

COLUMBIA/ADAIR UTILITIES DISTRICT EAST 80 WATER STORAGE TANK REPLACEMENT ADAIR COUNTY, KENTUCKY

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COLUMBIA/ADAIR UTILITIES DISTRICT BOARD MEMBERS:

ROBERT FLOWERS, CHAIRMAN
 TIM BAKER, VICE CHAIRMAN
 RUDY HIGGINBOTHAM, SECRETARY/TREASURER
 DAVID JONES
 BARRY STOTTS

 MANAGER
 LENNON STONE

 ATTORNEY
 MARSHALL LOY

AUGUST 2012

LOCATION MAP




Monarch Engineering, Inc.

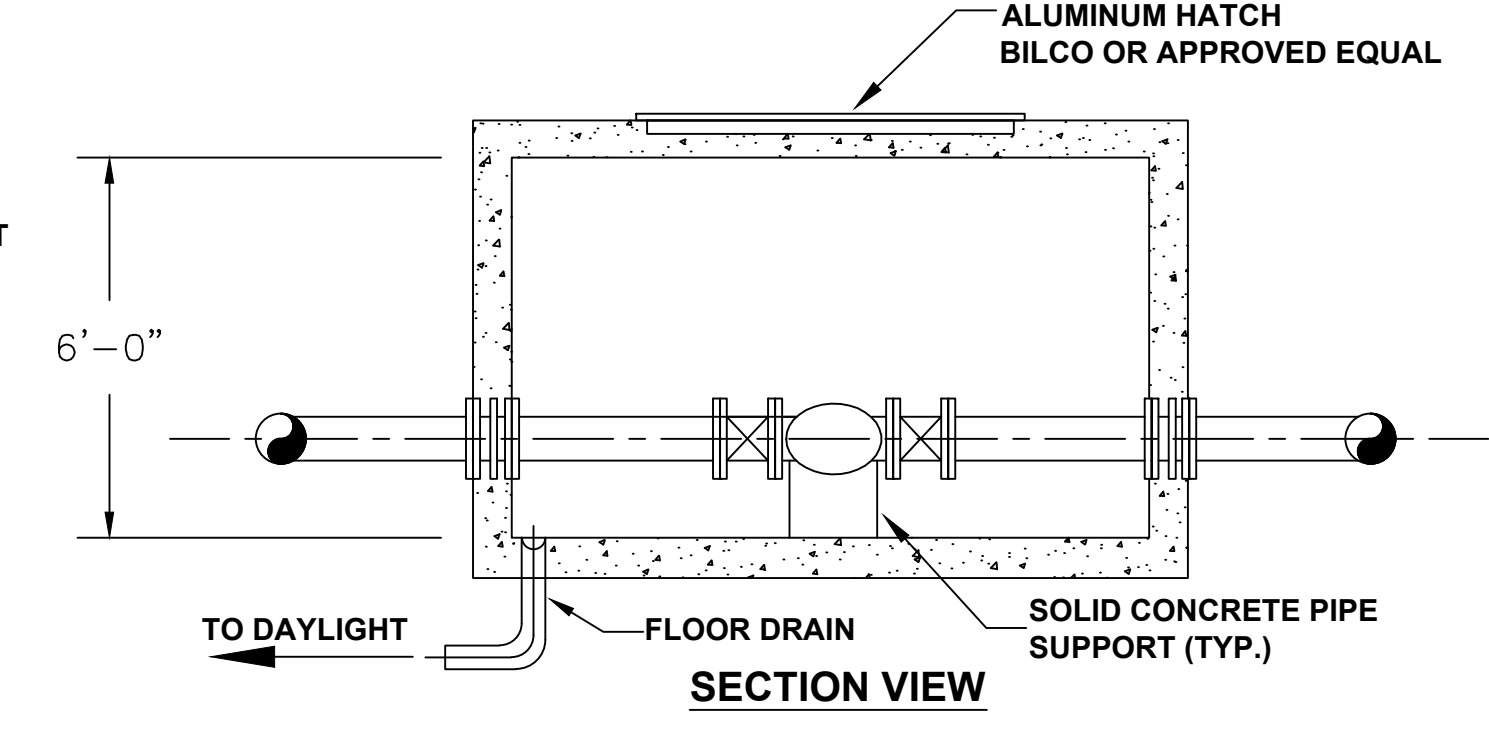
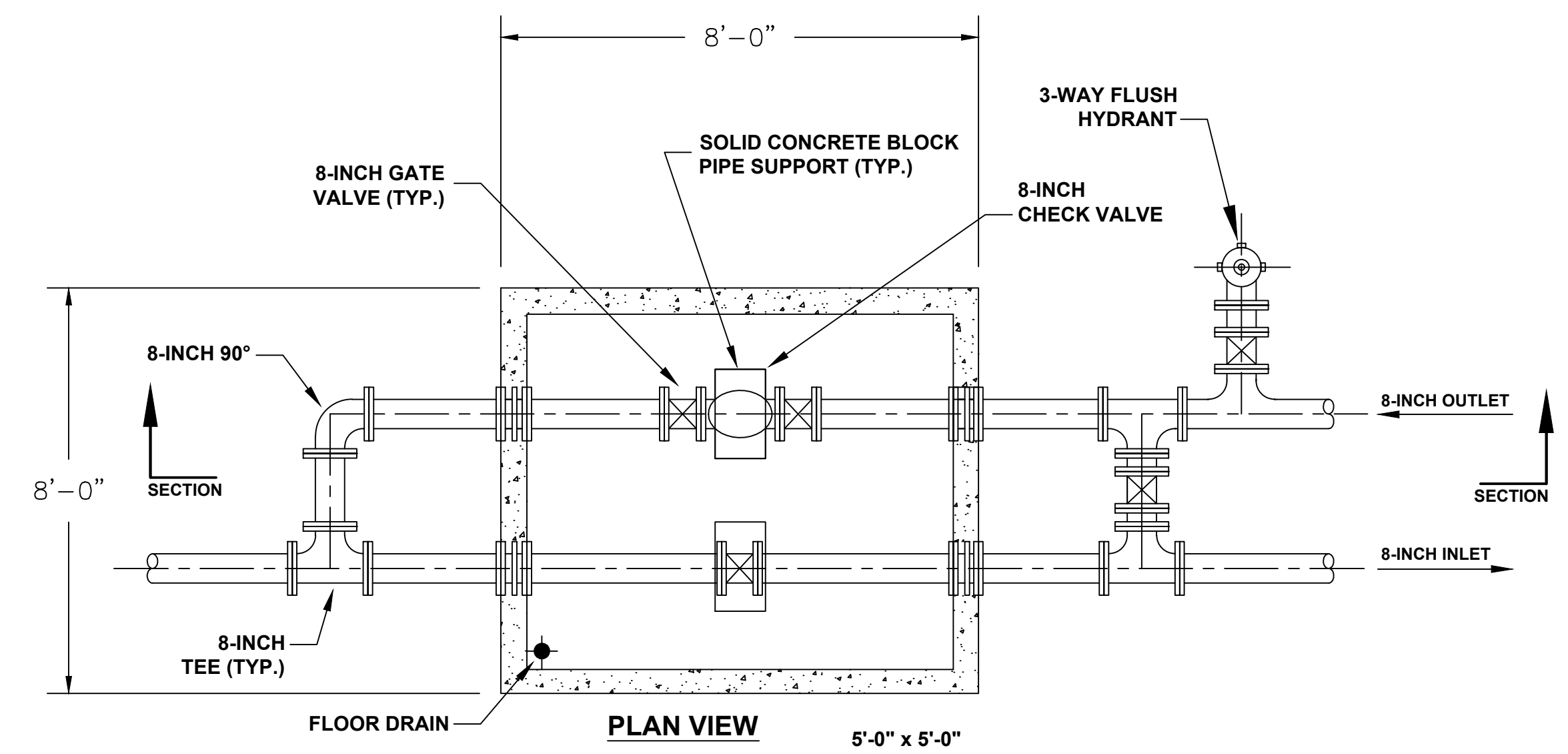
556 CARLTON DRIVE
 LAWRENCEBURG, KY 40342

RECORD DRAWINGS



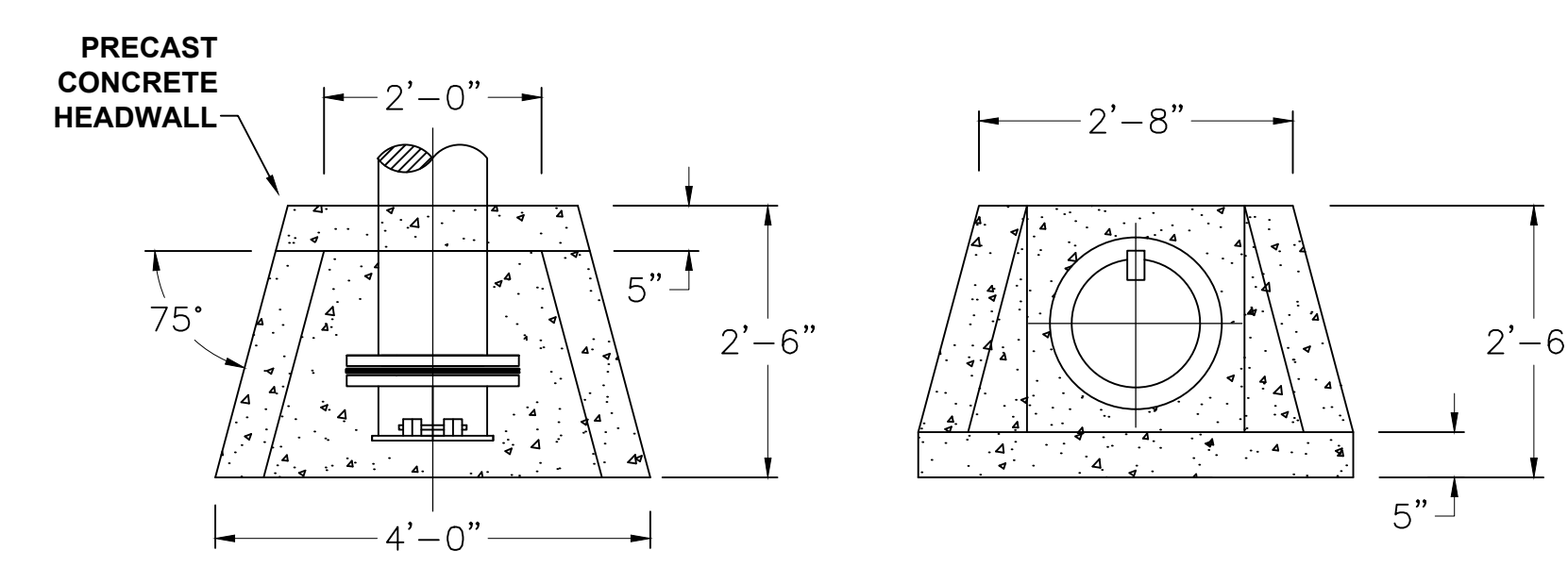
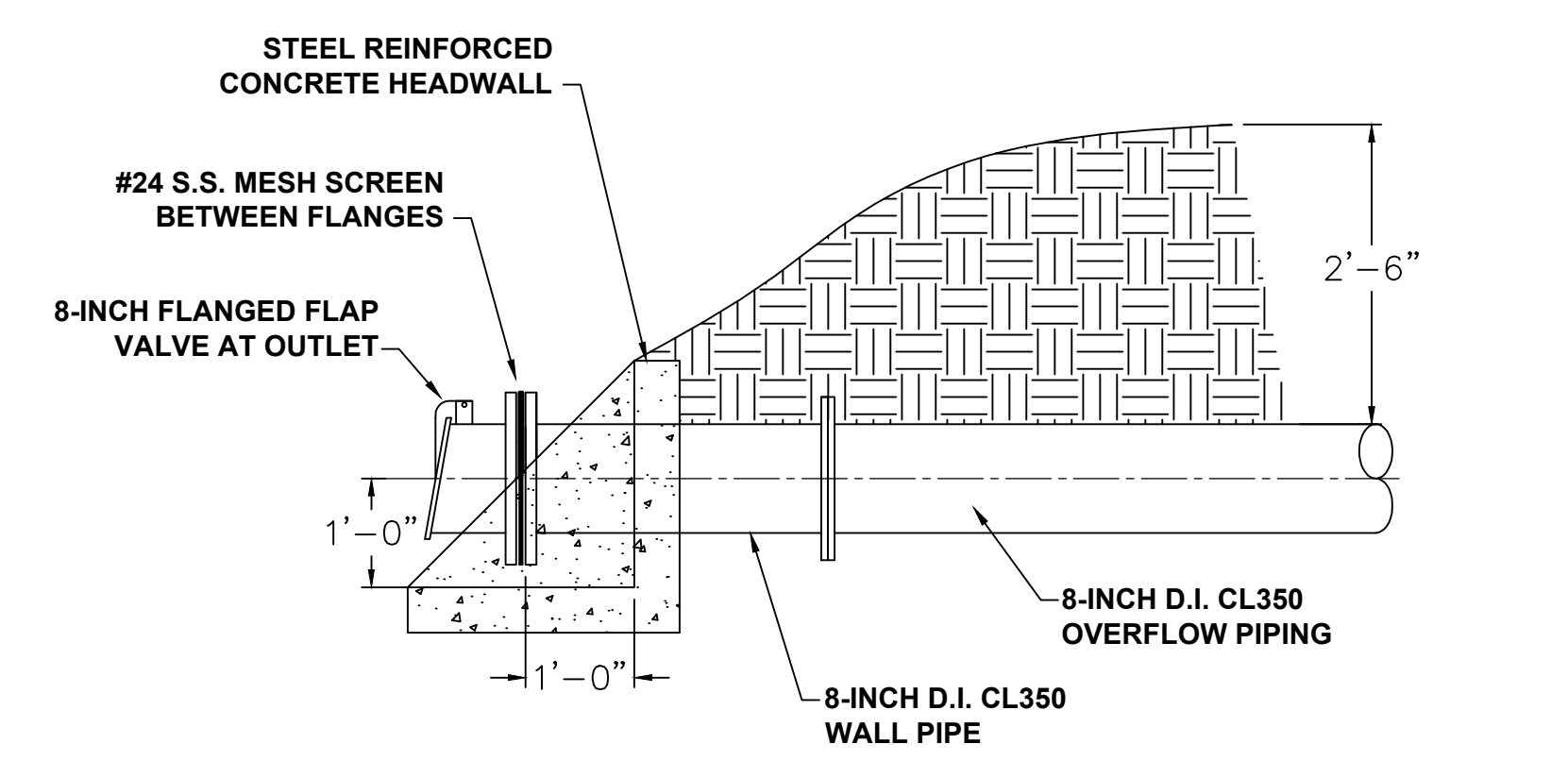


SITE PLAN
SCALE: 1"=30'



VALVE VAULT
N.T.S.

NOTE:
1. ALL PIPING AND FITTINGS IN VALVE VAULT SHALL BE CLASS 350 DUCTILE IRON.
2. ALUMINIM HATCH SHALL BE 5' x 5' AND CENTERED OVER VALVES. NOT SHOWN FOR CLARITY.



OVERFLOW OUTLET HEADWALL DETAIL
N.T.S.

GENERAL NOTES:

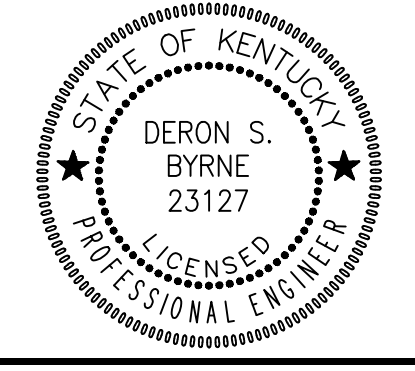
1. THE INLET/OUTLET PIPE SERVING THE TANK SHALL BE 8-INCH DUCTILE IRON, PRESSURE CLASS 350.
2. THE 8-INCH INLET SHALL EXTEND TO THE TOP OF THE TANK (ELEVATION 1170.00'). THE TANK EFFLUENT SHALL BE AT THE BASE OF THE TANK (ELEVATION 1050.00').
3. OVERFLOW PIPE SHALL EXTEND A MINIMUM OF TEN FEET FROM THE TANK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOUNDATION DESIGN.
5. TANK APPURTENANCES TO BE FIELD LOCATED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
6. TANK CONTRACTOR SHALL GRADE SITE TO ENSURE RUNOFF IS AWAY FROM FOUNDATION.
7. TANK CONTRACTOR SHALL FINISH TANK SITE WITH SEED AND STRAW AS DESCRIBED IN ACCOMPANYING SPECIFICATIONS.
8. TANK CONTRACTOR SHALL FINISH ACCESS DRIVE WITH 4-INCH BASE OF 57 STONE AND A 4-INCH TOP SURFACE OF COMPACTED DGA.
9. OVERFLOW PIPE SHALL HAVE A 24 - MESH SCREEN.
10. ROOF VENT SHALL HAVE A 24 - MESH SCREEN.

Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

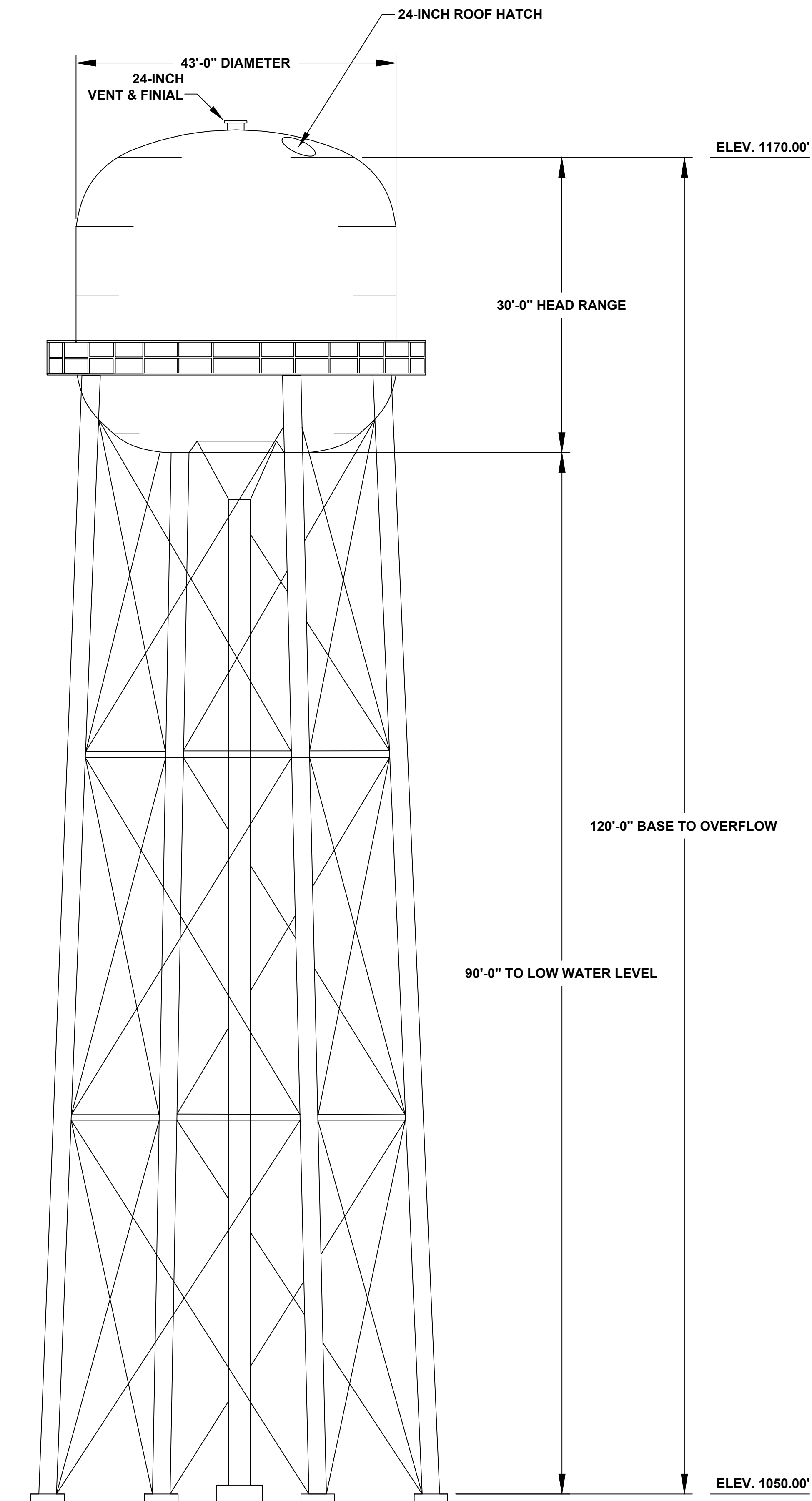
SITE PLAN
300,000 GALLON WATER STORAGE TANK
CUSTOMER: **COLUMBIA/ADAIR UTILITIES DISTRICT**
ADAIR COUNTY, KENTUCKY

DESCRIPTION:
PROJECT NO. 1050
DATE: AUG. 2012
DRAWN BY: JRC
CHECKED BY: DSB
CHECKED BY: DSB
SCALE: AS NOTED

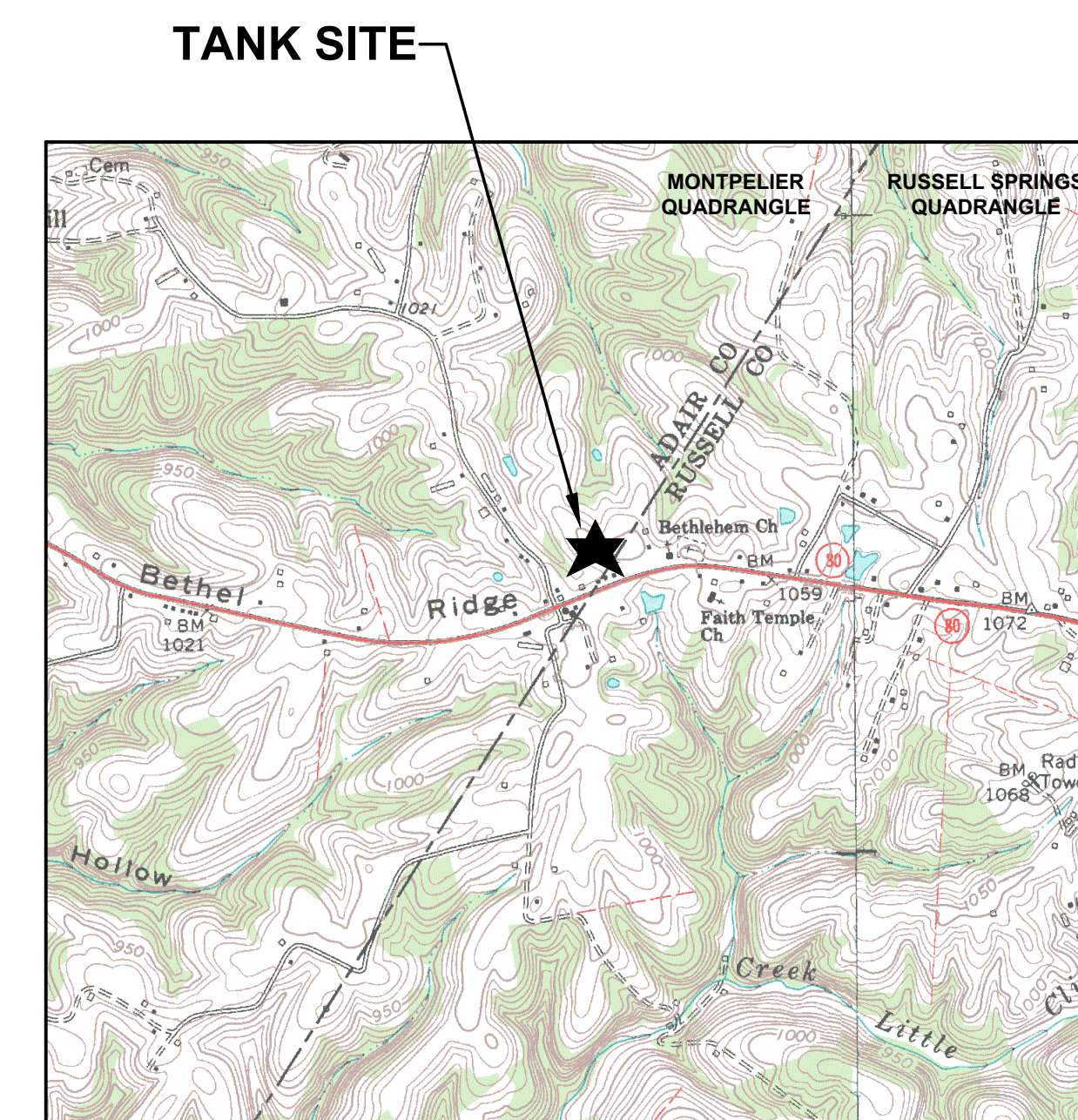
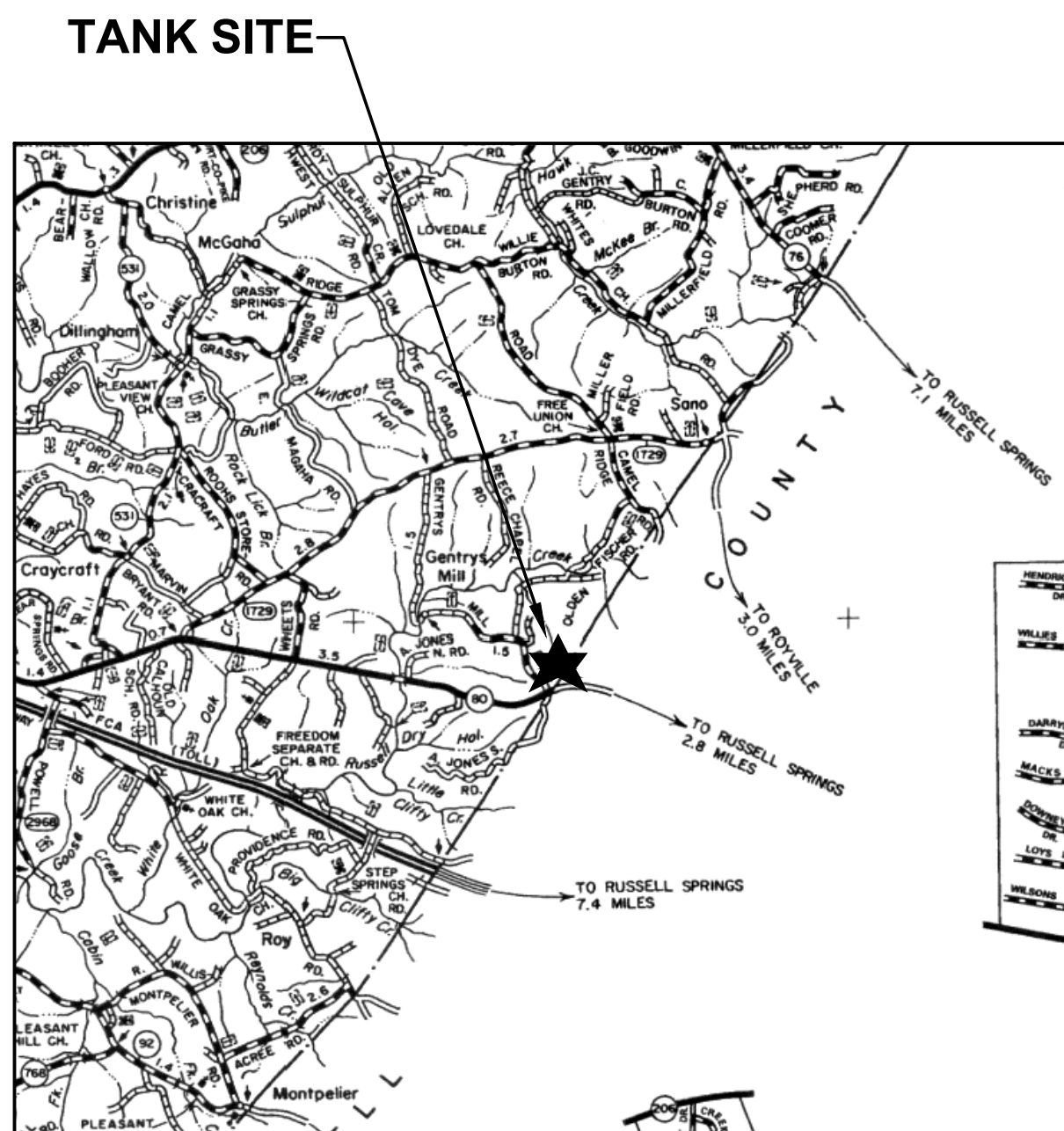
SHEET:
1



RECORD DRAWINGS



300,000 GALLON ELEVATED TANK
N.T.S.



TANK NOTES:

1. THE TANK FOUNDATION SHALL BE DESIGNED IN ACCORDANCE WITH AWWA STANDARD FOR WELDED STEEL TANKS FOR WATER STORAGE; (ANSI/AWWA D100-84), (AWS D5.2-84). THE TANK FOUNDATION SHALL BE DESIGNED FOR A 100 MILE PER HOUR WIND AND A ZONE 1 EARTHQUAKE.
2. PLATE MATERIAL FOR TANK SHELL, TANK BOTTOM AND TANK ROOF SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
4. REINFORCING STEEL SHALL BE ASTM A615, A616 OR A617, GRADE 60.
5. REINFORCING STEEL FOR CONCRETE CAST AGAINST EARTH SHALL HAVE A MINIMUM COVER OF 3 INCHES. ALL OTHER REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 2 INCHES.
6. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH AWWA STANDARD FOR WELDED STEEL TANKS FOR WATER STORAGE (ANSI-AWWA D100-84).
7. ANCHOR BOLTS SHALL BE THREADED RODS CONFORMING TO THE REQUIREMENTS OF ASTM A36.

GENERAL NOTES:

1. THE INLET/OUTLET PIPE SERVING THE TANK SHALL BE 8-INCH DUCTILE IRON, PRESSURE CLASS 350.
2. THE 8-INCH INLET SHALL EXTEND TO THE TOP OF THE TANK (ELEVATION 1170.00'). THE TANK EFFLUENT SHALL BE AT THE BASE OF THE TANK (ELEVATION 1050.00').
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DESCRIPTION:
EAST 80
300,000 GALLON WATER STORAGE TANK

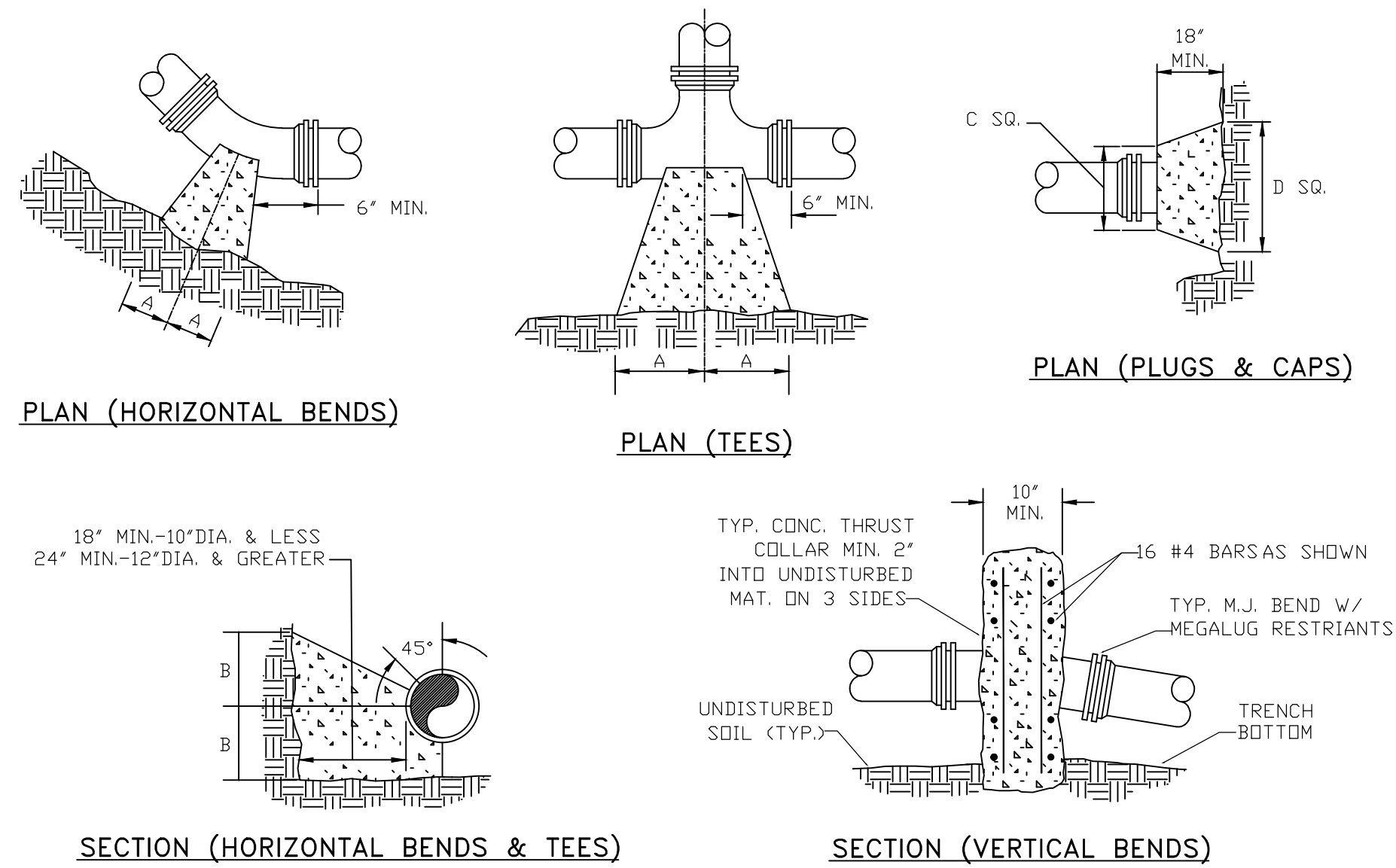
CUSTOMER:
COLUMBIA/ADAIR UTILITIES DISTRICT
ADAIR COUNTY, KENTUCKY

PROJECT NO. 1050
DATE: AUG. 2012
DRAWN BY: JRC
CHECKED BY: DSB
CHECKED BY: DSB
SCALE: AS NOTED

SHEET:
2



RECORD DRAWINGS

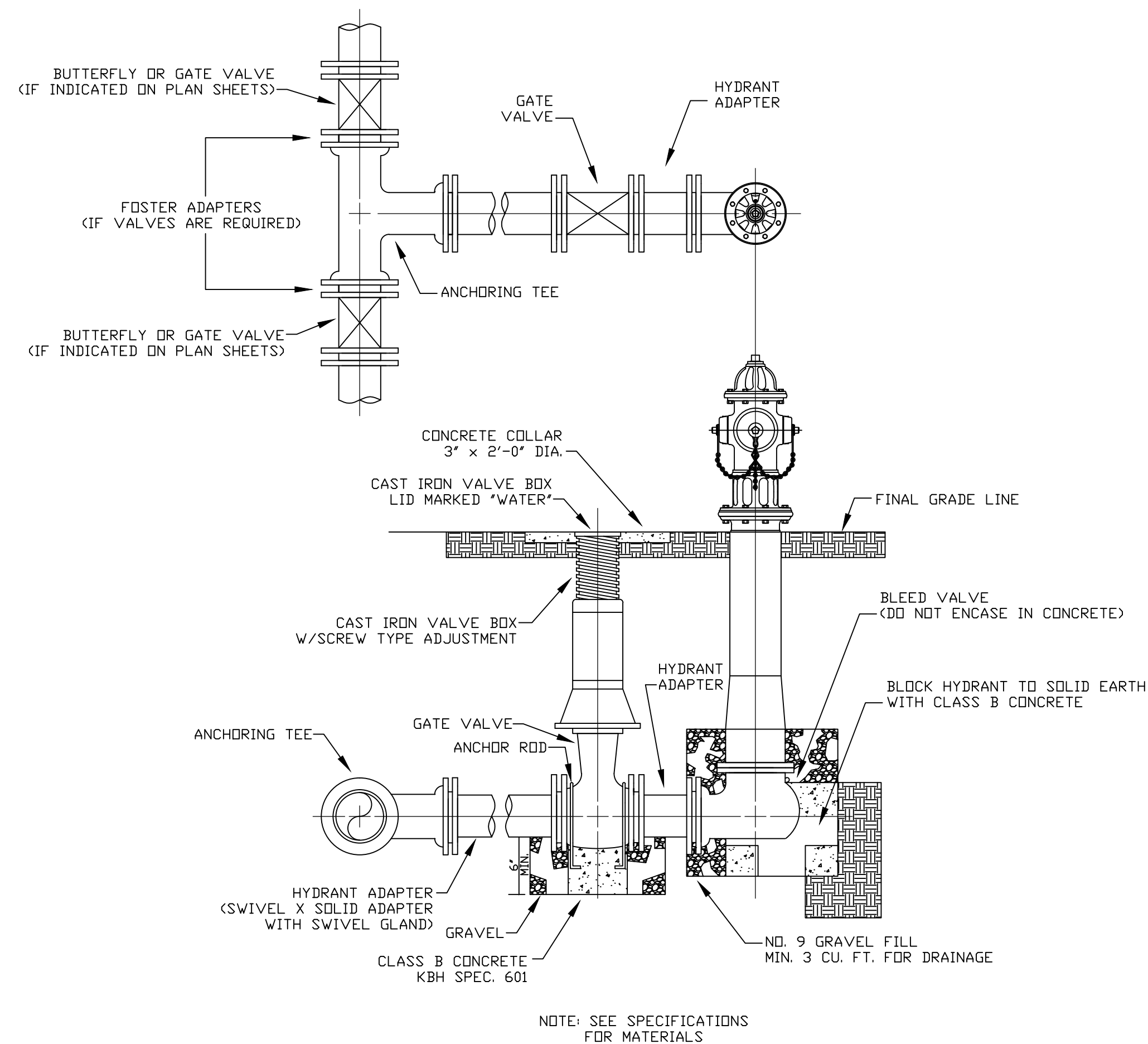


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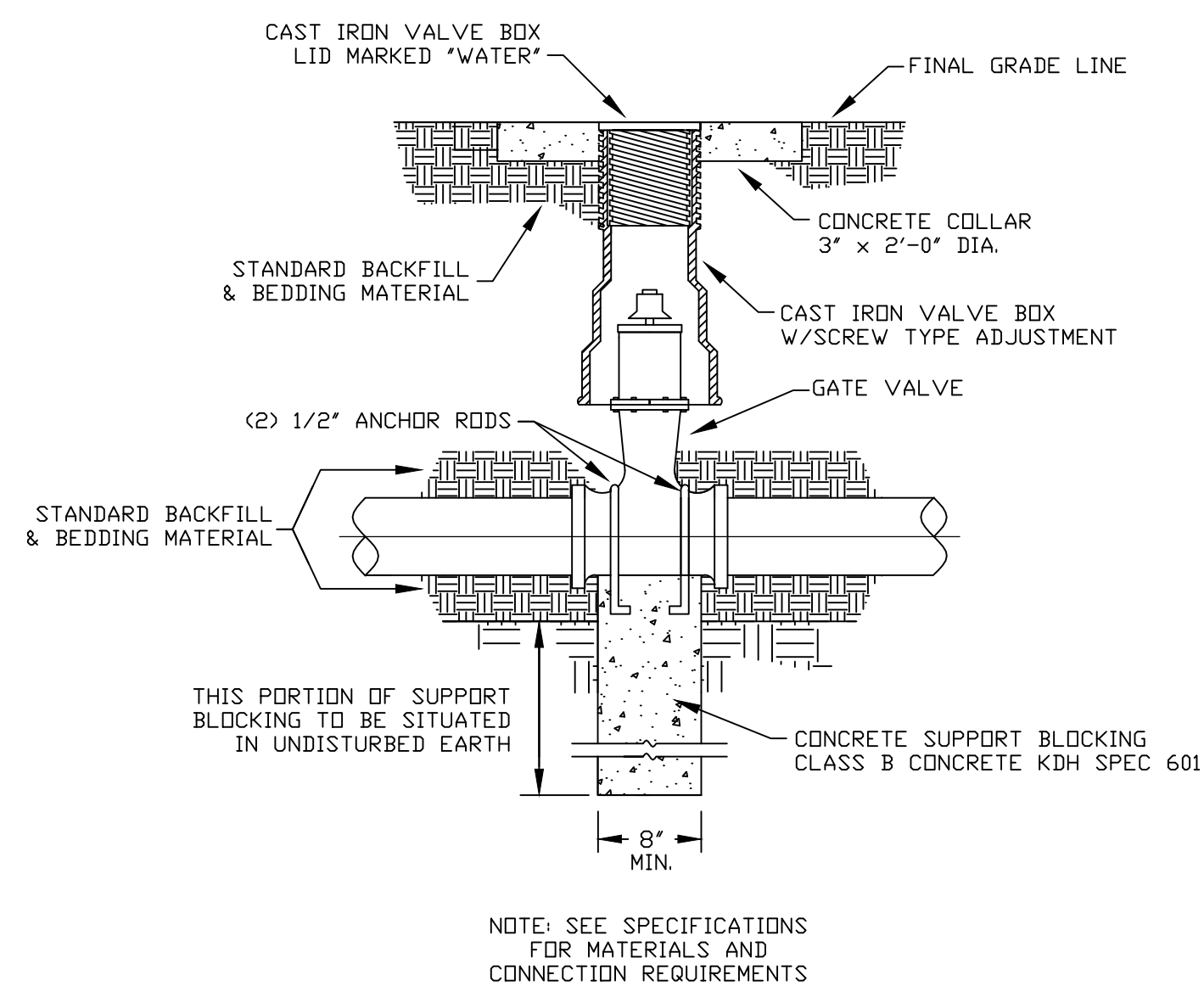
- FOR VERT. BEND DOWN IN EXCESS OF 1 1/4" BEND, ANCHORAGE SHALL BE DESIGNED BY ENGINEER.
- FOR VERT. BEND UPWARD, BLOCKING TO BE SIMILAR TO THAT FOR HORIZ. BEND.
- GLANDS & BOLTS SHALL REMAIN ACCESSIBLE AND MUST BE PROTECTED FROM CONCRETE BY PLASTIC SHEETING OR OTHERWISE.
- ALL THRUST BLOCK & SUPPORT CONCRETE SHALL BE 3000 PSI READY MIX
- THRUST BLOCKS WITH "B" DIMENSION GREATER THAN 30" SHALL HAVE THE RESTRAINED PIPE INSTALLED WITH A MINIMUM OF 4' OF COVER.
- DESIGN CRITERIA:
LINE PRESSURE = 200 psi
SOIL BEARING CAPACITY = 2000 psf
FACTOR OF SAFETY = 1.5

PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE		PLUG	
	A	B	A	B	A	B	A	B	A	B	C	D
4"	8"	12"	8"	8"	6"	6"	6"	6"	11"	9"	10"	6"
6"	18"	12"	8"	10"	8"	8"	8"	8"	8"	11"	10"	12"
8"	18"	13"	10"	10"	8"	8"	8"	8"	11"	12"	12"	24"
10"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
12"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
16"	26"	20"	16"	18"	11"	13"	11"	13"	18"	20"	20"	36"
24"	82"	42"	62"	30"	44"	22"	22"	16"	82"	42"	82"	42"
30"	185"	42"	100"	42"	52"	42"	40"	30"	185"	42"	185"	42"

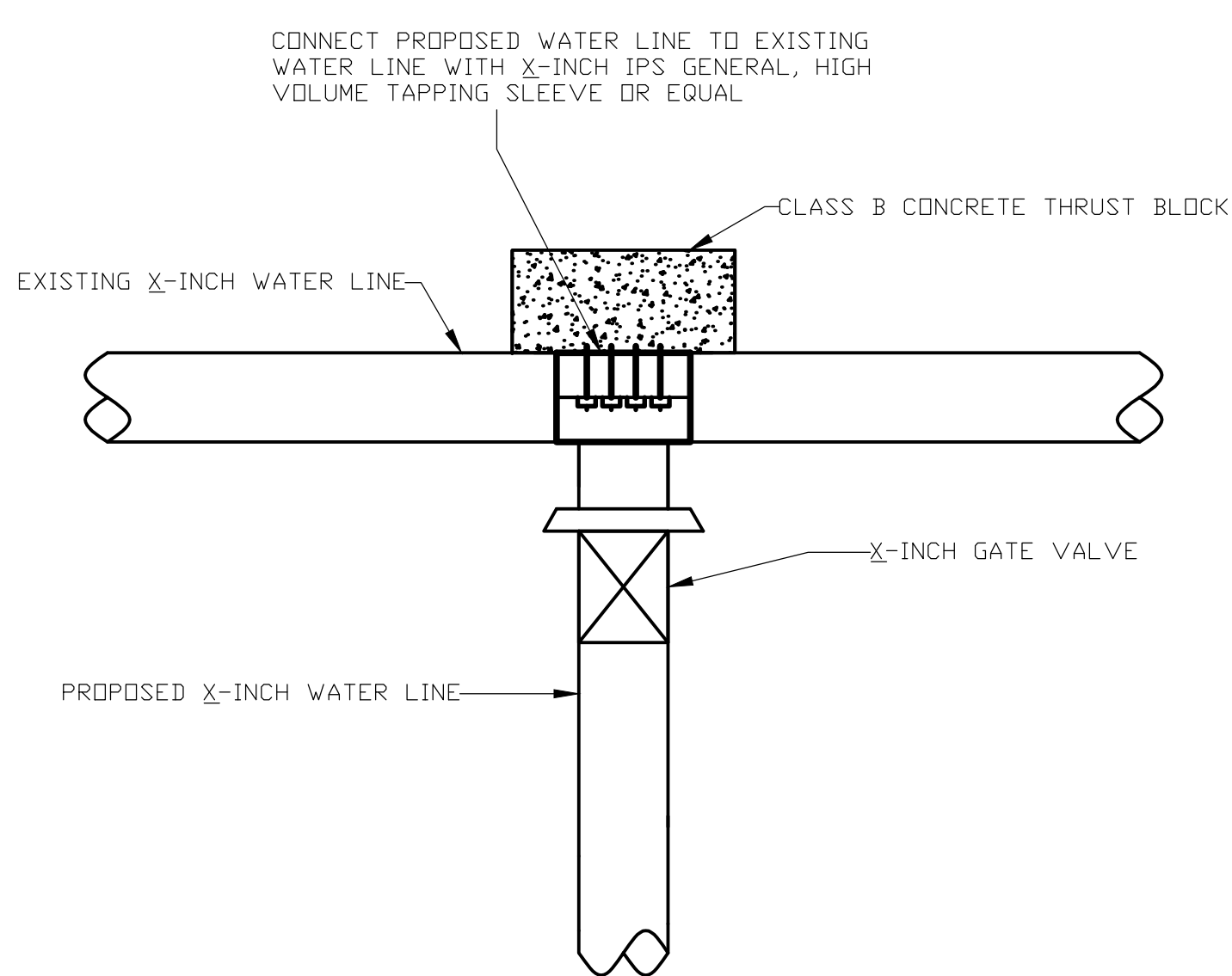
THRUST BLOCK DETAILS



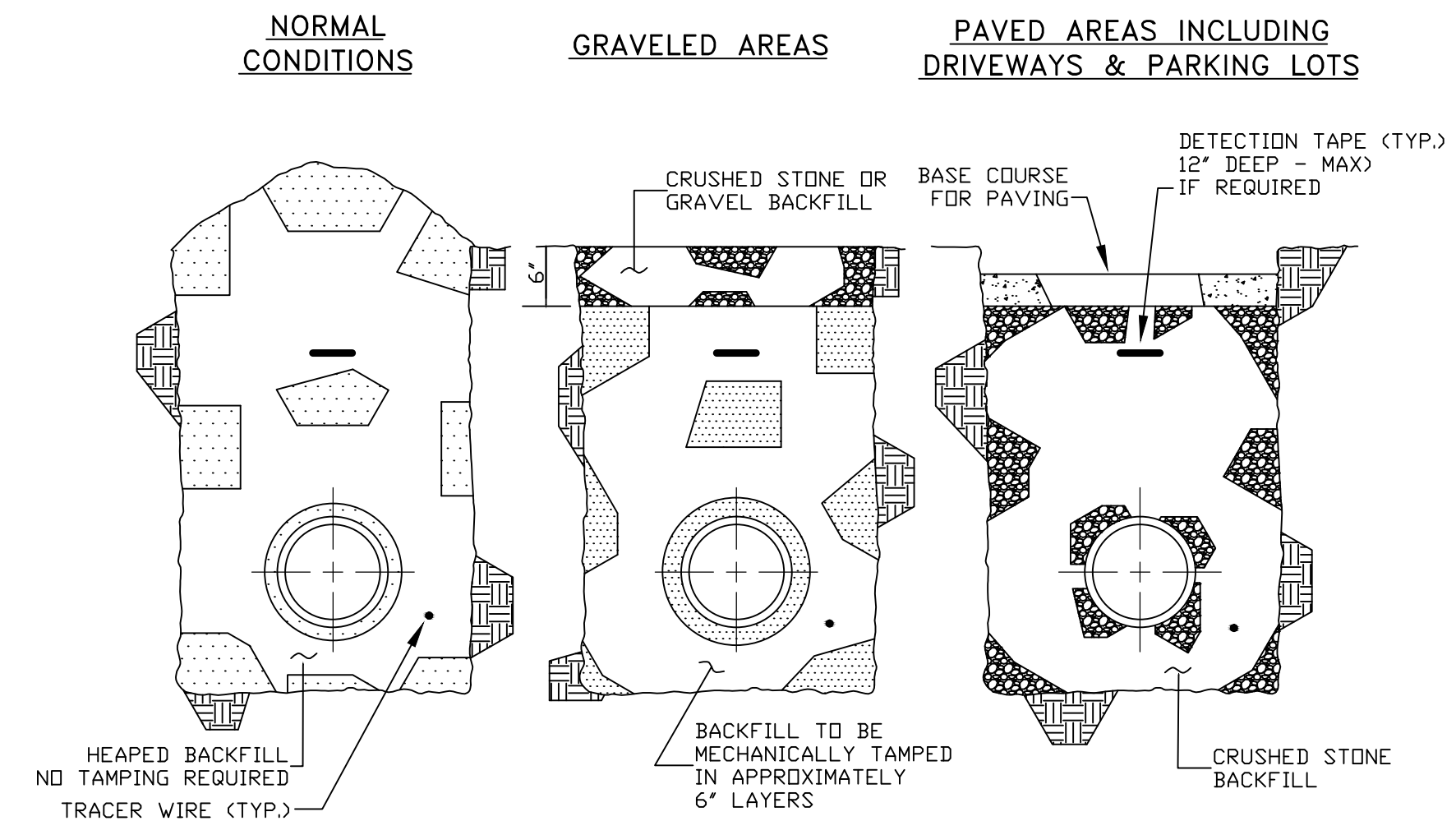
FLUSH HYDRANT ASSEMBLY



GATE VALVE DETAIL



WATER LINE CONNECTION DETAIL



BACKFILLING

RECORD DRAWINGS

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MISCELLANEOUS DETAILS

COLUMBIA/ADAIR COUNTY UTILITIES DISTRICT
ADAIR COUNTY, KENTUCKY

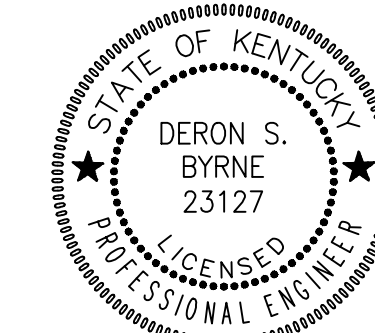
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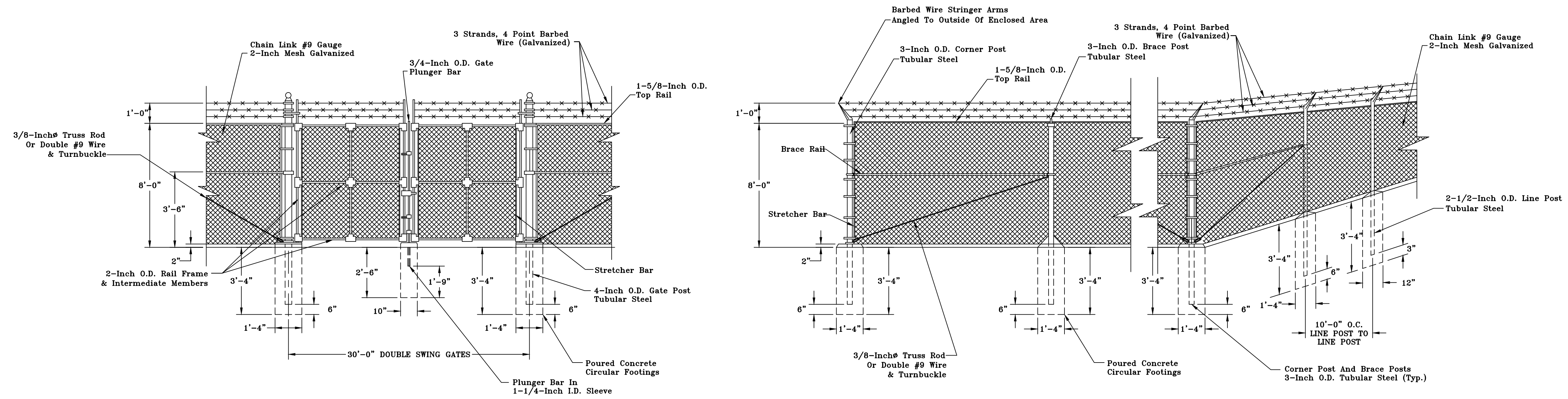
CUSTOMER:

PROJECT NO. 1050
DATE: AUG. 2012
DRAWN BY: JRC
CHECKED BY: JLM
CHECKED BY: DSB
SCALE: N.T.S.

SHEET:

MD-1





CHAIN LINK FENCE ELEVATION

Scale: N. T. S.

FENCING DETAILS

DESCRIPTION:

CUSTOMER:

**COLUMBIA/ADAIR COUNTY UTILITIES DISTRICT
 ADAIR COUNTY, KENTUCKY**

PROJECT NO. 1050

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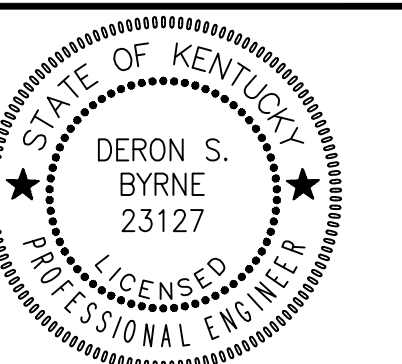
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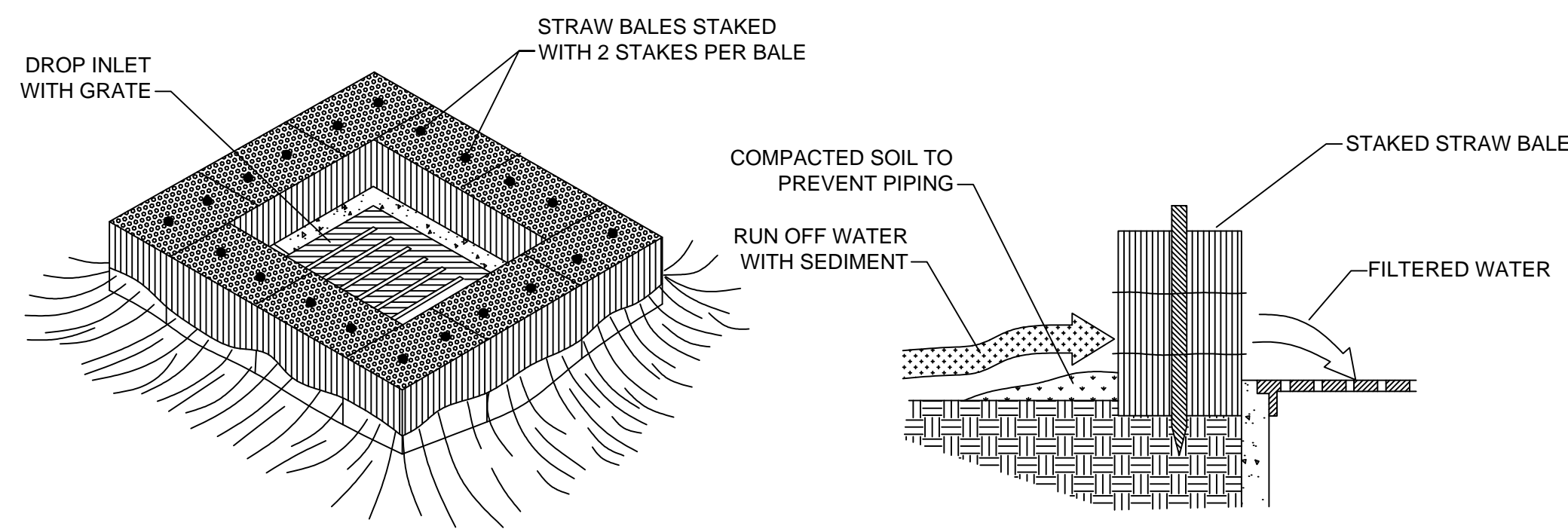
SCALE: AS NOTED

SHEET:

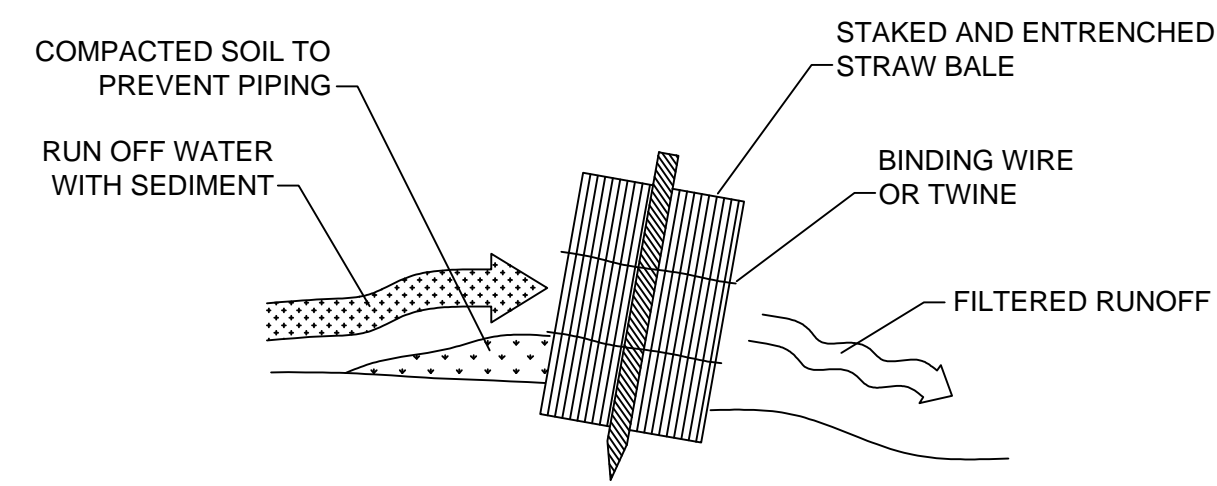
F-1

RECORD DRAWINGS

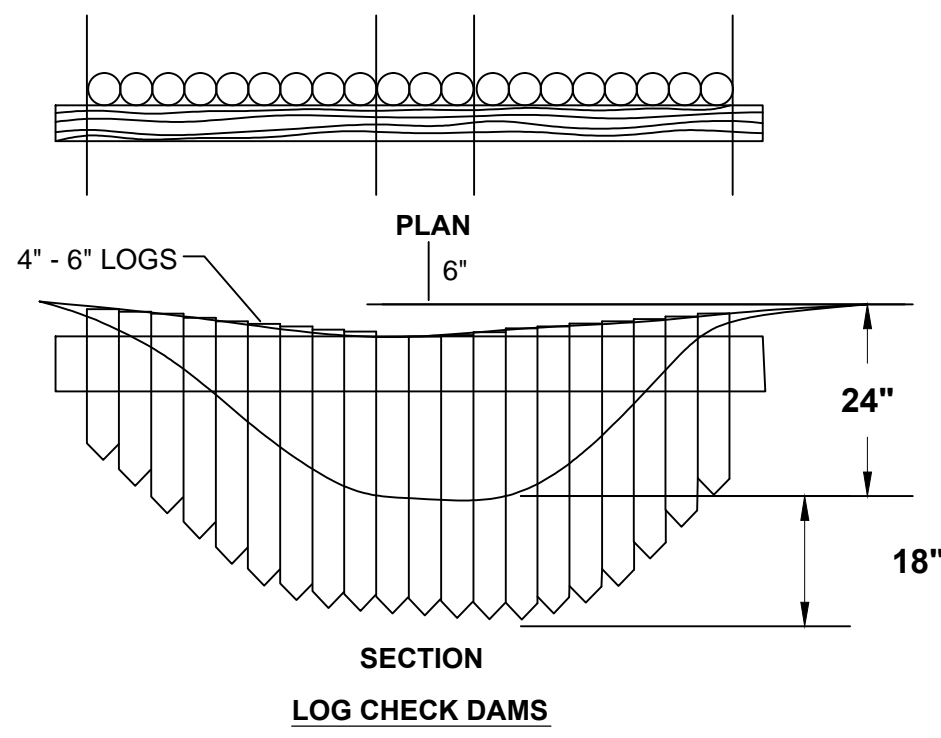




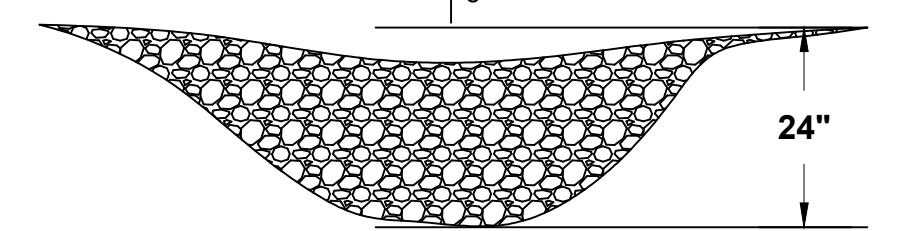
STRAW BALE DROP INLET SEDIMENT FILTER
N.T.S.



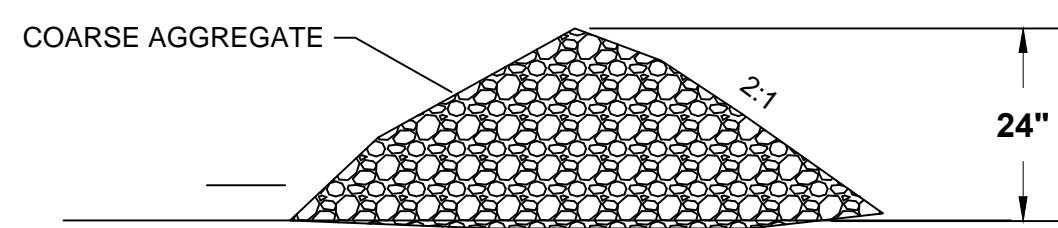
STRAW BALE INSTALLATION PROCEDURES
N.T.S.



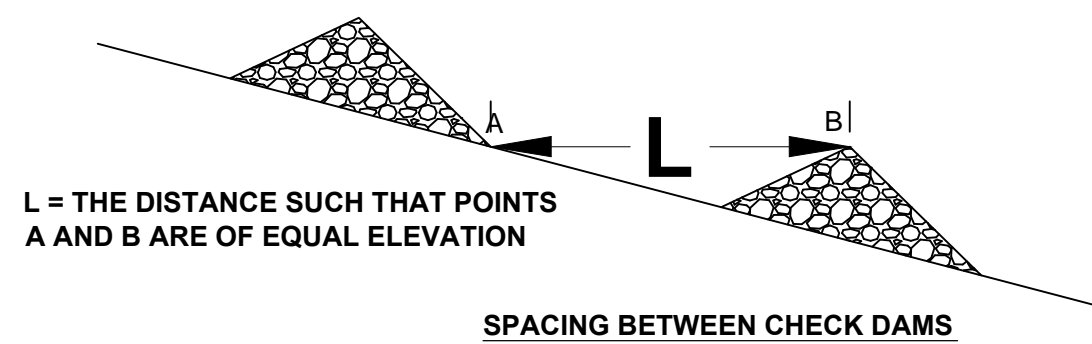
LOG CHECK DAMS



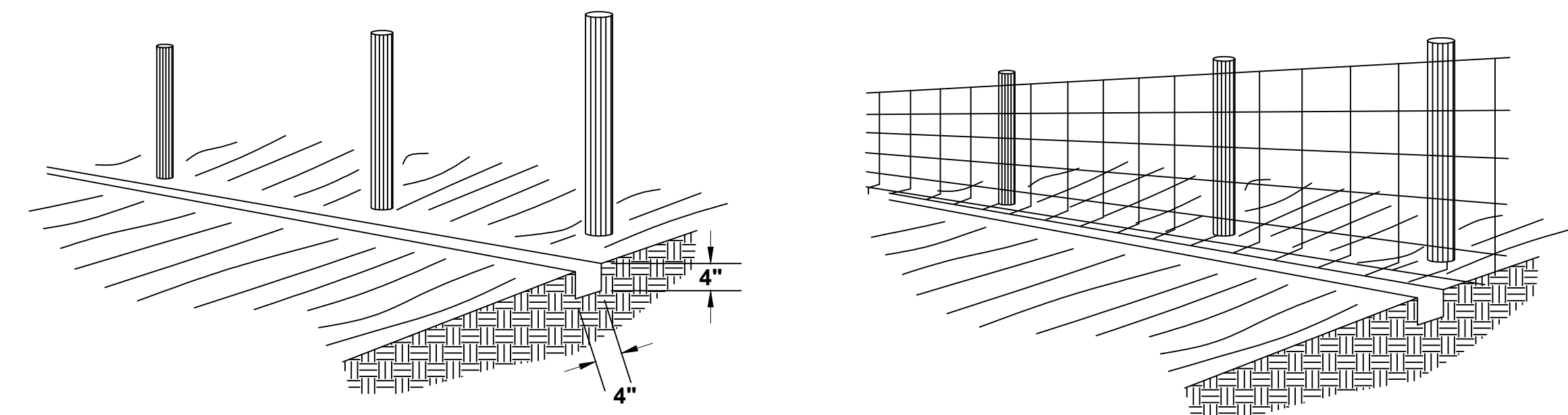
ROCK CHECK DAMS



COARSE AGGREGATE

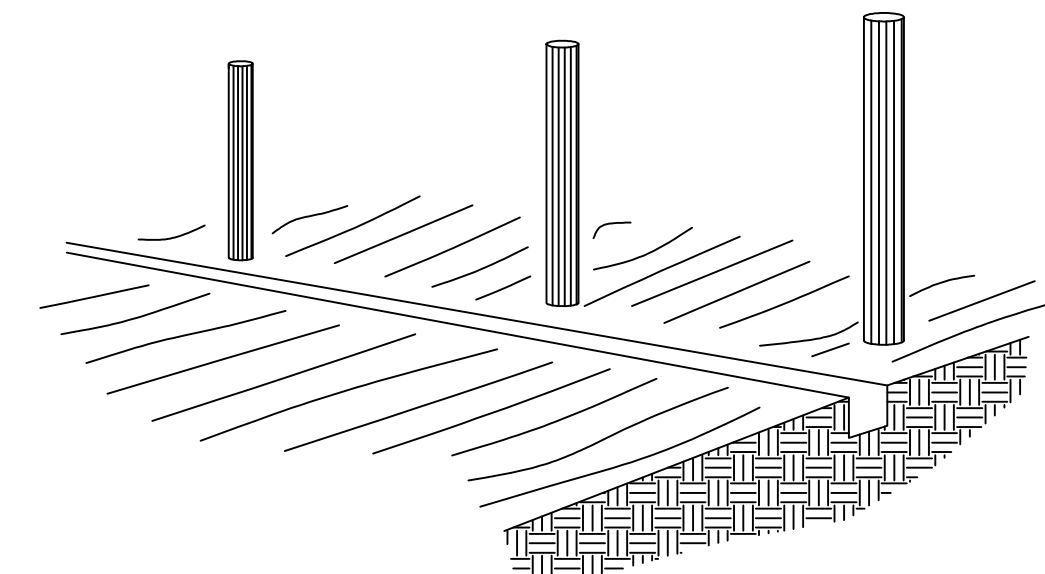


CHECK DAM DETAILS
N.T.S.

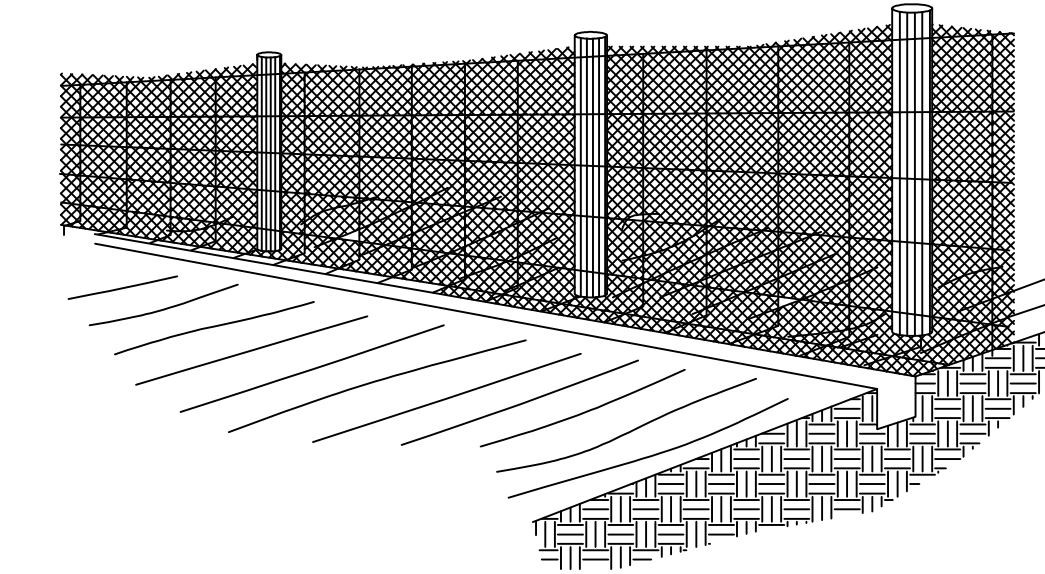


1. SET POSTS AND EXCAVATE A 4" x 4" TRENCH UPSLOPE ALONG THE LINE OF POSTS

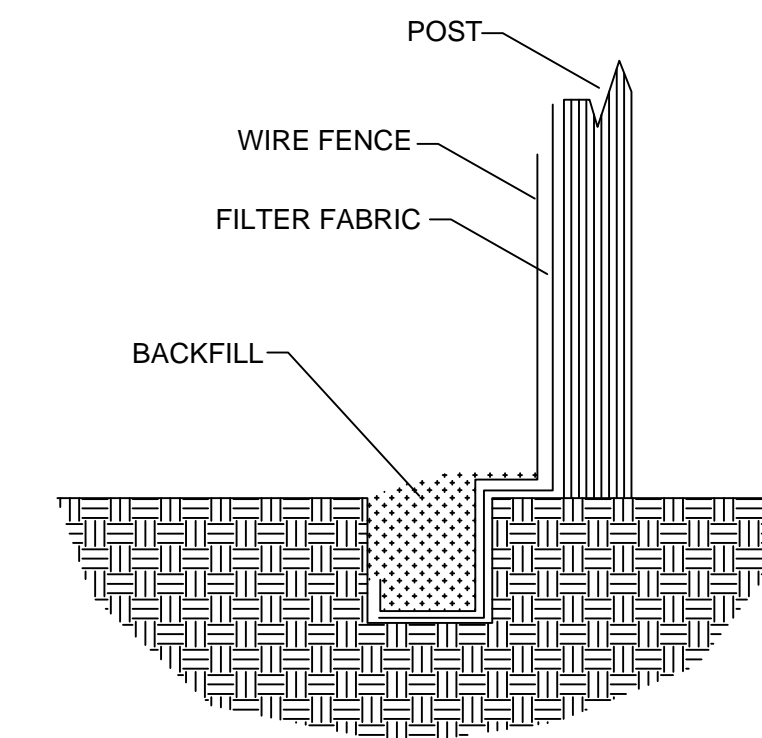
2. STAPLE WIRE FENCING TO POSTS



3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH

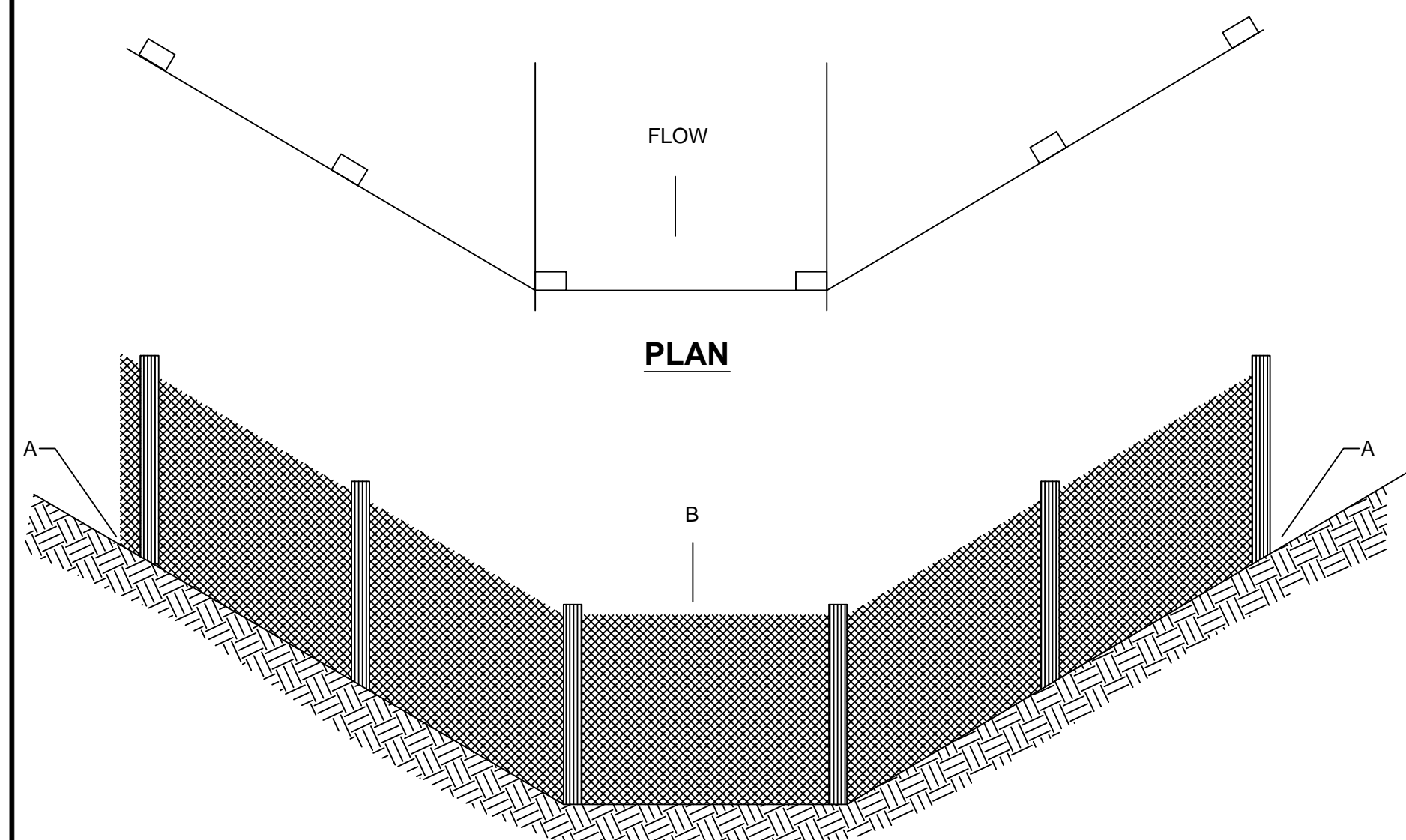


4. BACKFILL AND COMPACT THE EXCAVATED SOIL



EXTENSION OF FABRIC AND WIRE INTO THE TRENCH

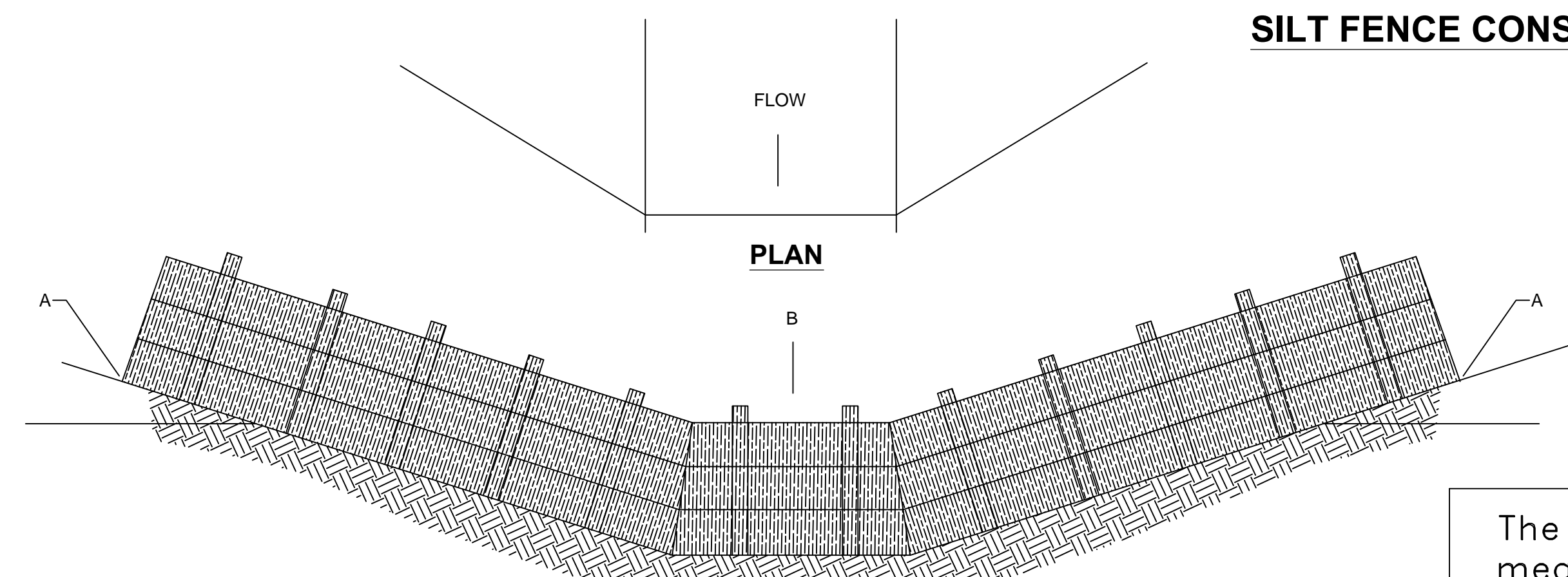
SILT FENCE CONSTRUCTION PROCEDURES
N.T.S.



ELEVATION

POINT A SHOULD BE HIGHER THAN POINT B

PLACEMENT OF FILTER BARRIER
N.T.S.



ELEVATION

POINT A SHOULD BE HIGHER THAN POINT B

PLACEMENT OF STRAW BALE BARRIER
N.T.S.

EROSION CONTROL DETAILS
N.T.S.

The Contractor shall do all work and take all measures necessary to control soil erosion resulting from construction operations, and shall prevent the flow of sediment from the construction site, and shall contain construction materials (including excavation and backfill) within their protected working area so as to prevent damage to the adjacent wetlands and water courses. The Contractor shall use any of the acceptable methods necessary to control soil erosion and prevent the flow of sediment to the maximum extent possible. These methods shall include, but not be limited to, the use of water diversion structures, diversion ditches, and settling basins.

RECORD DRAWINGS

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EROSION CONTROL DETAILS
COLUMBIA/ADAIR COUNTY UTILITIES DISTRICT
ADAIR COUNTY, KENTUCKY

PROJECT NO. 1050
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SHEET:
EC-1

