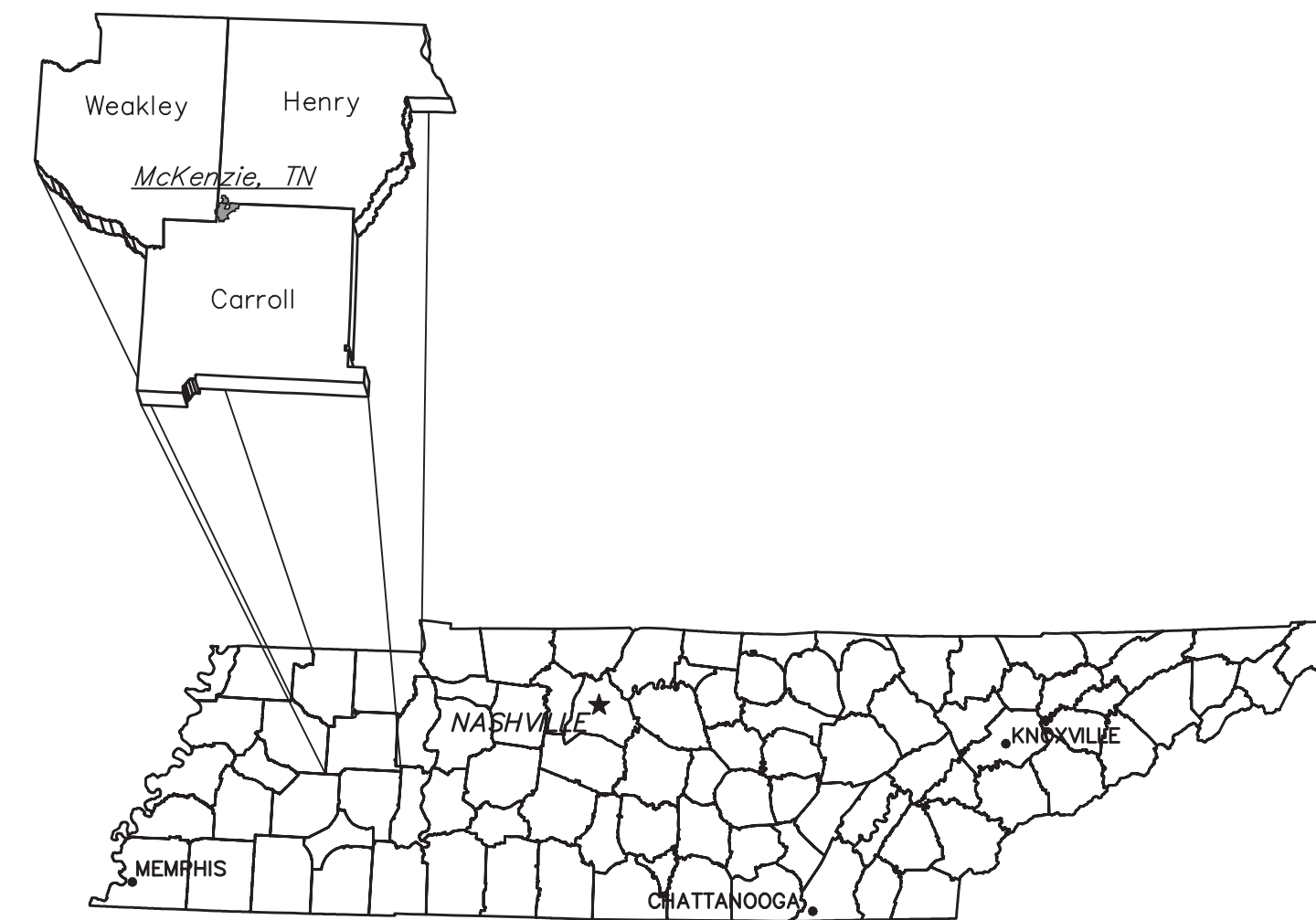


SEWER REHABILITATION DAVID STREET AND COLE STREET PUMPSTATIONS

TOWN OF MCKENZIE, TENNESSEE

INDEX OF SHEETS

SHEET	DESCRIPTION
G-01	PROJECT LOCATION MAP AND GENERAL NOTES
C-02	SITE MAP DAVID STREET DEMOLITION PLAN
C-03	SITE MAP DAVID STREET NEW PUMP STATION
C-04	SITE MAP COLE STREET DEMOLITION PLAN
C-05	SITE MAP COLE STREET NEW PUMP STATION
EC-06	EROSION CONTROL STANDARD DETAILS



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OCTOBER 2023

GRW PROJECT NO. 3849-17

WPN23.0657

APPROVED FOR CONSTRUCTION

THE DOCUMENT BEARING THIS STAMP HAS BEEN RECEIVED AND REVIEWED BY THE

**TENNESSEE DEPT. OF ENVIRONMENT & CONSERVATION
DIVISION OF WATER RESOURCES**

AND IS HEREBY APPROVED FOR CONSTRUCTION BY THE COMMISSIONER

Theresa Hill

12/14/2023

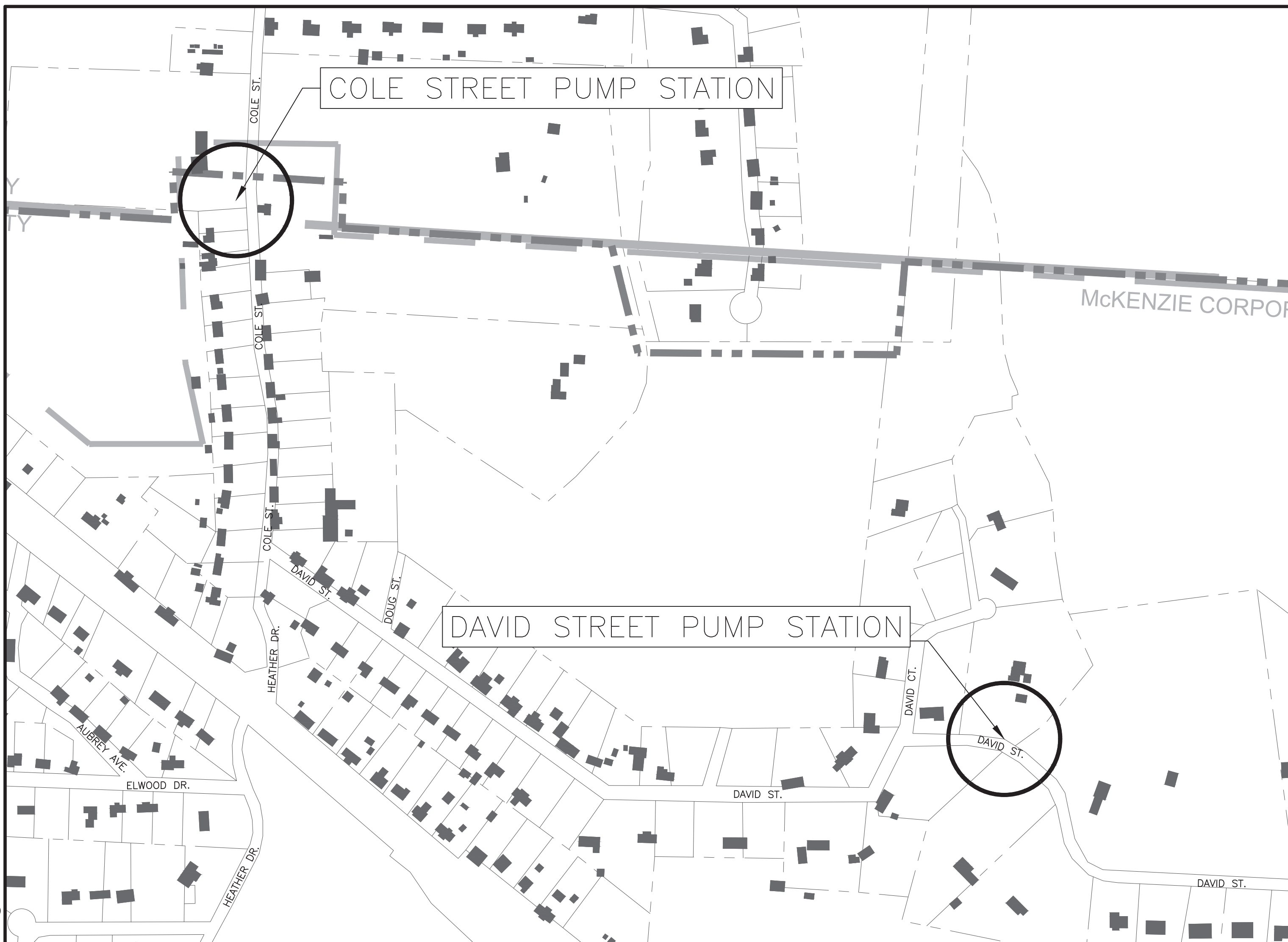
THIS APPROVAL SHALL NOT BE CONSTRUED AS CREATING A PRESUMPTION OF CORRECT OPERATION OR AS WARRANTING BY THE COMMISSIONER THAT THE APPROVED FACILITIES WILL REACH THE DESIGNED GOALS.

APPROVAL EXPIRES ONE YEAR FROM ABOVE DATE

PLOTTED BY: BHHolland

PRINTED: 10/2/2023 @ 3:37PM

FILE NAME: G:\3849-McKenzie\17-McK Coll Imp\Working Drawings\AutoCAD\3849-17-G-01.dwg



PROJECT LOCATION MAP
SCALE: 1" = 300'

EROSION & SEDIMENT CONTROL NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
- NO WORK MAY PROCEED UNTIL A NOTICE OF COVERAGE (NOC) HAS BEEN ISSUED BY THE STATE OF TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION.
- THE SWPPP SHALL BE AVAILABLE AT THE SITE FOR REVIEW AT ALL TIMES.
- AT A MINIMUM, THE CONTRACTOR SHALL INSTALL SILT FENCE ON THE DOWNHILL SIDE OF THE PROPOSED CONSTRUCTION AREA.
- CONTRACTOR SHALL PROVIDE DITCH CHECKS AS REQUIRED.
- CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY EROSION CONTROL BLANKET/MATTING ON ALL SLOPES GREATER THAN 4:1 UNLESS NOTED OTHERWISE.
- ALL AREAS TO REMAIN BARE MORE THAN 15 DAYS SHALL BE TEMPORARILY STABILIZED IN ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES (BMP'S).
- TDEC REGULATIONS REQUIRE THAT STABILIZATION MEASURES BE INITIATED WITHIN 7 DAYS AFTER CONSTRUCTION OR LAND DISTURBANCE ACTIVITIES HAVE BEEN TEMPORARILY OR PERMANENTLY TERMINATED.
- THE ONLY EXCEPTIONS, FOR NOTE 8, ARE FOR CASES WHERE SNOW COVER, FROZEN GROUND, OR EXCESSIVELY WET CONDITIONS PRECLUDE INITIATION OF STABILIZATION OR WHERE LAND DISTURBANCE ACTIVITIES WILL BE RESUMED ON THAT PORTION OF THE SITE WITHIN 15 DAYS.
- EROSION CONTROL MEASURES SHALL BE CHECKED AND REPAIRED IF NECESSARY AT LEAST TWICE EACH CALENDAR WEEK IN ACCORDANCE WITH THE SWPPP.
- ALL EROSION CONTROL MEASURES UTILIZED WITHIN STATE OF TENNESSEE ROW'S SHALL MEET OR EXCEED THE TDOT REQUIREMENTS.
- EROSION AND SEDIMENT CONTROL MEASURES AND STRUCTURES SHALL BE INSPECTED TWICE A WEEK 72 HOURS APART.

GENERAL NOTES

- THE CONTRACTOR SHALL RESTORE ALL CULVERTS, FENCES, WALLS, SMALL ORNAMENTAL TREES, CULTIVATED SHRUBS, FLOWERS, SIGNS, LIGHTS AND POWER POLES, STREET MARKERS, MAIL BOXES, WATER AND GAS LINES, WATER AND GAS METERS AND BOXES INCLUDING SHUT-OFFS, AND LAWNS DISTURBED BY CONSTRUCTION OPERATIONS TO THEIR ORIGINAL CONDITIONS.
THE COST OF THIS WORK SHALL BE MERGED IN THE UNIT BID AND CONTRACT PRICES FOR THE PROPOSED WORK.
- WHERE IN EASEMENTS THE CONTRACTOR SHALL PROTECT AND RESTORE SAID PROPERTY TO CONDITION SIMILAR OR EQUAL TO THAT EXISTING AT THE COMMENCEMENT OF CONSTRUCTION, EXCEPT AS NOTED.
- THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK IN EACH AREA. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES. BEFORE CONSTRUCTION, CONTRACTOR SHALL CONTACT :

TENNESSEE811
DIAL 811 (OR 1-800-351-1111)
72 HOURS NOTICE
- IF ANY EXISTING STORM SEWERS ARE SUBSTANTIALLY DAMAGED AS DETERMINED BY THE A/E AND OR OWNER, THE REPAIR SHALL BE MADE WITH R.C.P. PIPE FROM STRUCTURE-TO-STRUCTURE. PIPE SIZE SHALL BE EQUAL TO EXISTING.
- SUFFICIENT PRECAUTIONS SHALL BE TAKEN DURING CONSTRUCTION TO MINIMIZE THE RUN-OFF OF POLLUTING SUBSTANCES SUCH AS SILT, CLAY, FUELS, OILS, BITUMENS, CALCIUM CHLORIDE, OR OTHER POLLUTING MATERIALS HARMFUL TO HUMANS, FISH OR OTHER LIFE, INTO THE SUPPLIES AND SURFACE WATERS OF THE STATE. CONTROL MEASURES MUST BE ADEQUATE TO ASSURE THAT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS ARE MET. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT THE LAWS AND REGULATIONS ARE MET AND IS RESPONSIBLE FOR ENSURING THAT CONSTRUCTION DOES NOT HARM THE WATERS OF TENNESSEE. THE PROTECTION OF THE SITE SHALL CONTINUE THROUGHOUT THE CONSTRUCTION PERIOD. SPECIAL PRECAUTIONS SHALL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT OPERATIONS WHICH PROMOTE EROSION.
- THE TEMPORARY POLLUTION CONTROL PROVISIONS SHALL BE COORDINATED WITH THE PERMANENT EROSION CONTROL MEASURES, TO ENSURE ECONOMICAL, EFFECTIVE, AND CONTINUOUS EROSION CONTROL THROUGHOUT THE CONSTRUCTION AND POST-CONSTRUCTION PERIOD OF THE PROJECT. NATURAL COVER SHOULD BE MAINTAINED AS LONG AS POSSIBLE AND GRADED AREAS SHOULD BE STABILIZED AS SOON AS POSSIBLE.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS FROM THE APPROPRIATE FEDERAL, STATE, COUNTY AND/OR LOCAL AGENCIES TO CROSS ALL HIGHWAYS, STREETS, STREAMS, EASEMENTS, ETC...
- STATE HIGHWAY RIGHT-OF-WAY INFORMATION PROVIDED BY THE STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION. QUESTIONS CONCERNING R-O-W LOCATION ON ANY STATE HIGHWAY SHOULD BE REFERRED TO THE APPROPRIATE REGIONAL OFFICE OF THE STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION:
- PROPERTY OWNERS AND PARCEL INFORMATION PROVIDED BY THE COUNTY REGISTRAR OF DEEDS.
- SEWER INFORMATION PROVIDED BY THE CITY OF CROSSVILLE.
- COUNTY ROAD RIGHT-OF-WAY INFORMATION PROVIDED BY THE COUNTY HIGHWAY DEPT. QUESTIONS CONCERNING R-O-W LOCATION ON ANY COUNTY ROAD SHOULD BE REFERRED TO THE COUNTY HIGHWAY DEPARTMENT.



GRW PROJECT NO. 3849-17
ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT SHALL BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF GRW ENGINEERS, INC. AND SHALL NOT BE USED FOR ANY OTHER PROJECT OTHER THAN THIS SPECIFIC PROJECT WITHOUT WRITTEN PERMISSION.

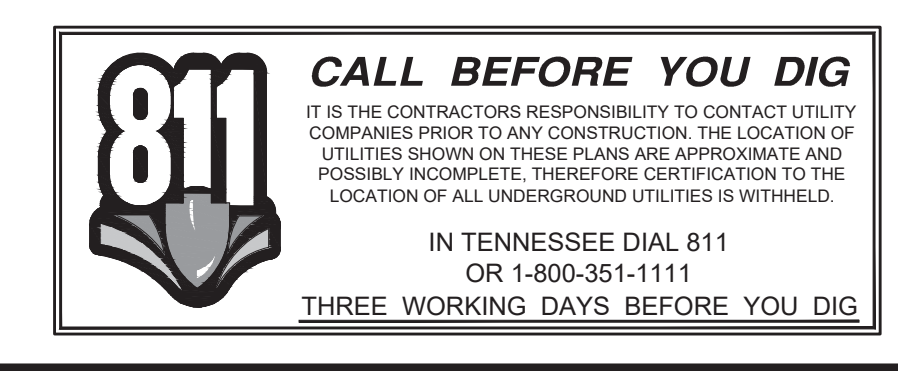


PROJECT LOCATION MAP
2023 CDBG SEWER REHAB
CITY OF MCKENZIE, TENNESSEE

NO.	REVISIONS	DATE	BY	DESIGNED	DRAWN	REVIEWED	APPROVED
	LER			LER	BHH	LER	LER

SCALE CHECK: _____ THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

DATE: OCTOBER, 2023
SCALE: 1" = 300'
SHEET NO. G-01

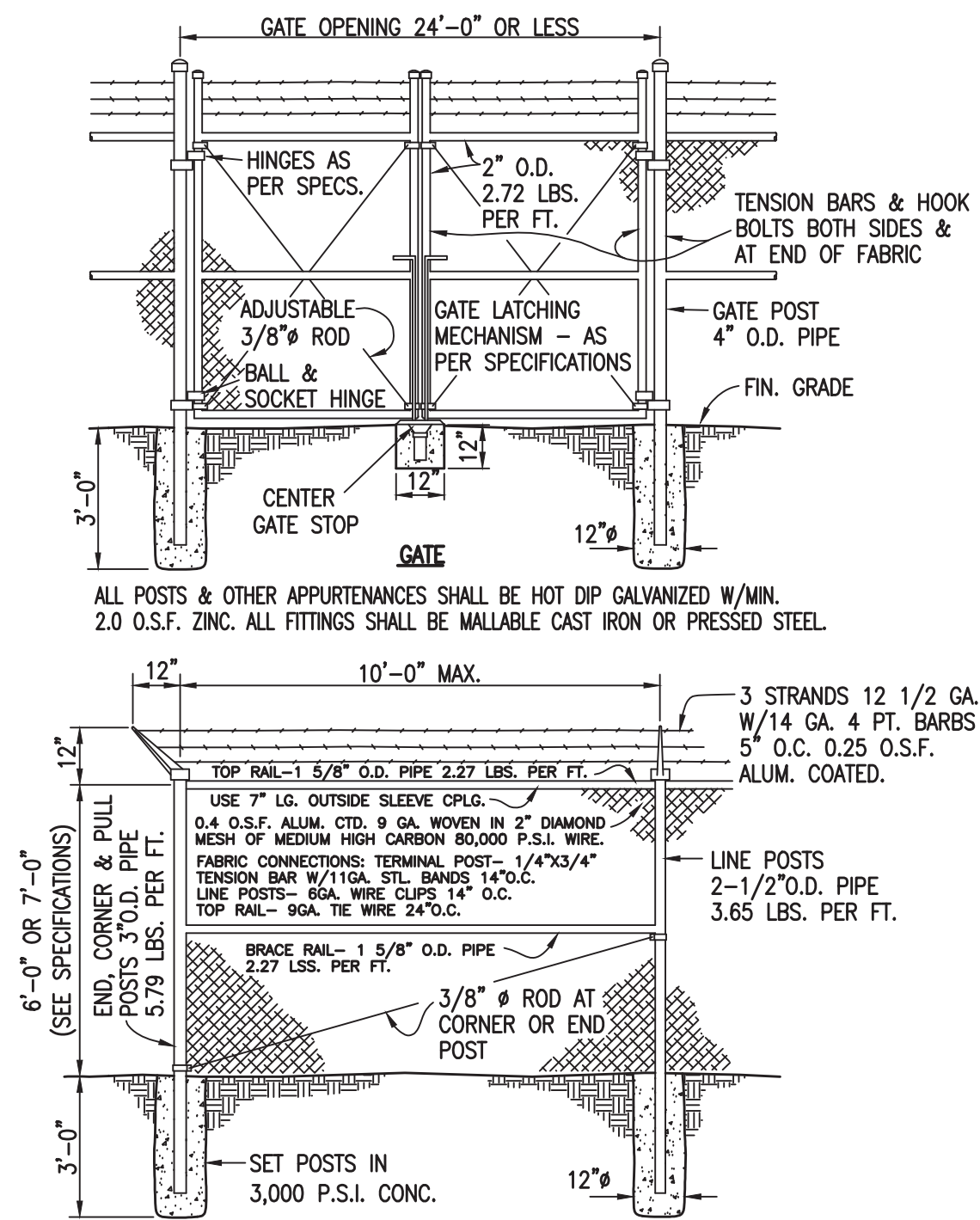
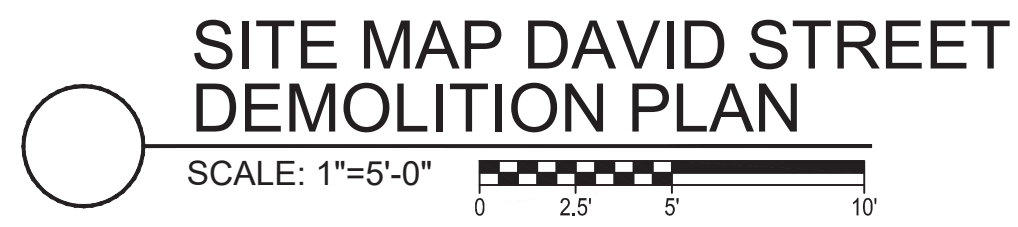
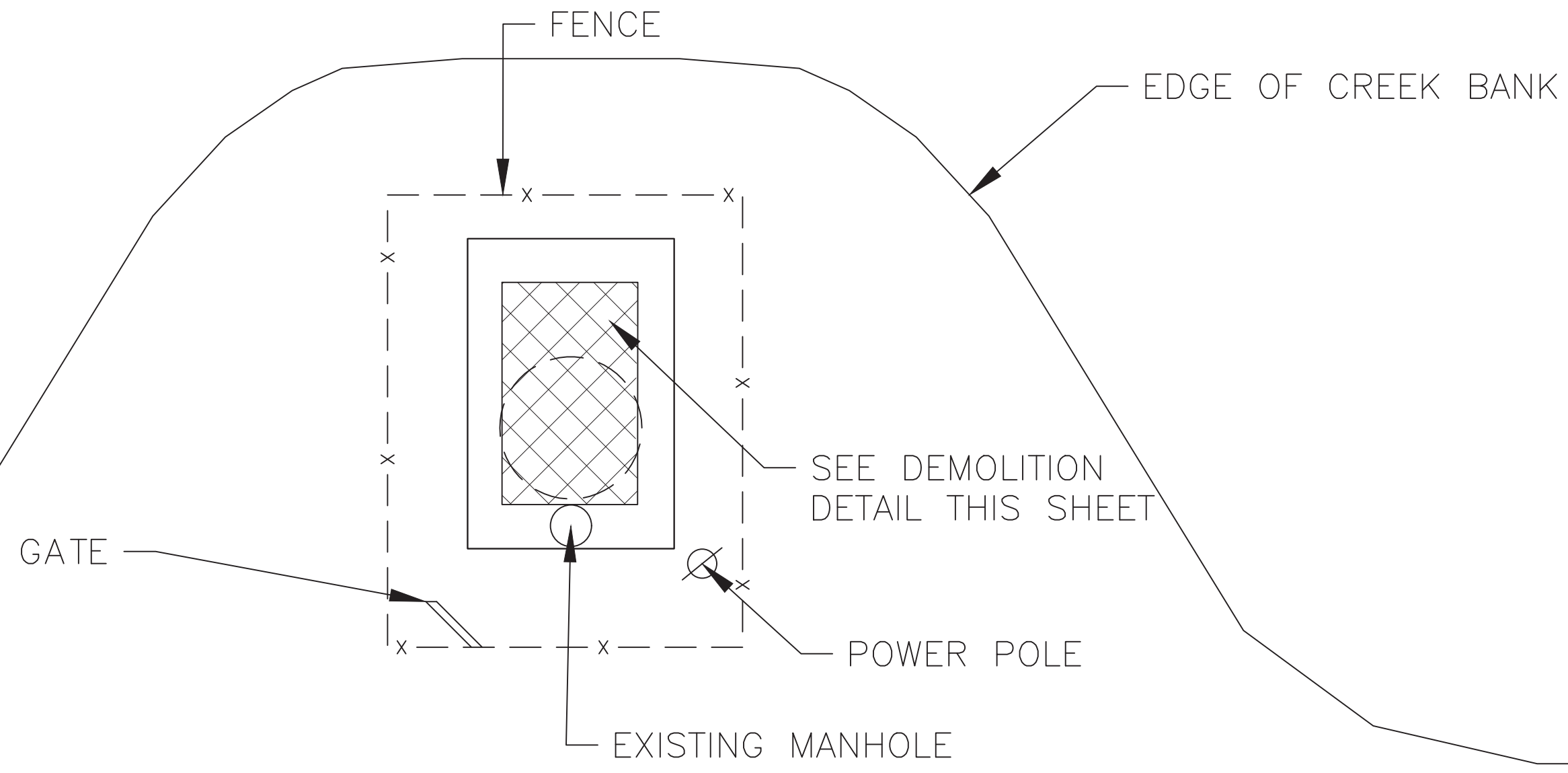


CONTRACT DOCUMENTS

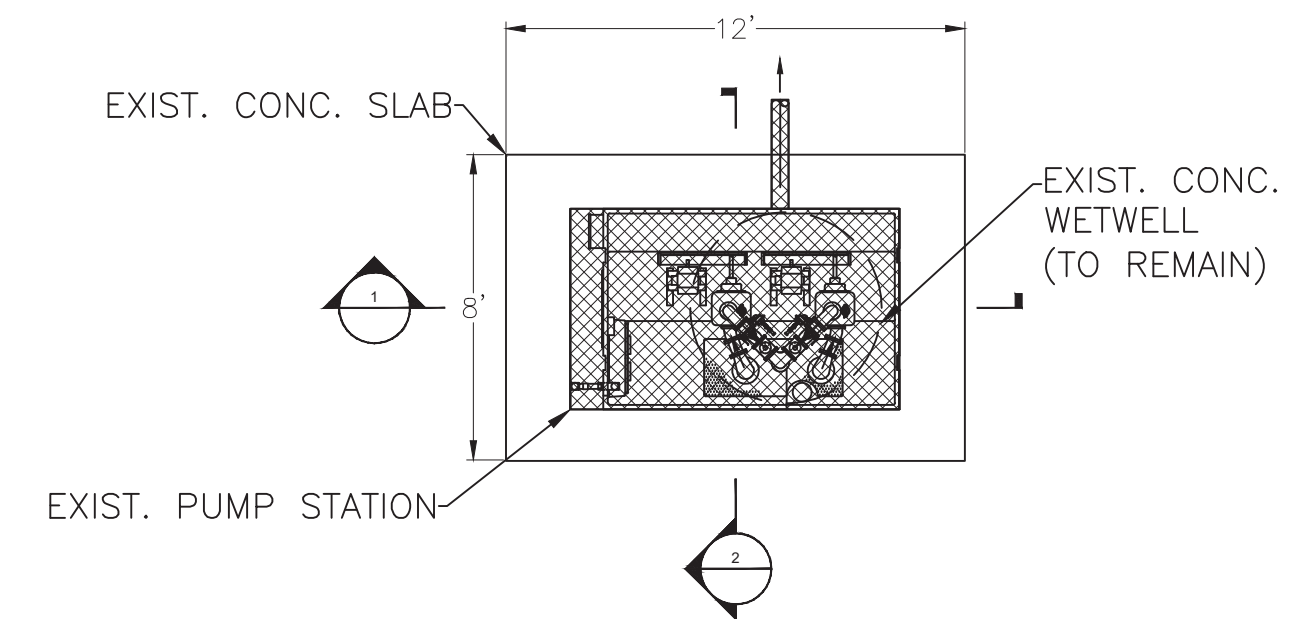
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PRINTED: 10/19/2023 @ 10:29AM

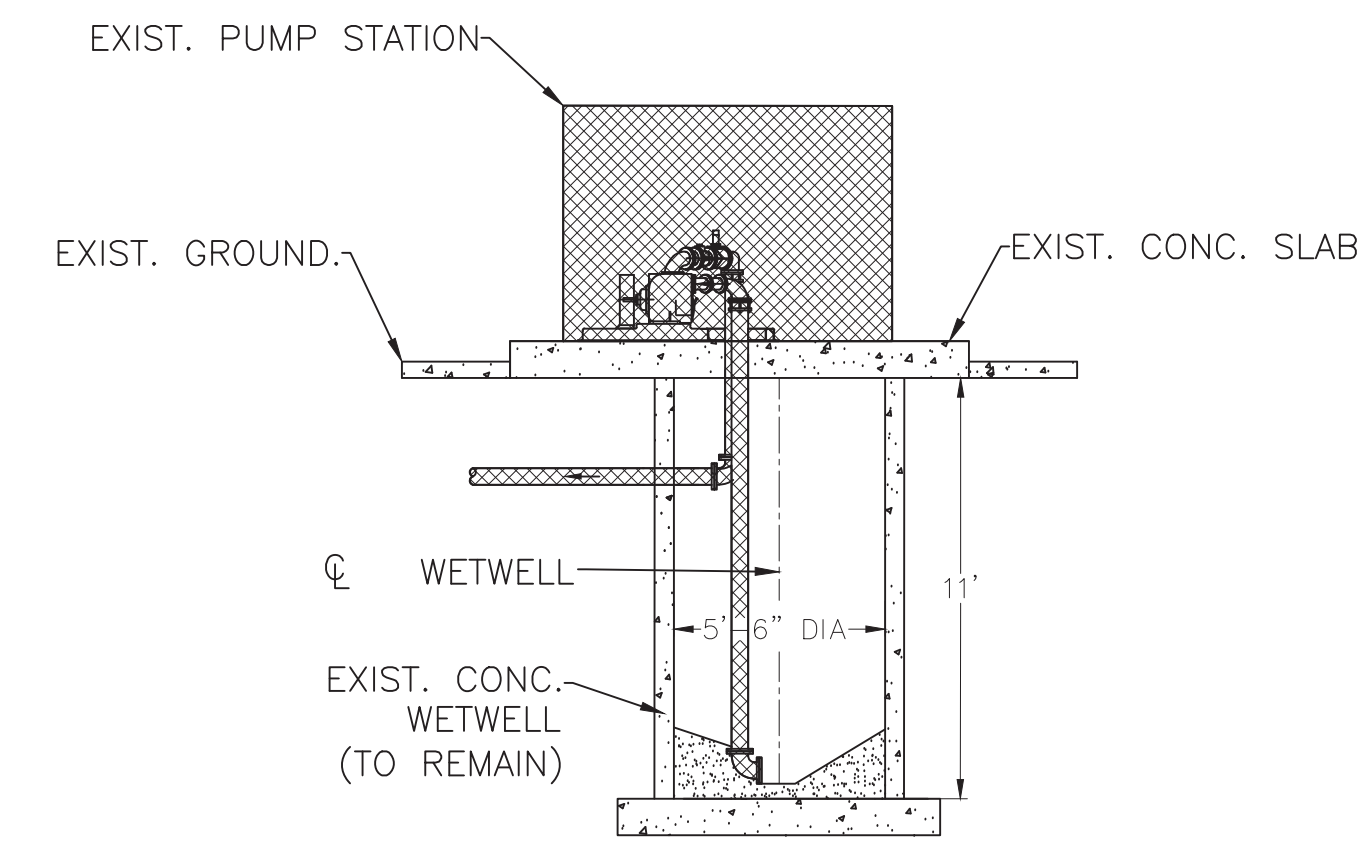
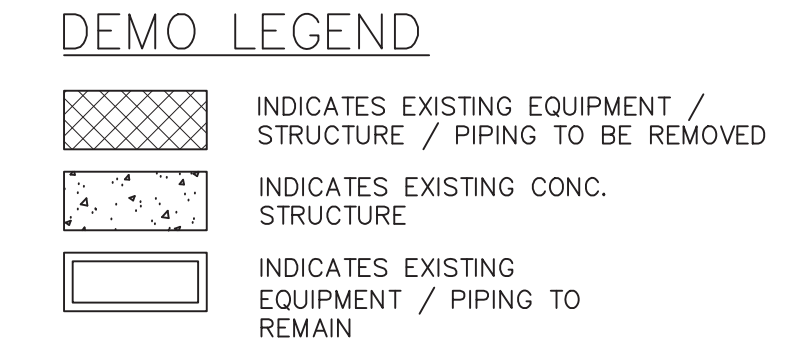
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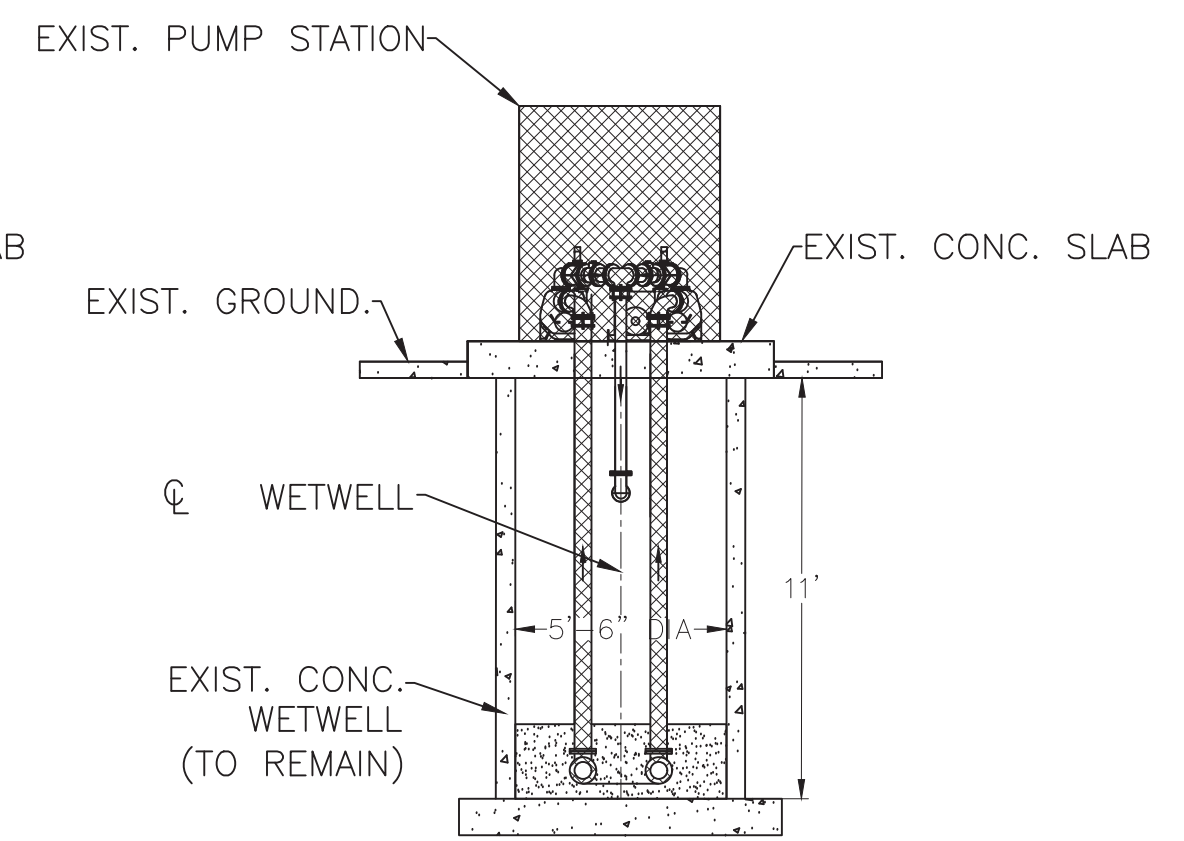
CHAIN-LINK FENCE DETAIL
NOT TO SCALE



PLAN VIEW - DAVID STREET PUMP STATION
SCALE: 1"=5'-0"



1 SECTION VIEW
SCALE: 1"=5'-0"



2 SECTION VIEW
SCALE: 1"=5'-0"



GRW PROJECT NO. 3849-17



SITE MAP DAVID STREET
DEMOLITION PLAN

2022 CDBG SEWER REHAB - CONTRACT B.
CITY OF MCKENZIE, TENNESSEE

DESIGNED	LER	DRAWN	BHH	REVIEWED	LER	APPROVED	LER
NO							
DATE							

REVISIONS

NO	DESCRIPTION

SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

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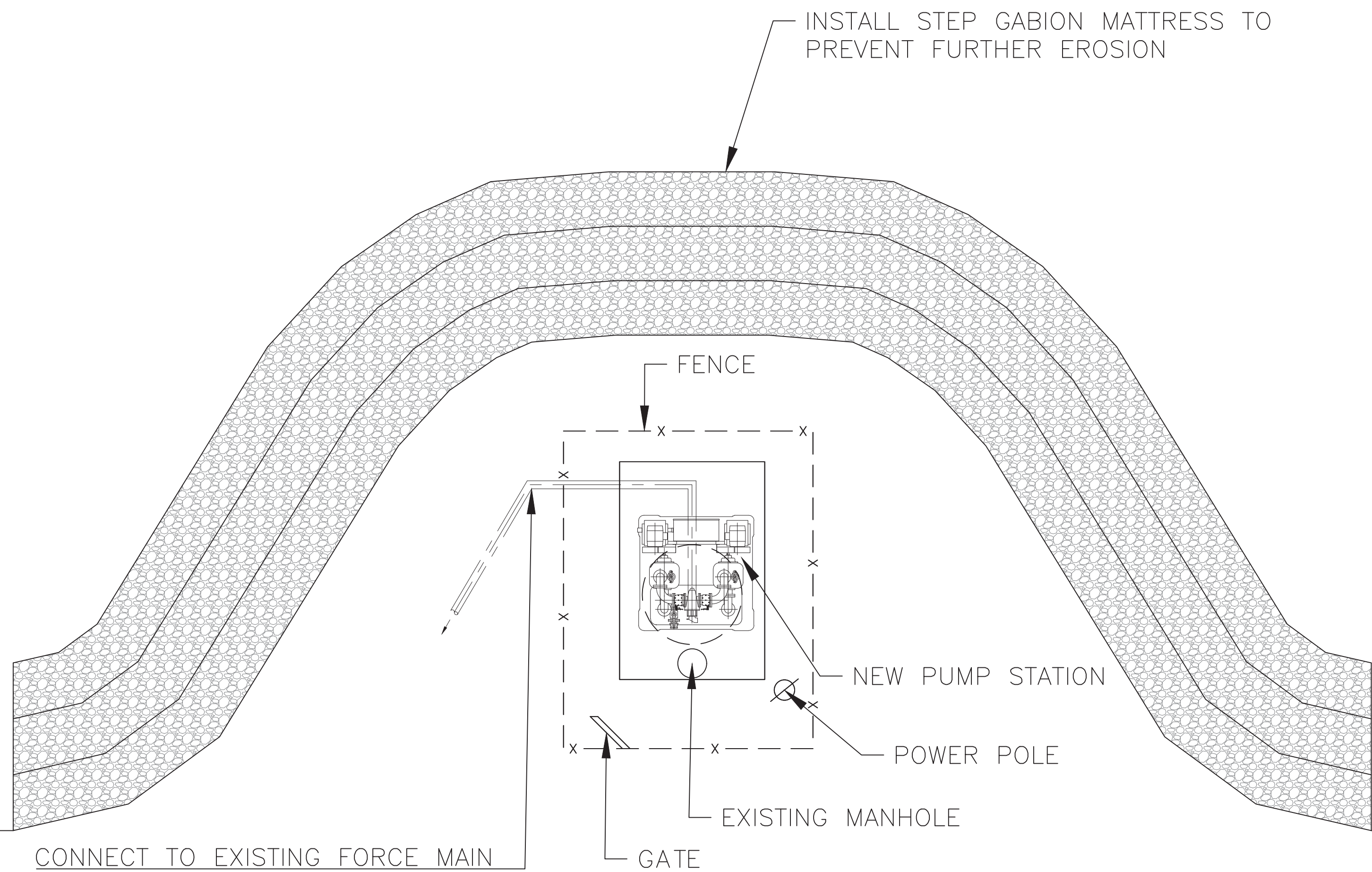
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CONTRACT DOCUMENTS

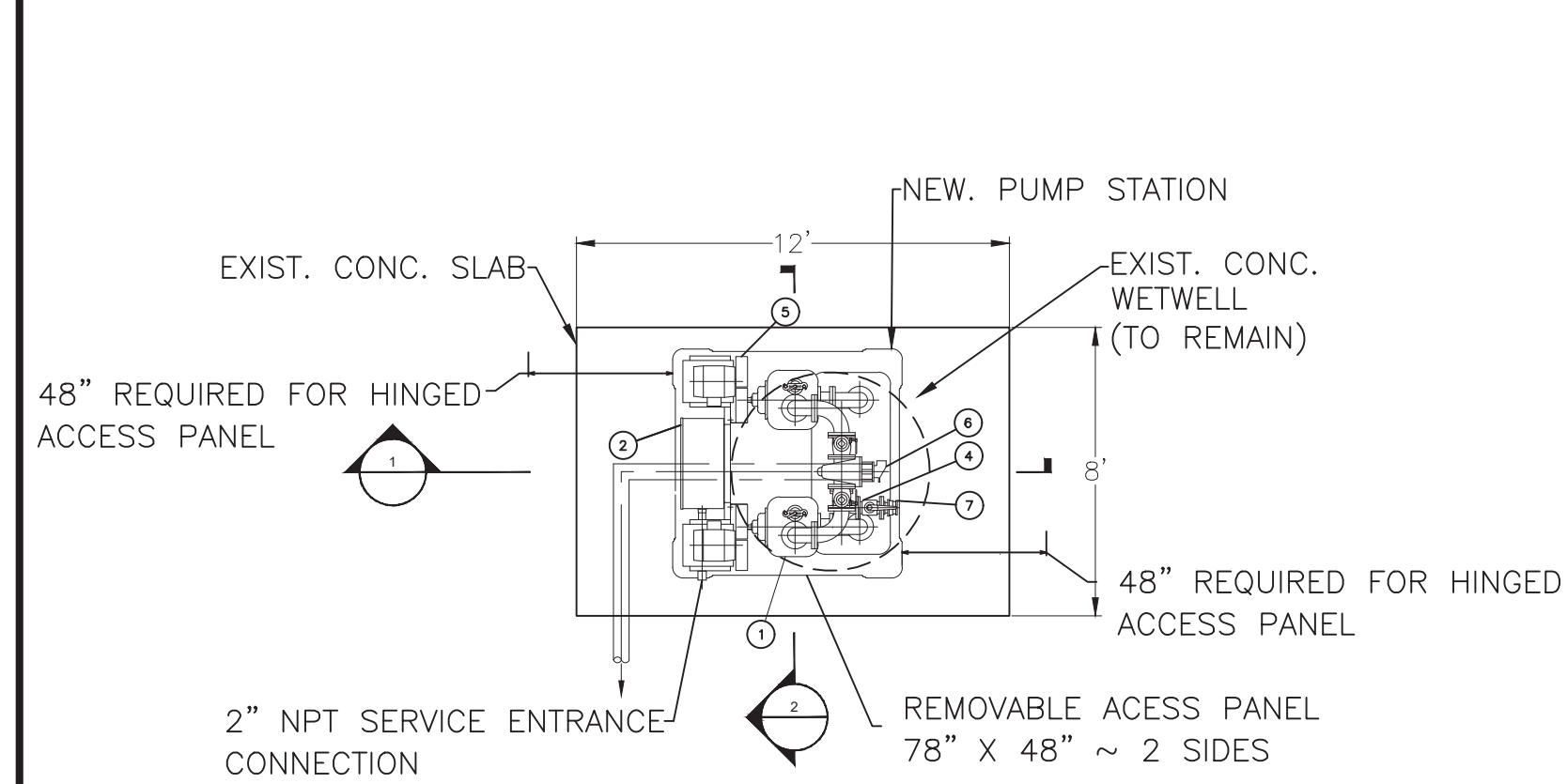
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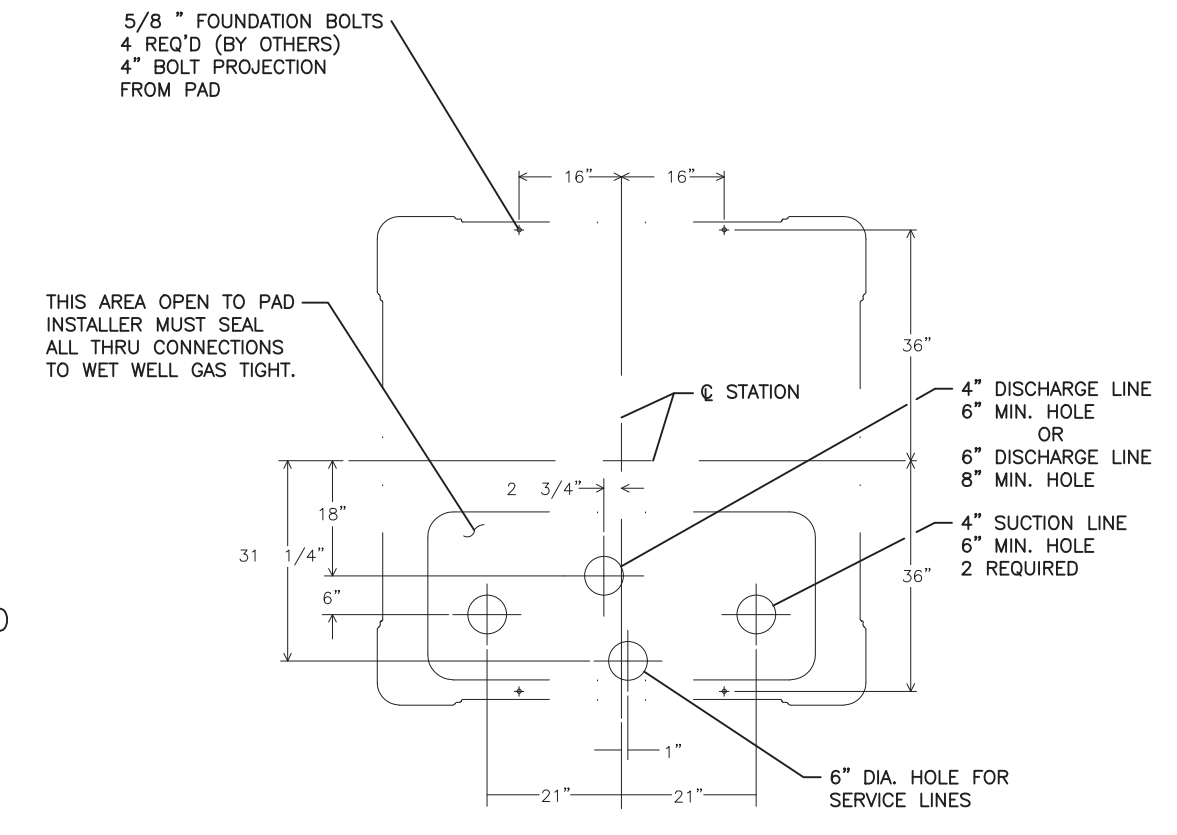


SITE MAP
DAVID STREET PUMP STATION
 SCALE: 1"=5'-0"



PLAN VIEW - DAVID STREET PUMP STATION
 SCALE: 1"=5'-0"

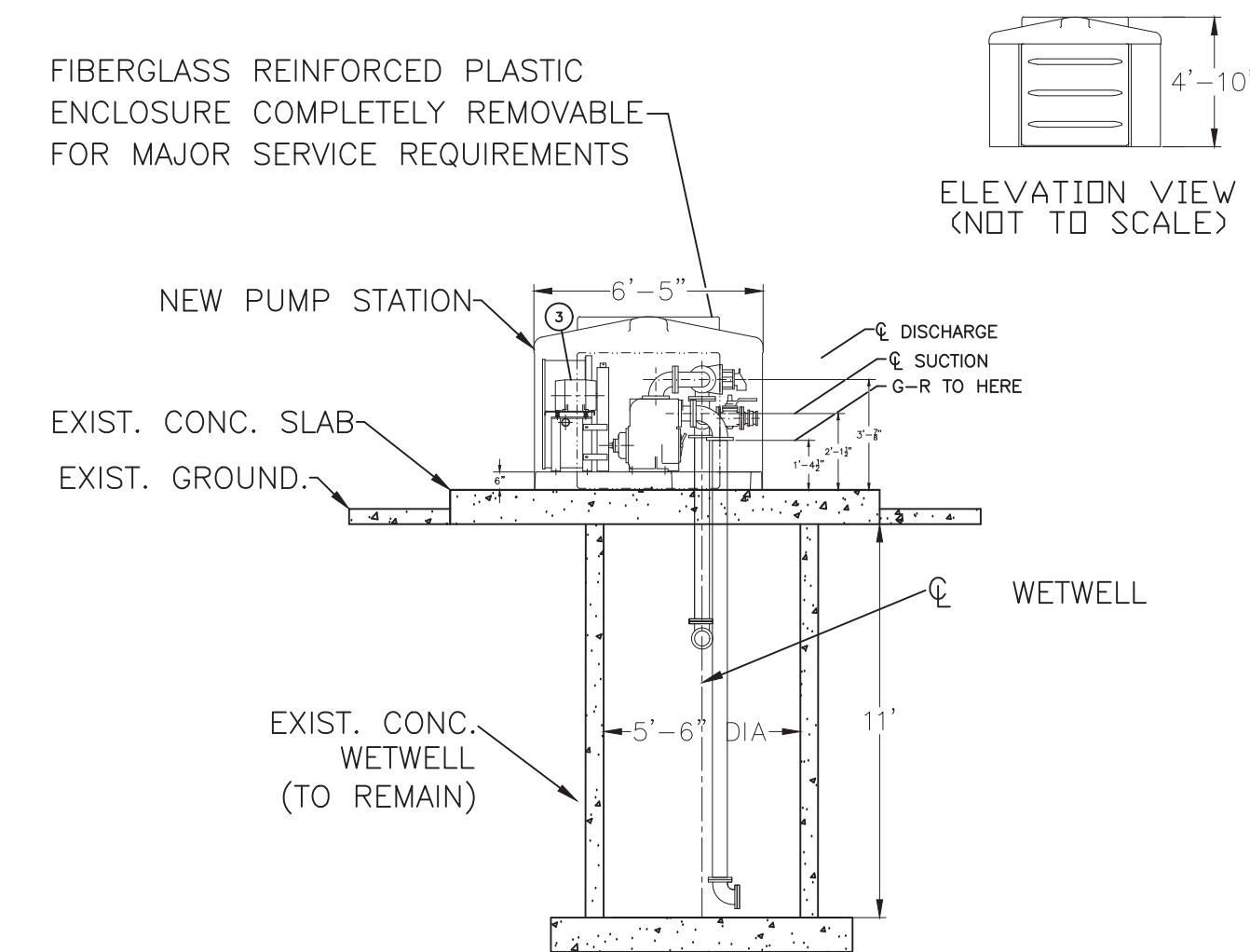
David St. Pump Elev.	
Ground	496
Gravity Line In	492.0
Highwater Alarm	491.75
Pump No. 2 On	491.5
Pump No. 1 On	490.0
Pumps Off	488.0
Bottom Wetwell	485



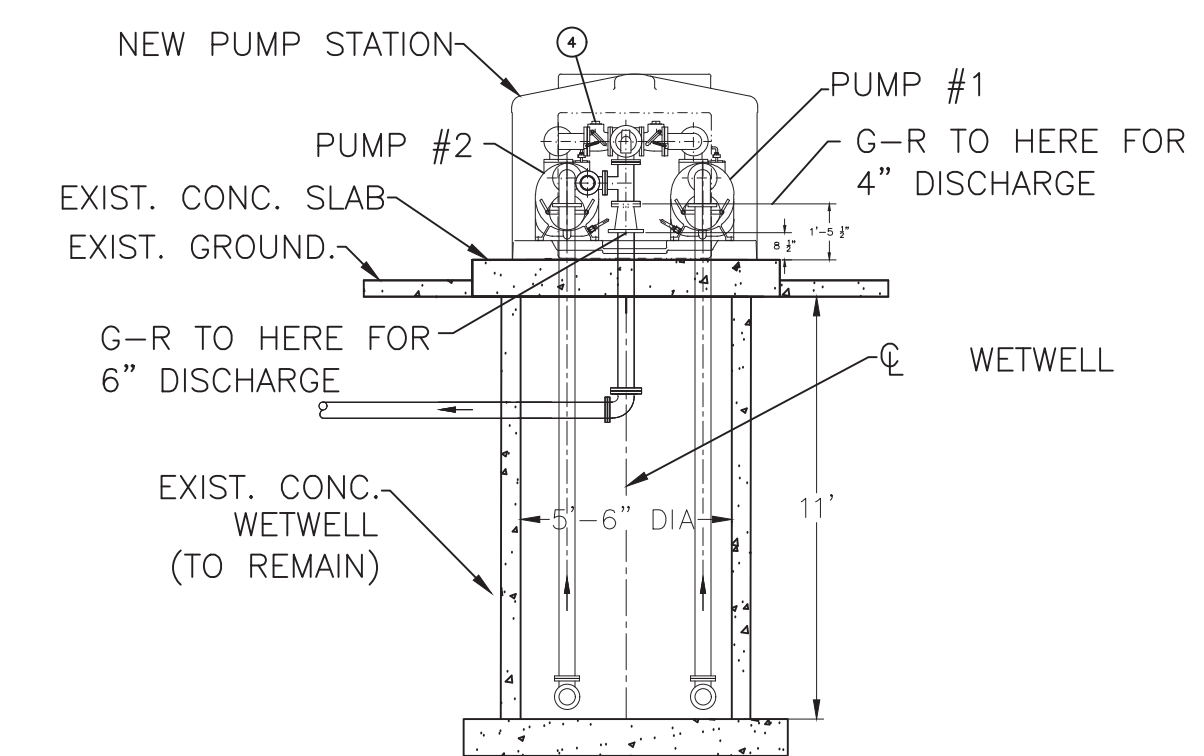
PLAN VIEW

ITEM	DESCRIPTION	MATERIAL & SIZE
1	PUMP	CAST IRON T4-B
2	CONTROL PANEL	STAINLESS STEEL
3	MOTOR	CAST IRON
4	DISCHARGE CHECK VALVE	CAST IRON 4"
5	BELT GUARD ASSY	STEEL
6	DISCHARGE PLUG VALVE	CAST IRON 4" 3-WAY
7	BY-PASS PLUG VALVE	CAST IRON 3"
8	OPW FITTING	ALUMINUM

NOTE:
 CUSTOMER SUCTION AND DISCHARGE CONNECTIONS ARE 125# FLANGE
 T4A-B, 4" X 4" X 4" AS SHOWN
 T4A-B, 4" X 4" X 6" WITH INCREASER DISCHARGE BYPASS CONNECTION



1 SIDE PROFILE
 SCALE: 1"=5'-0"



2 FRONT PROFILE
 SCALE: 1"=5'-0"



GRW PROJECT NO. 3849-17



SITE MAP DAVID STREET NEW PUMP STATION
 2022 CDBG SEWER REHAB - CONTRACT B.
 CITY OF MCKENZIE, TENNESSEE

DESIGNED	LER	DRAWN	BHH	REVIEWED	LER	APPROVED	LER
NO							

REVISIONS

NO	DATE	DESCRIPTION

SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

DATE: OCTOBER, 2023
 SCALE: 1"= 5'
 SHEET NO.

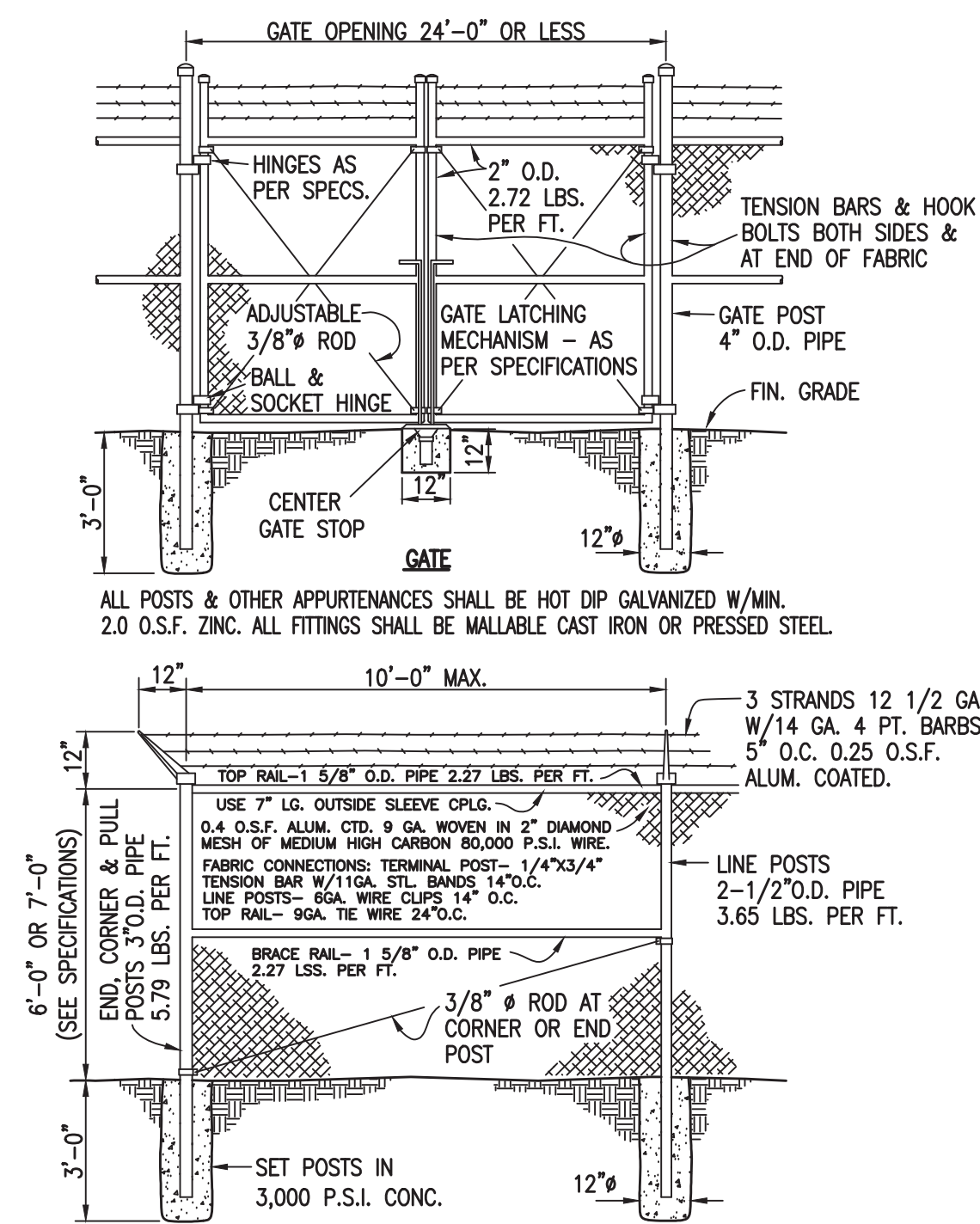
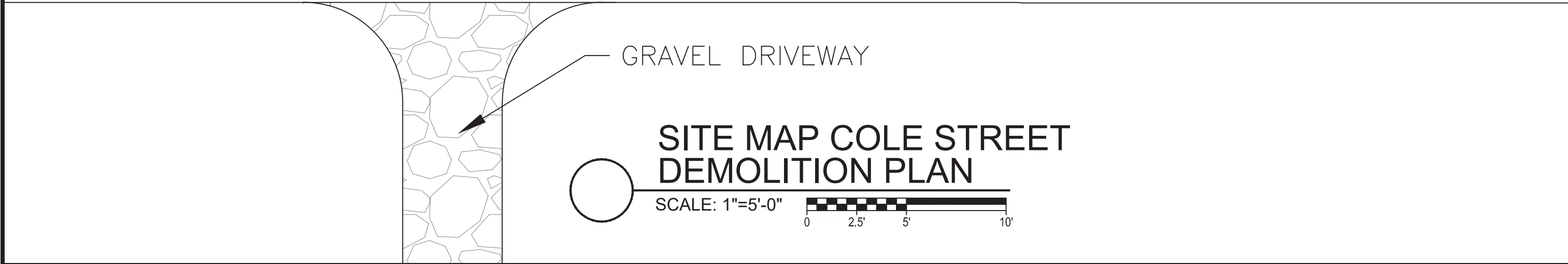
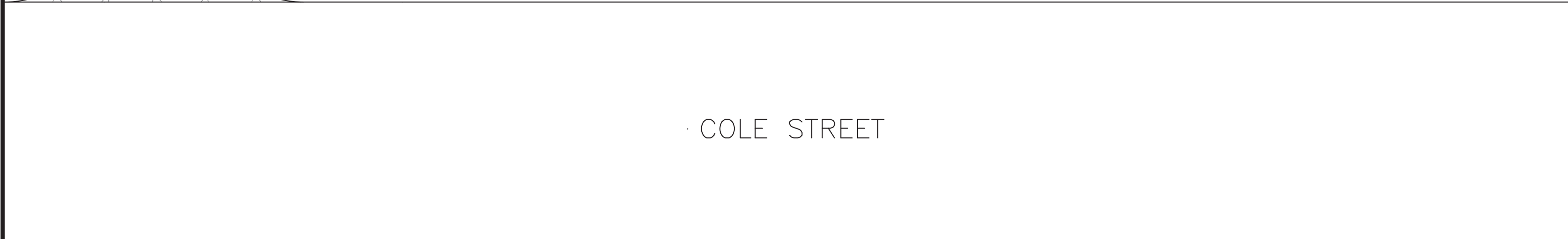
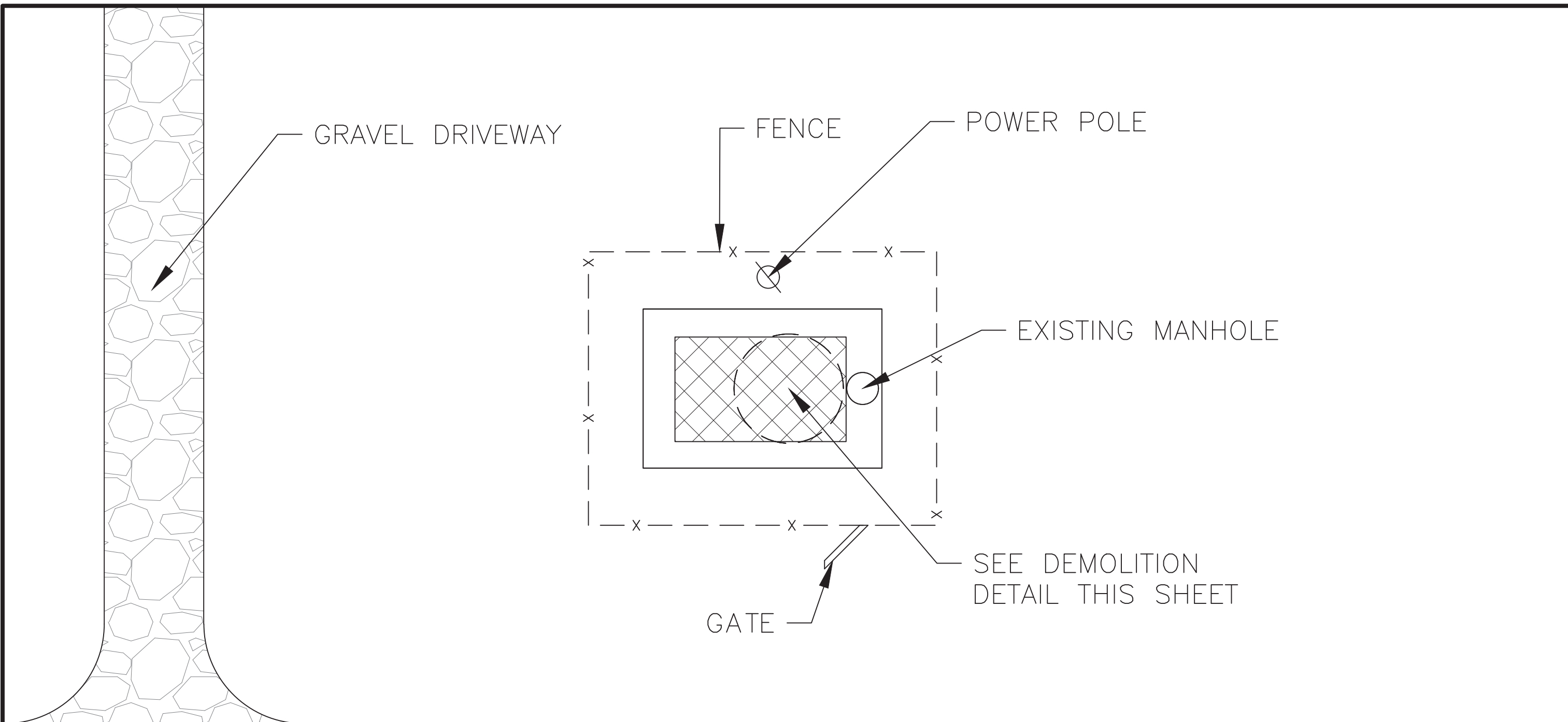
C-03

CONTRACT DOCUMENTS

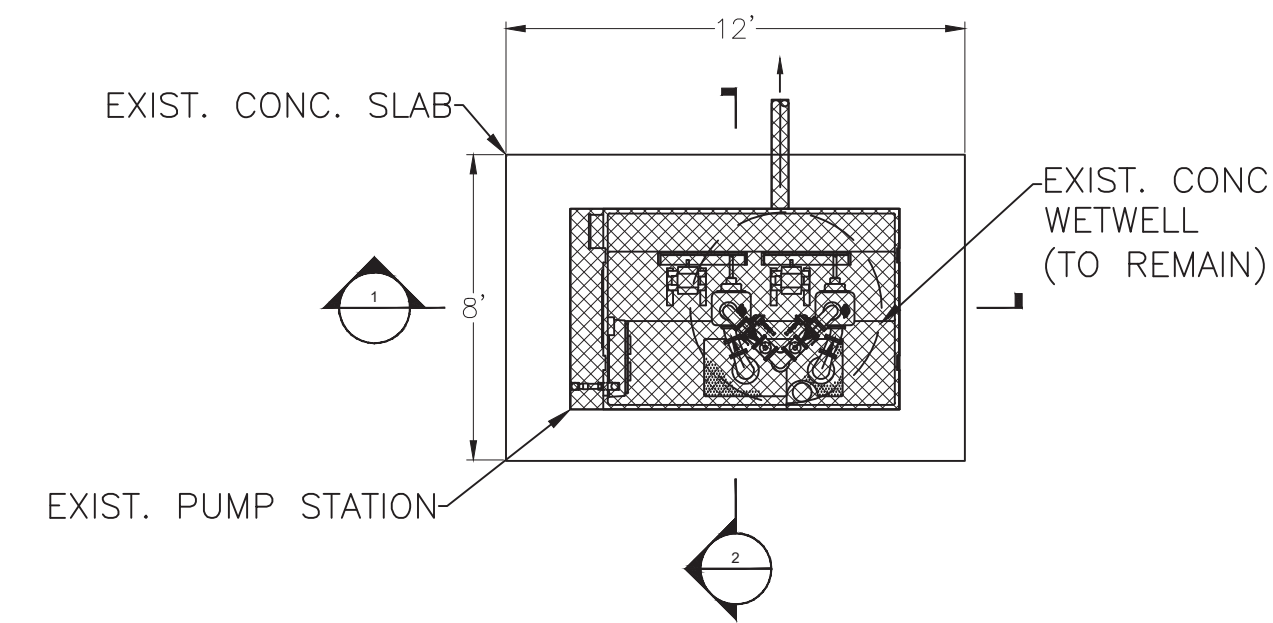
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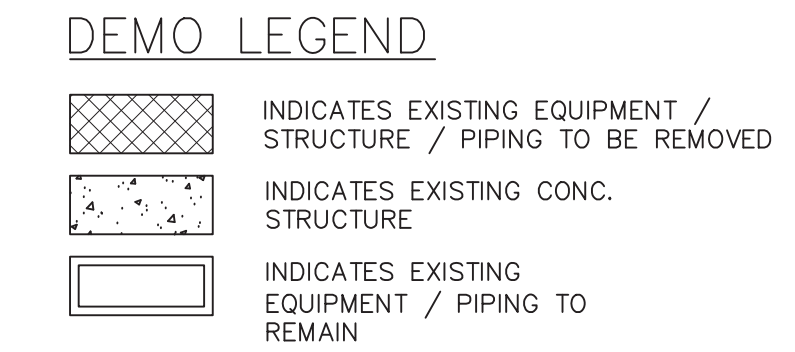
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CHAIN-LINK FENCE DETAIL
NOT TO SCALE

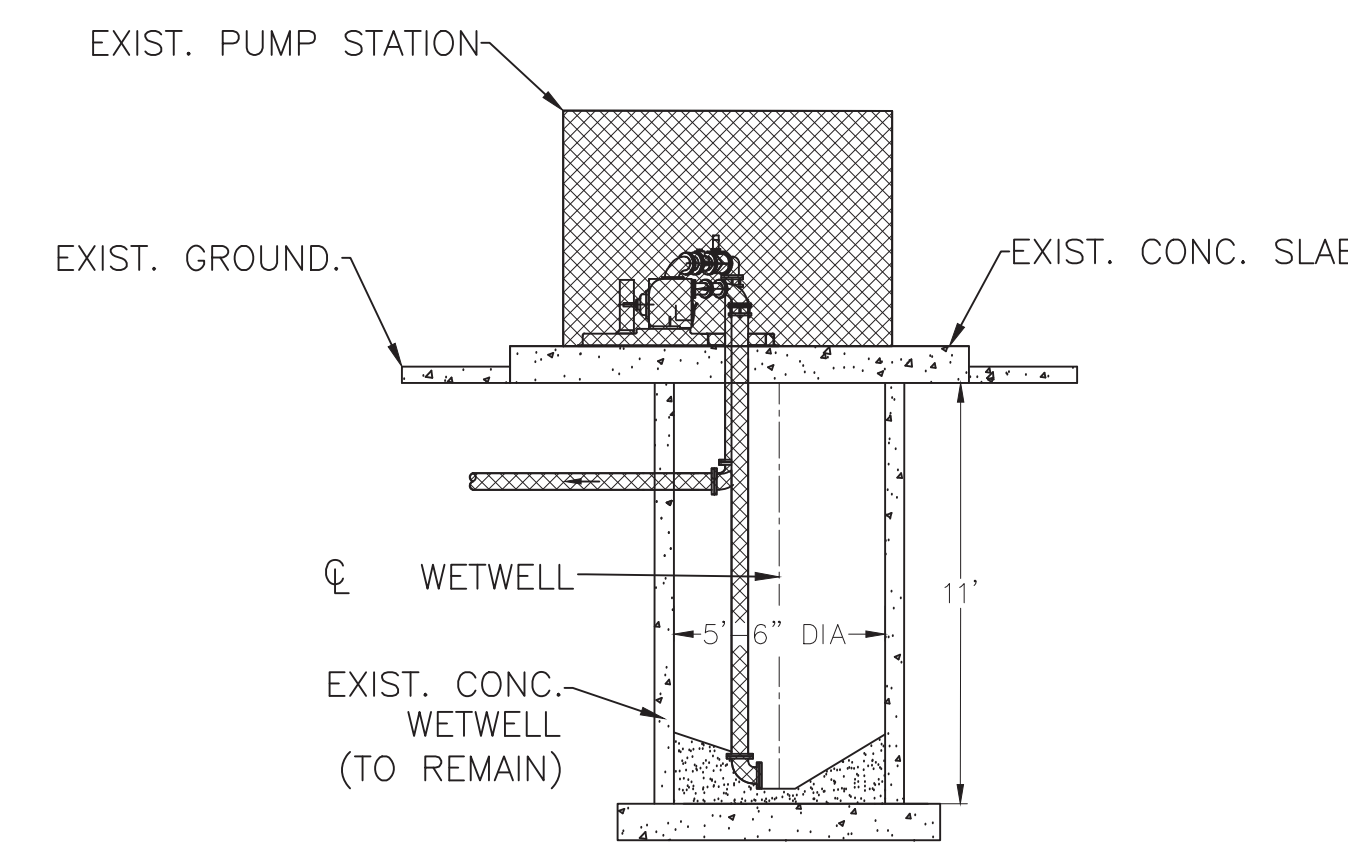


PLAN VIEW - COLE STREET PUMP STATION
SCALE: 1"=5'-0"

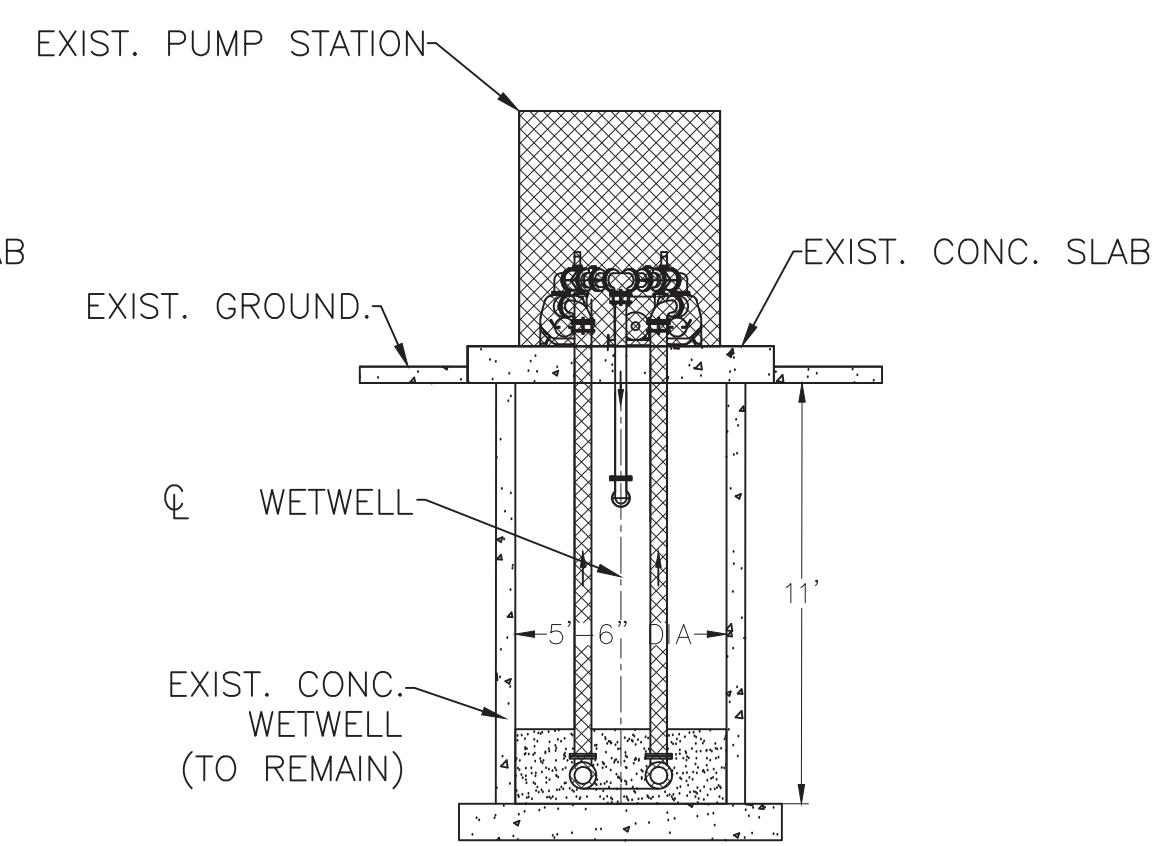


GENERAL NOTES

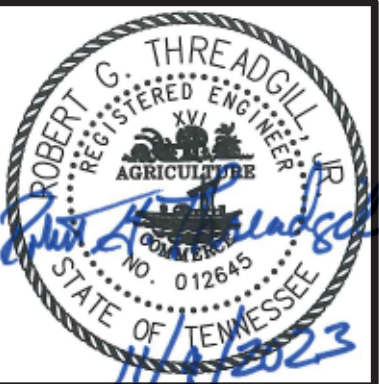
A. CONTRACTOR TO REMOVE PACKAGE PUMP STATION (WITH CARE) TO LOCATION AS DIRECTED BY MCKENZIE STAFF. THIS STATION WILL BE USED AT A FUTURE LOCATION AND MUST BE PRESERVED.



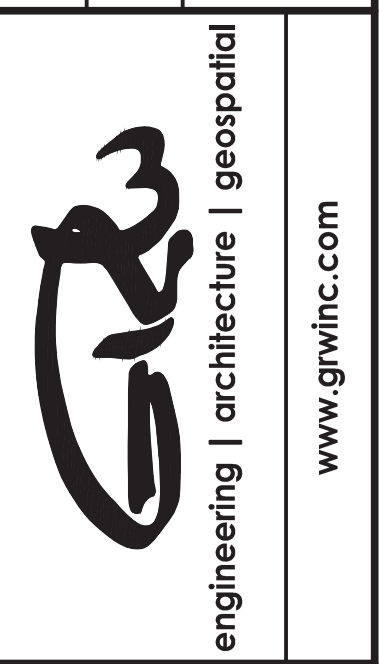
1 SECTION VIEW
SCALE: 1"=5'-0"



2 SECTION VIEW
SCALE: 1"=5'-0"



GRW PROJECT NO. 3849-17



SITE MAP COLE STREET DEMOLITION PLAN

2022 CDBG SEWER REHAB - CONTRACT B.

CITY OF MCKENZIE, TENNESSEE

DESIGNED	LER	DRAWN	BHH	REVIEWED	LER	APPROVED	LER
NO							
DATE							
DESCRIPTION							

SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

DATE: OCTOBER, 2023

SCALE: 1"= 5'

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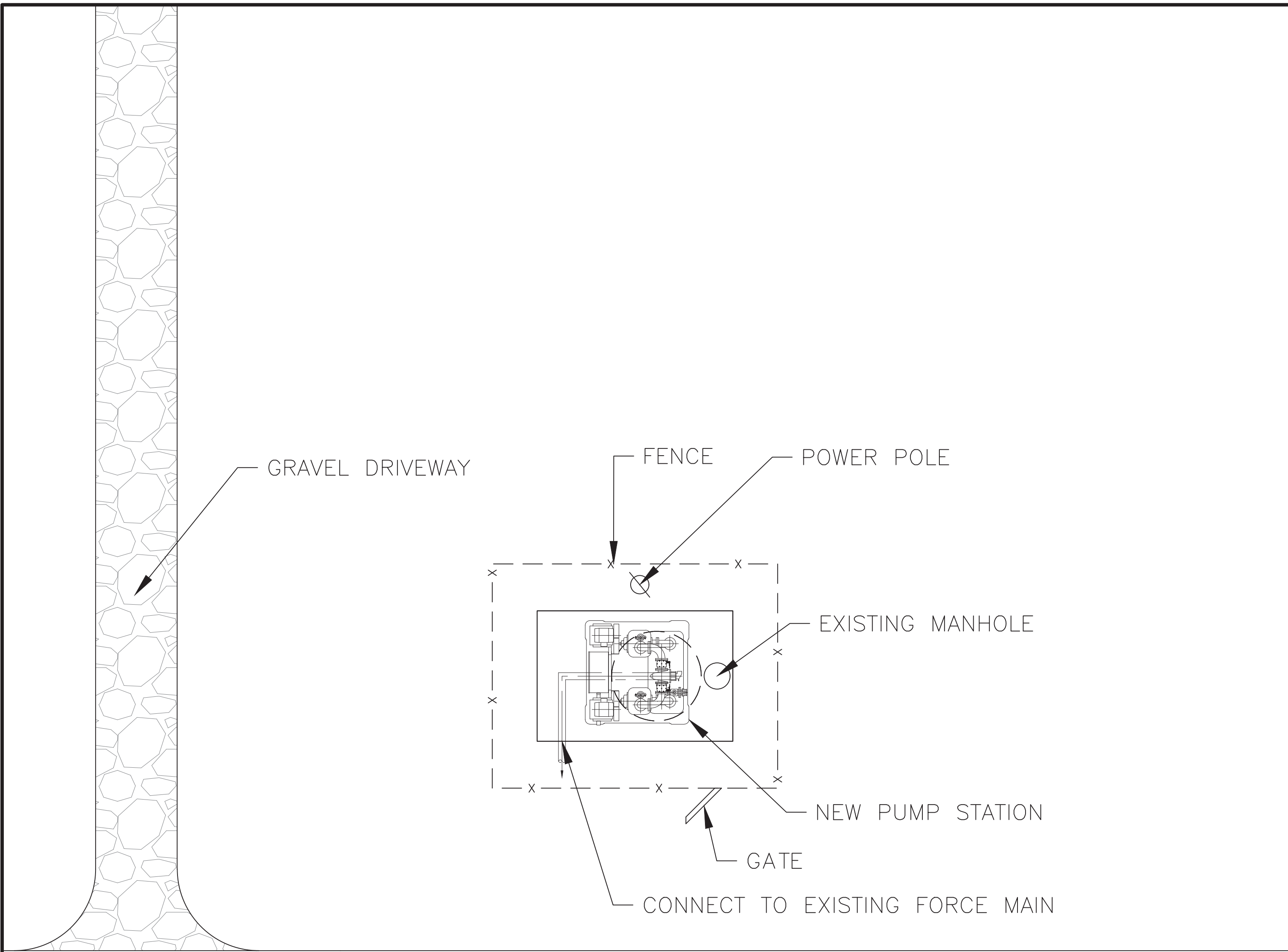
C-04

CONTRACT DOCUMENTS

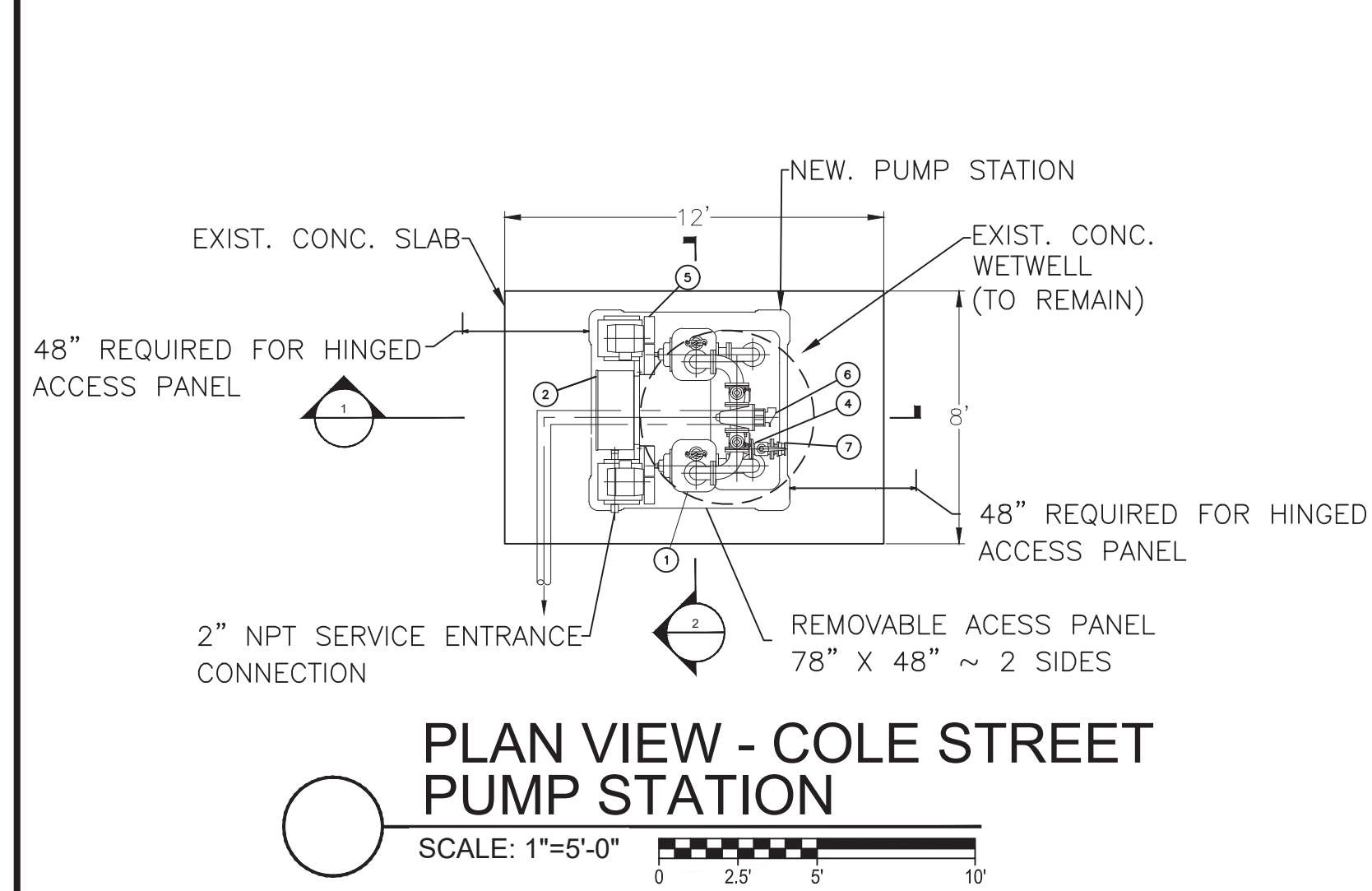
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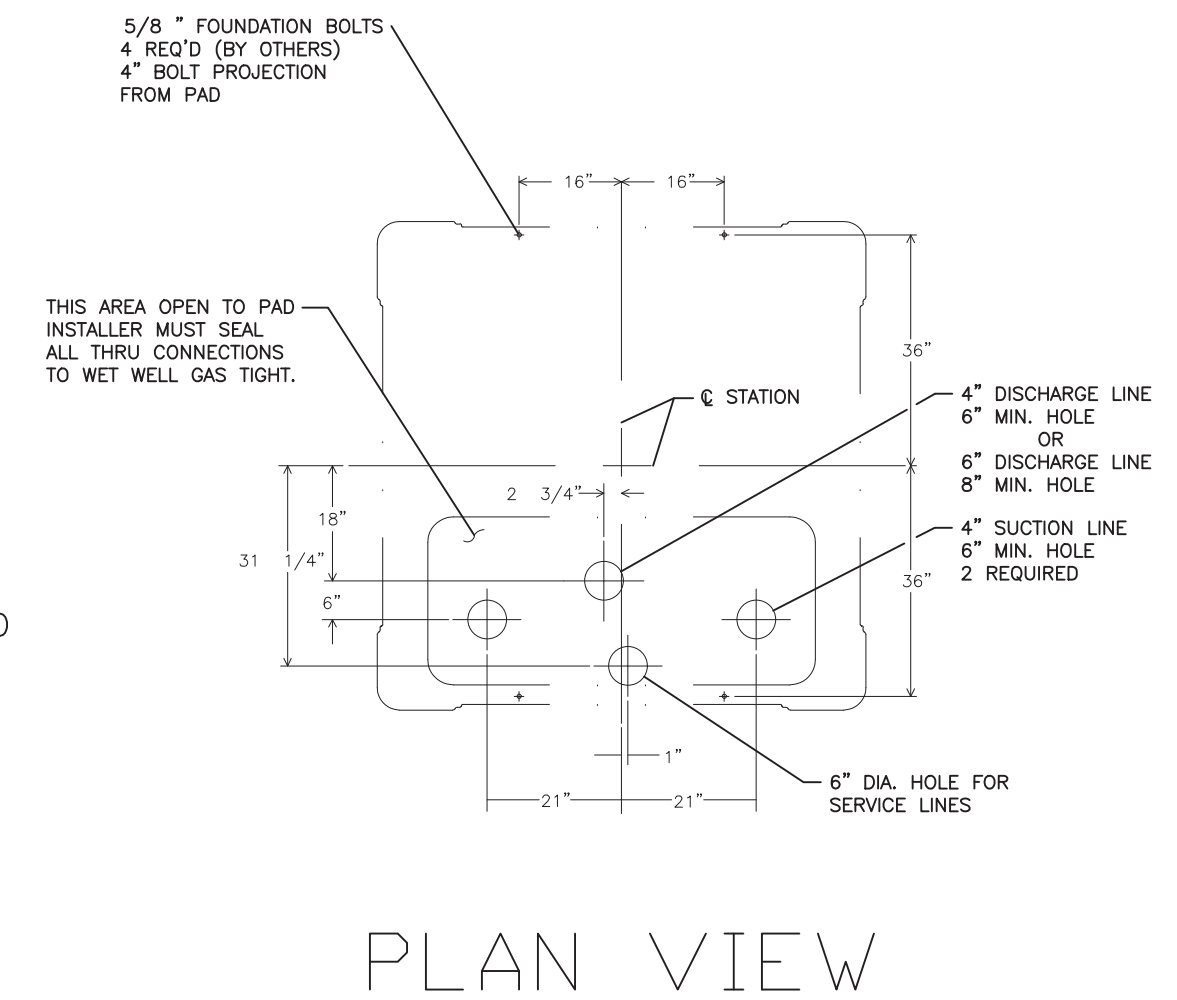
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**SITE MAP
COLE STREET PUMP STATION**
SCALE: 1"=5'-0"

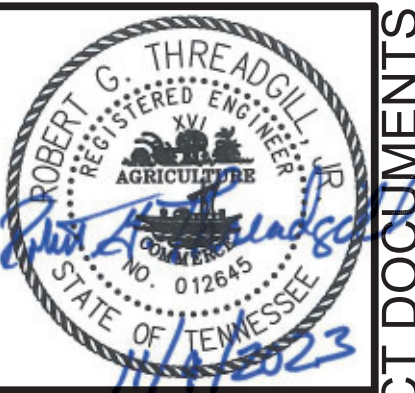
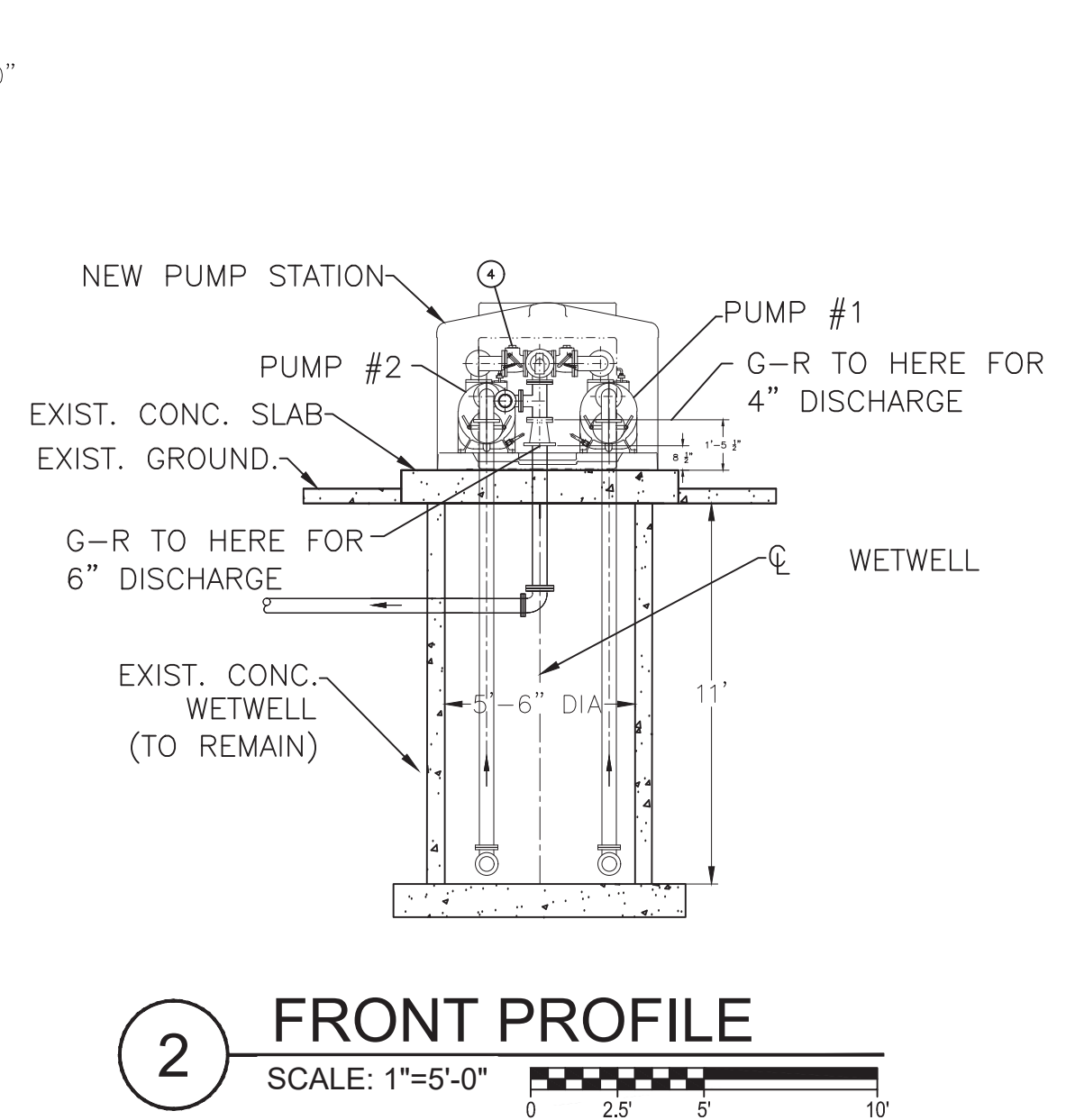
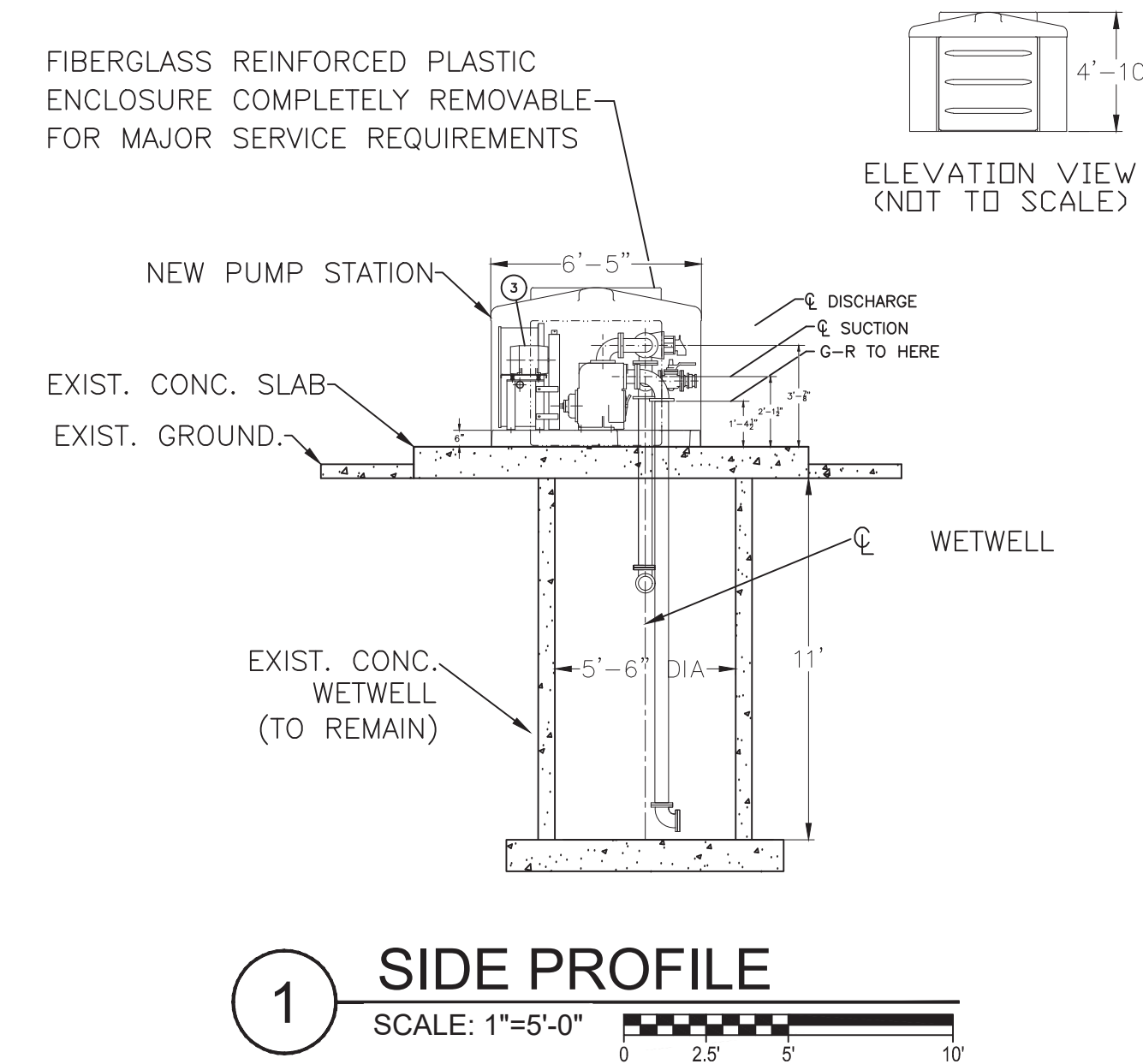


Cole Pump Elev.	
Ground	506
Gravity Line In	502
Highwater Alarm	501.5
Pump No. 2 On	500.5
Pump No. 1 On	499.0
Pumps Off	497.0
Bottom Wetwell	494



ITEM	DESCRIPTION	MATERIAL & SIZE
1	PUMP	CAST IRON T4-B
2	CONTROL PANEL	STAINLESS STEEL
3	MOTOR	CAST IRON
4	DISCHARGE CHECK VALVE	CAST IRON 4"
5	BELT GUARD ASSY	STEEL
6	DISCHARGE PLUG VALVE	CAST IRON 4" 3-WAY
7	BY-PASS PLUG VALVE	CAST IRON 3"
8	OPW FITTING	ALUMINUM

NOTE:
CUSTOMER SUCTION AND DISCHARGE CONNECTIONS ARE 125# FLANGE
T4A-B, 4" X 4" X 4" X 4" AS SHOWN
T4A-B, 4" X 4" X 4" X 6" WITH INCREASER DISCHARGE BYPASS CONNECTION



GRW PROJECT NO. 3849-17



**SITE MAP COLE STREET
NEW PUMP STATION**
2022 CDBG SEWER REHAB - CONTRACT B.
CITY OF MCKENZIE, TENNESSEE

DESIGNED	LER	DRAWN	BHH	REVIEWED	LER	APPROVED	LER
NO							

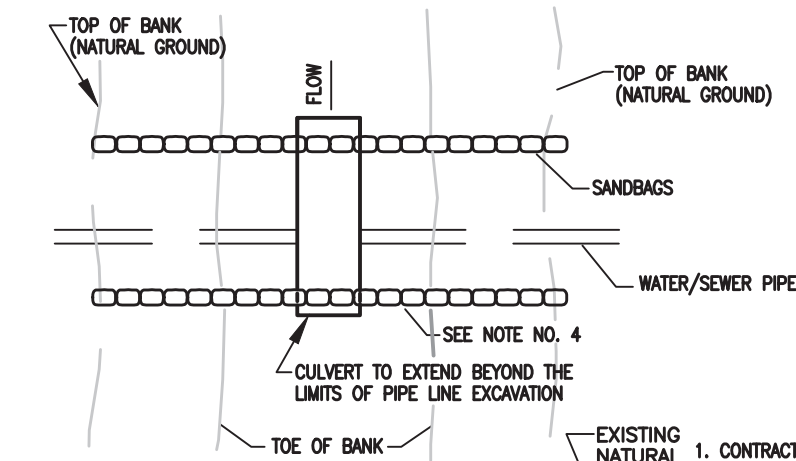
REVISIONS

NO	DATE	DESCRIPTION

SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED

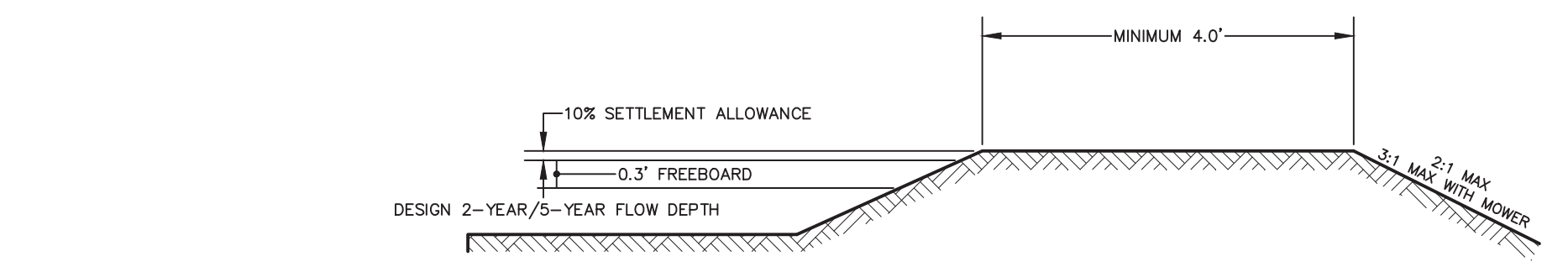
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SHEET NO. C-05

CONTRACT DOCUMENTS

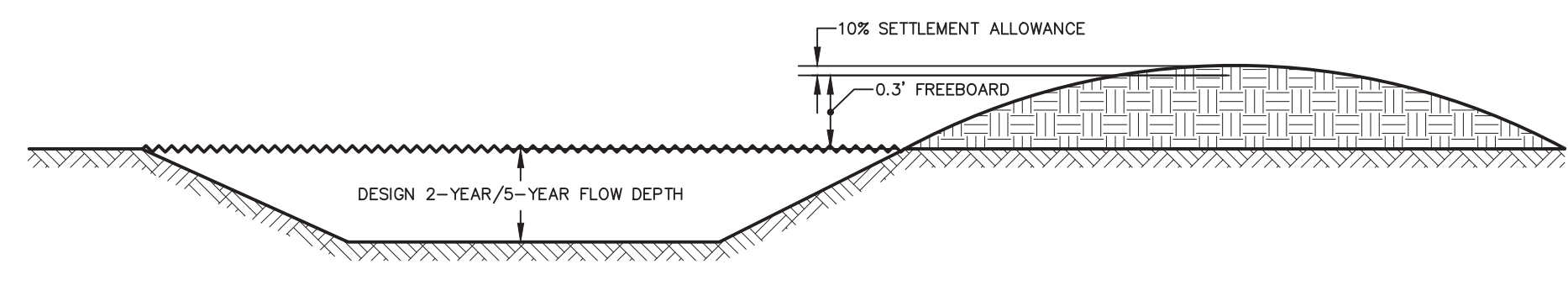


TEMPORARY STREAM DIVERSION
WATER/SEWER LINE CONSTRUCTION
NOT TO SCALE

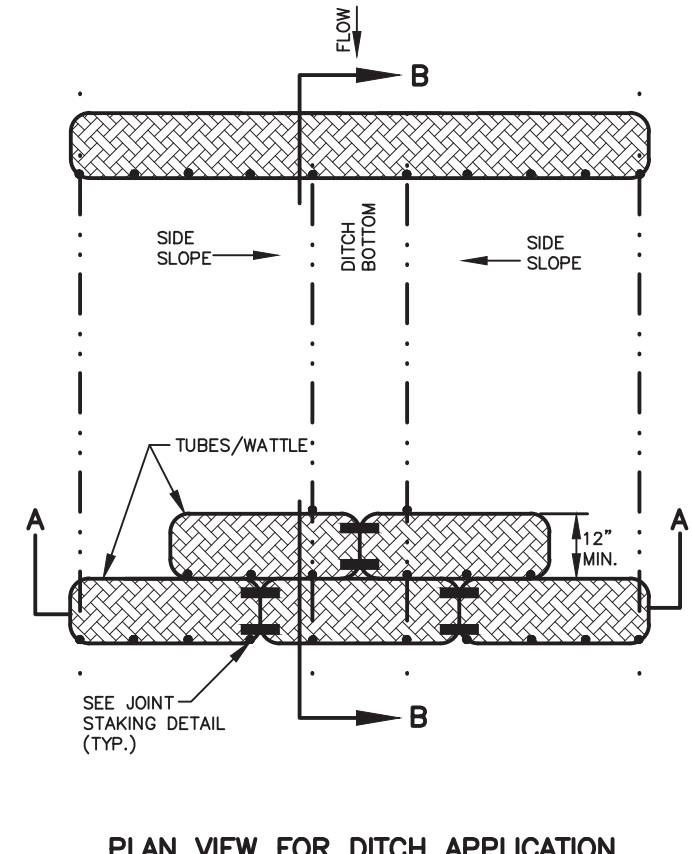
1. CONTRACTOR SHALL INSTALL APPROPRIATE SIZE CULVERT(S) IN THE STREAM TO CARRY ALL STREAM FLOW.
2. CONTRACTOR SHALL SANDBAG AROUND CULVERTS AND BEYOND THE TOP OF STREAM BANKS.
3. WATER OR SEWER LINE CONSTRUCTION SHALL BE PERFORMED DOWNSIDE OF TEMPORARY SANDBAGGING SO ALL WORK IS IN A DRY AREA.
4. USE OF SANDBAGS AT THE CULVERT DISCHARGE MAY BE NECESSARY TO PREVENT BACKWATER FROM COMING INTO THE WORK AREA.
5. INSTALL WATER/SEWER LINE IN ACCORDANCE WITH CREEK CROSSING DETAIL.
6. REMOVE TEMPORARY CULVERT AND SANDBAGS WHEN WORK IS COMPLETE.



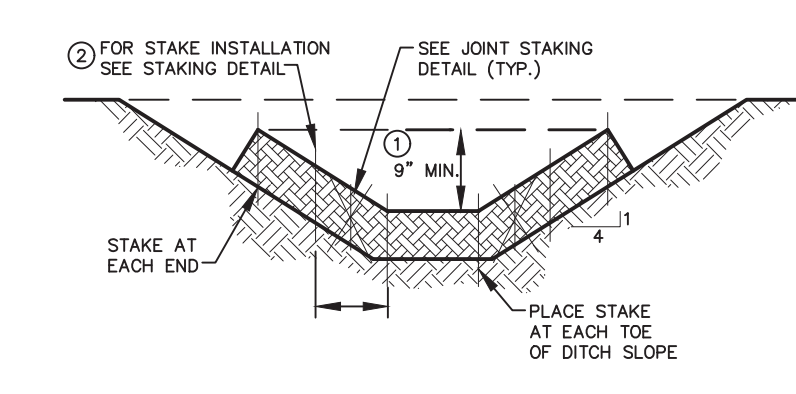
DIVERSION CHANNEL WITH BERM



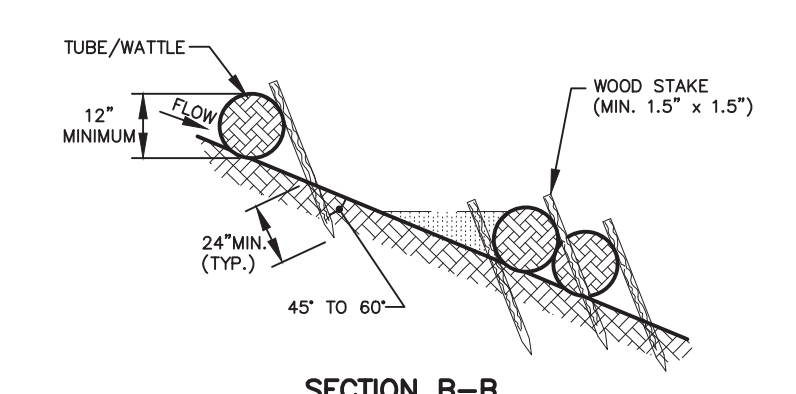
DIVERSION
TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK - CHAPTER 7.22
SCALE: NOT TO SCALE



PLAN VIEW FOR DITCH APPLICATION

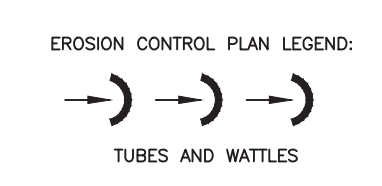


SECTION A-A

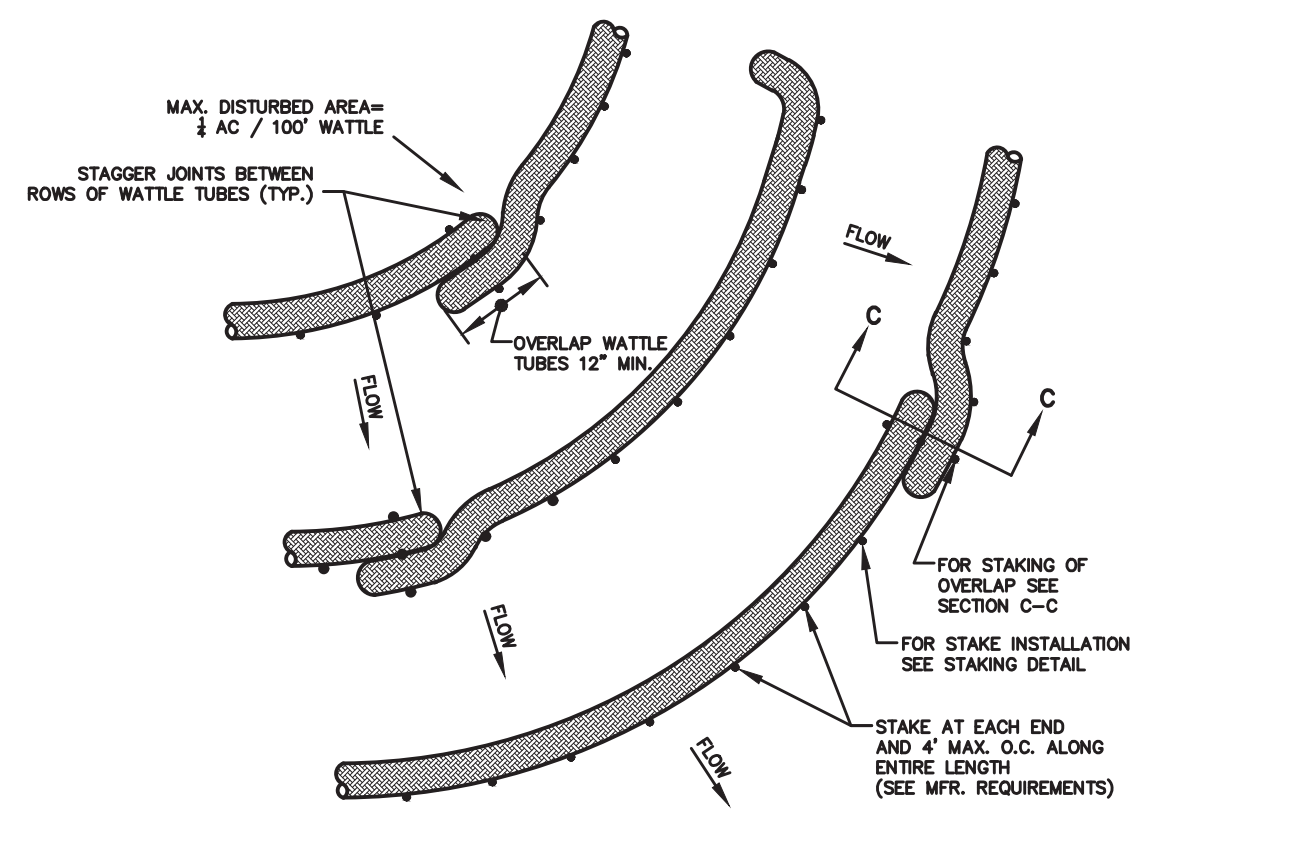


SECTION B-B

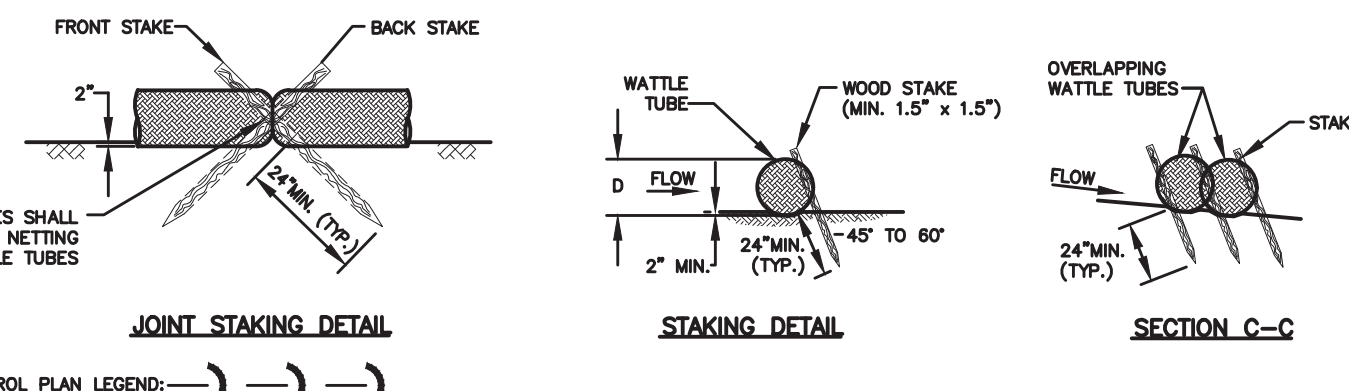
- NOTES:
1. THE DEPTH AND WIDTH OF THE WEIR SECTION OF THE WATTLE SHALL BE DESIGNED TO PASS THE 2yr/24hr OR 5yr/24hr STORM EVENT WITHOUT OVERTOPPING THE CHANNEL.
 2. STAKE PER MANUFACTURERS RECOMMENDATIONS



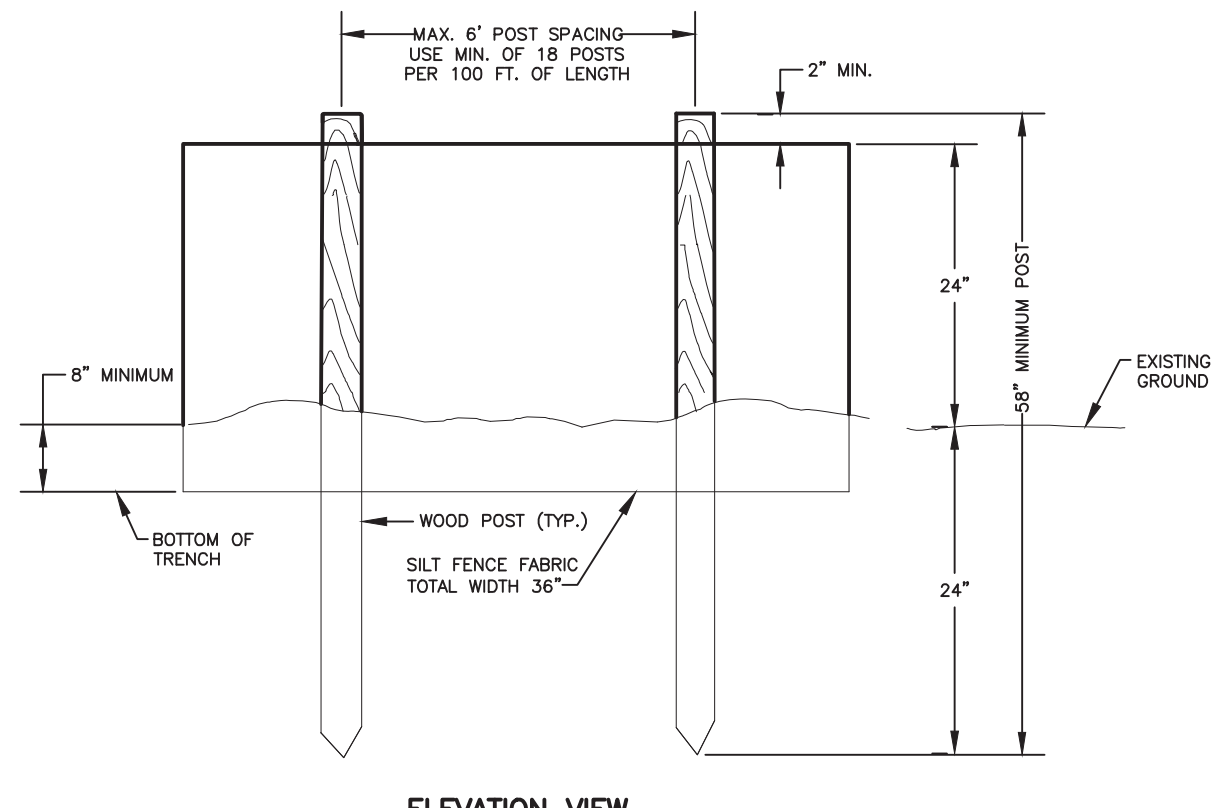
TUBES & WATTLES FOR DITCH APPLICATION
TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK - CHAPTER 7.25
SCALE: NOT TO SCALE



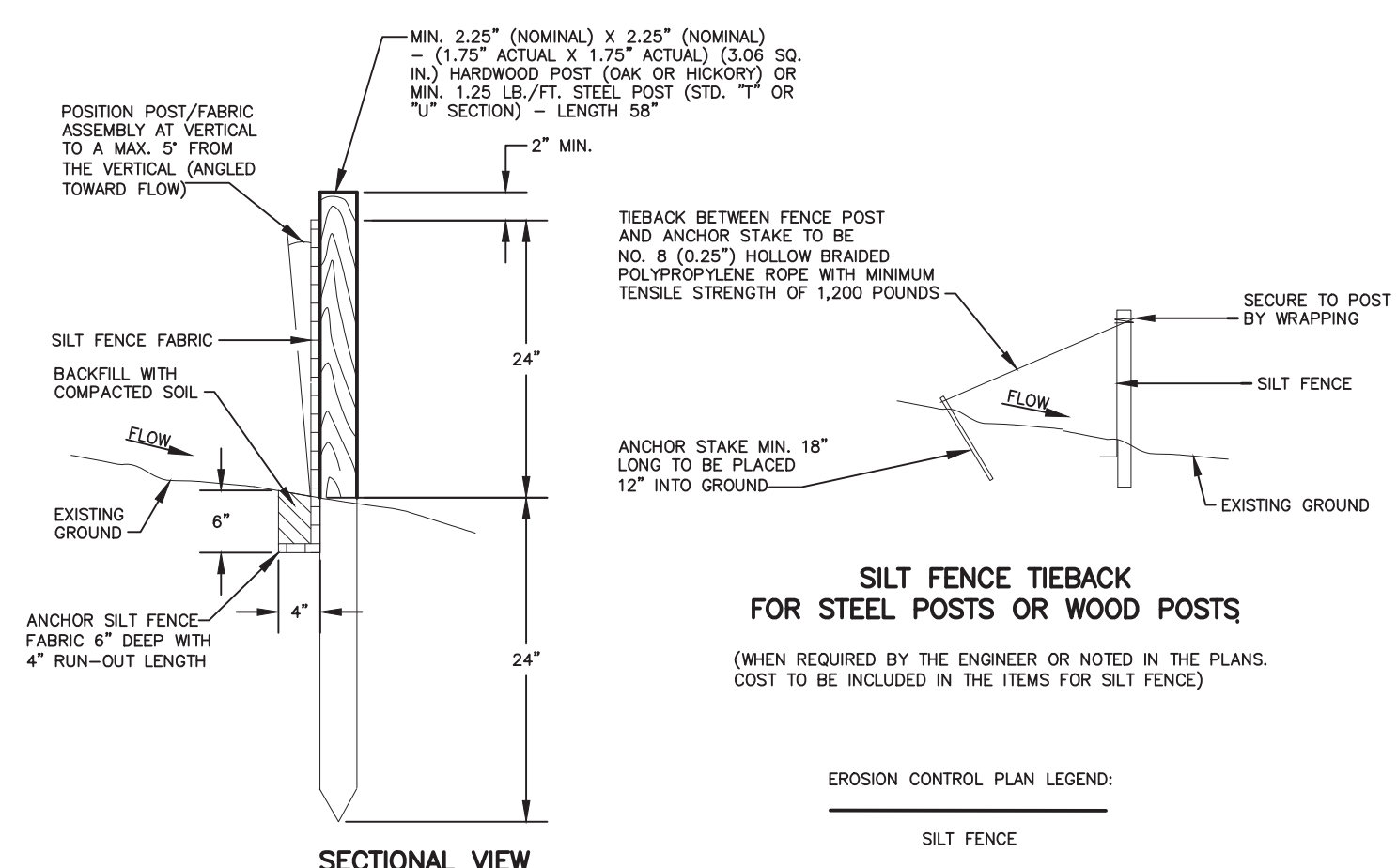
PLAN VIEW FOR SLOPE APPLICATION



TUBES AND WATTLES (7.37)
NOT TO SCALE



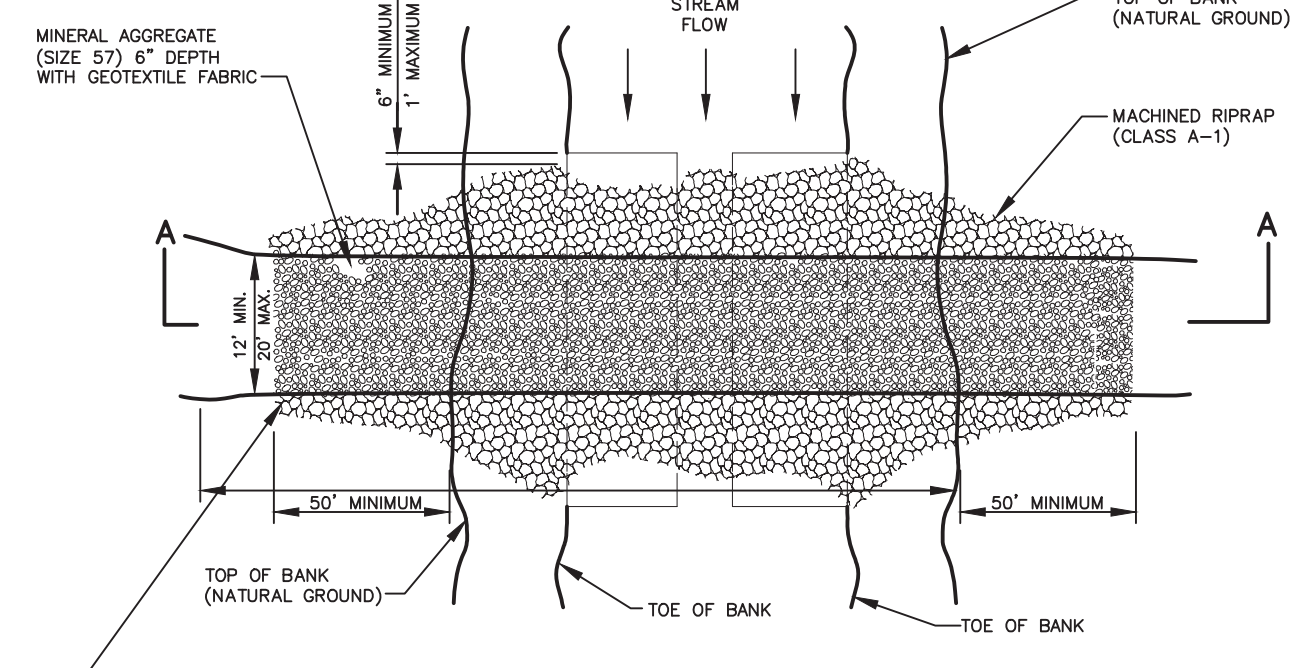
ELEVATION VIEW



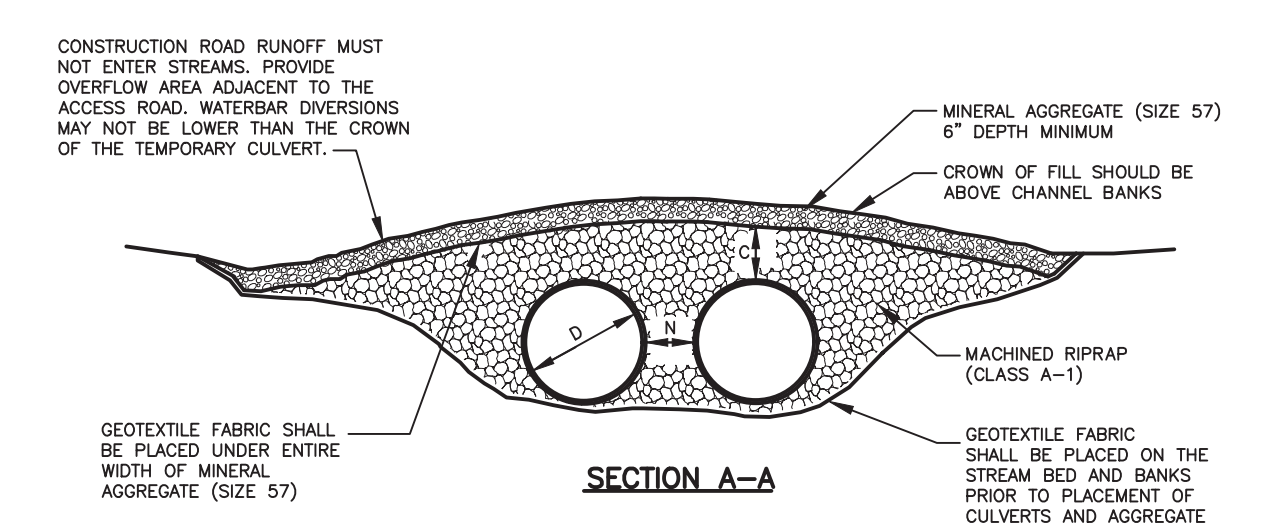
SECTIONAL VIEW

SILT FENCE
TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK - CHAPTER 7.34
SCALE: NOT TO SCALE

PIPE DIAMETER (INCHES)	AVERAGE CHANNEL SLOPE					
	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%
18	8.5	9.1	9.8	10.4	11.0	11.3
24	17.4	18.8	20.0	21.4	21.5	21.7
30	30.1	32.3	33.9	34.1	33.5	33.0
36	46.8	50.4	49.5	47.8	44.6	43.8
42	67.7	69.0	65.5	62.8	61.0	59.8
48	92.6	88.1	78.8	78.6	75.8	73.7
54	122.2	107.0	91.9	84.9	81.1	80.1
60	146.5	121.1	118.4	111.3	106.1	101.9
72	184.9	142.2	153.6	141.3	133.3	127.9
RIPRAP	B	B	B	B	B/C	B/C



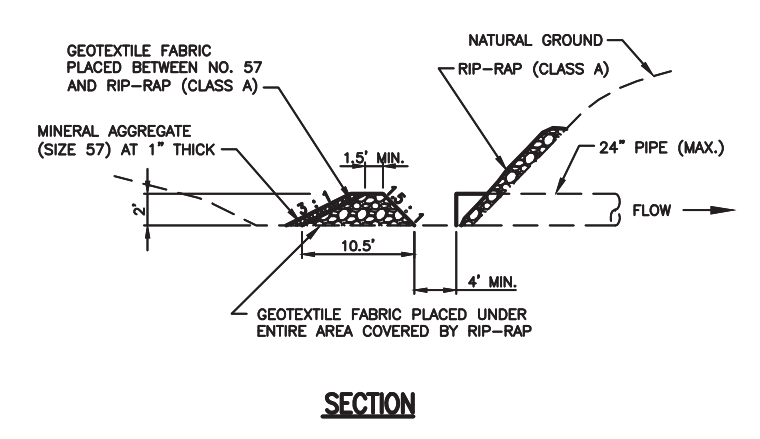
PLAN VIEW OF TEMPORARY CULVERT CROSSING



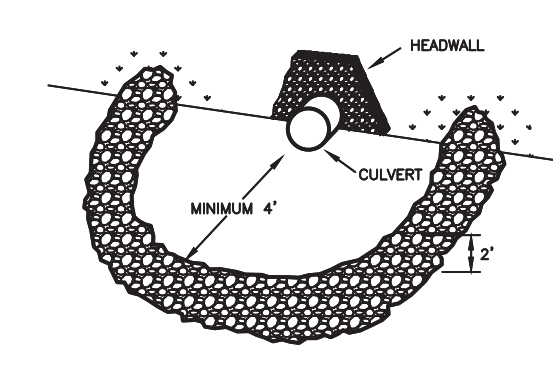
SECTION A-A

TEMPORARY STREAM CROSSING
TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK - CHAPTER 7.43
SCALE: NOT TO SCALE

- C = 1/2 DIAMETER OF PIPE OR 18" WHICHEVER IS GREATER
N = 1/2 DIAMETER OF PIPE OR 12" WHICHEVER IS GREATER
D = PIPE DIAMETER



SECTION



PERSPECTIVE VIEW

STONE FILTER RING
TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK - CHAPTER 7.30
SCALE: NOT TO SCALE



GRW PROJECT NO. 3848-17



EROSION CONTROL STANDARD DETAILS
2022 CDBG SEWER REHAB - CONTRACT B.
CITY OF MCKENZIE, TENNESSEE

NO.	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED	APPROVED
			LER	BHH	LER	LER

DATE: OCTOBER, 2023
SCALE: 1" = 5'
SHEET NO.

EC-06

PRINTED: 10/19/2023 @ 10:30AM

FILE NAME: G:\3848-McKenzie\17-McK Coll Imp\Working Drawings\AutoCAD\3848-17-C-SHEETS.dwg

EROSION CONTROL STANDARD DETAILS

CONTRACT DOCUMENTS