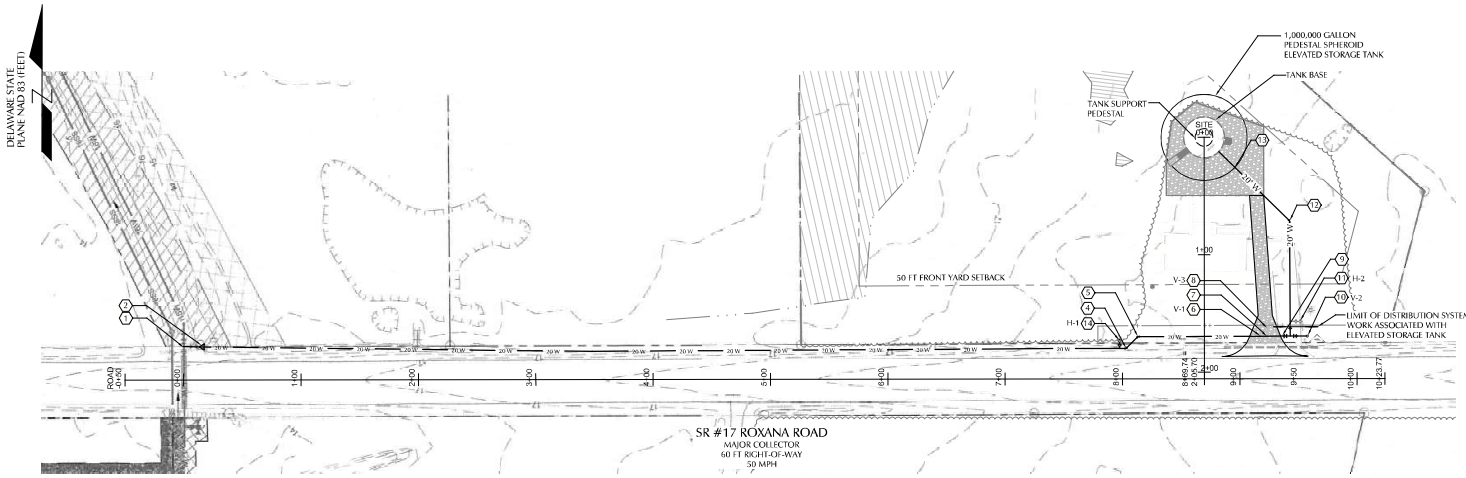


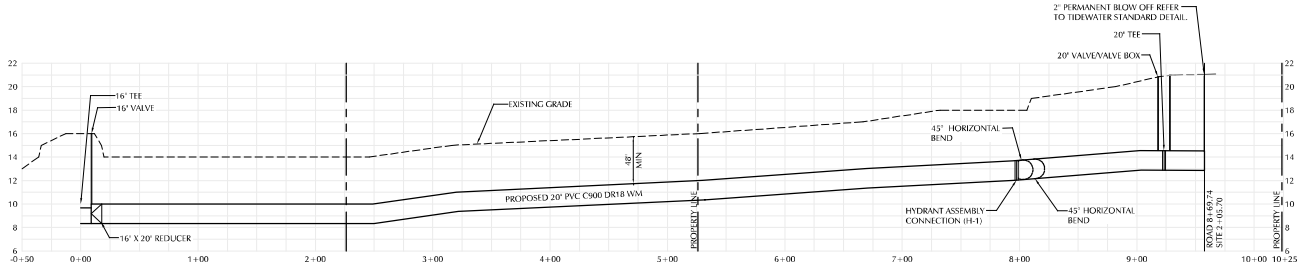
WATER MAIN PLAN

1" = 50'

0 50 100 150 FEET

WATER PLAN NOTES:

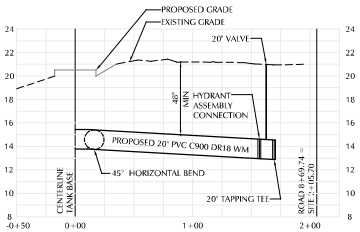
1. TEST PIT TO VERIFY THRUST RESTRAINT BETWEEN VALVE AND TEE BEFORE ORDERING MATERIALS.
2. 16" X 20" REDUCER ROAD STA 0+13.56 L 23.81
3. (V-10) 20" VALVE
4. 45° HORIZONTAL BEND
5. 45° HORIZONTAL BEND
6. (V-1) 20" VALVE & VALVE BOX
7. 20" X 20" TEE ROAD STA 9+23.14 R 36.25
8. (V-3) 20" VALVE
9. (V-2) 20" VALVE
10. 2" TEMPORARY BLOW OFF. REFER TO TIDEWATER STANDARD DETAIL.
11. (H-1) HYDRANT ASSEMBLY. SITE STA 1+56.85 L 53.38 FT. REFER TO TIDEWATER STANDARD DETAIL. FACE STEAMER NOZZLE TO ADJACENT PAVING.
12. 45° HORIZONTAL BEND
13. TRANSITION FROM C900 PVC TO CLASS 53 DUCTILE IRON PIPE, 20 FT MINIMUM OUTSIDE OF TANK FOUNDATION RING WALL.
14. (H-2) HYDRANT ASSEMBLY. SITE STA 7+97.64 L 27.73 FT. REFER TO TIDEWATER STANDARD DETAIL. FACE STEAMER NOZZLE TO ADJACENT SHOULDER PAVING.



WATER MAIN PROFILE - ROXANA ROAD

H 1" = 50' V 1" = 5

0 50 100 150 FEET



WATER MAIN PROFILE - SITE

H 1" = 50' V 1" = 5

0 50 100 150 FEET

NOTE:
SURVEY DATA PRESENTED IN THIS DRAWING WAS PROVIDED BY TIDEWATER UTILITIES, INC.

Seal:

06/03/2021

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Revision:	By:	Date:
1 OFFICE OF STATE FIRE MARSHAL	SKM	05/28/21

ELEVATED STORAGE TANK
TIDEWATER UTILITIES - OCEAN VIEW DISTRICT
LITTLE ASSAWOMAN BAY WATERSHED,
TOWN OF MILLVILLE, BALTIMORE HUNDRED,
SUSSEX COUNTY, DELAWARE
TAX MAP #134-15.00-116.01
WATER MAIN CONNECTION PLAN AND PROFILE

Date:	MAY 14, 2021
Scale:	AS SHOWN
Dwn.By:	SKM
Proj.No.:	TUI01-02

Dwg. No.: **UT1.1**

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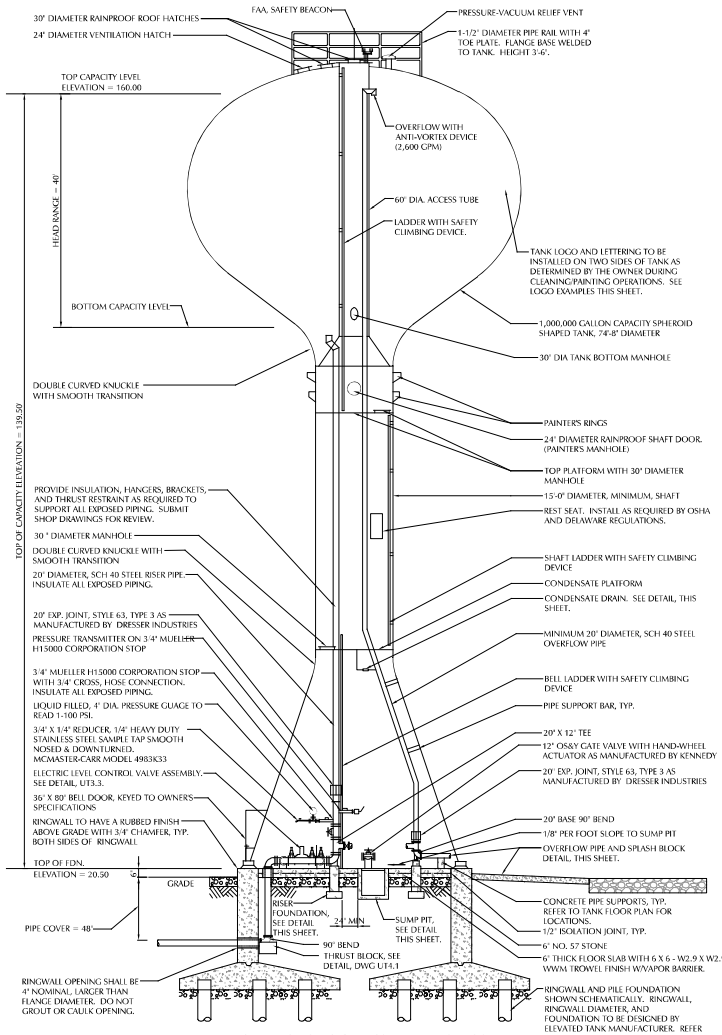


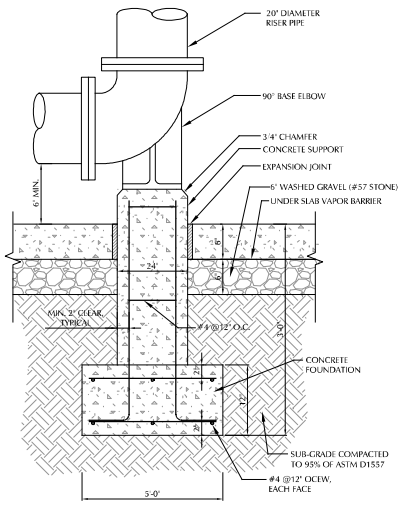
ELEVATED STORAGE TANK ELEVATION

GENERAL NOTES:

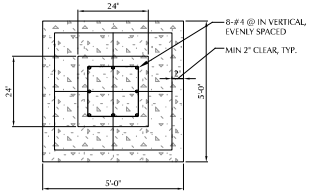
1. TANK APPURTENANCES ROTATED FOR CLARITY.
2. LADDER AND SAFETY DEVICES SHALL MEET OSHA AND DELAWARE REGULATIONS.
3. TANK SHALL BE PAINTED WHITE OR SKY NEUTRAL. OWNER SHALL MAKE COLOR CHOICE.
4. TANK SHALL BE LETTERED WITH THE TIDEWATER LOGO AND MILLVILLE BY THE SEA LOGO.
5. INSTALL RISER FOUNDATION DIRECTLY BELOW RISER BASE ELBOW AND OVERFLOW BASE TEE AS SHOWN AND PROVIDE MINIMUM 2' CLEARANCE BETWEEN OUTSIDE OF SUMP PIT AND RISER FOUNDATION. SLOPE CONCRETE FLOOR TO SUMP PIT AS NECESSARY.
6. ALL GATE VALVES SHALL BE KENNEDY C-509.
7. SEE SPECIFICATIONS FOR OPTIONAL ACCESSORIES AND ALTERNATE ITEMS.
8. PROVIDE CHAIN WHEEL OPERATORS FOR GATE VALVES WITH ACTUATOR CENTERLINE HIGHER THAN 4 FT ABOVE FINISH FLOOR.

ELEVATED WATER STORAGE TANK - PEDESTAL SPHEROID 1,000,000 GALLON CAPACITY

NTS



SECTION VIEW



PLAN VIEW

RISER PIPE CONCRETE FOUNDATION DETAIL

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TIDEWATER UTILITIES, INC.
A Middlesex Water Company Affiliate

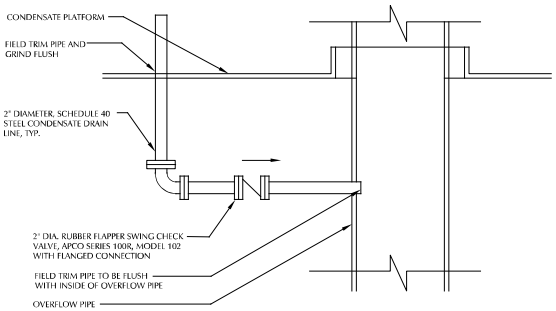
TIDEWATER LOGO EXAMPLE

NTS

Millville by the Sea

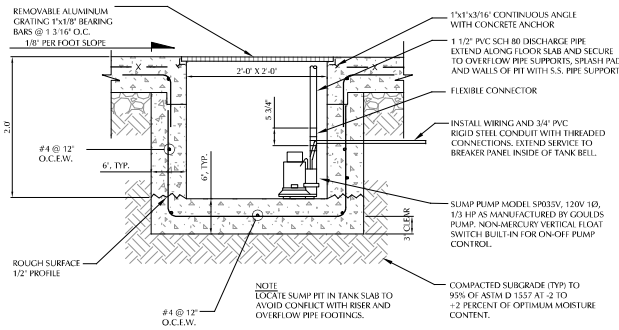
TOWN OF MILLVILLE LOGO EXAMPLE

NTS



CONDENSATE DRAIN LINE DETAIL

NTS



SUMP PUMP DETAIL

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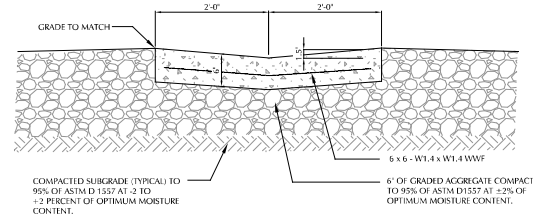

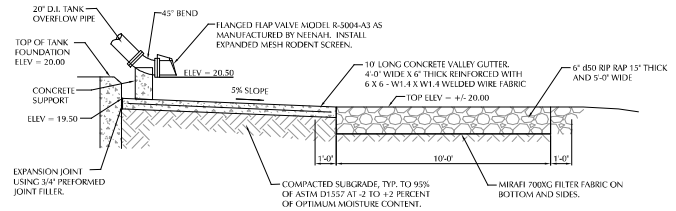

OVERFLOW SPLASH PAD

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No.	Revisions	By:	Date:
1	TOWN OF MILLVILLE COMMENTS	SKM	11/25/20
2	TOWN OF MILLVILLE COMMENTS	SKM	05/13/21

ELEVATED STORAGE TANK
TIDEWATER UTILITIES - OCEAN VIEW DISTRICT
LITTLE ASSAWOMAN BAY WATERSHED,
TOWN OF MILLVILLE, BALTIMORE HUNDRED,
SUSSEX COUNTY, DELAWARE
TAX MAP #134-15.00-116.01

ELEVATED STORAGE TANK DETAILS

Date:	APR 29, 2021
Scale:	NO SCALE
Dwn.By:	SKM
Proj.No.:	TU101-02

Dwg:

UT3.1

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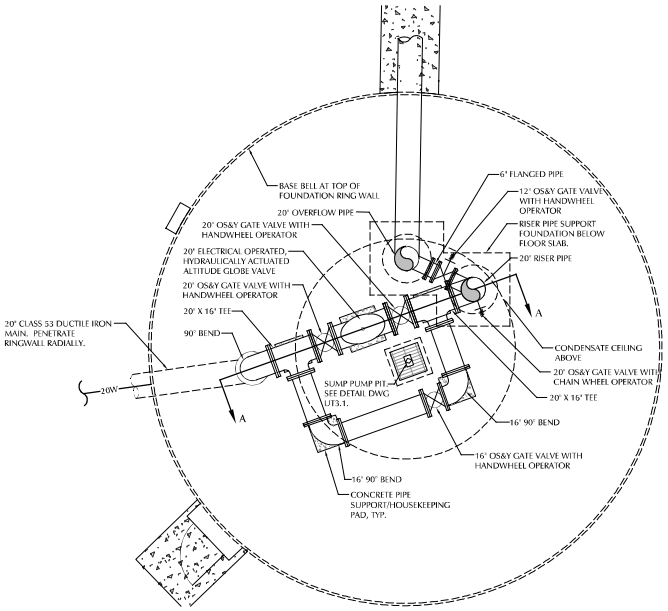
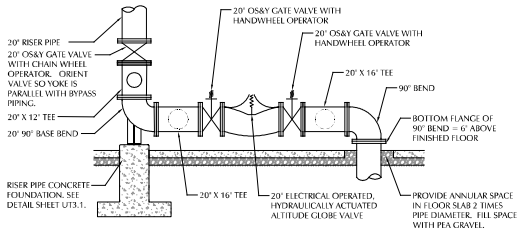


INTERIOR PIPING FLOOR PLAN

1/4" = 1'-0"

0 4 8 12



INTERIOR PIPING DETAIL - SECTON A

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1	TOWN OF MILLVILLE COMMENTS	SKM	11/25/20
2	TOWN OF MILLVILLE COMMENTS	SKM	05/13/21

ELEVATED STORAGE TANK

TIDEWATER UTILITIES - OCEAN VIEW DISTRICT

LITTLE ASSAWOMAN BAY WATERSHED,
TOWN OF MILLVILLE, BALTIMORE HUNDRED,
SUSSEX COUNTY, DELAWARE
TAX MAP #134-15.00-116.01

ELEVATED STORAGE TANK DETAILS

Date:	APR 29, 2021
Scale:	AS SHOWN
Dwn.By:	SKM
Proj.No.:	TUI01-02

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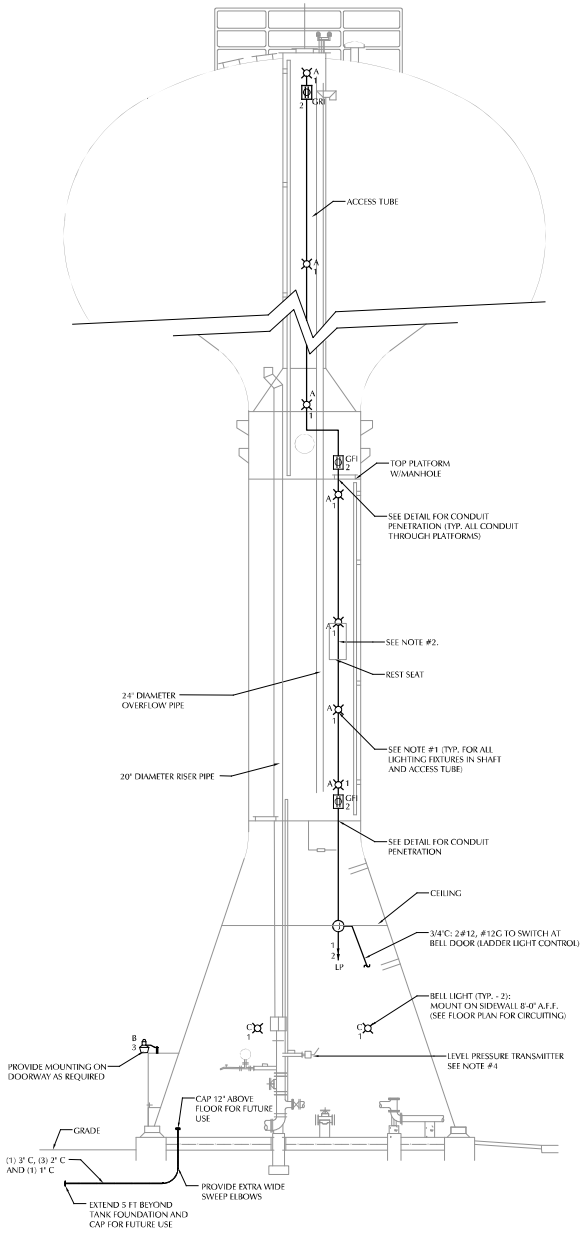
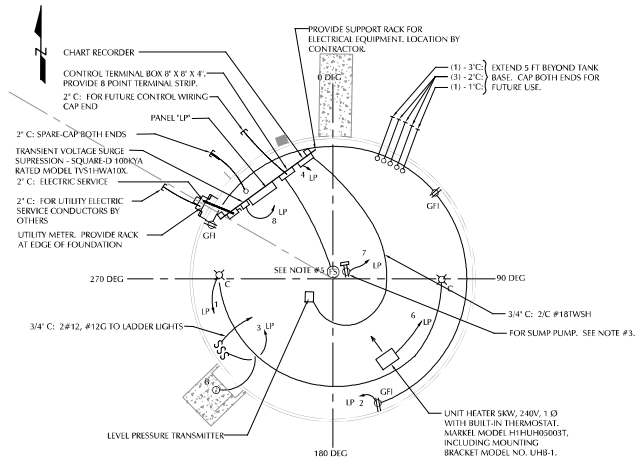


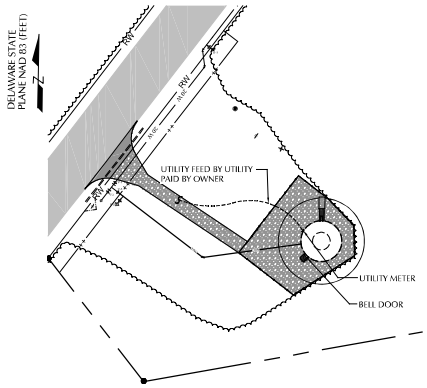
ELEVATION (TANK APPURTENANCES ROTATED FOR CLARITY)

NTS



FLOOR PLAN AT BASE

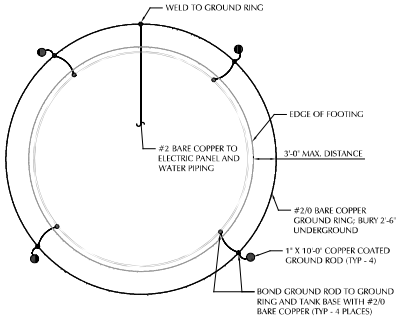
NTS



ELECTRICAL SITE PLAN

1" = 50'

0 50 100 150



GROUNDING GRID DETAIL

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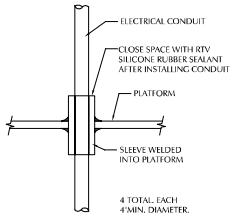

DETAIL CONDUIT PENETRATION

NTS

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER MODEL NUMBER	EQUAL MFGRS	LAMP	MOUNTING	DESCRIPTION
A	HUBBELL VL15P1G	1 2	(1) 15W PL-C	SURFACE	NEMA 4X RATED ENCLOSED & GASKETED COMPACT LED INDUSTRIAL FIXTURE, 30% GLASS-FILLED THERMOPLASTIC POLYESTER BODY, HEAT-RESISTANT GLASS GLOBE & GUARD; PROVIDE COLD WEATHER ELECTRONIC BALLAST & ALL HARDWARE & ACCESSORIES REQUIRED FOR COMPLETE INSTALLATION.
B	HUBBELL AL-D/24L-53/5K7/6X6/ UNV/PCU/SWP/FL/SF3/LCS	1 2	(1) LED (COATED)	2 3/8" OD TENON (BY OTHERS)	OUTDOOR LED SECURITY LIGHT, DIE-CAST ALUMINUM HOUSING, LATCH-ON TYPE V REFRACTOR, INTEGRAL PHOTO CONTROL, 24" ALUMINUM MOUNTING BRACKET; PROVIDE ALL REQUIRED HARDWARE FOR MOUNTING FIXTURE TO TANK SUPPORT STRUCTURE.
C	HUBBELL LXEM4-35/W-RFP-EU	1 2	(2) LED	SURFACE	ENCLOSED AND GASKETED FIBERGLASS EXTREME ENVIRONMENT, 4 FOOT LAMP LENGTH, NEMA 4X HOUSING, POLYCARBONATE LENS. PROVIDE DRIVER AND ALL HARDWARE AND ACCESSORIES REQUIRED TO COMPLETE INSTALLATION.

NOTES: 1 LITHONIA 2 COOPER

100A SQUARE-D TYPE QOB MCB 12-POLE — PANEL "LP" — 120/240V, 1 Ø, 3W

CIR. No.	DESIGNATION	CONN. LOAD (KVA)	CIRC. BKR.	BRANCH CIRCUIT	REMARKS
1	BELL/SHAFT/ACCESS TUBE LIGHTING	0.2	20/1	3/4"C: 2#12, #12G	
2	BELL/SHAFT/ACCESS TUBE RECEPTACLES	1.1	20/1	3/4"C: 2#12, #12G	
3	BELL DOOR SECURITY LIGHT	0.4	20/1	3/4"C: 2#12, #12G	
4	CHART RECORDER	0.1	20/1	3/4"C: 2#12, #12G	
5	SPARE	——	20/1	——	
6	UNIT HEATER	5.0	30/2	3/4"C: 2#10, #10G	
7	SUMP PUMP	0.3	20/1	3/4"C: 2#12, #12G	
8	TVSS		30/1	3/4"C: 2#10, #10G	
9-10	SPARE BREAKERS	——	20/1	——	
11-12	BLANK SPACES	——	—/1	——	

NOTES:

1. CONTRACTOR SHALL PROVIDE ONE TYPE 'A' FIXTURE PER EACH 20'-0" LENGTH OF SHAFT AND ACCESS TUBE. ADJUST INDICATED FIXTURE COUNT AS REQUIRED.
2. CONTRACTORS SHALL PROVIDE CONDUCTOR/CABLE SUPPORT IN VERTICAL CONDUITS PER NEC REQUIREMENTS. CONTRACTOR SHALL COORDINATE CONDUIT LOCATION WITH PIPING TO PROVIDE MAXIMUM SHAFT AND ACCESS TUBE CLEARANCE. LIGHTNIG FIXTURES, SHALL BE ACCESSIBLE FROM LADDER.
3. PROVIDE SUPPORT AND MOUNT RECEPTACLE 1'-0" ABOVE FLOOR NEAR SUMP PUMP DRAIN LINE AT EDGE OF SUMP.
4. TRANSDUCER TO BE INSTALLED ON RISER PIPE ONLY. ASHCROFT MODEL GC 51, 0-100 PSI.
5. MOUNT HI LEVEL FLOAT SWITCH ON SIDE OF SUMP TO OPERATE AT 3 INCHES BELOW FLOOR LEVEL. PROVIDE 3/4" C: 2#12, #12G TO CONTROL TERMINAL BOX FOR FUTURE CONNECTION.

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1	TOWN OF MILLVILLE COMMENTS	SKM	11/25/20
2	TOWN OF MILLVILLE COMMENTS	SKM	05/13/21

ELEVATED STORAGE TANK
TIDEWATER UTILITIES - OCEAN VIEW DISTRICT

LITTLE ASSAWOMAN BAY WATERSHED,
TOWN OF MILLVILLE, BALTIMORE HUNDRED,
SUSSEX COUNTY, DELAWARE
TAX MAP #134-15.00-116.01

ELEVATED STORAGE TANK ELECTRICAL PLAN & DETAILS

Date:	APR 29, 2021
Scale:	NO SCALE
Dwn.By:	SKM
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Dwg:

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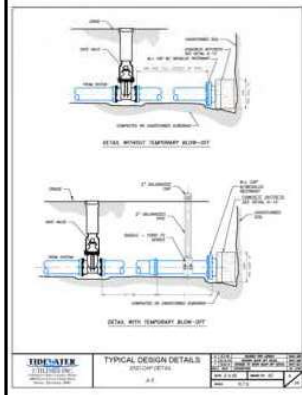
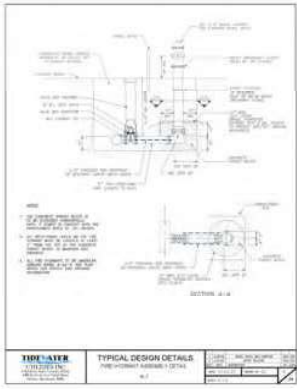
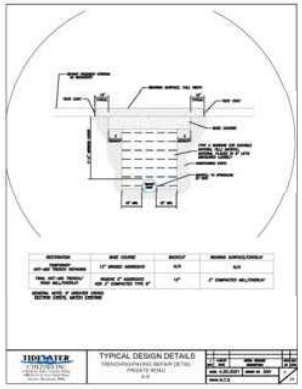
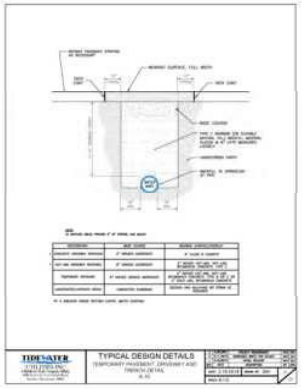
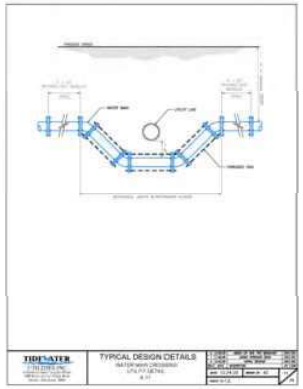
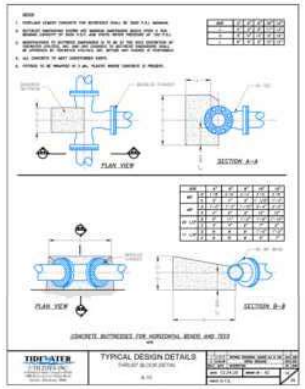


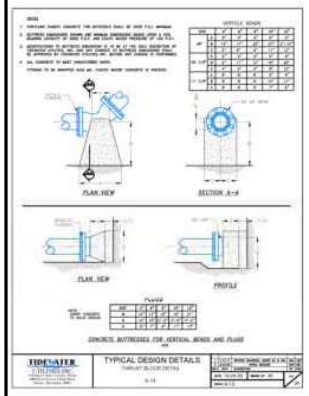


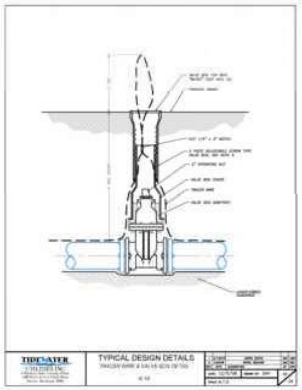


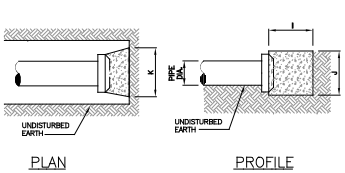










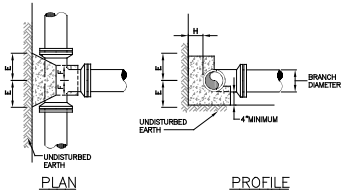


DIMENSION SCHEDULE									
PIPE DIA.	4"	6"	8"	10"	12"	16"	18"	20"	24"
I	6"	6"	8"	8"	10"	1'-0"	1'-4"	1'-6"	1'-8"
J	1'-0"	1'-0"	1'-4"	1'-8"	2'-0"	2'-8"	4'-0"	4'-6"	5'-0"
K	1'-5"	1'-5"	1'-11"	2'-5"	2'-10"	3'-9"	4'-0"	4'-8"	5'-0"

* USE OF BAGGED CONCRETE MIX IS PROHIBITED.

PLUG THRUST BLOCK DETAIL

NTS

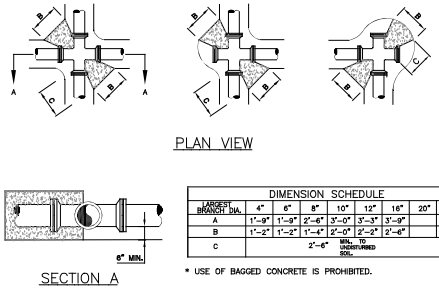


DIMENSION SCHEDULE									
BRANCH DIA.	4"	6"	8"	10"	12"	16"	18"	20"	24"
E	8"	8"	10"	1'-0"	1'-3"	1'-8"	2'-0"	2'-6"	2'-9"
F	6"	6"	8"	8"	8"	10"	1'-0"	1'-0"	1'-2"
G	7"	7"	9"	1'-0"	1'-2"	1'-6"	2'-0"	2'-6"	2'-9"
H	8"	8"	9"	10"	1'-0"	1'-2"	1'-4"	1'-5"	1'-6"

* USE OF BAGGED CONCRETE PROHIBITED.

TEE THRUST BLOCK DETAIL

NTS

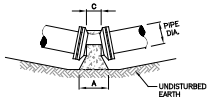


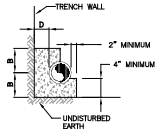
DIMENSION SCHEDULE							
LARGEST BRANCH DIA.	4"	6"	8"	10"	12"	16"	20"	24"
A	1'-9"	1'-9"	2'-6"	3'-0"	3'-3"	3'-9"		4'-6"
B	1'-2"	1'-2"	1'-4"	2'-0"	2'-2"	2'-6"		3'-6"
C	2'-6" MIN. TO UNDISTURBED SOIL.							

* USE OF BAGGED CONCRETE IS PROHIBITED.

CROSS THRUST BLOCK DETAIL

NTS



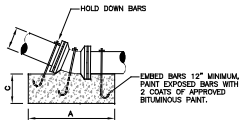


DIMENSION SCHEDULE																			
BEND	11¼°									22½°									
PIPE DIA.	4"	6"	8"	10"	12"	16"	18"	20"	24"	4"	6"	8"	10"	12"	16"	18"	20"	24"
A	6"	6"	6"	10"	1'-0"	1'-4"	2'-0"	2'-2"	2'-6"	9"	9"	1'-0"	1'-6"	1'-9"	2'-3"	2'-3"	2'-8"	3'-0"
B	7"	7"	8"	9"	10"	1'-0"	1'-6"	1'-6"	1'-8"	7"	7"	8"	9"	10"	1'-0"	1'-0"	1'-6"	1'-6"
C	4"	4"	6"	6"	10"	1'-0"	1'-6"	1'-6"	1'-8"	4"	4"	6"	8"	10"	1'-0"	1'-0"	1'-2"	1'-6"
D	7"	7"	7"	8"	8"	9"	1'-0"	1'-2"	1'-6"	8"	8"	9"	10"	11"	1'-2"	1'-2"	1'-4"	1'-8"
BEND	45°									90°								
PIPE DIA.	4"	6"	8"	10"	12"	16"	18"	20"	24"	4"	6"	8"	10"	12"	16"	18"	20"	24"
A	1'-3"	1'-3"	1'-8"	2'-1"	2'-6"	3'-4"	4'-0"	4'-0"	5'-0"	2'-0"	2'-0"	2'-6"	3'-0"	3'-6"	5'-0"	5'-0"	6'-0"	5'-6"
B	7"	7"	8"	9"	1'-1"	1'-3"	2'-0"	2'-6"	3'-0"	6"	6"	9"	1'-0"	1'-3"	1'-6"	1'-6"	3'-0"	2'-0"
C	4"	4"	6"	8"	10"	1'-0"	1'-6"	1'-6"	2'-0"	4"	4"	6"	8"	10"	1'-0"	1'-0"	1'-6"	1'-6"
D	8"	8"	9"	10"	11"	1'-2"	1'-4"	1'-6"	1'-10"	1'-5"	1'-5"	1'-7"	1'-8"	1'-9"	1'-10"	1'-10"	2'-0"	2'-4"

* USE OF BAGGED CONCRETE PROHIBITED.

HORIZONTAL BEND THRUST BLOCK DETAIL

NTS



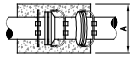
DIMENSION SCHEDULE										
BEND		PIPE DIAMETER								
		4"	6"	8"	10"	12"	16"	18"	20"	24"
11¼°	A	1'-6"	1'-6"	1'-6"	2'-5"	3'-0"	3'-6"	3'-9"	4'-0"	4'-0"
	B	1'-3"	1'-3"	1'-9"	1'-9"	2'-0"	2'-4"	2'-6"	2'-10"	3'-0"
	C	2'-0"	2'-0"	2'-6"	2'-9"	3'-0"	3'-6"	3'-9"	4'-0"	4'-0"
22½°	A	2'-0"	2'-0"	3'-4"	3'-8"	4'-0"	4'-4"	4'-8"	5'-0"	5'-0"
	B	1'-9"	1'-9"	2'-3"	2'-6"	2'-9"	3'-0"	3'-4"	3'-4"	3'-8"
	C	2'-6"	2'-6"	2'-8"	3'-10"	4'-0"	5'-6"	5'-8"	6'-0"	6'-0"
45°	A	2'-6"	2'-6"	3'-0"	4'-0"	4'-6"	5'-2"	5'-6"	5'-8"	5'-8"
	B	2'-0"	2'-0"	2'-2"	3'-0"	3'-4"	4'-0"	4'-0"	4'-0"	4'-0"
	C	3'-0"	3'-0"	4'-0"	4'-6"	4'-9"	5'-0"	5'-4"	5'-6"	5'-8"

* USE OF BAGGED CONCRETE PROHIBITED.

BAR SCHEDULE			
SIZE	REINFORCING BARS		
	11¼°	22½°	45°
4"	3 #5	3 #5	3 #5
6"	3 #6	3 #6	3 #6
8"	3 #6	3 #6	3 #6
10"	3 #6	3 #6	3 #6
12"	3 #6	3 #6	3 #6
16"	3 #6	3 #8	3 #8
18"	3 #8	3 #8	3 #8
20"	3 #8	3 #8	3 #8
24"	3 #8	3 #8	3 #8

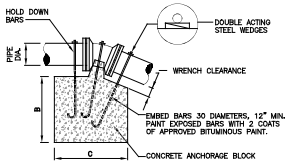
VERTICAL UPWARD BEND THRUST BLOCK DETAIL

NTS



DIMENSION SCHEDULE										
BEND		PIPE DIAMETER								
		4"	6"	8"	10"	12"	16"	18"	20"	24"
11¼°	A	1'-6"	1'-6"	1'-6"	2'-5"	3'-0"	3'-4"	3'-6"	3'-9"	4'-0"
	B	1'-3"	1'-3"	1'-9"	1'-9"	2'-0"	2'-4"	2'-6"	2'-10"	3'-0"
	C	2'-0"	2'-0"	2'-6"	2'-9"	3'-0"	3'-4"	3'-6"	3'-9"	4'-0"
22½°	A	2'-0"	2'-0"	3'-4"	3'-8"	4'-0"	4'-4"	4'-6"	4'-9"	5'-0"
	B	1'-9"	1'-9"	2'-3"	2'-6"	2'-9"	3'-0"	3'-2"	3'-4"	3'-6"
	C	2'-6"	2'-6"	2'-8"	3'-10"	4'-0"	5'-4"	5'-6"	5'-9"	6'-0"
45°	A	2'-6"	2'-6"	3'-0"	4'-0"	4'-6"	5'-2"	5'-4"	5'-6"	5'-8"
	B	2'-0"	2'-0"	2'-2"	3'-0"	3'-2"	3'-6"	4'-0"	4'-0"	4'-0"
	C	3'-0"	3'-0"	4'-0"	4'-6"	4'-9"	5'-0"	5'-3"	5'-6"	5'-8"

* USE OF BAGGED CONCRETE PROHIBITED.



BAR SCHEDULE			
SIZE	REINFORCING BARS		
	11¼°	22½°	45°
4"	3 #6	3 #6	3 #6
6"	3 #6	3 #6	3 #6
8"	3 #6	3 #6	3 #6
10"	3 #6	3 #6	3 #6
12"	3 #6	3 #6	3 #6
16"	3 #6	3 #6	3 #6
18"	3 #8	3 #8	3 #8
20"	3 #8	3 #8	3 #8
24"	3 #8	3 #8	3 #8

VERTICAL DOWNWARD BEND THRUST BLOCK DETAIL

NTS

Seal:

06/03/2021

BACON
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302-856-2825 | info@baconengineering.com

Revisions		By:	Date:
1	TOWN OF MILLVILLE COMMENTS	SKM	11/25/20
2	TOWN OF MILLVILLE COMMENTS	SKM	05/13/21

ELEVATED STORAGE TANK
TIDEWATER UTILITIES - OCEAN VIEW DISTRICT
LITTLE ASSAWOMAN BAY WATERSHED,
TOWN OF MILLVILLE, BALTIMORE HUNDRED,
SUSSEX COUNTY, DELAWARE
TAX MAP #134-15.00-116.01

WATER MAIN CONNECTION DETIALS

Date:	APR 29, 2021
Scale:	AS SHOWN
Dwn.By:	SKM
Proj.No.:	TUI01-02

Dwg:

UT4.1

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M:\Projects\TUI01-02 - Elevated Storage Tanks Project\Construction Docs\DWGs Construction DWG\TUI01-02 MBTS WATER MAIN DETAILS.dwg Jun 03 , 2021 - 9:35am, (Sarah)