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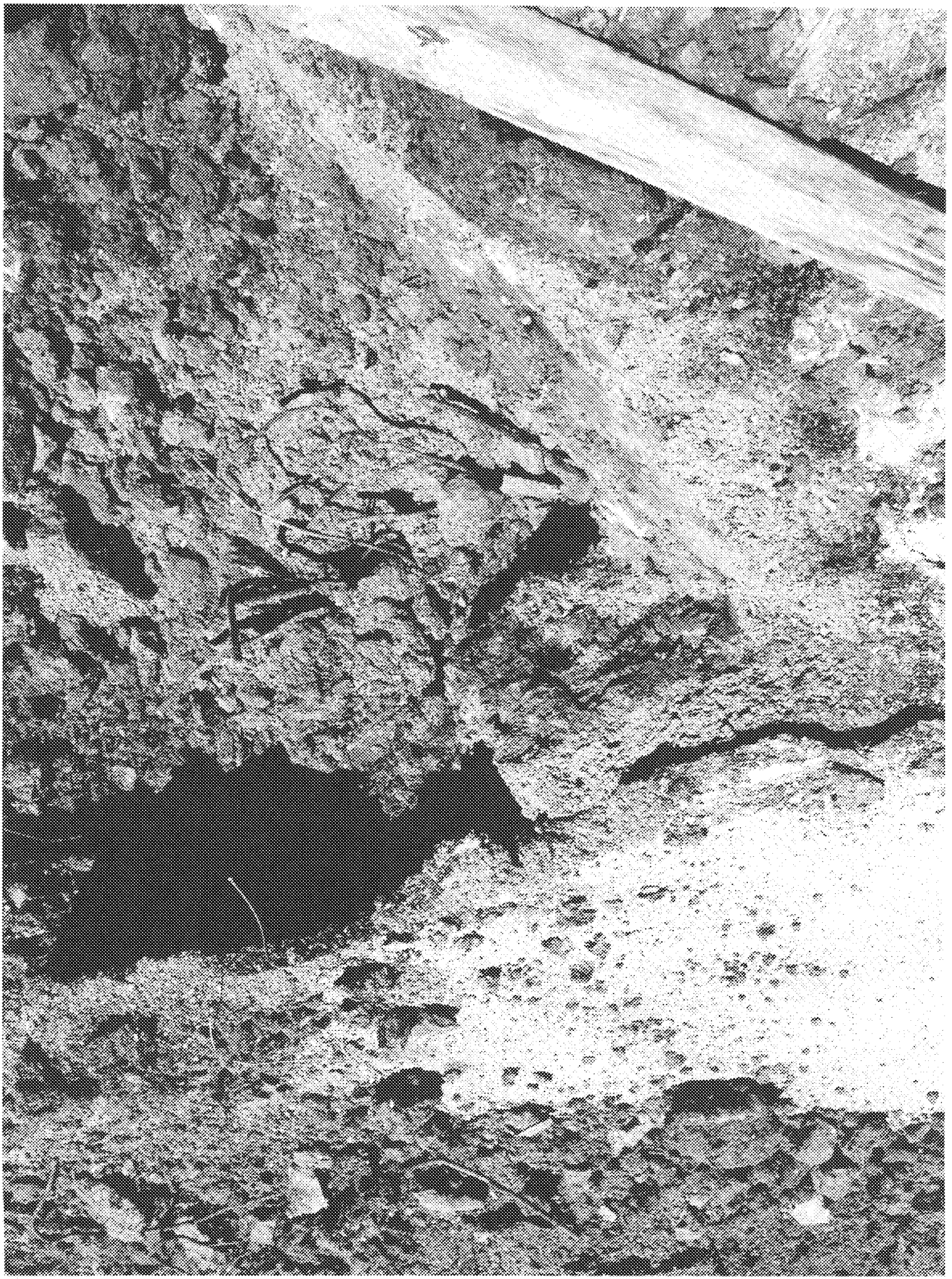

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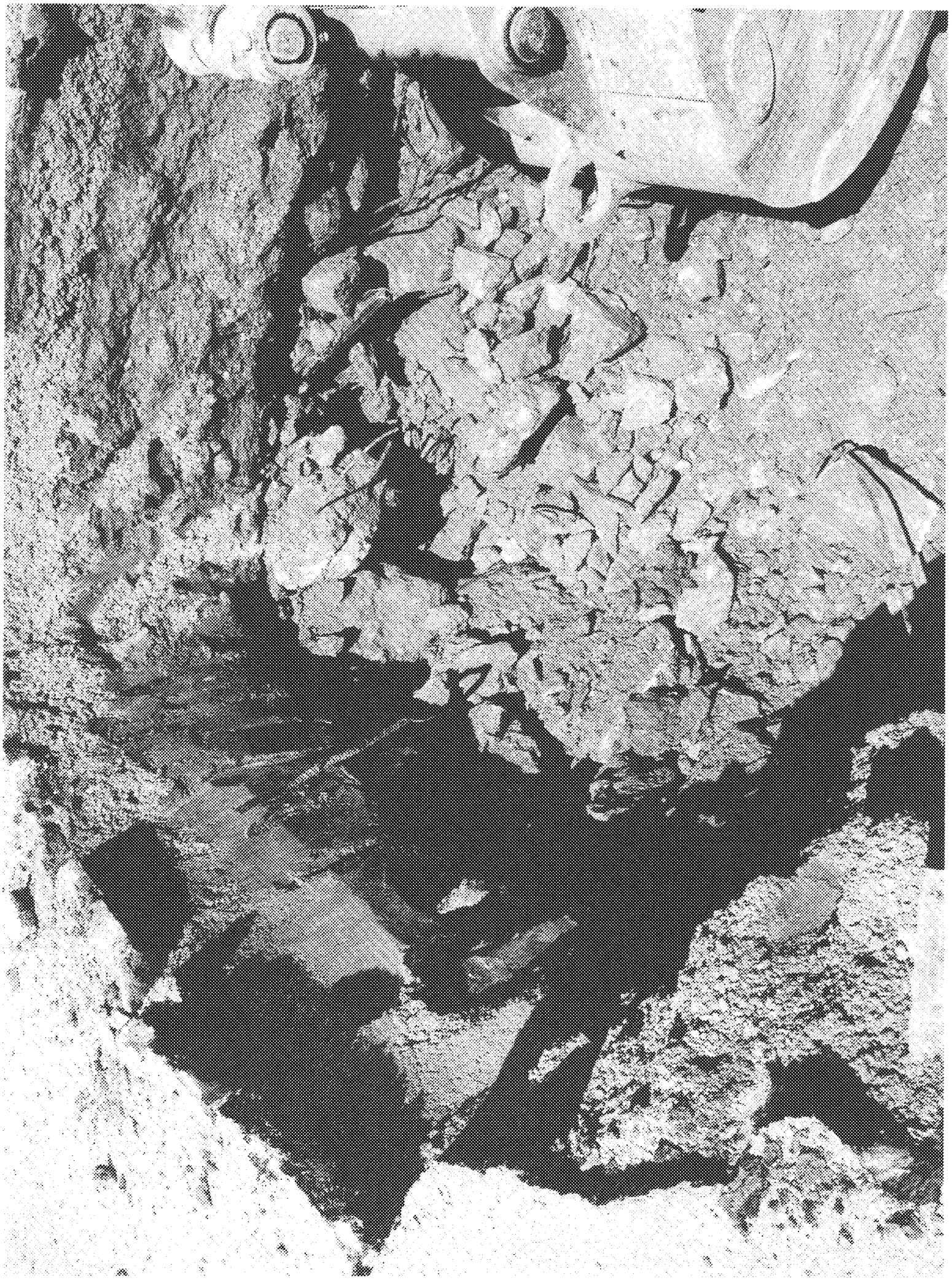

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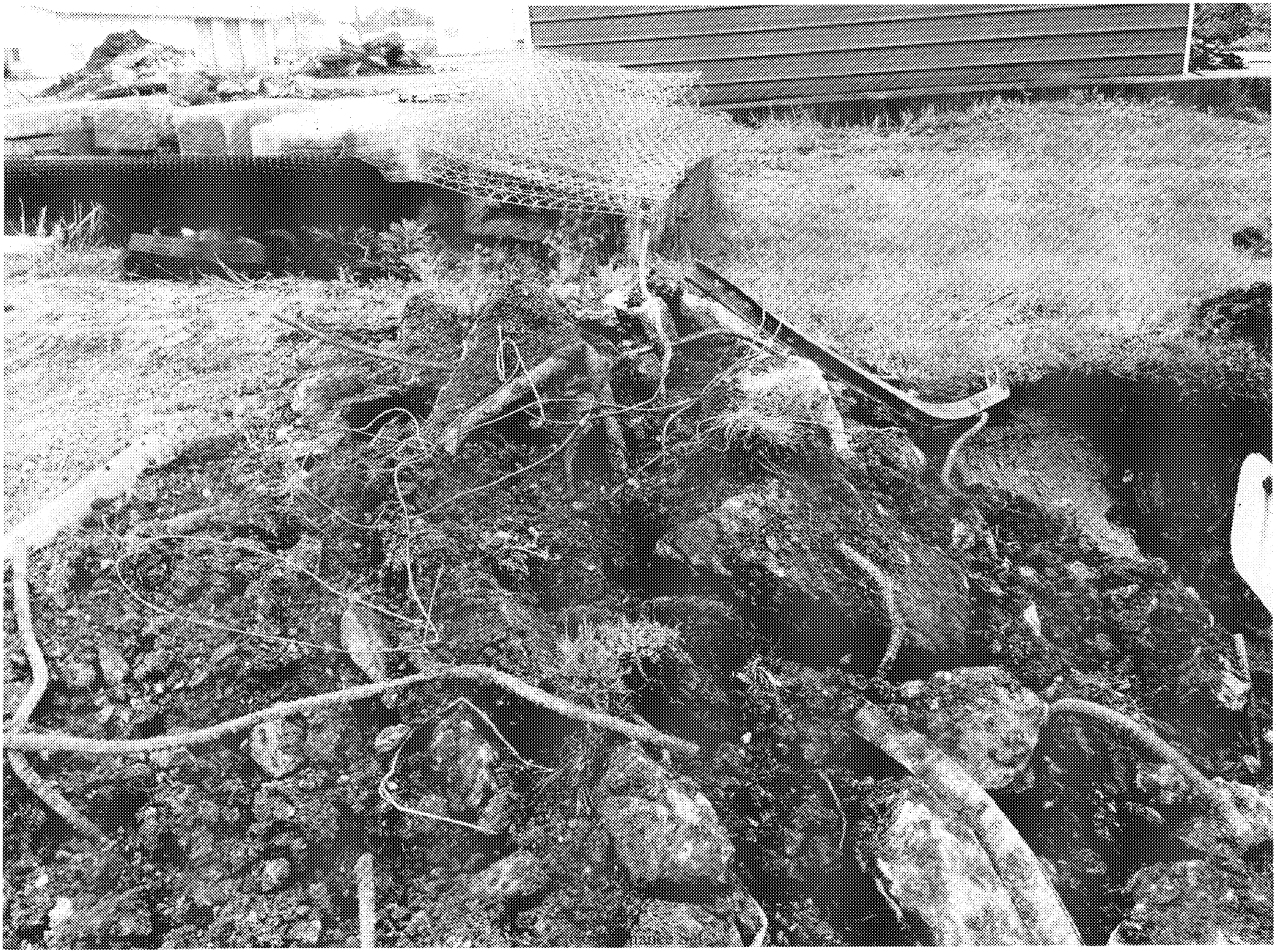

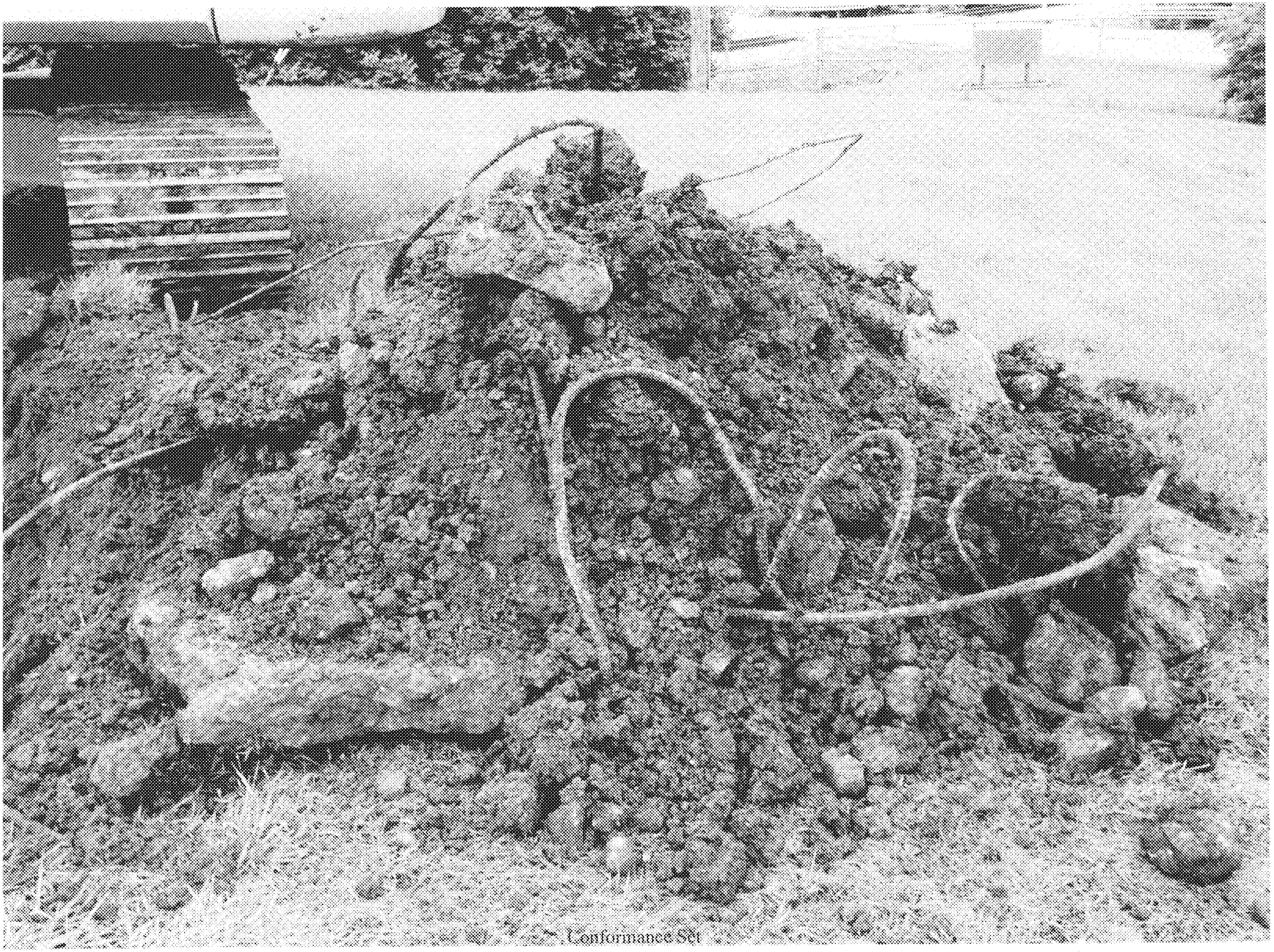

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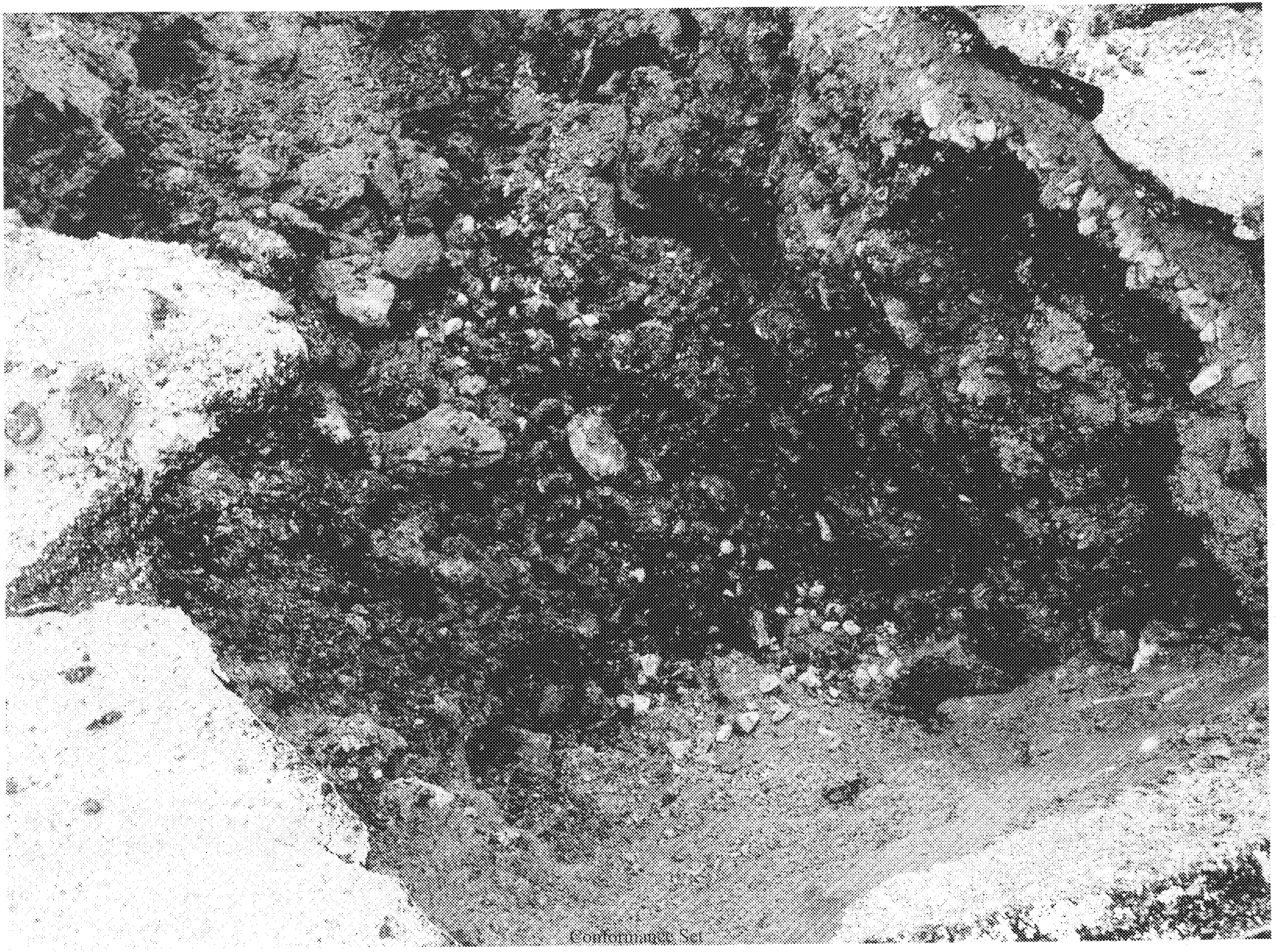


CONTROL TABLE

CONTROL POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
* CP#1	203417.1530	1559735.4360	928.20	LFUCG STA 0073
CP#2	204129.3630	1559954.6200	0.000	LFUCG STA 0073 AZI
CP#3	204503.8431	1560191.8732	918.18	MAGNAIL
CP#4	204312.5315	1560662.2678	924.18	MAGNAIL
CP#5	204138.5483	1560564.6387	921.75	MAGNAIL
CP#6	204064.5186	1560499.5048	920.66	MAGNAIL
CP#7	204144.0681	1560314.5706	920.69	MAGNAIL
CP#8	204267.5261	1560089.7944	913.97	IRON PIN & CAP

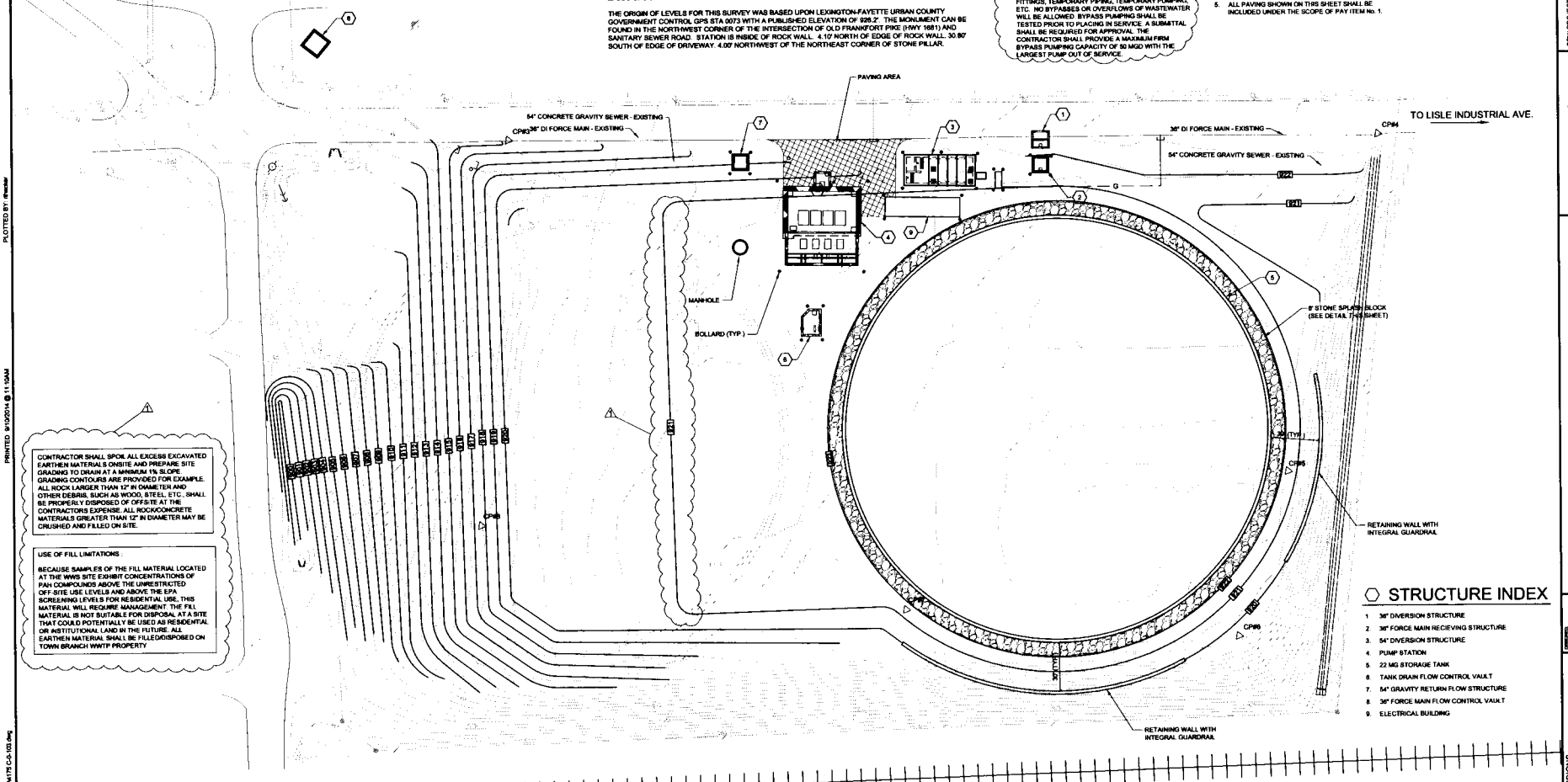
* CONTROL POINT FALLS OUTSIDE LIMITS OF PLAN SHEET

HORIZONTAL CONTROL FOR THIS SURVEY IS BASED UPON LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT CONTROL (STATE PLANE COORDINATE, NORTH ZONE), NAD-83 AND NAVD 1988. SPECIFICALLY, LFUCG GPS STA 0073 AND LFUCG 0073 AZI.

THE ORIGIN OF LEVELS FOR THIS SURVEY WAS BASED UPON LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT CONTROL GPS STA 0073 WITH A PUBLISHED ELEVATION OF 928.2'. THE MONUMENT CAN BE FOUND IN THE NORTHWEST CORNER OF THE INTERSECTION OF OLD FRANKFORT PIKE (HWY 1681) AND SANITARY SEWER ROAD. STATION IS INSIDE OF ROCK WALL. 4.10' NORTH OF EDGE OF ROCK WALL. 30.80' SOUTH OF EDGE OF DRIVEWAY. 4.00' NORTHWEST OF THE NORTHEAST CORNER OF STONE PILLAR.

GENERAL NOTES:

1. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR TEMPORARY SUPPORT OF 54" CONCRETE PIPE GRAVITY SEWER AND 36" DI FORCE MAIN IN ALL PLACES IMPACTED BY CONSTRUCTION. CONTRACTOR SHALL SUBMIT PROPOSED DESIGN AND CALCULATIONS PREPARED BY A LICENSED ENGINEER IN THE STATE OF KENTUCKY WHERE REQUIRED. SEE SPECIFICATION 315000 EXCAVATION SUPPORT AND PROTECTION.
2. BYPASS PUMPING WILL BE REQUIRED AND INCLUDED FOR THE CONSTRUCTION OF THE PROJECT. CONTRACTOR SHALL PROVIDE ALL MATERIAL, LABOR, AND EQUIPMENT TO COMPLETE WORK, INCLUDING MULTIPLE SETUPS, COUPLINGS, PLUGS, TEMPORARY FITTINGS, TEMPORARY PIPING, TEMPORARY PUMPING, ETC. NO BYPASSES OR OVERFLOWS OF WASTEWATER WILL BE ALLOWED. BYPASS PUMPING SHALL BE TESTED PRIOR TO PLACING IN SERVICE. A SUBMITTAL SHALL BE REQUIRED FOR APPROVAL. THE CONTRACTOR SHALL PROVIDE A MAXIMUM FIRM BYPASS PUMPING CAPACITY OF 50 MGD WITH THE LARGEST PUMP OUT OF SERVICE.
3. ALL NEW PAVEMENT ON THIS DRAWING SHALL BE INCLUDED IN THE LUMP SUM WORK, PARAGRAPH 1.05A-BASE BID FOR GENERAL CONSTRUCTION OF TOWN BRANCH WET WEATHER STORAGE FACILITY, OF SPEC SECTION 1025, MEASUREMENT AND PAVEMENT. ALL OTHER PAVEMENT MAINTENANCE AND RESTORATION ARE PAID FOR UNDER UNIT PRICE AMOUNTS
4. ALL UNPAVED AND NON-GRAVELED AREAS ON SITE WITHIN SILT FENCE LIMITS AND LIMITS OF CONSTRUCTION SHALL BE SEEDED AND STRAWED AT THE END OF CONSTRUCTION PER THE SPECS AND EROSION AND SEDIMENTATION CONTROL PLAN AND DETAILS
5. ALL PAVING SHOWN ON THIS SHEET SHALL BE INCLUDED UNDER THE SCOPE OF PAY ITEM No. 1.



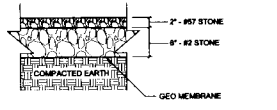
CONTRACTOR SHALL SPOIL ALL EXCESS EXCAVATED EARTHEN MATERIALS ONSITE AND PREPARE SITE GRADING TO DRAIN AT A MINIMUM 1% SLOPE. GRADING CONTOURS ARE PROVIDED FOR EXAMPLE. ALL ROCK LARGER THAN 12" IN DIAMETER AND OTHER DEBRIS, SUCH AS WOOD, STEEL, ETC., SHALL BE PROPERLY DISPOSED OF OFFSITE AT THE CONTRACTORS EXPENSE. ALL ROCK/CONCRETE MATERIALS GREATER THAN 12" IN DIAMETER MAY BE CRUSHED AND FILLED ON SITE.

USE OF FILL LIMITATIONS :

BECAUSE SAMPLES OF THE FILL MATERIAL LOCATED AT THE WWS SITE EXHIBIT CONCENTRATIONS OF PAH COMPOUNDS ABOVE THE UNRESTRICTED OFF-SITE USE LEVELS AND ABOVE THE EPA SCREENING LEVELS FOR RESIDENTIAL USE, THIS MATERIAL WILL REQUIRE MANAGEMENT. THE FILL MATERIAL IS NOT SUITABLE FOR DISPOSAL AT A SITE THAT COULD POTENTIALLY BE USED AS RESIDENTIAL OR INSTITUTIONAL LAND IN THE FUTURE. ALL EARTHEN MATERIAL SHALL BE FILLED/DISPOSED ON TOWN BRANCH WWTP PROPERTY

STRUCTURE INDEX

1. 36" DIVERSION STRUCTURE
2. 36" FORCE MAIN RECIEVING STRUCTURE
3. 54" DIVERSION STRUCTURE
4. PUMP STATION
5. 22 MG STORAGE TANK
6. TANK DRAIN FLOW CONTROL VAULT
7. 54" GRAVITY RETURN FLOW STRUCTURE
8. 36" FORCE MAIN FLOW CONTROL VAULT
9. ELECTRICAL BUILDING



STONE SPLASH BLOCK DETAIL

NOT TO SCALE

SITE GRADING PLAN

SCALE: 1"=30'-0"

LEGEND:

- EXISTING TELEPHONE
- EXISTING GAS
- PROPOSED GAS
- EXISTING WATER
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED NON POTABLE WATER
- BOLLARD (TYP.)
- PAVING
- STONE SURFACE

BIDDING DOCUMENTS

GRW PROJECT NO. 4175-01

LFUCG BID No. 137-2014

engineering | architecture | geospatial
www.grwinc.com

SITE GRADING PLAN

TOWN BRANCH WET WEATHER STORAGE FACILITY
REMEDIAL MEASURES PLAN ID No. G2-TB-1

DESIGNED	DRAWN	REVIEWED	APPROVED
KAZ	RLT	KAZ	JLH

REVISIONS

NO	DESCRIPTION	DATE	BY
1	PER ADDENDUM #2	9/10/14	JLH

DATE: AUGUST, 2014

SCALE: 1" = 30'

SHEET NO.: C-0-103

Conformance Set

PLOTTED BY: rhester

PRINTED: 9/10/2014 @ 11:10AM

FILE NAME: U:\A175-FLOOD TB WWS\Working Drawings\AutoCAD\ATR C-0-103.dwg

BID SCHEDULE				
Bid Item Description	**Approximate Quantities**	**Unit**	**Unit Bid Price**	**Total Price**
Item 1 – Base Bid - For General Construction of Town Branch Wet Weather Storage Facility – Lump Sum	1	LS		
Item 2 – System Programming Service Allowance Lump Sum	1	LS	$ 120,000.00	$ 120,000.00
Item 3 – Mechanical Screen – Equipment Allowance Only Lump Sum	1	LS	$ 307,400.00	$ 307,400.00
Item 4 – Allowance Railroad Repair – Lump Sum	1	LS	$ 25,000.00	$25,000.00
Item 5 – Allowance Project Documentation Photography Lump Sum	1	LS	$30,000.00	$30,000.00
Item 6a – Unit Price Pavement Construction Bituminous Asphalt Surface Dollars Per Ton (TN)	1,205	TN		
Item 6b – Unit Price Pavement Construction Bituminous Asphalt Base Dollars Per Ton (TN)	512	TN		
Item 6c – Unit Price Pavement Construction Dense Graded Aggregate (DGA) Dollars Per Ton (TN)	966	TN		
Item 7 – Unit Price Pavement Restoration Pavement Milling and Texturing Dollars Per Ton (TN)	303	TN		
Item 8 – Unit Price Pavement Restoration Subgrade Undercutting Dollars Per Cubic Yard (CY)	120	CY		
Item 9 – Unit Price Over-Excavation of Earthen/Rock/ Rubble/Debris and Replacement with Compacted Earthen/Rock Materials Under Structures with drilled shafts Dollars Per Cubic Yard (CY)	3,000	CY		
Item 10 – Unit Price Construct Drilled Shaft Through Overburden Dollars Per Vertical Linear Foot (VLF)	5,000	VLF		

Bid Item Description	Approximate Quantities	Unit	Unit Bid Price	Total Price
Item 11 – Unit Price Construct Drilled Shaft Through Rock Socket Removal Dollars Per Vertical Linear Foot (VLF)	1,850	VLF		
Item 12 – Unit Price Delay Time – Drilled Shaft Equipment and Crew Dollars Per Hour (Hours)	50	HRS		
Item 13 – Unit Price Lower Cane Run Force Main Tie-In Lump Sump	1	LS		
			Total Bid Price	

TOTAL BID PRICE for the Town Branch Wet Weather Storage Facility shall be provided and summed from Items 1 through 11 in words and figures.

_____ ($_____).
(words) (figures)

Alternate Equipment Information	
Equipment Item	**Base Bid Equipment Manufacturer**
1. Pumps	ABS Flygt Ebara
2. Check Valves	APCO Valvematic Golden Anderson
3. Plug Valves	DeZurik Pratt *Golden Anderson*[ADD#2]
4. Slide Gates	H. Fontaine Whipps Golden Harvest
5. Air Release Valves	ARI
6. Mechanical Screen	Westech ROMAG
7. Valve and Gate Actuators	Limitorque
8. Level Transmitters	Ohmart Vega
9. SCADA PLC's	Allen Bradley ControlLogix
10. Motor Control Center and Power House	Allen Bradley Schneider (Square D) Eaton (Cutler Hammer)
11. 18 Pulse VFD's	Allen Bradley Schneider (Square D) Eaton (Cutler Hammer)
12. Generator Set	Kohler Caterpillar Cummins/Onan MTU *Generac*[ADD#2]
13. Gas Detection System	Sierra Monitor Corporation
14. Prestressed Concrete Tank Manufacturer[ADD#1]	*The Crom Corporation*[ADD#1] *Precon Corporation*[ADD#1]

SECTION 02532 – SANITARY SEWER MANHOLES, FRAMES, AND COVERS[ADD2]

PART 1 - GENERAL

1.01 SUMMARY

A. The Contractor shall furnish all labor, material, and equipment necessary to construct manholes for sanitary storm sewers, including steps, frames, and covers, together with all appurtenances as shown and detailed on the Drawings and specified herein. Manhole materials shall be precast concrete.

1.02 DEFINITIONS

A. Standard Manhole: A standard manhole is defined as any manhole that is greater than 5 feet in depth, as measured from the invert of the manhole base at its center to the top (rim) of the manhole cover.

B. Shallow Manhole: A shallow manhole is defined as any manhole that is 5 feet or less in depth, as measured in the preceding sentence.

PART 2 - PRODUCTS

2.01 CONCRETE MANHOLES - GENERAL

A. Manholes shall conform in shape, size, dimensions, materials, and other respects as shown on the Drawings or specified herein.

B. All concrete manholes shall have precast reinforced concrete developed bases. No other type of base will be allowed. Invert channels shall be factory constructed when the base is made. Sloping invert channels shall be constructed whenever the difference between the inlet and outlet elevation is 2 feet or less.

C. The concrete manhole walls (barrels and cones) and base shall be precast concrete sections manufactured with **Xypex C-1000 RED cementitious crystalline admixture at dosage of 3.5% by weight of cement.** The top of the cone shall be built of reinforced concrete to allow adjustment rings to be added for adjustment of the frame to meet the finished surface. Minimum strength of the concrete for the precast sections shall be 4,000 psi at the time of shipment.

D. Manholes that receive sewage from a force main discharge, and within 2,000 LF downstream or to the nearest manhole beyond the 2,000 LF, shall have concrete admixture ConShield, or approved equal, as specified in Section 02532 for reinforced concrete pipe.

E. Manholes located in the 100-year floodplain shall have a concrete base that includes an anti-flotation collar. The collar shall have a radius 6-inches larger than the exterior wall of the base section.

F. For concrete manholes, the inverts of the developed bases shall conform accurately to the size of the adjoining pipes. Side inverts shall be curved and main inverts (where direction changes) shall be laid out in smooth curves of the longest possible radius which is tangent, within the manhole, to the centerlines of adjoining pipelines.

G. For concrete manholes, the cast iron frames and covers shall be the standard frame and cover as indicated on the LFUCG Standard Drawings.

H. Manholes shall be manufactured by Sherman Dixie, Oldcastle Precast or approved equal.

2.02 PRECAST CONCRETE SECTIONS

A. Precast concrete sections and appurtenances shall conform to the ASTM Standard Specifications for Precast Reinforced Concrete Manhole Sections, Designation C478, latest revision, with the following exceptions and additional requirements.

B. The base section shall be monolithic for 4-foot and 5-foot diameter manholes. Manholes with diameter of 6 feet or larger shall have a monolithic base or base slab.

C. The wall sections shall be not less than 5 inches thick.

D. Type II or type III cement shall be used except as otherwise permitted.

2.03 CONCRETE MANHOLE - FRAMES AND COVERS

A. The Contractor shall furnish all cast iron manhole frames and covers as shown in LFUCG Standard Drawings.

B. Castings shall be designed for H-20 traffic loading.

C. The castings shall be of good quality, strong, tough, evengrained cast iron, smooth, free from scale, lumps, blisters, sandholes, and defects of every nature which would render them unfit for the service for which they are intended. Contact surfaces of covers and frame seats shall be machined to prevent rocking of covers.

D. Frames shall be set in mastic and bolted down in non-traffic areas with four ¾" SS Hilti anchor bolts and washers. Hilti anchor bolts shall be embedded a minimum of 4-inches into precast concrete cone section. In traffic areas, the frame shall be set in mastic and Class A concrete donut poured around frame to the top of concrete cone section. The concrete donut shall be 12-inches in width and in depth up to within 1 ½-inches of surface for bituminous asphalt pavement.

E. All casting shall be thoroughly cleaned and subject to a careful hammer inspection.

F. Castings shall be at least Class 25 conforming to the ASTM Standard Specifications for Gray Iron Casting, Designation A48, latest revision.

G. Unless otherwise specified, manhole covers shall be 22-3/4 inches in diameter, weighing not less than 305 pounds per frame and cover. Manhole covers shall set neatly in the rings, with contact edges machined for even bearings and tops flush with ring edge. They shall have sufficient corrugations to prevent slipperiness. The covers shall have two (2) pick holes about 1-1/4 inches wide and 1/2 inch deep with 3/8-inch undercut all around. Covers shall not be perforated. Frames and covers shall be J.R. Hoe and Sons Mc-350, or approved equal.

H. Watertight lids shall have neoprene T-gasket and concealed pickhole.

I. All covers shall be marked in large letters "LEXINGTON KENTUCKY SANITARY SEWER" as shown in LFUCG Standard Drawings.

2.04 MANHOLE STEPS (CONCRETE MANHOLES)

A. Manholes steps shall be the polypropylene plastic type reinforced with a 1/2 inch diameter deformed steel rod. The step shall be 10-3/4 inches wide and extend 5-3/4 inches from the

manhole wall. Steps shall line up over the downstream invert of the manhole. The steps shall be embedded into the manhole wall a minimum of 3-3/8 inches. Steps shall be uniformly spaced at 12-inch to 16-inch intervals.

B. Manhole steps shall be in accordance with LFUCG Standard Drawings.

2.05 PREMOLDED ELASTOMERIC-SEALED JOINTS

A. All holes for pipe connections in concrete barrels and bases shall have a factory-installed flexible rubber gasket to prevent infiltration. The manhole boots shall conform to the latest revision of ASTM-C923. The boots shall be Contour Seal or Kor-N-Seal manufactured by National Pollution Control Systems, Inc., Nashua, NH; A-Lok Manhole Pipe Seal manufactured by A-Lok Corporation, Trenton, NJ; or an approved equal.

2.06 MANHOLE DIAPHRAGM (FOR WATERTIGHT LID APPLICATIONS)

A. Diaphragm manhole inserts shall be manufactured from corrosion-proof material suitable for atmospheres containing hydrogen sulfide and diluted sulfuric acid. Diaphragm shall be installed in manholes susceptible to inflow as indicated on the Drawings.

B. The body of the manhole insert shall be made of high density ethylene hexene-1 copolymer material meeting ASTM Specification D 1248, Class A, Category 5 (the insert shall have a minimum impact brittleness temperature of -180 degrees Fahrenheit). The thickness shall be uniform 1/8 inch or greater. The manhole insert shall be manufactured to dimensions as shown on the Drawings to allow easy installation within the manhole frame.

C. Gaskets shall be made of closed cell neoprene. The gasket shall have a pressure sensitive adhesive on one side and shall be placed under the weight bearing surface of the insert by the manufacturer. The adhesive shall be compatible with the manhole insert material so as to form a long lasting bond in either wet or dry conditions.

D. Lift strap shall be attached to the rising edge of the bowl insert. The lift strap shall be made of 1 inch wide woven polypropylene web and shall be seared on all cut ends to prevent unraveling. The lift strap shall be attached to the manhole insert by means of a stainless steel rivet. Location of the lift strap shall provide easy visual location.

E. Standard ventilation shall be by means of a valve or vent hole. Vent holes shall be on the side wall of the manhole insert approximately 3/4 inch below the lip. The valve or vent hole will allow a maximum release of 5 gallons per 24 hours when the insert is full.

F. The manhole insert shall be manufactured to fit the manhole frame rim upon which the manhole cover rests. The Contractor is responsible for obtaining specific measurements of each manhole cover to insure a proper fit. The manhole frame shall be cleaned of all dirt, scale and debris before placing the manhole insert on the rim.

G. Diaphragm shall be Rainstopper manufactured by Rainstopper, Inc. in color white, or approved equal.

2.07 CLEANOUTS

A. Cleanouts shall be cast iron and extend to the finish grade and capped with a clean-out plug in accordance with details and at locations shown on the Drawings. Pipe shall be the same size as the gravity sewer line in which the cleanout is located. A 4-inch thick concrete pad, with 6" x 6", 1.9 x 1.9 wire mesh, 24 inches square, with the valve box lid section, shall be provided around each cleanout.

B. Cleanouts shall be in accordance with LFUCG Standard Drawings.

2.08 DROP CONNECTIONS

A. Drop connections shall be installed on exterior of manhole as shown on the LFUCG Standard Drawings. The pipe material inside the drop manhole shall be of the same material as the sanitary sewer line.

PART 3 - EXECUTION

3.01 FABRICATION - PRECAST SECTIONS

A. Manhole sections shall contain manhole steps accurately positioned and embedded in the concrete when the section is cast.

B. Sections shall be cured in an enclosed curing area and shall attain a strength of 4,000 psi prior to shipment.

C. No more than two (2) lifting hooks may be cast or drilled in each section.

D. Flat slab tops shall have a minimum thickness of 6 inches and reinforcement in accordance with ASTM C478.

E. The date of manufacture and the name or trademark of the manufacturer shall be clearly marked on the precast sections.

F. Acceptance of the sections will be on the basis of material tests and inspection of the completed product and test cylinders if requested by the Engineer.

G. Cones shall be precast sections of similar construction.

3.02 SETTING PRECAST MANHOLE SECTIONS

A. Precast-reinforced concrete manhole sections shall be set so as to be vertical and with sections and steps in true alignment.

B. Butyl mastic sealant shall be installed in all manhole joints in accordance with the manufacturer's recommendations and as shown in LFUCG Standard Drawings. Butyl mastic sealant shall meet Federal Spec SS-S-210A, AASHTO M-19875l, and ASTM C990. Butyl mastic sealant shall be NPC Bidco C-56 as manufactured by Trelleborg Engineered Systems, or approved equal. Sealant shall be a minimum bead of 1 inch in rope configuration.

C. All holes in sections used for their handling shall be thoroughly plugged with rubber plugs made specifically for this purpose.

3.03 ADJUSTING MANHOLE FRAMES AND COVERS TO GRADE

A. Except where shown on the Drawings, the top of the precast concrete eccentric cone of a standard manhole or the top of the flat slab of a shallow manhole shall terminate 6 inches below existing grade in an unpaved non-traffic area except in a residential yard and 13 inches below existing grade in a paved or unpaved traffic area and in a residential yard. The remainder of the manhole shall be adjusted to the required grade.

B. When a manhole is located in an unpaved non-traffic area other than in a residential yard, the frame and cover shall be adjusted to an elevation 1 inch above the existing grade at the

center of the cover. If field changes have resulted in the installed manhole invert elevation to be lower than the invert elevation shown on the Drawings, the adjustment to an elevation of 1 inch above existing grade shall be accomplished by the use of precast concrete or cast iron adjusting rings. The area around the adjusted frame and cover shall be filled with the required material, sloping it away from the cover at a grade of 1 inch per foot.

C. When a manhole is located in a bituminous, concrete, or crushed stone traffic area, or in a residential yard, the frame and cover shall be adjusted to the grade of the surrounding area by the use of precast concrete or cast iron adjusting rings. The adjusted cover shall conform to the elevation and slope of the surrounding area.

1. The Contractor shall coordinate elevations of manhole covers in paved streets with the local public works department. If resurfacing of the street in which sewers are laid is expected within twelve (12) months, covers shall be set 1-1/2 inches above the existing pavement surface in anticipation of the resurfacing operations.

3.04 ADJUSTING SECTIONS

A. Only clean adjusting sections shall be used. Each adjusting section shall be laid in a bead of butyl mastic sealant and shall be thoroughly bonded.

3.05 SETTING MANHOLE FRAMES AND COVERS

A. Manhole frames shall be set with the tops conforming to the required elevations set forth hereinbefore. Frames shall be set concentric with the top of the concrete and in a full bead (1") of butyl mastic sealant so that the space between the top of the masonry and the bottom flange of the frame shall be completely watertight.

B. Manhole covers shall be left in place in the frames on completion of other work at the manholes.

3.06 VACUUM TESTING (ASTM C1244)

A. Scope

1. This test method covers procedures for testing precast concrete manhole sections when using the vacuum test method to demonstrate the integrity of the installed materials and the construction procedures. This test method is used for testing concrete manhole sections utilizing mortar, mastic, or gasketed joints.

B. References, ASTM Standards:

1. C 822 Terminology Relating to Concrete Pipe and Related Products.

2. C 924 Practice for Testing Concrete Pipe Sewer Lines by Low-Pressure Air Test Method.

3. C 969 Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines.

C. Summary of Practice

All lift holes and any pipes entering the manhole are to be plugged. A vacuum will be drawn and the vacuum drop over a specified time period is used to determine the acceptability of the manhole.

D. Significance and Use

This is not a routine test. The values recorded are applicable only to the manhole being tested and at the time of testing.

E. Preparation of the Manhole

1. All lift holes shall be plugged.

2. All pipes entering the manhole shall be temporarily plugged, taking care to securely brace the pipes and plugs to prevent them from being drawn into the manhole.

F. Procedure

1. The test head shall be placed at the top of the manhole in accordance with the manufacturer's recommendations.

2. A vacuum of 10 inches of mercury shall be drawn on the manhole, the valve on the vacuum line of the test head closed, and the vacuum pump shut off. The time shall be measured for the vacuum to drop to 9 inches of mercury.

3. The manhole shall pass if the **minimum time** for the vacuum reading to drop from 10 inches of mercury to 9 inches of mercury **exceeds 60 seconds (one minute)**.

4. If the manhole fails the initial test, necessary repairs shall be made by an approved method. The manhole shall then be retested until a satisfactory test is obtained.

5. Use or failure of this vacuum test shall not preclude acceptance by appropriate water infiltration or exfiltration testing, (see Practice C 969), or other means.

G. Precision and Bias

No justifiable statement can be made either on the precision or bias of this procedure, since the test result merely states whether there is conformance to the criteria for the success specified.

END OF SECTION

SECTION 11310 – NON-CLOG SUBMERSIBLE SEWAGE PUMPS[ADD2]

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. Provide all labor, materials, equipment, tools and incidentals required for the complete and operable installation of submersible sewage pumps, complete with all appurtenances, including benching and splitters, as shown on the Drawings and more fully described hereinafter.

B. Unless otherwise specified the pump manufacturer shall furnish each pumping unit complete with drive motor and all other components and shall be entirely responsible for the compatibility in all respects of all components furnished.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A.	Cast-In-Place Concrete:	Section 03300
B.	Precision Grouting:	Section 03600
C.	Electrical:	Division 16
D.	Pressure Gauges:	Division 17
E.	Instrumentation:	Division 17
F.	Interior Process Piping:	Section 11290
G.	Interior Process Valves - Sanitary:	Section 11295

1.03 SUBMITTALS

A. Submit manufacturer's data and shop drawings for the materials specified herein. Comply with all requirements of Section 01300.

B. Descriptive literature, catalog cuts, and dimensional prints clearly indicating all dimensions and materials of construction shall be submitted on all items specified herein to the Engineer for review before ordering.

C. At the time of submission, the Contractor shall, in writing, call the Engineer's attention to any deviations that the submittals may have from the requirements of the Engineer's Contract Drawings and Specifications.

D. The Contractor shall provide a notarized certification indicating that all piping products meet the required Specifications.

E. In accordance with the requirements of the General and Special Conditions and this Section, the following table includes, but is not limited to, the items required to be submitted:

Item Description	Shop Drawings	Product Data	Schedules	Installation Data	Parts Lists	Wiring Diagram	Samples	O & M Manual	Certificates	Warranty	Report	Other
Shop Tests									X		X	
Pumps	X			X	X	X		X		X		
Electrical	X				X	X		X				
Field Tests									X		X	

1.04 IDENTIFICATION - NAMEPLATES

A. Each piece of equipment shall be provided with a substantial nameplate, securely fastened in place and clearly inscribed with the manufacturer's name, year of manufacture, serial number and principal rating date.

1.05 TESTS

A. Shop Tests:

1. The pumps shall be fully tested at the manufacturer's works before shipment at their rated speed, capacity, and head, and at such other conditions of head and capacity to establish that each has met all guarantees on the characteristic curves submitted. Five (5) certified copies of the results of these tests are to be sent to the Engineer. Also included with the test curves shall be a certified bill of material list depicting quality of construction. Such tests shall be accomplished at the manufacturer's facility prior to shipment.

2. The pumping units will be accepted upon the basis of the certified copies of the shop test and be subject to a four-hour field test of each unit. This test will be for the purpose of determining if each pumping unit will operate under installed conditions within a reasonable degree of correlation with the shop tests.

B. Field Tests:

1. The Contractor shall give at least two (2) weeks' notice to the Owner when the field tests are to be accomplished so that the Owner may have a representative present at the said tests.

2. The field tests shall be made by the Contractor in the presence of and as directed by the Engineer. Testing shall be done in accordance with the Hydraulic Institute Standards.

3. Field tests shall be made on each pumping unit. Included therein, each pump shall be run at maximum rated speed for at least three (3) rates of flow corresponding to minimum rate, design rate, and maximum rate of flows specified as evidenced by the corresponding total dynamic head shown by the pump gages; simultaneous ammeter readings shall be taken. Variation of the rate of flow shall be made by throttling the discharge valve (where applicable).

The rated motor nameplate current and power shall not be exceeded at any rate of flow within the specified range.

4. Before any pump is rotated, the Contractor shall make certain that no debris is present in suction well, pumps or pipe lines. Any internal damage done to equipment while starting up shall be assumed to be caused by debris and shall be replaced at the Contractor's expense. No pump shall be rotated under power unless submerged with liquid.

5. When water can be pumped, the Contractor shall commence pumping and shall have representatives from the pump manufacturer to start the pumps. When flow conditions are favorable, the Contractor or pump manufacturer shall in the presence of the Engineer, run a series of tests to establish the adequacy of the pumping units.

6. Field tests shall also conform to Part 3, Paragraph 3.3 as specified hereinafter.

C. Failure of Tests:

1. Any defects in the equipment or failure to meet the guarantees or requirements of the specifications shall be promptly corrected by the Contractor by replacements or otherwise. The decision of the Engineer as to whether or not the Contractor has fulfilled his obligations under the Contract shall be final and conclusive. If the Contractor fails or refuses to make these corrections or if the improved equipment, when tested, shall fail again to meet the guarantees of specified requirements, the Owner notwithstanding its having made partial payment for work and materials which have entered into the manufacture of said equipment, may reject said equipment and order the Contractor to remove it from the premises at his own expense.

2. In case the Owner rejects said equipment, then the Contractor hereby agrees to repay to the Owner all sums of money paid to him for said rejected equipment on progress certificates, and upon the receipt of said sum of money the Owner will execute and deliver to the Contractor a bill of sale of all its rights, title, and interest in and to said rejected equipment; provided, however, that said equipment shall not be removed from the premises of the Owner until the Owner obtains from other sources the equipment to take the place of the rejected. The Owner hereby agrees to obtain said other equipment within a reasonable time and the Contractor agrees that the Owner may use the equipment furnished by him without rental or other charge until said other new equipment is obtained.

D. Responsibility During Test: The Contractor shall be fully responsible for the proper operation of equipment during tests and instruction periods and shall neither have nor make any claim for damage which may occur to equipment prior to the time when the Owner formally takes over the operation thereof.

E. Manufacturer's Representative: For all pumping units, the Contractor shall furnish the services of accredited representatives of the pump manufacturer who shall supervise the installation, adjustment, and field tests of each pumping unit and give instructions to the operating personnel. As one condition necessary to acceptance of any pumping unit, the Contractor shall submit a certificate from the manufacturer, stating that the installation of the pumping unit is satisfactory, that the unit is ready for operation, and that the operating personnel have been suitably instructed in the operation, lubrication, and care of the unit.

1.06 GUARANTEE PERIOD

A. After successful completion of tests and trials under operating conditions on all equipment, the Contractor shall guarantee all equipment and materials from undue wear

and tear from mechanical and electrical defects, and from any failure whatever except those resulting from proven carelessness or deliberate actions of the Owner, for a minimum of one (1) year. This one (1) year minimum shall not replace a standard manufacturer's guarantee if it exceeds one (1) year.

1.07 PUMP WARRANTY

A. The Contractor guarantees and warrants that during the first year of operation, the pumps will operate satisfactorily and continuously according to the pump schedule specified herein, and that after due notice has been given by the Owner, he or the pump manufacturer will proceed, within a reasonable time, to adjust, regulate, repair and renew at his own expense or perform such work as is necessary to maintain the guaranteed capacities, efficiencies and performances.

PART 2 - PRODUCTS

2.01 SUBMERSIBLE NON-CLOG SEWAGE PUMPS

A. Submersible pumping equipment shall include motor driven submersible non-clog sewage pumps, pump retrieval systems, required piping, electrical controls, automatic pumping level controls, slide rails, grout benching, stainless steel splitters, and other required appurtenances and wiring.

2.02 SUBMERSIBLE PUMPS AND APPURTENANCES

A. Equipment shall comply with the following characteristics in the Pump Schedule:

Pump Station Schedule

Fill Pumps

Xylem Flygt CP 3531/865 3 ~ 1040, 685 mm Impeller											
Total No. of Pumps	Shutoff Head (ft.)	Design Point (Flow/TDH)	Additional Point (Flow/TDH)	Additional Point (Flow/TDH)	Rated Motor Speed (rpm)	Impeller Type	Motor Each (HP)	Motor Voltage	Hydraulic Efficiency (%)	Discharge Connection Diameter (in.)	NPSH
4	129	14,000 gpm @ 74.7 ft TDH	10,000 gpm @ 90.5 ft TDH	17,000 gpm @ 59.5.0 ft TDH	710 rpm	Multi-channel impeller	335 Hp	460V 3 Phase	85.1% @ 14,000 gpm	20 in.	<24ft. @ 16,000 gpm

OR

ABS XFP 500U-CH3, 572 mm impeller diameter											
Total No. of Pumps	Shutoff Head (ft.)	Design Point (Flow/TDH)	Additional Point (Flow/TDH)	Additional Point (Flow/TDH)	Rated Motor Speed (rpm)	Impeller Type	Motor Each (HP)	Motor Voltage	Hydraulic Efficiency (%)	Discharge Connection Diameter (in.)	NPSH
4	131	14,000 gpm @ 70.7 ft TDH	10,000 gpm @ 96 ft TDH	17,000 gpm @ 59.5.0 ft TDH	890	Multi-channel impeller	345	460V 3 Phase	79% @ 14,000 gpm	20 in.	<24ft. @ 16,000 gpm

OR

Ebara 500DSC3, E2244-885U, 566 mm											
Total No. of Pumps	Shutoff Head (ft.)	Design Point (Flow/TDH)	Additional Point (Flow/TDH)	Additional Point (Flow/TDH)	Rated Motor Speed (rpm)	Impeller Type	Motor Each (HP)	Motor Voltage	Hydraulic Efficiency (%)	Discharge Connection Diameter (in.)	NPSH
4	118	14,000 gpm @ 70 ft TDH	10,000 gpm @ 90 TDH	17,000 gpm @ 50.0 ft TDH	885	Multi-channel impeller	335	460V 3 Phase	85% @ 14,000 gpm	20 in.	<24ft. @ 16,000 gpm

Low Flow Pumps Schedule

Total No. of Pumps	Shutoff Head (ft.)	Design Point (Flow/TDH)	Additional Point (Flow/TDH)	Additional Point (Flow/TDH)	Rated Motor Speed (rpm)	Impeller Type	Motor Each (HP)	Model	Motor Voltage	Hydraulic Efficiency (%)	Discharge Connection Diameter (in.)
2	58 gpm @ 40.2 ft TDH	1 pump running: 172 gpm @ 33 ft TDH	1 pump running: 240 gpm @ 27 ft TDH	1 pump running: 320 gpm @ 19 ft TDH	1,750 rpm	Vortex impeller	5.3 Hp	**ABS** XFP 80C VX w/185 mm impeller or approved equal	460 V 3 Phase	40.70%	3 in.

B. Manufacturers:

1. The pump and motor shall be from the same manufacturer.
2. The pump and motor manufacturer shall be ABS, Flygt, or Ebara, or approved equal.

C. Pump Requirements:

1. Furnish and install submersible non-clog wastewater pumps as indicated in the pump schedule. Power cable shall be SUBCAB type suitable for submersible pump applications. The power cable shall be sized according to NEC and ICEA standards. Sufficient power and control cable lengths shall as determined by the Contractor. Stainless steel strain relief cable grips shall be furnished and installed for each end of the pump power and control cables.

D. Pump Design:

1. The pump shall be supplied with a mating cast iron discharge connection as shown in the pump schedule. The pumps shall be automatically and firmly connected to the discharge connection, guided by no less than two 304 SS guide bars extending from the top of the station to the discharge connection. There shall be no need for personnel to enter the wet-well. Sealing of the pumping unit to the discharge connection shall be accomplished by a machined metal to metal or O-ring watertight contact. Sealing of the discharge interface with a diaphragm will not be acceptable. No portion of the pump shall bear directly on the sump floor. Each pump shall be fitted with 30 feet of 316 Stainless lifting chain. The working load of the lifting system shall be 50% greater than the pump unit weight.

E. Pump Construction:

1. Major pump components shall be of grey cast iron, ASTM A-48, Class 35B, with smooth surfaces devoid of blow holes or other irregularities. The lifting handle shall be of stainless steel. All exposed nuts or bolts shall be of 316 stainless construction. All metal surfaces coming into contact with the pumpage, other than stainless steel or brass, shall be protected by a factory applied spray coating of acrylic dispersion zinc phosphate primer with a polyester resin paint finish on the exterior of the pump.
2. Sealing design shall incorporate metal-to-metal or O-ring contact between machined surfaces. Critical mating surfaces where watertight sealing is required shall be machined and fitted with Nitrile rubber O-rings. Fittings will be the result of controlled compression of rubber O-rings in two planes and O-ring contact of four sides without the requirement of a specific torque limit.
3. Rectangular cross sectioned gaskets requiring specific torque limits to achieve compression shall not be considered as adequate or equal. No secondary sealing compounds, elliptical O-rings, grease or other devices shall be used.

F. Cooling System:

1. Each unit shall be provided with an integral motor cooling system. A stainless steel or epoxy coated steel motor cooling jacket shall encircle the stator housing, providing for dissipation of motor heat regardless of the type of pump installation. An impeller, integral to the cooling system and driven by the pump shaft, shall provide the necessary circulation of the cooling liquid through the jacket. The cooling liquid shall pass about the stator housing in the closed loop system in turbulent flow providing for superior heat transfer. The cooling system shall have one fill port and one drain port integral to the cooling jacket. The cooling system shall provide for continuous pump operation in liquid or ambient temperatures of up to 104°F (40°C). Operational restrictions at temperatures below 104°F are not acceptable. Fans, blowers or auxiliary cooling systems that are mounted external to the pump motor are not acceptable.

OR

The motor design shall include an integral cooling jacket constructed of steel, A283, Grade D. The cooling medium shall be the pumpage. Re-circulation through the jacket shall be achieved by discharging the pumpage into the cooling jacket from the periphery, high pressure area, of the impeller, and returning it into the low pressure behind the impeller, at the hub. Riser pipes within the jacket shall be utilized to facilitate circulation. The cooling passage ways shall be non clogging by virtue of the dimensions; screening solids from entering the jacket. The jacket shall have may have external NPT connections to be used for external cooling as an option, as well as for venting the jacket. The jacket cooling system shall provide heat dissipation for the motor whether the unit is submerged or operating in air. The cooling system shall provide for continuous pump operation in liquid or ambient temperatures of up to 104°F (40°C). Operational restrictions at temperatures below 104°F are not acceptable. Fans, blowers or auxiliary cooling systems that are mounted external to the pump motor are not acceptable.

G. Cable Entry Seal:

1. The cable entry seal design shall preclude specific torque requirements to insure a watertight and submersible seal. The cable entry shall consist of dual cylindrical elastomer grommets, flanked by washers, all having a close tolerance fit against the cable outside diameter and the entry inside diameter. The grommets shall be compressed by the cable entry unit, thus providing a strain relief function. The assembly shall provide ease of changing the cable when necessary using the same entry seal. The cable entry junction chamber and motor shall be sealed from each other, which shall isolate the stator housing from foreign material gaining access through the pump top. Secondary epoxy sealing systems shall not be considered equal.

H. Motor:

1. The pump motor shall be a NEMA B design, induction type with a squirrel cage rotor, shell type design, housed in an air filled, watertight chamber. The stator windings shall be insulated with moisture resistant Class H insulation rated for 180°C (356°F). The motor shall be designed for continuous duty while handling pumped media of up to 104°F. The motor shall be capable of no less than 15 evenly spaced starts per hour. The rotor bars and short circuit rings shall be made of aluminum. Three thermal switches shall be embedded in the stator end coils, one per phase winding, to monitor the stator temperature. These thermal switches shall be used in conjunction with and supplemental to external motor overload protection and shall be connected to the motor control panel. See Contract Drawings for Electrical Schematics.
2. The junction chamber shall be sealed off from the stator housing and shall contain a terminal board for connection of power and pilot sensor cables using threaded compression type terminals. The use of wire nuts or crimp-type connectors is not acceptable.
3. The motor service factor (as defined by NEMA MG1 standard) shall be 1.15 minimum. The motor shall have a voltage tolerance of +/- 10%. The motor shall be designed for continuous operation in up to a 40°C ambient and shall have a NEMA Class A maximum operating temperature rise of 80°C. A motor performance chart shall be provided upon request exhibiting curves for motor torque, current, power factor, input/output kW and efficiency. The chart shall also include data on motor starting and no-load characteristics. Motor horsepower shall be sufficient so that the pump is non-overloading throughout its entire performance curve, from shut-off to run-out. The motor and cable shall be capable of continuous submergence underwater without loss of watertight integrity to a depth of 65 feet or greater.
4. The motor shall be approved by Factory Mutual as explosion proof for use in NEC CLASS I, DIVISION 1, GROUP C&D HAZARDOUS LOCATIONS.
5. Supply voltage for each motor shall be 460-volt, 3-phase, 60 Hz.

I. Bearings:

1. The integral pump/motor shaft shall rotate on a minimum two bearings. The motor bearings shall be sealed and permanently grease lubricated with high temperature grease. The upper motor bearing shall be a two row angular contact ball bearing. The lower bearing shall be a two row angular contact ball bearing to handle the thrust and radial forces. L-10 bearing life shall be a minimum of 100,000 hours at flows ranging from ½ of BEP flow to 1½ times BEP flow (BEP is best efficiency point).

J. Mechanical Seals:

1. Each pump shall be provided with a positively driven dual, tandem mechanical shaft seal system consisting of two seal sets, each having an independent spring. The lower primary seal, located between the pump and seal chamber, shall contain one stationary and one positively driven rotating corrosion and abrasion resistant silicon carbide or tungsten-carbide ring. The upper secondary seal, located between the seal chamber and the seal inspection chamber shall be a leakage-free seal. The upper seal shall contain one stationary and one positively driven rotating corrosion and abrasion resistant silicon carbide or tungsten-carbide seal ring. The rotating seal ring shall have small back-swept grooves laser inscribed upon its face to act as a pump as it rotates, returning any fluid that should enter the dry motor chamber back into the lubricant chamber. All seal rings shall be individual solid sintered rings. Each seal interface shall be held in place by its own spring system. The seals shall not depend upon direction of rotation for sealing. Mounting of the lower seal on the impeller hub is not acceptable. Shaft seals without positively driven rotating members or conventional double mechanical seals containing either a common single or double spring acting between the upper and lower seal faces are not acceptable. The seal springs shall be isolated from the pumped media to prevent materials from packing around them, limiting their performance. The mechanical seal hardware shall be 316SS.

OR

The mechanical seal system shall be a cartridge mounted double mechanical seal in a tandem arrangement. Each seal shall be positively driven and act independently with its own spring system. The upper seal operates in an oil bath, while the lower seal is lubricated by the oil from between the shaft and the seal faces, and in contact with the pumpage. The oil filled seal chamber shall be designed to prevent over-filling and include an anti-vortexing vane to insure proper lubrication of both seal faces. Lower face materials shall be Silicon Carbide or Tungsten Carbide seal ring, upper faces be Silicon Carbide or Tungsten Carbide seal ring. NBR elastomers shall be provided in the oil chamber and viton elastomers where in contact with the pumpage. The mechanical seal hardware shall be 316SS. Seal system shall not rely on pumping medium for lubrication.

2. Each pump shall be provided with a lubricant chamber for the shaft sealing system. The lubricant chamber shall be designed to prevent overfilling and shall provide capacity for lubricant expansion. The seal lubricant chamber shall have one drain and one inspection plug that are accessible from the exterior of the motor unit. The seal system shall not rely upon the pumped media for lubrication.
3. The area about the exterior of the lower mechanical seal in the cast iron housing shall have cast in an integral concentric spiral groove. This groove shall protect the seals by causing abrasive particulate entering the seal cavity to be forced out away from the seal due to centrifugal action.
4. A separate seal leakage chamber shall be provided so that any leakage that may occur past the upper, secondary mechanical seal will be captured prior to entry into the motor stator housing. Such seal leakage shall not contaminate the motor lower bearing. The leakage chamber shall be equipped with a float type switch and/or probe electrical that will signal if the chamber should reach 50% capacity.
5. The seal system shall not rely upon the pumped media for lubrication and shall not be damaged when the pump is run dry. Lubricant in the chamber shall be environmentally safe non toxic material.

K. Pump Shaft:

1. The pump and motor shaft shall be a single piece unit. The pump shaft is an extension of the motor shaft. Shafts using mechanical couplings shall not be acceptable. The shaft shall be stainless steel – ASTM A479 S43100-T, Stainless steel AISI 403, or a C54N carbon steel shaft with an A276 Type 420 stainless steel shaft sleeve.

L. Impeller:

1. The Flygt impeller shall be of Hard-Iron™ (ASTM A-532 (Alloy III A) 25% chrome cast iron), dynamically balanced, semi-open, multi-vane, back swept, screw-shaped, non-clog design. The impeller leading edges shall be mechanically self-cleaned automatically upon each rotation as they pass across a spiral groove located on the volute suction. The leading edges of the impeller shall be hardened to Rc 60 and shall be capable of handling solids, fibrous materials, heavy sludge and other matter normally found in wastewater. The screw shape of the impeller inlet shall provide an inducing effect for the handling of up to 5% sludge and rag-laden wastewater. The impeller to volute clearance shall be readily adjustable by the means of a single trim screw. The impeller shall be locked to the shaft, held by an impeller bolt and shall be coated with alkyd resin primer.

OR

2. The ABS channel impeller shall be of gray cast iron, EN-GJL-250 (ASTM A-48, Class 35B). The impeller shall be of the double shrouded, non-clogging, three vane design. The impeller shall be capable of passing a minimum of 7.9" x 4.9" inch oblong solids or 4 inch spherical solids. The impeller shall have a slip fit onto the motor shaft and drive key, and shall be securely fastened to the shaft by a stainless steel bolt which is mechanically prevented from loosening by a positively engaged ratcheting washer assembly. The head of the impeller bolt shall be effectively recessed within the impeller bore or supporting washer to prevent disruption of the flow stream and loss of hydraulic efficiency. The impeller shall be dynamically balanced to the ISO 10816 standard to provide smooth vibration free operation.

OR

3. The Ebara impeller shall be a non-clog, enclosed, multi-vane mixed flow type. It shall be dynamically balanced and shall be designed for solids handling with a long thrulet without acute turns. The inlet edge of the impeller vanes shall be angled toward the impeller periphery so as to facilitate the release of objects that might otherwise clog the pump. The design shall also include back pump out vanes to reduce the pressure and entry of foreign materials into the mechanical seal area. Impellers shall be direct connected to the motor shaft with a slip fit, key driven, and secured with an impeller nut. The design shall include an optional, replaceable wear ring manufactured of AISI 304SS material to maintain working clearances and hydraulic efficiencies.

M. Wear Ring System:

1. A replaceable wear ring of stainless steel 1.4581 (AISI 318) or brass shall be securely fitted into the pump casing (volute). The impeller wear ring shall be stainless steel 1.4571 (AISI 316Ti) or equal.

N. . Volute/Suction Cover:

1. The Flygt pump volute shall be a single piece gray cast iron, ASTM A-48, Class 35B, non-concentric design with smooth passages of sufficient size to pass any solids that may enter the impeller. Minimum inlet and discharge size shall be as specified. The volute shall have a replaceable suction cover insert ring in which are cast spiral-shaped, sharp-edged groove(s). The spiral groove(s) shall provide trash release pathways and

sharp edge(s) across which each impeller vane leading edge shall cross during rotation so to remain unobstructed. The insert ring shall be cast of Hard-Iron™ (ASTM A-532 (Alloy III A) 25% chrome cast iron) and provide effective sealing between the multi-vane semi-open impeller and the volute housing.

OR

2. The ABS pump volute shall be single piece gray cast iron, EN-GJL-250 (ASTM A-48, Class 35B) non –concentric design with centerline discharge. Passages shall be smooth and large enough to pass any solids which may enter the impeller. Discharge size shall be as specified on the pump performance curve. The discharge flange design shall permit attachment to standard ANSI. The discharge flange shall be drilled to accept either ANSI class 125. Discharge elbow shall be ANSI Class 125. Proprietary or non standard flange dimensions shall not be considered acceptable. The suction flange shall be integrated into the volute and its bolt holes shall be drilled and threaded to accept standard ANSI class 125 flanged fittings. The minimum working pressure of the volute and pump assembly shall be 10 bar (145 psi).

OR

3. The Ebara casing design shall be of ASTM A-48, Class 35B gray cast iron and centerline discharge with a large radius on the cut water to prevent clogging. Units shall be furnished with a discharge elbow and 125 lb. flat face ANSI flange. A replaceable casing ring shall be provided, manufactured of AISI 403SS material, to maintain working clearances and hydraulic efficiencies. All exposed bolts and nuts shall be 304 stainless steel. All mating surfaces of major components shall be machined and fitted with NBR O-rings where watertight sealing is required. Machining and fitting shall be such that sealing is accomplished by automatic compression of O-rings in two planes and O-ring contact is made on four surfaces without the requirement of specific torque limits. Surfaces in contact with the pumpage shall be surface prepared to SSPCSP-10 and coated with three (3) coats of coal tar epoxy paint. The internal surface of the motor shall be surface prepared to SSPC-SP-3 and coated with one (1) coat of zinc rich primer paint. Surfaces in air shall be surface prepared to SSPC-SP-10 and coated with one (1) coat of zinc chromate primer and one (1) coat of alkyd resin enamel paint.

O. Protection:

1. Each pump motor stator shall incorporate three thermal switches, one per stator phase winding and be connected in series, to monitor the temperature of the motor. Should the thermal switches open, the motor shall stop and activate an alarm.
2. Bearing temperature switches shall also be installed for the upper and lower bearing housings.
3. A float switch shall be installed in the seal leakage chamber for each seal and will activate if leakage into the chamber reaches 50% chamber capacity, signaling the need to schedule an inspection.
4. Moisture sensing probes shall be provided in the electrical connection chamber and the motor chamber.
5. The thermal switches and float switch shall be connected to a Mini CAS control and status monitoring unit, for Flygt pumps, or equal, for ABS or Ebara pumps, to take signal and relay signals from pump. The Mini CAS unit shall be designed to be mounted in the pump control panel. The units shall provide alarm information.

P. Guide Rail Base Assembly

1. There shall be no need for personnel to enter the wet well to remove or reinstall the pump(s). In a wet pit installation, the discharge base & elbow assembly shall be permanently installed in the wet well and connected to the discharge piping. In order to

prevent binding or separation of the pump from the guide rail system, the pump(s) shall connect to the guide rail base automatically and firmly, guided by two 2 inch 304 SS guide pipes extending from the base elbow to the top of the station. Systems using guide cable in lieu of rigid guide bars or pipes shall not be considered acceptable. The sliding guide bracket shall be a separate part of the pumping unit, capable of being attached to standard 20 inch ANSI class 125 or metric DN500 pump flanges, so that the pump mounting is non-proprietary, and any pump with a standard discharge flange can be mounted on the base assembly. Base or bracket assemblies with proprietary or non standard flange dimensions shall not be considered acceptable.

A field replaceable Nitrile (Buna-N) rubber profile gasket or o-ring shall accomplish positive sealing of the pump flange/guide rail bracket to the discharge elbow. Base assemblies which rely solely on metal to metal contact between the pump flange and discharge base elbow as a means of sealing are inherently leak prone, and shall not be considered equal. No portion of the pump shall bear directly on the floor of the sump. The guide rail system shall be available in an optional non-sparking version, approved by Factory Mutual for use in NEC Class 1, Division 1, Group C&D hazardous locations.

Q. Pump Retrieval System:

Each submersible pump shall be furnished with a pump lifting-chain positive-recovery system consisting of the following components:

1. A minimum of the depth of chamber plus 5 feet of nylon or stainless steel line, of diameter matching weight of lifting chain required, connected to a short length (approximately ten links long) of high tensile strength proof-tested chain of required capacity, connected to the lifting eye or lifting bail of the submersible pump.
2. A forged "grip-eye" or "grab link" of wrought alloy steel, provided separately to connect to the end of the lifting cable or chain of the pump lifting device. The operation of the pump lifting-chain positive-recovery system shall be as follows:

    a. Connect small eye of "grip-eye" or "grab link" to end of chain or cable of external mechanical of lifting device.
    b. Slip top end of nylon or stainless steel line through large eye of "grip-eye" or "grab link".
    c. Lower "grip-eye" or "grab link" to top of pump while maintaining a taut nylon or stainless steel line, making sure short length of chain fastened to pump is also taut.
    d. Release tension on nylon or stainless steel line when "grip-eye" or "grab link" has reached pump top. Make certain upper end of nylon or stainless steel line has been secured.
    e. Take up tension on cable or chain of lifting device, "grip-eye" or "grab link" will engage links of short chain and lift pump.

R. Coatings:

1. Pumps shall be provided with manufacturer's standard coating system.

S. Inlet Flow Protection (Anti-Vortex):

1. The pump manufacturer shall also supply an intake splitter plate for each pump. The splitter shall be fabricated of ½-inch thick AISI type 304 stainless steel, and be constructed with integral tabs for anchoring to the floor. The splitter shall be centered underneath the pump inlet to prevent swirl formation at the pump. Pump manufacturer is responsible for confirming splitter dimensions during the submittal process.

T. Lifting Chain Support Bracket

1. A 304 SS Lifting Chain support bracket shall be installed at the opening, beneath each pump hatch. The bracket shall be fabricated to support the two times the weight of the chain without deflection or damage. Contractor shall coordinate and install bracket.

2.4 PRESSURE GAUGES

A. See Division 17 – Instrumentation for pressure gauge specification and schedule.

PART 3 - EXECUTION

3.1 PREPARATION

A. Coordinate with other trades, equipment and systems to the fullest extent possible.

B. Take all necessary measurements in the field to determine the exact dimensions for all work and the required sizes of all equipment under this contract. All pertinent data and dimensions shall be verified by the Contractor.

3.2 INSTALLATION

A. Installation shall be in strict accordance with the manufacturer's instructions and recommendations in the locations shown on the Drawings. Anchor bolts shall be set in accordance with the manufacturer's recommendations and setting plans.

B. The Contractor shall also provide from the submersible pump supplier the service of a qualified start-up engineer (factory representative) who has had prior on-site start-up experience to assist in performing start-up, check-out and initial operation services of the pumping units. The start-up engineer shall also instruct the Owner's personnel on the operation and maintenance procedures for the station. Qualified supervisory services, including manufacturers' engineering representatives, shall be provided for a minimum of two (2) man-days to insure that the work is done in a manner fully approved by the respective equipment manufacturer. The pump manufacturer's representatives shall specifically supervise the installation of the pump and the alignment of the connection piping. If there are difficulties in the start-up or operation of the equipment due to the manufacturer's design or fabrication, additional service shall be provided at no cost to the Owner. Services of the manufacturer's representatives and training shall be provided when the first pump is started, with follow-up visits upon start-up of each subsequent pump.

C. A certificate from each equipment manufacturer shall be submitted stating that the installation of his/her equipment is satisfactory, that the equipment is ready for operation and that the operating personnel have been suitably instructed in the operation, lubrication and care of each unit.

3.3 FIELD TESTS

A. During the field tests, observations shall be recorded of head, capacity, and motor input. All defects or defective equipment revealed by or noted during the tests shall be corrected or replaced promptly at the expense of the Contractor, and if necessary, the tests shall be repeated until results acceptable to the Engineer are obtained. The Contractor shall furnish all labor, piping, equipment, and materials necessary for conducting the tests. A report of the field tests shall be submitted to the Engineer.

B. After installation of the pumping equipment, and after inspection, operation, testing and adjustment have been completed by the manufacturer's representative, each pump shall be given a running test in the presence of the Engineer, such tests as necessary to indicate that the pumps, motors, and drives generally conform to the efficiencies and operating conditions specified and its ability to operate without vibration or overheating. The pumps and motors shall operate at the specified capacities in the range of heads specified without undue noise or vibration. Any undue noise or vibration in the pumps or motors, which is objectionable, will be sufficient cause for rejection of the units.

C. A thirty-day operating period of the pumps will be required before acceptance. If a pump performance does not meet the Specifications, corrective measures shall be taken or the pump shall be removed and replaced with a pump which satisfies the conditions specified. All test procedures shall be in accordance with Hydraulic Institute Standard ANSI/HI 11.6 *Rotodynamic Submersible Pumps for Hydraulic Performance, Hydrostatic Pressure, Mechanical, and Electrical Acceptance Tests*.

D. Provide, calibrate and install all temporary gauges and meters, shall make necessary tapped holes in the pipes, and install all temporary piping and wiring required for the field acceptance tests. Written test procedures shall be submitted to the Engineer for approval 30 days prior to testing.

3.5 TRAINING

A. A factory representative shall provide a minimum of eight (8) man-hours of training to the Owner's operations staff concerning the recommended operation and maintenance of the equipment. Training shall be performed after substantial completion of the project with the use of operating equipment.

END OF SECTION

PRE-BID MEETING MINUTES

RE: Town Branch Wet Weather Storage Facility
LFUCG Bid # 137-2014

MEETING DATE: Date: September 11, 2014
Time: 10:00 AM

LOCATION: 125 Lisle Industrial Avenue; Suite 180 (Tate Building)

PRESENT: Refer to attached sign-in sheet

On this date, the Pre-Bid Meeting was held for the above referenced project. Following is a summary of the topics discussed:

Introduction and Responsibilities

1. Owner's representatives: LFUCG DWQ
   Mark Fischer, PE, (Project Manager) **Owner's point of contact during construction**
   Vernon Azevedo, PE (Remedial Measures Program Director)

2. Engineer's representatives: GRW Engineers, Inc.
   Joe Henry, PE, (Project Manager), **Main point of contact during construction**
   Kurt Zehnder, PE, (Project Engineer)

3. LFUCG Division of Purchasing:

   Sondra Stone (Purchasing) sstone@lexingtonky.gov **Main point of contact during bidding process**
   Marilyn Clark (DBE Participation)

4. Richard Walker, P.E., TetraTech – LFUCG Stormwater Program Manager

5. The work is entitled the **"Town Branch Wet Weather Storage Facility".** The project consists of flow diversion and pumping facilities for up to 56 MGD of wastewater flow and 22 MG of wastewater storage.

Bidding Requirements

1. All bidding questions are to be submitted to Sondra Stone sstone@lexingtonky.gov

2. All verbal instructions must be followed by written documentation. Verbal instructions are not binding by the contract.

3. Last day for questions shall be September 17 at 4:00 p.m.

4. Bid Opening: September 25, 2014 @ 2:00 pm @ LFUCG's Division of Purchasing (200 East Main Street; 3rd Floor).

5. Substantial Completion is 583 calendar days from Notice to Proceed.

6. Liquidated Damages are $1,000 per day.

7. MBE/WBE Requirements – Good Faith Efforts

8. KIA Fund A State Revolving Loan Program – Davis-Bacon and State Wage Rates

9. Construction Cost - $22,000,000 to $27,000,000

Stormwater – Richard Walker, P.E., Tetratech, Inc.

1. Richard Walker of TetraTech provided a handout and discussed the stormwater requirements during the construction phase for the project. The Contractor shall abide by the LFUCG requirements for stormwater.

Hydraulic Capacity Review – Joe Henry, P.E., GRW Engineers, Inc.

1. WWTP Wet Weather Capacity – 70 MGD

2. Ultimate projected 2030 Peak Daily Flow – 126 MGD

3. Projected Required Wet Weather Storage – 44 MG

4. Projected Excess Peak Flow Pumping – 56 MGD

5. This project is for construction of Phase 1 – 56 MGD Pumping – 22 MG Storage

Project Review – Joe Henry, P.E., GRW Engineers, Inc.

1. 8 Structures

2. 5 Flow Diversion Structures

3. 56 MGD Submersible Style Pumping Station

4. 22 MG Prestressed Concrete Tank

5. Tank Drain Flow Control Vault

6. Site Grading – Excess Materials Spoiled Onsite

7. Site Piping

8. Temporary Bypass Pumping and Flow

Discussion Items

1. Prestressed ConcreteTank Foundation Materials. The foundation of the tank was discussed and 30 pictures shown of the typical materials. Photographs will be attached to Addenda #2.

2. No earthen materials to be moved offsite. Due to the contaminants in the soil, the earthen materials shall be disposed of onsite.

3. Rock larger than 12" to be disposed of properly. All rock greater than 12" in diameter will be removed from the site. The Contractor may elect to crush the rock and/or concrete. The rock socket material was discussed that will require crushing or hauling.

4. All debris – steel, wood, other to be disposed of properly

5. Temporary Bypass Pumping and Expected Flows. An exhibit of the flows was provided and included in Addenda #2. The LFUCG will leave the methodology of construction up to the Contractor.

6. Lisle Road Entrance was discussed. The need to close this entrance at the discretion of the Contractor is understood. LFUCG is presently attempting to obtain an emergency exit from the WWTP at another location. Look for further details in an upcoming addenda.

7. Existing KU Power adjacent to the road. The existing power poles and powerlines adjacent to the road are the permanent power supply for the project. Contractor shall be responsible for completing work. Temporary relocation is certainly an option. The power supply is the auxiliary backup power for the WWTP.

8. Temporary Piping and Construction Methodology of Diversion

Addendum No. 2 Review – Friday, September 12, 2014

1. Drilled Shafts - 6' Rock socket is required

2. Contractor shall provide Builder's Risk Insurance

3. A Railroad Protective Liability Policy will not be required

4. A Pollution Liability and/or Environmental Casualty Endorsement is required on the CGL policy for $1M/$2 aggregate.

5. The Erosion and Sediment Control Performance Bond - $100,000 limit

6. Umbrella Liability endorsement to CGL is $24,000,000.

7. CGL policy to be renewed for one year after completion of the project.

8. Tank drawings and specifications have been coordinated for accessories

9. The Site Grading Plan, C-0-103 is replaced. Earthen material to remain onsite.

10. Existing 54" Concrete Pipe is Class IV, RCP.

11. Blasting was discussed. Further direction may be forthcoming.

12. Construction Methodology of Diversion was discussed. The Contractor shall be responsible for the methodology of constructing the project.

13. Pumping Equipment – Flygt, ABS, and Ebara – Bid Form to Be Replaced. Specifications revised.

14. Precon Corporation is an acceptable supplier of PCT's.

Questions and Answers:

1. The Lisle access gate can be closed at the Contractor's discretion for the time of construction. If the road is closed for longer than one week the emergency access road behind the WWTP to the apartment complex shall be installed and is incidental to the project. The Contractor shall also coordinate the road closure with the Lexington Fire Department.

2. The Contractors and subcontractors should sign up on the Economic Engine.

3. This is an EPA/KIA Funded project which has a 10% goal of MBE/WBE contractors/work on this project.

4. The 6 good faith efforts are very important to this project.

5. The Erosion and Sedimentation Control measures on this project were included in the handout by Richard Walker at the meeting.

6. An early submittal on construction methodology will be required as part of this project.

7. There is no borrow associated with this project.

8. There was a discussion about backfilling along buried structures. No large rocks shall be buried alongside buried structures which could possibly cause a point load on the structure.

9. The site, excavated pit photographs will be sent to all Contractors in Addenda #2.

10. There shall be no blasting within 25' of the existing concrete pipe.

11. The new power poles along the Lisle Ave entrance road are the back-up power for the WWTP. These electrical lines may need to be sleeved

12. The current pump selections are Flygt, ABS and EBARA, which has been substituted for KSB.

13. Is there a chance to move the Bid date? Not at this time.

14. Further direction on the mechanical screen price will be provided.

15. System Programming language in the specification was discussed. GRW will clarify.

16. Question/issues with installation of the mechanical screen in the diversion structure which live flow in half of the structure. It is the intent for the Contractor to resolve these details.

17. Everything is taxable on this project.

18. Spec Section 02531 is missing. GRW will resolve.

19. Sheet C-0-111 lists DIP being a pressure class different than what the specifications list. GRW to resolve.

20. The MJ fittings in the specifications state restrained joint should be used upon approval. Restrained joint is required for all pressure sewer.

21. What is the RPR overtime rate? Guidance will be provided.

Permitting, Inspection, and Enforcement Procedures for Erosion and Sediment Control on Capital Projects Division of Water Quality Remedial Measures Plan (RMP)

DWQ Project Managers: Mark Fischer, Doug Baldwin
DWQ Administrative Specialist Principal: Courtney Thacher
Construction Contract Administrators (CA): DWQ Consultants
Resident Project Representatives (RPR): DWQ Consultants
ESC Plan Reviewer: DWQ Stormwater Section – Amad AL-Humadi
ACCELA Data Entry: DWQ Compliance and Monitoring – Kevin Lyne
Permittee: Contractor

Permitting Procedures

1. Contractor shall develop a Stormwater Pollution Prevention Plan (SWPPP)/ESC Plan. A SWPPP/ESC Plan template is on the LFUCG website at http://lexingtonky.gov/index.aspx?page=863.

   On some projects, the construction contract documents may contain a SWPPP/ESC Plan prepared by LFUCG's staff engineer or consultant for purposes of establishing bid quantities. If the Contractor chooses to use this SWPPP to obtain the required permits, the Contractor takes sole responsibility for the content of the SWPPP and the implementation of the SWPPP during construction.

2. Contractor must submit an application for a Land Disturbance Permit to the LFUCG Division of Engineering before beginning project construction. A permit application is on the LFUCG website at http://lexingtonky.gov/index.aspx?page=863.

3. Contractor must submit a Notice of Intent (NOI) to the KY Division of Water (KDOW) and obtain KYR10 Permit coverage before beginning construction of any kind on the site. The NOI can be submitted electronically at: https://dep.gateway.ky.gov/eForms/default.aspx?FormID=7.

4. Contractor cannot start project work until they have obtained the LFUCG Land Disturbance Permit and KYR10 Permit coverage. In addition, Contractor will be required to post an ESC Performance Bond before starting construction. (Note: ESC will be bid as lump sum. The value of the bond will be equal to the lump sum amount.)

5. Amad AL-Humadi reviews the SWPPP/ESC Plan, confirms that the Contractor has obtained KYR10 Permit coverage, and authorizes the Contractor to install the BMPs.

6. Amad AL-Humadi inspects the installation of the BMPs and authorizes DOE to issue the LFUCG Land Disturbance Permit.

Contractor Responsibilities

Contractor shall:

1. Attend a pre-construction conference with LFUCG.
2. **Post the LFUCG Land Disturbance Permit and KYR10 Permit on the project sign at the site.**
3. **Follow the SWPPP/ESC Plan; revise and redline it as conditions change on the site.**
4. **Install and maintain BMPs to prevent sediment from washing into streets, storm sewers, and streams.**
5. **Conduct an ESC inspection at least once every 7 calendar days and within 24 hours after each storm event of 0.5" or greater.**
6. **Complete an inspection form after each inspection.**
7. **Stabilize the site within 14 days after reaching temporary or final grade.**
8. **For work within 25' of a stream, wetland, sinkhole, or inlet, stabilize the area within 24 hours after completing work.**
9. Maintain a 25' vegetative buffer strip along streams, wetlands, sinkholes, and inlets. The buffer zone is 50' adjacent to streams impaired by sediment. The list of impaired streams can be found at http://www.lexingtonky.gov/index.aspx?page=2677.
10. File a Notice of Termination with the KY Division of Water, LFUCG Division of Engineering, and LFUCG Division of Water Quality when final stabilization has been achieved. Final stabilization is defined as follows from KYR10:

    "All soil disturbing activities at the site have been completed and either of the two following criteria are met:

    a. a uniform(e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or
    b. equivalent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed."

11. Respond promptly to Verbal Warnings from the LFUCG inspector regarding correcting ESC problems.

Inspection Procedures of the RPR

RPR Monthly Field Inspection (two times a month if crossing a stream or in a floodplain)

1. **Ensure the LFUCG Land Disturbance Permit and KYR10 Permit are posted at the site**
2. **Ensure ESC Plan and SWPPP are available for review**
3. **Ensure Contractors' weekly inspection forms are available for review**
4. Walk the perimeter of the entire site
5. Note downgradient controls
    - Inspect silt fences, culvert/ditch outlets
    - Significant sediment discharges?
6. Walk around internal disturbed areas
    - Idle for more than 14 days . . . stabilized?
7. Inspect all inlets and ditches
    - Inlets protected, ditches stabilized?
8. Check out material/fuel storage areas
    - Spills? Leaks? Leaching pollutants?
9. Inspect concrete washout(s)
10. Inspect the construction entrance/exit
11. Inspect the vegetated buffer strip adjacent to streams (no disturbance allowed)
12. Complete the LFUCG monthly inspection checklist. Submit an electronic copy of the completed checklist to Kevin Lyne, the DWQ Project Manager, and Courtney Thacher. Kevin will enter it into ACCELA.
13. Inspect the site the next working day after a storm event of 0.5" or greater and complete the inspection checklist. Submit a copy to the DWQ Project Manager and Courtney Thacher.

Important things for the RPR to look for:

- Posted permits, plans, and inspection reports
- Graded areas stabilized with seed, mulch, blankets, mats, etc.
- Stabilized ditches
- Maintenance on silt fences and curb/drop inlets
- No mud on the street
- Trash and litter managed
- No disturbance in 25' buffer zone adjacent to streams, wetlands, sinkholes, and inlets. The buffer zone is 50' adjacent to streams impaired by sediment. The list of impaired streams can be found at http://www.lexingtonky.gov/index.aspx?page=2677.

Enforcement Procedures

1. The Contractor will be paid for erosion and sediment control based upon a schedule of values established within the Measurement and Payment section of the specifications (e.g. 25% paid once initial ESCs have been installed and LDP obtained, 50% paid in equal monthly payments for maintenance over the construction period, 25% paid for removal of ESCs and final stabilization). The intent of this provision is to pay the Contractor for monthly ESC maintenance only if the BMPs are functioning properly.
2. When the RPR identifies ESC deficiencies, the RPR shall issue a verbal warning to the Contractor to address the deficiencies. If the deficiencies are not addressed after two verbal warnings, the RPR shall notify the RMP Contract Administrator of the deficiencies. In some cases, the RMP Contract Administrator should be notified immediately. **Refer to the attached Compliance Assistance Guidance for RPRs.**
3. The RMP Contract Administrator shall prepare a written summary of the deficiencies referred by the RPR, and shall notify the DWQ Project Manager that additional enforcement measures are needed to achieve compliance.
4. The DWQ Project Manager shall use all available means in the contract to obtain compliance, including:
    a. stopping work
    b. withholding payment
    c. notifying the Contractor that LFUCG intends to initiate the process for declaring that the Contractor is in default of the contract and specifying a deadline for addressing the ESC deficiencies
    d. initiating the process for calling the ESC Performance Bond
    e. issuing NOVs

Compliance Assistance Guidance for RPRs on RMP Projects

Observed Condition	Verbal Warning to Correct within 3-5 days	Verbal Warning to Correct within 24 hours (See Note 1)	Notify RMP Contract Administrator Immediately
Construction Entrance to Public Road	Rock pad poorly installed/maintained	Rock pad not installed	
	Small amount of sediment on road	Rock pad completely covered with soil	
		Significant amount of sediment on road	
Unstabilized Areas	Flat inactive disturbed areas not stabilized in 14 days	Ditches not stabilized immediately after construction	
		Disturbed, inactive slopes not stabilized within 14 days	Disturbed, inactive slopes above waterways, wetlands, floodplains, critical areas not stabilized within 24 hours
Inlet Protection	Sediment needs to be removed around inlet protection	Curb inlet protection not in place or improperly installed	Discharge of concrete wash water, chemicals, other pollutants into inlets, streams, wetlands, etc.
Silt Fencing	Does not match ESC Plan but critical areas and roads are protected	Silt fence not installed per plan	
	Does not comply with Stormwater Manual but is functional	Blowouts have occurred with discharge of sediment to critical areas	
	Needs maintenance/repair, but is not near an inlet or surface water	Not trenched in, is not functional	
		Needs repaired in critical areas	
Soil Stockpiles	No perimeter controls, downstream BMPS in place	No perimeter controls, downstream BMPs not in place	
Permit Violations		Permit expired	Site not permitted
		Permit not posted or available on site	
		Contact name/phone not posted	
		No self-inspection reports; reports not on site	
		Self-inspection reports not current	
		ESC Plan / SWPPP not on site	
		Minor unapproved construction activities in 25 ft buffer zone around sinkholes, streams, wetlands, etc.	Major unapproved construction activities in 25 ft buffer zone around sinkholes, streams, wetlands, etc.
		Construction has started, BMPs not installed	

1. Refer issue to RMP Contract Administrator after 2nd Verbal Warning
2. Critical areas are streams, wetlands, sinkholes, and inlets

Attendees List - Pre-Bid Meeting

Town Branch Wet Weather Storage (TB WWS)

September 11, 2014, 10:00 a.m.

INITIALS	NAME	ORGANIZATION	PHONE #	E-MAIL ADDRESS
VA	Vernon Azevedo	LFUCG - DWQ	Office: (859) 425-2438 Mobile: (859) 285-9173	wazevedo@lexingtonky.gov
	Doug Baldwin	LFUCG - DWQ	Office: (859) 258-3474 Mobile: (859) 806-9700	dbaldwin@lexingtonky.gov
✓	Marilyn Clark	LFUCG - Purchasing	Office: (859) 258-3320	mclark@lexingtonky.gov
✓	Lee Czor	Thelen & Assoc.	Office: (859) 226-0761 Mobile: (859) 806-6257	lczor@thelenassoc.com
MWF	Mark Fischer	LFUCG - DWQ	Office: (859) 258-3415 Mobile: (859) 361-3334	mfischer@lexingtonky.gov
JLH	Joe Henry	GRW	Office: (859) 223-3999	jhenry@grwinc.com
TR	Tiffany Rank	LFUCG - DWQ	Office: (859) 425-2406 Mobile: (859) 327-9993	tiffanyr@lexingtonky.gov
MES	Mark Stager	LFUCG - DWQ	Office: (859) 425-2413 Mobile: (859) 333-0662	mstager@lexingtonky.gov
SS	Sondra Stone	LFUCG - Purchasing	Office: (859) 258-3324	sstone@lexingtonky.gov
✓	Richard Walker	Tetra Tech, Inc.	Office: (859) 514-8739	richard.walker@tetratech.com
KAZ	Kurt Zehnder	GRW	Office: (859) 223-3999	kzehnder@grwinc.com
DM	Don Myers	3D Enterprises	Phone: 272-6618	drm@3DKY.com
MK	Mike Klein	3D	Phone: 272-6618	MCL@3DKY.com ~~[illegible]~~.com
WRC	Will Cooksey	Caldwell Tanks	Phone: 251-709-5734	wcooksey@caldwelltanks.com
ZB	Zack Bloomfield	Garney	Phone: 615-350-7975	garneynashville@garney.com
JJ	Jeff Janson	Sunbelt Rentals	Phone: 859-393-7451	jeffrey.janson@sunbeltrentals.com
CM	Craig Myers	Hayes Drilling, Inc	Phone: 502-863-9555	cmyers@hayesdrillinginc.com
MJB	Michael Bailey	W. Rogers	Phone: 859-231-6290	MICHAELB@WROGERS.COM
JB	John Boesch	W. Rogers Co.	Phone: 859-231-6290	johnb@wrogers.com
MB	Boyd Rogers	Cobra Industrial	Phone: 859-410-7220	BoydR@CIRogers.Com
AZ	Andy Zalla	Dugan-Meyers.com	Phone: 502-849-4981	azalla@dugan-meyers.com
JS	Joe Strehl	J. Dwight Thompson Co	Phone: 859 351-0850	Joe@JDTCO.com
MR	Matt Rankin	Evapar	Phone: 859-983-6978	mrankin@evapar.com
JD	JD Varatta	Rawdon Myer	Phone: 513 965-6897	JDV@rawdonmyers.com
DK	Dave Kershaw	RMI	Phone: 859 608-4250	DaveKershaw@insightbb.com
TS	Tom Sauers	AdamsRobinson	Phone: 937 274-5318	arco@adamsrobinson.com
RD	Rick Davis	TEM Electric	Phone: 502-338-7273	rdavis@temelectric.com

Initials by your name indicates attendance.

Attendees List - Pre-Bid Meeting

Town Branch Wet Weather Storage (TB WWS)

September 11, 2014, 10:00 a.m.

INITIALS	NAME	ORGANIZATION	PHONE #	E-MAIL ADDRESS
PDM	Pete Miner	Precon	Phone: 3524749165	PDM@PRECONTRUCKS.COM
BFB	Brett Bohannon	Crom Corp.	Phone: 3528140135	bfb@cromcorp.com
BJS	Brad Senn	Hall Contracting	Phone: 502 367 6151	Bsenn@hallky.com
MJH	Michael Harris	ControlTouch Sys.	Phone: 502-452-9397	MHARRIS@ControlTouch_c
BB	BOB BEYERT	CI THORNBURG	Phone: 859 338-7829	bbeyert@cithornburg.com
JC	James Crosier	MAC Construction	Phone: 812 941-7895	jcrosier@macconstruction.com
OSY	OWEN S. YOCUM	JUDY CONSTRUCTION CO	Phone: 859-234-6900	owen@judyconstructionco.com
TL	Toni Levy	LEPS	Phone: 502-680-3039	tl@tonilevya.com
LH	Larry Holder	LEPS	Phone: 502 680 3039	LH@levyeps.com
MB	MATT BARKER	Thelen	Phone: 226-0761	mbarker@thelenassoc.com
LJC	LEE CZOR	Thelen ASSOCIATES	Phone: 226-0761	lczor@thelenassoc.com
TAW	Tom Wood	Pace Contracting LLC	Phone: 812-283-5784	tomwood@pacecontracting llc.com
RR	Rick Reynolds	Gorman Pumps	Phone: 304 984 0200	Rick.Reynolds@xylemine.com
BH	Billy Holiday	SMITH CONTRACT	Phone: 502 839-4196	bh@sci82.com
MR	MikeRobinson	McKinney Drilling	Phone: 502-955-8474	Mrobinson@McKinneydrill.com
ARM	Andrew Proffitt	McKinney Drilling	Phone: 502955[illegible]	aproffitt@mckinneydrilling.com
	Tim Condo	Harrod Concrete	Phone: 254 0526	TimCondo@HarrodCo.com
	Bert VanHorn	"	Phone: 502-35[illegible]	bertvan4@harrodco.com
SJ	STEVE JUDY	Judy CONST, CO	Phone: 8592346900	SJudy@JudyCONSTRUCTIONCO.com
GJ	Greg Johnson	Building Crafts, Inc	Phone: 8597819500	gJohnson@buildingcrafts.com
BTM	Brad Miller	Building Crafts, Inc.	Phone: 859 781 9500	bmiller@buildingcrafts.com
AW	Andrew Wright	imi	Phone: 859 5097174	andrew.wright@irvmat.com
	Bret King	imi	Phone: 859221 5367	bret.King@irvmat.com
JEB	Lester Boyd	Lestar Inc.	Phone: 859 608-9926	lester@lestarinc.com
JAH	JEREMY HINES	SHOOK CONSTRUCTION CO.	Phone: 937 276-6666	jhines@shookconstruction.com
			Phone:	
			Phone:	

Initials by your name indicates attendance.

Addendum 3

Lexington-Fayette Urban County Government
DEPARTMENT OF FINANCE & ADMINISTRATION

Jim Gray
Mayor

William O'Mara
Commissioner

ADDENDUM #3

Bid Number: **#137-2014**

Date: September 16, 2014

Subject: Town Branch Wet Weather Storage Facility

Address inquiries to:
Sondra Stone
(859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following clarifications to the above referenced Bid:

Q&A cutoff has been extended to September 23, 2014, 4:00 pm.

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged.
This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: _____

ADDRESS: _____

SIGNATURE OF BIDDER: _____

Addendum 4

Lexington-Fayette Urban County Government
DEPARTMENT OF FINANCE & ADMINISTRATION

Jim Gray
Mayor

William O'Mara
Commissioner

ADDENDUM #4

Bid Number: **#137-2014**

Date: September 22, 2014

Subject: Town Branch Wet Weather Storage Facilities

Address inquiries to:
Sondra Stone
(859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following clarifications to the above referenced Bid:

	Questions	Answers
1.	Specification Section 01010, 1.13, paragraphs B & C address the blasting requirements in close proximity of the existing 54" sanitary sewer. Paragraph B requires that a 4' wide "air gap" trench, be excavated 2' deeper than the required blast elevation. The invert elevation of the existing 54" concrete sanitary sewer is ~903.50. The required blast elevation of the new pump station is ~883.00, so... the 4' wide "air gap" trench would have to be pre-excavated to elevation ~881.00, which is 22.5' below the invert elevation of the existing 54" sanitary sewer. Obviously, a significant portion of the depth of the "air gap" trench would be in rock (~21') which would have to be mechanically fractured, for removal. Paragraph C states that no blasting will be allowed within 25' of the 54" sanitary sewer. The "scaled" dimension between the south side of the 54" sanitary sewer and the north edge of the pump station slab-on-grade, at elevation 883.00, appears to be less than 10'. Therefore, based on these 2 criteria for blasting in close proximity to the 54" sanitary sewer, it appears that most of the pump station rock fracturing will have to be performed mechanically. Since there appears to be serious concern, and rightly so, on the part of the Owner & A/E regarding blasting in close proximity to the existing 54" concrete pipe,	No changes to the specifications.

	that has been in the ground +25 years and whose condition is unknown, we recommend that mechanical rock fracturing be required for the entire pump station excavation. By mandating this, the concern over potential blast damage to an old concrete pipe, of unknown condition, is eliminated along with the need for the "air gap" trench and the resultant cost.	
2.	Please refer to Plan Sheet C-0-402 and the existing 36" DI force main and advise how many lift stations in the collection system feed this force main and which ones they are. Is there any period of time ie. (1 hour, 4 hours, etc.) that there can be an outage on this force main during a dry, low flow weekend night by pumping the wet well or wells empty in an existing lift station or stations in a coordinated effort?	The LFUCG operations staff will accommodate the Contractor to minimize flows, pump down wet wells, and provide nighttime assistance, however, the LFUCG cannot guarantee periods of time that there can be an outage on this force main.
3	Please refer to Plan Sheet C-0-402 and the existing 36" DI force main and advise how many lift stations in the collection system feed this force main and which ones they are. What can be expected in the way of average flow per day (MGD) in normal weather conditions and what is the wet weather flow (MGD) for the 36" force main?	Refer to Addenda No. 1 concerning the historical flows received at the Town Branch WWTP. The flows in the 36" FM vary greatly and are unmeasured. Four existing pump stations discharge into the 36" force main, North Elkhorn, Deep Springs, and Dixie. In addition, the Lower Cane Run force main will be tied-in at some point.
4	Please refer to Plan Sheet C-0-402 and the existing 54" Concrete Gravity Sewer and advise when the low flow periods are and what flows can be expected during those low flow periods. What can be expected in the way of average flow per day (MGD) and what is the wet weather flow (MGD) for the 54" gravity sewer line?	Low flow periods cannot be guaranteed. Guidance on historical flows was provided in Addenda No. 2.
5	Please refer to Plan Sheet C-0-402 and the existing 54" Concrete Gravity Sewer and advise when the low flow periods are and what flows can be expected during those low flow periods. In the event of a major rain event where does the existing 54" Gravity Sewer currently backup to and to what elevations in the existing manholes nearest the plant?	Guidance on historical flows was provided in Addenda No. 2. Overflows have occurred in the 54" behind the stockyards, rim elevation ±912.0. Actual elevations of surcharge are unknown.

6	Also on Plan Sheet C-0-402 please advise if all of the 54" DI temporary bypass line will have to be removed and backfilled or if some of it can be left in place with a concrete plug installed on the open end of the pipe.	All temporary bypass piping must be removed. See Addenda No. 2.
7	Please refer to Plan Sheet C-8-101. It is unclear if the intent is to cut a section out of the existing line and construct the Flow Control Vault or to construct the Flow control vault around the existing pipe and utilize a mega-flange or similar product on the downstream side of the valve on the existing pipe. Please advise.	Direction has been provided in Addenda No. 2 concerning construction methodology of these vaults. The Contractor will have the flexibility in construction methodology. A dismantling joint will be installed. An EBAA Iron Megaflange type restrained joint connection will be required on each end of the pipe cut to secure the flange to the pipe. This item will be addressed in a future Addendum.
8	Please refer to Plan Sheet E-0-101 Site Electrical Demolition Plan. It is noted that the main overhead primary power adjacent to Lisle Industrial Road plant entrance on the north end of the site does not demo or relocate. This will significantly impact the construction of the Flow Diversion structures and related buried piping. It appears that there are (2) two power poles that will be impacted by the new below grade construction in this area. One is in very close proximity to the new Structure 2 – 36" Force Main Receiving structure and Structure 1 – 36" Diversion structure. It is very unlikely this area will accommodate shoring to support the power pole. Please consider including an allowance for the Electrical Utility Company to install a new power pole some +/- 40' to the east out of the footprint of the area that will be impacted by this deep excavation. Additionally the next pole to the west of this one will also be impacted by a deep pipe trench excavation. It would be appropriate to include in the allowance a provision to relocate this pole some 45'-50' to the west to get it out of the area where it will be severely impacted by the deep trench excavation in close proximity of the pole.	An allowance for temporary relocation of overhead electric near the pump station will be added to the bid schedule for $20,000. This item will be addressed in a future Addendum.

9	Would it be acceptable to abandon in place a portion of the temporary 54" piping?	No, the temporary 54" sewer shall be removed once the 54" Diversion Structure is in service. (No action required)
10	What is the Wattage and Type of "Shoebox" pole light fixtures in Keynote #10 on Sheet E-0-101?	A 400 watt metal halide shoebox fixture is assumed. Actual fixture is unknown. Contractor shall price accordingly. No addenda item.
11	Where is Keynote #9 to be located on Sheet E-0-101?	Keynote 9 on E-0-101 no longer applies and should be changed to "not used". (See addenda item.)
12	What is the distance from the Existing Handhold to the Control Room Plant Fiber Backboard?	Up to 550 LF.
13	General Structural Note 13.a, on Plan Sheet S-0-001 states that construction joint spacing for foundation slabs, slabs on grade and slabs retaining liquids shall be ~45 +/- feet, placed in a checker board pattern. Please confirm that this requirement does not apply to the storage tank structural floor slab. If not, please advise what the criteria is for construction joints in this slab.	Construction joint requirements, as shown on Plan Sheet S-0-001 do not apply to the floor slab of the prestressed concrete tank. Construction joint layout and concrete placement sequence for the slab of the storage tank shall be part of the delegated engineered design and submitted for approval. Should continuous concrete placement design be considered for the entire slab, the Contractor shall provide affidavits from each of the concrete material suppliers that all materials and deliveries will be available for the continuous period of placement.
14	Specification Section 13201, 1.04, D states that concrete testing for the tank concrete is to be paid for by the Contractor. This is contrary to provisions of Specification Section 01400 – Quality Control, which states that these services will be paid for by the Owner. Please confirm that the Owner will pay for the tank related testing as well.	All concrete, shotcrete, geotechnical, and pavement density testing will be performed by the Owner. All other testings, as required, will be performed per the detail specification.
15	Specification Section 13201, 1.05, B identifies items that must be submitted by the tank construction companies, with their bids, to the General Contractors. Please confirm that the successful General Contractor can submit a copy of this information to the Engineer after the bid.	Post bid submittals for items for the prestressed concrete tank and other items are acceptable. However, these may be required prior to the award of the contract. See addenda.
16	Specification Section 13201, 1.07, B, 4 references a "future dome". It is our understanding that the dome is to be included in this project. Please confirm.	The dome is included. (See addendum item below.)

17	Specification Section 13201 requires the tank construction company to be responsible for the entire tank design, including the structural floor slab; however, based on the details shown on Plan Sheet C-5-302, the structural floor slab appears to have already been designed. Please clarify if the tank construction company is to design the floor slab or if the design shown in the project plans is to be used.	The prestressed tank company is delegated the design of the entire tank system, with exception of the drilled shafts. The design of the floor slab is included in the delegated design. Minimum floor thicknesses shall be provided for in the specifications and as shown on the drawings. Any steel indicated in the drawings is for informational purposes and is not intended to be final design. See addenda item.
18	Specification 13201, 2.10, B states the requirement for an exterior spiral staircase but states that the staircase is not to be provided by the tank contractor. We have found no requirements for this staircase on the applicable plan sheets… only an exterior ladder shown on Plan Sheets C-5-301 & C-5-508. Please clarify if the specified spiral staircase is required in addition to the ladder.	No exterior spiral staircase. Addressed in addendum no. 2.
19	We have found no details of the existing concrete sections that are to be demolished by the Contractor. The Methane Tank Foundation is of particular concern as we are uncertain as to what buried foundation concrete may be present and have to be removed. Additionally, we've found no information on the existing building foundations (footings/stem walls), slabs-on-grade or details of the existing Vactor Pad structure. Please provide the necessary information or provide the parameters that we may base our bid on.	No additional information is available on the structures or foundations. Foundations to be completely demolished at no cost or scope to the Owner.
20	Keynote 4 on Plan Sheet C-0-102 seems to indicate that the demolition of the large existing metal buildings is not in this contract and will be performed by others. Please confirm this and, if so, please also confirm that everything above the existing floor slabs will be removed by others prior to issuing the Notice to Proceed for this project.	The three large metal building superstructures will be demolished prior to the start of the project. All floor slabs, foundations, small red storage building, gas sphere and other associated features will remain for the Contractor to demolish as a part of this contract.

21	Specification Section 02300, 3.06, B indicates that payment for field density tests shall be by the Contractor. This is contrary to the provisions of Specification Section 01400 – Quality Control, which states that these services will be paid for by the Owner. Please confirm that the Owner will pay for the field density testing.	All field density testing will be performed by the Owner. See addenda.
22	This is a follow-on question to our Question 2-8. The existing OHP lines, located on the south side of the Lisle Industrial Ave. entrance road, that are not shown to be removed, will create significant crane safety issues and resultant costs to work within certain minimum distances of these power lines. Please consider if these OHP lines can be de-energized or relocated, by the utility company. If not, please consider having the utility company install insulators on all power lines to remain along the south side of this plant entrance road.	See question number 8 response.
23	Specification Section 02300, 3.03, D indicates that excavations for structural slabs on grade shall extend 2 feet below the bottom of the slabs and be refilled with 18" of suitable fill material and 6" of porous fill material. Please confirm how these requirements apply to the new wet weather storage tank. Since the tank is supported by drilled shafts, we would not expect the 18" of over-excavation and suitable fill refill would apply; however, we do believe that the 6" porous fill material will provide a more uniform surface to work from and help achieve final grades. It will also provide a clean surface in which to install the slab on grade reinforcing steel. Therefore, please confirm that the 18" slab on grade over-excavation /suitable fill refill does not apply to the storage tank slab on grade but the 6" over-excavation/porous fill refill does apply.	Excavating 2' below the bottom of the slab will not be required. This is not considered an "on grade" structure. Since this structure extends below the frost line, the over-excavation will not be required. Only the 6-inches of crushed stone will be required.

24	The EJCDC General Conditions specify the OWNER will provide builders risk insurance that includes coverage for the interests of contractors & subs (See Page 19, Article 5.06 Property Insurance, par. A.). Par. D of that same section on Page 20 states CONTRACTOR, Subcontractors, etc. are responsible for any deductibles on the owner-provided builders risk. Please clarify the amount of the deductible.	This item will be addressed in a future Addendum.
25	Paragraph E, and language contained in Attachment Number 12 BONDS AND INSURANCE, last paragraph, that mandates flood insurance that may be available MUST be obtained from the FEMA National Flood Insurance Program by either the Contractor or the Owner. We believe the Owner should purchase the flood insurance as part of the builders risk coverage. Please clarify the responsibility for any deductible on the flood policy, which is normally substantial, much higher that deductibles on the standard builder risk coverage for fire, wind, etc.	This item will be addressed in a future Addendum.
26	Also, par. E, will the owner include special coverage's on the builders risk. Hall requests that EARTHQUAKE at full policy limits be included, along with flood insurance if this option is available outside the National Flood Insurance Program.	This item will be addressed in a future Addendum.
27	Specification Section 02300, 3.05, A states that material for backfilling shall be as specified for suitable material. Considering the nature of the existing material present on this site, please advise if we will be allowed to utilize the excavated material that can remain on-site (earth and rock less than 10"; no debris) for backfill of the new WW Storage Tank access road and other misc. structures. Allowing this will result in significant savings to the Owner, by eliminating the need to locate and pay for suitable borrow material, to be delivered to the site, from some unknown off-site source.	All earthen materials must stay on site and be utilized in the fill. Rock/concrete materials greater than 12" must be removed from the site and properly disposed. All debris, including wood, steel, and other non-earthen, rock, or concrete materials must be removed from the site and properly disposed. The Contractor may "crush" rock/concrete greater than 12" in diameter to utilize onsite.

28	Specification Section 03350, 3.05 provides the Finish Schedule for cast-in-place concrete. Inner faces of walls of tanks, flow channels, wet wells, etc. are specified to receive a Type II – Grout Cleaned Finish. These surfaces are non-exposed surfaces and are usually only required to receive a rough form finish which is Type I. Please consider allowing a Type I finish for these surfaces.	No change to the specifications
29	Specification Sections 02540 & 02541 both reference polywrap encasement for buried ductile iron piping. Both sections also note to install polywrap where indicated on the drawings. We have found no requirements to use polywrap noted on the drawings. Therefore, we will assume that polywrap is not required, unless advised otherwise by addendum.	Polywrap will be required for all ductile iron pipe and all ductile iron fittings. See addenda.
30	Please refer to the Bid Form page 00410-5, BID SCHEDULE for these questions: Item 3 - Mechanical Screen is indicated to be an allowance of $307,400.00, which is to be included in the bid. Please issue, by addendum, the Quotation from the manufacturer for this scope of work that is to be included in this Allowance and confirm that this is the same screen as specified in Specification Section 11252-Vertical Mounted Mechanical Screen.	The quotation and terms for the vertical mounted mechanical screen are provided. See addendum item below.
31	Please refer to the Bid Form page 00410-5, BID SCHEDULE for these questions: Item 2 - System Programming Service Allowance Lump Sum is indicated to be a lump sum amount of $120,000.00 which is to be included in the bid. Please provide a more definitive description of what this allowance covers so there is no duplication in the bid price submitted by the contractors.	This item will be addressed in a future Addendum.

32	Please refer to Plan Sheet C-4-301, Section 1 and note that the centerline elevation of the 42" pump discharge headed to the WW Storage Tank is 907.25. Also please refer to Plan Sheet C-5-502 which shows the centerline elevation of this same line at 914.67. As shown on the plan view of this line, on Plan Sheet C-0-401, the horizontal distance is less than 40 lf for this +7 vertical foot change in elevation. Please advise if additional 42" or 48" fittings are required to make this vertical elevation adjustment or if it is the intent to lower the elevation of the pipe under the tank. If lowering the elevation of the pipe at the tank is the option please advise if concrete encasement is required all the way up to the bottom of the tank floor slab.	Fittings have been added. (See addenda below)
33	Please refer to Plan Sheet C-0-105 and the Line 'A' Gravity Sewer Profile. In accordance with the Geotechnical Report, Boring B-8, which is in the proximity of this Gravity Sewer line, indicates there is fill material from existing grade down to approximate elevation of 911.0+/- at which point lean clay residual material is encountered. Please advise if the fill material encountered above elevation 911.0 (earth and rock <10"; no debris) can be used for pipe trench backfill above Zone 1. Specification page 02300-6 Paragraph 3.06 Compaction, subparagraph A., indicates that Field and Utility Trench Backfill under Sidewalks and Open Areas are required to be compacted to 90-100% density per ASTM D-698. This will be difficult to achieve utilizing the existing fill material from the trench excavation; however, if the 90-100% compaction in open areas is required the existing material will have to be spoiled on site and suitable borrow material, to achieve the compaction requirements, will have to be hauled in, at considerable expense to the Owner. Please advise as there will be considerable quantities involved due to the size and depth of this pipeline.	No borrow material is anticipated on the project. The Contractor shall place the full envelope of crushed stone around the pipe and then backfill existing material free of rock greater than 6" in diameter in 12" lifts and compact. Where rubble is utilized for backfill, it is understood proper density testing may not be possible.

34	Keynote 20, on Sheet C-0-104 states a retaining wall with integral guardrail will be placed on the west and south sides of the WW Storage Tank. We have found no guardrail detail shown for this in the drawings and no specification as to what product is to be used. Please provide details and a specification for the integral guardrail.	See replaced Sheet C-0-506 with guard rail details included on it. See addenda.
35	General Note 2 on Sheet C-1-101 calls for asphalt dampproofing to be coated on the exterior of the concrete structure. We have found no specification for dampproofing. Please advise what product is required for this application and also confirm that it is the Engineer's intention to only apply dampproofing to this structure.	Damproofing is required for the grade rings associated with Structure 1. Refer to the manhole Specification Section 02532.
36	Please refer to Specification Section 00600, Item 1.05D and confirm that the owner (LFUCG) will be providing the Builders Risk insurance coverage for the project, as we are unable to locate a requirement for the contractor to provide this coverage.	Refer to Addendum #2, Item #12, "Contractor is required to provide a Builder's Risk endorsement..."
37	Referencing Drawing S-5-301, the Spiral Bar for the drilled shaft reinforcing is detailed to be 4'-0" diameter. The drilled shafts are also shown to be 48" diameter, as detailed on Drawing S-5-101. Please advise what the diameter of the spiral bar should be to allow proper concrete cover.	Disregard the dimension on S-5-301. The Contractor shall detail and supply spiral steel to maintain 3" clear cover. See addenda.
38	Will the American Iron and Steel Act (AIS) be in place on this project? It is my understanding that this requirement is in place when SRF money is used to partially or fully fund a project and dictates that all iron and steel used on the project shall be of domestic origin. Please confirm.	The project is funded by the KIA Fund A, State Revolving Loan Fund for Clean Water. Buy American provisions will be required. (Title IV of H.R. 3547, Appropriations Act, January 17, 2014. See specifications.
39	What is the RPR overtime rate to be charged on this project?	$70/Hr. See addenda.
40	The MJ fittings referred in the specifications for sewage force mains states, ".where they are approved". What does this mean.	All sewage force main ductile iron pipe shall utilize restrained joint fittings, as specified. MJ fittings may be utilized on the non-potable water distribution piping.
41	Specification section 02531 is missing.	Delete specification section 02531 from the table of contents.

42	Sheet C-0-111 lists DIP being a pressure class different than what is required in the specifications.	All ductile iron pipe shall be Pressure Class 250 or greater.
43	Will the Contractor be required to obtain and pay for a building permit?	Yes, Contractor shall obtain the building permit.
44	Plan document C-8-101 shows a 36-inch plug valve with and electric operator in the flow control vault. Plan document I-3-101 shows the valve as V-1 and it appears as both manual control and positioning control. This valve is not shown in the I/O list, plan document I-0-006. Please clarify if the electric operator for valve V-1 needs to be provided with provisions to send and receive 4-20mA signals for positioning control or if the electric operator needs to be for open-close service.	The valve is shown on the network architecture drawing I-0-004 as V-1. I/O is via a Devicenet network. The valve will be modulated in automatic and will also be able to be manually positioned as written in the specifications. It is not for full open/full close service.
45	Plan document C-4-101 shows a 4-inch plug valve with and electric operator on the drain piping. This valve is also shown in I-4-103 and is labeled as V-2 but it does not appear on the I/O list. Please clarify if this electric operator needs to be prepared for positioning control via 4-20mA signals for positioning control or if the electric operator needs to be for open-close service.	This valve V-2 is a full open/full close valve, controlled on a Devicenet network to SCADA as shown on I-0-004. Signals from this valve are shown on I-4-103. Options A, D and E are required for this valve.
46	Specification section 11295, part 2.06 identifies options for the specified Limitorque operator. Please identify which of those options should be provided with the proposed electric operator	Provide as required by the drawings.
47	Specification 13201, 2.10.B refers to a spiral staircase. Drawings and details show an exterior ladder with a platform. Which is desired?	No spiral staircase. See addenda no. 2.
48	C-5-301 indicates a 30" SS dome pipe at the apex of the dome. We assume this may be for a future odor control duct connection. If so, are dome pads required to support the future duct? Spacing? Dimensions? Orientation?	A 30" SS dome pipe is required. No further information is provided.

49	A visual float operated liquid level indicator is shown to be mounted on the tank wall on sheet C-5-506, but not mentioned in the specification. These are not common in raw wastewater tanks and can be problematic. Please confirm whether this is a desired appurtenance.	A fiberglass liquid level indicator is not required. (See addenda).
50	Are non-critically silenced pumps allowed to be used for the bypass pumping system?	No restrictions on noise are required for the bypass pumping system.
51	If bypass system is designed for 50MGD when flow exceeds 50MGD, who will be responsible for the overflow? For instance, on 9-11-14 flow was 78MGD. In this case, the manhole would have overflowed.	Contractor shall be responsible for 50MGD of bypass pumping.
52	Will doghouse manholes be permitted for additional suction/discharge manholes for the 54" line bypass?	No
53	How many feet are we permitted to surcharge the suction manhole on the 54" line?	The invert of the manholes on the site are approximately 903.50. Allowable surcharge shall be to 910.00.
54	Can we use the upstream MH on the 54" line as an additional suction manhole and bury the discharge lines in the bluegrass stock yards parking lot? If so, will LFUCG have to get permission or will the contractor?	Utilization of upstream manholes on adjacent property is not permitted. If required, the Contractor shall obtain written permission from the Owner and a copy to the LFUCG prior to work initiating.
55	What is the exact inside diameter of the 54" suction manhole?	Not provided.
56	Please confirm that if a large slab of limestone is encountered in the fill zone that results in the drilling equipment not being able to advance greater than 2" in 5 minutes, this would not be considered for delay time/over-excavation.	Correct
57	The geotech report suggests potential for casing to remain in place where voids are present in the rock socket. Can a unit price for 48" casing left in place be added to the bid documents?	No
58	The seismic parameters in the tank spec should be changed to: Ss = .227 S1 = .088 Imp Fact = 1.25 Site Class = B	For the tank design, these parameters are acceptable.

59	Could you please clarify the Drilled Pier Spec. The Drilled Spec notes 4000 psi @ 28 days. However the Cast In Place specs are calling for either a Class A (4500psi) or Class B (3000psi) with noted W/C ratios. Please Clarify if 4000 psi has a W/C ratio or not on the Drilled Piers?	All concrete for the Drilled Shafts shall be 4,500 psi per specification section 03300. See addenda.
60	GRW has specified class 350 for non-pressure gravity sewer DIP. This may be an oversight. The concrete spec calls for manufacturer's minimum (spec 02540, 2.01, B, 3.C), but the ductile spec is much heavier and much more expensive than the ductile manufacturer's minimum. Furthermore, LFUCG/RMP has class 150 ductile in their system elsewhere, even on pressure force mains. Not sure if LFUCG has actually budgeted for class 350 given the corrosion protection is already covered by the Protecto 401 lining?	All ductile iron gravity sewer pipe shall be Class 250 or greater. See addenda.
61	For the buried yard piping, will you give prior approval to use MJ fittings with restraining glands? The specs call for "prior approval". MJ fittings with megalugs will allow greater ease of installation and field flexibility for the contractors, and will offer greater joint deflection to accommodate any settlement. MJ fittings with retainer glands are allowed on NPW lines per 02650, 2.01, F. Also, megalugs are used with MJ valves and MJ wall pipes, why not allow them for MJ fittings as well?	Mechanical joint fittings with ductile iron pipe restraints are acceptable on this project. EBAA iron (or equal) products will be acceptable for all mechanical joint valves, mechanical joint wall pipes and mechanical joint fittings. See addenda.
62	Key Note #5 – Will this be a sleeved tie-in or a wet tap? We are assuming the existing is 6". Please confirm both.	The Contractor will perform a dry tap on the non-potable water system. Size shall be incidental to the work.
63	Key Note #21 – please confirm size of existing sewer lateral to be capped.	Unknown. Size shall be incidental to the work.
64	Key Note #27 – please confirm size of existing water main to be capped.	Unknown. Size shall be incidental to the work.
65	Do you want the Air Release Assembly to be installed on existing 30" FM by cutting in a 30x6 Flanged Tee with flanged x plain end pipes exiting vault, or a30x6 MJ tee, or a 30x6 wet tap?	Air Release Assembly shall be installed on the existing 30" force main with a 30"x6" MJ tee

66	Please refer to Plan Sheet C-0-111 and confirm the new force main interconnect pipe diameter and DIP material class identified in Keynote No. 12. It appears that we are to extend an existing 36" dia. DIP (North Elkhorn Force main) and tie it into an existing 30" PVC line (Cane Run Force main). If that is correct please advise where the transition from 36" to 30" diameter is to occur.	The entire new force main pipe shall be 30" Ductile Iron Class 250. The existing stub out near the 36"x30" tee on the North Elkhorn force main is 30" in diameter.
67	Please refer to Plan Sheet C-0-111 - Please advise how long the existing 36" DIP Sewer North Elkhorn Force main can be taken out of service with the Pump Station shut down during a low flow period. This will be necessary in order to not have to initialize a bypass pumping operation to tie-in the Cane Run Force main cross connect.	The North Elkhorn force main does not require a shutdown for the 30" connection. A 30" plug valve already exists on the 30" stub-out.
68	Please refer to Plan Sheet C-0-111 - Please advise how long the existing 30" PVC Sewer Cane Run Force main can be taken out of service with the Pump Station shut down during a low flow period. This will be necessary in order to not have to initialize a bypass pumping operation to tie-in the Cane Run Force main cross connect to the North Elkhorn Force main.	The Lower Cane Run force main is a manifolded force main receiving flow from Lower Cane Run Pump Station, Lower Cane Run 2 Pump Station and Sandersville may be shut down for up to 6 hours. Lower Cane Run Pump Station may be shut down for 1 hour max during nighttime hours only.
69	Please refer to Plan Sheet C-0-111 - There is an existing sanitary valve shown to be on the existing 36" DIP Sewer North Elkhorn force main that appears that it may be able to be used to isolate the new cross connection from the Cane Run force main. Please refer to the plan view. Advise if this valve is in fact there and on the branch line for this purpose. It is not shown in the Profile view.	A 30" plug valve already exists on the 30" stub-out and operates properly.
70	Please refer to Plan Sheet C-0-111 - Please advise if there is any constraint as to when this cross connection of force mains can be performed. Must the new WWSF be in service prior to this cross connection being completed?	See answer to question 68.

71	Please refer to Plan Sheet C-0-111 - Please refer to Keynote No. 11 and advise what MOT plan is referring to. Also, advise what the constraints are going to be as it relates to closing one entrance at a time to the LFUCG Regional Recycling Facility. Will one of the entrances be able to be closed for a week or two at a time in order to get the pipe laid across the entrance and the concrete entrance restored. There is a considerable amount of rock that will have to be mechanically broken and removed to install the pipe. This takes time.	Contractor shall provide Maintenance of Traffic (MOT) plan. It shall be the responsibility of the Contractor to provide adequate measures to protect and redirect pedestrian and vehicular traffic at the Recycling Facility driveways and along Thompson Road and Manchester Street. Signals and barricades shall conform to requirements of federal, state and local laws, rules, regulations, precautions, orders and decrees.
72	Please refer to Plan Sheet C-0-111 -Please advise what the section thickness of concrete is and what the reinforcing requirements are for the (2) two concrete entrances which appear to receive a lot of heavy truck traffic.	Concrete shall be the greater of 8 inches or the existing thickness. No steel reinforcement is required.
73	Please refer to Plan Sheet C-0-111 - Please advise what the operating pressure will be for the new cross connect force main for buried pipe testing purposes. Specifications require force main piping to be tested at 1.5 times the operating pressure in accordance with Specification section 02541.	Force main shall be pressure tested to 150 psi.
74	Discrepancies appear to exist with the radial dimensions shown on Plan Sheet C-5-302, Typical Pile Floor Section. Based on the radial dimensions denoted below the slab-on-grade, the outside radius of the tank slab-on-grade should be 134'-3". However, the dimensions denoted above the slab-on-grade do not add up to this. Starting at the radial dimension of 125'-10" there are 3 additional dimensions, denoted extending to the outside radius of the slab-on-grade, totaling +/-11'-8". These, added to the 125'-10" dimension, total +/-137.5', not 134.25'. We will assume that the dimensions denoted below the slab-on-grade are correct (R=134'-3") unless specifically advised otherwise by addendum.	See addenda.

75	Specification Section 02540 - Gravity Sewer Piping has a material reference for both ductile iron pipe and centrifugally cast fiberglass reinforced polymer mortar pipe. The specifications do not indicate where the FRP pipe is to be utilized. The drawings denote for the gravity lines to be ductile iron, as referenced by the notes for the line types at the Force Main Receiving Structures on Sheet C-2-101. However, it has been brought to our attention, by the ductile iron pipe manufacturers, that the 66" gravity line between the eastern Force Main Receiving Station and the Diversion structure is only available in FRP pipe. Please advise if this line can be sized as 64" ductile iron pipe, or if this particular run of gravity sewer is to be 66" FRP pipe.	64-inch or 66-inch gravity sewer pipe will be acceptable. See revised site plan, Addenda 2.
76	The detail for the flush hydrants on Sheet C-0-504, and their notation on Sheet C-0-104, do not note the hydrant inlet shoe size or the branch line size off the 6" NPW line that supplies the hydrants. There is no model number indicated in Specification Section 02517, other than M&H being noted as the manufacturer by the detail on Sheet C-0-504. Part 3.01 C appears to indicate the branch line and isolation gate valves as 2" diameter, and the outlet and branch pipe line appear to be similar in size when reviewing the detail of the hydrant on Sheet C-0-504. However, when researching M&H flush hydrants, the data sheets for the only available models of flush hydrants they produce denote these types of hydrants with a 6" MJ or FLG shoe inlet. Please confirm what size inlet shoe is to be provided for these hydrants, which will subsequently determine the branch line and valve sizes, or provide a specific flush hydrant model number that can be referenced.	All non-potable water mains to and around the tank are 6-inch. The flush hydrant leads, branch lines, valves, etc. are all 6-inch. The flush hydrant shoe shall be 6-inch mechanical joint.

77	Please refer to the note on Sheet C-5-303 in the center of the page in the 30" DIP Drain detail. This note also occurs on Sheet C-5-303 in the 48" DIP Future Overflow detail and on Sheet C-5-302 in the 48" DIP Overflow detail. The notes indicates that an extra mat of reinforcing steel in the same plane as the floor steel, #4 at 8" each way, extends 24" minimum into the 4" thick floor section. Please clarify the intent of the rebar installation at this location, as it is unclear what is meant by "4" thick floor section".	Delete the following note from C-5-303 in two locations, "Add an extra mat of resteel in same plane as floor steel, #4 at 8" each way. Extend 24" minimum into 4" thick floor section.". Also, delete the Typical Pipe Encasement at Footing detail in its entirety. See addenda.
77a	The Bid Form, Section 00410-10 #1.05, requires bidders to provide a Statement of Qualifications and lists certain additional information that may be required later upon request of the Owner. Specifications Section 00300 #1.04.D titled Documents Required of Contractor includes requirements that do not seem to be included in the Bid Form, such as sworn statements, percentage of completion disclosures for current projects and DBE participation levels for Subcontractors. Unless otherwise directed we will assume that the information requested on the provided Qualification Statement is the information required at bid time, and if additional information is required it will be requested at a later time by the Owner.	Any additional information required per Section 00300 #1.04 or Section 00410-10 #1.05k, beyond forms provided in the specifications, will be requested after bid opening.
78	The Bid Form includes in Section 00410-30 #1.15 a Workforce Analysis Form. Specification Section 00410-17, last paragraph, and Specification Section 00300 #1.16, as well as KRS 45.600 states that this information is to be submitted following the bid opening by the successful bidder. Further, Specification section 00300 #1.04.E lists this disclosure as an Optional disclosure if requested by Owner after the bid along with additional financial disclosures if necessary. Unless directed otherwise we will assume, based on the specifications cited, that submittal of this information within a reasonable period after the bid will be acceptable.	Section 00300 #1.04E makes no mention of these requirements being submitted following the bid opening. Section 00300 #1.16 states, "The successful bidder must submit with their bid the following items to the Urban County Government:" Section 00410-30 #1.15 Workforce Analysis Form must be submitted with bid.

79	The Bid Form includes in Section 00410-33 #1.18 a Debarment Certification, stating that all Contractors and Subcontractors shall complete this certification. Unless directed otherwise we will assume that, consistent with other SC certification requirements for this project, this certification may be submitted within a reasonable period after the bid.	Section 00410-33 #1.18 Debarment Certification is to be submitted with bid.
80	Specification Section 01120 #1.13 indicates the requirements for the 1 year Guaranty Period, which language seems to leave in question the start date of the Guaranty period. Industry standard General Conditions section 00700 #13.07 provide for the Guaranty period to begin upon Substantial completion. Please confirm the Guaranty period will begin at Substantial Completion versus upon Final completion or some later date.	Guarantee period shall began upon Substantial Completion date.
81	Shotcrete testing. Consider removing the requirement for air and slump tests for the shotcrete. The air dissipates upon nozzling and the slump is controlled by the ability to pump it and keep it on the wall (self limiting to stay within spec).	The slump test for shotcrete has been removed. See addenda.
82	Specification Section 02540, Paragraph 2.01.B references "Centrifugally Cast Fiberglass Reinforced Polymer Mortar Pipe;" we notice references to "DI Gravity Sewer" and "Gravity Sewer" but no reference to any "Fiberglass Gravity Sewer." Which lines, if any, have a fiberglass pipe requirement or fiberglass pipe option?	The Contractor may choose between Fiberglass Pipe or Ductile Iron Pipe for gravity sewer applications as shown on Construction Sheets C-0-104 and C-0-401. Under all structures, Restrained Joint Ductile Iron Pipe pipe and fittings are required. See addenda.
83	If fiberglass pipe is allowed for certain lines as an option to DI pipe, should the bedding and backfill requirement be more stringent for the more flexible fiberglass option? Please advise if you prefer to discuss further.	The bedding and backfill requirements are the same for all pipe materials and are detailed on Construction Sheet C-0-503, Standard Pipe Laying Details.
84	Will line called out on drawing C-0-401 as 66" DI be changed to 64"? (66" nominal size pipe is unavailable as DIP.)	Yes. 64-inch or 66-inch gravity sewer pipe will be acceptable for Construction Sheets C-0-104 and C-0-401.

85	Where fittings are required for gravity sewer lines are MJ joint fittings required? If so, is restraint – like EBBA Iron Megalugs, SIGMA One-Loks, or approved equal - required at the pipe-to-fitting connection?	Generally, fittings are not provided on gravity sewer lines. Ductile Iron restrained Joint fittings are required under all structures. Other restraint systems will also be allowed, such as EBBA Iron, or equal, etc. See addenda.
86	Is there a material option (other than DIP) for the 54" (Line C on Sheet C-0-401)?	Should short sections of concrete pipe be required to tie into an existing structure, similar RCP pipe will be allowed. No concrete pipe will be accepted for the full run of pipe, structure to structure. Ductile iron and fiberglass gravity sewer pipe will be allowed. See addenda.
87	Referencing Sheet C-0-401 showing a 48" restrained "tank overflow line;" where there is a 48" 22.5° bend indicated, shall we provide a 48" Flex-Ring fitting (or equal) – along with 48" Flex-Ring pipe to satisfy the restraint requirement?	All fittings shown on Construction Sheet C-0-104 and C-0-401 shall be ductile iron mechanical joint fittings with ductile iron pipe restraints. The American Flex Ring fittings or equal will also be acceptable. See addenda.
88	The 30" force main tie-in line referenced on drawing C-0-111 indicates the use of Pressure Class 150 for pipe and "megalugs" for fittings, referencing Specification Section 02531. It appears that Specification Section 02531 is not included with this project manual; instead Specification Section 02541 is provided requiring class 250 for 14" and larger pipe and no mention of "megalugs."	All force mains shall be Ductile Iron Pipe, Pressure Class 250 or greater and all fittings shall be ductile iron restrained joint fittings. Please see Specification Section 02541, Sewage Force Mains. There is no Specification Section 02531 associated with this project. See addenda.
89	We understand, per details in Section 02541 and in discussion in the recent pre-bid meeting, that only push-on, restrained joint fittings - such as AMERICAN Flex-Ring, US Pipe TR-Flex, or equal - are to be utilized for the larger diameter (30" and larger) pressure sewer force mains. To remain consistent with that requirement, shall the 30" 90°, 22.5°, and 11.25° bends be push-on, restraint joint types?	Per the specification and drawings, all force mains and fittings shall be restrained joint.

90	Additionally, we notice a 6" force main line on Sheet C-0-401. Assuming this is a DI force main, please note that AMERICAN is unable to provide push-on, restrained joint fittings for fittings less than 16" in size – and I believe we may not be alone in that capability or lack thereof; because of the small size and relatively low pressure with a sewer force main, we suggest the use of 6" gasketed restrained joint (like AMERICAN Fast-Grip, or equal) for the 6" pipe-to-pipe joints and MJ fittings with MJ restraints like EBBA Iron Megalugs, SIGMA One-Loks, or approved equal. Would you accept that option?	A restrained joint system for pipe and fittings will be required for all force main and non-potable water main.
91	Paragraph 2.03.A of both of the specifications mentioned above indicate, "*Polyethylene encasement shall be installed where indicated on the drawings.*" We have been unable to find any reference to a requirement for this on the plans; is there an area where you are requiring "polywrap?"	All Ductile Iron Pipe and all mechanical joint ductile iron fittings installed on this project shall receive Polyethylene encasement. See addenda.
92	With reference to the 6" non-potable waterline on Sheet C-0-401, specification Section 02650 references both DI and PVC pipe; are both allowed?	Specification Section 02650 references both ductile iron pipe and polyvinyl chloride plastic pipe so yes, both ductile iron pipe and polyvinyl chloride plastic pipe are acceptable.
93	Are any of the pipe and / or fittings required to be restrained on the non-potable water line? If so, we would recommend the use of AMERICAN Fast-Grip, US Pipe Field-Lok, restrained joint gaskets – or equal – for pipe-to-pipe joints and MJ fittings with EBBA Iron Megalugs, SIGMA One-Loks, or approved equal for MJ joint restraints; would that be acceptable?	Yes, all the fittings of the non-potable water main are required to be restrained and polywrapped. See pipe restraint tables on Sheet C-0-504. Per the Flush Hydrant detail shown on Construction Sheet C-0-504, Standard Force Main Details, all the valves and fittings associated with the flush hydrant lead/branch main require DI or PVC pipe restraints such as EBAA Iron Megalug or equal. Yes, the use of AMERICAN Fast-Grip, US Pipe Field-Lok, restrained joint gaskets – or equal is acceptable.
94	Per Addendum No. 2, Item 14 (Page 12), two tank construction companies are currently deemed acceptable (Crom and Precon). As such, will the submittal requirements outlined in Section 13201, Paragraphs 1.05. B., 1. and 2., not be necessary for these companies? No documentation is to be submitted with our bid, correct?	No documentation will be required for the bid from the Prestressed Tank Manufacturers. Post bid submittals are acceptable.

95	Sheet C-0-103 indicates two locations for "Retaining Wall with Integral Guardrail". Nowhere else in the drawings or specifications are details or other pertinent information pertaining to the intended guardrail system found. Please provide additional guidance for this feature.	See addenda and Sheet C-0-506 for guardrail system detail.
96	Can some or all of the affected portions of the existing 54" gravity sewer line be left in place and reused as part of the new system?	The 54" gravity sewer between structure no. 2 (36" force main receiving structure) and structure no. 7 (54" gravity return flow structure) shall be replaced. No existing pipe may remain.

1. DRAWINGS
SHEET NO. C-0-104, C-0-401

Each of these drawings are replaced. The pump station discharge pipelines have been changed and added fittings to allow for the vertical elevation change between the valve vault and the pipeline under each tank.

2. DRAWINGS
C-0-504, RESTRAINED JOINT DETAILS

Replace Sheet C-0-504 in its entirety with the included sheet. This sheet includes the restrained joint details.

3. DRAWINGS
C-0-506, RETAINING BLOCK WALL DETAILS

Replace Sheet C-0-506 in its entirety with the included sheet. This sheet includes the retaining wall guardrail details.

4. DRAWINGS
SHEET NO. C-5-302

Replace Sheet C-5-302 in its entirety with the included sheet. This includes revisions to the elevation of finished floor, transition radius elevations.

Add the following to the notes:

"2. The prestressed tank company is delegated the design of the entire tank system, with exception of the drilled shafts. The design of the floor slab is included in the delegated design. Minimum floor thicknesses shall be provided for in the specifications and as shown on the drawings. Any steel indicated in the drawings is for informational purposes and is not intended to be final design."

5. **DRAWINGS**
SHEET NO. C-5-302

The internal diameter of the prestressed concrete tank is 260' (130' radius). The dimensions shown in the Typical Pile Floor Section are not consistent. The outside radius of edge of the drilled shaft floor is 134' – 3". Thickness indicated are considered minimum thicknesses. All other dimensions are delegated design to the prestressed tank manufacturer and details shall be provided with submittals.

6. **DRAWINGS**
SHEET NO. C-5-303

A. Delete the Typical Pipe Encasement at Footing Detail in its entirety.

B. Delete the following note in two locations, "Add an extra mat of resteel in same plane as floor steel, #4 at 8" each way. Extend 24" minimum into 4" thick floor section."

7. **DRAWINGS**
SHEET NO. C-5-506

No fiberglass liquid level indicators are required. Delete all references the indicator from this and all other drawings.

8. **DRAWINGS**
SHEET NO. C-8-101

A. Add the following to the General Notes:
2. Contractor shall remove a section of the existing 36" force main in order to install the flow control valve.
3. The valve and dismantling joint shall be restrained in two (2) locations with utilization of a Megaflange or equal.

9. **DRAWINGS**
SHEET NO. S-5-301

Change the dimension diameter of the spiral bar from, "4'-0"", to: (4'-0" less 3" cover on each side"

10. **DRAWINGS**
SHEET NO. S-9-101

Electrical Building Slab/Foundation Plan, replace the note on the long dimension with the following new note:
"48'-0" VERIFY – ACTUAL BUILDING SIZE PLUS 4'-0" EACH END"

11. DRAWINGS
SHEET NO. E-0-101

Delete keynote 9 in its entirety and replace with "not used".

12. DRAWINGS
SHEET NO. E-0-502

Isometric View of Proposed Weatherproof Housing, change overall length to 40'-0" nominal.

13. DRAWINGS
SHEET E-0-503

Control Circuit No. 1, it is the intent that the seal leak signal and bearing and motor winding overtemperature alarm signals be transmitted to the plant SCADA system through the ETHERNET connection to the drive. Provide whatever I/O or optional relays and wiring as required to allow for this monitoring.

14. DRAWINGS
SHEET E-9-101

Electrical Building Power Plan – Follow the Electrical Building Manufacturers accepted shop drawings for layout and fitup. With the change from MCC VFD lineup to cabled VFD's, the equipment layout will potentially be different, requiring conduits to enter and exit from different locations than shown. Overall length will potentially increase to 40'-0" maximum.

15. SPECIFICATIONS
TABLE OF CONTENTS

Delete Specification Section 02531 from the table of contents.

16. SPECIFICATIONS
SECTION 01025, MEASUREMENT AND PAYMENT

Delete paragraph 1.05.C.1 in its entirety and replace with the following:

"The equipment allowance shown in the Proposal Form of $307,400. represents the pricing provided by the equipment supplier as negotiated by the Owner for the supply of goods and services related to the equipment and as specified in the manufacturer's proposal for the work. The proposal for the work is included in the specifications. Contractor shall include all additional items, services, goods, resources, and manpower to complete the work in the lump sum item for General Construction. The lump sum provided includes all cost of equipment, **taxes**, delivery,

O&M manuals, factory service during installation, start-up, Owner training, and the warranty period. No field installation of the equipment is included in this price. Contractor shall be fully responsible for successful field installation of the equipment and the price for these services shall be included in Item No. 1, Base Bid – For General Construction of the Town Branch Wet Weather Storage Facility.[ADD4"]

17. SPECIFICATIONS
SECTION 01120, GENERAL PROVISIONS

Add the following to paragraph 1.14:

1.14 OVERTIME WORK[ADD4]

A. Any overtime work (greater than 40 hours in one week) shall require the Contractor to reimburse the Owner for additional resident inspection costs at an hourly rate of $70.00 per hour.[ADD4]

18. SPECIFICATIONS
SECTION 02300, EARTHWORK

Please change the following in paragraph 3.06.B from:

"....Payment for field density tests shall be by the Contractor....", to read:

"....Payment for field density tests shall be by the ~~Contractor~~Owner[ADD4]..."

19. SPECIFICATIONS
SECTION 02371, SWPP

Add the included Lower Cane Run Storm Water Pollution Prevention Plan (SWPPP) sheet to Specification Section 02371.

20. SPECIFICATIONS
SECTION 02475, DRILLED SHAFTS

Please change the following in pargraph 2.01B from:

"Concrete for Drilled Shafts shall be proportioned to have a 28 day compressive strength of not less than 4,000 pounds per square inch.", to read:

"Concrete for Drilled Shafts shall be proportioned to have a 28 day compressive strength of not less than ~~4,000~~ *4,500*[ADD4] pounds per square inch."

21. SPECIFICATIONS
SECTION 02540-2.01-B-4-c

Replace the paragraph from Specification Section 02540-2.01-B-4-c with the following:

C. Stiffness: Minimum pipe stiffness when tested in accordance with ASTM D2412 shall normally be ~~36~~ *72*[ADD#4] psi. *The minimum Stiffness Class shall be SN 72.*[ADD#4]

22. SPECIFICATIONS
SECTION 02540-2.03-B

Replace the paragraph from Specification Section 02540-2.03-B with the following:

B. Polyethylene encasement shall be ~~installed where indicated on the drawings~~ *required on all ductile iron pipe and fittings.*[ADD#4]

23. SPECIFICATIONS
SECTION 02541-3.08-A

Replace the paragraph from Specification Section 02541-3.08-A with the following:

A. All pressure piping (lines not laid to grade) shall be given a hydrostatic test of at least ~~1.5 times the normal operating pressure of the pipe~~ *150 psi*[ADD#4] (at its lowest elevation), but not to exceed the rated working pressure of the pipe or valves. Note: Engineer shall verify test pressure. Loss of pressure during the test shall not exceed 0 psi in a 4 hour period and 5 psi in a 24 hour period. Any test results that do not meet either of these requirements shall constitute a failure of the pressure test.

24. SPECIFICATIONS
SECTION 02650-2.01-A

Replace the paragraph from Specification Section 02650-2.01-A with the following:

A. Ductile iron pipe shall conform to ANSI/AWWA C151/A21.51, latest revision, pressure class ~~350~~ *250*[ADD#4], with push-on joints unless otherwise noted on Drawings.

25. SPECIFICATIONS
SECTION 02650-2.01-G

Add the following paragraph to Specification Section 02650-2.01:

G. Restrained joint pipe and fittings can be either be FLEX-RING Restrained Joint by American Ductile Iron Pipe, TR FLEX Restrained Joint by U.S. Pipe, SNAP-LOCK Restrained Joint by Griffin Pipe, or approved equal or an EBAA Iron Megalug or equal restrained joint type connection as described below in paragraph 2.10.[ADD#4]

26. SPECIFICATIONS
SECTION 02650

Add the following paragraphs to Specification Section 02650:

2.10 MECHANICAL RESTRAINT SYSTEM[ADD#4]

A. All fittings shall be secured in place with a mechanical restraint system as manufactured by EBAA Iron, Inc. Series 2000PV, 1100, 1900 or 1700 as required as well as a concrete thrust block or "Kicker".[ADD#4]

2.11 POLYETHYLENE ENCASEMENT FOR DUCTILE IRON PIPE (Polywrap)[ADD#4]

A. Polyethylene encasement and materials shall be in accordance with ANSI/AWWA C105/A21.5-88 and shall conform to the details and specifications shown therein.

B. Polyethylene encasement shall be required on all ductile iron pipe and fittings.

C. Installation:

1. The polyethylene encasement shall prevent contact between the pipe and the surrounding backfill and bedding material.

2. All lumps of clay, mud, cinders, etc. on the pipe surface shall be removed prior to installation of the polyethylene encasement. During installation, care shall be taken so as to prevent soil or embedment material from becoming trapped between the pipe and the polyethylene.

3. The polyethylene film shall be fitted to the contour of the pipe to effect a snug, but not tight, encasement with minimum space between the polyethylene and the pipe. Sufficient slack shall be provided in contouring to prevent stretching the polyethylene where it bridges irregular surfaces, such as bell-spigot interfaces, bolted joints, or fittings, and to prevent damage to the polyethylene due to backfilling operations. Overlaps and ends shall be secured with adhesive tape, string, or any other material capable of handling the polyethylene encasement in place until backfilling operations are complete.

D. Methods of Installation

Method A - for use with Polyethylene Tubes:

1. Cut polyethylene tube to a length approximately 2 ft. longer than the pipe section.

2. Slip the tube around the pipe, centering it to provide a 1 ft. overlap on each adjacent pipe section, and bunching it accordion-fashion lengthwise until it clears the pipe ends.

3. *Lower the pipe into the trench and make up the pipe joint with the preceding section of pipe. A shallow bell hole must be made at joints to facilitate the installation of the polyethylene tube.*

4. *After assembling the pipe joint, make the overlap of the polyethylene tube. Pull the bunched polyethylene from the preceding length of pipe, slip it over the end of the new length of pipe, and secure it in place. Then slip the end of the polyethylene from the new pipe section over the end of the first wrap until it overlaps the joint at the end of the preceding length of pipe. Secure the overlap in place. Take up the slack width at the top of the pipe to make a snug, but not tight, fit along the barrel of the pipe, securing the fold at quarter points.*

5. *Any cuts, tears, punctures, or other damage to the polyethylene shall be repaired in accordance with Section 2.23 Sub-section F of these specifications.*

Method B - for use with Polyethylene Tubes:

1. *Cut polyethylene tube to a length approximately 1 ft. shorter than that of the pipe section. Slip the tube around the pipe, centering it to provide 6 inches of bare pipe at each end. Take up the slack width at the top of the pipe to make a snug, but not tight, fit along the barrel of the pipe, securing the fold at quarter points; secure the ends as described here within under Method A.*

2. *Before making a joint, slip a 3-ft. length of polyethylene tube over the end of the preceding pipe section, bunching it accordion-fashion lengthwise. After completing the joint, pull the 3-ft. length of polyethylene over the joint, overlapping the polyethylene previously installed on each adjacent section of pipe by at least 1 ft.*

3. *Any cuts, tears, punctures, or other damage to the polyethylene shall be repaired in accordance with Section 2.23 Sub-section F of these specifications.*

Method C - For use with Polyethylene Sheets:

1. *Cut polyethylene sheet to a length approximately 2 ft. longer than that of the pipe section. Center the cut length to provide a 1-ft overlap on each adjacent pipe section, bunching it until it clears the pipe ends. Wrap the polyethylene around the pipe so that it circumferentially overlaps the top quadrant of the pipe. Secure the cut edge of polyethylene sheet at intervals of approximately 3 ft.*

2. *Lower the wrapped pipe into the trench and make up the pipe joint with the preceding section of pipe. A shallow bell hole must be made at joints to facilitate installation of the polyethylene. After completing the joint, make the overlap and secure the ends as described here within under Method A.*

3. Any cuts, tears, punctures, or other damage to the polyethylene shall be repaired in accordance with Section 2.23 Sub-section F of these specifications.

E. Appurtenances

Pipe Shaped Appurtenances:

1. Cover bends, reducers, offsets, and other pipe-shaped appurtenances with polyethylene in the same manner as the pipe.

Odd-Shaped Appurtenances:

1. When it is not practical to wrap valves, tees, crosses and other odd-shaped pieces in a tube, wrap with a flat sheet or split length of polyethylene tube by passing the sheet under the appurtenance and bringing it up around the body. Make seams by bringing the edges together, folding over twice, and taping down.

2. Tape polyethylene securely in place at valve stem and other penetrations.

F. Repair any cuts, tears, punctures, or damage to polyethylene with adhesive tape or with a short length of polyethylene sheet or a tube cut open, wrapped around the pipe to cover the damaged area, and secured in place.

G. Openings in the encasement shall provide for branches, service taps, blowoffs, air valves, and similar appurtenances by making an X-shaped cut in the polyethylene and temporarily folding back the film. After the appurtenance is installed, tape the slack securely to the appurtenance and repair the cut with tape. Service taps may also be made directly through the polyethylene, with any resulting damaged areas being repaired as described here within.

H. Where polyethylene -wrapped pipe joins an adjacent pipe that is not wrapped, extend the polyethylene wrap to cover the adjacent pipe for a distance of at least 3 ft. Secure the end with circumferential turns of tape. Service lines of dissimilar metals shall be wrapped with polyethylene or a suitable dielectric tape for a minimum clear distance of 3 ft. away from the ductile iron pipe.

I. Backfilling for Polyethylene -Wrapped Pipe:

1. Use the same backfill material as that specified for pipe without polyethylene wrap, exercising care to prevent damage to the polyethylene wrapping when placing backfill material.

2. Backfill material shall be free from cinders, refuse, boulders, rocks, stones, or other material that could damage the polyethylene. Backfilling shall be in accordance with AWWA C600.

27. SPECIFICATIONS
SECTION 02650-3.08-A

Replace the paragraph from Specification Section 02650-3.08-A with the following:

A. All pressure piping (lines not laid to grade) shall be given a hydrostatic test of at least ~~1.5 times the normal operating pressure of the pipe~~ *150 psi*[ADD#4] (at its lowest elevation), but not to exceed the rated working pressure of the pipe or valves. Note: Engineer shall verify test pressure. Loss of pressure during the test shall not exceed 0 psi in a 4 hour period and 5 psi in a 24 hour period. Any test results that do not meet either of these requirements shall constitute a failure of the pressure test.

28. SPECIFICATIONS
SECTION 03300, CAST-IN-PLACE CONCRETE

Please change the following in paragraph 3.10.2 from:

"Concrete for testing shall be supplied by the Contractor at no additional cost to the Owner, and the Contractor shall provide assistance to the testing laboratory in obtaining samples. The Contractor shall dispose of and clean up all excess material.", to read:

"Concrete for testing shall be supplied by ~~the Contractor at no additional cost to~~ the Owner, and the Contractor shall provide assistance to the testing laboratory in obtaining samples. The Contractor shall dispose of and clean up all excess material.[ADD4]

29. SPECIFICATIONS
SECTION 03410, Modular Block Retaining Wall

Add the following paragraphs to Specification Section 03410:

2.08 GUARDRAIL

A. The retaining wall shall have an integral guardrail as detailed on Sheet C-0-506, Retaining Block Wall Details across the entire length of wall.[ADD#4]

30. SPECIFICATION
SECTION 13201, PRESTRESSED CONCRETE TANK

A. Paragraph 1.07.B.4

Delete the word "future".

B. Add the following paragraph to 1.04.A

"6. *Construction joint layout and concrete placement sequence for the slab of the storage tank shall be part of the delegated engineered design and submitted for approval. Should continuous concrete placement design be considered for the entire slab, the Contractor shall submit their construction sequence and affidavit from each of the concrete material suppliers that all materials and deliveries will be available for the continuous period of placement.*[ADD4]"

C. Delete the requirement for shotcrete slump testing. Add the following paragraph 3.03,A.1.c.(3), "No slump testing shall be conducted on the shotcrete"

D. Replace paragraph 1.05 B.1 in its entirety with the following:

"All tank construction companies must submit verification with their bid *or prior to award*[ADD4] that they meet the criteria stated in Section 1.05 A. of this specification to be considered an acceptable tank builder. "

31. SPECIFICATIONS
SECTION 16440, MOTOR CONTROL

Add the following new paragraph to Article 2.03, in reaction to the inability of some vendors to construct the VFD's in an MCC style arrangement:

"H. The arrangement of the VFD's and MCC may be altered from the arrangement shown on the Drawings. Overall building dimensions must not exceed a gross exterior footprint of 10 feet by 40 feet. If VFD's are to be cabled to the MCC feeder breakers, they shall be pre-wired from MCC to VFD, either in conduit, or in a cable tray, so that the Contractor doesn't have to wire them together in the field. If cable tray is used, be sure to provide code approved conductors for tray application. Tray shall be ladder style, aluminum, dimensions as required."

32. SPECIFICATIONS
SECTION 16620, PACKAGED ENGINE GENERATOR SYSTEMS

Add the following new article:

"2.12 AUTOMATIC TRANSFER SWITCH

A. Rating

1. An automatic transfer switch shall be furnished with ratings as indicated in the Drawings (nominal 104 amperes). The transfer switch shall be capable of switching all classes of load and shall be rated for continuous duty when installed in a non-ventilated enclosure that is constructed in accordance with Standard UL-50. The switch shall be 3 pole with solid neutral.

	with the ATA Package (i.e., not required to be submitted to Grant Recipients with bid or proposal package) We request that bidders be allowed to submit the EPA MWDBE forms, the Participation policy, the certification letters, and the good faith effort documentation within a short period after the bid, which is our experience on other similar funded projects.	
24.	Please provide a profile for the 54" Gravity Sewer line that can be utilized in developing the By-pass pump around provisions. The actual diameters, depths and locations of the manholes in the line are critical in determining the By-pass pumping requirements.	Two as-built drawing of the existing 54" sewer are provided in the Addendum below. One as-built drawing of the 36" force main is provided.
25.	Please provide the historical flow data for the 30" Cane Run Force main.	6.5 MGD average and 11.5 MGD maximum. This is for dry weather.
26.	Please provide the flow data which indicates the amount or percentage of average daily flow that is carried in the 54" Gravity Sewer line and how much is carried in the 36" Force main?	NE_FM = ±11.6 MGD avg. daily flow NE_FM = ±43 MGD peak flow 54" TB Trunk = ±5.33 MGD avg. daily flow 54" TB Trunk = ±50 MGD peak flow
27.	Please refer to Special Conditions of the specifications page 00800-4, paragraph 6.06.G; and advise if it is the intent to have subcontractors provide $25 million in Umbrella liability coverage as well? It will be very difficult for many of them to obtain these limits.	The Contractor has to carry the 25 million umbrella policy. The Contractor must then come to an agreement with the subcontractor to either make them additional insured under the Contractors CGL and Umbrella policy or require the subcontractor to carry $25 million in Umbrella liability coverage.
28.	Please refer to Addendum No. 2, Item 9 SPECIFICATIONS – INSURANCE REQUIREMENTS, which added paragraph h., which states that the Contractor is required to carry the $25 million in Umbrella liability limits for one year after the completion of the project. Please confirm the owner intends to pay for the requirement in the bid to provide an additional year of $25 mil in coverage after the project is complete as it is quite costly.	The owner will not pay the premium for the additional years coverage on the Umbrella policy. The coverage shall be part of the bid.
29.	Please refer to plan sheet C-0-112 and advise if a separate Project Sign, as shown in the top middle of the page, is going to be required for the line work being done on the Lower Cane Run Force Main Tie-in, in addition to the 2 signs that are specified to be provided in Specification Section 01580 – Project Identification and Signs.	No additional sign will be required for the Lower Cane Run tie-in.
30.	Please refer to Bid Form 00410-33, #1.18 stating that all Contractors/Subcontractors shall complete this certification. Please confirm that Subcontractor	Subcontractor Certifications may be submitted after the bid.

	Certifications may be submitted after the bid.	
31.	00300-18, #1.29 refers bidders to section 00890 regarding permits obtained by the owner. Please provide copies of any such permits.	Permits will be provided prior at Contract Award.
32.	Addendum No. 2, Page 2, Item 12, includes the wording "... Builder's Risk endorsement ...". Builder's Risk coverage is normally issued as a stand-alone policy, not an endorsement to another policy. Please clarify what is intended. This same response includes the wording "... new construction (buildings, materials and equipment) left onsite is protected from all risks." Please clarify what is meant by this wording.	The Contractor shall provide all Builder's Risk insurance. Please disregard all previous answers in Addenda No. 2 and No. 4.
33.	Addendum No. 4, Page 7, Items 24 and 26 discuss features of Builder's Risk and related coverages, but the question of who Is to provide the Builder's Risk coverages is not answered. Which party will be responsible for providing the necessary Builder's Risk coverages?	The Contractor shall provide all Builder's Risk insurance. Please disregard all previous answers in Addenda No. 2 and No. 4.
34.	With regard to the proposed Air Release Assembly (Cane Run Force Main), due to the limited time available during a pump station shut-down, will the use of a 30" x 6" tapping saddle be acceptable?	A 30" x 6" tapping saddle will be acceptable in lieu of the 30" x 6" ductile iron tee. Please disregard the response to question no. 65 on Addendum no. 4.
35	Will other methods of gasketing be allowed at the structures, other than A-lok or the Hydrotite Materials listed in Addendum No. 2 and provided in the drawings.	Each of these methods will be approved. Other methods will be reviewed by the Owner at the time of construction. A 316SS modular seal of good quality with grout fill is an acceptable alternative, however, the methodology and material are subject to review.
36	Regarding the Performance Bond and Erosion and Sediment Control Performance Bond, is the project's overall Performance Bond to **exclude** coverage of any Erosion and Sediment Control work? If the Performance Bond DOES include this work, isn't the work being double covered by both the overall Performance Bond and the Erosion and Sediment Control Performance Bond? What is your intent?	Both bonds will be provided, no further information is provided.

1. ADDITIONAL INFORMATION
RECORD DRAWINGS

Record Drawings of the existing 54" gravity sewer and North Elkhorn 36" force main along the Lisle Industrial Road WWTP entrance are provided for reference.

2. ADDITIONAL INFORMATION

Considerable demolition and utility work have been completed since the drawings and specifications were completed. The Contractor shall accept the site, as-is for the Contract Price. Any changes to the site are accepted by the Contractor with no claim of additional work associated with the changes.

3. ADDITIONAL INFORMATION

An attachment is provided concerning comments from the LFUCG concerning the SWPPP provided in the drawings. These comments shall be incorporated into the Contractor's SWPPP for the project.

4. DRAWINGS
SHEET G-0-002

TRAFFIC CONTROL NOTES:

Traffic Control Plan General Conditions

Replace the 5th bullet paragraph "Contractor shall attempt to maintain one lane..." with:

"The Contractor shall maintain one lane of traffic open from the Lisle Industrial Avenue Wastewater Treatment Plant Entrance at all times. If the Contractor desires to close the Lisle Industrial Avenue access for more than 24 hours, the Contractor shall submit that request to the Owner 72 hours prior to access road closure, include the closure in the Traffic Control Plan (TCP) and complete the construction of an emergency exit into the adjacent Townley Square development (see Exhibit B for location) as described below.

Emergency Exit: The emergency exit shall consist of 100' long x 12' wide x 4" thick compacted stone (DGA), on top of filter fabric, on top of an evenly graded compacted embankment leading to a residential parking lot (see Exhibits C and D) at the Townley Square apartment development. This work shall also include constructing a 6' chain link fence up to the emergency exit, a 12' steel swing gate, and temporary asphalt across the sidewalk and concrete curb into the apartment parking lot. At completion of the wet weather storage tank project, all of the emergency exit road shall be removed and returned to preconstruction conditions. All work associated with the emergency exit shall be incidental to Bid Item 1."

5. DRAWINGS
SHEET C-0-103

Add the following General Note:

"6. Crushed stone backfill shall be required under and around the electrical building (Structure No. 9) to prevent future settlement of the building and the associated conduit runs. Contractor shall be responsible for all repair of settlement of the electrical building.

6. DRAWINGS
SHEET C-0-111 Clarification

KEYNOTES:

Replace Note 5 with:
"5. Contractor shall remove and replace concrete pavement with Class A Concrete (8" thick) per RMP Standard Specifications Section 03300: Cast-In-Place Concrete."

Replace Note 10 with:
"10. Contractor shall remove all impacted fences, gates and guardrail and replace in kind. All disturbed areas that are unpaved, shall be finely graded and vegetation restored with seed and straw."

Replace Note 11 with:
"11. Prior to beginning Project, Contractor shall coordinate with Owner to maintain facility access. Contractor shall submit Maintenance of Traffic (MOT) Plan prior to construction activities in concrete entrances. All work on concrete entrances shall be performed between 6:00 p.m. Friday to 6:00 a.m. Monday. Fully loaded tractor trailers shall require uninterrupted access to ½ of the concrete entrance width between 6:00 a.m. Monday to 6:00 p.m. Friday."

Replace Note 12 with:
"12. Pipe material shall be Ductile Iron Class 250 with Protecto 401 coating per RMP Standard Specifications Section 02531: Sewage Force Mains. Final alignment shall be field determined due to recent construction activity."

Insert the following Note:
"13. Contractor shall notify RJ Corman Railroad of work in the vicinity of the railroad tracks and grade crossing and coordinate construction activities with the railroad's operations."

7. DRAWINGS
SHEET C-0-113 – Lower Cane Run Force Main Tie-in SWPPP

Insert this new sheet in its entirety.

8. DRAWINGS
SHEET E-0-102

Add the following to Sheet Keynote No. 1:

"The length of the FO cable from the existing handhole to the control room main switch is 550 LF."

9. DRAWINGS
SHEET E-0-501

New Tangent Riser Pole Detail, change Material List Item "sb" from a single blade disconnect switch to a fused cutout.

10. DRAWINGS
SHEET E-0-505

Dead End Riser Pole Detail, change Material List Item "AA" from a single blade disconnect switch to a fused cutout.

11. DRAWINGS
SHEET C-8-101

Replace the sheet in its entirety. Restrained couplings/flanges have been added.

12. SPECIFICATIONS
SECTION 00410, BID FORM

Replace the bid schedule in its entirety with the attached.

13. SPECIFICATIONS
SECTION 00820, WAGE DETERMINATION SCHEDULES

Replace the following Federal Wage Determinations in the Specifications.

Davis Bacon: Highway, revised 08/22/2014, See attached
Davis Bacon: Building, No Change
Davis Bacon: Residential, No Change
Davis Bacon: Heavy, revised 08/29/214, See attached

The State Wage Determinations listed in the Bidding Specifications are still current.

14. SPECIFICATIONS
SECTION 01025, MEASUREMENT AND PAYMENT

Replace Pay Item No. 9, paragraph 1.05.I.1 with the following:

1. The Contractor shall furnish all necessary labor, equipment, tools, materials, and services for over-excavation of earthen/rock/rubble/debris material and replacement with compacted earth/rock. Payment for over-excavation of earthen/rock/rubble/debris material and replacement with compacted earth/rock will be made at the Contract unit price per cubic yard, complete in place. *In addition, payment shall only be made for conditions that result between the identified top of drilled shaft elevation and the rock socket elevation, all as indicated on drawing S-5-102.*[ADD5] The Contractor shall notify the Engineer that an over-excavation exists. The Engineer shall review and notify the Owner that a condition exists that will require the unit price work to be completed. The Owner will then provide approval to proceed.

Add the following sentence to pay item no. 12, paragraph 1.05.L.1:

"Delay time will only be paid for conditions that result between the identified top of drilled shaft elevation and the rock socket elevation, all as indicated on drawing S-5-102.[ADD5]

Add the following paragraph for pay item no. 14 to paragraph 1.05, Pay Items:

N. Pay Item No. 14 – Allowance – Temporary Power Relocation[ADD5]

1. *The Contractor shall include a $20,000 allowance for temporary power relocation. The allowance shall be utilized to coordinate temporary relocation of the existing power supply along the entrance road from Lisle Industrial Road. The allowance is for the utility company only (KU). Any work performed by the Contractor in association with the temporary power supply shall be at his expense and not a part of the allowance.*

15. SPECIFICATIONS
SECTION 01210, ALLOWANCES

Add the following sentence to paragraph 3.03, Schedule of Allowances:

E. Lump Sum Allowance[ADD5] *– Temporary Power Relocation - $20,000.00*

16. SPECIFICATIONS
SECTION 11310, NON-CLOG SUBMERSIBLE PUMPS

A. Change the following in paragraph 2.02.H.3 from:

"The motor service factor (as defined by NEMA MG1 standard) shall be 1.15 minimum.", to:

"The motor service factor (as defined by NEMA MG1 standard) shall be ~~1.15~~ *1.10*[ADD5] minimum."

B. Change the following in paragraph 2.02.A, the Pump Station Schedule for the Fill Pumps for the ABS Pumps from:

"ABS XFP 500U-CH3, 570 mm impeller diameter", to:

"~~ABS XFP 500U-CH3~~ ABS AFP5002-CH3 M2800/8[ADD5], 570 mm impeller diameter"

17. SPECIFICATIONS
SECTION, 13201, PRESTRESSED CONCRETE STORAGE TANK

Add the following paragraph 3.03.1.d:

All shotcrete and concrete testing shall be paid for by the Owner, with exception to testing required for defective work.

18. SPECIFICATIONS
SECTION 16370, OVERHEAD MEDIUM VOLTAGE POWER DISTRIBUTION

Specifications Section 16370, Article 2.13, pole top distribution arrestors shall be rated for 9 KV.

Eliminate reference to 3 KV from this article.

19. SPECIFICATIONS
SECTION 16370, OVERHEAD MEDIUM VOLTAGE POWER DISTRIBUTION

Specifications Section 16370, Article 2.11A, add the following new item:

"2. Provide 200 ampere cutouts fused at 150 amperes, S&C Type XS or equal. Provide one portable Loadbreak tool for the project."

Todd Slatin, Director
Division of Central Purchasing

Attachments:
Drawing C-8-101
Drawing C-0-113
Specifications, 00410, Bid Form, Bid Schedule
Wage Rates, Davis Bacon: Highway, revised 08/22/2014
Wage Rates, Davis Bacon: Heavy, revised 08/29/214
Record Drawings 36" North Elkhorn Force Main – 1 ea.
Record Drawings, 54" Gravity Sewer, - 2 ea.
LFUCG Comments – SWPPP
Exhibits B, C, D – Emergency Exit Road

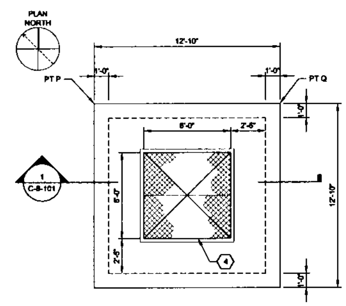
All other terms and conditions of the Bid and specifications are unchanged.
This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: _____

ADDRESS: _____

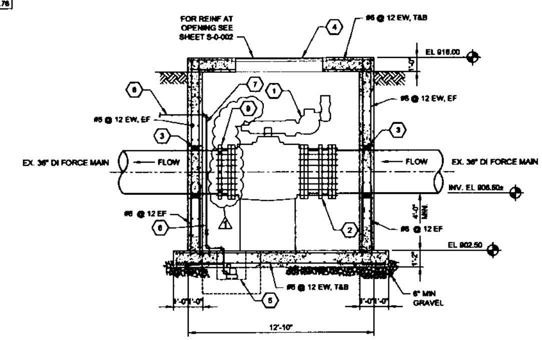
SIGNATURE OF BIDDER: _____

	NORTHING	EASTING
PT P	204611.54	1560105.30
PT Q	204600.55	1560111.76



TOP PLAN

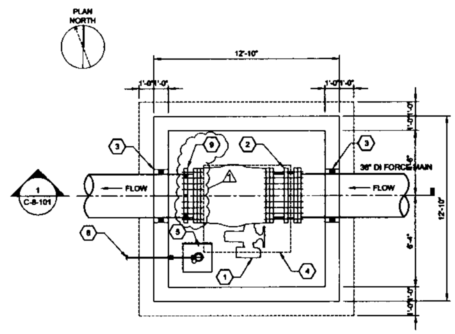
SCALE: 1/4"=1'-0"



NOTES:
1. REINFORCEMENT TYPICAL ALL EXTERIOR WALLS.
2. STRUCTURAL DESIGN FOR THIS STRUCTURE IS ON THIS SHEET.

1 C-8-101 SECTION

SCALE: 1/4"=1'-0"



FOUNDATION PLAN

SCALE: 1/4"=1'-0"

SHEET KEYNOTES:

1. 36" ECCENTRIC PLUG VALVE W/MOTOR OPERATOR
2. 36" DISMANTLING JOINT WITH 36" EBAA MEGAFLANGE OR EQUAL.
3. LINK SEAL (TYP.)
4. 6'-0" X 6'-0" ALUMINUM HATCH W/ FALL PROTECTION GRATE.
5. 24" SQ x 24" DEEP SUMP WITH EXPLOSION PROOF SUMP PUMP
6. 1" PVC CHECK VALVE
7. 1" SCH 80 PVC DISCHARGE PIPE
8. RUN 1" PIPE TO DAYLIGHT, INSTALL PRECAST CONCRETE STRUCTURE WITH SCREEN. SLOPE PIPE TO DRAIN.
9. 36" EBAA MEGAFLANGE

GENERAL NOTES:

1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL CONFIRM AND COORDINATE ALL EXISTING PIPELINE ELEVATIONS. SUBMITTALS SHALL BE PROVIDED INDICATING THE EXISTING TOP OF PIPE AND PIPE INVERT ELEVATIONS.

36" FORCE MAIN FLOW CONTROL VAULT PLAN & SECTION

TOWN BRANCH WET WEATHER STORAGE FACILITY
REMEDIAL MEASURES PLAN ID No. G2-TB-1

GRW PROJECT NO. 4175-01
LFUCG BID No. 137-2014

engineering | architecture | geospatial
www.grwinc.com

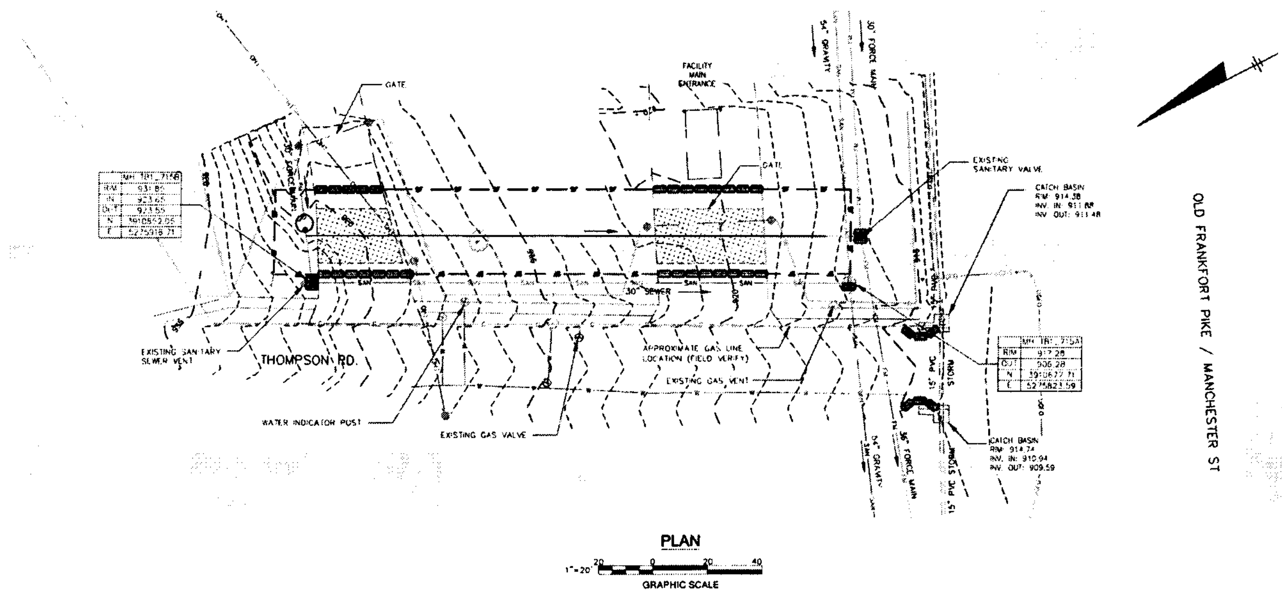
DESIGNED: JAB
DRAWN: JAB
REVIEWED: JLH
APPROVED: JLH

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	PER ADDENDUM #5	9/25/14	JLH

DATE: AUGUST, 2014
SCALE: 1/4" = 1'-0"
SHEET NO. C-8-101

BIDDING DOCUMENTS

Conformance Set



LEGEND

253	EXISTING CONTOUR
255	EXISTING INDEX CONTOUR
SAN	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
OHT	EXISTING OVERHEAD TELEPHONE
UGFO	EXISTING UNDERGROUND FIBER OPTIC
G	EXISTING UNDERGROUND GAS
W	EXISTING UNDERGROUND WATER
	SANITARY SEWER TO BE REHABILITATED
	APPROXIMATE PROPERTY LINE
	EXISTING FENCE
	SILT FENCE
SMH	EXISTING SANITARY SEWER MANHOLE
	LIGHTED UTILITY POLE
	EXISTING GAS METER
	EXISTING FIRE HYDRANT
	EXISTING WATER METER
	EXISTING TREE
	ROCK-FILLED BAGS

LOWER CANE RUN FORCE MAIN TIE-IN
STORM WATER POLLUTION PREVENTION PLAN

TOWN BRANCH WET WEATHER STORAGE FACILITY
REMEDIAL MEASURES PLAN ID No. G2-TB-1

JDS
DGR
TWK
JDS

REVISIONS

DATE: AUGUST 29, 2014
SCALE: 1" = 20'
SHEET NO.: C-P-113 ~~SWPPP-1~~

Addendum #5

REGULATORY REVIEW SET

Conformance Set

BID SCHEDULE				
Bid Item Description	**Approximate Quantities**	**Unit**	**Unit Bid Price**	**Total Price**
Item 1 – Base Bid - For General Construction of Town Branch Wet Weather Storage Facility – Lump Sum	1	LS		
Item 2 – System Programming Service Allowance Lump Sum	1	LS	$ 120,000.00	$ 120,000.00
Item 3 – Mechanical Screen – Equipment Allowance Only Lump Sum	1	LS	$ 307,400.00	$ 307,400.00
Item 4 – Allowance Railroad Repair – Lump Sum	1	LS	$ 25,000.00	$25,000.00
Item 5 – Allowance Project Documentation Photography Lump Sum	1	LS	$30,000.00	$30,000.00
Item 6a – Unit Price Pavement Construction Bituminous Asphalt Surface Dollars Per Ton (TN)	1,205	TN		
Item 6b – Unit Price Pavement Construction Bituminous Asphalt Base Dollars Per Ton (TN)	512	TN		
Item 6c – Unit Price Pavement Construction Dense Graded Aggregate (DGA) Dollars Per Ton (TN)	966	TN		
Item 7 – Unit Price Pavement Restoration Pavement Milling and Texturing Dollars Per Ton (TN)	303	TN		
Item 8 – Unit Price Pavement Restoration Subgrade Undercutting Dollars Per Cubic Yard (CY)	120	CY		
Item 9 – Unit Price Over-Excavation of Earthen/Rock/ Rubble/Debris and Replacement with Compacted Earthen/Rock Materials Under Structures with drilled shafts Dollars Per Cubic Yard (CY)	3,000	CY		
Item 10 – Unit Price Construct Drilled Shaft Through Overburden Dollars Per Vertical Linear Foot (VLF)	5,000	VLF		

Bid Item Description	Approximate Quantities	Unit	Unit Bid Price	Total Price
Item 11 – Unit Price Construct Drilled Shaft Through Rock Socket Removal Dollars Per Vertical Linear Foot (VLF)	1,850	VLF		
Item 12 – Unit Price Delay Time – Drilled Shaft Equipment and Crew Dollars Per Hour (Hours)	50	HRS		
Item 13 – Unit Price Lower Cane Run Force Main Tie-In Lump Sum	1	LS		
Item 14^{ADD5} – Allowance *Temporary Power Relocation* *Lump Sum*	*1*	*LS*	*$20,000*	
			Total Bid Price	

TOTAL BID PRICE for the Town Branch Wet Weather Storage Facility shall be provided and summed from Items 1 through ~~11~~ *14^{ADD5}* in words and figures.

_____ ($_____).
(words) (figures)

General Decision Number: KY140100 08/22/2014 KY100

Superseded General Decision Number: KY20130100

State: Kentucky

Construction Type: Highway

Counties: Anderson, Bath, Bourbon, Boyd, Boyle, Bracken, Breckinridge, Bullitt, Carroll, Carter, Clark, Elliott, Fayette, Fleming, Franklin, Gallatin, Grant, Grayson, Greenup, Hardin, Harrison, Henry, Jefferson, Jessamine, Larue, Lewis, Madison, Marion, Mason, Meade, Mercer, Montgomery, Nelson, Nicholas, Oldham, Owen, Robertson, Rowan, Scott, Shelby, Spencer, Trimble, Washington and Woodford Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Modification Number	Publication Date
0	01/03/2014
1	02/14/2014
2	04/18/2014
3	05/09/2014
4	05/23/2014
5	06/06/2014
6	06/27/2014
7	07/04/2014
8	07/18/2014
9	07/25/2014
10	08/22/2014

BRIN0004-003 06/01/2011

BRECKENRIDGE COUNTY

	Rates	Fringes
BRICKLAYER	$ 24.11	10.07

BRKY0001-005 06/01/2013

BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, & TRIMBLE COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 24.82	10.71

BRKY0002-006 06/01/2011

BRACKEN, GALLATIN, GRANT, MASON & ROBERTSON COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 26.57	10.26

BRKY0007-004 06/01/2011

BOYD, CARTER, ELLIOT, FLEMING, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 28.29	16.80

BRKY0017-004 06/01/2009

ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, OWEN, SCOTT, WASHINGTON & WOODFORD COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 24.11	9.97

CARP0064-001 04/01/2014

	Rates	Fringes
CARPENTER	$ 27.50	14.96
Diver	$ 41.63	14.96
PILEDRIVERMAN	$ 27.75	14.96

ELEC0212-008 06/02/2014

BRACKEN, GALLATIN and GRANT COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 26.74	16.45

ELEC0212-014 07/01/2013

BRACKEN, GALLATIN & GRANT COUNTIES:

	Rates	Fringes
Sound & Communication Technician	$ 22.50	9.51

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* ELEC0317-012 05/28/2014

BOYD, CARTER, ELLIOT & ROWAN COUNTIES:

	Rates	Fringes
ELECTRICIAN		
Cable Splicer	$ 32.68	18.13
Electrician	$ 32.62	21.45

ELEC0369-007 05/29/2013

ANDERSON, BATH, BOURBON, BOYLE, BRECKINRIDGE, BULLITT, CARROLL, CLARK, FAYETTE, FRAONKLIN, GRAYSON, HARDIN, HARRISON, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, MONTGOMERY, NELSON, NICHOLAS, OLDHAM, OWEN, ROBERTSON, SCOTT, SHELBY, SPENCER, TRIMBLE, WASHINGTON, & WOODFORD COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 29.48	14.37

ELEC0575-002 06/02/2014

FLEMING, GREENUP, LEWIS & MASON COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 31.70	14.21

ENGI0181-018 07/01/2014

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1	$ 28.85	14.15
GROUP 2	$ 26.24	14.15
GROUP 3	$ 26.65	14.15
GROUP 4	$ 25.95	14.15

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - A-Frame Winch Truck; Auto Patrol; Backfiller; Batcher Plant; Bituminous Paver; Bituminous Transfer Machine; Boom Cat; Bulldozer; Mechanic; Cableway; Carry-All Scoop; Carry Deck Crane; Central Compressor Plant; Cherry Picker; Clamshell; Concrete Mixer (21 cu. ft. or Over); Concrete Paver; Truck-Mounted Concrete Pump; Core Drill; Crane; Crusher Plant; Derrick; Derrick Boat; Ditching & Trenching Machine; Dragline; Dredge Operator; Dredge Engineer; Elevating Grader & Loaders; Grade-All; Gurries; Heavy Equipment Robotics Operator/Mechanic; High Lift; Hoe-Type Machine; Hoist (Two or More Drums); Hoisting Engine (Two or More Drums); Horizontal Directional Drill Operator; Hydrocrane; Hyster; KeCal Loader; LeTourneau; Locomotive; Mechanic; Mechanically Operated Laser Screed; Mechanic Welder; Mucking Machine; Motor Scraper; Orangepeel Bucket; Overhead Crane; Piledriver; Power Blade; Pumpcrete; Push Dozer; Rock Spreader, attached to equipment; Rotary Drill; Roller (Bituminous); Rough Terrain Crane; Scarifier; Scoopmobile; Shovel; Side Boom; Subgrader; Tailboom; Telescoping Type Forklift; Tow or Push Boat; Tower Crane (French, German & other types); Tractor Shovel; Truck Crane; Tunnel Mining Machines, including Moles, Shields or similar types of Tunnel Mining Equipment

GROUP 2 - Air Compressor (Over 900 cu. ft. per min.); Bituminous Mixer; Boom Type Tamping Machine; Bull Float; Concrete Mixer (Under 21 cu. ft.); Dredge Engineer; Electric Vibrator; Compactor/Self-Propelled Compactor;

Elevator (One Drum or Buck Hoist); Elevator (When used to Hoist Building Material); Finish Machine; Firemen & Hoist (One Drum); Flexplane; Forklift (Regardless of Lift Height); Form Grader; Joint Sealing Machine; Outboard Motor Boat; Power Sweeper (Riding Type); Roller (Rock); Ross Carrier; Skid Mounted or Trailer Mounted Conrete Pump; Skid Steer Machine with all Attachments; Switchman or Brakeman; Throttle Valve Person; Tractair & Road Widening Trencher; Tractor (50 H.P. or Over); Truck Crane Oiler; Tugger; Welding Machine; Well Points; & Whirley Oiler

GROUP 3 - All Off Road Material Handling Equipment, including Articulating Dump Trucks; Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4 - Bituminous Distributor; Burlap & Curing Machine; Cement Gun; Concrete Saw; Conveyor; Deckhand Oiler; Grout Pump; Hydraulic Post Driver; Hydro Seeder; Mud Jack; Oiler; Paving Joint Machine; Power Form Handling Equipment; Pump; Roller (Earth); Steerman; Tamping Machine; Tractor (Under 50 H.P.); & Vibrator

CRANES - with booms 150 ft. & Over (Including JIB), and where the length of the boom in combination with the length of the piling leads equals or exceeds 150 ft. - $1.00 over Group 1 rate

EMPLOYEES ASSIGNED TO WORK BELOW GROUND LEVEL ARE TO BE PAID 10%
ABOVE BASIC WAGE RATE. THIS DOES NOT APPLY TO OPEN CUT WORK.

IRON0044-009 06/01/2013

BRACKEN, GALLATIN, GRANT, HARRISON, ROBERTSON,
BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);
CARROLL (Eastern third, including the Township of Ghent);
FLEMING (Western part, excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);
MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);
NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);
OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);
SCOTT (Northern two-thirds, including Townships of Biddle, Davis, Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall)

	Rates	Fringes

IRONWORKER
Fence Erector.....$ 22.50 18.40
Structural.....$ 24.80 18.40

IRON0070-006 06/01/2014

ANDERSON, BOYLE, BRECKINRIDGE, BULLITT, FAYETTE, FRANKLIN, GRAYSON, HARDIN, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE, WASHINGTON & WOODFORD
BOURBON (Southern two-thirds, including Townships of Austerlity, Centerville, Clintonville, Elizabeth, Hutchison, Littlerock, North Middletown & Paris);
CARROLL (Western two-thirds, including Townships of Carrollton, Easterday, English, Locust, Louis, Prestonville & Worthville);
CLARK (Western two-thirds, including Townships of Becknerville, Flanagan, Ford, Pine Grove, Winchester & Wyandotte);
OWEN (Eastern eighth, including Townships of Glenmary, Gratz, Monterey, Perry Park & Tacketts Mill);
SCOTT (Southern third, including Townships of Georgetown, Great Crossing, Newtown, Stampling Ground & Woodlake);

	Rates	Fringes
IRONWORKER	$ 26.97	19.75

IRON0372-006 06/01/2013

BRACKEN, GALLATIN, GRANT, HARRISON and ROBERTSON
BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);
CARROLL (Eastern third, including the Township of Ghent);
FLEMING (Western part, Excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains,
Ringos Mills, Tilton & Wallingford);
MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);
NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);
OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);
SCOTT (Northern two-thirds, including Townships of Biddle, Davis,Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall) COUNTIES

	Rates	Fringes
IRONWORKER, REINFORCING	$ 26.47	19.30

IRON0769-007 12/01/2012

BATH, BOYD, CARTER, ELLIOTT, GREENUP, LEWIS, MONTGOMERY & ROWAN
CLARK (Eastern third, including townships of Bloomingdale,
Hunt, Indian Fields, Kiddville, Loglick, Rightangele & Thomson);
FLEMING (Townships of Beechburg, Colfax, Elizaville,
Flemingsburg, Flemingsburg Junction, Foxport, Grange City,
Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton,
Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains,
Ringos Mills, Tilton & Wallingford);
MASON (Eastern third, including Townships of Helena, Marshall,
Orangeburg, Plumville & Springdale);
NICHOLAS (Eastern eighth, including the Township of Moorefield
Sprout)

	Rates	Fringes
IRONWORKER	$ 32.54	20.18

LABO0189-003 07/01/2014

BATH, BOURBON, BOYD, BOYLE, BRACKEN, CARTER, CLARK, ELLIOTT,
FAYETTE, FLEMING, FRANKLIN, GALLATIN, GRANT, GREENUP, HARRISON,
JESSAMINE, LEWIS, MADISON, MASON, MERCER, MONTGOMERY, NICHOLAS,
OWEN, ROBERTSON, ROWAN, SCOTT, & WOOLFORD COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 21.80	11.96
GROUP 2	$ 22.05	11.96
GROUP 3	$ 22.10	11.96
GROUP 4	$ 22.70	11.96

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger;

Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

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LABO0189-008 07/01/2014

ANDERSON, BULLITT, CARROLL, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 22.71	11.05
GROUP 2	$ 22.96	11.05
GROUP 3	$ 23.01	11.05
GROUP 4	$ 23.61	11.05

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

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LABO0189-009 07/01/2014

BRECKINRIDGE & GRAYSON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 22.66	11.10
GROUP 2	$ 22.91	11.10
GROUP 3	$ 22.96	11.10
GROUP 4	$ 23.56	11.10

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste

- Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

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PAIN0012-005 06/11/2005

BATH, BOURBON, BOYLE, CLARK, FAYETTE, FLEMING, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, ROBERTSON, SCOTT & WOODFORD COUNTIES:

	Rates	Fringes
PAINTER		
Bridge/Equipment Tender and/or Containment Builder	$ 18.90	5.90
Brush & Roller	$ 21.30	5.90
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement	$ 22.30	5.90
Sandblasting & Waterblasting	$ 22.05	5.90
Spray	$ 21.80	5.90

PAIN0012-017 05/01/2014

BRACKEN, GALLATIN, GRANT, MASON & OWEN COUNTIES:

	Rates	Fringes
PAINTER (Heavy & Highway Bridges - Guardrails - Lightpoles - Striping)		
Bridge Equipment Tender and Containment Builder	$ 20.73	8.71
Brush & Roller	$ 23.39	8.71
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement	$ 24.39	8.71
Sandblasting & Water Blasting	$ 24.14	8.71
Spray	$ 23.89	8.71

PAIN0118-004 06/01/2014

ANDERSON, BRECKINRIDGE, BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES:

	Rates	Fringes
PAINTER		
Brush & Roller	$ 18.50	12.02
Spray, Sandblast, Power Tools, Waterblast & Steam Cleaning	$ 19.00	12.02

PAIN1072-003 12/01/2013

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS and ROWAN COUNTIES

	Rates	Fringes
Painters:		
Bridges; Locks; Dams; Tension Towers & Energized Substations	$ 31.03	15.10
Power Generating Facilities	$ 27.79	15.10

PLUM0248-003 06/01/2014

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
Plumber and Steamfitter	$ 33.00	18.95

PLUM0392-007 06/01/2014

BRACKEN, CARROLL (Eastern Half), GALLATIN, GRANT, MASON, OWEN & ROBERTSON COUNTIES:

	Rates	Fringes
Plumbers and Pipefitters	$ 29.80	17.79

PLUM0502-003 08/01/2013

BRECKINRIDGE, BULLITT, CARROLL (Western Half), FRANKLIN (Western three-fourths), GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

	Rates	Fringes
PLUMBER	$ 32.00	17.17

SUKY2010-160 10/08/2001

	Rates	Fringes
Truck drivers:		
GROUP 1	$ 16.57	7.34
GROUP 2	$ 16.68	7.34
GROUP 3	$ 16.86	7.34
GROUP 4	$ 16.96	7.34

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Mobile Batch Truck Tender

GROUP 2 - Greaser; Tire Changer; & Mechanic Tender

GROUP 3 - Single Axle Dump; Flatbed; Semi-trailer or Pole Trailer when used to pull building materials and equipment;

Tandem Axle Dump; Distributor; Mixer; & Truck Mechanic

GROUP 4 - Euclid & Other Heavy Earthmoving Equipment & Lowboy; Articulator Cat; 5-Axle Vehicle; Winch & A-Frame when used in transporting materials; Ross Carrier; Forklift when used to transport building materials; & Pavement Breaker

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

==========

END OF GENERAL DECISION

General Decision Number: KY140161 08/29/2014 KY161

State: Kentucky

Construction Type: Heavy

Counties: Bourbon, Clark, Fayette, Jessamine, Scott and Woodford Counties in Kentucky.

HEAVY CONSTRUCTION PROJECTS (including sewer/water construction).

Modification Number	Publication Date
0	08/29/2014

ELEC0369-004 09/02/2013

	Rates	Fringes
LINE CONSTRUCTION		
Equipment Operator	$ 29.48	10.90
Groundman	$ 19.53	8.91
Lineman	$ 32.98	11.60

ELEC0369-008 05/29/2013

	Rates	Fringes
ELECTRICIAN	$ 29.48	14.37

ENGI0181-016 06/01/2014

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1	$ 27.66	14.15

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - Crane; Forklift

Operators on cranes with boom 150 feet and over, including jib, shall receive $0.75 above Group 1. All cranes with piling leads will receive $0.50 above Group 1 rate regardless of boom length. Combination rate shall mean $0.50 per hour above the basic hourly rate of pay.

Employees assigned to work below ground level are to be paid 10% above basic wage rate. This does not apply to open cut work.

ENGI0181-051 07/01/2014

	Rates	Fringes
POWER EQUIPMENT OPERATOR		

GROUP 1.....$ 28.85 14.15
GROUP 2.....$ 26.24 14.15
GROUP 4.....$ 25.95 14.15

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - Drill; Pumpcrete; Roller (Bituminous)

GROUP 2 - Bobcat/Skid Steer/Skid Loader; Concrete Pump; Roller (Rock)

GROUP 4 - Pump; Roller (Earth)

Operators on cranes with booms 150 feet and over (including jib) shall receive $1.00 above Group 1 rate; 250 feet and over including jib shall receive $1.50 above Class 1 rate. Combination Rate: All crane operators operating cranes, where the length of the boom in combination with the length of the piling leads equal or exceeds 150 feet, shall receive $1.00 above the Group 1 rate.

Employees assigned to work below ground level are to be paid 10% above basic wage rate. This does not apply to open cut work.

IRON0044-005 06/01/2013

	Rates	Fringes
IRONWORKER (STRUCTURAL AND REINFORCING)	$ 25.00	18.40

IRON0070-011 06/01/2014

	Rates	Fringes
IRONWORKER, ORNAMENTAL	$ 26.97	19.75

LABO0189-020 07/01/2014

	Rates	Fringes
LABORER		
Concrete Worker	$ 21.80	11.96

LABO0265-014 05/01/2014

	Rates	Fringes
LABORER		
Concrete Saw (Hand Held/Walk Behind)	$ 27.89	9.80
Flagger	$ 27.72	9.80

SUKY2011-038 06/25/2014

	Rates	Fringes
CARPENTER (Form Work Only)	$ 24.80	8.76

LABORER: Common or General	$ 22.17	9.64
LABORER: Concrete Finishing	$ 25.75	8.60
LABORER: Pipelayer	$ 19.66	10.85
OPERATOR: Backhoe/Excavator/Trackhoe	$ 22.56	12.10
OPERATOR: Bulldozer	$ 27.90	13.00
OPERATOR: Loader	$ 26.68	13.00
OPERATOR: Mechanic	$ 28.60	11.83
OPERATOR: Oiler	$ 24.34	13.00
OPERATOR: Trencher	$ 26.27	12.37
TRUCK DRIVER: Dump Truck	$ 17.82	3.26

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

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2.) If the answer to the question in 1.) is yes, then an

interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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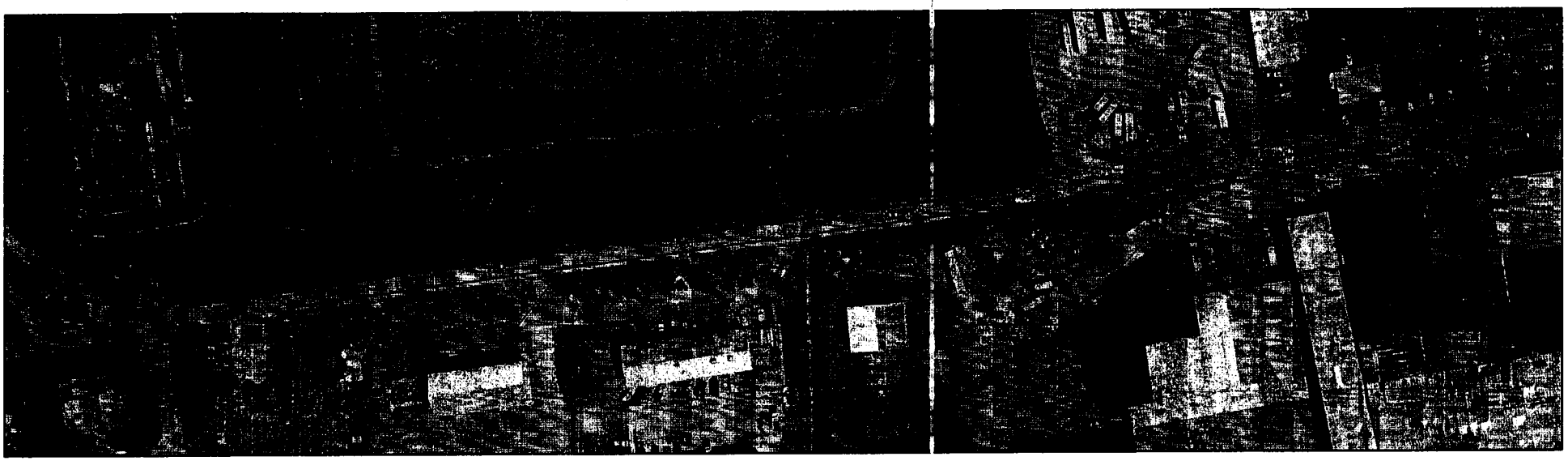
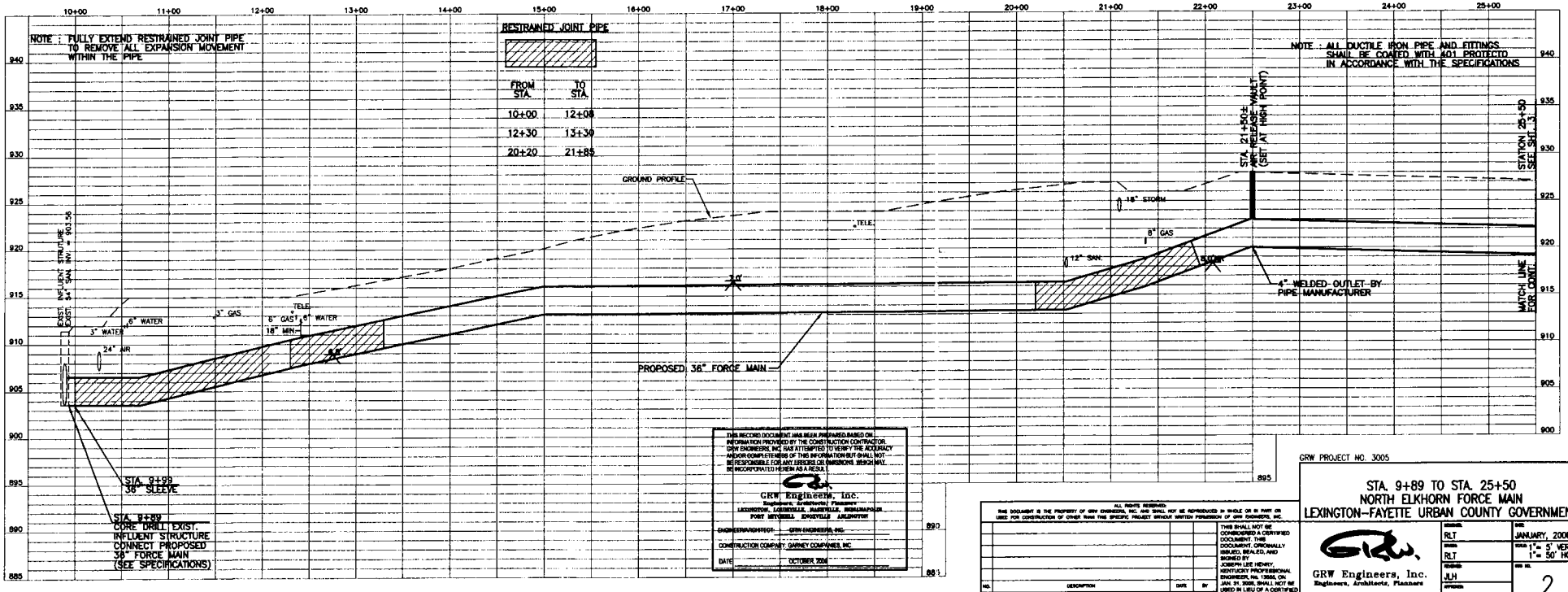
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

==========

END OF GENERAL DECISION





THIS RECORD DOCUMENT HAS BEEN PREPARED BASED ON INFORMATION PROVIDED BY THE CONSTRUCTION CONTRACTOR. GRW ENGINEERS, INC. HAS ATTEMPTED TO VERIFY THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION BUT SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

GRW Engineers, Inc.
Engineers, Architects, Planners
LEXINGTON, LOUISVILLE, PADUCAH, BOWLING GREEN
FORT MITCHELL, KNOXVILLE, ARLINGTON

ENGINEER/ARCHITECT: GRW ENGINEERS, INC.

CONSTRUCTION COMPANY: GARNEY COMPANIES, INC.

DATE: OCTOBER, 2006

NO.	DESCRIPTION	DATE	BY

REVISIONS

THIS SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT. THIS DOCUMENT, ORIGINALLY ISSUED, SEALED, AND SIGNED BY JOSEPH LEE HENRY, KENTUCKY PROFESSIONAL ENGINEER, No. 13994, ON JAN. 31, 2008, SHALL NOT BE USED IN LIEU OF A CERTIFIED DOCUMENT

GRW PROJECT NO. 3005

STA. 9+89 TO STA. 25+50
NORTH ELKHORN FORCE MAIN
LEXINGTON--FAYETTE URBAN COUNTY GOVERNMENT

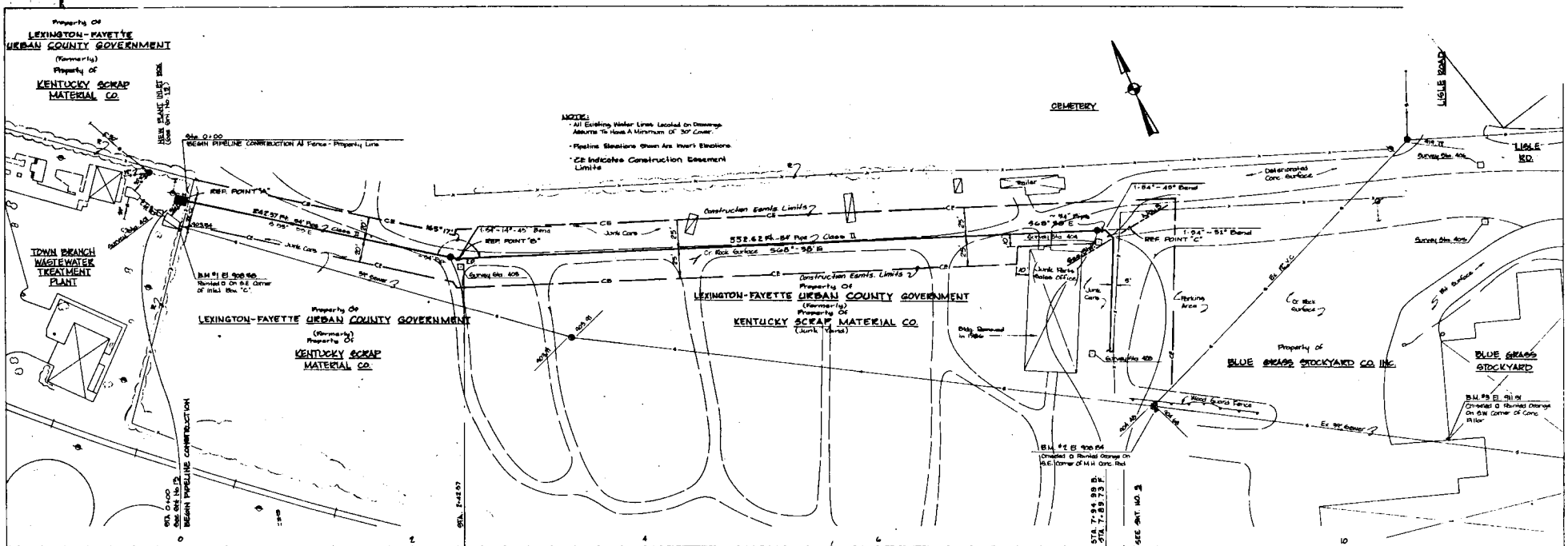
GRW Engineers, Inc.
Engineers, Architects, Planners
LEXINGTON LOUISVILLE NASHVILLE WASHINGTON

DESIGNED	RLT
DRAWN	RLT
REVIEWED	JLH
APPROVED	JLH
DATE	JANUARY, 2008
SCALE	1"= 5' VERT. 1"= 50' HORIZ.
SHT. NO.	2

00530

FILE NAME: M:\3005\Cadd\FORCE MAIN\FORCE MAIN AS BUILTS\3005-02.dwg
PRINTED: 10/20/2009 @ 2:00PM
EDITED BY: Rhocker

Conformance Set



RECORD DRAWINGS

These Record Drawings Have Been Prepared In Part On The Basis Of Information Compiled And Furnished By Others. The Engineer Will Not Be Responsible For Any Resulting Errors Or Omissions Which Have Been Incorporated Into This Document.

000387

NO.	DATE	BY	REVISIONS
1	2/28		Sewer Line Relocation - Sta. 7+75.73 To 8+07.73

CHECKED/HER
APPROVED/JEL/ADP

Howard K. Bell Consulting Engineers, P.C. — A Joint Venture — PEH Engineers

Lexington – Fayette Urban County Government
- Manchester Street Relief Sewer

SCALE: Vert. 1" = 5'
Horiz. 1" = 40'
DATE: Dec., 1982

54" SEWER
WASTEWATER PLANT TO BLUE GRASS STOCKYARD

SHEET NO. 2 OF 17

Conformance Set

RECORD DRAWINGS

These Record Drawings Have Been Prepared In Part On The Basis Of Information Compiled And Furnished By Others. The Engineer Will Not Be Responsible For Any Resulting Errors Or Omissions Which Have Been Incorporated Into This Document.

000388

12/1/84	RSG	Sewer Line Relocation - Sta. 8+07.73 To 11+29.41
DATE	BY	REVISIONS

CHECKED: RER
APPROVED: JEL/GDP

HKB Howard K. Bell Consulting Engineers, Inc. — A Joint Venture — PEH Engineers

Lexington - Fayette Urban County Government
Manchester Street Relief Sewer

SCALE: Vert. 1" = 5' Horiz. 1" = 40'
DATE: Dec., 1982

54" SEWER
BLUE GRASS STOCKYARD

SHEET NO. 3 OF 17

Conformance Set

LFUCG LAND DISTURBANCE PERMIT APPLICATION AND ESC PLAN CHECKLIST

OWNER / DEVELOPER Name: Town Branch Wet Weather Storage Facility — The Lexington Fayette Urban County Gov. **Date:** 09-23-2014 **Zone:**

Address: Thompson Rd **City:** Lexington **State:** KY **Zip:** 40511

Contractor Name and Address: Not yet selected **Reg #:**

Contact Name, Phone/ FAX/Email:

ITEM DESCRIPTION	Y	N	N/A	PAGE #	NOTES
I. Plans stamped by licensed prof.	☐	☒	☐		
II. Permits:					
KY Construction NOI / Permit (Gen. or Ind.)	☐	☒	☐		To be submited by the Contractor.
USCOE 404 Permit	☐	☐	☒		
KYDOW 401 Water Quality Cert.	☒	☐	☐		Categorical Exclusion Determination
KY Stream Construction Permit	☐	☐	☒		
FEMA LOMR or CLOMR	☐	☐	☒		
III. BMPS:					
Site Preparation:					
Phasing plan for large projects	☐	☐	☒		Maximum disturbed area = 25 acres
Limits of disturbance clearly marked	☒	☐	☐		25 foot undisturbed buffer strip along streams See Note below
Construction Entrance/ Exit Pad	☒	☐	☐		No. 2 stone w/ filter fabric, min. 50 ft long (100' where practical)
Temporary Diversion (Berm or Ditch)	☐	☐	☒		Offsite (clean) water routed around disturbed area
Stream Crossings	☐	☐	☒		Not allowed without US Army Corps 404 permit
Concrete Washout Area	☒	☐	☐		One washout pit for every 40 lots
Soil Stabilization:					
Seeding/sodding schedule/timing	☒	☐	☐		Applied within 14 days of reaching final grade or suspending work
Slope Protection:					
Silt Fence downslope of bare areas	☒	☐	☐		
Silt Fence installed along contour	☒	☐	☐		
Erosion Control Blankets on slopes	☐	☐	☒		Conforms with Fig. 11-1 in LFUCG Stormwater Manual
Drainage System Control:					
Inlets Protected	☒	☐	☐		
Pipe Outfall Erosion Prevention	☐	☐	☒		
Channel Lining	☐	☐	☒		Sodding or seed w/ blankets/mats immediately after construction
Check Dams	☒	☐	☐		Max drainage area = 10 acres
Sediment Basins and Traps:					
Sediment Traps (drainage area < 5 ac)	☐	☐	☒		Minimum volume = 3600 cf x number of disturbed acres
Sediment Basins (drainage area = > 5 ac)	☐	☐	☒		Minimum volume = 3600 cf x number of disturbed acres
Good Housekeeping:					
Material storage addressed	☒	☐	☐		
Spill Prevention and Control addressed	☒	☐	☐		
Dust control addressed	☒	☐	☐		
Dewatering operations are filtered	☐	☐	☒		
Narrative:					
Schedule/sequence for BMP installation	☒	☐	☐		
BMP Inspection Requirement	☒	☐	☐		Every 7 days and after 0.5" of rainfall See Note below
BMP Maintenance Requirement	☒	☐	☐		
Roadway Cleaning	☒	☐	☐		

LFUCG USE ONLY: Review Date: 09-23-2014 **Status:** In Compliance: Y (N) Additional Info Needed: (Y) N

Reviewed By: A. AL-HUMADI **Department:** WQ

Comments / Items Missing or Incomplete:

1- To use a thicker line marking the limit of land disturbance.
2- "ESC" details will be inspected; once a week, or every (7) days and after a rainfall event of 0.5 Inches.
3- To provide detail of the concrete washout pit such as; size & method of construction, above ground / under ground.
4- construction entrance to be underlined with geotextile fabric and covered with #2 stone.
5- Drawing G2-TB1, to provide details ... stabilization, concrete, silt fence shouldn't cross contours.

Conformance Set

Exhibit B

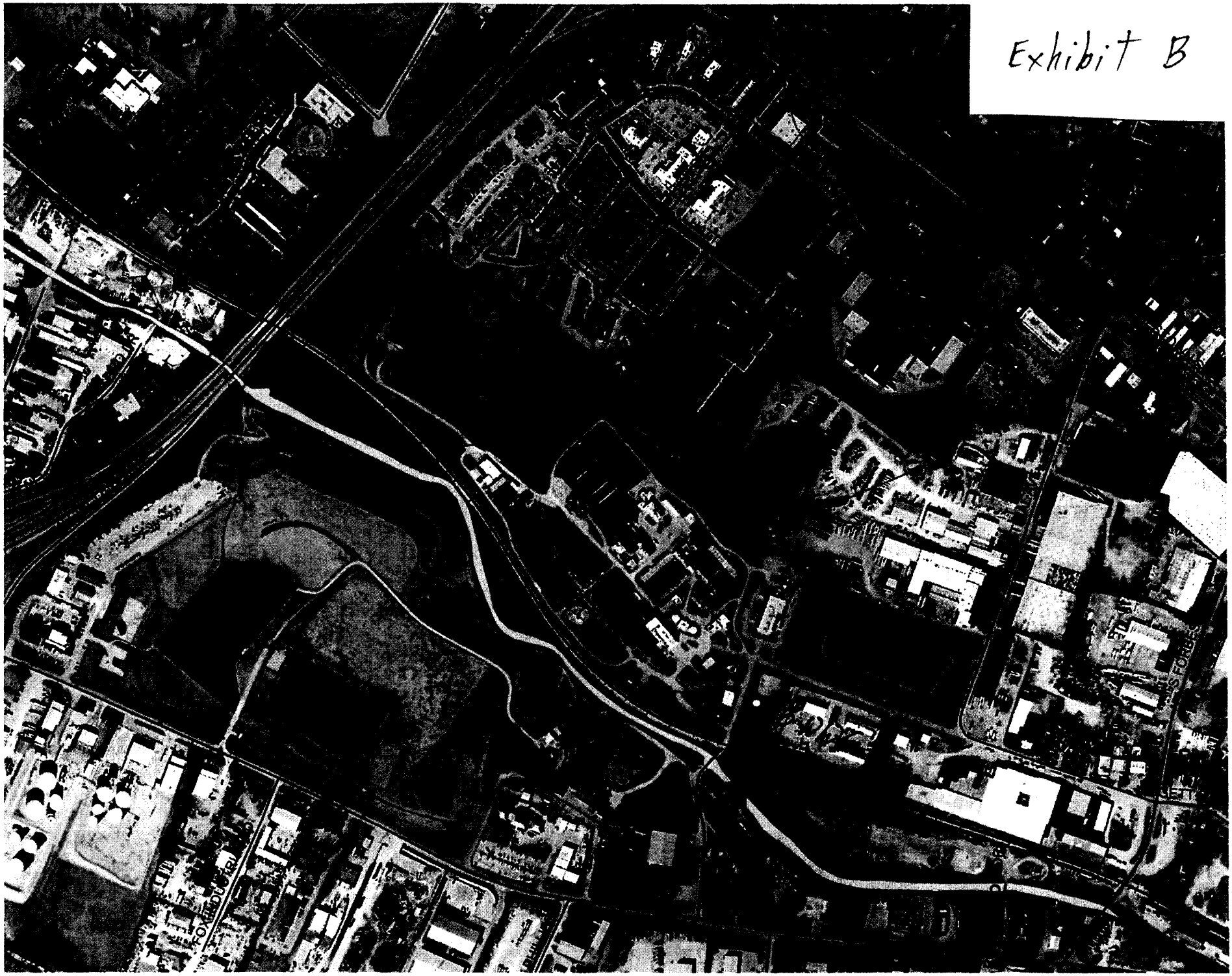


Exhibit C

Exhibit D

Addendum 6

Lexington-Fayette Urban County Government
DEPARTMENT OF FINANCE & ADMINISTRATION

Jim Gray
Mayor

William O'Mara
Commissioner

ADDENDUM #6

Bid Number: **#137-2014**

Date: September 29, 2014

Subject: Town Branch Wet Weather Storage Facilities

Address inquiries to:
Sondra Stone
(859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

1. SPECIFICATIONS
SECTION 11310, NON-CLOG SEWAGE SUBMERSIBLE PUMPS

Change the following in paragraph 3.3.C from:

"C. A thirty-day operating period of the pumps will be required before acceptance. If a pump performance does not meet the Specifications, corrective measures shall be taken or the pump shall be removed and replaced with a pump which satisfies the conditions specified. All test procedures shall be in accordance with Hydraulic Institute Standards certified results of tests shall be submitted.", To:

"C. A thirty-day consecutive operating period of the pumps will be required before acceptance. It is understood that rain events may not occur during this period. Operation of the facility will be conducted by closing gates and activating the pump station into a simulated storm situation. If a pump performance does not meet the Specifications, corrective measures shall be taken or the pump shall be removed and replaced with a pump which satisfies the conditions specified. All test procedures shall be in accordance with Hydraulic Institute Standards certified results of tests shall be submitted. All power costs during this period of operation of the pump station will be paid for by the LFUCG. However, after the 30-day operating period and the pumps have not been accepted, the Contractor shall be responsible for these costs.ADD6"

2. ADDITIONAL INFORMATION
ASPHALT DEMOLITION

All demolished asphalt is allowable in the backfill provided it is less than 12" in diameter.

Todd Slatin

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged.
This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: _____

ADDRESS: _____

SIGNATURE OF BIDDER: _____