are advised that there is a Contingency Item Allowance (Bid Item D-2) of \$10,000 that must be included in their Bid.
- Q. Electrical Contractors should refer to Page 1-28 of Specifications for description of Bid Items for Contract 11D.
- R. Bidders are further advised to carefully review the soils information included in Appendix C of the specifications when preparing their bid. All costs associated with dewatering, special trench shoring, special excavation equipment, slower production, etc. should be taken into consideration when preparing the bid. No additional compensation will be considered.
- S. Bidders are further advised that the requirement of compacting the select backfill in lifts will be strictly enforced. Settlement over time will not be an acceptable method of compaction. Compaction tests must be taken.
- T. Bidders are advised that requests for interpretations will be accepted up to Thursday June 21, 2012 and a written addendum will be sent to the bidders 3 days before the bid opening.
- U. The Contractor shall comply in all respects to the Industrial Code Part (Rule No. 53) relating to construction, excavation and demolition operations at or near underground facilities as issued by the State of New York department of Labor Board of Standards and Appeals.
- V. Geneva Road to be resurfaced by Town of Aurora in 2013. Road restoration for Geneva Road must be according to detail on plans and requires binder to be installed to match existing pavement surface. No top corse will be required for Geneva Road.

W. The following is a short list of the major equipment required for the Pumping Station. Please refer to Division 15 and 16 for specifics:

Sewage Pump:	Flygt (Xylem) NP 3085 SH-256, 230 VAC, 3 Phase Motor, Flush Valve
Pump Controller:	Mercoid (Dwyer) Model MPC
Level Sensor:	Mercoid (Dwyer) Model Series PBLT2
VFD/Phase Convertor:	Schneider (Square D) Electric Altivar Series 61- Single phase input; three phase output with line reactor
Cellular Telemetry Unit:	Omnisite "Crystal Ball"

X. "Or equals" will be considered, however, contractor must reimburse DSM for cost for engineering time spent to determine if a substitute is an "or equal". Also, note that according to the contract when substitute (or equals) are proposed, any saving in cost resulting from the substitution shall be passed onto the owner.

Y. Contractor must inform the County of the location where spoil from the contract will be taken for disposal.

Z. There are 7 "R" trees noted on plans in the Pumping Station area. They are the following sizes:

- 2 – 4" trees
- 4 – 6" trees
- 1 – 10" tree

Replacement trees shall be provided according to contract specifications

8) UTILITY COMPANY REQUIREMENTS AND COMMENTS -

NONE

9) CONTRACTOR'S QUESTIONS

Question: What list for MBE/WBE should be used?

Answer: The project is partially funded by the EFC. The contractor must use the Empire State Development Corporation list. The list may be found online at: www.esd.ny.gov/mwbe

Question: Can an MBE/WBE be used from the Erie County list?

Answer: Only if listed on the Empire State Development (ESD) list.

Question: Are suppliers listed on the ESD list counted at 100% commitment?
Answer: Bidders are advised to review the EFC requirements and the ESD list for the percentage allowed.

Question: Does the pump specification number indicate the pump horsepower?
Answer: Yes, the pump is 4HP.

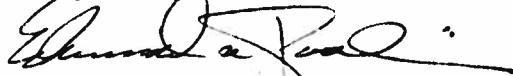
Question: What does the utility allowance cover?
Answer: The allowance is to cover the cost for utility relocation if necessary. The relocation work will be performed by the utility company or the contractor at discretion of the utility company. The test pit locations indicate possible utility conflicts. If a conflict is encountered the owner may order a realignment of the proposed work to avoid relocation of the utility.

10) ADDITIONAL COMMENTS

The attached attendee list and a copy of the minutes of this meeting will be included in Addendum No.2 and distributed to all bidders who purchased plans and contract documents.

The meeting was concluded at 2:36 p.m.

Respectfully submitted,



Edward A. Paolini, P.E.
Senior Sanitary Engineer

CC: All Attendees
S. Canestrari (w/ encl.)
J. Carr/W. Lardo/J. Russell/D.Skowronski/8.3.3.11 (w/encl.)
V:\Sewerage Management\Project Files\Construction\District 8\11\Pre Bid Meeting Minutes.doc

ERIE COUNTY
DEPARTMENT OF ENVIRONMENT PLANNING
DIVISION OF SEWERAGE MANAGEMENT
PRE-BID MEETING
ECSD #8 - Contract 11

LOCATION: Rath Bldg. Rm. 1004
DATE: June 19, 2012
TIME: 2:00 PM

CONTRACT : 11: Geneva RD Sanitary Sewer Ext. & Pump Station
ENGINEER : ECDEPDSM

NAME	COMPANY / ADDRESS	TELEPHONE / FAX
JAMES A. CARR, P.E. ASSISTANT DEPUTY COMMISSIONER	EC DIV. SEWERAGE MGMT. 95 FRANKLIN ST. ROOM 1040 BUFFALO, NY 14202	(716) 858-2126 FAX (716)858-6257
EDWARD A. PAOLINI, P.E. SENIOR SANITARY ENGINEER	EC DIV. SEWERAGE MGMT. 95 FRANKLIN ST. ROOM 1032A BUFFALO, NY 14202	(716) 858-7407 FAX (716)858-6257
GARRY S. PECAK, P.E. SANITARY ENGINEER	EC DIV. SEWERAGE MGMT. 95 FRANKLIN ST. ROOM 1032C BUFFALO, NY 14202	(716) 858-6267 FAX (716)858-6257
DANIEL F. SKOWRONSKI, PLS ASSISTANT SANITARY ENGINEER	EC DIV. SEWERAGE MGMT. 95 FRANKLIN ST. ROOM 1032 BUFFALO, NY 14202	(716) 858-6472 FAX (716)858-6257
Ed. Sullivan	PIVOT Construction 1 Babcock St. Buffalo, NY 14210	716-725-6666
PAUL GALLO	PSGCI 4242 R. 666 LGA, Amherst	P 446-1908 F 446-1809
Greg Gill	Northrup Construction PO Box 669 Elliptical NY 14731	P- 699-2000 F 699-5403
D. BUSH	TEB PO BOX 750 SENECA FALLS NY 14641	LTS 9434 F LTS A729
L. Visone	VISION Construction 79 Sheldon Ave. Depew NY 14043	(681)-7331 681-7876 F
James Collins	Millenst Construction, Inc PO Box 430 Walton Center, NY 14030	688-9098 688-7562
GEORGE WEYDMAN	WEYDMAN ELECTRIC 747 YOUNG ST TONAWANDA, NY 14150	692-7667 692-7982
GLENN BELTON	ERIE County FEO 95 FRANKLIN ST 14202	858-8604 444-3634
Josh Prezioso	NFP and Sons, Inc	695-2926 695-2928 Fx
C. Pohl	EC DSM	823 5388

ATTACHMENT II

Contract No. 11A and 11D

Delete/Add List

Division No. 15 and 16

Geneva Pump Station

Delete/Add List

DIVISION 15

- Section 15174 – DELETE entire section.
- Section 15351, 1.01 B – DELETE the following items: **aluminum access ladder, wiring channel, belted vent set, jib crane and hoist.** ADD the following item: “...(with bottom rails supports, ***intermediate rail supports***, upper rail supports, stainless steel guide rails),....”
- Section 15351, 2.02 A 1 – DELETE “...inside diameter of 10'-0...” ADD “...inside diameter of 6'-0...”
- Section 15351, 2.02 B 1 – DELETE “Piping in the basin shall be 6” size and....” Add “Piping in the basin shall be 4” size and....”
- Section 15351, 2.02 C 1 – DELETE. ADD “The access hatch shall be a double-leaf aluminum type, 4'-0” x 4'-0”, diamond pattern, as manufactured by Syracuse Castings (Model DTD-15A0SG). Doors shall be equipped with stainless steel hinges and hinge pins, hold open arm for each leaf, aluminum flush mounted handles, stainless steel hardware, and 1½ inch threaded drain coupler. All parts to be in contact with concrete shall receive a protective coating. Units shall be supplied with hinged safety grates to provide fall through protection and a recessed padlock clip for the purpose of securing the hatch”.
- Section 15351 2.03 B 1 – DELETE. ADD “Major pump components shall be gray cast iron, ASTM A-48, Class 35B, with smooth surfaces devoid of blow holes or other irregularities. Where watertight sealing is required, O-rings made of nitrile rubber shall be used. All exposed nuts and bolts shall be AISI type 316 stainless steel construction. The pump lifting handle shall be of stainless steel. All exposed pump surfaces shall be protected by an approved sewage resistant coating comprised of a zinc phosphate based primer followed by a factory applied spray coating of a polyester resin paint finish. A replaceable wear ring system shall provide sealing between the volute and impeller. Impeller shall be gray cast iron, dynamically balanced, semi-open, multi-vane, back-swept, non-clog design.”

- **Section 15351 2.03 B – ADD Paragraph C. “At least one pump in the wetwell shall be equipped with an automatically operating valve that will produce a turbulent mixing action in the wetwell at the start of the equipped pumps’ cycle. The valve shall be mounted directly to the pump volute and shall direct a portion of the discharge into the wetwell. The valve shall not require any external power source, pneumatic or electric, to function. The valve shall open at the beginning of the equipped pumps’ cycle and shall automatically close after a pre-selected time of operation. The valve shall be equipped with a method of adjusting the operating time.”**

- **Section 15351 2.03 C 1 – DELETE “...in Subsection 1.02.”**

- **Section 15351 2.03 C 2 – DELETE paragraph. ADD Paragraph “Pump motors shall be squirrel cage, induction, shell type design, housed in an air filled, watertight chamber NEMA Design B type. They shall have Class H insulation suitable for operating to temperatures of 180°C (356°F). Motors to have adequate cooling systems to allow continuous duty handling pumped media of 40°C and capable of no less than thirty evenly spaced starts every hour. The service factor of the motor shall be a minimum of 1.15. The pump motor shall have a voltage tolerance of ±10%. Provide three (3) thermal switches set to open at 125°C, and embedded within the stator end coils to monitor temperatures in each winding. The switches shall be wired to the control circuit and shut off the pump if windings overheat. Thermal switches shall automatically reset when the winding temperature drops to manufacturer’s accepted level. The motor and pump shall be produced by the same manufacturer.”**

- **Section 15351 2.03 C 3 – DELETE paragraph. ADD paragraph “The seal chamber shall be fitted with a sensor to indicate water in the seal chamber. The pump manufacturer shall supply control relays that interface the seal chamber sensor and the thermal switches into the pump control system. This shall allow operator selection of either an advisory alarm or shutdown of the affected pump if water appears in the seal chamber and a shutdown of the affected pump if a thermal sensor trips. The supplied relays will indicate what initiated the fault.”**

- **Section 15351 2.03 E 1 – DELETE paragraph. ADD paragraph “Furnish and install one automatic pump control panel in the specified enclosure, for operation on a 240 volt, single phase, 60 Hertz, 3 wire utility power supply with required grounding.”**

- **Section 15351 2.03 E 2 – DELETE paragraph. ADD paragraph “There shall be included for each pump motor an individual disconnect circuit breaker, A variable frequency drive which shall provide a three phase output required for the approved pump motor, ancillary motor control contactors and/or overloads, a running time meter for each pump, individual Hand-Off-Auto selector switch, and indicating lights. Furnish and install any additional power components required to assure safe and reliable pump operation with the VFD/converter. The main pump control circuit shall be provided with a disconnect circuit breaker, relays, switches, lights, etc., as specified.”**
- **Section 15351 2.03 E 3 – DELETE paragraph. ADD paragraph “There shall also be included such other appurtenances as are required, with all components wired to accessible terminal points, for connection to external wiring.”**
- **Section 15351 2.03 E 4 – DELETE paragraph. ADD paragraph “Enclosures – control panel construction shall be as follows:**
 - a. **316L Stainless Steel enclosure with continuous stainless steel, single hinged door of the same material as the enclosure, stainless steel inner back panel, hinged and secured inner door panel within the enclosure to mount control devices, and a three point, padlock locking latch system.**
 - b. **NEMA 4X rated enclosure**
 - c. **Wall mount enclosure.**
 - d. **Anti-condensation heater thermostatically controlled with a separate circuit breaker.**
 - e. **L.E.D. interior panel light fixture to provide working light inside main panel, manually controlled.”**
- **Section 15351 2.03 E 6 – DELETE paragraph. ADD paragraph “Variable frequency drives intended for converting single phase to three phase power shall be sized to provide proper operation without overloading or overheating the drive or pump motor. Furnish Square D, Altivar 61 Series drives or approved equal.”**
- **Section 15351 2.03 E 10 – DELETE paragraph. ADD paragraph “Heavy duty, NEMA 4X pilot lights with replaceable L.E.D. lamps, full voltage. Provide lamps in same color as the corresponding cap color.”**
- **Section 15351 2.03 E11 – DELETE paragraph. ADD paragraph “ Additional controls:**

- a. **Pump controller shall be provided to control pump levels and alternation. Unit manufactured by Mercoid, Series MPC controller or approved equal. The specified controller shall supply operating power for the submersible hydrostatic pressure transducer specified in this section. Mount controller on inner door panel.**
 - b. **Separate circuit breakers for control system, telemetry system, cabinet heater, 15 ampere corrosion resistant, duplex convenience outlet, and input power for each pump. Mount duplex outlet on inner door panel.**
 - c. **Incoming power surge and lightning arrestors to protect control system.**
 - d. **Indicator lights to show system status; Control power on, individual pump run, individual pump fail, individual pump overheat, individual pump seal failure, low wetwell level, and high wetwell level. Mount lights on inner door panel.**
 - e. **An exterior mounted, NEMA 4X L.E.D. based warning light controlled by the high wetwell alarm from the MPC pump controller. Mount on top of pump control panel. Warning light manufactured by Federal Signal Corporation, Model 225XL, lens color – red.**
 - f. **Provide engraved, laminated labels for all control devices and lights. Secure to panels with screws. No plastic embossed or printed labels will be allowed.**
 - g. **Wire runs will be labeled at both ends with permanent markers. All terminal points shall be labeled. Use stranded wire for internal wiring of the control panel – minimum of 14 AWG.”**
- **Section 15351 2.03 F 1 – DELETE paragraph. ADD paragraph “A single sealed float type switch shall be supplied. The mercury tube switch shall be sealed in a solid polyurethane float for corrosion and shock resistance. The support wire shall have a heavy neoprene jacket and a weight shall be attached to the cord above the float. The float switch shall hang from a stainless steel, single eye, split mesh, rod closing Kellums grip in the wetwell and supported from a hanger as shown on the Plans. Connect float switch to junction box detailed in this Section. Float switch will be wired into telemetry unit. Furnish a float switch manufactured by Anchor Scientific – Mini Float or approved equal.”**

- **Section 15351 2.03 F 2 – DELETE paragraph. ADD paragraph “Furnish and install one submersible hydrostatic pressure transducer manufactured by Mercoid, Series PBLT2, or approved equal, with desiccant vent filter and a lift loop/hangar. Hang the transducer with the supplied hangar from a point directly above the stilling well shown on the Plans and run cable to a junction box detailed in this Section. Run isolated signal wires from transducer to pump controller.”**
- **Section 15351 2.03 F 3 – DELETE paragraph.**
- **Section 15351 2.03 G 1 – ADD paragraph. Junction Boxes “Furnish a 316L stainless steel junction box with back panel and terminal strips to allow isolated connection to the submersible pressure transducer and the single float switch. The installation of this junction box will require the use of conduit seal fittings between the proposed junction box and the pump control panel. Provide a junction box that can be secured with a padlock or security hardware. If security hardware is used, provide the tool to allow access.”**
- **Section 15351 2.03 G 2 – ADD paragraph. “Furnish a 316L stainless steel junction box with back panel and terminals to allow isolated connection to the pump cables. The installation of this junction box will require the use of conduit seal fittings between the proposed junction box and the pump control panel. Provide a junction box that can be secured with a padlock or security hardware. If security hardware is used, provide the tool to allow access. Allow adequate working space in this enclosure.”**
- **Section 15351 2.03 H – ADD paragraph. Cable Supports “Furnish cable hanger for all cables hung in the wetwell. Provide an appropriately sized stainless steel split mesh, rod closing Kellums grip for each pump cable supported by a hanger as shown in the plans. Provide sufficient cable lengths for all cables to allow relaxed loops to be installed from device to proposed junction boxes.”**
- **Section 15351 3.01 A 1 – DELETE sentence. ADD sentence. “Power will be 240 volts, single phase, 3 wire plus ground.”**
- **Section 15351 3.01 A 1 – DELETE Sentence. ADD paragraph. “The Electrical contractor shall furnish and install underground service to the pump station electrical system. Utility power is available approximately Fifty (50) feet south of the proposed pump station.**

- **Section 15351 3.01 B 1 d – DELETE Sentence. ADD sentence. “One spare submersible pressure transducer as approved for installation.”**
- **Section 15351 3.01 B 1 e – ADD paragraph. “Furnish one complete spare pump as approved and specified for this project.”**
- **Section 15351 3.02 A 1 – DELETE paragraph. ADD paragraph. “On sump level rise the submersible pressure transducer will allow display of the wetwell depth on the pump controller. At a level shown on the Plans the lead pump will be energized and start to lower the water level in the well. When the level reaches the pump off level, the pump will be turned off. The pump controller will automatically alternate the pumps at the end of each pump cycle to maintain even wear and run hours. If sump level continues to rise when the lead pump is operating, the controller will call the lag pump into operation upon reaching the assigned level. Both pumps will run to lower the level until the pump off point is reached. If the sump level continues to rise while both pumps are running, the pump controller will initiate a high level alarm which will light the exterior warning light and trigger an alarm in the telemetry unit. If the sump level continues to rise above the initial high wetwell alarm point, the level will actuate the float switch which will trigger a second High-High wetwell alarm in the telemetry unit. If one pump should fail for any reason the pump controller will send an alarm and cause the remaining pump to the lead pump position.”**

DIVISION 16

- **Section 16010 1.11 B – DELETE paragraph. ADD paragraph. “Shop drawings shall be submitted for the following equipment:
 1. Main circuit breaker and enclosure.”**
- **Section 16055 2.01 A 1 a – DELETE paragraph. ADD paragraph. “Application – Unless otherwise indicated on the Contract Drawings or under this Section, the use of this conduit shall be limited runs less than six inches.”**

- Section 16055 2.01 A 2 a – DELETE paragraph. ADD paragraph. “This conduit shall be limited for use for the utility riser as shown on the Plans.”
- Section 16055 2.01 A 3 a – DELETE paragraph. ADD paragraph. “This conduit shall be used for all underground and exposed runs.”
- Section 16055 2.01 A 3 b – DELETE paragraph. ADD paragraph. “Conduit shall conform to ANSI Standard C80-1 and UL Standard #6/6A with a bonded 40 mil PVC exterior jacket and 2 mil urethane interior jacket.”
- Section 16055 2.01 A 4 – DELETE paragraph.
- Section 16055 2.01 A 5 – DELETE paragraph.
- Section 16055 2.01 A 6 – DELETE paragraph.
- Section 16055 2.01 A 7 – DELETE paragraph.
- Section 16055 2.01 A 8 – DELETE paragraph.
- Section 16055 2.01 B 1 – DELETE paragraph. ADD paragraph. B. Conduit Fittings “Weatherhead – Schedule 80 PVC to top specified PVC riser as shown on Plans.”
- Section 16400 1.01 A – DELETE paragraph. ADD paragraph. Electrical power will be supplied by the local electric utility company at 240 volts, single phase, 3 wire plus ground, 60 Hertz. The Contractor shall furnish and install one (1) 2 inch plastic coated rigid steel conduit as specified, underground from the electric utility company pole structure to the service meter and main breaker. The Contractor shall furnish and install properly sized USE conductors to match the service requirements and minimize voltage droop. Provide a stainless steel, lockable enclosure to house the outdoor mounted main breaker. Main breaker and all pump station components are in an open area that is not protected by fencing. The service wires at the pole shall be terminated as specified by the power company, leaving sufficient wire length for drip loops and their connections.”
- Section 16400 2.01 A – DELETE paragraph. ADD paragraph. “Main circuit breaker shall be a 100 ampere, single phase 240 volt thermal magnetic molded case type in a NEMA 3R or 4X enclosure.”

- **Section 16400 2.01 B – DELETE paragraph. ADD paragraph. “The Electrical Contractor shall provide specified framing material to mount the metering equipment, main breaker and etc. as required by the local electric utility company and current electrical codes.”**

- **Section 16720 – DELETE Section.**

- **Section 16745 – DELETE Section.**

- **Section 16800 – DELETE Section. ADD Section 16810.**

SECTION 16810 – CELLULAR TELEMETRY SYSTEM

PART I - GENERAL

1.01 SCOPE OF WORK

A. The General Contractor shall furnish and install all materials, equipment, structures, and incidentals, and perform all work, required to complete, tune, optimize and place into satisfactory operation, the Cellular Telemetry System as shown and specified. The Cellular Telemetry System shall transmit remote pumping station status, alarm signals, and data utilizing data networks available from common cellular providers to an existing Internet website where the information shall be received. The Cellular Telemetry System shall also receive interrogation information, data, and system modifications from the same website to each of the remote sites to initiate status and alarm reports. Work under this section includes, electrical installation, excavation and backfill, structural, and other work required to furnish a complete installation. All work shall conform to the requirements of the applicable Specification sections.

1.02 RELATED WORK

- A. Division 13, Instrumentation
- B. Division 16, Electrical Work

1.03 INTENT

A. The Contract Drawings show the principal elements of the installation; however, they are not intended as detailed working drawings, but as a complement to the Specifications to clarify the principal features of the Cellular Telemetry System.

B. It is the intent of this section that all equipment and devices furnished and installed under this and other sections be properly connected and interconnected with other equipment so as to render the installation complete for successful operation regardless of whether all the connections and interconnections are specifically mentioned in the Specifications or shown on the Contract Drawings.

C. The Contractor under this Section shall assume complete unit responsibility for the installation of the cellular telemetry equipment and appurtenances, which shall include mast (if required), antenna, transmission cables, power supply, control wiring, dry contacts, and etc.

SECTION 16810 - PART I

D. The conduit and cable sites and quantity, equipment dimension and components are approximate. The Contractor shall provide sizes and quantities required for equipment furnished.

1.04 Quality Assurance

A. Requirements of Regulatory Agencies:

- 1. Codes: All material and equipment shall be installed in conformance with the standards of the National Electrical Code, and any local codes which may apply. In case of conflicts, the most restrictive code shall apply.**
- 2. Permits: The Contractor shall obtain all permits required to commence work, and upon completion of the work, shall obtain any permits necessary to place the system in full operation.**
- 3. Regulations: All material, antenna, mast(s), transmitters and receiving equipment shall be installed in conformance to the Rules and Regulations of the Federal Communication Commission Part 90, Part O, Part 1, Part 2 and Part 17 and the requirements of the FAA.**
- 4. Tests by Independent Regulatory Agencies:**
 - a. Electrical material and equipment shall be new and shall bear the label of the Underwriters Laboratory, Inc., wherever standards have been established and label service regularly applies.**
 - b. Radio equipment shall be of the type listed in the FCC's current "Radio Equipment List, Equipment Suitable for Licensing."**

- #### **B. Equipment Manufacturers Services: Retain a factory-trained manufacturer's representative with demonstrated ability and experience in installation and operation of the specific cellular telemetry equipment. The representative shall perform the following services.**

SECTION 16810 - PART I

- 1. Check the installation of his equipment for compliance with the manufacturer's recommendation.**
- 2. Program, test, and calibrate all components of the telemetry system.**
- 3. Inspect the complete installation and within 10 days and prepare an inspection report to be sent to the Engineer. Items to be addressed in the report are as follows:**
 - a. List of deficiencies found**
 - b. Recommended corrective action for all deficiencies**
 - c. Certification that the equipment is properly installed and adjusted as noted.**
- 4. Review and approve all applicable shop drawings prior to submission. The approval shall be identified by a special stamp and signature on the submittal.**

1.05 SUBMITTALS

A. SHOP DRAWINGS

- 1. Submit for all electrical materials and radio equipment, including masts and if required, towers showing proposed methods of installation.**
- 2. Shop drawing shall include manufacturer's literature, specifications, wiring diagrams and all engineering data necessary to fully describe electrical and electronic equipment and materials and to substantiate compliance with the Specifications and include the following:**
 - a. Complete block diagram of Cellular Telemetry System showing all components at all locations.**
 - b. Actual location of in place conduit and cable routing with number and size of conductors.**
 - c. Control wiring diagram with terminal numbers and all control devices identified.**

SECTION 16810 - PART I

- d. List of pertinent transmitter receiver data, including RF output power, operating frequency, power consumption and requirements, and antenna type and characteristics.

B. RECORD DRAWINGS

1. Prepare and submit comprehensive record drawings for principal cellular telemetry work performed under this section. Submit for approval prior to final submission. Final submission shall be in accordance with final contract record drawing requirements. Refer to Section 16810, 3.03 H.

1.06 PRODUCT DELIVERY STORAGE AND HANDLING

A. Delivery of Materials: Contractor shall check with manufacturers and vendors as to the physical sizes of equipment to ensure that it will fit into spaces assigned and shall instruct manufacturers and vendors as to the maximum shipping sizes of equipment.

B. Storage and Handling of Material: Conform to the requirements of General Contract Conditions, "Storage and Handling of Materials".

1.07 JOB CONDITIONS

A. The Contractor shall examine the site with respect to the condition of the premises, location of and/or connection to existing facilities and any obstructions which may be encountered. The Contractor shall immediately report any different conditions or obstructions, which may affect the work, to the Engineer. This shall be done prior to ordering any materials or preparing shop drawings.

1.08 GUARANTEE

A. In addition to the manufacturer's standard guarantee, the Contractor shall include the services of qualified factory-trained servicemen to correct all defects due to faulty product design, calibration, materials or workmanship commencing with the time the equipment is placed in operation and extending throughout the Guarantee period stated in the General Conditions.

SECTION 16810 - PART II

PART II - PRODUCTS

2.01 CELLULAR REMOTE STATION STATUS UNITS

A. Install an OmniSite brand, "Crystal Ball", or approved equal, cellular telemetry unit as shown on the plans.

1. The specified cellular telemetry unit is a component of an existing web based hosting system already in use with the Owner. In order to be considered an "approved equal", the proposed telemetry unit must provide proof that it can interface directly with the existing hosting system and provide the same information and data exchange provided by the remote units currently used.

2. All costs associated in submitting an "approved equal" shall be borne by the Contractor. If, in the opinion of the Owner, the submitted equal unit fails to meet the specified performance, the Contractor shall immediately replace the failed unit with the unit detailed in these specifications at no additional costs to the Owner.

B. Telemetry unit to be complete with power supply to receive 120 volt AC, rectified to a DC voltage, and nickel-cadmium battery which will provide 12 hours standby operation. Battery power pack shall automatically operate the status unit when input power fails.

C. The Cellular Telemetry Unit (CTU) is to be an intelligent, single unit capable of both data acquisition and local data processing. It is able to monitor and control local equipment. It will be microprocessor based to allow reconfiguration and optimization to occur via a secure website and/or by a secure local keypad. The CTU must be supplied with the number of type of I/O points as indicated elsewhere in the plans and specifications. Future expansion may be made by simply plugging in an additional input module to the bus on the motherboard. Each CTU must be supplied with the following minimum configuration:

- 1. Mother Board**
- 2. Power Supply**
- 3. Antenna**
- 4. Battery**
- 5. Enclosure**
- 6. I/O Terminations**
- 7. CPU Processor Module**
- 8. Communication Interface**

SECTION 16810 - PART II

D. Units shall have capacity to handle a minimum of 14 universal inputs rated for use at 12 VDC or 120 VAC, 4 analog inputs isolated to 4KV, 2 dry contact pulse inputs rated from 0-30 Hz, and 4 control outputs, two of which shall be used to control two pumps minimum. Pump control shall be configured by both a 4-20 mA signal and/or floats wired into the system. Status points shall correspond in paragraph 3.04 of this section. Actual capacity of I/O, analog, and control shall be determined by the specific Contract and shown on the plans.

Installation contractor will make use of rigid conduit runs from contact points to the telemetry unit, and keep all input points isolated from high potential or high current circuits as much as practicable.

E. The control shall have a backlit, Vacuum Fluorescent Display, 4 line X 20 character to display controller information. An integral keypad will be included to locally program and retrieve information or parameters. A removable "Smart Key" will be provided to secure the device and prevent unauthorized/unidentified programming of the unit – provide one additional key with system.

F. Unit shall be equipped with a memory card slot for the purpose of updating and storing historical data. The memory card shall be able to store a minimum of one year of data. Historical reporting of runtime, on/off cycles, flow data, and drawdown for up to three pumps shall be included.

Reports and historical data stored in the Unit shall be downloadable to an Excel file format from the host website. The CTU shall update itself a minimum of twice daily through a scheduler, report system status, inflow report, daily average inflow, pump on/off cycles, drawdown time, and rainfall analysis with an optional rain gauge.

G. Provide the system with a RS232, RS485, and Ethernet port for future expansion.

H. The telemetry unit shall have the ability to provide the Owner with the following options: Video, rain gauge, current sensors (0-100 Amperes minimum), a 4-20 mA hydrostatic level transmitter, and solar power system when used in a stand alone location.

2.02 ENCLOSURES

A. Housing for status unit is to be a weatherproof NEMA 4X, 316L stainless steel enclosure with hinged door and a stainless steel inner panel suitable for outdoor mounting. Enclosure shall be lockable with stainless steel hardware to secure unit.

SECTION 16810 - PART II

2.03 REMOTE STATIONS ANTENNAS

A. Remote station antenna shall be manufacturer's standard antenna designed and installed for cellular communications capability. Unit to include a six (6) foot cable for remote mounting of the antenna.

2.04 CELLULAR UNIT MONITORING

A. The Cellular unit shall communicate through existing commercial cellular systems and be programmable through a secure web site that is accessible from any internet connected computer.

B. The Cellular unit manufacturer shall host a secure web site used for monitoring the supplied CTU. This web site shall allow programming and monitoring of the remote CTU in the field. The monitoring and programming shall be accomplished without the use of additional software other than an Internet connected computer running Explorer 6 or greater.

C. Alarm status and notification shall be accomplished via an existing web browser logged onto the hosting site, E-mail notification, pager, and voice message from the hosting site. Notification methods shall be selected by the system Owner.

D. All costs of installation, activation and monthly monitoring shall be the responsibility of the Contractor. Monthly monitoring shall be provided for a minimum of three months after the successful activation of the CTU.

PART III - EXECUTION

3.01 INSTALLATION

A. GENERAL

1. Install as shown on the drawings and shop drawings and as directed by the manufacturer's representative.
2. Install in accordance with the radio equipment supplier's recommendations. Provide all brackets, fasteners, clamps, nuts and bolts to ensure a complete, weatherproof, and secure installation. All devices used to secure the system components shall be stainless or approved corrosion resistant devices.

SECTION 16810 - PART III

B. GROUNDING

- 1. Equipment Grounding: Ground all electrical equipment and provide lightning protection in compliance with the National Electric Code.**
 - a. Connect ground conductors to conduit with copper clamps straps with ground bushing.**
 - b. Connect to piping by welding or brazing**
 - c. Connect to equipment by means of lug compressed on cable end. Bolt lug to equipment frame with silicon bronze hardware. Use hole or terminals provided on equipment specifically for grounding. Do not use hold down bolts. Where grounding provisions are not provided, drill holes, and provide lugs.**

3.02 INSPECTION TESTING AND ADJUSTMENTS

A. Inspections: Accompany the installation tests with inspections to demonstrate the following:

- 1. Connections: All circuits are properly connected in accordance with the drawings and applicable shop drawings.**
- 2. Operation: All circuits and devices are operable.**
- 3. Identification: All conductors are properly identified at each terminal.**

B. OPERATION TESTS

- 1. Operate all switches, equipment and devices to demonstrate suitability and compliance with Specifications and reference standards, except for short circuit interrupting rating or other inherent design features covered by shop tests.**
- 2. Test each electrical system after permanent cables are in place to demonstrate that all circuits and equipment perform satisfactorily and that they are free from improper grounds and short circuits.**

SECTION 16810 - PART III

3. Check control circuits to determine that operation and sequence are correct and adjust limit switches, pressure switches, float switches, timers and other devices to give proper operation.
4. Make all adjustments required to place the radio telemetry system in proper operation.
 - a) Install telemetry unit in an area to allow service to the unit.

C. ANTENNA INSTALLATION

1. The antenna installation shall be made to the manufacturer's recommendation to assure the efficient transfer of data to and from the cellular system.
2. Minimize any sharp bends in antenna cable - sharp bends will damage antenna conductors.
3. Maintain a minimum of ten-foot separation between antenna and any power or telephone cables.

3.03 GENERAL INSTALLATION REQUIREMENTS

- A. 120 volt, 60 Hz power required
- B. Separate circuit breaker for the Cellular Telemetry unit.
- C. All wiring color coded and marked.
- D. All inputs must be either 12 VDC or 120VAC. Isolate inputs from control/power wiring as much as possible.
- E. "As-built" installation drawings included with final O&M submittal.
- F. Programming of the CTU and installation will be tested by an authorized manufacturer's representative. Cost for this field service shall be included in the bid.
- G. Supply a Three (3) year written guarantee for each installation. All guarantees to commence upon acceptance by Erie County.

SECTION 16810 - PART III

- H. Supply two (2) bound, hard copies, and one copy in electronic format of all as-build drawings and O&M manuals for all equipment provided. Electronic format shall be CD ROM, PDF format, Maximum 8x speed. Manuals to be turned over to Erie County upon acceptance by the County.

3.04 TYPICAL MONITORING REQUIREMENTS

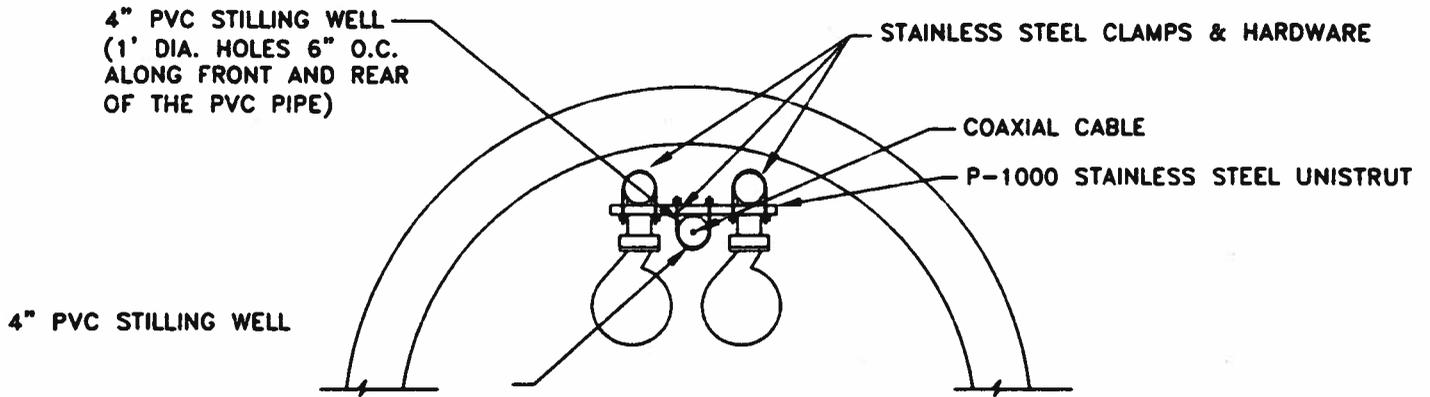
A. PUMP STATION: Based on individual requirements and station complexity, may include some, all, and/or not limited to the following digital monitoring points.

1. Telemetry Unit Open
2. Level Controller PLC Fail
3. Valve Control System Fault
4. Low Wetwell
5. High Wetwell (from Level Control)
6. High Wetwell Float (Separate/Redundant)
7. Comminutor Fault
8. Pump No. X Run
9. Pump No. X Failure
10. Pump No. X High Bearing Temp
11. Pump No. X Check Valve Failure
12. Pump No. X Seal Failure
13. Pump Motor No. X High Winding Temp
14. VFD No. X Fault
15. VFD No. X Bypass Fault
16. Gas Detected
17. Fire Detected
18. Unauthorized Entry
19. High Pump Station Temp
20. Low Pump Station Temp
21. Drywell/Chamber Flood
22. Flow Control PLC Failure
23. Utility Power Failure
24. Standby Generator Run
25. Standby Generator Fail
26. Transfer Switch – Normal
27. Transfer Switch – Emergency

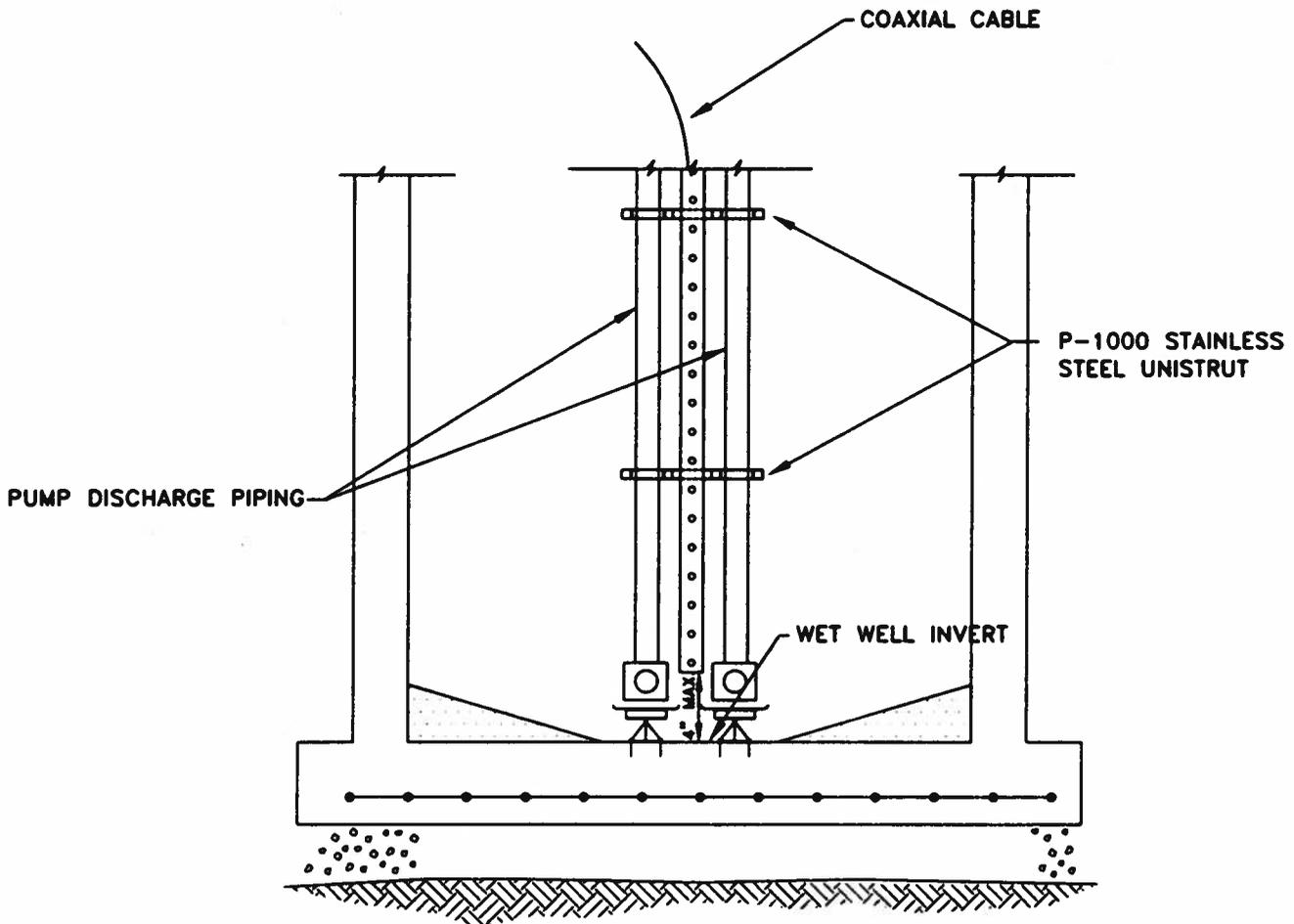
ATTACHEMENT III
Contract 11A and 11D
Stilling Well Detail

STILLING WELL INSTALLATION DETAIL

NOT TO SCALE



PLAN VIEW



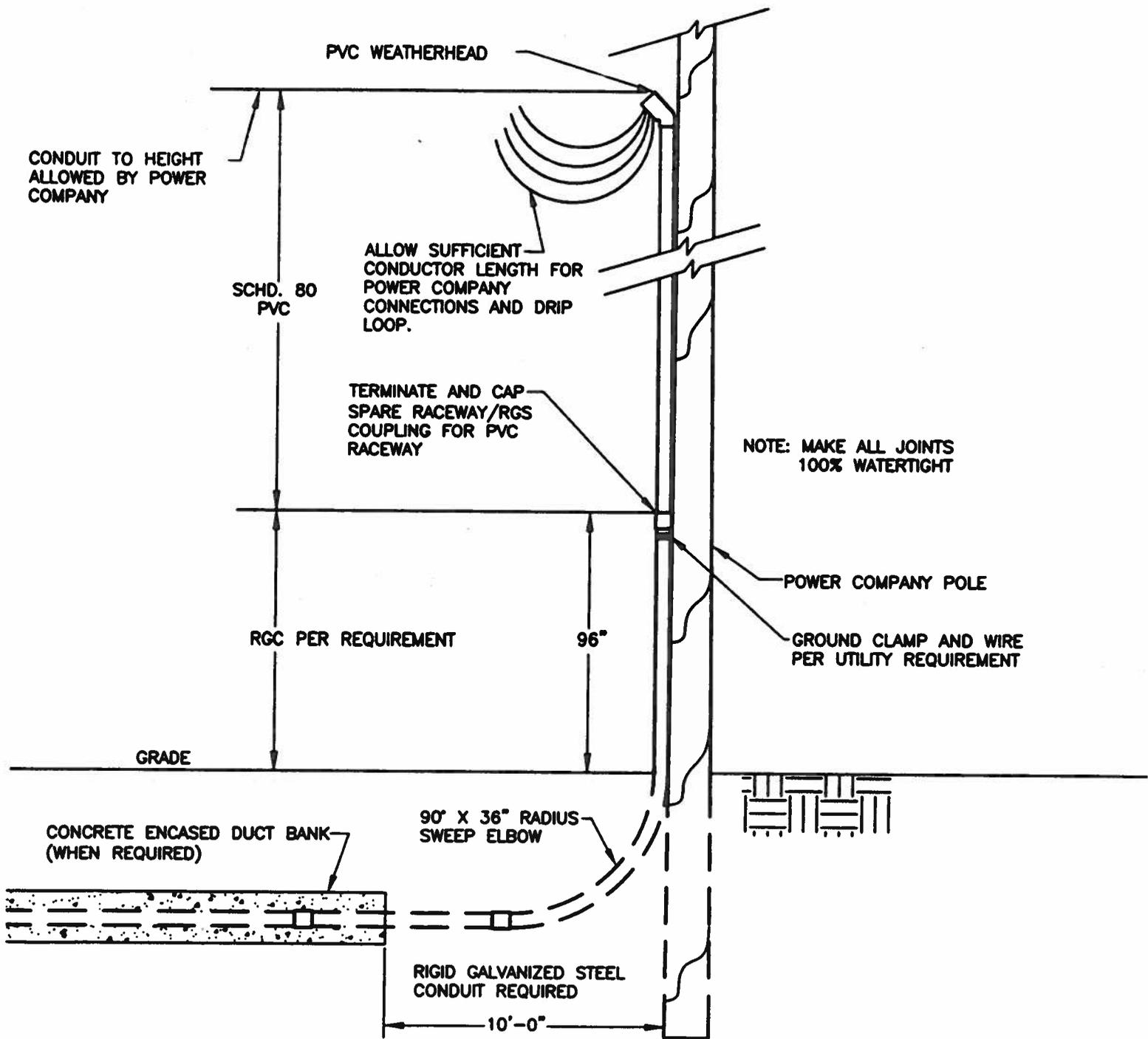
SECTION

ERIE COUNTY
DEPT. OF ENVIRONMENT & PLANNING
DIVISION OF SEWERAGE MANAGEMENT

CONTRACT 11
GENEVA ROAD PUMP STATION

Date: 6/15/2012

ATTACHMENT IV
Contract No. 11A and 11D
Service Drop Detail



POWER POLE DETAIL

NO SCALE

ATTACHMENT V

Contract No. 11A

Specific Contract Conditions

Field Trailer and Easement Conditions

SCC-63 FIELD OFFICES

A. Add the following to the end of Item No. 63 of the General Contract Conditions: The contractor shall provide the Engineer with a cellular telephone with both a wall and car charger for the duration of the Contract. The Contractor shall provide at his own expense, for the Engineer's cellular telephone use costs for the duration of the Contract. The Contractor shall also furnish for the duration of the Contract a digital camera in place of the required 35mm camera with the following minimum features: 10 megapixels, 4x optical zoom, 4GB memory card, rechargeable lithium battery, USB cable and a case. The Contractor shall also furnish for the duration of the Contract a laptop computer free of miscellaneous files pictures etc., with the following minimum features:

- PC/Compatible Pentium 4, 3.0GHz or Higher
- Windows Operating System (Windows XP Pro. or Windows 7 Pro.)
- MS office 2010
- 4GB Ram
- 500 GB Hard Drive
- Power cord and rechargeable battery
- Optical mouse
- Optical Drive DVD±RW/CD-RW
- Internet Explorer
- Contractor to provide a Wireless Internet Card connection at his own expense compatible with the laptop for the duration of the contract.
- Inkjet Printer compatible with the laptop for the duration of the contract.
- Scanner compatible with the laptop for the duration of the contract.
- Dust Covers for all Electronic Pieces for the duration of the contract.
- Laptop case

II. SPECIAL EASEMENT CONDITIONS

Bidders are hereby advised to review the attached special easement conditions for this contract included in this Section. Costs associated with fulfilling these conditions shall be included in the bid. No additional compensation will be considered.

L 11223 P. 5919
REC 5-24-12

TEMPORARY EASEMENT

PARCEL NO 175.16-1-10

John Lynn and Nancy S Hubbard
553 South Street
East Aurora, N.Y. 14052

Re: Contract 11
Geneva Rd Sanitary Sewer Ext

hereinafter referred to as "Grantor", in consideration of the sum of One Dollar and no more, receipt of which is hereby acknowledged, hereby grants unto the COUNTY OF ERIE, for the purposes of ERIE COUNTY SEWER DISTRICT NO. 8 with offices at 95 Franklin Street, Buffalo, New York, its successors and assigns the right, privilege and authority to ingress and egress of Erie County Personnel, representatives, contractors, subcontractors and engineers for the purpose of making test borings and any activities associated with protecting and maintaining existing utilities and with the construction of a sanitary sewer within the proximity of the following described land:

ALL THAT TRACT OR PARCEL OF LAND situate in the TOWN of Aurora, County of Erie and State of New York, being part of Lot No 22, Township 2, Range 6 Section NA of the Holland Land Company's Survey and more particularly described as a portion of that land designated as Parcel No. 175.16-1-10 as shown on a sketch prepared by the Erie County Department of Environment & Planning, Division of Sewerage Management on behalf of Erie County Sewer District No. 8 Said sketch attached hereto and made a part hereof with the right of ingress and egress thereto; said portions of land covered by this easement shall be that 25 x 30 foot wide area as shown on said attached sketch.

Special Conditions: invisible underground fence to be protected & repaired if disturbed. Storm drain line along southerly property line shall not be disturbed. Fence (wooden) along west property line shall be repaired if disturbed.

To have and to hold said easement(s) for said sewer district purposes unto said County of Erie, its successors and assigns until one year from the date that the contract is completed and accepted by the Erie County Legislature. The Grantor hereby covenant with the County of Erie that Grantor has a good and lawful right to convey all or any part of the aforesaid Parcel, that it is free of all encumbrances and that Grantor will warrant and defend the title thereto against all claims of all persons and will obtain such further assurances of title as required.

Erie County agrees that during construction of any sanitary or storm sewers the property of the Grantor shall be protected from damage by the contractor by all reasonable means and the County of Erie shall cause the contractor to restore the property as nearly as possible to its original conditions by the repair or replacement of sidewalks, driveways, lawns, ornamental shrubbery, ornamental small trees and underground facilities. The County of Erie shall require each contractor to maintain adequate liability and Workmen's Compensation Insurance during construction.

IN WITNESS WHEREOF, the part 109 of the first part ha ve hereunto set their hand and seal on this 19th day of April 2012

IN PRESENCE OF:

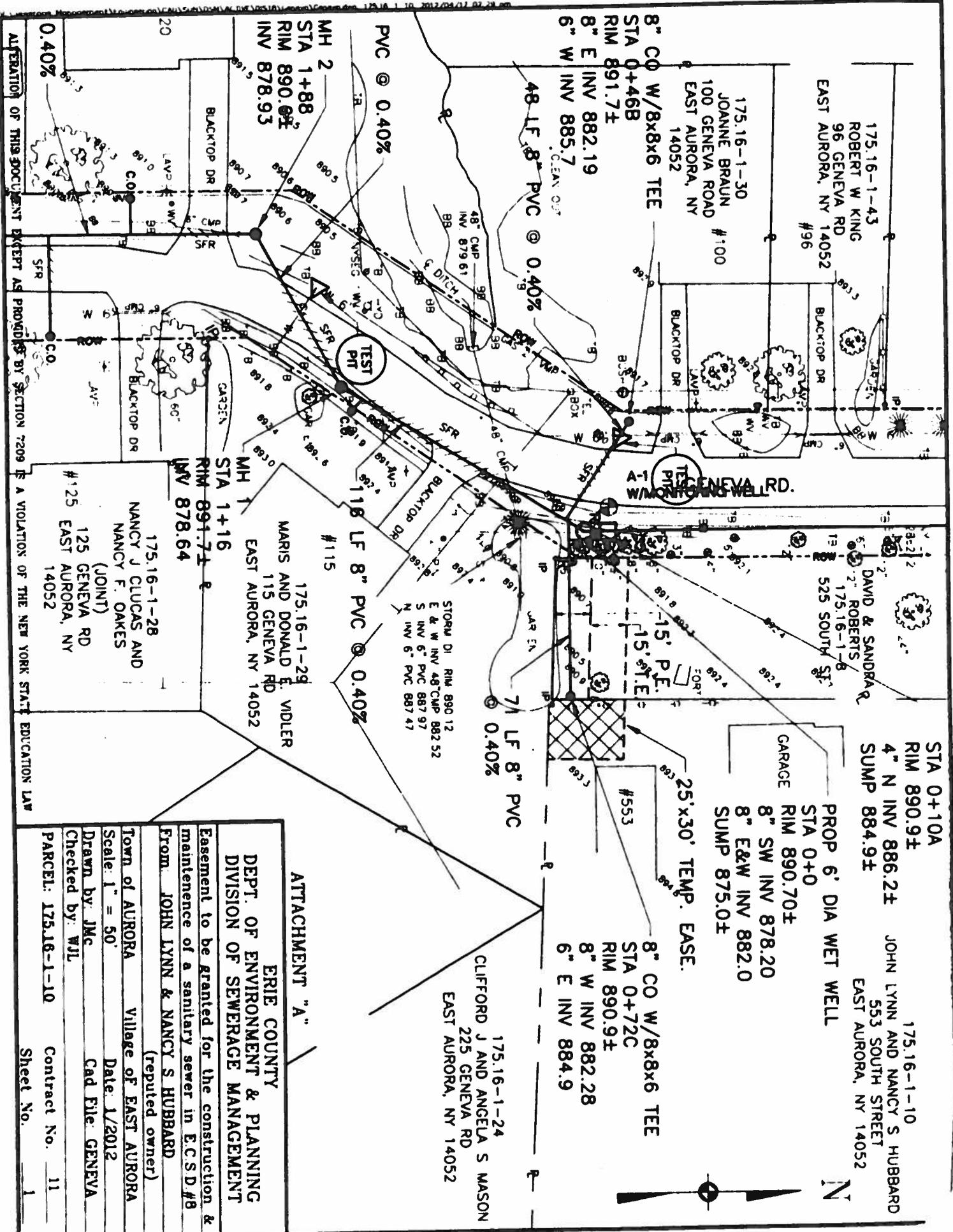
Clayton G. Schuch
(SUBSCRIBING WITNESS ONLY)

John L. Hubbard a.k.a. John Lynn Hubbard (L.S.)
Nancy S. Hubbard (L.S.)

(L.S.)

DSM-AST

UNIFORM CERTIFICATE OF ACKNOWLEDGEMENT



175.16-1-43
ROBERT W KING
96 GENEVA RD
EAST AURORA, NY 14052
#96

175.16-1-30
JOANNE BRAUN
100 GENEVA ROAD
EAST AURORA, NY
14052
#100

DAVID & SANDRA R
175.16-1-8
525 SOUTH ST
EAST AURORA, NY 14052

175.16-1-10
JOHN LYNN AND NANCY S HUBBARD
553 SOUTH STREET
EAST AURORA, NY 14052

175.16-1-24
CLIFFORD J AND ANGELA S MASON
225 GENEVA RD
EAST AURORA, NY 14052

175.16-1-28
NANCY J CLUCAS AND
NANCY F. OAKES
(JOINT)
125 GENEVA RD
EAST AURORA, NY
14052
#125

175.16-1-29
MARIS AND DONALD E. VIDLER
115 GENEVA RD
EAST AURORA, NY 14052
#115

ATTACHMENT "A"

**ERIE COUNTY
DEPT. OF ENVIRONMENT & PLANNING
DIVISION OF SEWERAGE MANAGEMENT**

Easement to be granted for the construction & maintenance of a sanitary sewer in E.C.S.D.#8
From: JOHN LYNN & NANCY S HUBBARD
(reputed owner)

Town of AURORA Village of EAST AURORA
Scale: 1" = 50'
Date: 1/2012

Drawn by: JMC
Checked by: WJL
Cad File: GENEVA

PARCEL: 175.16-1-10
Contract No. 11
Sheet No. 1

ALTERATION OF THIS DOCUMENT SUBJECT AS PROVIDED BY SECTION 7209 IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW

ATTACHMENT VI

Proposal Section Revision

P-7A-3R

P-7A-4R

P-7A-7R

Bid Item No. 3A – Sanitary Force Main Material

For furnishing and delivering along the trench site, force main pipe 4" diameter of the type specified herein and manufactured to contract specifications, including all work as described in Section 01020 and as detailed in Section 02300, the following unit price per linear foot of (Written) _____ Dollars \$ _____

*Total for 380 linear feet (Written) _____ Dollars \$ _____

Note: This item does not include the linear feet of force main carrier pipe material included in Bid Item No. 11, Highway Crossings by Boring and Jacking; or the linear feet of force main carrier pipe material included in Bid Item No. 13, Creek Crossing and Bid Item No. 14 Tree Tunneling. Pipe is the only material to be paid for upon proper delivery.

Bid Item No. 4 – Standard Manholes – 0 – 8 feet Deep

For furnishing all supervision, labor, materials, tools and equipment required to install standard manholes including all work as described in Section 01020 and as detailed in Section 02376, the following unit price per each of (Written) _____ Dollars \$ _____

*Total for 11 manholes (Written) _____ Dollars \$ _____

Note: The unit price bid for this item should include costs to furnish and install pipe stubs and other incidentals as described in Division.

Bid Item No. 5 – Drop Manholes – N.I.C

Bid Item No. 6 – Additional Depth Manhole Barrel – Over 8’ Depth

For furnishing all supervision, labor, materials, tools and equipment required to install additional manhole barrel including all work as described in Section 01020, the unit price per linear foot of (Written)

_____ Dollars \$

*Total for 15 linear feet (Written)

_____ Dollars \$

Bid Item No. 7 – Sanitary Sewer Cleanouts

For furnishing all supervision, labor, materials, tools, equipment and incidentals required to furnish and install cleanouts as shown on the Plans and described in Section 01020, the unit price per each cleanout assembly is as follows:

Cleanout Size	Unit	Quantity	Unit Price Figure	Unit Price Written	Total
6"	Ea.	27			
8"	Ea.	3			

Total Amount for Bid Item No. 7 (Written)

_____ Dollars \$

Bid Item No. 17 – Pavement and Shoulder Replacement

For furnishing all supervision, labor, materials, tools and equipment required to remove or replace pavement or road shoulder, as described in Section 01020, the following prices per linear foot:

<u>Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Figures</u>	<u>Unit Price L.F. Written</u>	<u>Total</u>
Item 17					
A Top Coarse	50	LF			
B Binder Coarse	700	LF			
C Base Coarse	700	LF			
*Total Amount for Bid Item No. 17 (Written)					
					Dollars \$

Bid Item No. 17 – Pavement Restoration(Alternative) – N.I.C

Bid Item No. 18 – Driveway Replacement

For furnishing all supervision, labor, materials, tools, equipment and incidentals required to remove and replace, in kind, driveways of the types indicated on the Plans, including all work as described in Section 01020, the following unit prices per square yard of:

<u>Materials</u>	<u>Unit</u>	<u>Quantity</u>	<u>Figures</u>	<u>Unit Price Per Square Yard Written</u>	<u>Total</u>
Bituminous					
Macadam	SY	180			
*Total Amount for bid Item No. 18 (Written)					
					Dollars \$

Note: Costs for removal and replacement of stone and/or dirt driveways shall be included in the unit prices bid for Item No. 2 – Sanitary Sewer Pipe.