

# WATER SYSTEM IMPROVEMENTS

FOR

# OHIO COUNTY WATER DISTRICT

# OHIO COUNTY, KENTUCKY

## CONTRACT 17-01

HOOVER HILL INTERCONNECT WATER LINE  
FUNDED IN PART BY KENTUCKY INFRASTRUCTURE AUTHORITY  
FEDERALLY ASSISTED DRINKING WATER REVOLVING LOAN FUND #F15-069

JOB NO. 2084

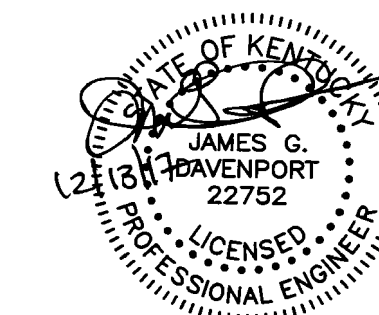
DECEMBER, 2017

# WAUFORD

J. R. Wauford & Company, Consulting Engineers, Inc.  
Nashville, Tennessee  
(615) 883-3243  
[www.jrwauford.com](http://www.jrwauford.com)



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Call before you dig.



## INDEX OF DRAWINGS

<u>SHEET</u>	<u>DESCRIPTION</u>
1.	KEY MAP
2.	LINE "W-1" - STA. 0+00 TO 28+00
3.	LINE "W-1" - STA. 28+00 TO 41+00
4.	LINE "W-1" - STA. 41+00 TO E.O.L.
5.	DETAIL SHEET

## OFFICIALS

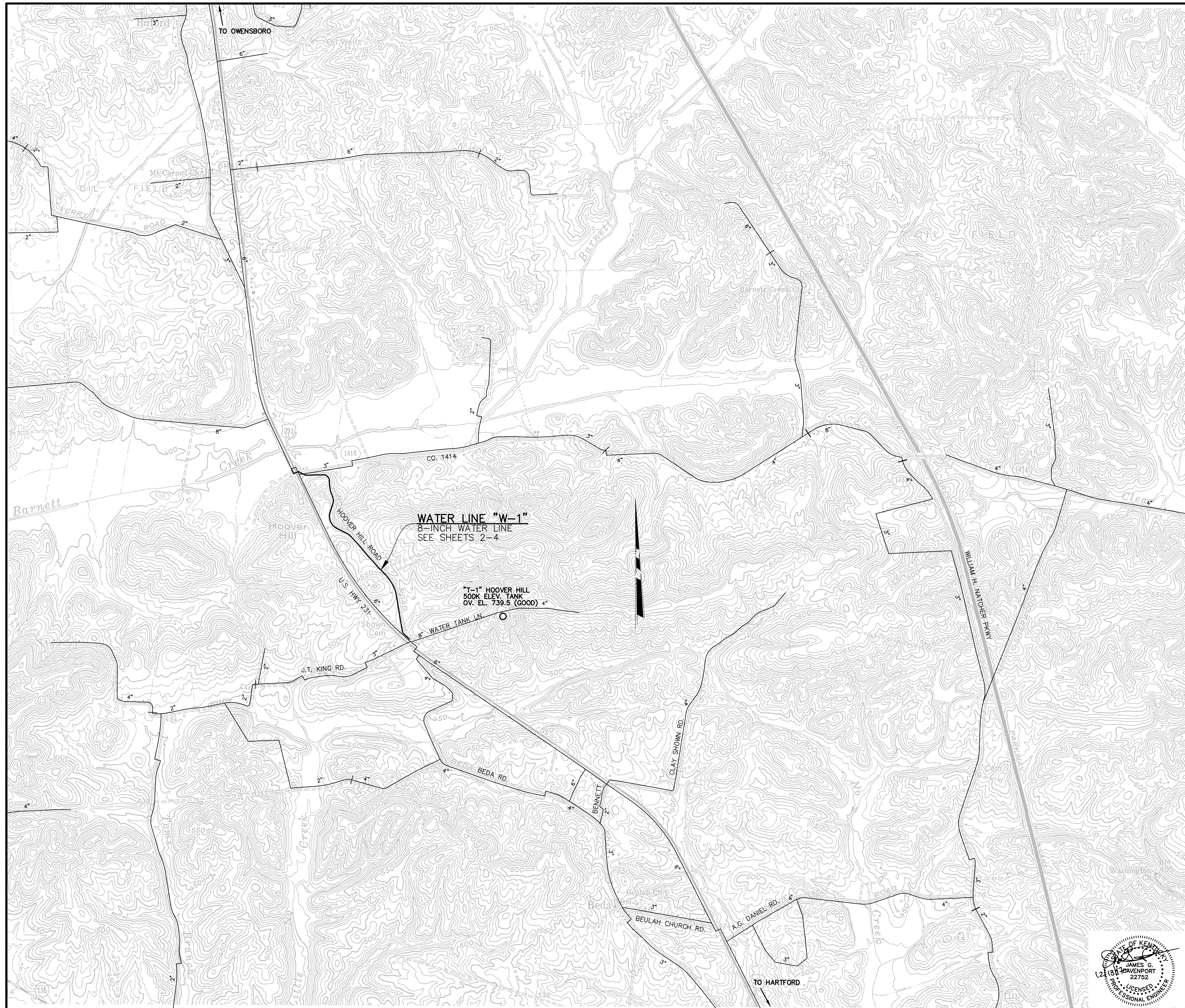
### GENERAL MANAGER

WALT BEASLEY

### BOARD MEMBERS

BEN EVERLEY, CHAIRMAN  
JAMES DEWAYNE JOHNSON,  
SECRETARY  
CHUCK PRICE, TREASURER  
MARK WHITEHOUSE  
EDDIE EMBRY  
CLETUS GREER  
REID HAIRE





**KEY MAP LEGEND**

- EXISTING WATER LINES
- PROPOSED WATER LINE

**LEGEND FOR PLAN SHEETS**

- PROPOSED**
- WATER LINE
  - PROPOSED VALVE
  - REDUCER

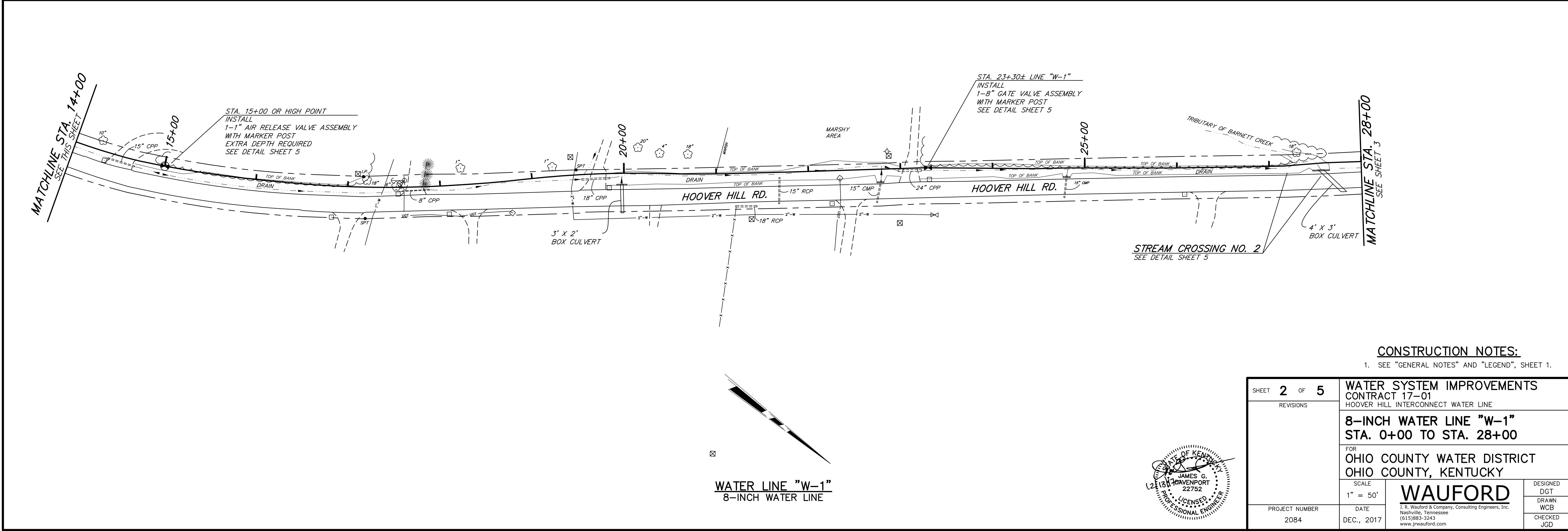
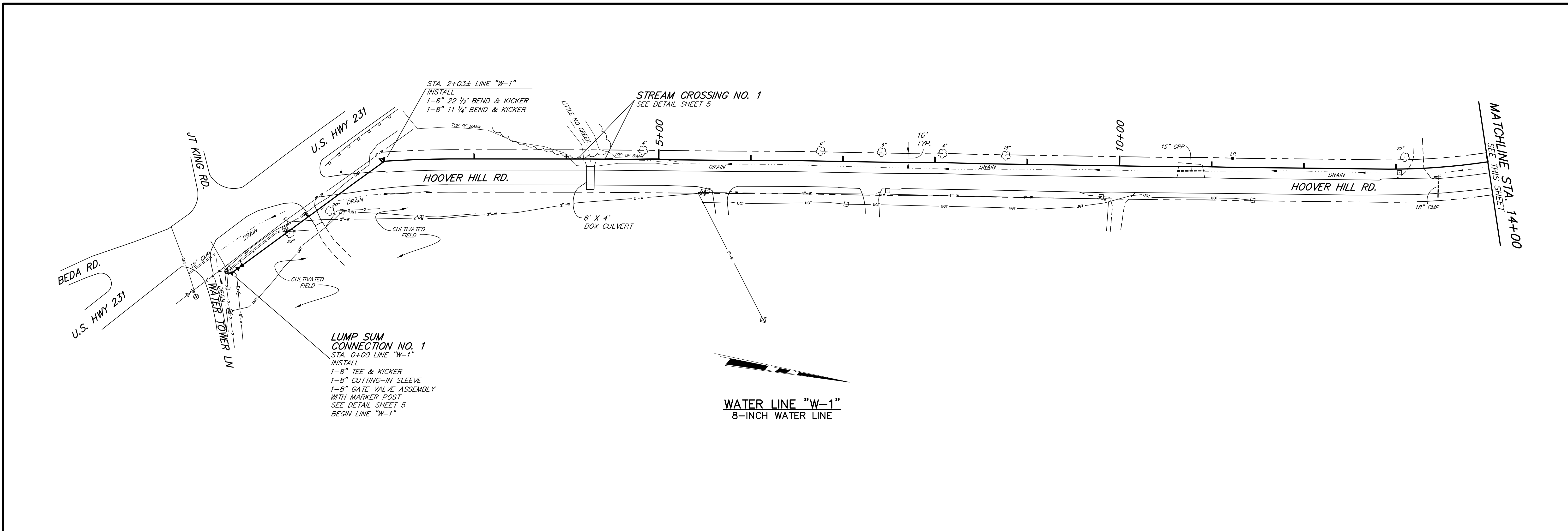
- EXISTING**
- 4"-W WATER LINE
  - 2"-G GAS LINE
  - OHE OVER-HEAD ELECTRICAL LINE
  - UGT UNDERGROUND TELEPHONE CABLE
  - RIGHT-OF-WAY
  - PROPERTY LINE
  - PAVED SURFACE
  - UNPAVED SURFACE
  - GUARDRAIL
  - TOP / TOE OF BANK
  - DITCH LINE OR CREEK
  - TREE LINE
  - TREE
  - HEDGE ROW
  - BUSH
  - X FENCE LINE
  - WATER METER
  - GAS METER
  - VALVES
  - TELEPHONE PEDESTAL
  - POWER POLE & GUY WIRE
  - SIGNS
  - MAILBOX
  - PROPERTY PIN
  - STEEL POST
  - YARD HYDRANT

**GENERAL NOTES:**

1. THE CONTRACTOR IS PROHIBITED FROM EXCAVATING BY KRS CHAPTER 367 UNTIL EXISTING UNDERGROUND UTILITIES HAVE BEEN LOCATED BY PROPERLY NOTIFIED UTILITY COMPANIES. UTILITY LOCATIONS ARE APPROXIMATE AND BASED ON INFORMATION PROVIDED BY OTHERS. THE CONTRACTOR SHALL IDENTIFY AND CONTACT ALL UTILITIES PER LEGAL REQUIREMENTS.
2. THE CONTRACTOR SHALL BE STRICTLY AND SOLELY LIABLE FOR ANY FINES LEVIED BY ANY REGULATORY AGENCY DUE TO VIOLATION OF WATER QUALITY CAUSED BY CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL USE ALL NECESSARY TEMPORARY WATER POLLUTION CONTROL MEANS AS SPECIFIED TO PREVENT TRANSPORT OF SEDIMENT INTO WATERWAYS AT NO ADDITIONAL COST TO THE OWNER.
3. EXISTING WATERLINE LOCATIONS SHOWN HEREON ARE APPROXIMATE AND BASED ON AS BUILT DRAWINGS PROVIDED BY OWNER.
4. MAIN LINE TIE-INS SHALL BE COORDINATED AND SCHEDULED SUCH THAT WATER SERVICE SHALL NOT BE DISRUPTED FOR MORE THAN TWO HOURS IN A SINGLE TWENTY FOUR HOUR PERIOD. DISRUPTED SERVICE PERIODS SHALL BE LIMITED TO MID-MORNING TO MID-AFTERNOON.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF TRAFFIC IN ACCORDANCE WITH KYTC REQUIREMENTS. CONTACT KENTUCKY TRANSPORTATION CABINET DISTRICT OFFICE FOR TRAFFIC CONTROL MANUALS.
6. THE NAMES OF PROPERTY OWNERS, PROPERTY LINES, STREET AND ROAD RIGHTS-OF-WAY SHOWN ON THESE PLANS WERE OBTAINED FROM OHIO COUNTY TAX MAPS AND THE OHIO COUNTY PROPERTY VALUATION ADMINISTRATION THIS INFORMATION IS ONLY GENERAL IN NATURE AND IS NOT GUARANTEED BY THE ENGINEER.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL HAVE ON HAND ALL APPROPRIATE REPAIR SLEEVES, ETC., TO QUICKLY CORRECT DAMAGE TO ALL SIZES AND MATERIAL OF EXISTING WATERLINE. SOUNDINGS AND HAND EXCAVATION SHALL BE NECESSARY TO AVOID DAMAGING EXISTING LINES.
8. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS PERTAINING TO EXISTING ASBESTOS CEMENT PIPE.
9. THE CONTRACTOR SHALL REPLACE ANY PAVEMENT DAMAGED DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL STAY WITHIN THE LIMITS OF CONSTRUCTION AS SET OUT IN SECTION 1 OF THE DETAILED SPECIFICATIONS AND/OR AS SHOWN ON THE PLANS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND/OR REPLACEMENT OF ALL EXISTING DRAINAGE CULVERTS DISTURBED DURING CONSTRUCTION. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK.
12. WATER LINES SHALL BE DISINFECTED IN ACCORDANCE WITH THE DETAILED SPECIFICATIONS.

SHEET <b>1</b> OF <b>5</b>		<b>WATER SYSTEM IMPROVEMENTS</b>	
REVISIONS		CONTRACT 17-01	
		HOOVER HILL INTERCONNECT WATER LINE	
<b>KEY MAP</b>			
FOR			
<b>OHIO COUNTY WATER DISTRICT</b>			
<b>OHIO COUNTY, KENTUCKY</b>			
SCALE	DATE		DESIGNED
1" = 1000'	DEC., 2017		DGT
PROJECT NUMBER		<b>WAUFORD</b> <small>J. R. Wauford &amp; Company, Consulting Engineers, Inc.          Nashville, Tennessee          (615)883-3343          www.jrwauford.com</small>	DRAWN
2084			WCB
			CHECKED
			JGD



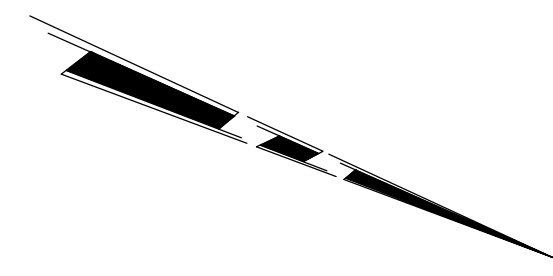
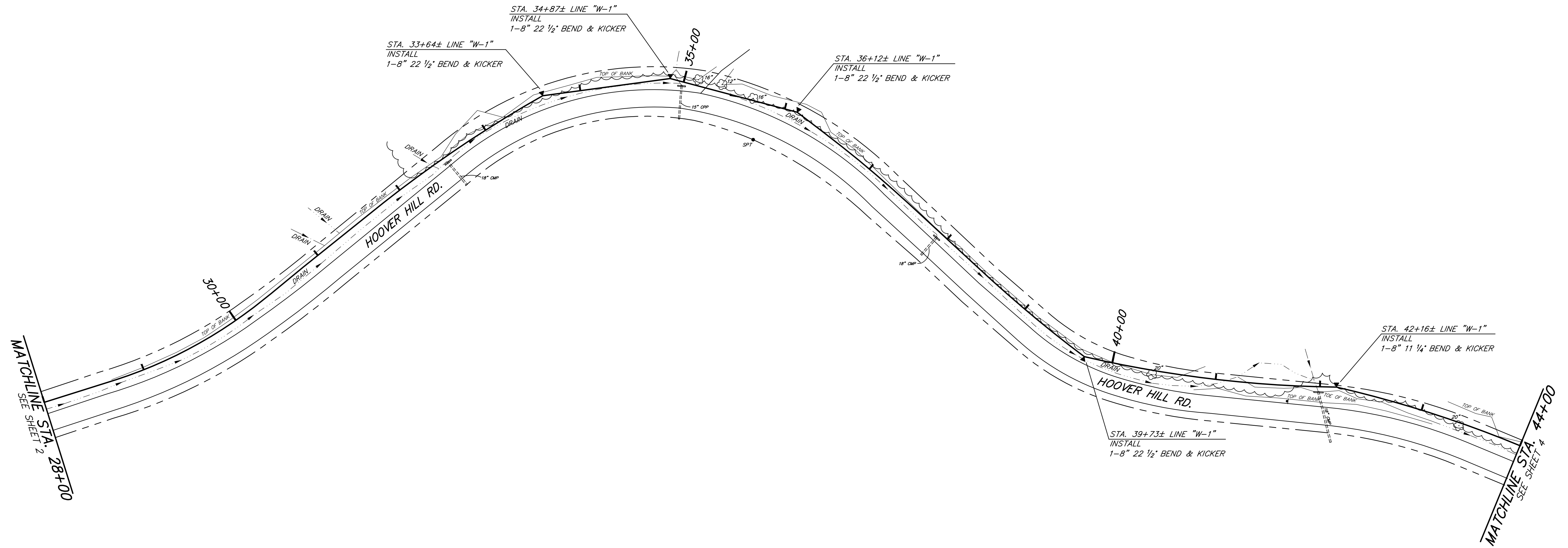


WATER LINE "W-1"  
8-INCH WATER LINE

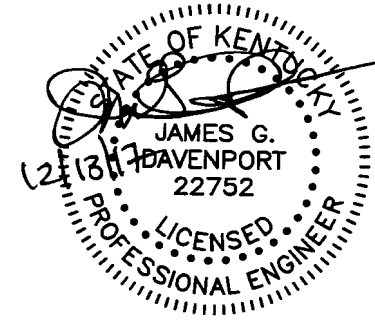
**CONSTRUCTION NOTES:**

- SEE "GENERAL NOTES" AND "LEGEND", SHEET 1.

SHEET <b>2</b> OF <b>5</b>		<b>WATER SYSTEM IMPROVEMENTS</b>	
REVISIONS		CONTRACT 17-01	
		HOOVER HILL INTERCONNECT WATER LINE	
		<b>8-INCH WATER LINE "W-1"</b>	
		STA. 0+00 TO STA. 28+00	
		FOR	
		OHIO COUNTY WATER DISTRICT	
		OHIO COUNTY, KENTUCKY	
SCALE	DATE		DESIGNED
1" = 50'	DEC., 2017		DGT
PROJECT NUMBER		<b>WAUFORD</b> J. R. Wauford & Company, Consulting Engineers, Inc. Nashville, Tennessee (615) 883-3343 www.jrwauford.com	DRAWN
2084			WCB
			CHECKED
			JGD

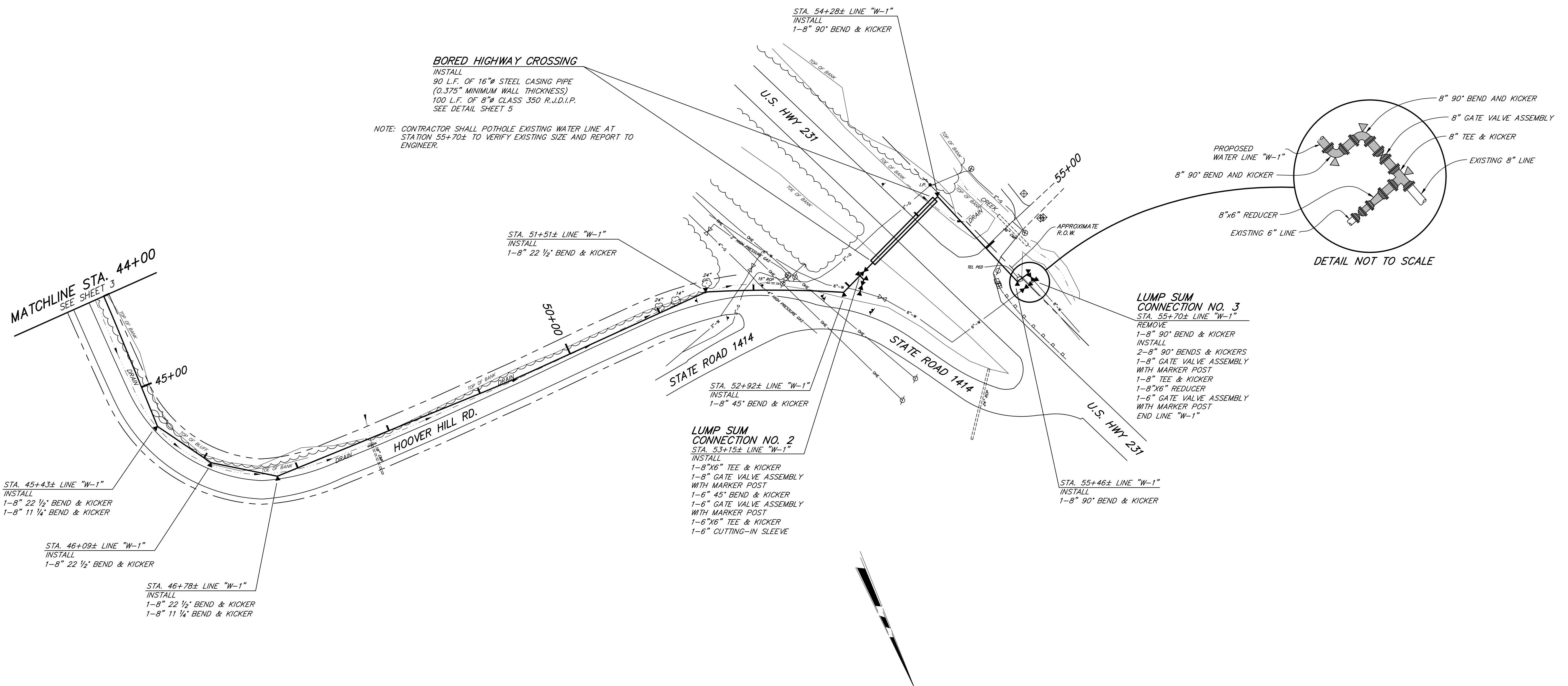


WATER LINE "W-1"  
8-INCH WATER LINE



**CONSTRUCTION NOTES:**  
1. SEE "GENERAL NOTES" AND "LEGEND", SHEET 1.

SHEET <b>3</b> OF <b>5</b>		<b>WATER SYSTEM IMPROVEMENTS</b>	
REVISIONS		CONTRACT 17-01	
		HOOVER HILL INTERCONNECT WATER LINE	
		<b>8-INCH WATER LINE "W-1"</b>	
		STA. 28+00 TO STA. 44+00	
		FOR	
		OHIO COUNTY WATER DISTRICT	
		OHIO COUNTY, KENTUCKY	
SCALE	DATE	<b>WAUFORD</b>	
1" = 50'	DEC., 2017	J. R. Wauford & Company, Consulting Engineers, Inc.	
PROJECT NUMBER	2084	Nashville, Tennessee	
		(615)883-3043	
		www.jrwauford.com	
		DESIGNED	DGT
		DRAWN	WCB
		CHECKED	JGD



**BORED HIGHWAY CROSSING**  
 INSTALL  
 90 L.F. OF 16"Ø STEEL CASING PIPE  
 (0.375" MINIMUM WALL THICKNESS)  
 100 L.F. OF 8"Ø CLASS 350 R.J.D.I.P.  
 SEE DETAIL SHEET 5

NOTE: CONTRACTOR SHALL POTHOLE EXISTING WATER LINE AT STATION 55+70± TO VERIFY EXISTING SIZE AND REPORT TO ENGINEER.

**LUMP SUM CONNECTION NO. 3**  
 STA. 55+70± LINE "W-1"  
 REMOVE  
 1-8" 90° BEND & KICKER  
 INSTALL  
 2-8" 90° BENDS & KICKERS  
 1-8" GATE VALVE ASSEMBLY WITH MARKER POST  
 1-8" TEE & KICKER  
 1-8"x6" REDUCER  
 1-6" GATE VALVE ASSEMBLY WITH MARKER POST  
 END LINE "W-1"

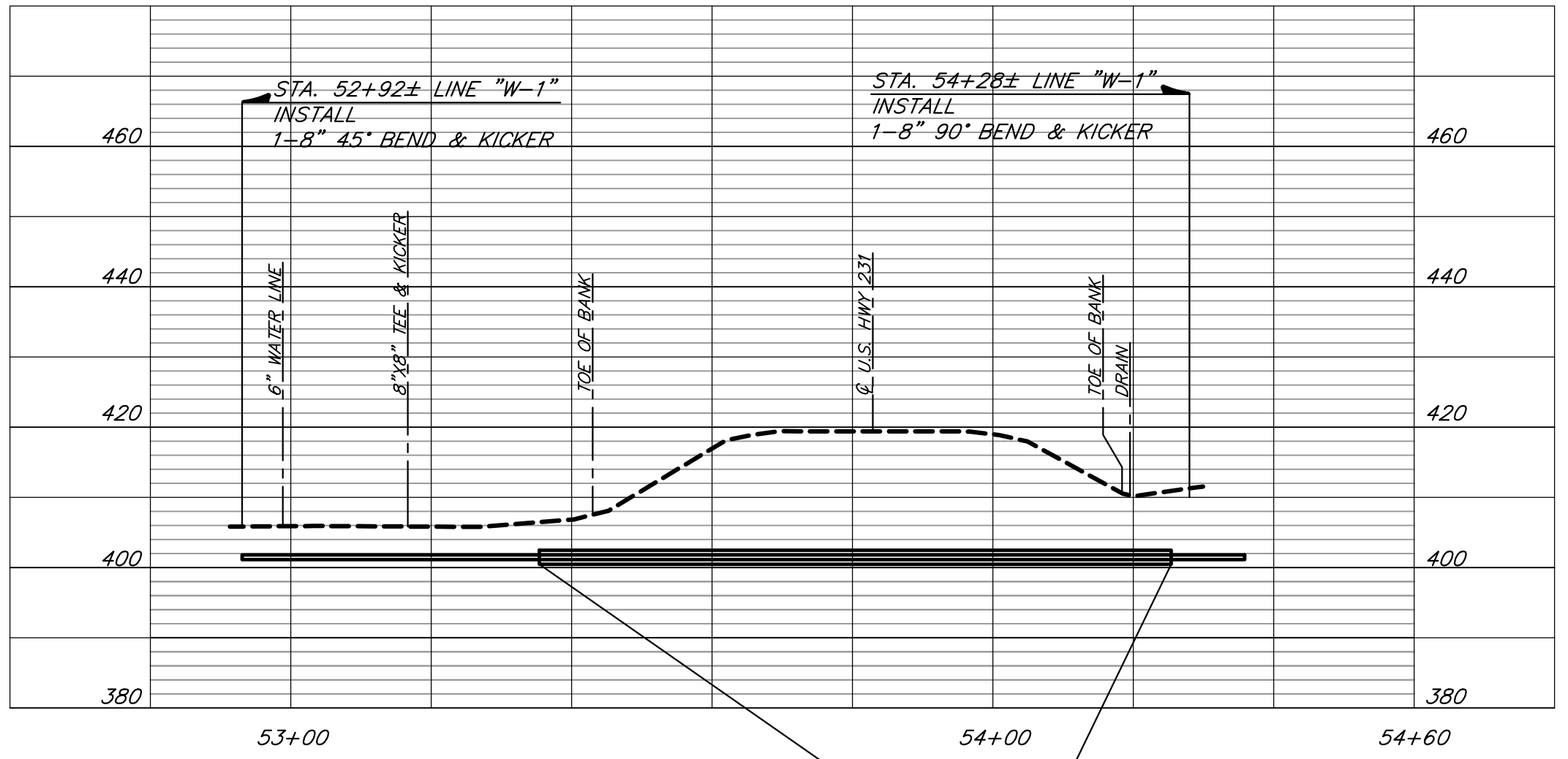
**LUMP SUM CONNECTION NO. 2**  
 STA. 53+15± LINE "W-1"  
 INSTALL  
 1-8"x6" TEE & KICKER  
 1-8" GATE VALVE ASSEMBLY WITH MARKER POST  
 1-6" 45° BEND & KICKER  
 1-6" GATE VALVE ASSEMBLY WITH MARKER POST  
 1-6"x6" TEE & KICKER  
 1-6" CUTTING-IN SLEEVE

STA. 45+43± LINE "W-1"  
 INSTALL  
 1-8" 22 1/2° BEND & KICKER  
 1-8" 11 1/4° BEND & KICKER

STA. 46+09± LINE "W-1"  
 INSTALL  
 1-8" 22 1/2° BEND & KICKER

STA. 46+78± LINE "W-1"  
 INSTALL  
 1-8" 22 1/2° BEND & KICKER  
 1-8" 11 1/4° BEND & KICKER

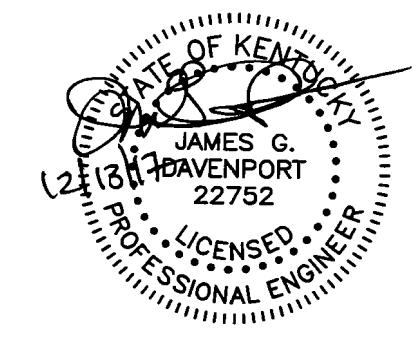
**WATER LINE "W-1"**  
 8-INCH WATER LINE

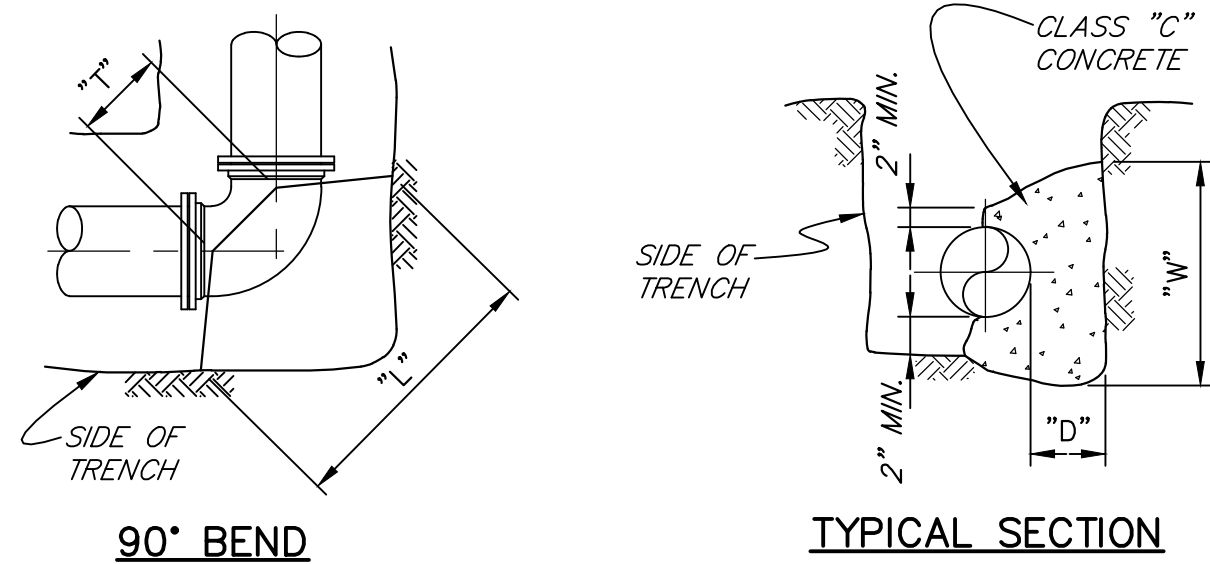


SCALE: 1" = 20' HOR.  
 1" = 20' VERT.

**BORED HIGHWAY CROSSING**  
 INSTALL  
 90 L.F. OF 16"Ø STEEL CASING PIPE  
 (0.375" MINIMUM WALL THICKNESS)  
 100 L.F. OF 8"Ø CLASS 350 R.J.D.I.P.  
 SEE DETAIL SHEET 5

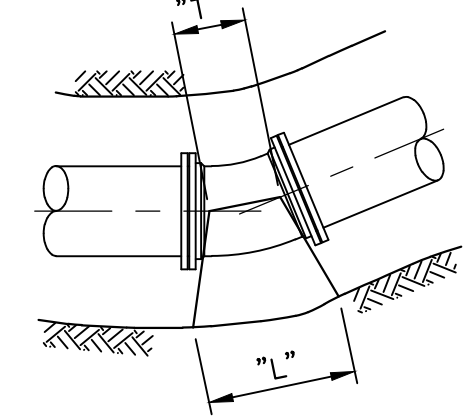
**CONSTRUCTION NOTES:**  
 1. SEE "GENERAL NOTES" AND "LEGEND", SHEET 1.

SHEET <b>4</b> OF <b>5</b>		<b>WATER SYSTEM IMPROVEMENTS</b> CONTRACT 17-01 HOOVER HILL INTERCONNECT WATER LINE	
REVISIONS		<b>8-INCH WATER LINE "W-1"</b> STA. 44+00 TO E.O.L.	
		FOR OHIO COUNTY WATER DISTRICT OHIO COUNTY, KENTUCKY	
SCALE	1" = 50'	DESIGNED	DGT
PROJECT NUMBER	2084	DRAWN	WCB
DATE	DEC., 2017	CHECKED	JGD
		 <b>WAUFORD</b> J. R. Wauford & Company, Consulting Engineers, Inc. Nashville, Tennessee (615)883-3343 www.jrwauford.com	

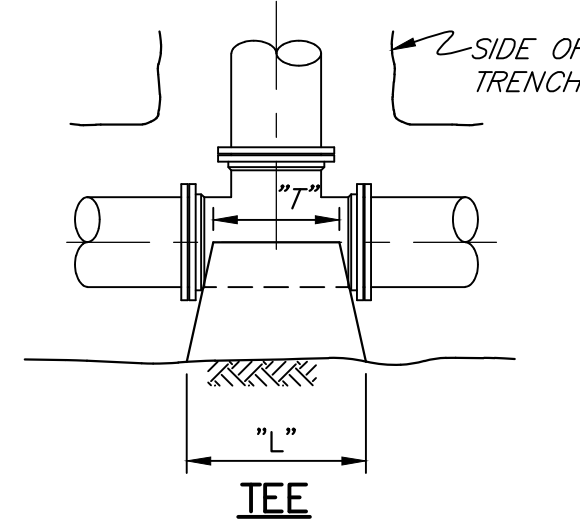


90° BEND

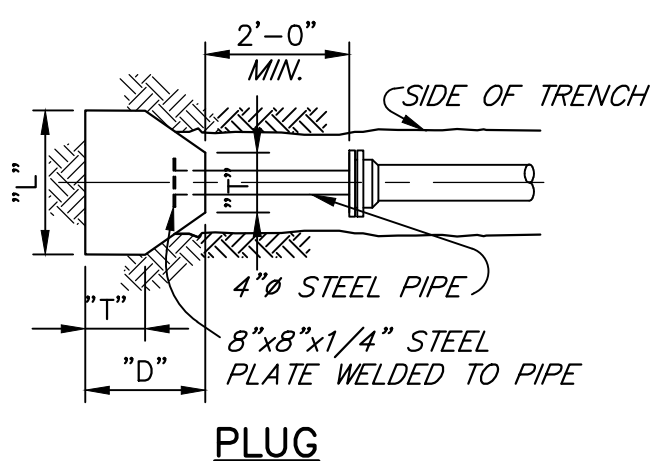
TYPICAL SECTION



45°, 22 1/2° & 11 1/4° BENDS



TEE



PLUG

SOIL BEARING PRESSURE = 3000 PSF  
TEST PSI = 200

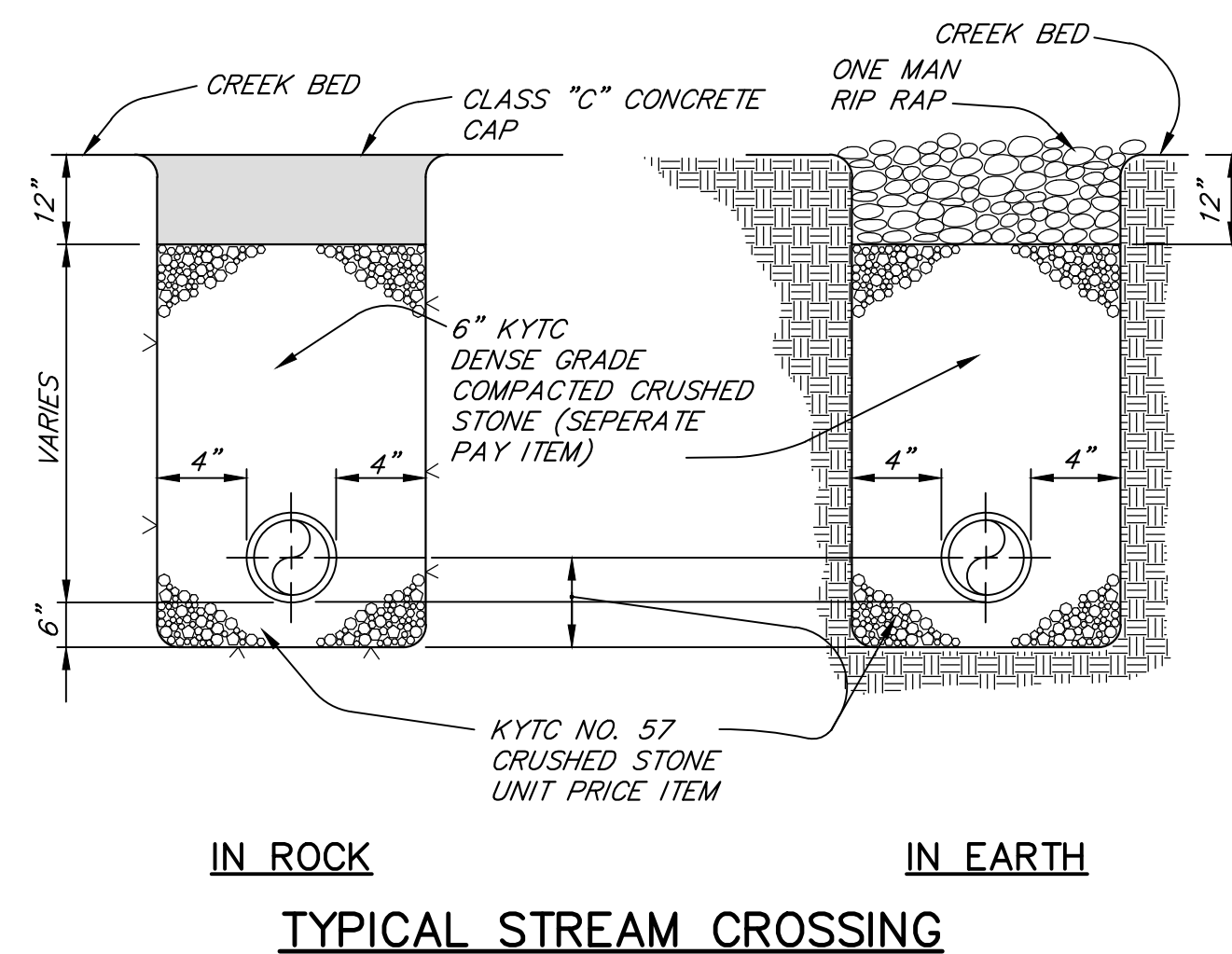
90° BEND		45° BEND		22 1/2° & 11 1/4° BENDS		TEE		PLUG	
SIZE		6"	8"	6"	8"	6"	8"	6"	8"
D	14	19		11	20	8	10	12	16
L	28	37		21	29	15	19	24	31
W	28	37		21	29	15	19	24	31
T	10	12		6	12	8	10	14	14

DIMENSIONS ARE IN INCHES

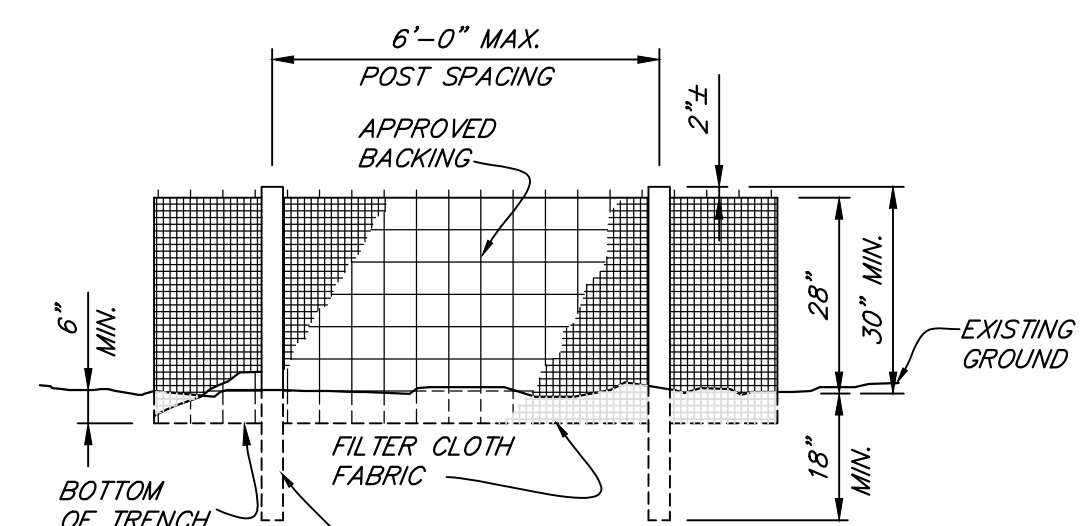
**NOTES**

- FOR TEE WITH BRANCH UNEQUAL TO RUN, USE TEE TYPE KICKER WITH D, L & W DIMENSIONS THE SAME AS THOSE FOR PLUG WITH SAME DIMENSIONS AS BRANCH OF TEE, SELECT T DIMENSION FROM TEE TABLE UNDER COLUMN HEADED BY THE SIZE OF THE BRANCH.
- IF EXACT SIZE OF PIPE BLOCKING IS NOT SHOWN, USE NEXT LARGER SIZE.
- DIMENSION D MAY BE GREATER THAN SPECIFIED TO ALLOW WORKING SPACE. CONCRETE BLOCKING MUST BE POURED AGAINST UNDISTURBED EARTH.

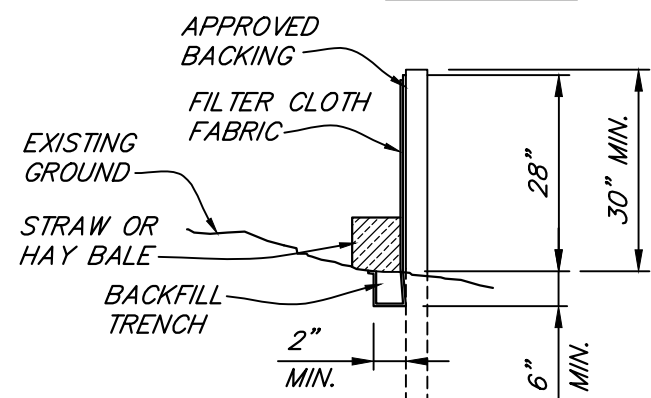
**CONCRETE BLOCKING FOR PIPE (KICKERS)**



IN ROCK IN EARTH  
TYPICAL STREAM CROSSING



ELEVATION

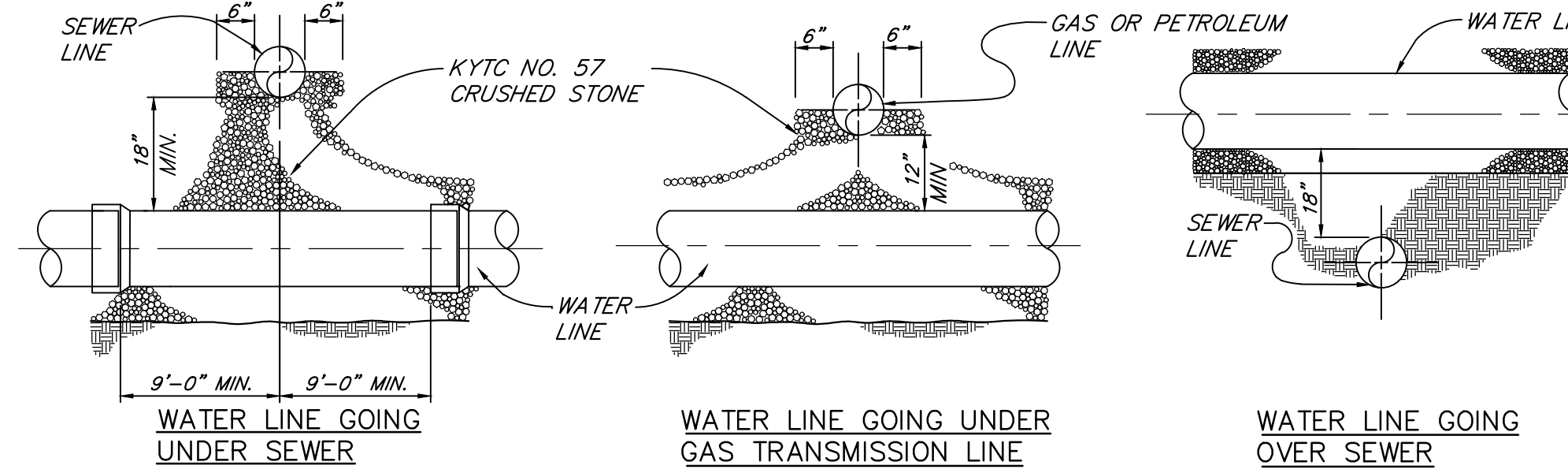


SECTION

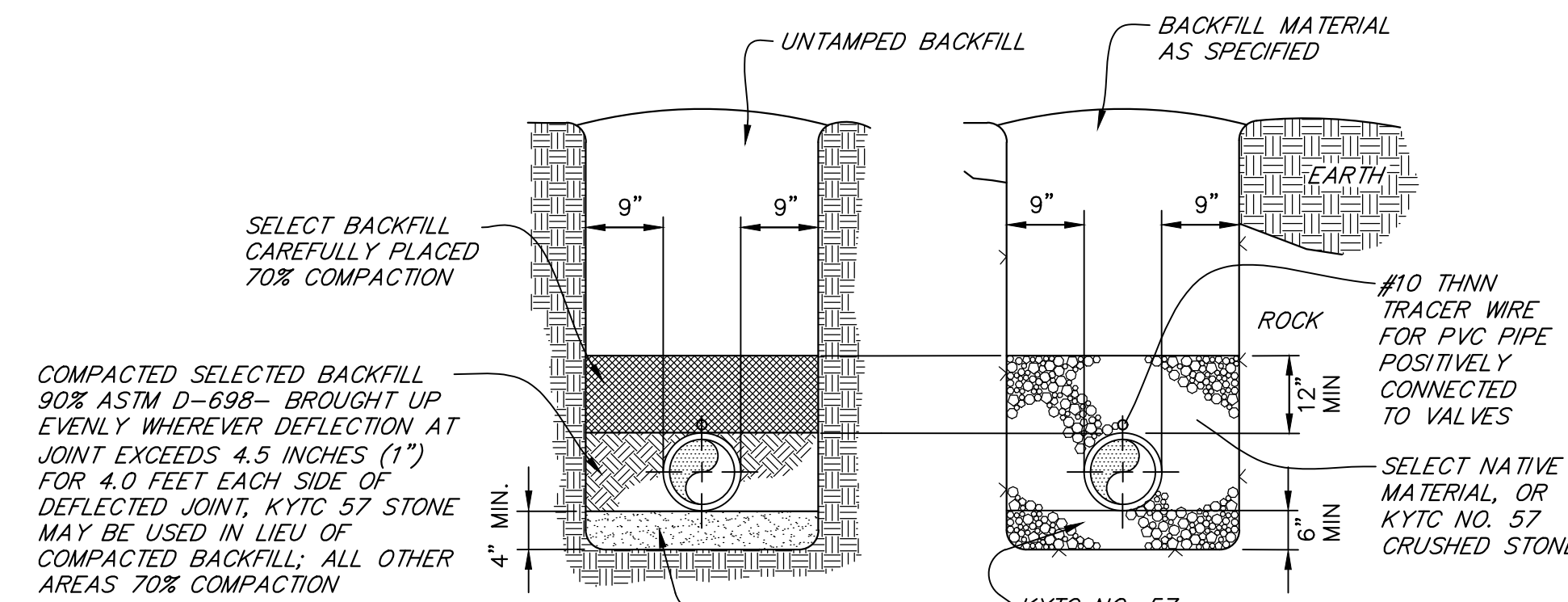
**NOTES:**

- FILTER CLOTH SHALL HAVE APPROVED BACKING OR A BUILT-IN REINFORCED STRUCTURE AS RECOMMENDED BY THE MANUFACTURER TO SUPPORT THE FILTER CLOTH.
- A PREASSEMBLED SILT FENCE MEETING THE REQUIREMENTS OF THIS DRAWING IS ACCEPTABLE IN LIEU OF A FIELD CONSTRUCTED SILT FENCE.
- SEE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN SPECIFICATIONS FOR FURTHER DETAILS AND REQUIREMENTS.

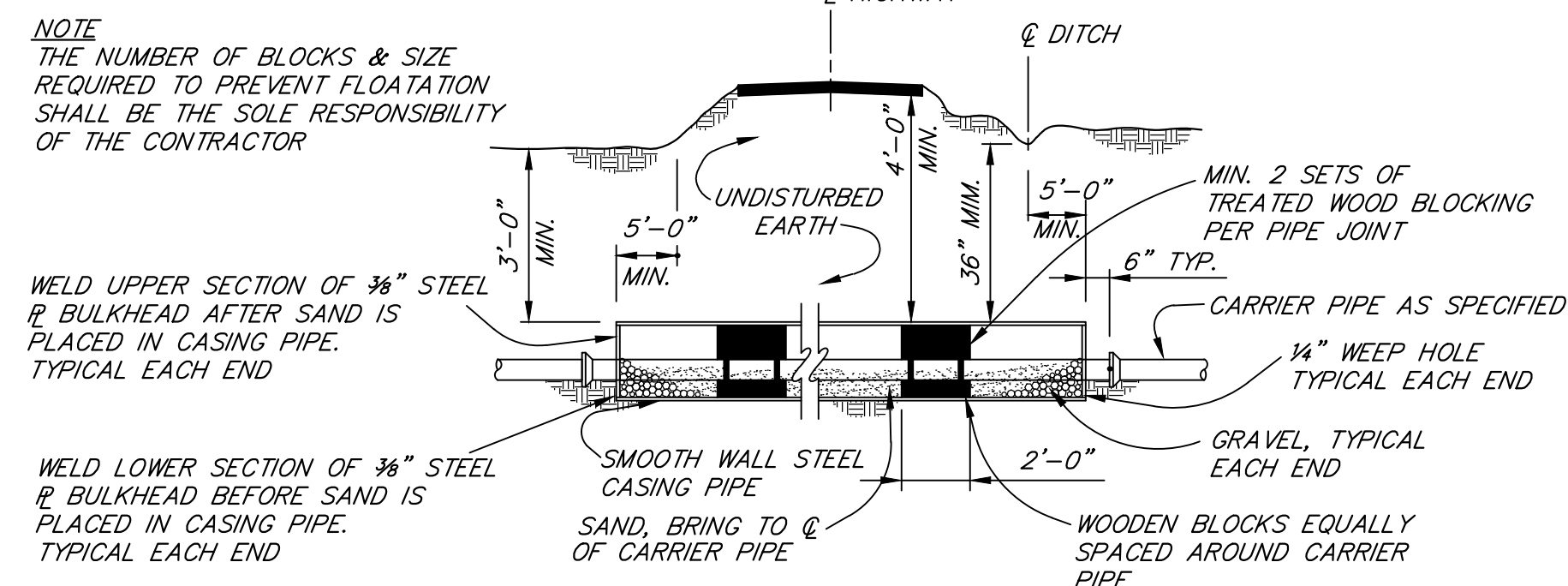
**STANDARD TEMPORARY SILT FENCE**



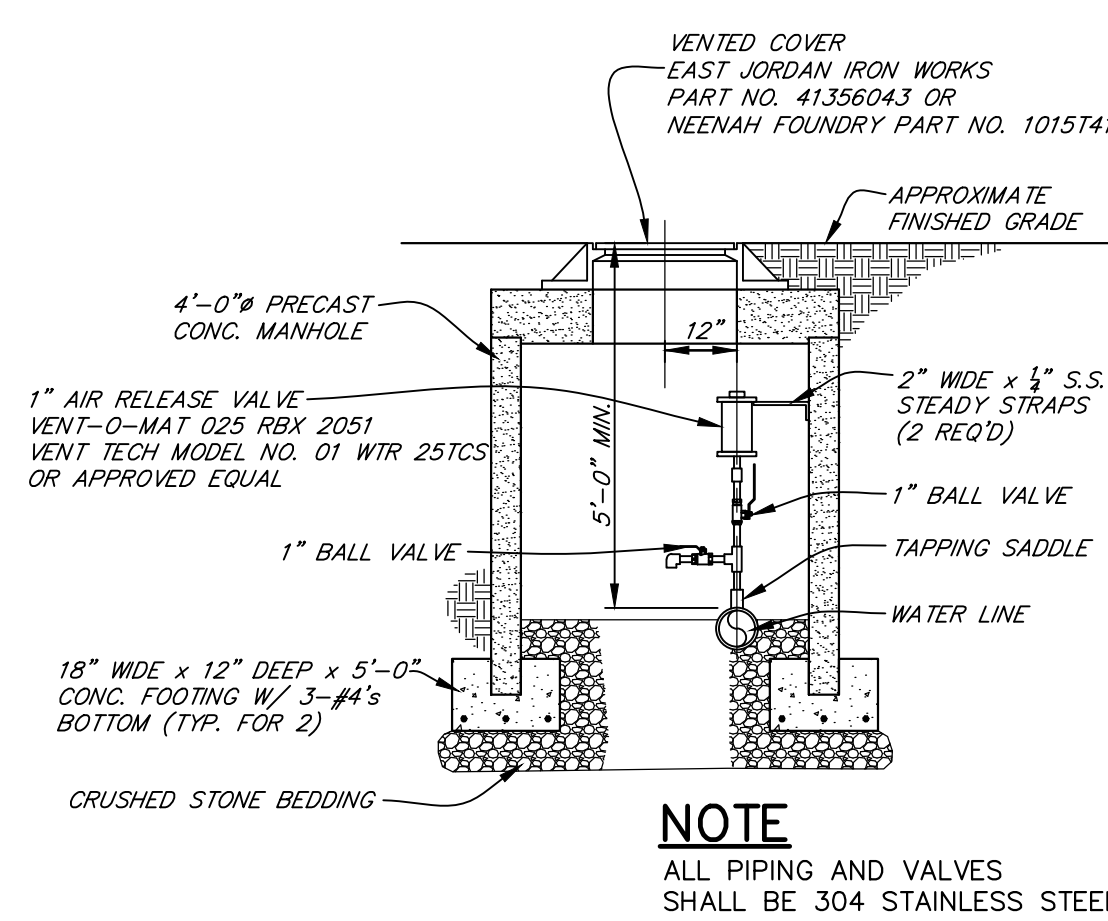
TYPICAL PIPE CROSSING



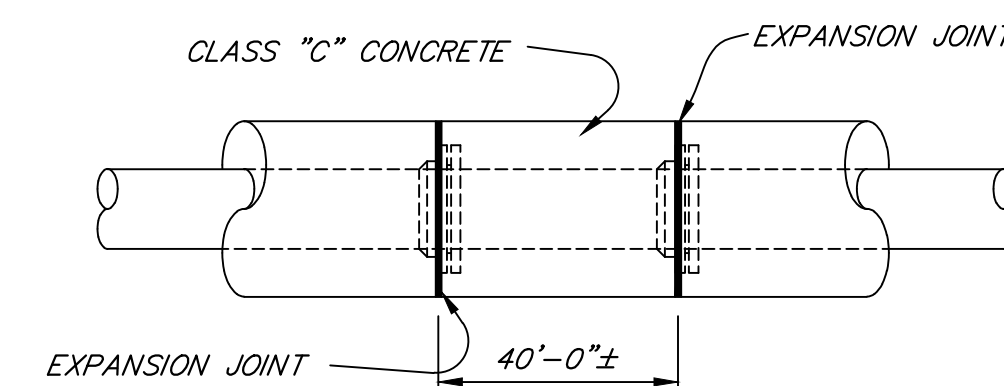
IN EARTH IN ROCK  
STANDARD WATER LINE BEDDING



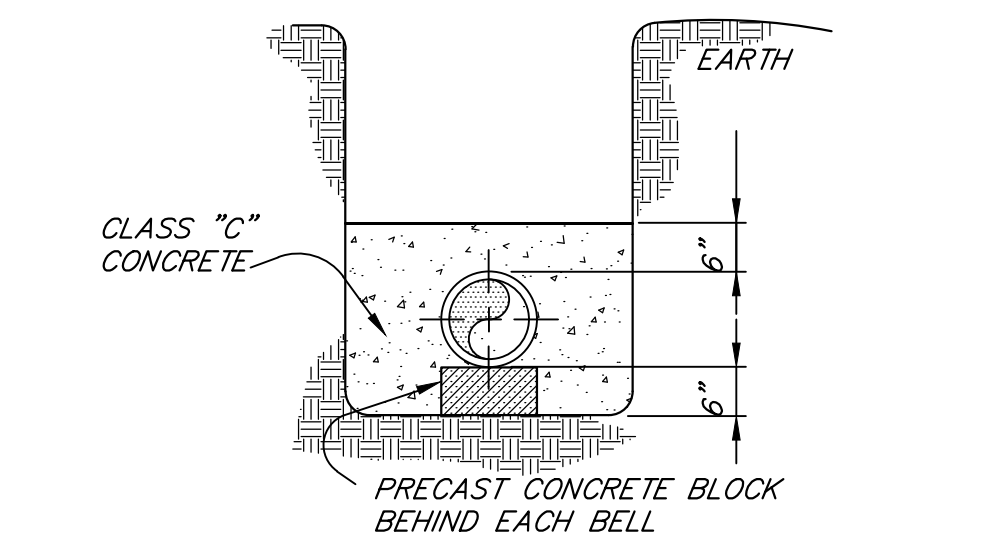
BORED HIGHWAY CROSSING



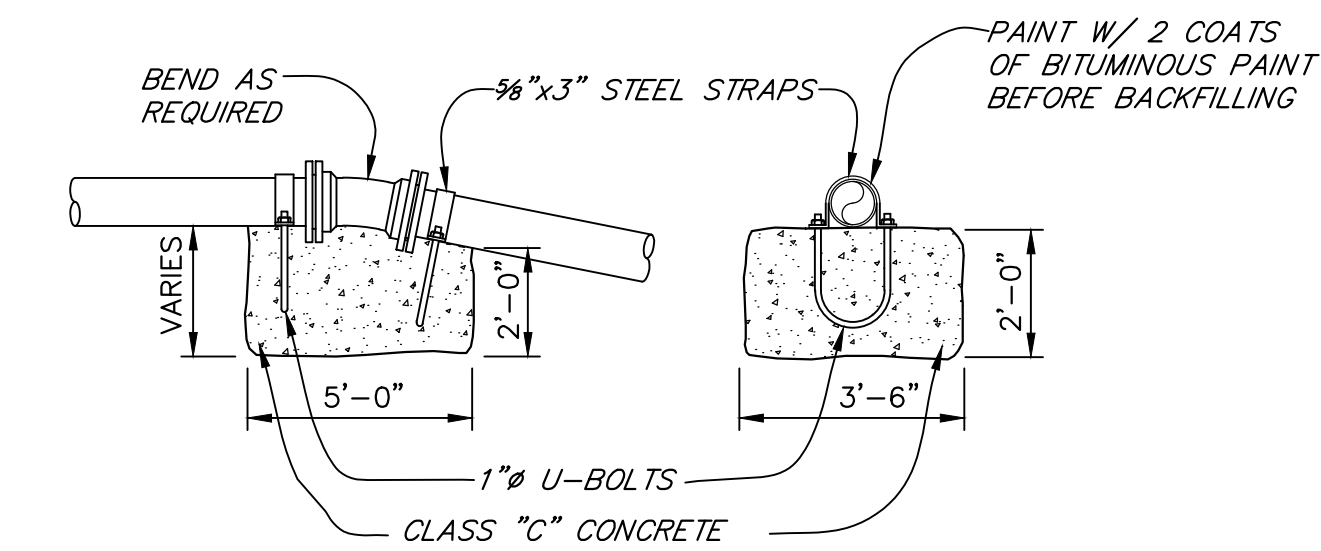
1-INCH AIR RELEASE VALVE DETAIL



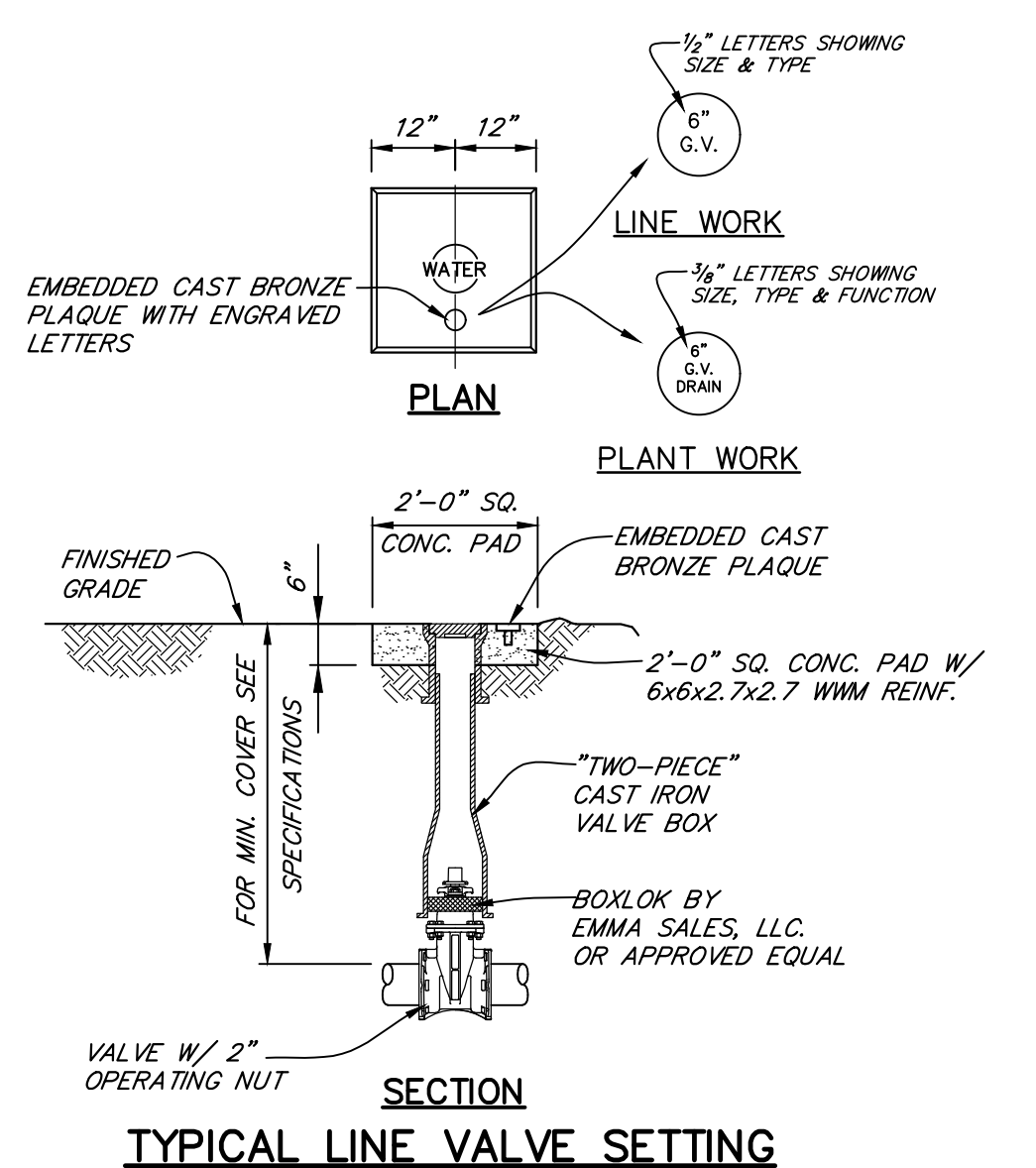
NOTE: FOR ENCASMENT OVER 40' LONG PLACE 3/4" FIBERBOARD EXPANSION JOINT AT PIPE JOINTS BETWEEN POURS APPROXIMATELY EVERY 40'



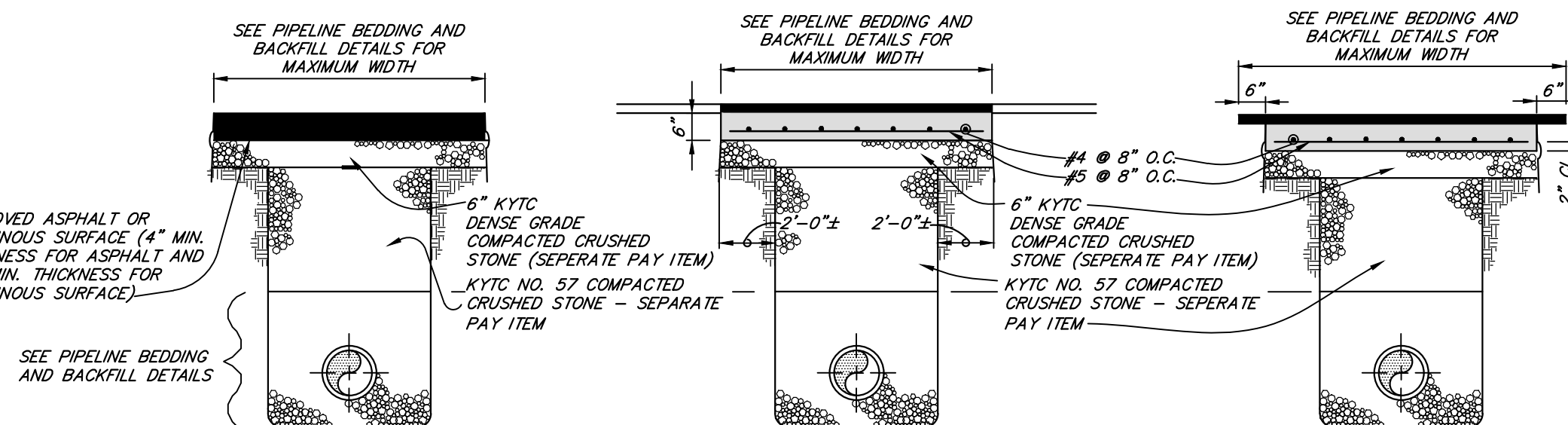
SPECIAL NOTE:  
ALL IRON SURFACES SHALL BE PROTECTED WITH 6 MIL POLYETHYLENE PRIOR TO PLACING CONCRETE.  
STANDARD CONCRETE ENCASMENT



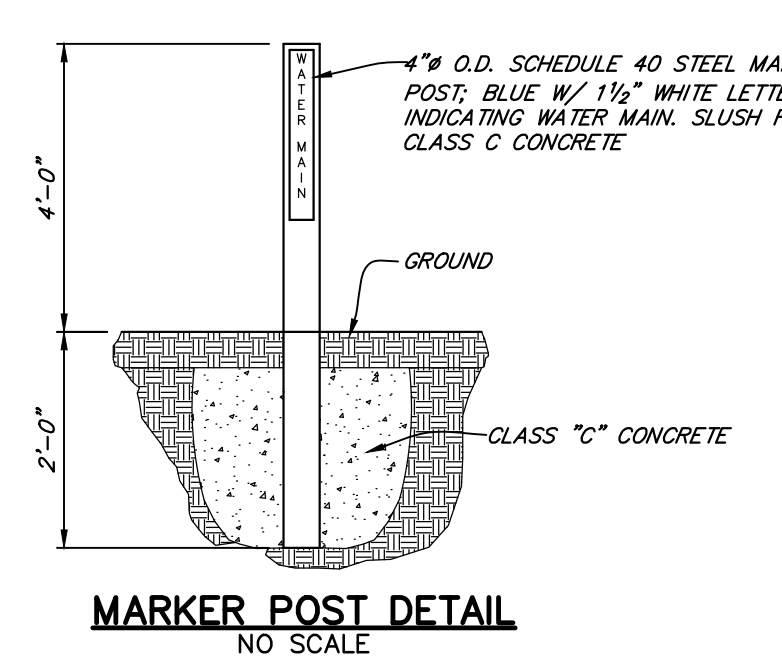
VERTICAL ANCHORING DETAIL FOR VERTICAL BENDS 5 OR MORE



TYPICAL LINE VALVE SETTING



ASPHALT OR BITUMINOUS SURFACE PAVEMENT REPLACEMENT WHERE CROSSING PAVEMENT BITUMINOUS SURFACE CONCRETE BASE



MARKER POST DETAIL NO SCALE

SHEET 5 OF 5	REVISIONS	WATER SYSTEM IMPROVEMENTS CONTRACT 17-01 HOOVER HILL INTERCONNECT WATER LINE
DETAIL SHEET		FOR OHIO COUNTY WATER DISTRICT OHIO COUNTY, KENTUCKY
SCALE AS SHOWN	DATE DEC., 2017	DESIGNED DGT DRAWN WCB CHECKED JGD
PROJECT NUMBER 2084	DATE DEC., 2017	WAUFORD J. R. Wauford & Company, Consulting Engineers, Inc. Nashville, Tennessee (615)883-3343 www.jrwauford.com

