

BORE & JACK
Scale: 1"=20' HOR 1"=2' VERT

STRANEY PROPERTIES LLC
2021 ST MARTIN RD
D.B. 604 Pg. 342

MITCHELL DIXIE L
155 CLARKSON RD
D.B. 115 Pg. 125

MITCHELL MARK D & LINDA M
81 CLARKSON RD
D.B. 446 Pg. 659

MITCHELL JOHN C
2465 ST MARTIN RD
D.B. 522 Pg. 596

HOBBS THOMAS A
ST MARTIN RD
D.B. 389 Pg. 541
3561 BIG SPRING RD

EBERHARDT REGINA W
2510 ST MARTIN RD
D.B. 647 Pg. 115

GROUNDS TIMOTHY & DEBORAH
15 VESSELS RD
D.B. 469 Pg. 137

WILES CHRISTOPHER A & CHRISTY L
79 VESSELS RD
D.B. 460 Pg. 243

EXISTING OVERHEAD ELECTRIC LINES AND POLES RUNNING ALONG THE RIGHT-OF-WAY LINE

PROPOSED 4" WATER MAIN LINE "A1" (SEE SHEET C-06)

PROPOSED 6" WATER MAIN LINE "A3" (SEE SHEET C-10)

PROP. 6" PVC (SDR17) WM

50 LF ~ 12" STEEL CASING PIPE (OPEN CUT)

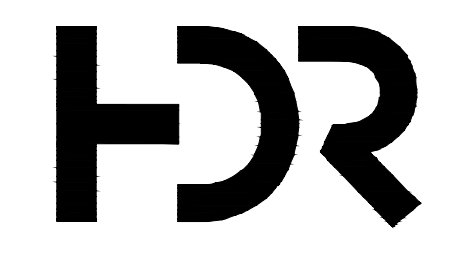
STA. 59+45
1 - 6"x6"x6" TEE

STA. 56+56
1 - 6"x6"x4" TEE

HOBBS JOSEPH E & CATHY
3840 ST MARTIN RD
D.B. 453 Pg. 238

LUSK JEFFREY D & DARLENE
2240 ST MARTIN RD
D.B. 418 Pg. 013

SIPES CHAD & JESSICA L
2376 ST MARTIN RD
D.B. 633 Pg. 303



PROJECT MANAGER	KEVIN J. BRIAN
DESIGNED BY	KEVIN J. BRIAN
DRAWN BY	WILLIAM M. GUMM
QA / QC	
PROJECT NUMBER	10175028

ISSUE	DATE	DESCRIPTION

**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS**

**LINE "A"
KY 1600 - ST. MARTINS ROAD
PLAN SHEET
STA. 54+00 TO STA. 72+00**

0 60' 120' FILENAME Plan-A.dwg SHEET
SCALE 1" = 60' C-04



MITCHELL JOHN C
2465 ST MARTIN RD
D.B. 522 Pg. 596

HOBBS THOMAS A
ST MARTIN RD
D.B. 389 Pg. 541
3561 BIG SPRING RD

THOMAS CRYSTAL L
2569 ST MARTIN RD
D.B. 522 Pg. 152

HOBBS THOMAS A
ST MARTIN RD
D.B. 389 Pg. 541
3561 BIG SPRING RD

HOBBS THOMAS G
2715 ST MARTIN RD
D.B. 494 Pg. 248

HOBBS THOMAS A
ST MARTIN RD
D.B. 389 Pg. 541
3561 BIG SPRING RD

HOBBS JOSEPH E &
CATHY I
2985 ST MARTIN RD
D.B. 643 Pg. 393
3840 ST MARTIN RD

SNYDER JOHN C & TIFFANIE
N BENNETT
2735 ST MARTIN RD
D.B. 623 Pg. 486

EBERHARDT REGINA W
2510 ST MARTIN RD
D.B. 647 Pg. 115

TRITT DAVID A
2552 ST MARTIN RD
D.B. 632 Pg. 121

MERIDETH ROGER F
& PENNY L
2590 ST MARTIN RD
D.B. 621 Pg. 214

KNOTT JASON D & FAY
2690 ST MARTIN RD
D.B. 620 Pg. 088

LANCASTER JOSEPH N JR
& JULIE F
2700 ST MARTIN RD
D.B. 607 Pg. 450

RAYMER FRANK C & CARA J
40 TUCKER LN
D.B. 645 Pg. 270

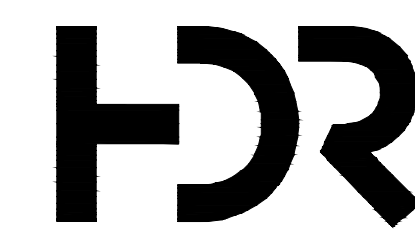
PIKE & TUCKER LLC
TUCKER LN
D.B. 662 Pg. 182
P O BOX 485

WILES
CHRISTOPHER A &
CHRISTY L
79 VESSELS RD
D.B. 460 Pg. 243

JONES RENTALS LLC
80 TUCKER LN
D.B. 604 Pg. 477
425 TUCKER LN

HOWARD DOUGLAS M &
SANDRA G
81 TUCKER LN
D.B. 655 Pg. 034

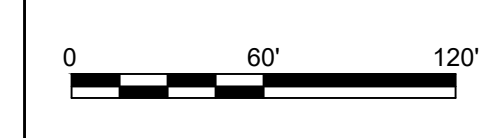
JONES RENTALS LLC
195 TUCKER LN
D.B. 604 Pg. 477
425 TUCKER LN



ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	KEVIN J. BRIAN
DESIGNED BY	KEVIN J. BRIAN
DRAWN BY	WILLIAM M. GUMM
QA / QC	
PROJECT NUMBER	10175028

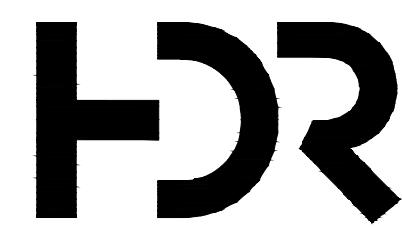
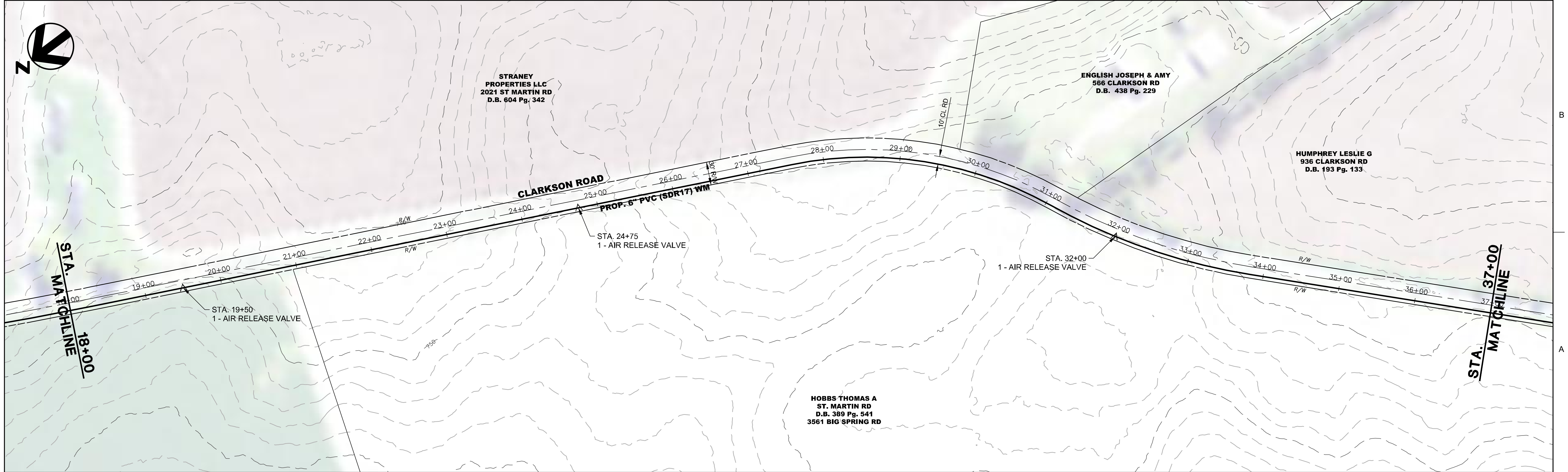
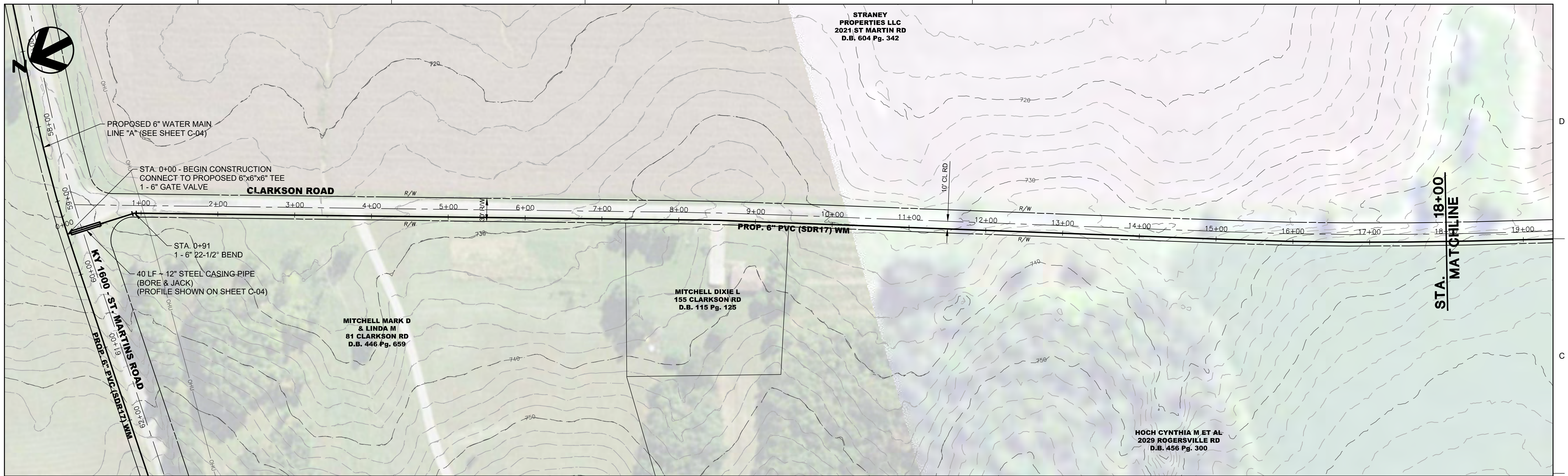
**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS**



FILENAME | Plan-A.dwg
SCALE | 1" = 60'

**LINE "A"
KY 1600 - ST. MARTINS ROAD
PLAN SHEET
STA. 72+00 TO STA. 83+50**

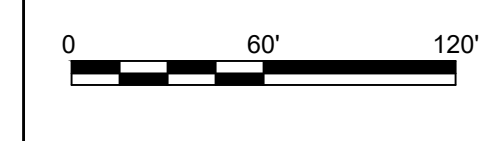
SHEET
C-05



ISSUE	DATE	DESCRIPTION

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QA / QC	
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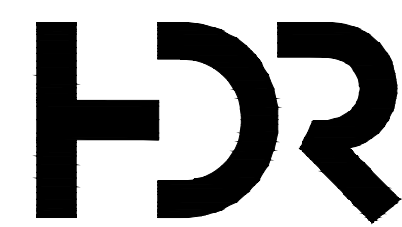
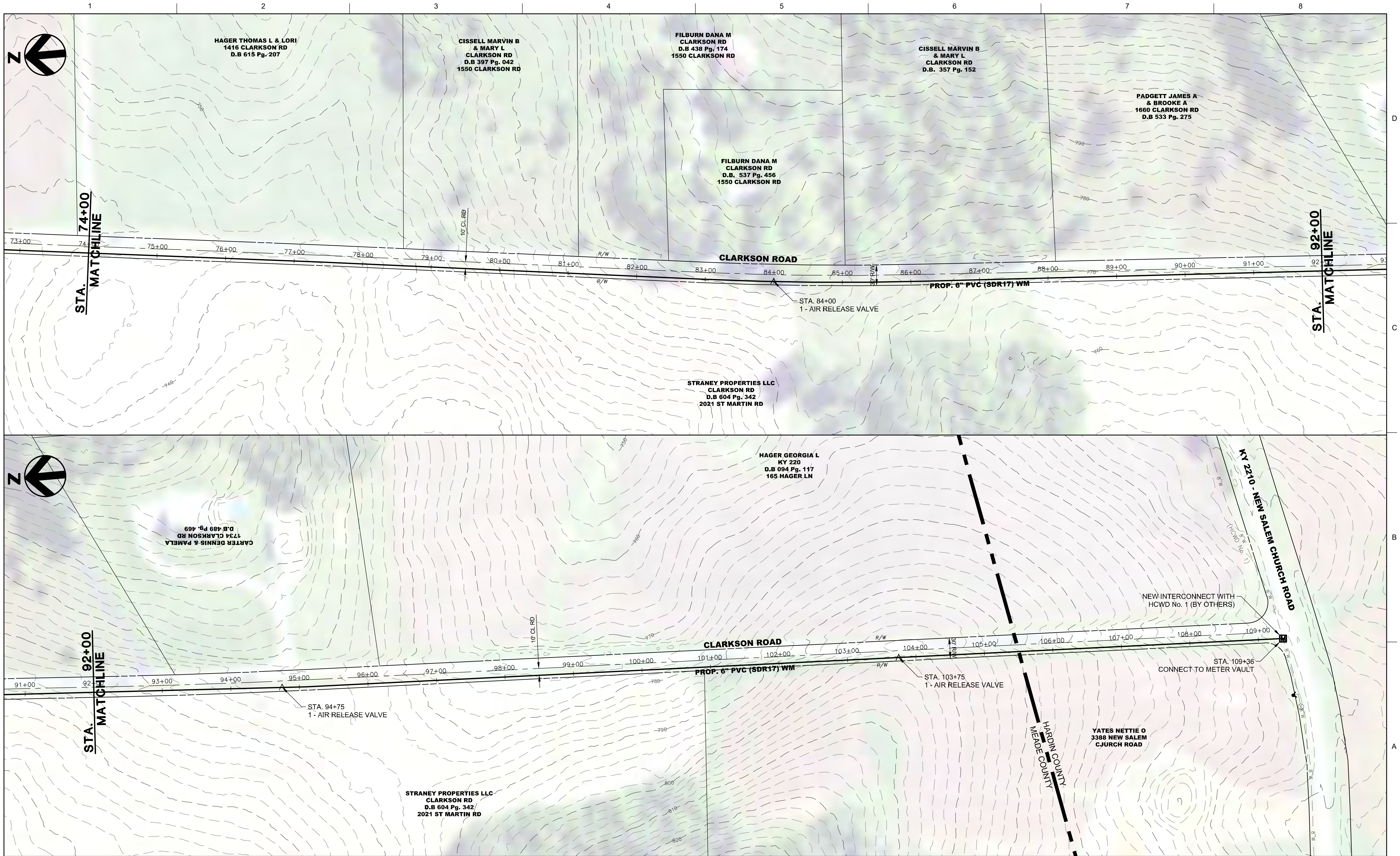
**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS**



**LINE "A3"
CLARKSON ROAD
PLAN SHEET
STA. 0+00 TO STA. 37+00**

FILENAME | Plan-A.dwg
SCALE | 1" = 60'

SHEET
C-10

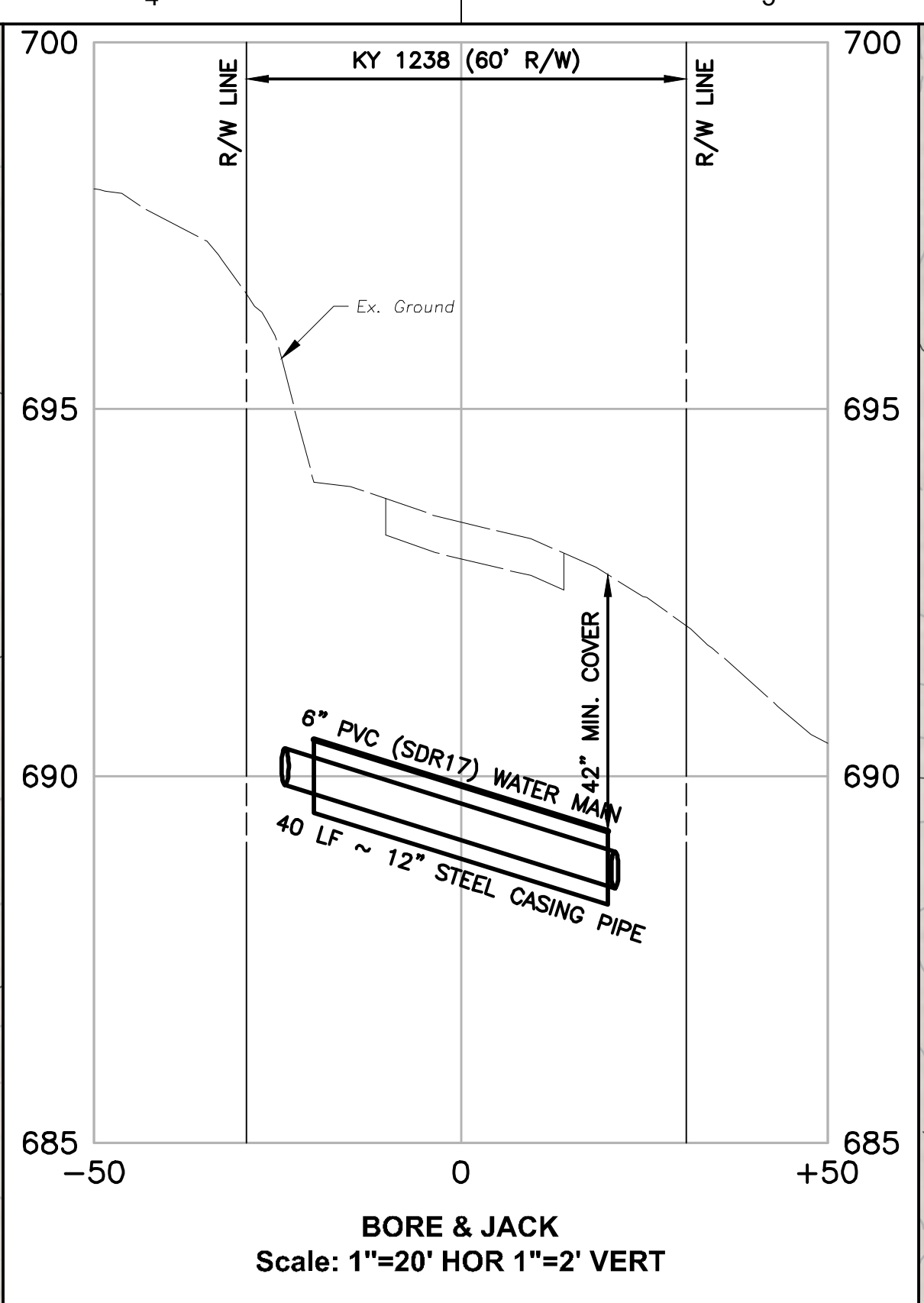


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**MEADE COUNTY WATER DISTRICT
 WATER SYSTEM IMPROVEMENTS
 PROPOSED LINE EXTENSIONS**



**LINE "A3"
 CLARKSON ROAD
 PLAN SHEET
 STA. 74+00 TO STA. 109+00**



MARKINS REGINA M
325 STITH VALLEY RD
D.B. 597 Pg. 016

STA. 0+00 - BEGIN CONSTRUCTION
REMOVE EX. 6" CAP / PLUG
CONNECT TO EX. 6" WATER MAIN
PROPOSED 15' EASEMENT

BOARDS LIVESTOCK
FARMS LLC
1238 STITH VALLEY RD
D.B. 573 Pg. 569
1180 HILLGROVE RD

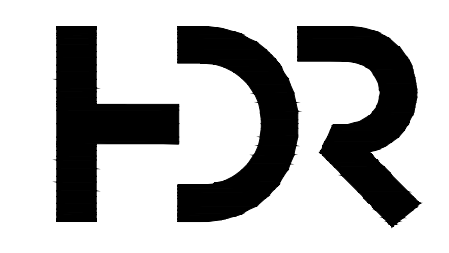
BURCH HELM B &
FRANCES R
STITH VALLEY RD
D.B. 632 Pg. 355
5655 GARRETT RD

SIPES FRED L & STACY
675 STITH VALLEY RD
D.B. 635 Pg. 176

SIPES FRED L & STACY
675 STITH VALLEY RD
D.B. 635 Pg. 176

SIPES FRED L JR
675 STITH VALLEY RD
D.B. 600 Pg. 323

BOARD DANNY D &
DERRICK BOARD
STITH VALLEY RD
D.B. 606 Pg. 282
PO BOX 426

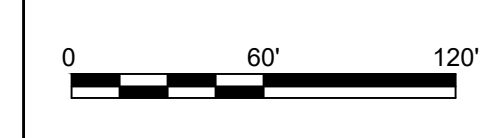


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MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS

LINE "B"
KY 1238 - STITH VALLEY ROAD
PLAN SHEET
STA. 0+00 TO STA. 18+00



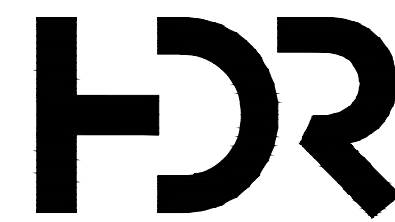
FILENAME | Plan-B.dwg
SCALE | 1" = 60'

SHEET
C-13



1 2 3 4 5 6 7 8

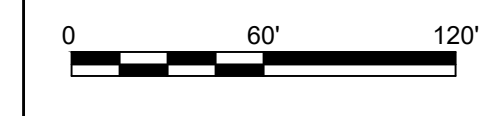
D
C
B
A



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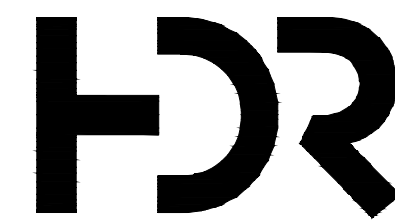
**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS**



FILENAME | Plan-B.dwg
SCALE | 1" = 60'

SHEET
C-14

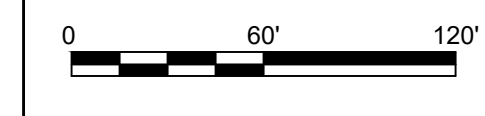
**LINE "B"
KY 1238 - STITH VALLEY ROAD
PLAN SHEET
STA. 18+00 TO STA. 36+00**



ISSUE	DATE	DESCRIPTION

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QA / QC	
PROJECT NUMBER	10175028

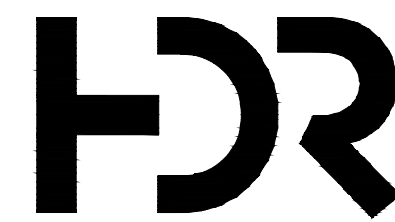
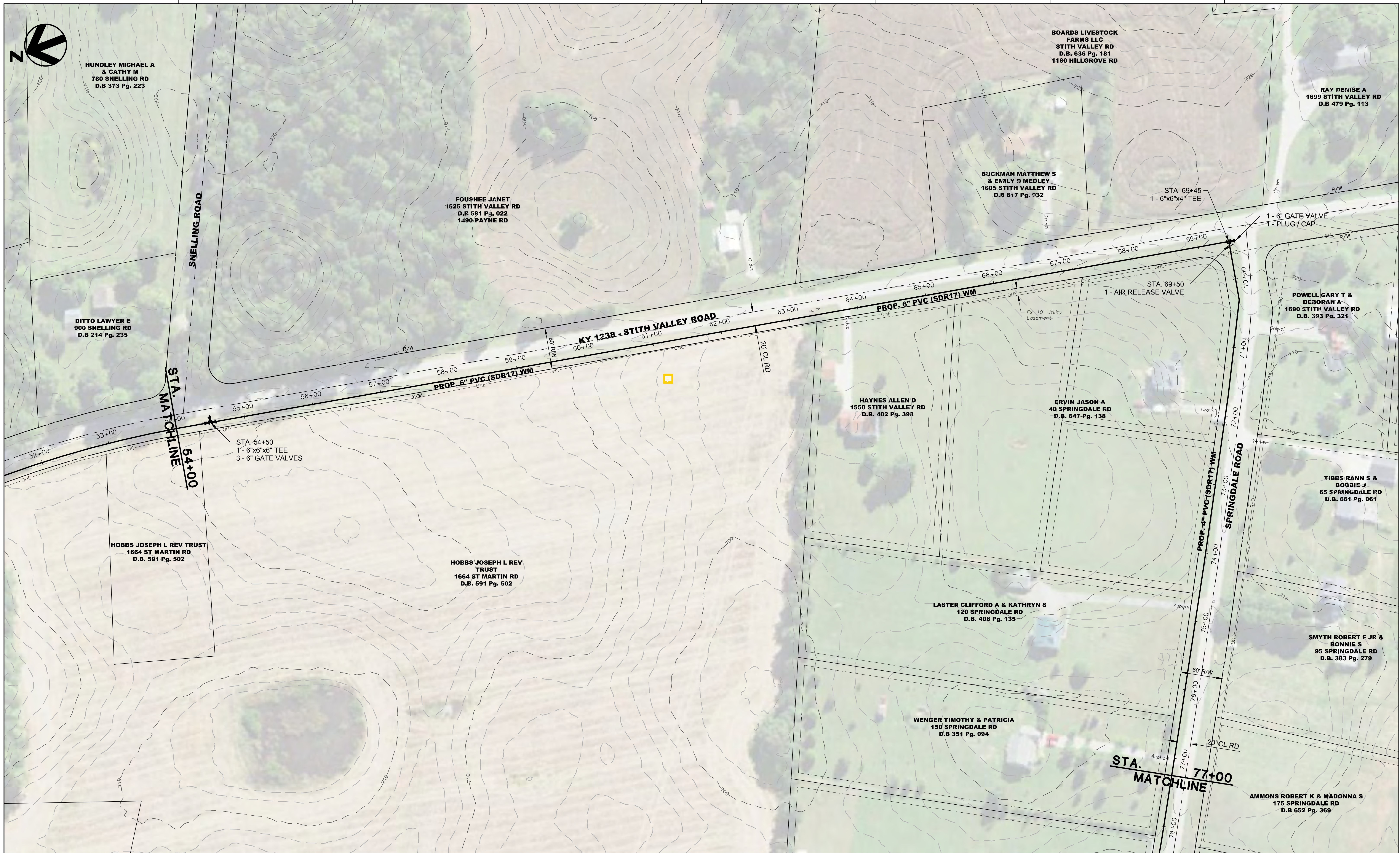
**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS**



**LINE "B"
KY 1238 - STITH VALLEY ROAD
PLAN SHEET
STA. 36+00 TO STA. 54+00**

FILENAME | Plan-B.dwg
SCALE | 1" = 60'

SHEET
C-15



ISSUE	DATE	DESCRIPTION

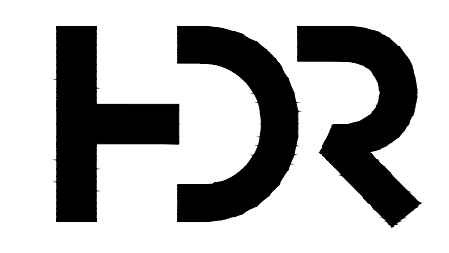
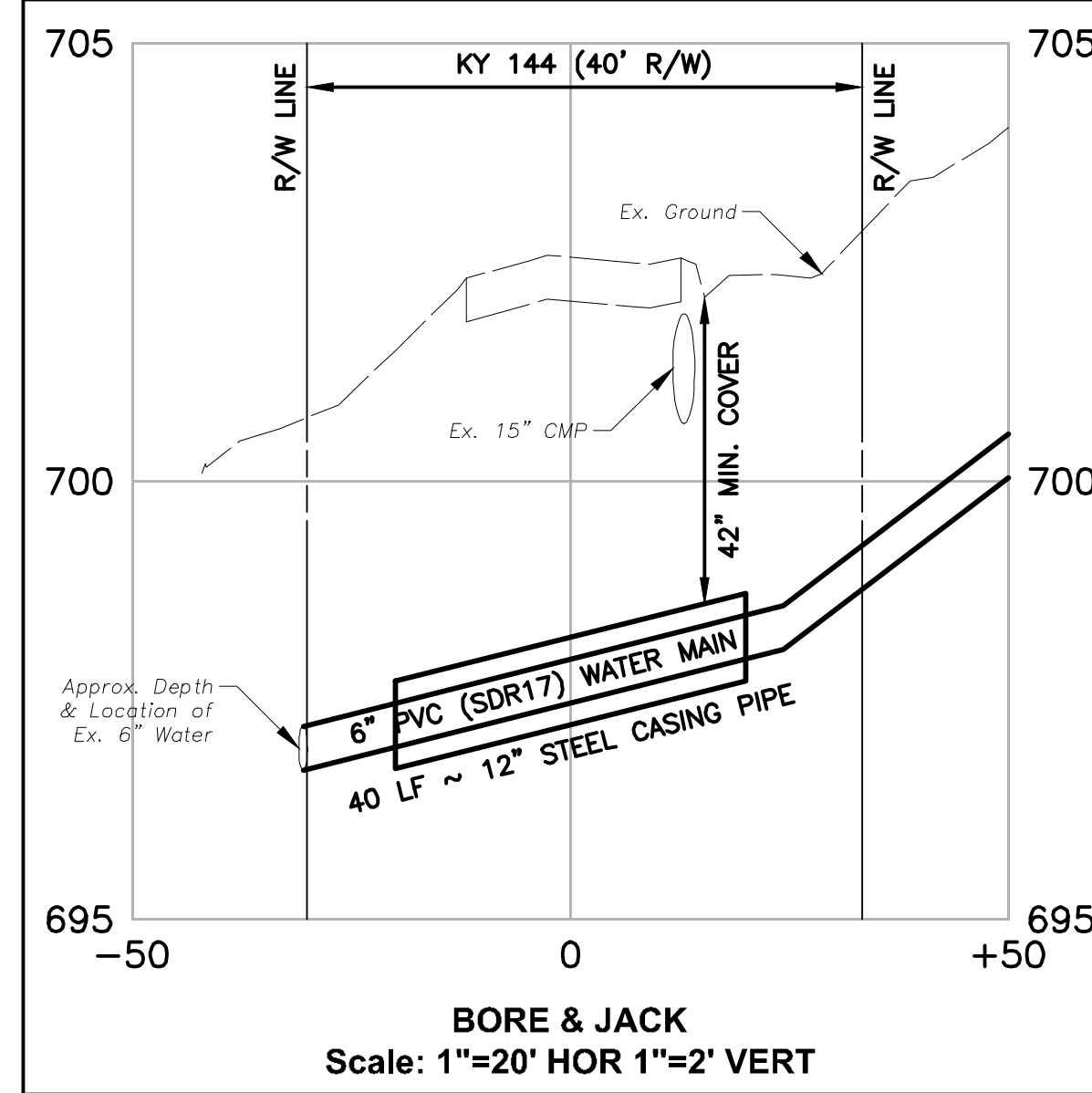
PROJECT MANAGER	KEVIN J. BRIAN
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**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS**

**LINE "B"
KY 1238 - STITH VALLEY ROAD / SPRINGDALE ROAD
PLAN SHEET
STA. 54+00 TO STA. 77+00**



SHEET
C-16



PROJECT MANAGER	KEVIN J. BRIAN
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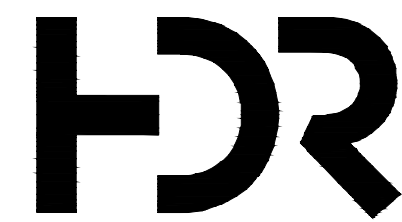
ISSUE	DATE	DESCRIPTION

**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS**



**LINE "C"
KENNEDY ROAD
PLAN SHEET
STA. 0+00 TO STA. 18+00**

FILENAME Plan-C.dwg
SCALE 1" = 60'
SHEET
C-18



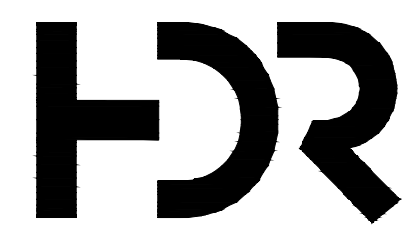
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	KEVIN J. BRIAN
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DRAWN BY	WILLIAM M. GUMM
QA / QC	
PROJECT NUMBER	10175028

**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS**

**LINE "C"
KENNEDY ROAD / KY 710 - OLD STATE ROAD
PLAN SHEET
STA. 18+00 TO STA. 39+00**

0 60' 120' FILENAME Plan-C.dwg SHEET
SCALE 1" = 60' C-19



ISSUE	DATE	DESCRIPTION

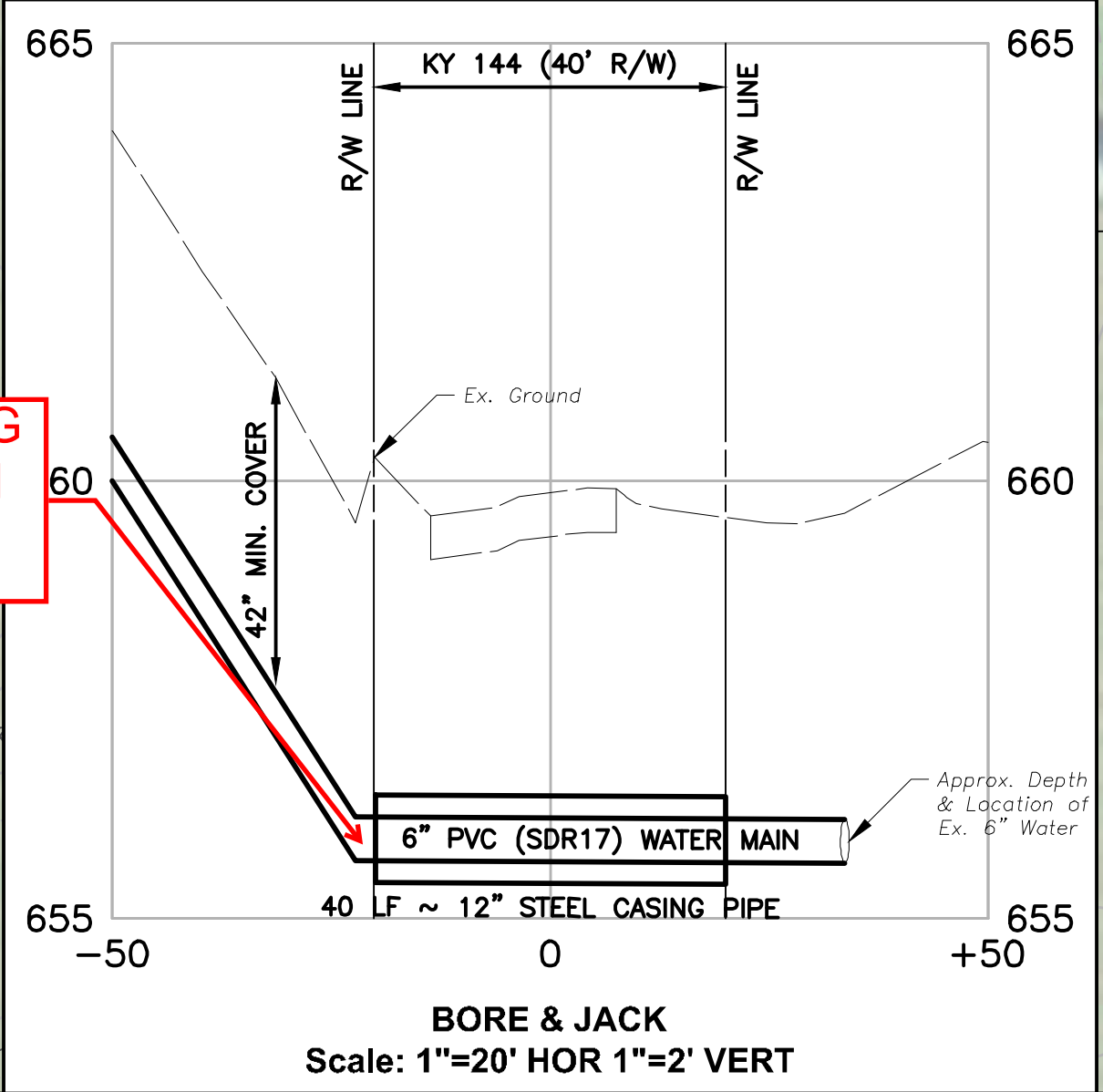
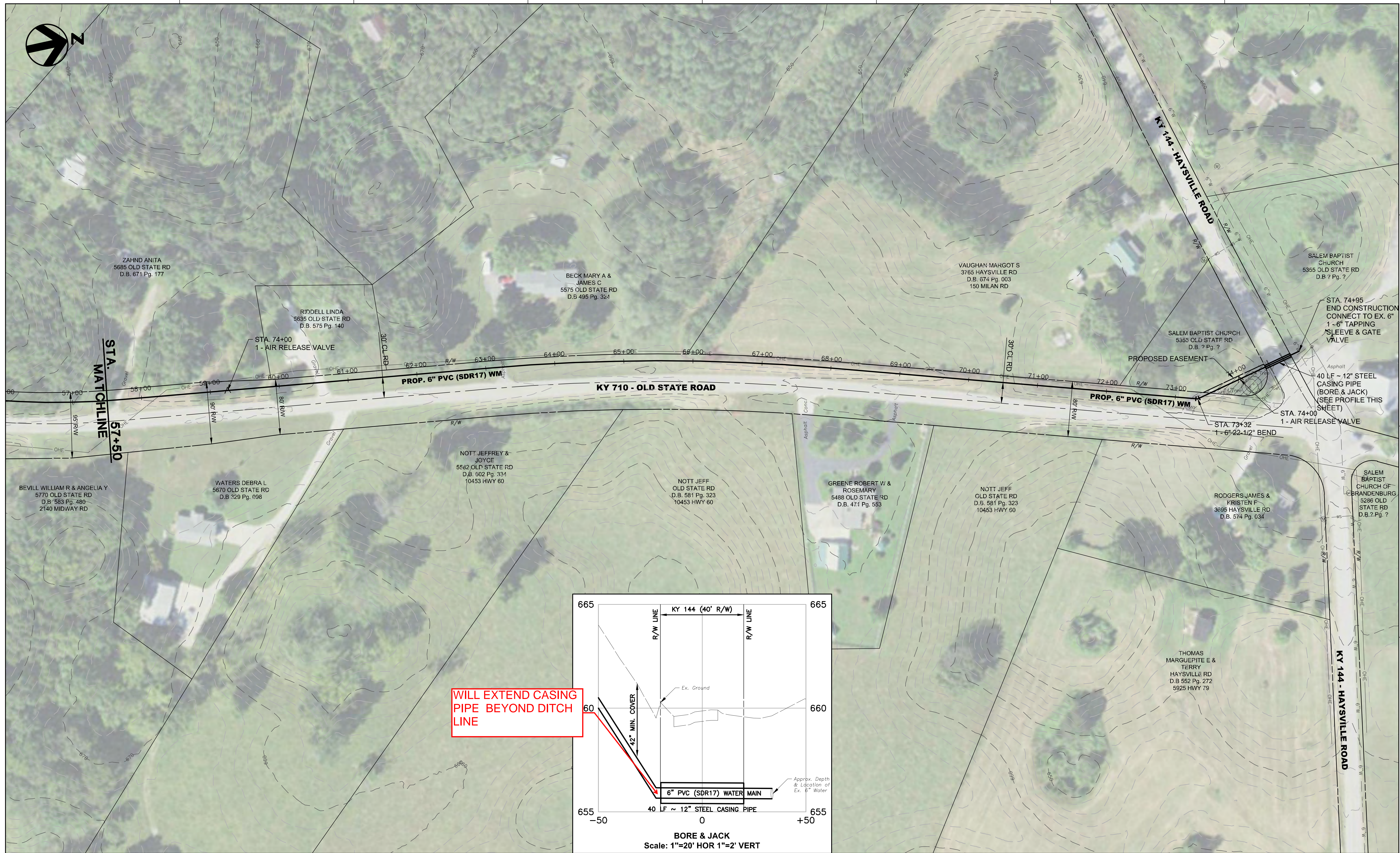
PROJECT MANAGER	KEVIN J. BRIAN
DESIGNED BY	KEVIN J. BRIAN
DRAWN BY	WILLIAM M. GUMM
QA / QC	
PROJECT NUMBER	10175028

**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS**

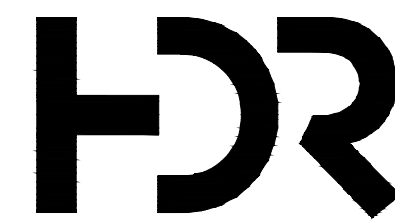
0 60' 120' FILENAME Plan-C.dwg
SCALE 1" = 60'

**LINE "C"
KY 710 - OLD STATE ROAD
PLAN SHEET
STA. 39+00 TO STA. 57+50**

SHEET
C-20



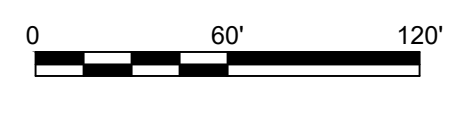
WILL EXTEND CASING PIPE BEYOND DITCH LINE



PROJECT MANAGER	KEVIN J. BRIAN
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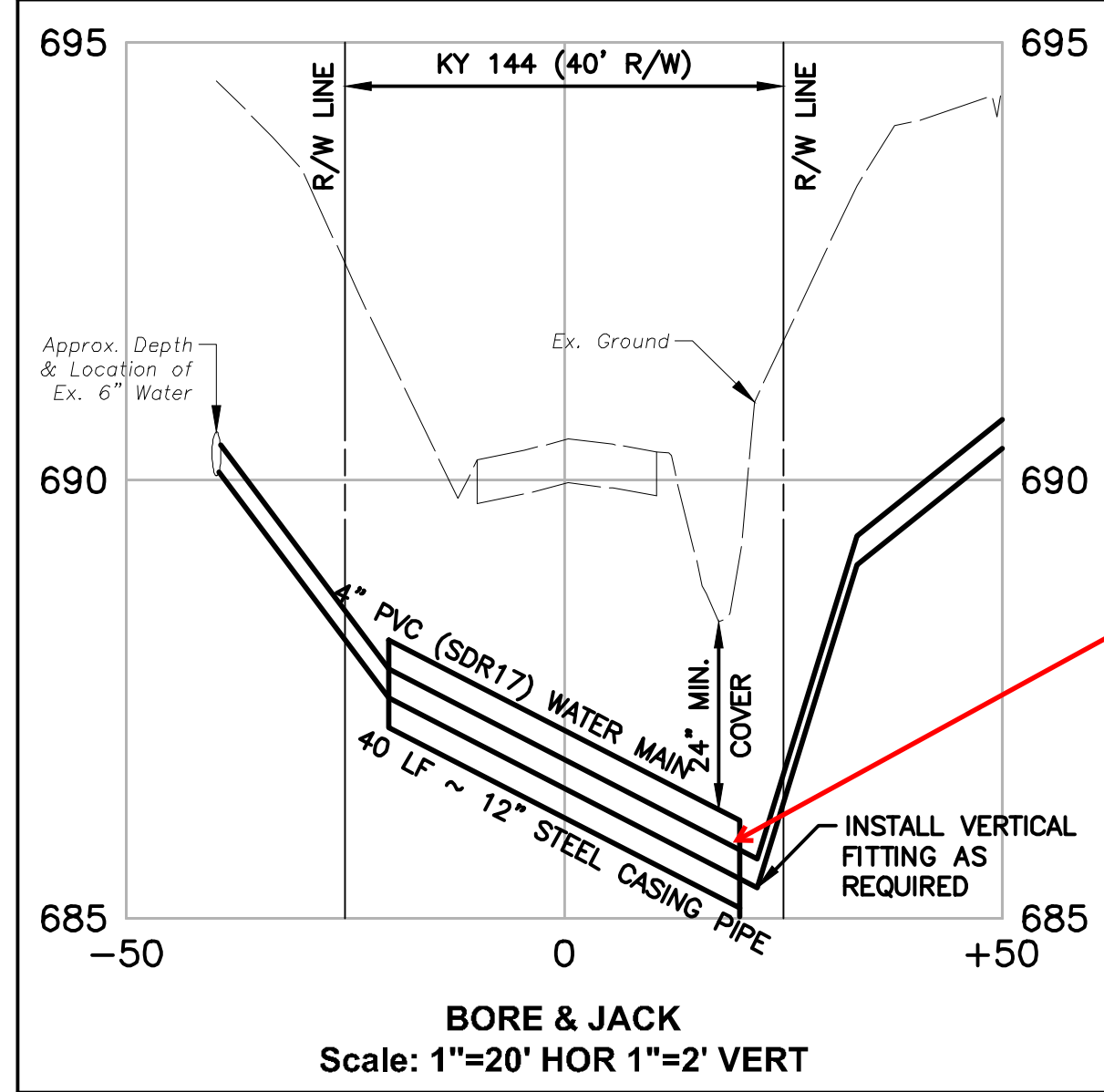
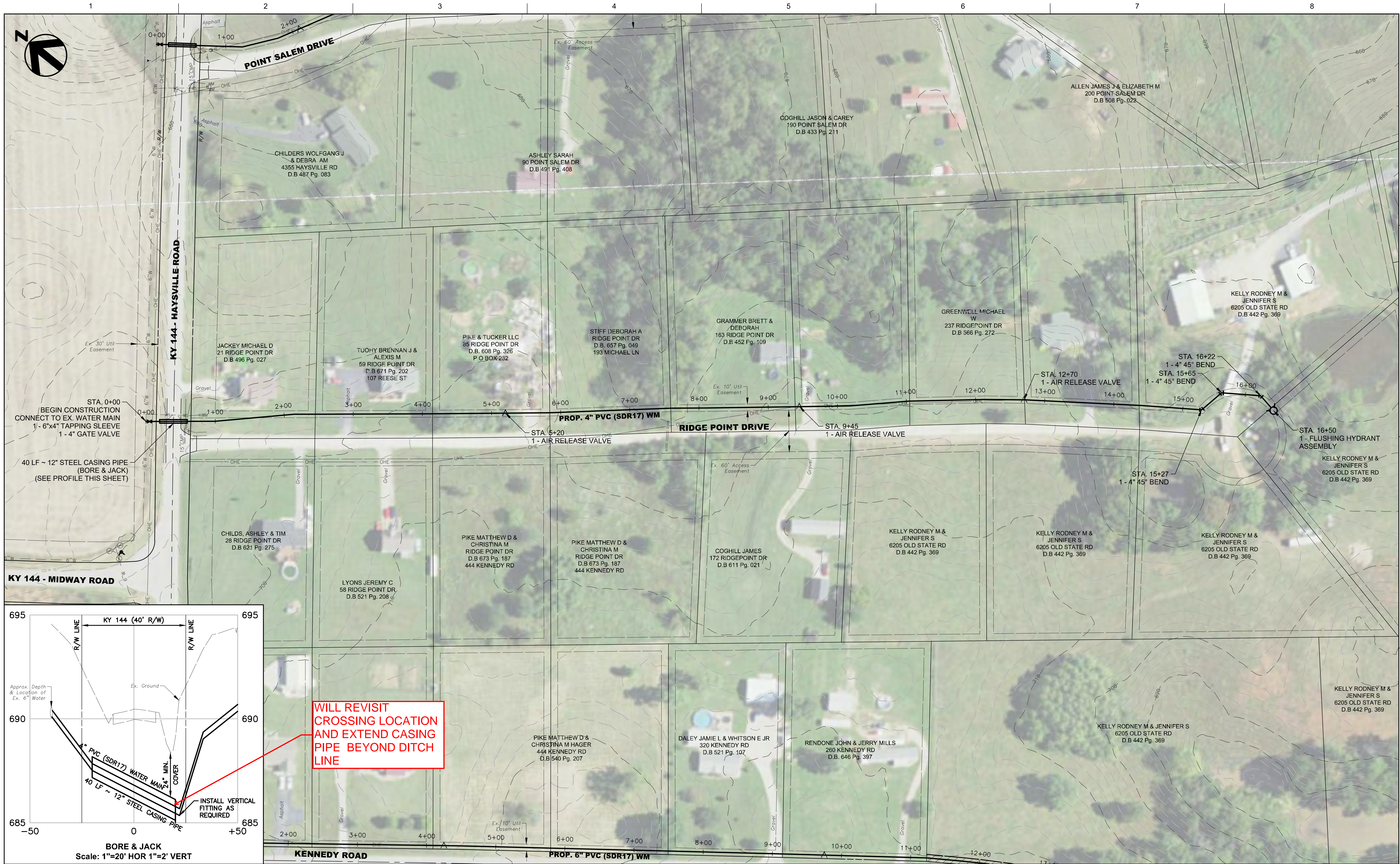
**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS**

**LINE "C"
KY 710 - OLD STATE ROAD
PLAN SHEET
STA. 57+50 TO STA. 75+00**

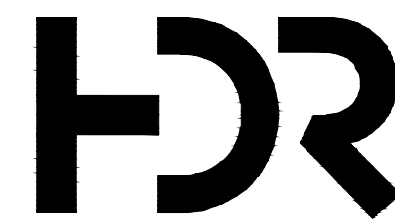


FILENAME Plan-C.dwg
SCALE 1" = 60'

SHEET
C-21



**WILL REVISIT
CROSSING LOCATION
AND EXTEND CASING
PIPE BEYOND DITCH
LINE**



ISSUE	DATE	DESCRIPTION

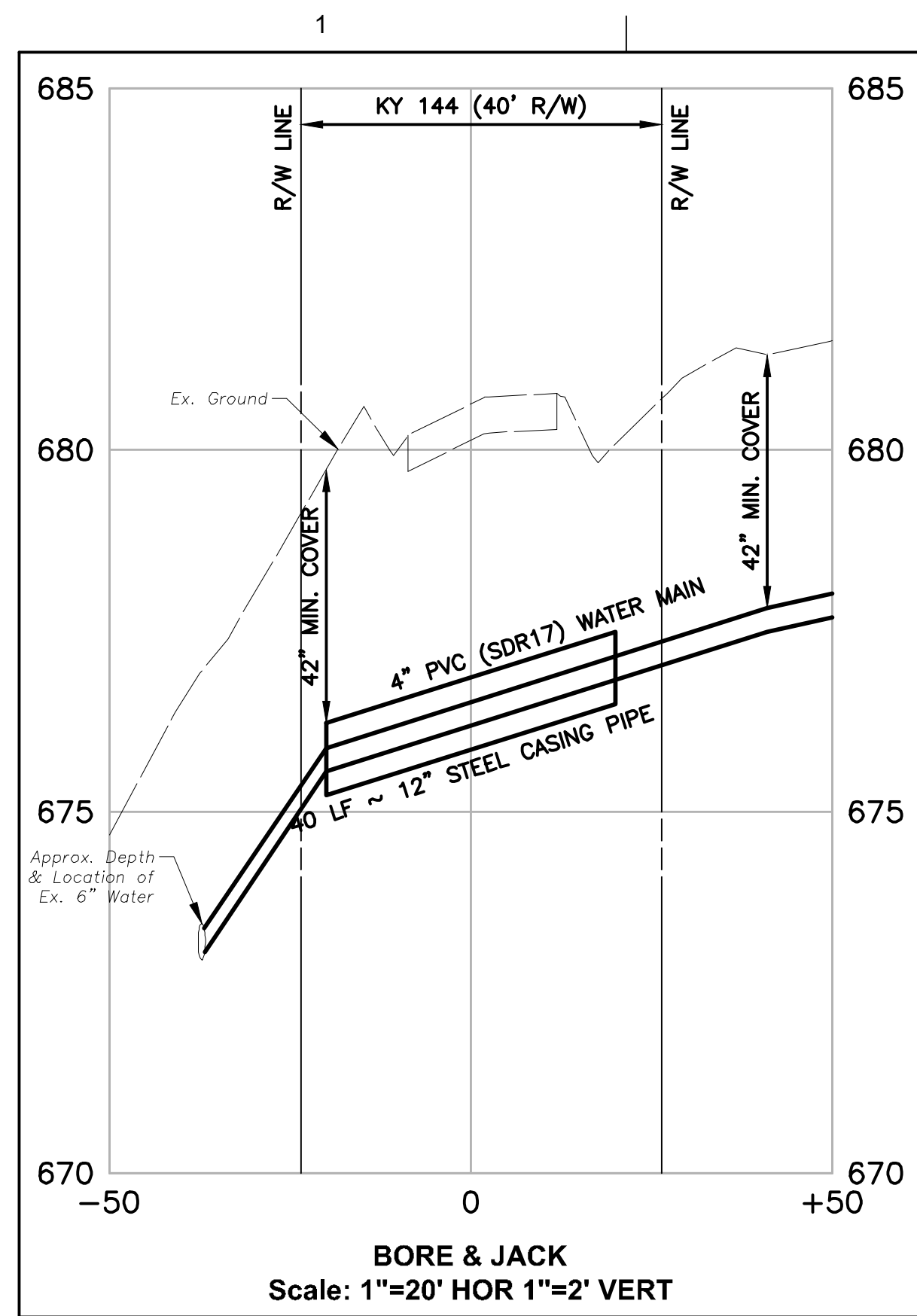
PROJECT MANAGER	KEVIN J. BRIAN
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QA / QC	
PROJECT NUMBER	10175028

**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS**

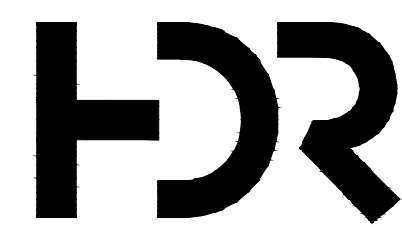
**LINE "C1"
RIDGE POINT DRIVE
PLAN SHEET
STA. 0+00 TO STA. 16+50**



FILENAME Plan-C.dwg
SHEET **C-22**



BORE & JACK
Scale: 1"=20' HOR 1"=2' VERT



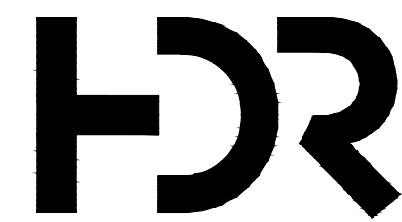
ISSUE	DATE	DESCRIPTION

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**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS**

0 60' 120' FILENAME Plan-C.dwg
SCALE 1" = 60'

**LINE "C2"
POINT SALEM ROAD
PLAN SHEET
STA. 0+00 TO STA. 17+50**



ISSUE	DATE	DESCRIPTION

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QA / QC	
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**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS**



**LINE "E"
KY 703 - SANDY HILL ROAD
PLAN SHEET
STA. 0+00 TO STA. 18+00**

FILENAME | Plan-E.dwg
SCALE | 1" = 60'

SHEET
C-25

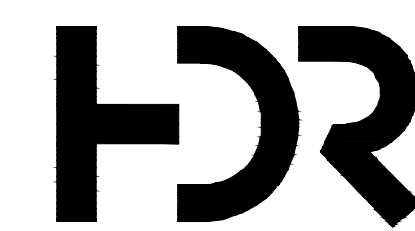


STA. MATCHLINE
18+00

KY 261 - SANDY HILL ROAD

PROP. 6" PVC (SDR17) WM

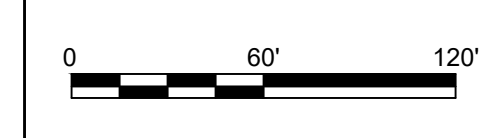
STA. 37+00 - END CONSTRUCTION
1 - FLUSHING HYDRANT ASSEMBLY



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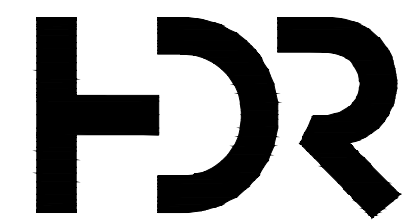
**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS**



FILENAME | Plan-E.dwg
SCALE | 1" = 60'

SHEET
C-26

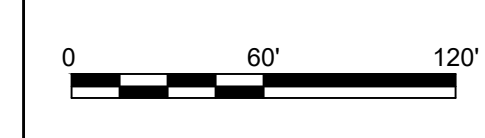
**LINE "E"
KY 703 - SANDY HILL ROAD
PLAN SHEET
STA. 18+00 TO STA. 37+00**



ISSUE	DATE	DESCRIPTION

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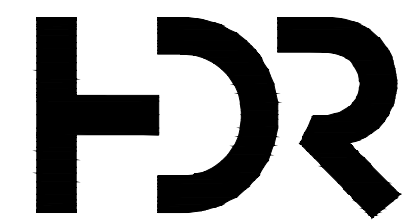
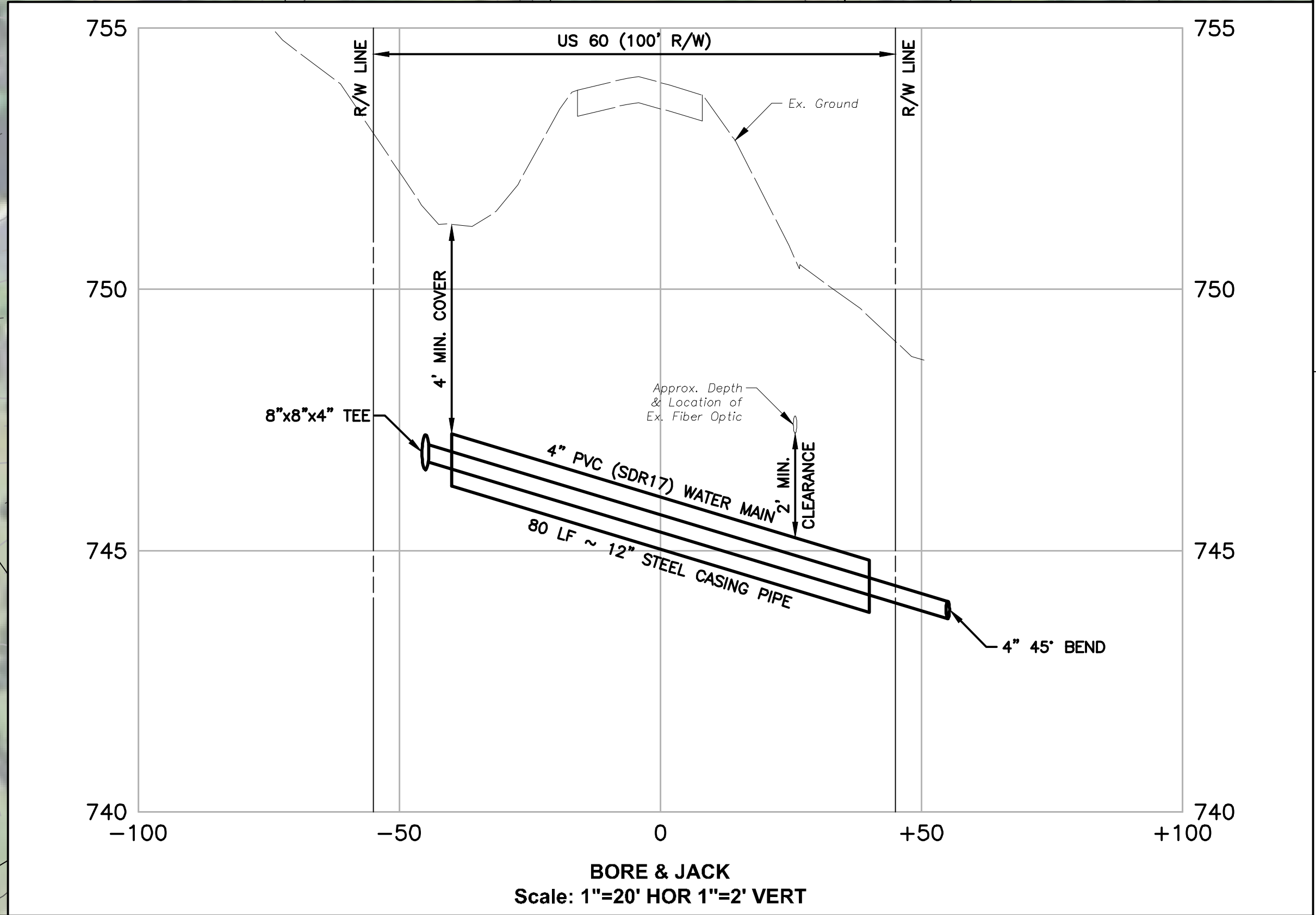
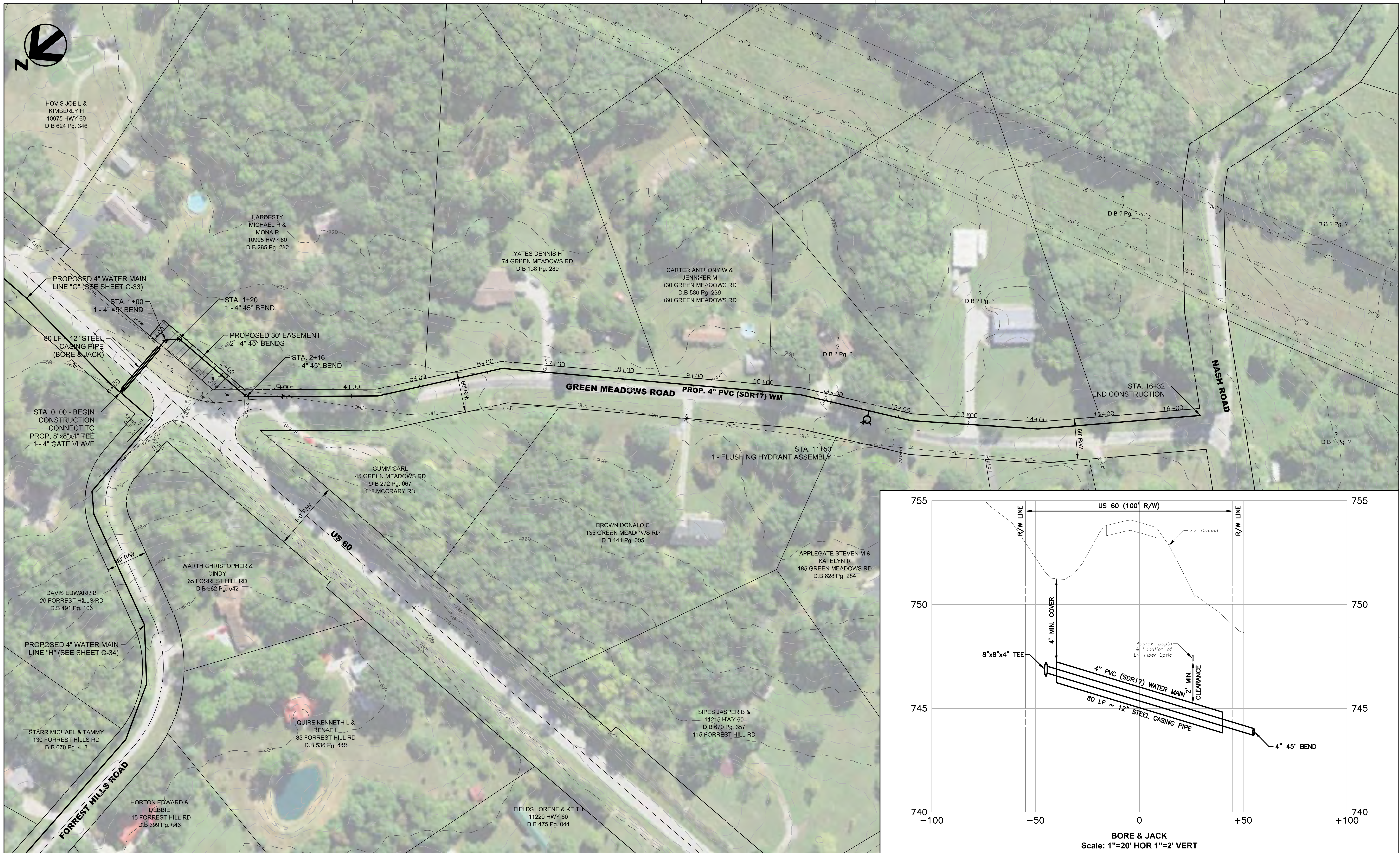
**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS**



**LINE "G"
US 60
PLAN SHEET
STA. 0+00 TO STA. 11+00**

FILENAME | Plan-G.dwg
SCALE | 1" = 60'

SHEET
C-33



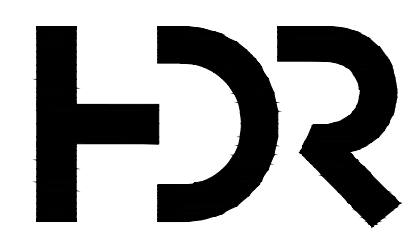
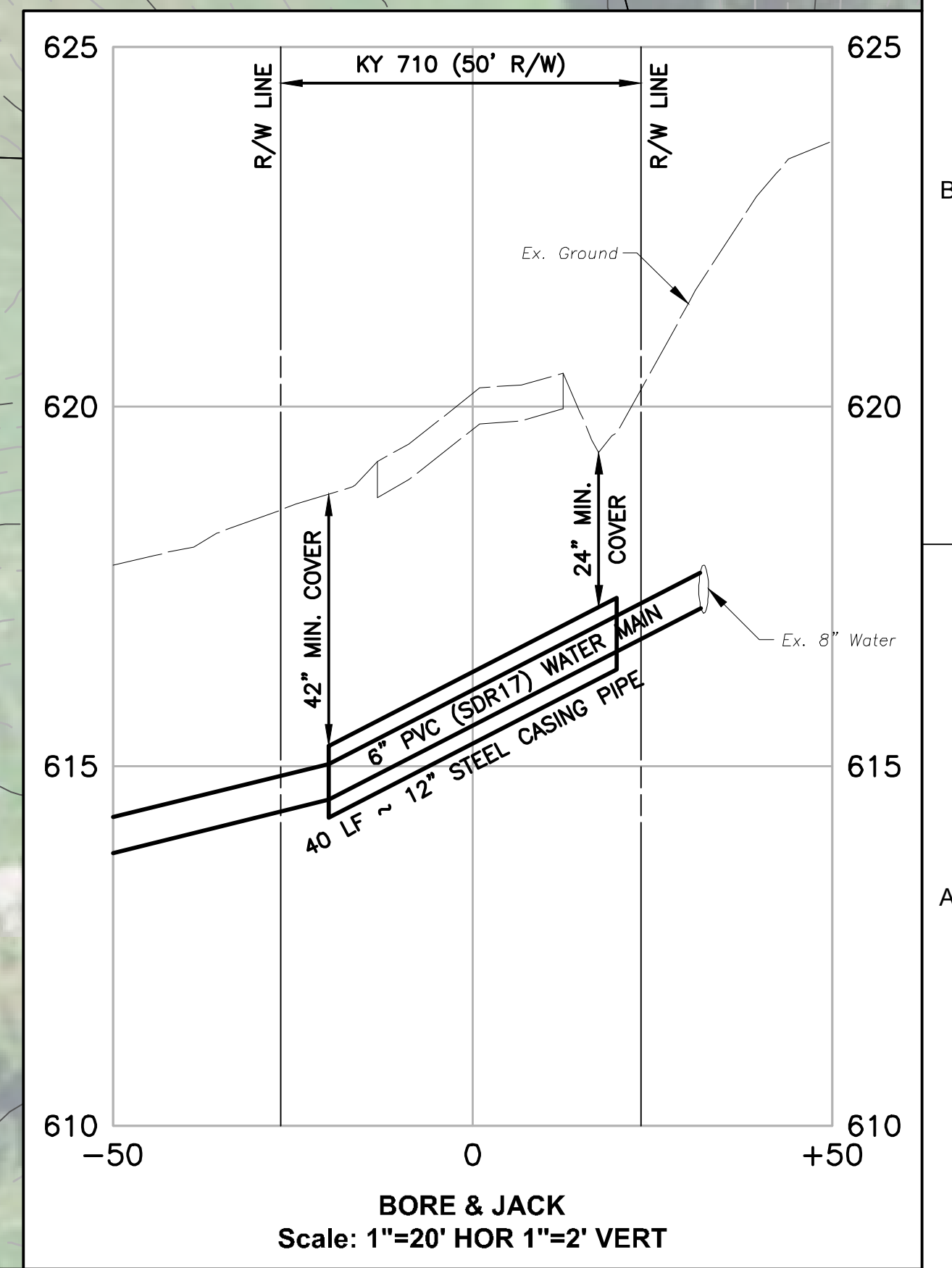
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**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED LINE EXTENSIONS**

FILENAME | Plan-I.dwg
SCALE | 1" = 60'

SHEET
C-35



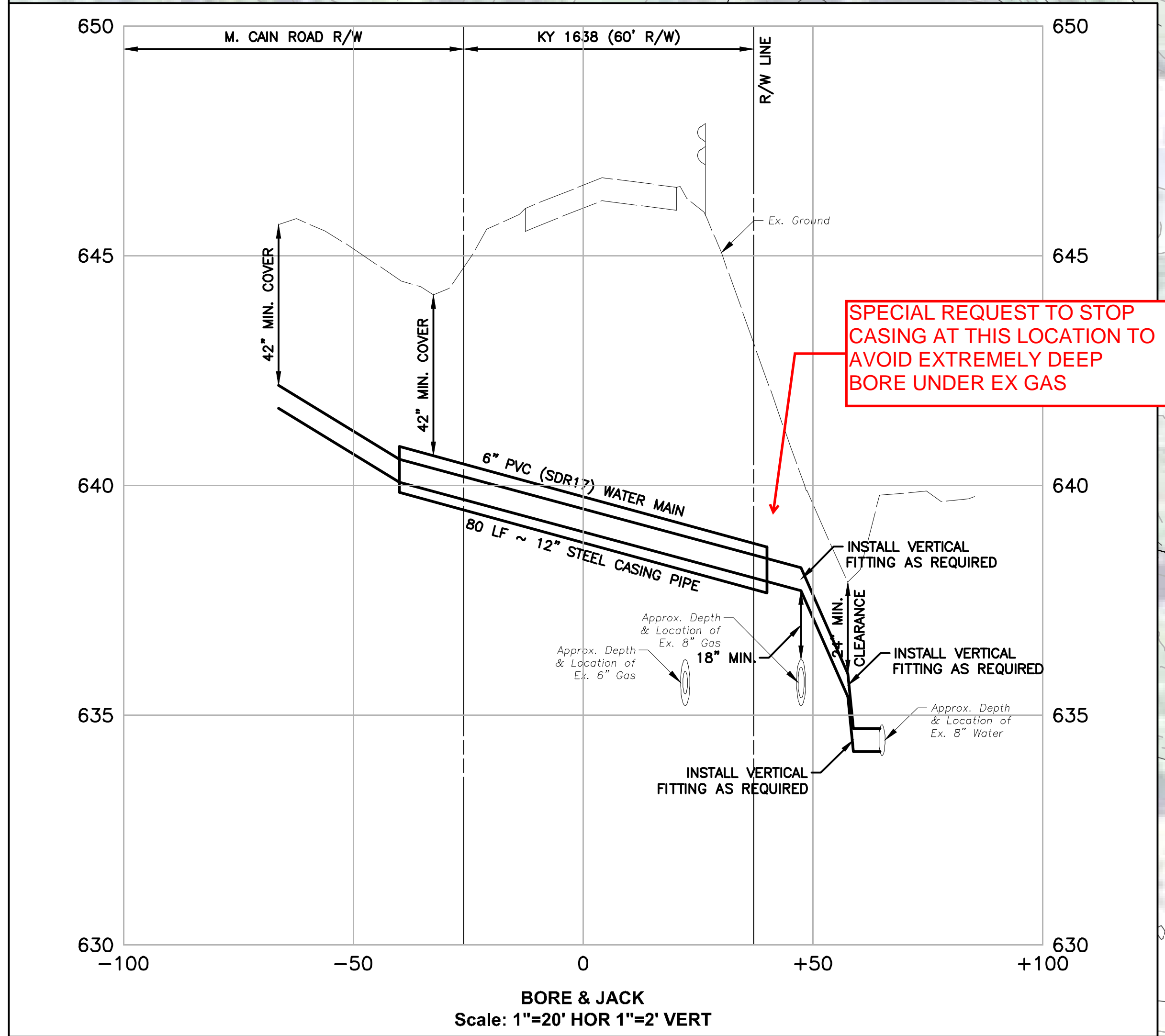
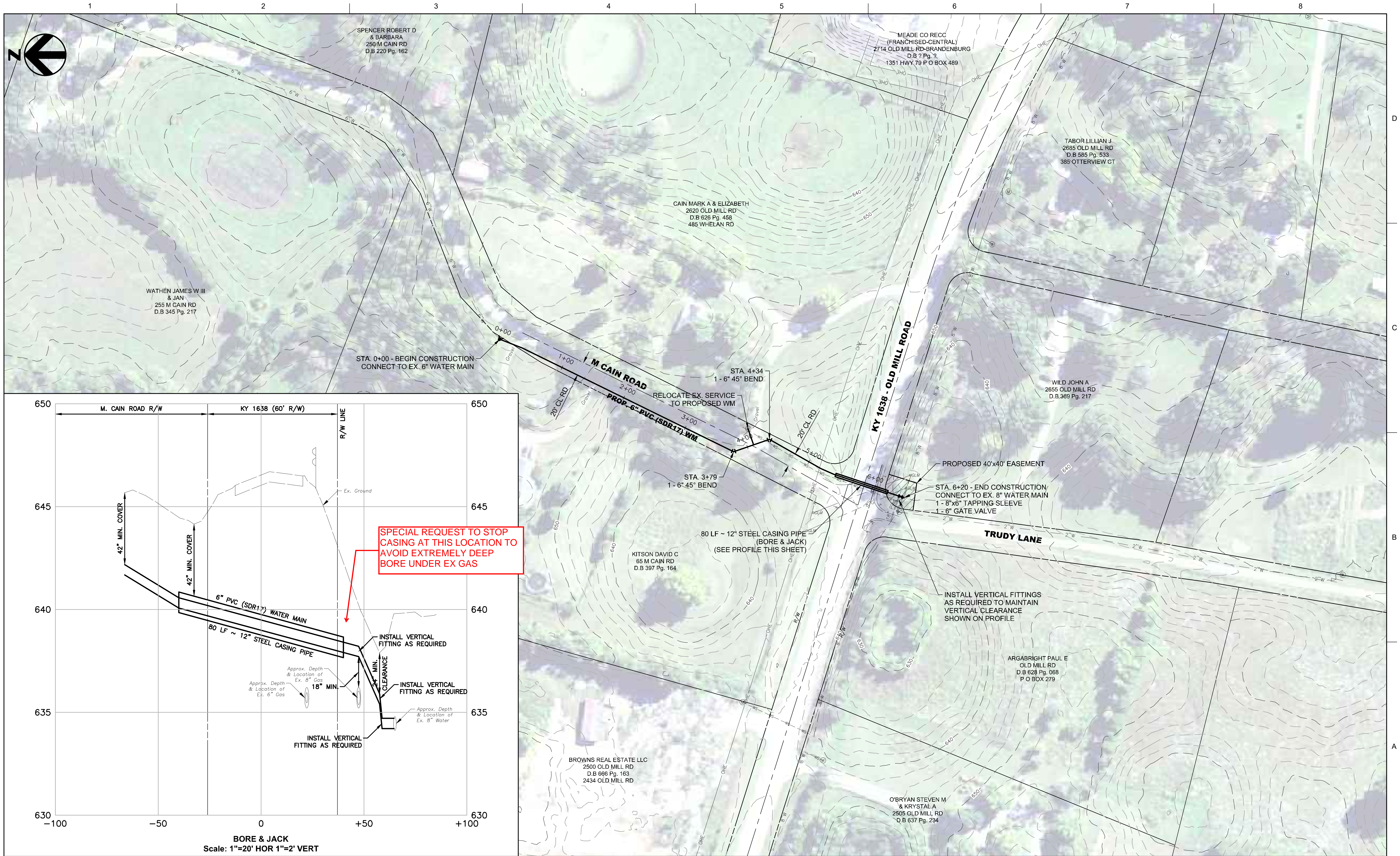
PROJECT MANAGER	KEVIN J. BRIAN
DESIGNED BY	KEVIN J. BRIAN
DRAWN BY	WILLIAM M. GUMM
QA / QC	
PROJECT NUMBER	10175028

ISSUE	DATE	DESCRIPTION

**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED GRID TIES**

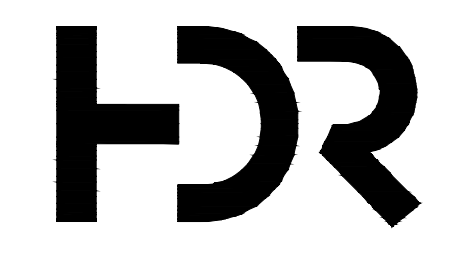
FILENAME	Plan-1.dwg	SHEET	C-39
SCALE	1" = 60'		

**LINE "1"
FRED FACKLER ROAD
PLAN SHEET
STA. 57+00 TO STA. 66+50**



SPECIAL REQUEST TO STOP CASING AT THIS LOCATION TO AVOID EXTREMELY DEEP BORE UNDER EX GAS

BORE & JACK
Scale: 1"=20' HOR 1"=2' VERT



ISSUE	DATE	DESCRIPTION

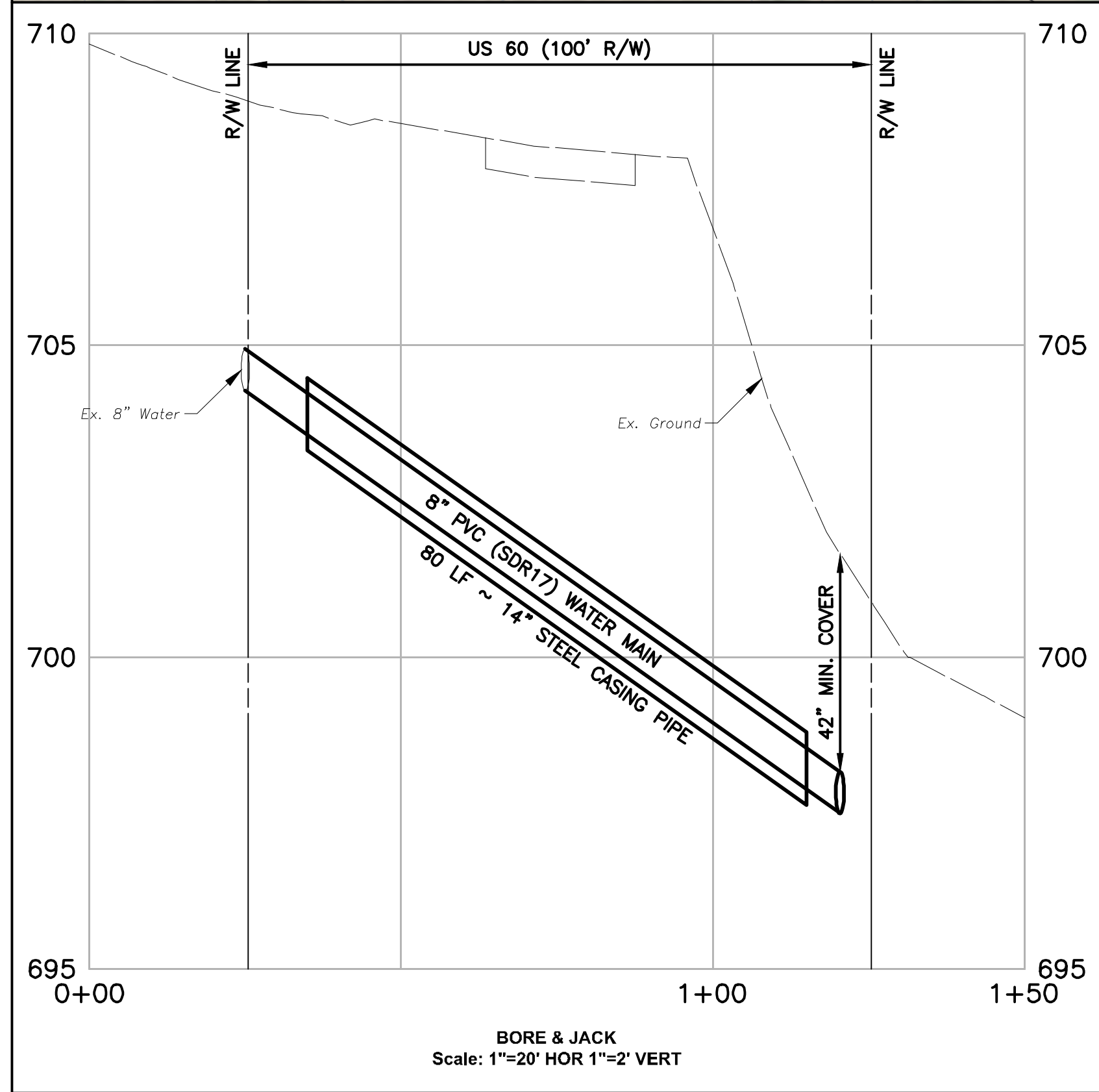
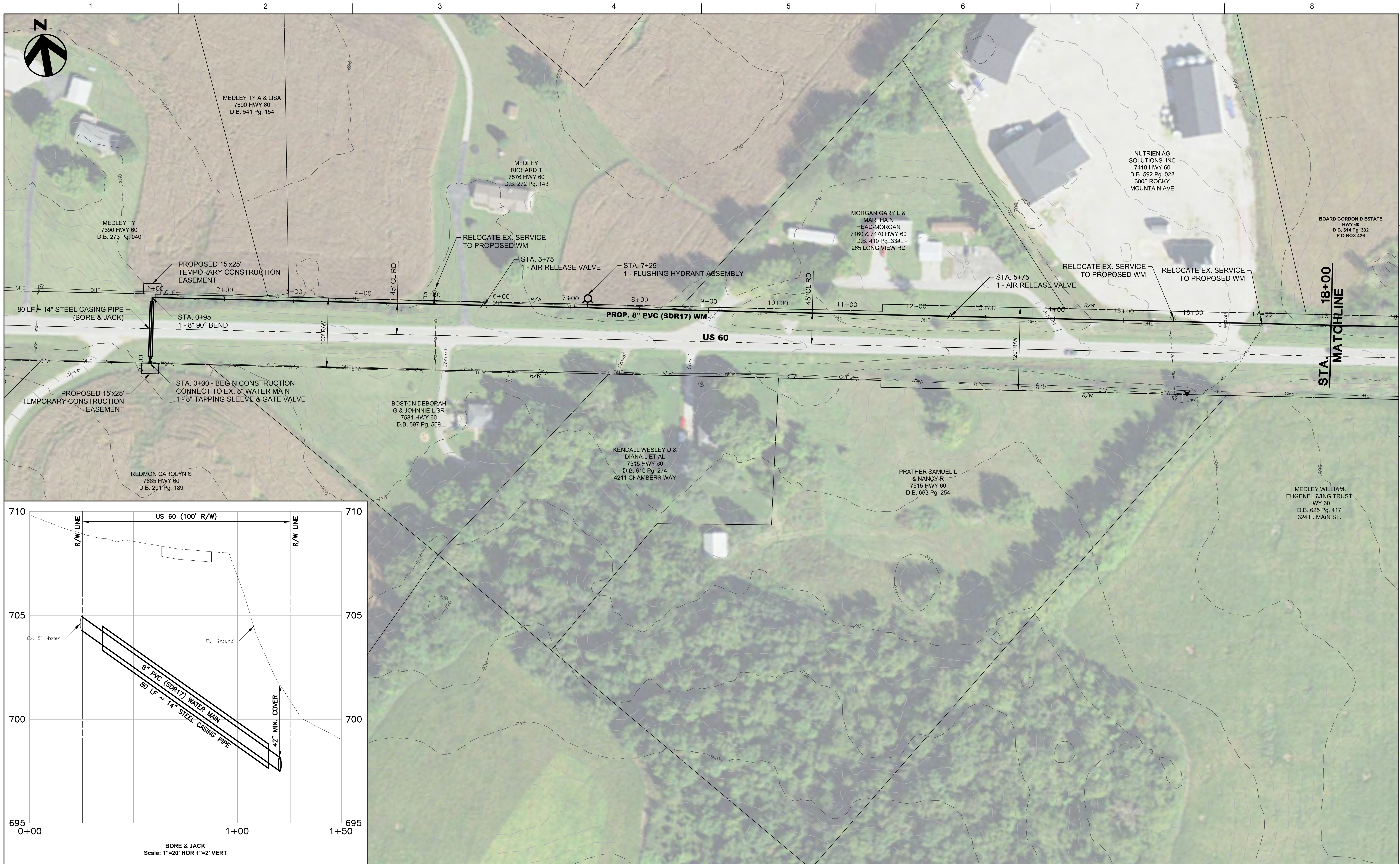
PROJECT MANAGER	KEVIN J. BRIAN
DESIGNED BY	KEVIN J. BRIAN
DRAWN BY	WILLIAM M. GUMM
QA / QC	
PROJECT NUMBER	10175028

**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED GRID TIES**

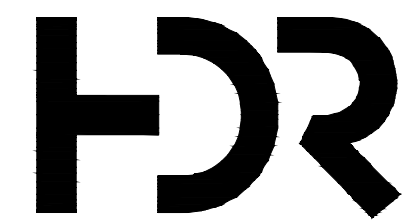
**LINE "4"
M. CAIN ROAD AT KY 1638
PLAN SHEET
STA. 0+00 TO STA. 6+50**

0 60' 120' SCALE 1" = 60'

FILENAME Plan-4.dwg SHEET C-42



BORE & JACK
Scale: 1"=20' HOR 1"=2' VERT



ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	KEVIN J. BRIAN
DESIGNED BY	KEVIN J. BRIAN
DRAWN BY	WILLIAM M. GUMM
QA / QC	
PROJECT NUMBER	10175028

**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED GRID TIES**

0 60 120
SCALE 1" = 60'

**LINE "6"
US 60
PLAN SHEET
STA. 0+00 TO STA. 18+00**

FILENAME Plan-6.dwg
SCALE 1" = 60'

SHEET
C-44



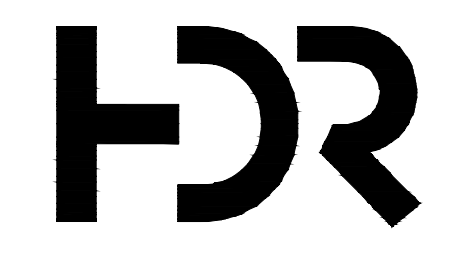
MEDLEY WILLIAM
EUGENE LIVING TRUST
HWY 60
D.B. 625 Pg. 417
324 E. MAIN ST.

BOARD GORDON D
ESTATE
HWY 60
D.B. 614 Pg. 332
P.O. BOX 426

HAGER BROTHERS LLC
HWY 60/FLAHERTY RD
D.B. 614 Pg. 329
165 HAGER LN

HILL JAMES R
9245 BRANDENBURG RD
D.B. 497 Pg. 039

WEST CHARLES H &
SHARON J
394 DOWN HOME LN
D.B. 485 Pg. 157
140 BUCK KNOES RD



PROJECT MANAGER	KEVIN J. BRIAN
DESIGNED BY	KEVIN J. BRIAN
DRAWN BY	WILLIAM M. GUMM
QA / QC	
PROJECT NUMBER	10175028

ISSUE	DATE	DESCRIPTION

**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED GRID TIES**

**LINE "6"
US 60
PLAN SHEET
STA. 18+00 TO STA. 37+00**

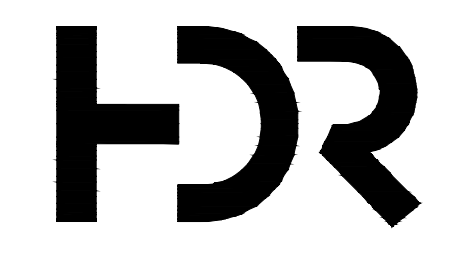
SCALE 1" = 60'

FILENAME Plan-6.dwg
SCALE 1" = 60'

SHEET
C-45



TIE-IN LOCATION TO EX WM PREVENTS CASING PIPE FROM BEING EXTENDED.



ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	KEVIN J. BRIAN
DESIGNED BY	KEVIN J. BRIAN
DRAWN BY	WILLIAM M. GUMM
QA / QC	
PROJECT NUMBER	10175028

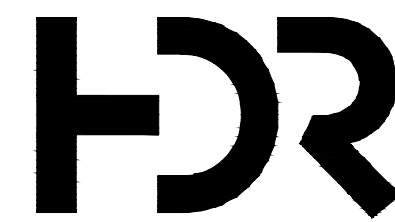
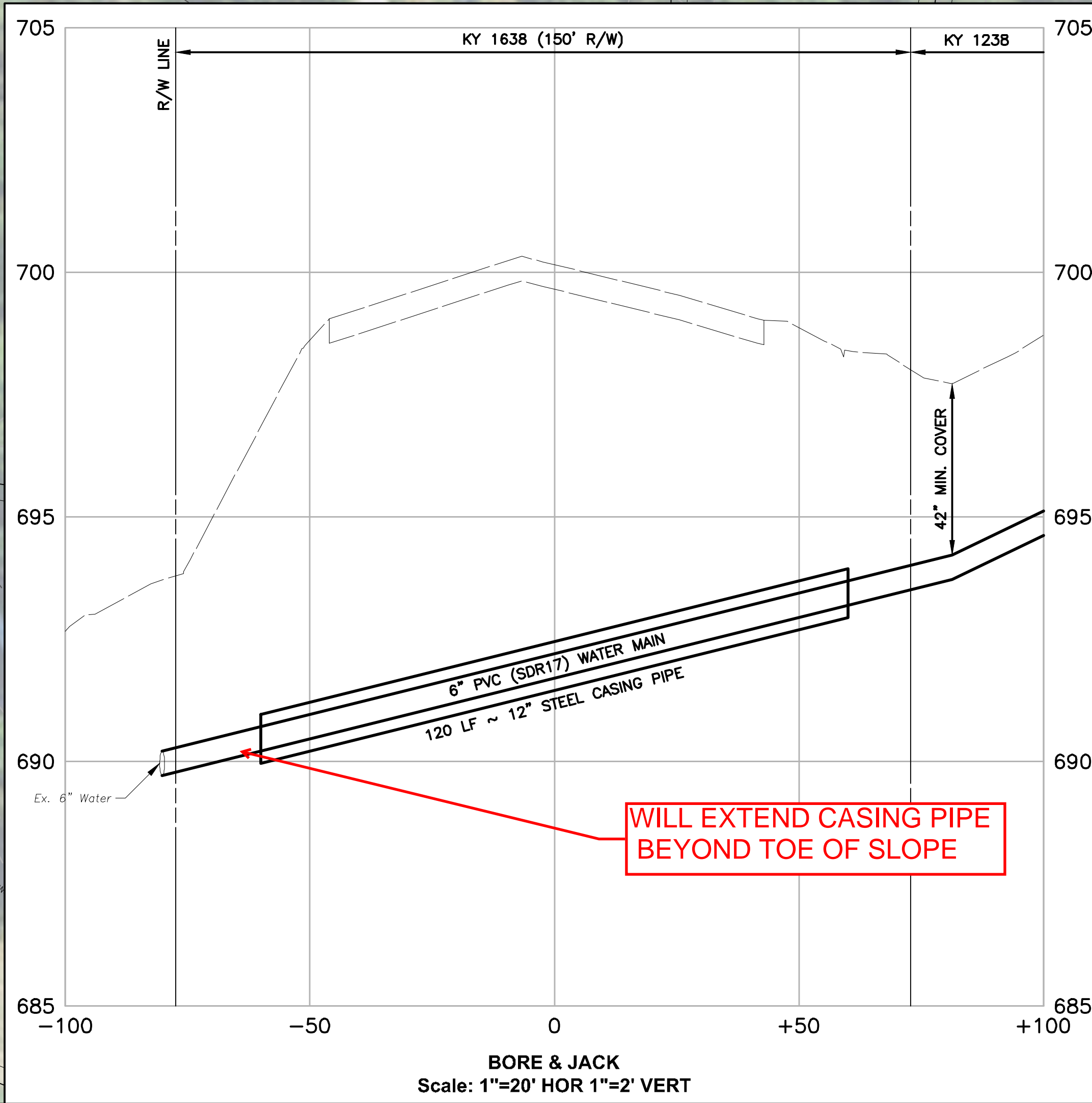
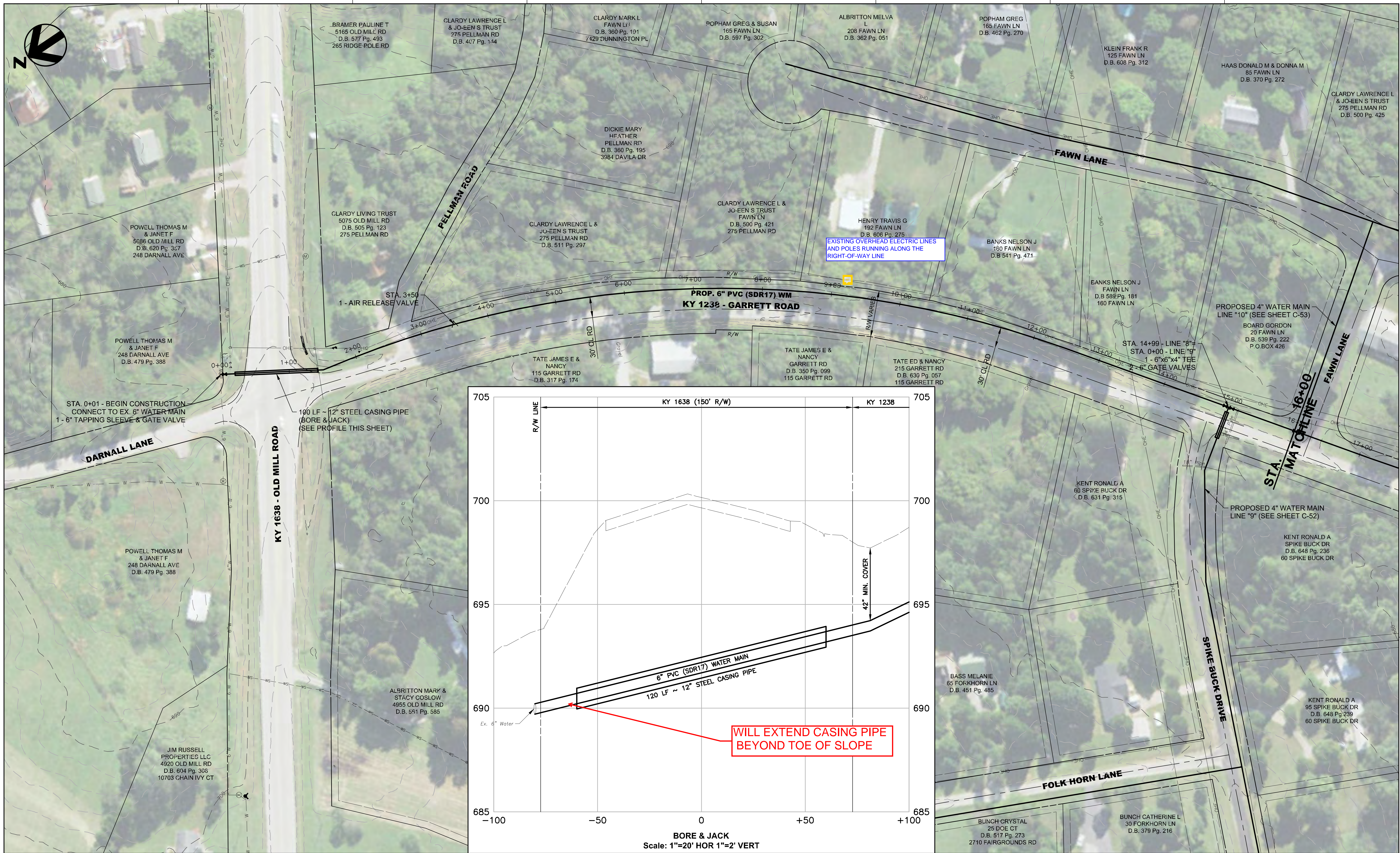
**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED GRID TIES**



**LINE "7"
FARRIS ROAD
PLAN SHEET
STA. 0+00 TO STA. 18+00**

FILENAME Plan-7.dwg
SCALE 1" = 60'

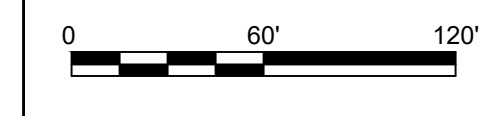
SHEET
C-46



PROJECT MANAGER	KEVIN J. BRIAN
DESIGNED BY	KEVIN J. BRIAN
DRAWN BY	WILLIAM M. GUMM
QA / QC	
PROJECT NUMBER	10175028

MEADE COUNTY WATER DISTRICT
 WATER SYSTEM IMPROVEMENTS
 PROPOSED GRID TIES

LINE "8"
 KY 1238 - GARRETT ROAD
 PLAN SHEET
 STA. 0+00 TO STA. 16+00



FILENAME | Plan-8.dwg
 SCALE | 1" = 60'

SHEET
 C-48



PROJECT MANAGER	KEVIN J. BRIAN
DESIGNED BY	KEVIN J. BRIAN
DRAWN BY	WILLIAM M. GUMM
QA / QC	
PROJECT NUMBER	10175028

MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED GRID TIES

LINE "8"
KY 1238 - GARRETT ROAD
PLAN SHEET
STA. 16+00 TO STA. 33+00

SCALE 1" = 60'
 FILENAME Plan-8.dwg
 SHEET C-49

ISSUE	DATE	DESCRIPTION



1 2 3 4 5 6 7 8

D
C
B
A

STA. MATCHLINE
33+00

STA. MATCHLINE
50+00

EXISTING OVERHEAD ELECTRIC LINES
AND POLES RUNNING ALONG THE
RIGHT-OF-WAY LINE

STA. 43+50
1 - AIR RELEASE VALVE

PROP. 6" PVC (SDR17) WM
KY 1238 - GARRETT ROAD

MCGLAUN CLARENCE W JR &
NANCY S
GARRETT RD
D.B. 620 Pg. 167
2316 WINDSOR FOREST DR

COOK MICHAEL S &
BELINDA J
GARRETT RD
D.B. 632 Pg. 428
4911 FIELDING WAY

CLARK PATRICIA L
1020 GARRETT RD
D.B. 128 Pg. 307

DAVIS CHRISTOPHER W
GARRETT RD
D.B. 578 Pg. 410
7905 CARDINAL HILL RD

SIPES DIANE K
895 GARRETT RD
D.B. 577 Pg. 447

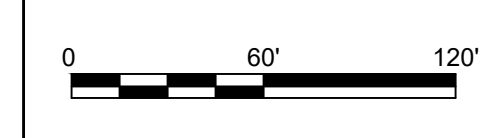
DAVIS WILLIAM C FAMILY
GSTT TRUST
GARRETT RD
D.B. 593 Pg. 060
7905 CARDINAL HILL RD



ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	KEVIN J. BRIAN
DESIGNED BY	KEVIN J. BRIAN
DRAWN BY	WILLIAM M. GUMM
QA / QC	
PROJECT NUMBER	10175028

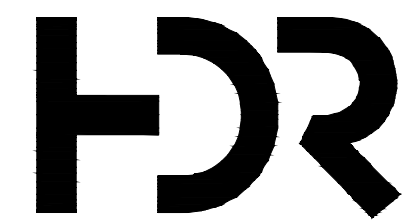
**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED GRID TIES**



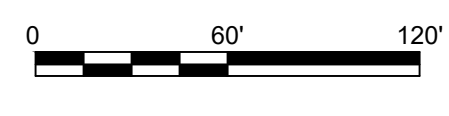
**LINE "8"
KY 1238 - GARRETT ROAD
PLAN SHEET
STA. 33+00 TO STA. 50+00**

FILENAME | Plan-8.dwg
SCALE | 1" = 60'

SHEET
C-50

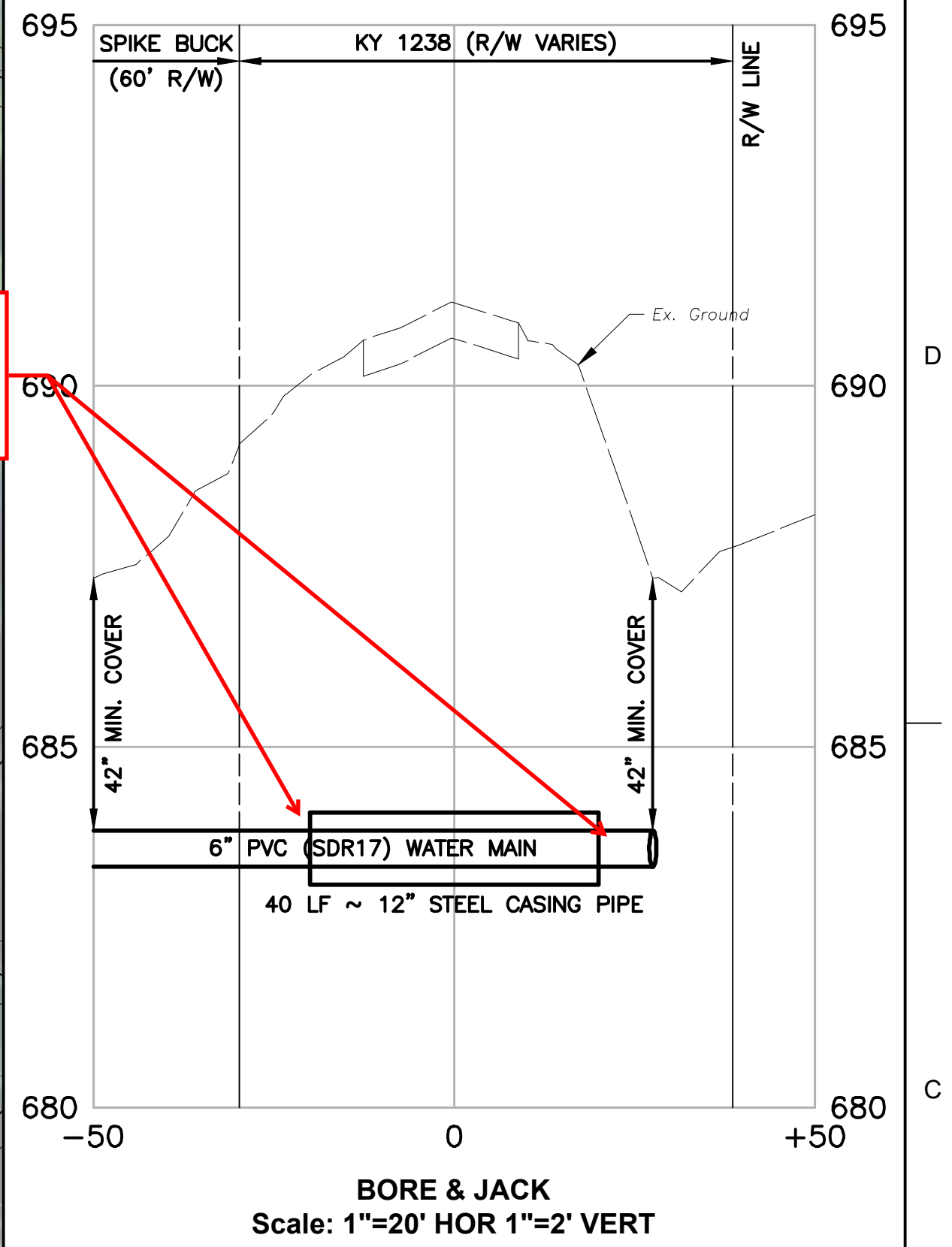


ISSUE	DATE	DESCRIPTION

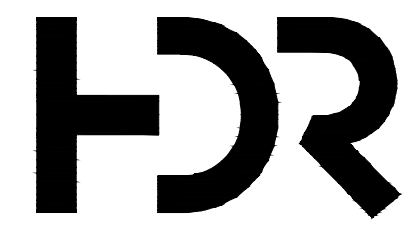




WILL EXTEND CASING PIPE IN BOTH DIRECTIONS



BORE & JACK
Scale: 1"=20' HOR 1"=2' VERT

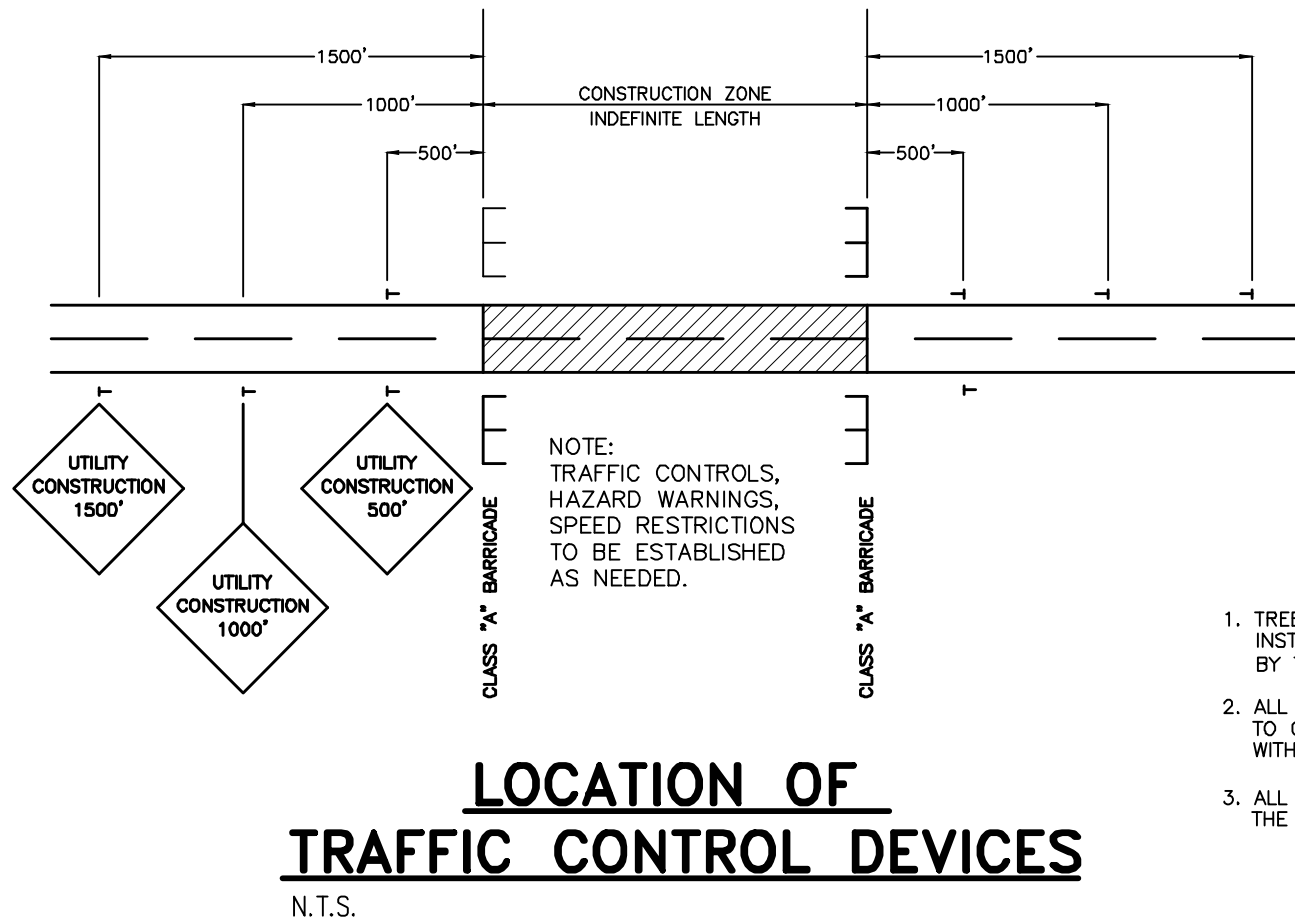


PROJECT MANAGER	KEVIN J. BRIAN
DESIGNED BY	KEVIN J. BRIAN
DRAWN BY	WILLIAM M. GUMM
QA / QC	
PROJECT NUMBER	10175028

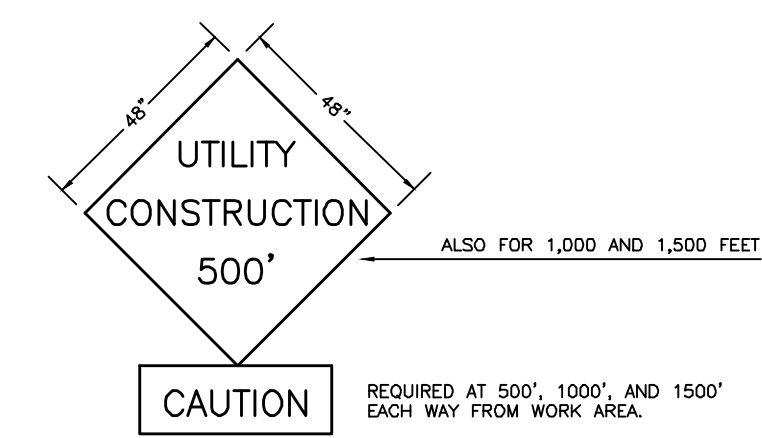
**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
PROPOSED GRID TIES**

**LINES "9" & "9A"
SPIKE BUCK DR. & FORK HORN LN. / DOE CT.
PLAN SHEET
STA. 0+00 TO STA. 13+00 & STA. 0+00 TO STA. 9+50**

0 60' 120' FILENAME Plan-9.dwg SHEET
SCALE 1" = 60' C-52

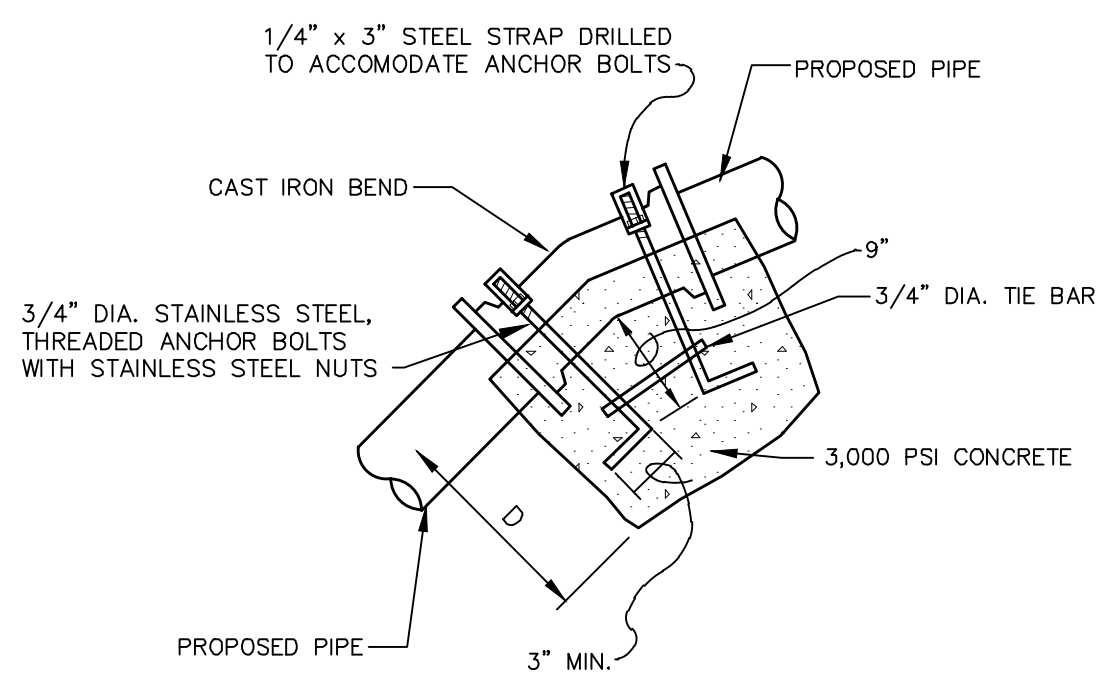


LOCATION OF TRAFFIC CONTROL DEVICES
N.T.S.

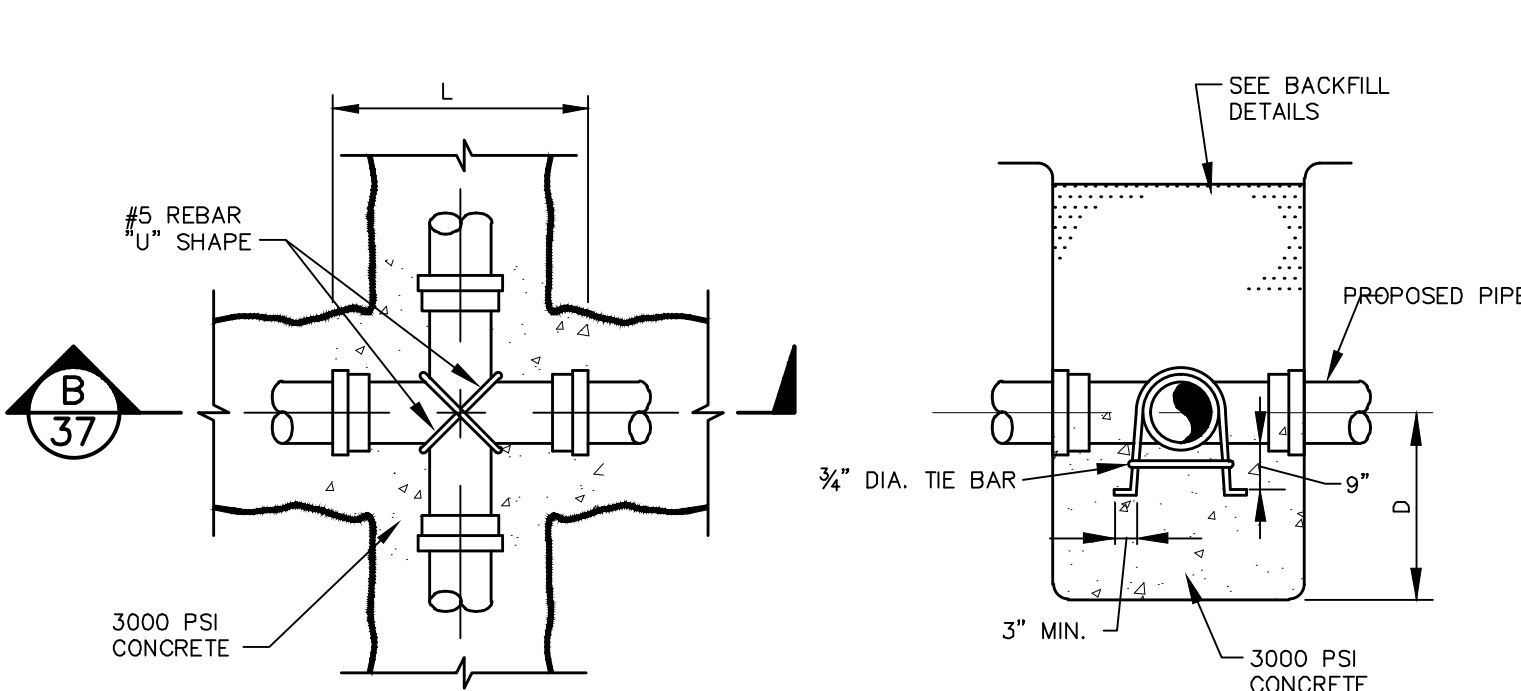


WARNING SIGNS

1. TREES ON STATE RIGHT-OF-WAY ARE NOT TO BE DAMAGED BY THIS INSTALLATION, NO TREE TRIMMING OR REMOVAL IS AUTHORIZED BY THIS PERMIT.
2. ALL DISTURBED PORTIONS OF THE STATE RIGHT-OF-WAY TO BE RESTORED TO ORIGINAL CONDITION BY SEEDING AND MULCHING IN ACCORDANCE WITH KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS.
3. ALL SIGNS AND CONTROL OF TRAFFIC TO BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.



VERTICAL BENDS BLOCKING
N.T.S.



CROSS ANCHORING
N.T.S.

PLUGS						
SIZE	3"	4"	6"	8"	10"	12"
D	8"	10"	13"	18"	21"	25"
L & W	15"	19"	26"	35"	42"	50"

TEES						
SIZE	3"	4"	6"	8"	10"	12"
D	5"	5"	7"	11"	13"	16"
L	20"	22"	30"	40"	48"	56"
H	9"	12"	18"	24"	28"	34"
C (Max.)	11"	13"	16"	18"	22"	24"

90°-Elts (Quarter Bends)						
SIZE	3"	4"	6"	8"	10"	12"
D	8"	9"	14"	20"	24"	28"
L	27"	31"	44"	58"	70"	80"
H	12"	16"	22"	29"	36"	45"
C (Max.)	11"	13"	16"	18"	22"	24"

45°-Elts (Eighth Bends)						
SIZE	3"	4"	6"	8"	10"	12"
D	6"	7"	10"	15"	18"	21"
L	18"	21"	30"	40"	48"	56"
H	10"	12"	18"	24"	28"	34"
C (Max.)	8"	8"	10"	11"	13"	15"

22 1/2°-Elts (Sixteenth Bends)						
SIZE	3"	4"	6"	8"	10"	12"
D	5"	6"	7"	9"	11"	14"
L	15"	19"	24"	29"	35"	42"
H	6"	7"	11"	16"	20"	24"
C (Max.)	6"	8"	10"	11"	13"	15"

11 1/4°-Elts (Thirty-Second Bends)						
SIZE	3"	4"	6"	8"	10"	12"
D	3"	4"	5"	7"	9"	10"
L	12"	16"	20"	24"	30"	34"
H	6"	6"	7"	10"	12"	15"
C (Max.)	6"	8"	10"	11"	13"	15"

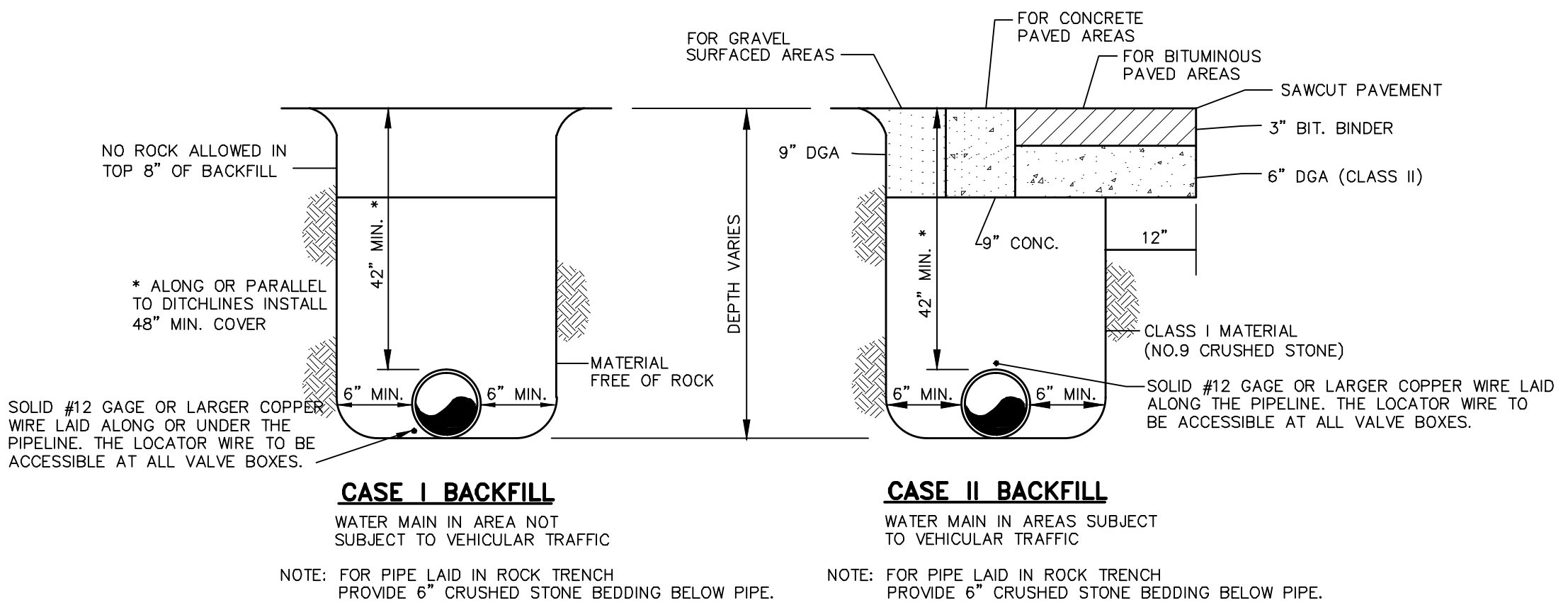
Crosses						
SIZE	3"	4"	6"	8"	10"	12"
D	18"	18"	18"	18"	22"	22"
L	18"	20"	23"	25"	29"	31"

Vertical Bends (45°-Elt or less)						
SIZE	3"	4"	6"	8"	10"	12"
D	18"	27"	33"	36"	42"	58"
Volume (Cu. Ft.)	16	23	48	82	124	175

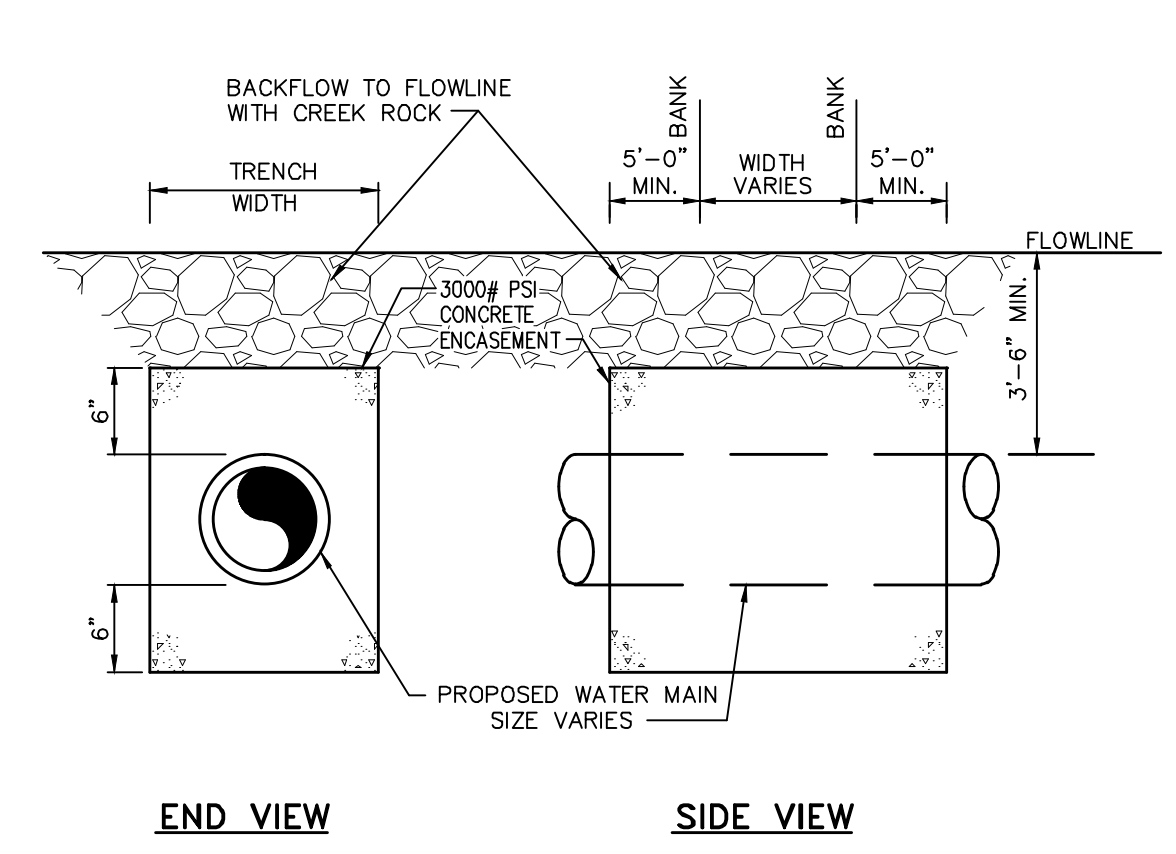
- NOTES:**
1. TABLES ARE BASED ON A SOIL BEARING CAPACITY OF 2000 POUNDS/SQUARE FOOT (PSF)
 2. IF SOIL BEARING CAPACITY IS LESS THAN 2000 PSF, OR PIPE IS LAID IN FILL, CONSULT ENGINEER.
 3. ALL FIGURES ARE MINIMUM UNLESS OTHERWISE STATED.
 4. BLOCKS MUST BE PLACED AGAINST UNDISTURBED EARTH.

THRUST BLOCK SCHEDULE

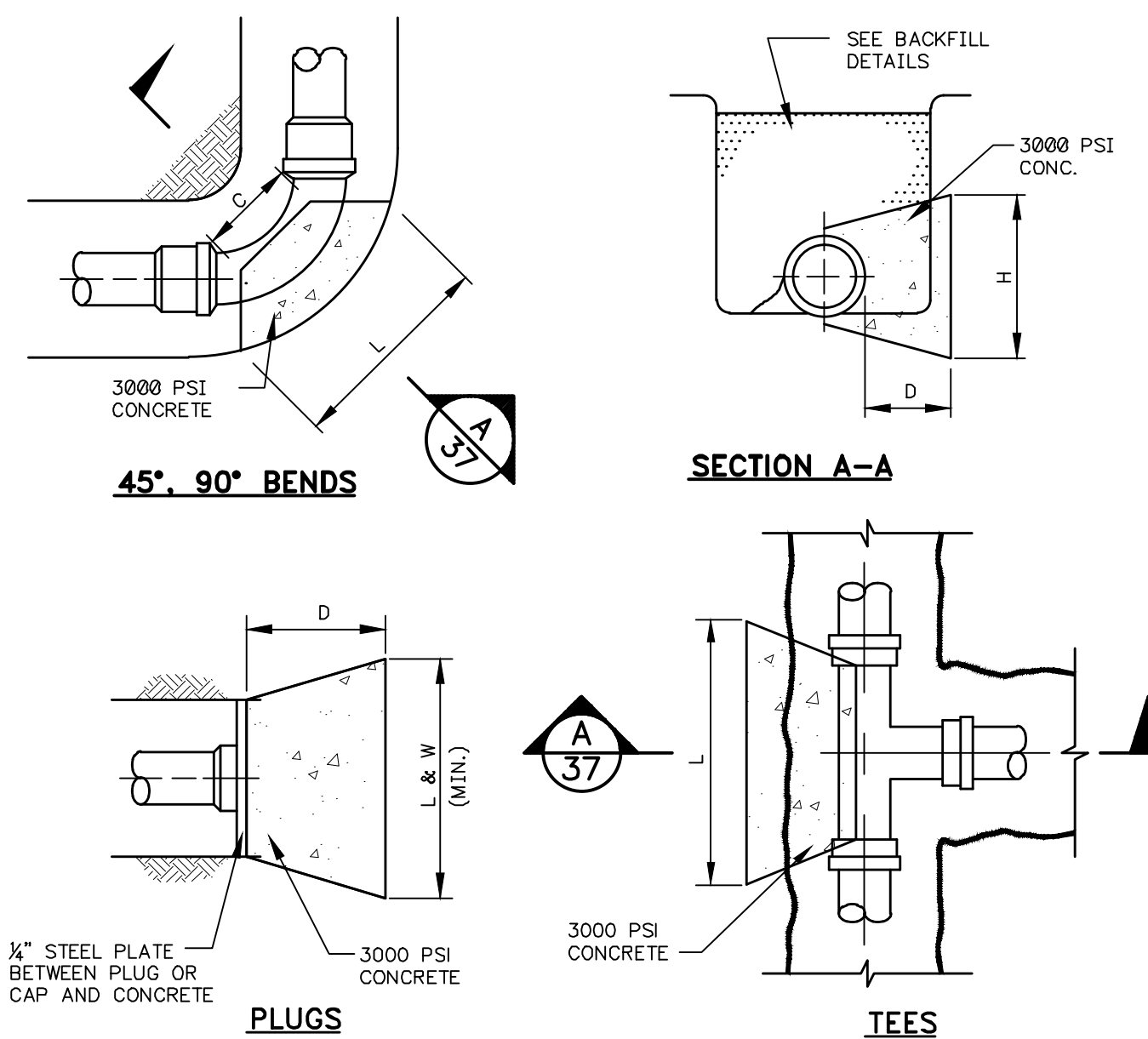
(FOR PRESSURE CLASS 250 PIPE)
SDR 17, DR 14



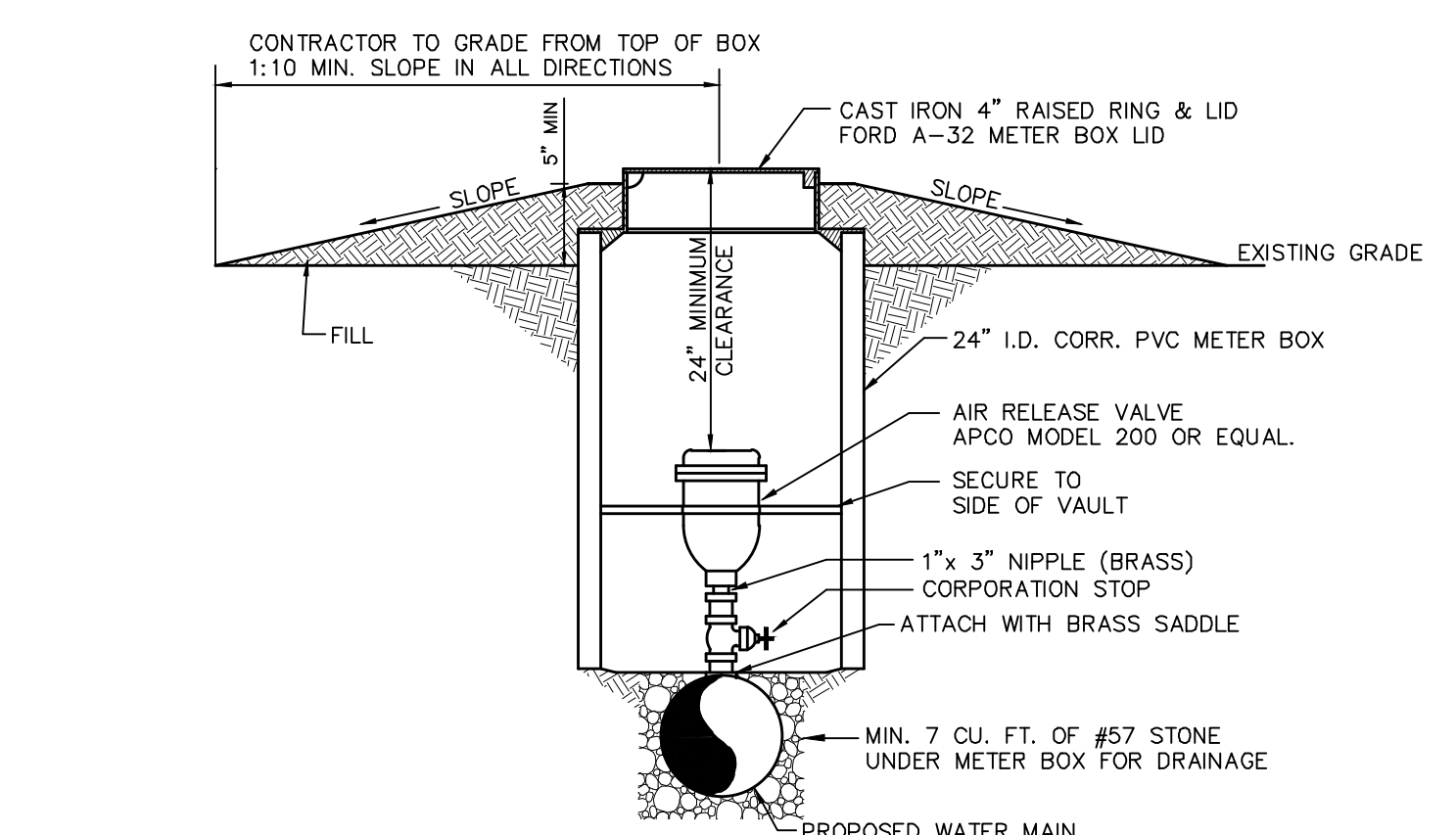
WATER MAIN TRENCHING & BACKFILLING DETAILS
N.T.S.



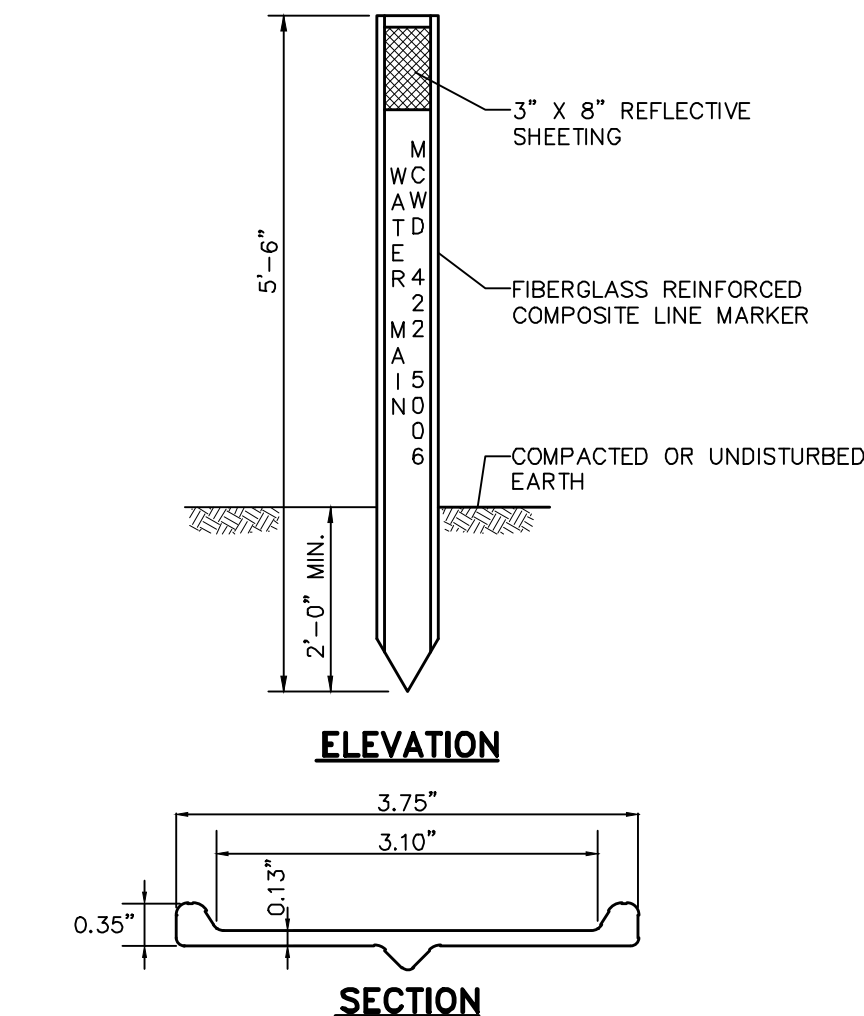
CREEK CROSSING DETAIL
N.T.S.



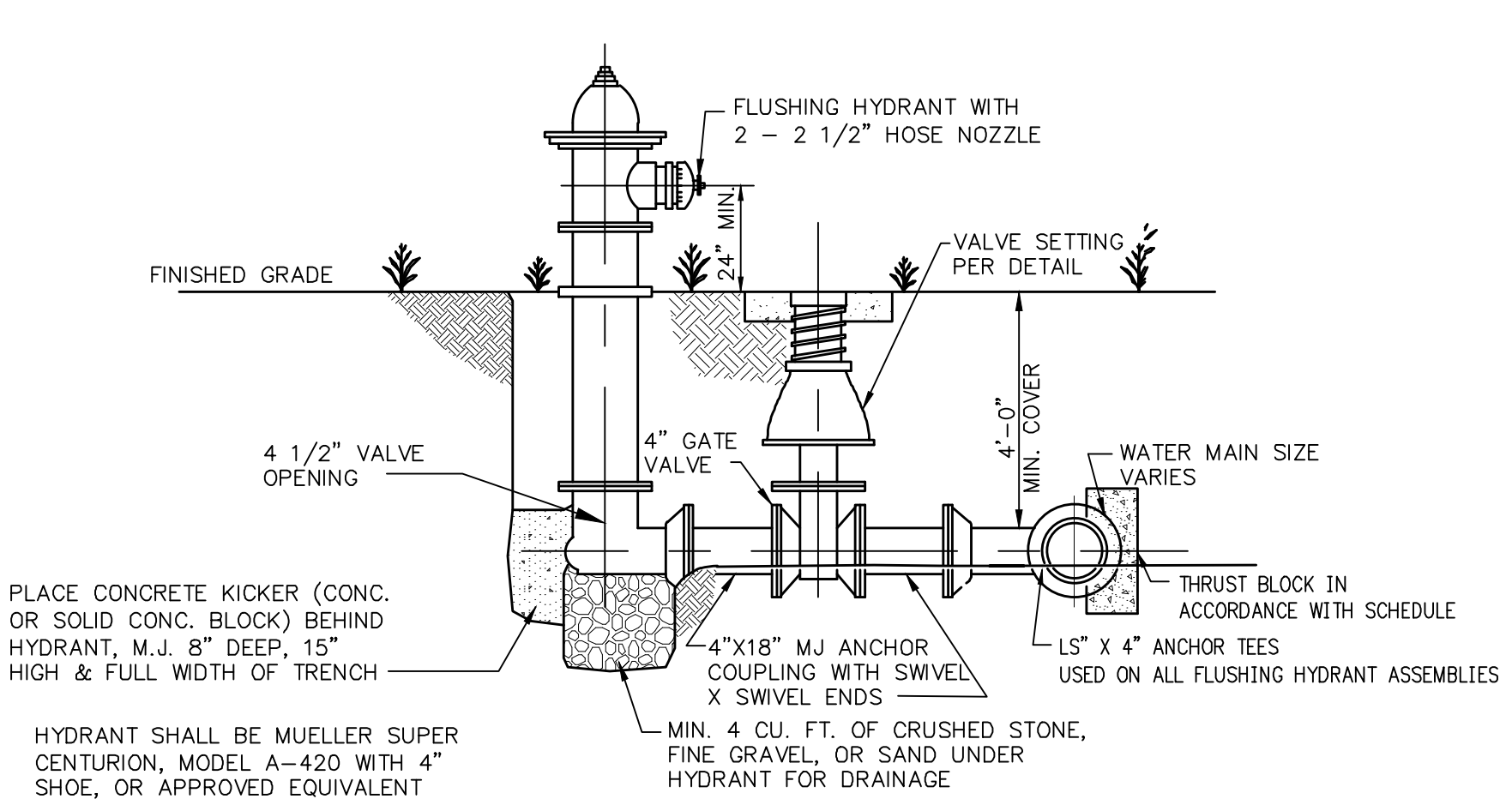
CONCRETE THRUST BLOCKS
N.T.S.



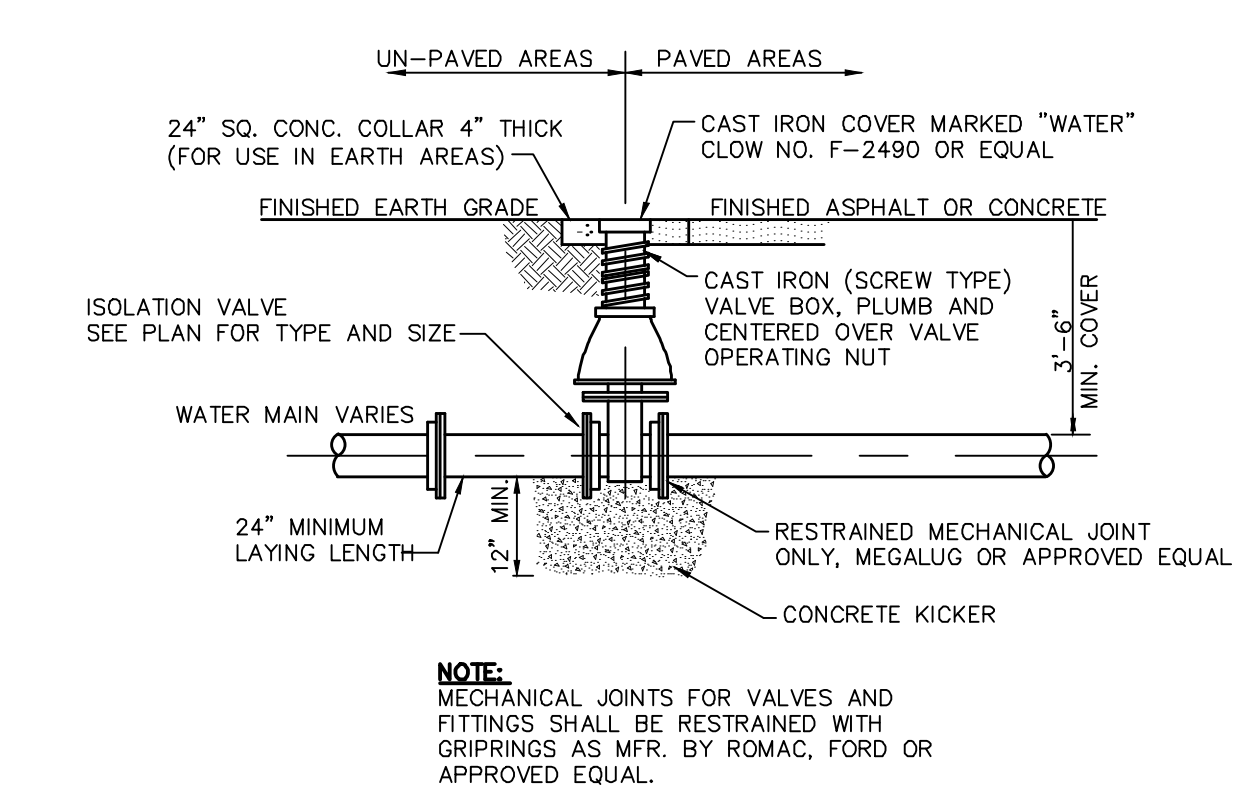
AIR RELEASE VALVE AND BOX
N.T.S.



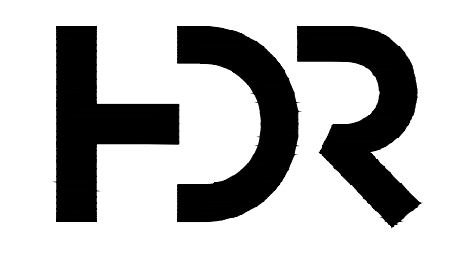
FIBERGLASS LINE MARKER
N.T.S.



FLUSHING HYDRANT ASSEMBLY
N.T.S.



GATE VALVE INSTALLATION
N.T.S.

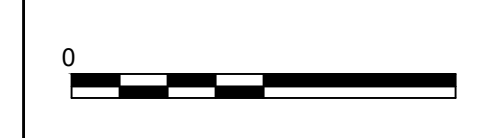


PROJECT MANAGER	KEVIN J. BRIAN
DESIGNED BY	KEVIN J. BRIAN
DRAWN BY	WILLIAM M. GUMM
QA / QC	
PROJECT NUMBER	10175028

ISSUE	DATE	DESCRIPTION

**MEADE COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS
MEADE COUNTY, KENTUCKY**

**CIVIL
STANDARD DETAILS**

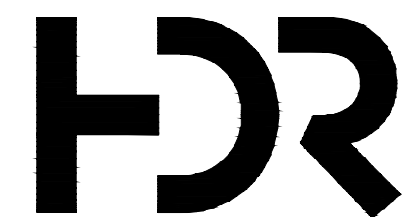
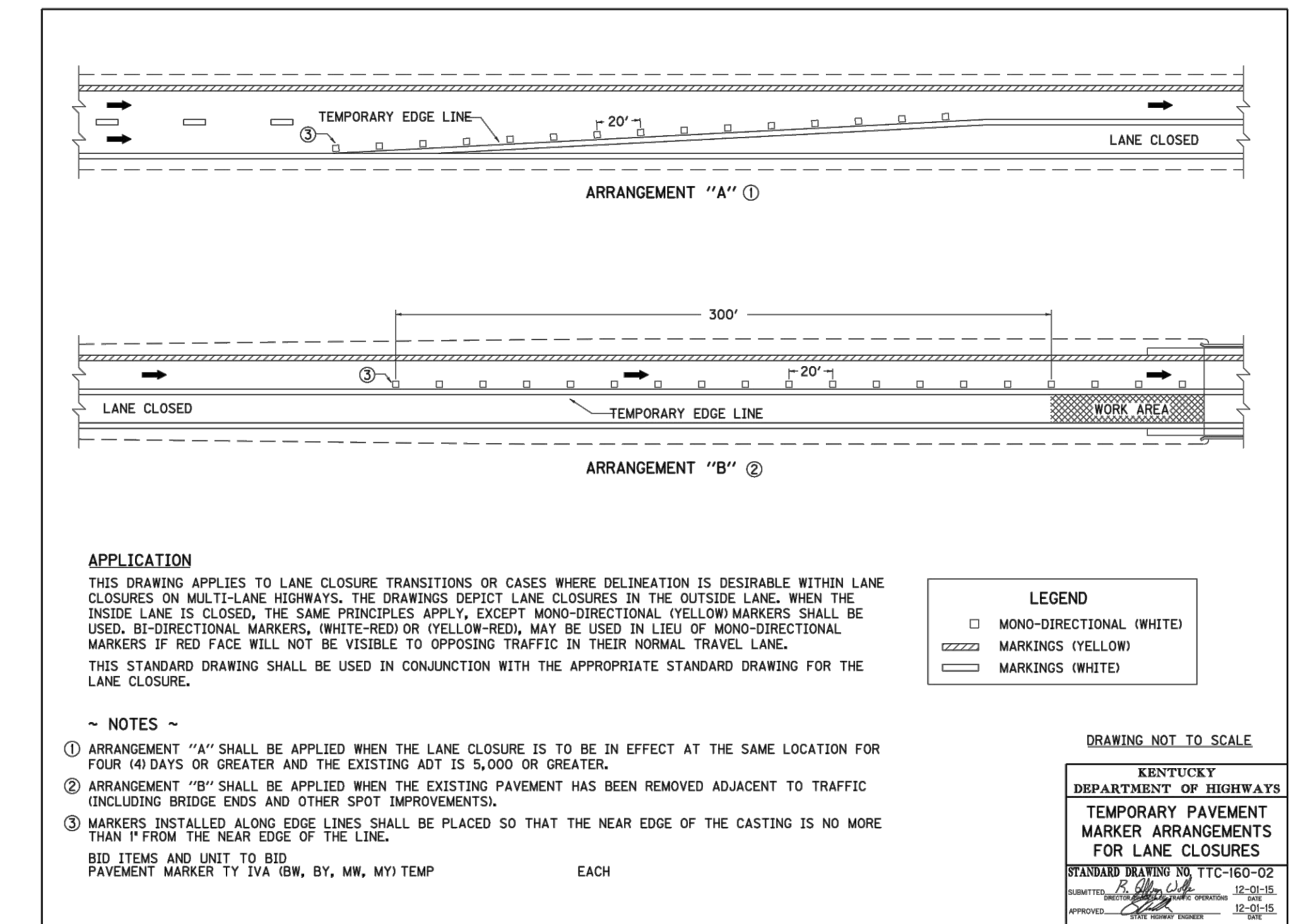
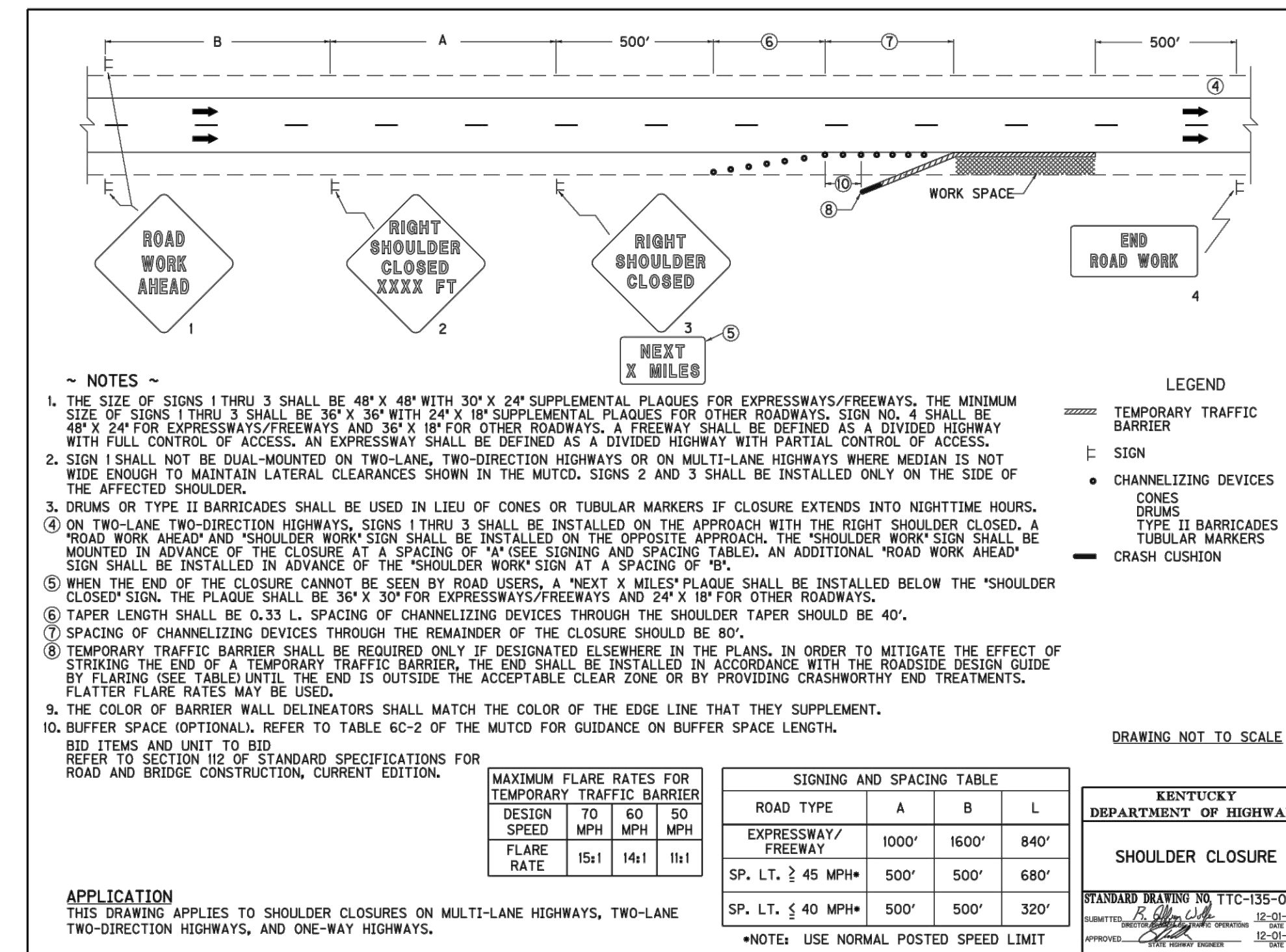
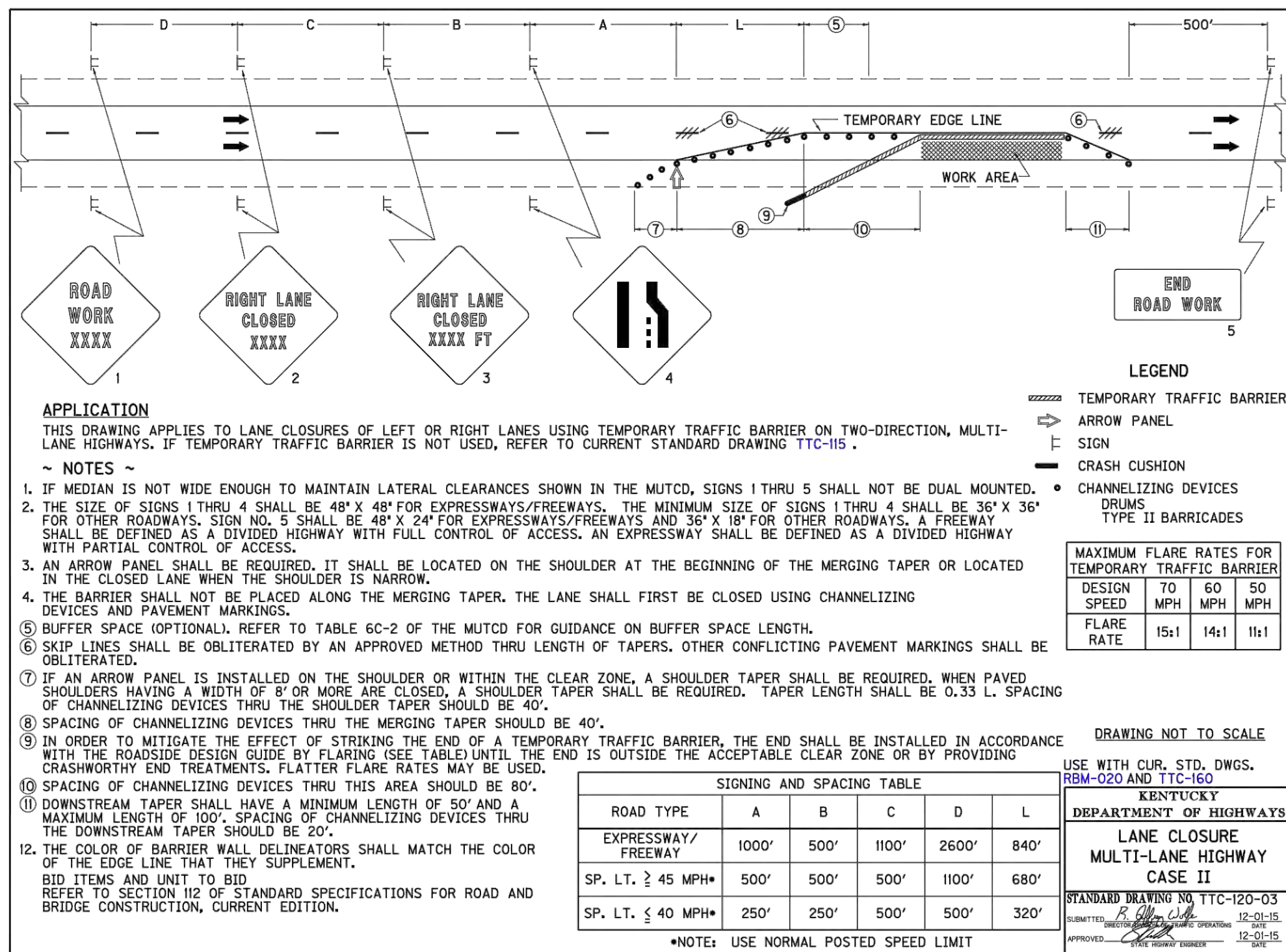
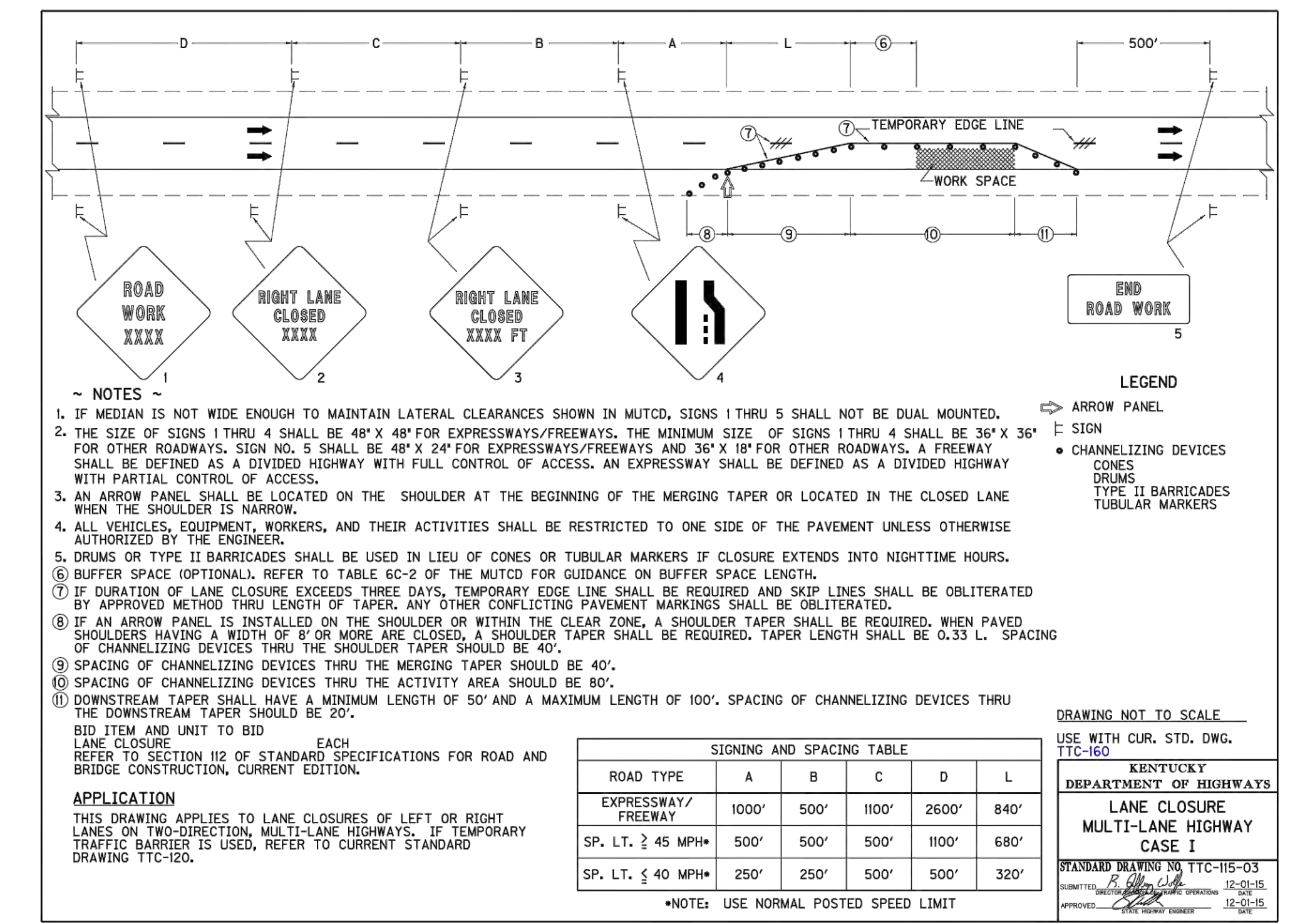
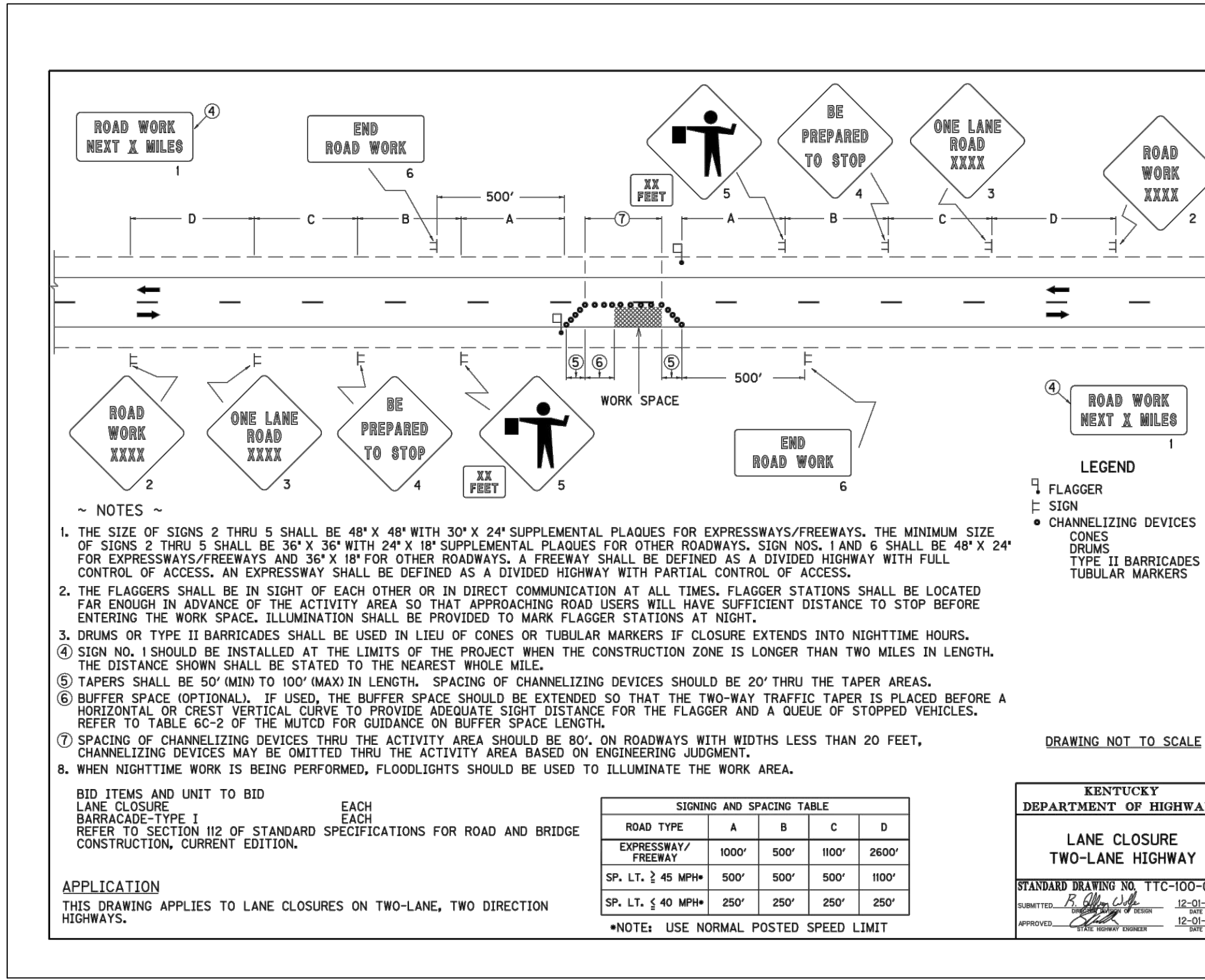


FILENAME | C-54.dwg
SCALE | NONE

SHEET
C-54

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE SURE THAT ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE TRAFFIC CONTROLS FOR STREET CONSTRUCTION AND MAINTENANCE OPERATIONS OF LOUISVILLE METRO PUBLIC WORKS TRAFFIC ENGINEERING, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 AND THE KENTUCKY DEPARTMENT OF HIGHWAY STANDARD DRAWINGS, OR AS APPROVED BY LOUISVILLE METRO PUBLIC WORKS AND THE KENTUCKY DEPARTMENT OF HIGHWAYS DISTRICT 5.
2. BUSINESSES SHALL BE NOTIFIED 5 WORKING DAYS PRIOR TO CLOSING THEIR DRIVEWAYS/ROADWAYS.
3. THE ENGINEER MAY REQUIRE THE USE OF ADDITIONAL SIGNAGE AND/OR BARRICADES OR ADJUSTMENT OF SIGNAGE SPACING TO BETTER FIT THE EXISTING PHYSICAL CONDITIONS OR TRAFFIC PATTERNS.
4. SIGNAGE SHALL BE EITHER COVERED OR MOVED BEHIND THE DITCH LINE AND MADE INACCESSIBLE TO THE VIEW OF TRAFFIC AT ANY TIME THE LANE IS NOT PHYSICALLY CLOSED OR WHERE THERE ARE NO CONSTRUCTION HAZARDS.
5. ALL SIGNAGE USED SHALL BE RETROREFLECTIVE.
6. FOR THIS PROJECT, COST INVOLVED WITH MINOR ADJUSTMENTS AND/OR ADDITIONS TO TRAFFIC CONTROL REQUIREMENTS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT, AND SHALL NOT BE REGARDED AS AN EXTRA PAY ITEM. IN THE EVENT OF A CHANGE IN SCOPE OF WORK, COST FOR ADJUSTMENTS AND/OR ADDITIONS TO TRAFFIC CONTROL REQUIREMENTS SHALL BE NEGOTIATED.



PROJECT MANAGER	KEVIN J. BRIAN
DESIGNED BY	KEVIN J. BRIAN
DRAWN BY	WILLIAM M. GUMM
QA/QC	
PROJECT NUMBER	10175028

MEADE COUNTY WATER DISTRICT WATER SYSTEM IMPROVEMENTS MEADE COUNTY, KENTUCKY

CIVIL MAINTENANCE OF TRAFFIC DETAILS

ANDY BESHEAR
GOVERNOR



REBECCA W. GOODMAN
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

ANTHONY R. HATTON
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

October 7, 2020

Mr. Tim Gossett
Meade Co Water District
1003 Armory Pl
Brandenburg, KY 40108

RE: Meade Co Water Dist 2019 WSI Project
Meade County, KY
Meade Co Water District
AI #: 34020, APE20200001
PWSID #: 0820369-20-001

Dear Mr. Gossett:

We have reviewed the plans and specifications for the above referenced project. The plans include the construction of approximately 32,300 feet of 4-inch PVC, 60,000 feet of 6-inch PVC and 4,600 feet of 8-inch PVC waterline. This is to advise that plans and specifications for the above referenced project are APPROVED with respect to sanitary features of design, as of this date with the requirements contained in the attached construction permit.

If you have any questions concerning this project, please contact Mr. Mohammed Mohiuddin at 502-782-7020.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Humphries", written over a horizontal line.

Terry Humphries, P.E.
Supervisor, Engineering Section
Water Infrastructure Branch
Division of Water

TH: MM
Enclosures

C: HDR Engineering Inc.
Meade County Health Department
Division of Plumbing

Distribution-Major Construction

Meade Co Water District

Facility Requirements

Activity ID No.:APE20200001

Page 1 of 5

PORT000000060 (Meade Co Water Dist 2019 WSI Project) 32,300 feet of 4-inch PVC, 60,000 feet of 6-inch PVC and 4,600 feet of 8-inch PVC Waterline:

Narrative Requirements:

Condition No.	Condition
T-1	Construction of this project shall not result in the water system's inability to supply consistent water service in compliance with 401 KAR 8:010 through 8:600. [401 KAR 8:100 Section 5]
T-2	The public water system shall not implement a change to the approved plans without the prior written approval of the cabinet. [401 KAR 8:100 Section 4(3)]
T-3	A proposed change to the approved plans affecting sanitary features of design shall be submitted to the cabinet for approval in accordance with Section 2 of this administrative regulation. [401 KAR 8:100 Section 4(2)]
T-4	During construction, a set of approved plans and specifications shall be available at the job site. Construction shall be performed in accordance with the approved plans and specifications. [401 KAR 8:100 Section 3(1)]
T-5	Unless construction begins within two (2) years from the date of approval of the final plans and specifications, the approval shall expire. [401 KAR 8:100 Section 3(3)]
T-6	Upon completion of construction, a professional engineer shall certify in writing that the project has been completed in accordance with the approved plans and specifications. [401 KAR 8:100 Section 4(1)]
T-7	The system shall be designed to maintain a minimum pressure of 20 psi at ground level at all points in the distribution system under all conditions of flow. [Recommended Standards for Water Works 8.2.1, Drinking Water General Design Criteria IV.1.a]
T-8	Water lines should be hydraulically capable of a flow velocity of 2.5 ft/s while maintaining a pressure of at least 20 psi. [Drinking Water General Design Criteria IV.1.b]
T-9	The normal working pressure in the distribution system at the service connection shall not be less than 30 psi under peak demand flow conditions. Peak demand is defined as the maximum customer water usage rate, expressed in gallons per minute (gpm), in the pressure zone of interest during a 24 hour (diurnal) time period. [Drinking Water General Design Criteria IV.1.d]
T-10	When static pressure exceeds 150 psi, pressure reducing devices shall be provided on mains or as part of the meter setting on individual service lines in the distribution system. [Drinking Water General Design Criteria IV.1.c]
T-11	The minimum size of water main in the distribution system where fire protection is not to be provided should be a minimum of three (3) inch diameter. Any departure from minimum requirements shall be justified by hydraulic analysis and future water use, and can be considered only in special circumstances. [Recommended Standards for Water Works 8.2.2, Drinking Water General Design Criteria IV.2.b]

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PORT000000060 (Meade Co Water Dist 2019 WSI Project) 32,300 feet of 4-inch PVC, 60,000 feet of 6-inch PVC and 4,600 feet of 8-inch PVC Waterline:

Narrative Requirements:

Condition No.	Condition
T-12	Water mains not designed to carry fire-flows shall not have fire hydrants connected to them. [Recommended Standards for Water Works 8.4.1.b]
T-13	Flushing devices should be sized to provide flows which will give a velocity of at least 2.5 feet per second in the water main being flushed. [Recommended Standards for Water Works 8.2.4.b, Recommended Standards for Water Works 8.4.1.b]
T-14	No flushing device shall be directly connected to any sewer. [Recommended Standards for Water Works 8.2.4.b, Recommended Standards for Water Works 8.4.1.b]
T-15	Pipe shall be constructed to a depth providing a minimum cover of 30 inches to top of pipe. [Drinking Water General Design Criteria IV.3.a]
T-16	Water mains shall be covered with sufficient earth or other insulation to prevent freezing. [Recommended Standards for Water Works 8.7]
T-17	A continuous and uniform bedding shall be provided in the trench for all buried pipe. Backfill material shall be tamped in layers around the pipe and to a sufficient height above the pipe to adequately support and protect the pipe. Stones found in the trench shall be removed for a depth of at least six inches below the bottom of the pipe. [Recommended Standards for Water Works 8.7]
T-18	Water line installation shall incorporate the provisions of the AWWA standards and/or manufacturer's recommended installation procedures. [Recommended Standards for Water Works 8.7]
T-19	All materials used for the rehabilitation of water mains shall meet ANSI/NSF standards. [Recommended Standards for Water Works 8.1]
T-20	Packing and jointing materials used in the joints of pipe shall meet the standards of AWWA and the reviewing authority. [Recommended Standards for Water Works 8.1]
T-21	All tees, bends, plugs and hydrants shall be provided with reaction blocking, tie rods or joints designed to prevent movement. [Recommended Standards for Water Works 8.7]
T-22	All materials including pipe, fittings, valves and fire hydrants shall conform to the latest standards issued by the ASTM, AWWA and ANSI/NSF, where such standards exist, and be acceptable to the Division of Water. [Recommended Standards for Water Works 8.1]
T-23	Water mains which have been used previously for conveying potable water may be reused provided they meet the above standards and have been restored practically to their original condition. [Recommended Standards for Water Works 8.1]

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PORT000000060 (Meade Co Water Dist 2019 WSI Project) 32,300 feet of 4-inch PVC, 60,000 feet of 6-inch PVC and 4,600 feet of 8-inch PVC Waterline:

Narrative Requirements:

Condition No.	Condition
T-24	Manufacturer approved transition joints shall be used between dissimilar piping materials. [Recommended Standards for Water Works 8.1]
T-25	The minimum size of water main which provides for fire protection and serving fire hydrants shall be six-inch diameter. [Recommended Standards for Water Works 8.2, Drinking Water General Design Criteria IV.2.a]
T-26	Pipes and pipe fittings containing more than 8% lead shall not be used. All products shall comply with ANSI/NSF standards. [Recommended Standards for Water Works 8.1]
T-27	Gaskets containing lead shall not be used. Repairs to lead-joint pipe shall be made using alternative methods. [Recommended Standards for Water Works 8.1]
T-28	Pipe materials shall be selected to protect against both internal and external pipe corrosion. [Recommended Standards for Water Works 8.1]
T-29	Dead end mains shall be equipped with a means to provide adequate flushing. [Recommended Standards for Water Works 8.2]
T-30	The hydrant lead shall be a minimum of six inches in diameter. Auxiliary valves shall be installed on all hydrant leads. [Recommended Standards for Water Works 8.4.3]
T-31	A sufficient number of valves shall be provided on water mains to minimize inconvenience and sanitary hazards during repairs. [Recommended Standards for Water Works 8.3]
T-32	Wherever possible, chambers, pits or manholes containing valves, blow-offs, meters, or other such appurtenances to a distribution system, shall not be located in areas subject to flooding or in areas of high groundwater. Such chambers or pits should drain to the ground surface, or to absorption pits underground. The chambers, pits and manholes shall not connect directly to any storm drain or sanitary sewer. Blow-offs shall not connect directly to any storm drain or sanitary sewer. [Recommended Standards for Water Works 8.6]
T-33	At high points in water mains where air can accumulate provisions shall be made to remove the air by means of air relief valves. [Recommended Standards for Water Works 8.5.1]
T-34	Automatic air relief valves shall not be used in situations where flooding of the manhole or chamber may occur. [Recommended Standards for Water Works 8.5.1]

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PORT000000060 (Meade Co Water Dist 2019 WSI Project) 32,300 feet of 4-inch PVC, 60,000 feet of 6-inch PVC and 4,600 feet of 8-inch PVC Waterline:

Narrative Requirements:

Condition No.	Condition
T-35	The open end of an air relief pipe from automatic valves shall be extended to at least one foot above grade and provided with a screened, downward-facing elbow. [Recommended Standards for Water Works 8.5.2.c]
T-36	Discharge piping from air relief valves shall not connect directly to any storm drain, storm sewer, or sanitary sewer. [Recommended Standards for Water Works 8.5.2.d]
T-37	Water pipe shall be constructed with a lateral separation of 10 feet or more from any gravity sanitary or combined sewer measured edge to edge where practical. If not practical a variance may be requested to allow the water pipe to be installed closer to the gravity sanitary or combined sewer provided the water pipe is laid in a separate trench or undisturbed shelf located on one side of the sewer with the bottom of the pipe at least 18 inches above the top of the gravity sanitary or combined sewer pipe. [Drinking Water General Design Criteria IV.3.b]
T-38	Water lines crossing sanitary, combined or storm sewers shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sanitary, combined or storm sewer with preference to the water main located above the sanitary, combined or storm sewer. [Drinking Water General Design Criteria IV.3.c]
T-39	At crossings, one full length of water pipe shall be located so both joints will be as far from the sewer as possible. [Recommended Standards for Water Works 8.8.3.b]
T-40	There shall be no connection between the distribution system and any pipes, pumps, hydrants, or tanks whereby unsafe water or other contaminating materials may be discharged or drawn into the system. [Recommended Standards for Water Works 8.10.1]
T-41	Water utilities shall have a cross connection program conforming to 401 KAR 8. [Recommended Standards for Water Works 8.10.1]
T-42	Installed pipe shall be pressure tested and leakage tested in accordance with the appropriate AWWA Standards. [Recommended Standards for Water Works 8.7.6]
T-43	New, cleaned and repaired water mains shall be disinfected in accordance with AWWA Standard C651. The specifications shall include detailed procedures for the adequate flushing, disinfection, and microbiological testing of all water mains. In an emergency or unusual situation, the disinfection procedure shall be discussed with the Division of Water. [Recommended Standards for Water Works 8.7.7]
T-44	A minimum cover of five feet shall be provided over pipe crossing underwater. [Recommended Standards for Water Works 8.9.2]

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PORT0000000060 (Meade Co Water Dist 2019 WSI Project) 32,300 feet of 4-inch PVC, 60,000 feet of 6-inch PVC and 4,600 feet of 8-inch PVC Waterline:

Narrative Requirements:

Condition No.	Condition
T-45	Valves shall be provided at both ends of water crossings so that the section can be isolated for testing or repair; the valves shall be easily accessible, and not subject to flooding for pipes crossing underwater. [Recommended Standards for Water Works 8.9.2.b]
T-46	Permanent taps or other provisions to allow insertion of a small meter to determine leakage and obtain water samples on each side of the valve closest to the supply source for pipes crossing. [Recommended Standards for Water Works 8.9.2.c]