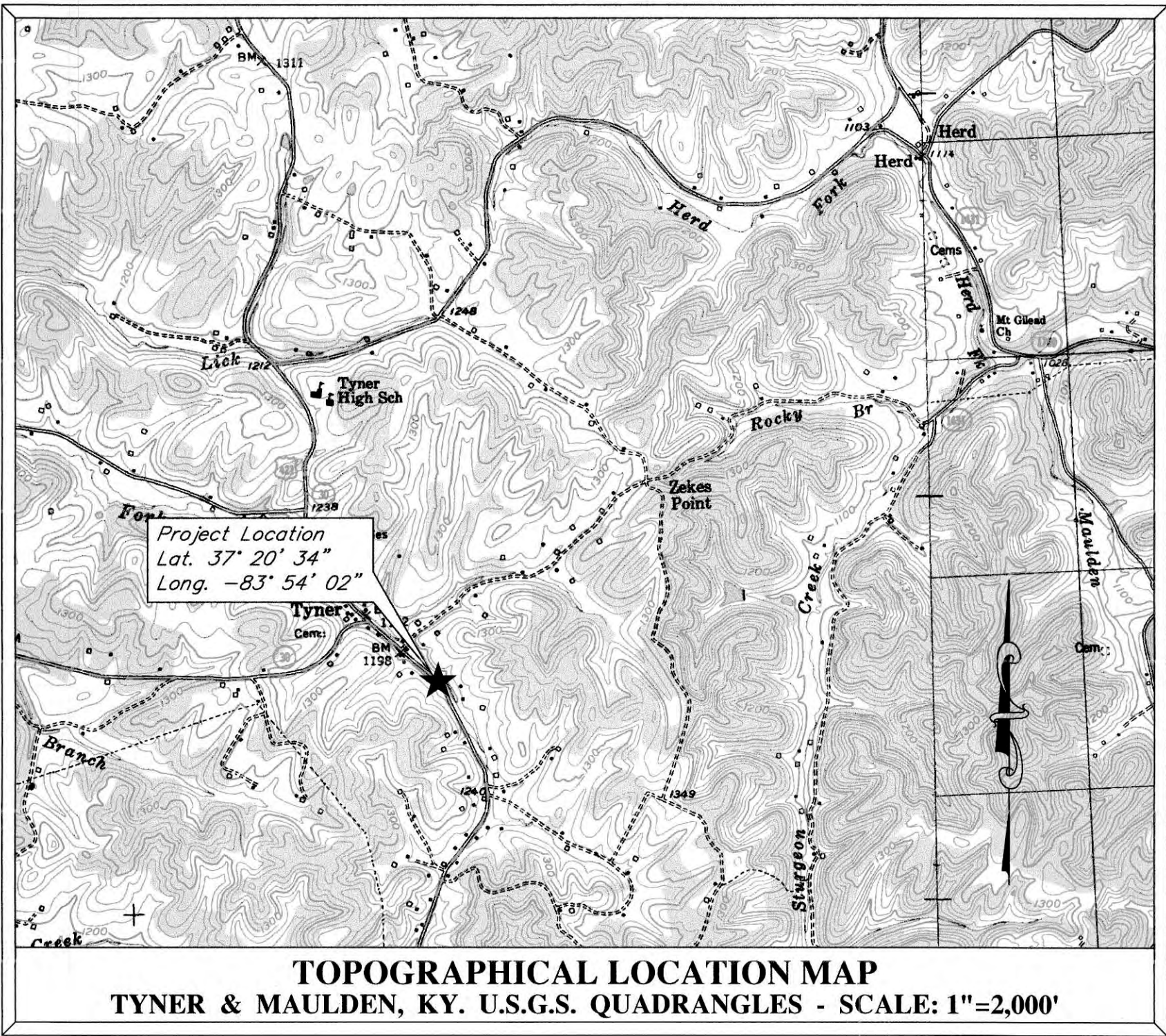
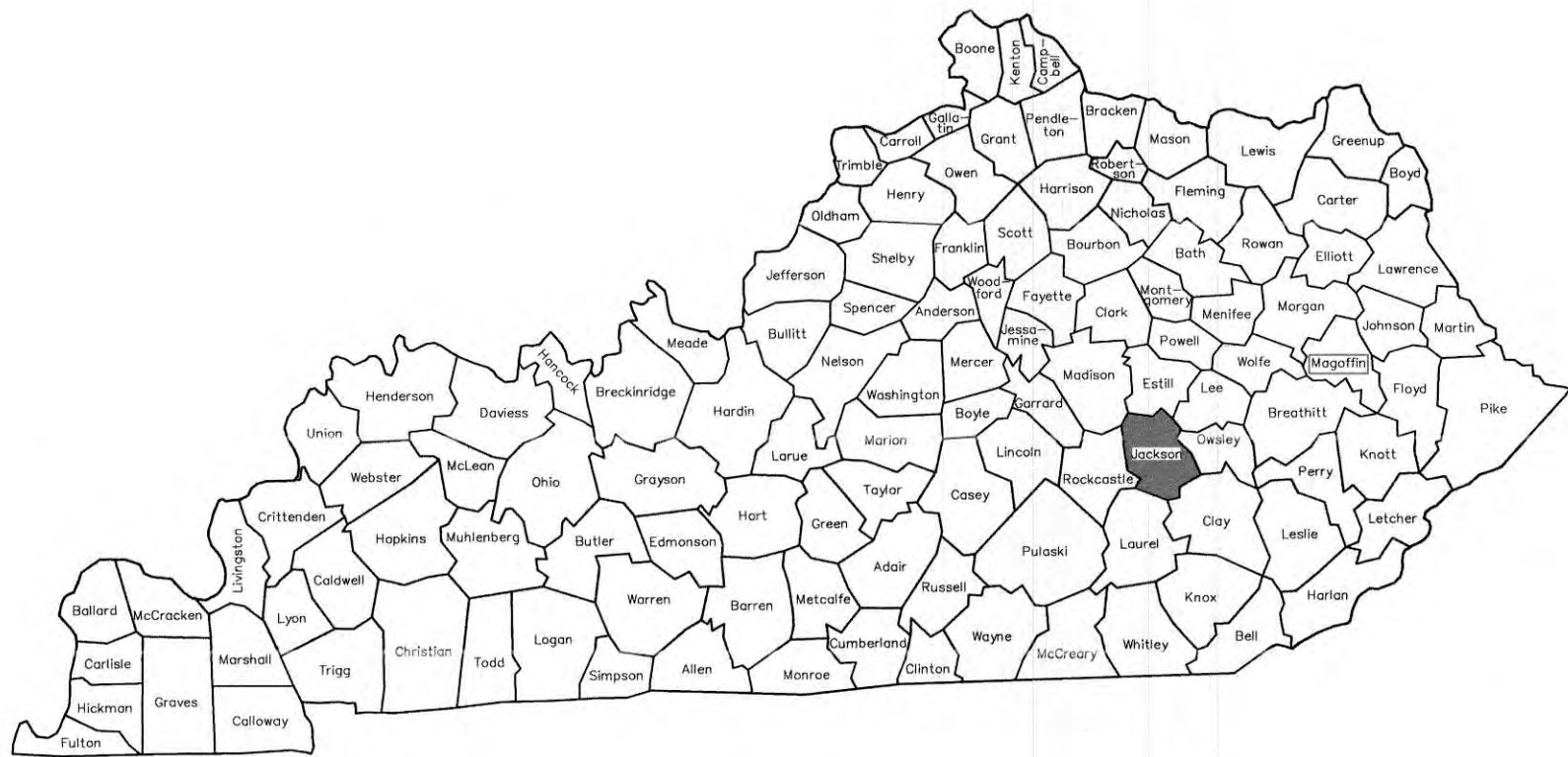


JACKSON COUNTY WATER ASSOCIATION

KY 30 RECONSTRUCTION

WATERLINE RELOCATION - KYTC ITEM NO. 10-279.61/11-287.30

JACKSON COUNTY, KENTUCKY

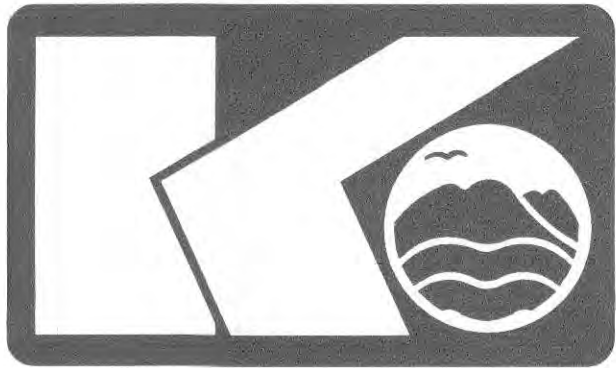


INDEX OF SHEETS

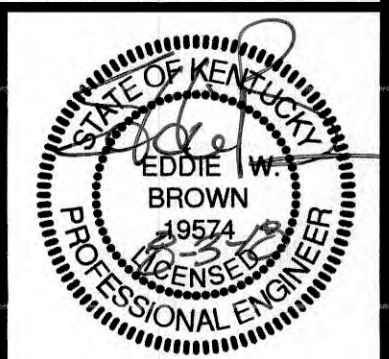
DESCRIPTION	SHEET NO.
COVER SHEET	U1
GENERAL NOTES	U2
SHEET LAYOUT	U3
MAINLINE STA. 95+00 TO STA. 110+00	U4
MAINLINE STA. 110+00 TO STA. 125+00	U5
MAINLINE STA. 125+00 TO STA. 140+00	U6
MAINLINE STA. 140+00 TO STA. 155+00	U7
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10-279.61 - JCWA Relocation Plans
For Information Purposes Only
Not As-Built Plans

Prepared By:



KENVIRONS, INC.
FRANKFORT, KENTUCKY



N:\P2017112\Plans\02 General Notes.dwg, 8/2/2018 10:15:38 AM, DWG To PDF.pc3

GENERAL NOTES

- Stations shown on the water line are for reference only and do not reflect the actual linear lengths of pipe required for construction.
- The Contractor shall be responsible for coordinating all construction work with local utility companies and other concerned parties.
- Existing buried utilities are shown on the drawings in their general location utilizing the best available information. Before construction begins near or through existing utilities (i.e. Gas Co., Telephone Co., etc.) each utility company shall be notified, a request for the exact location of the utility shall be made, and permission to proceed with construction. The Contractor shall contact BUD at telephone no. 1-800-752-6007 or 811.
- Before construction begins through any property, the Contractor shall make himself aware of the exact location of construction through the property and the bounds of the permanent and temporary construction easements.
- The Contractor shall have on hand at the job site 11 1/4", 22 1/2", 45" and 90" bends for use where necessary for proper installation.
- Pipe joint deflection shall not exceed 2". Bending of PVC pipe will not be allowed.
- At some locations, the Contractor may be required to provide extra cover over line. Cost of extra cover is to be included in unit price bid for line installation and no separate payment will be made for such extra cover. All such locations are shown on the plans.
- Connecting new lines to existing lines or to work in other contracts is subsidiary to the contract unless specifically itemized in the Bid Schedule. It includes fittings, sleeves, etc., but does not include gate valves, which are an extra pay item.
- All fittings, thrust restraints and appurtenances to construct the pipelines as shown shall be included in the unit cost for the pipe and are not separate pay items.
- The pipe lengths have been estimated as close as possible. The Contractor shall be responsible for ordering pipe quantities necessary for installation to the limits as shown on the Drawings unless otherwise instructed. Any left-over pipe quantities shall be the property of the Contractor unless other arrangements are made. The Owner shall not be responsible for re-stocking or other charges associated with the left over pipe.
- Ductile iron pipe shall be installed in accordance with Standard AWWA C150/ANSI A21.50 Laying Condition Type 3 unless otherwise noted.
- All driveways that are cut shall be backfilled with KYTC #8 or 9-M and shall be included in the unit price for pipe installation unless specifically itemized in the bid schedule.
- All open cut streets and roads and trenches cut in existing pavements shall be backfilled with compacted crushed stone or DGA in accordance with the miscellaneous details drawings.
- Paved driveways shall be free-bored. Free bore unit prices are contained in Bid Schedule. The material in which the free bore is made is unclassified.
- It is the responsibility of the Contractor to comply with all regulations regarding the effect on the environment from the discharge of chlorinated water. See Technical Specification 15103 Subsection 3 for methods of sterilization and for disposing of heavily chlorinated water.
- The time period for pressure testing in this project shall be at least 6 hours unless otherwise stipulated by the Owner.
- Marking tape and tracer wire shall be installed with all waterline pipe. See Technical Specification 15100, and the miscellaneous details drawings.
- During the process of tapping asbestos cement mains, the Contractor shall conform to OSHA regulations governing the handling of hazardous waste. Pieces of asbestos cement resulting from the tap shall be double bagged, placed in a rigid container and disposed of in an approved landfill.
- Locations where pipeline is to be installed on state road right of way are approximately delineated on the drawings. The Contractor, along with the Engineer's Representative, shall determine, precisely, the field locations for transitions between private easements, and state and county road rights of way.
- All pipelines installed in the ditchline on state or county rights of way shall have 42" minimum cover over top of pipe.
- The pipeline trench width will be strictly enforced. See Technical Specification 15100 for trench width requirements.
- Rough cleanup must be performed as the pipe is laid or as soon thereafter as possible. Failure to keep rough cleanup current with the pipe laying may be grounds for additional retainage.
- Do not cut fences except where specifically shown and noted.
- The Contractor shall obtain and pay for all grading, storm water, etc. permits, if any are required to complete the work. The Contractor shall maintain compliance with all conditions, limitations and stipulations of all permits. The Contractor shall not commence work, except mobilization, until he has obtained all required permits for said work. The Contractor shall supply the Owner with copies of all permits within 24 hours of receipt. A KPDES Storm Water Discharge Permit will be required for this project. The Contractor shall fill out, sign and submit the Notice of Intent (NOI) and the Notice of Termination (NOT).
- All work shall be provided in compliance with all applicable local, state and national building codes.
- All work shall be executed in compliance with the current workplace safety regulations of the U.S. Department of Labor, Occupational Safety and Health Administration (O.S.H.A.).
- The Contractor shall restrict all construction activities to within the limits of the public right of way and the private easements and fee parcels unless otherwise approved by the Owner in writing. The Contractor shall be solely liable for any and all Work he performs outside of the boundaries of the public road right of way and the private easements and fee parcels provided by the Owner.
- The Contractor is solely responsible for determination of the existence and location of any and all other buried utilities in the vicinity of his Work. Utilities shown on the Project Drawings are purported to be approximate only and not warranted to be complete nor accurately located. Additional buried utility lines, other than as shown on the Project Drawings, may exist in the vicinity of the Project work. The Contractor shall contact local utilities and/or locating service at least 48 hours prior to commencing work on the Project.
- The Contractor shall be responsible for all traffic control measures necessary for the safe execution of his work, including but not limited to flaggers, traffic signage, barricades, construction fencing and nighttime warning lights. Traffic safety provisions shall be employed by the Contractor in accordance with the Standards of the appropriate State and local public highway authorities.
- All excavation and all boring shall be considered unclassified excavation and unclassified boring. No additional payment shall be due and payable to the Contractor for dewatering of pipe trenches/excavations or for excavation and removal of rock or for boring casing through rock.
- All water main fittings shall be ductile iron, mechanical joint compact fittings for water service complying with AWWA Standard C153. Unless otherwise specifically shown or noted, no PVC fitting, other than in-line repair couplings, will be accepted.
- All water main fittings shall be anchored with poured concrete thrust blocks as shown in the miscellaneous details drawings. Wrap fittings in minimum 5-mil plastic (PVC) wrap prior to forming and pouring the block.
- Prior to cutting existing driveways, the Contractor shall acquire the property owner's/occupant's permission and notify the property owner/occupant at least 24 hours in advance and shall schedule his Work such to restrict access to not more than 2 hours in one (1) day.

EWB 01/22/18 (2017044)

GENERAL NOTES (CONT.)

- The Contractor shall repair/replace any and all existing utility lines and equipment damaged by the Contractor's Work, to the satisfaction of the damaged utility and at no additional cost to the Owner.
- The Contractor shall protect all drainage culverts in the vicinity of his Work and shall repair or replace all culverts damaged by his Work and at no additional cost to the Owner. All existing culverts may not be shown/noted on the Project Drawings.
- Existing utility lines may be cathodically protected. The installation of all ductile iron pipe, fittings and appurtenances within 100' of cathodically protected utility lines shall comply with AWWA Standard C105 (Polyethylene Encasement), latest revision, and at no additional cost to the Owner.
- If sewer or other sanitary facilities are encountered, the Engineer shall direct the relocation of the water main to provide separation and/or other protection of the water main in accordance with terms of the Kentucky Department for Environmental Protection, Division of Water Construction Permit. The Contractor shall provide relocation of the water main as directed by the Engineer and the Contract Price adjusted only by/to the number of Bid Item units actually provided.
- No water service shall be activated until the new work has been completed, sterilized, and tested in accordance with the Contract Documents and accepted in writing by the Owner.

ENVIRONMENTAL NOTES

- When crossing all streams and ditches, silt barriers, ie. straw bales or silt fences, shall be put in place to prevent sediment runoff into stream. Conventional stream crossings shall be accomplished during low flow periods. Stream banks shall be reseeded with native vegetation beneficial to wildlife immediately following completion of the stream crossing. Disturbed surfaces shall be restored to original contours and excess materials removed to a properly confined area.
- Contractor shall not disturb any trees with a diameter at breast height greater than three (3) inches.
- Any excavation by the Contractor that uncovers a historical or archaeological artifact shall be immediately reported to the Owner and Engineer. Construction shall be temporarily halted pending the notification process and further directions after consultation with the State Historic Preservation Officer (SHPO).

HIGHWAY DEPARTMENT NOTES

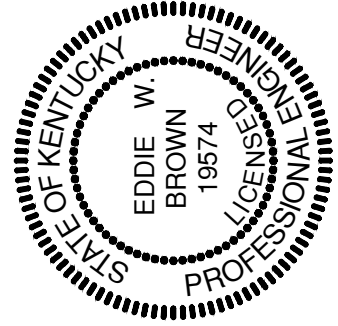
- Underground utilities installed inside state right of way shall be located within 3-5 feet from the edge of the right of way unless otherwise shown on the plans.
- Underground utilities on state right of way shall be installed at a minimum depth of 42" under roadways, ramps, and ditch lines and 30" in all other areas within state right of way.
- Underground utilities crossing any paved driveway inside state right of way shall be installed by boring unless written permission to open cut is obtained from the property owner.
- Underground utilities shall not be installed in embankment fills or between edge of pavement and ditchline unless specifically noted on permitted plans.
- Fire Hydrants or utility service boxes should be located within 2 feet from the edge of right of way line, or off right of way.
- Contact KYTC-DOH District Office prior to beginning work.
- All affected KYTC ditchlines shall remain free of excess silt or erosion and constructed to the normal typical section of the roadway with a minimum depth of 18 inches from the shoulder break point.
- All necessary steps shall be taken to prevent erosion or siltation of the public right of way, adjoining property and waterways.
- All traffic control for construction and maintenance operations will conform to the *Manual on Uniform Traffic Control Devices*. All construction and maintenance operations must be planned with full regard to safety to keep traffic interference to an absolute minimum. Closure of intersecting streets, road approaches or other access points is to be held to a minimum.
- All areas disturbed by utility installation should be kept to a minimum and restoration methods should be in accordance with Kentucky Transportation Cabinet's *2012 Standard Specifications for Road and Bridge Construction*.



In compliance with the Kentucky Dig Law, the Contractor shall call (800) 752-6007 (Kentucky811) toll free or dial 811 a minimum of two and no more than ten business days prior to excavation for information of the location of existing underground utilities. It will be the Contractors responsibility to coordinate excavation with all Utility Owners.

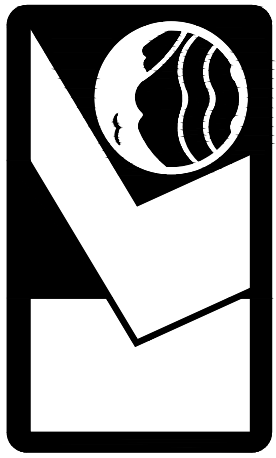
GENERAL NOTES

JACKSON COUNTY WATER ASSOCIATION
KY 30 RECONSTRUCTION
WATERLINE RELOCATION - KYTC ITEM 10-279.61
JACKSON COUNTY, KENTUCKY



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DATE: 01/18	DATE: 01/18
SCALE: N/A	REVISIONS

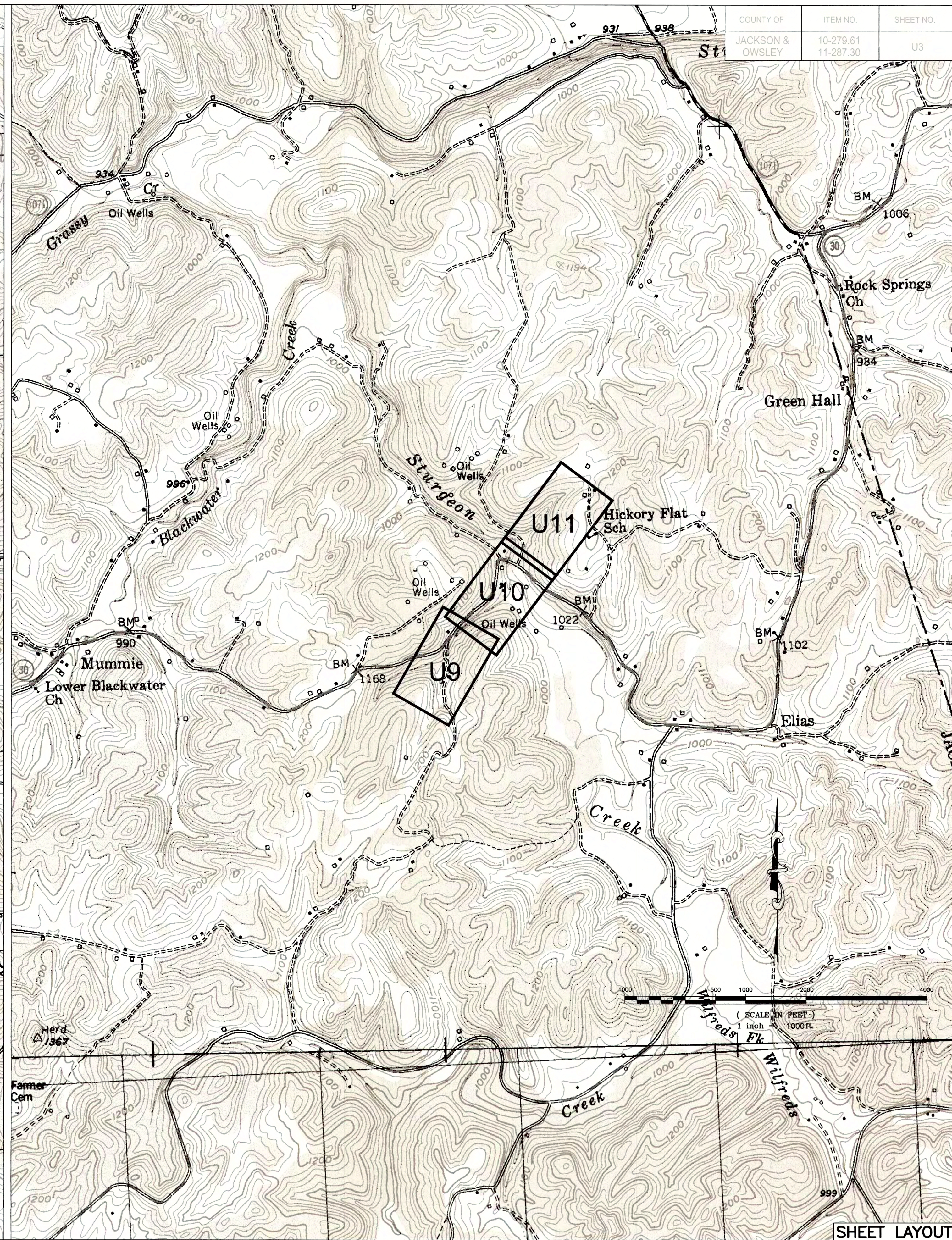
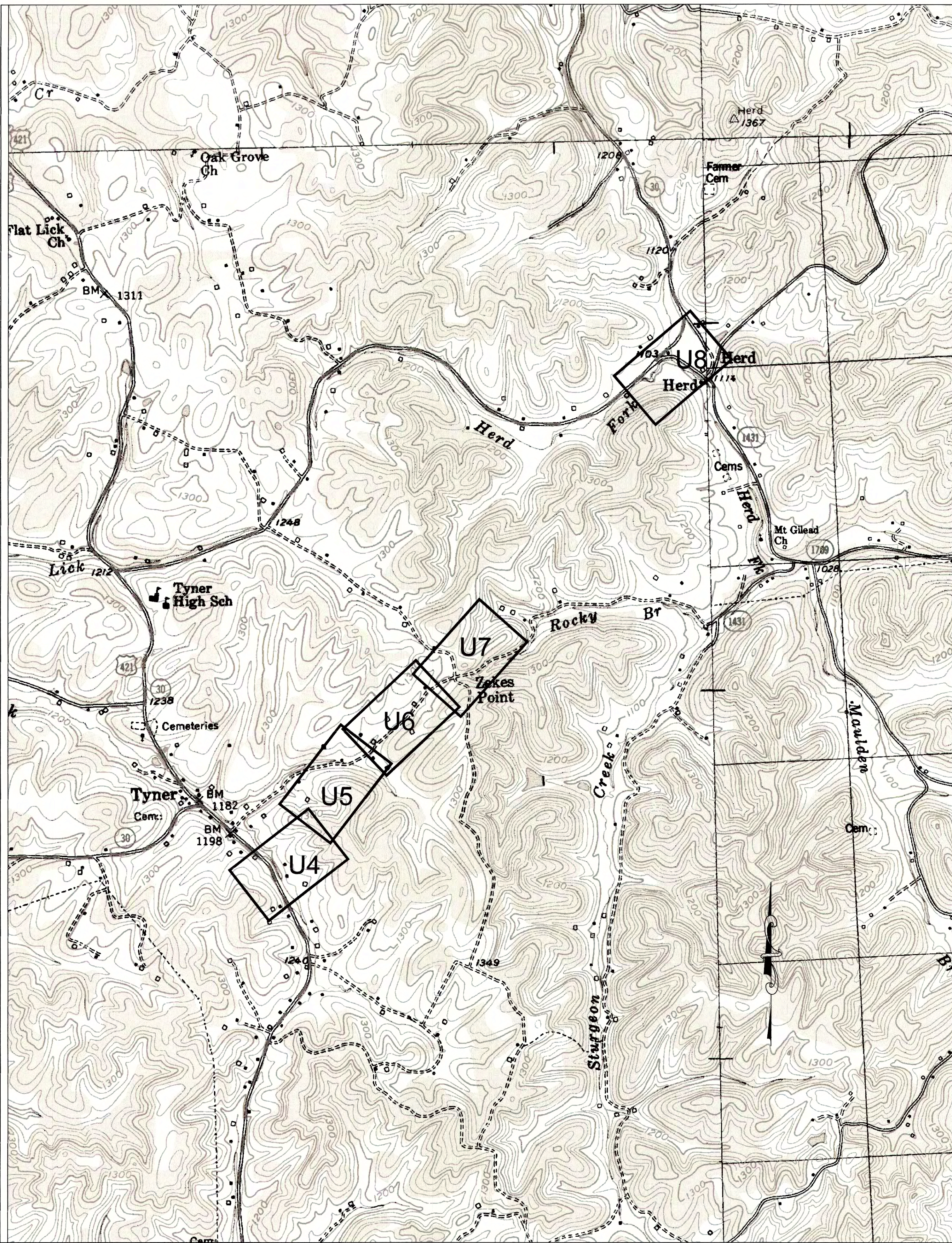
KENVIRONS, INC.
FRANKFORT, KENTUCKY



PROJECT NO.
2017112

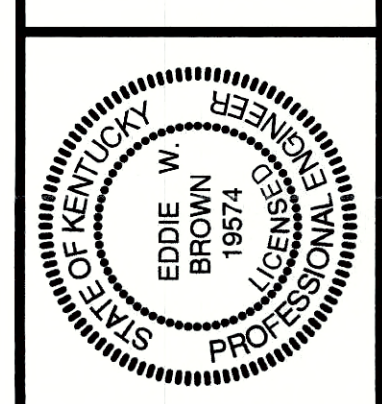
SHEET NO.
U2

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COUNTY OF	ITEM NO.	SHEET NO.
JACKSON & OWSLEY	10-279.61 11-287.30	U3

JACKSON COUNTY WATER ASSOCIATION
KY 30 RECONSTRUCTION
WATERLINE RELOCATION - KYTC ITEM 10-279.61
JACKSON COUNTY, KENTUCKY



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DATE: 01/18	SCALE: 1"=1,000'
REVISIONS	

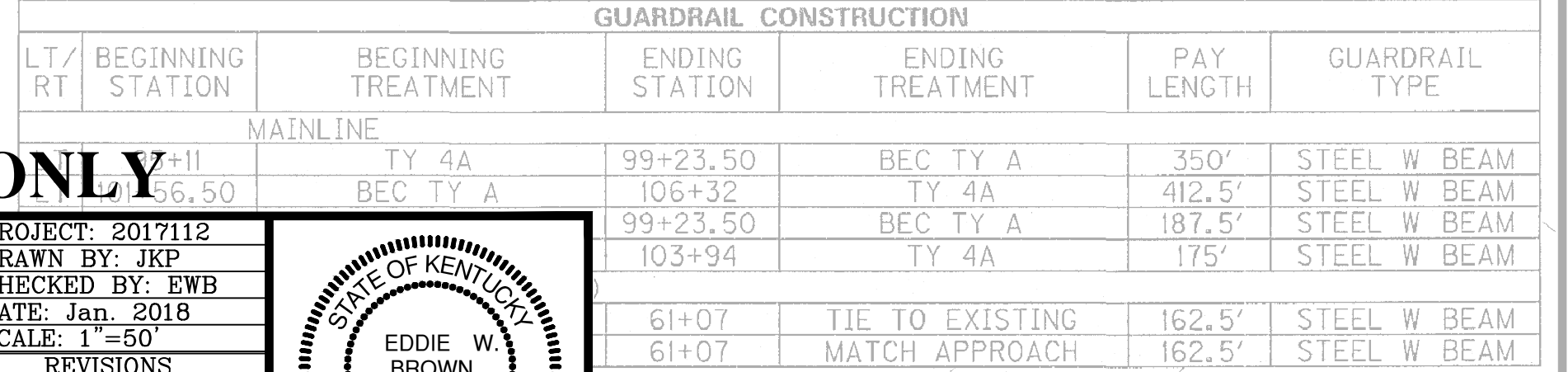
KENVIRONS, INC.
FRANKFORT, KENTUCKY



PROJECT NO.
2017112

SHEET NO.
U3

COUNTY OF	ITEM NO.	SHEET NO.
JACKSON & OWSLEY	10-279.61 11-287.30	U4



MAINLINE
STA. 95+00 TO STA. 110+00

ENTRANCE CONSTRUCTION				
LT/RT	STATION LOCATION	WIDTH	SOYD ASPHALT	ENTRANCE PIPE
LT	48+80 (APPR. LT. 120+25)	14'	428	SEE PIPE SHEET

DITCH CONSTRUCTION						
LT/RT	STA TO STA	SIZE/TYPE	TYPE	CHANNEL LINING	QUANTITY	CLASS B CONC.
LT	110+00 - 113+50	NORMAL	CL IV	1.0'	233 CUYD	-
LT	113+50 - 119+50	NORMAL	ECB	1.0'	534 SOYD	-
LT	121+95	6' OUTLET DT	CL IV	2.0'	2' SEE PIPE SHEET	-
LT	121+00 - 122+50	SPEC V	CL IV	0.5'	78 CUYD	-
LT	122+50 - 125+00	SPEC V	CL IV	2.0'	389 CUYD	-
RT	110+00 - 111+50	SPEC V	ECB	1.0'	134 SOYD	-
RT	111+50 - 115+50	SPEC V	ECB	1.5'	534 SOYD	-
RT	115+50 - 121+00	NORMAL	CL IV	1.0'	367 CUYD	-
RT	121+00 - 121+50	SPEC V	CL IV	1.0'	33 CUYD	-
RT	121+50 - 122+50	2' FB	CL IV	0.5'	44 CUYD	-
RT	121+95	6' INLET DT	CL IV	2.0'	2' SEE PIPE SHEET	-
RT	122+50 - 124+00	2' FB	GR CL IV	1.0'	138 CUYD	29 CUYD
RT	124+00 - 125+00	SPEC V	CL IV	1.5'	2' 119 CUYD	-

APPR. LT. STA. 120+25 (KY 1431 CONN. 1)

LT	44+50 - 46+00	6' FB	GR CL IV	2.5'	2' 278 CUYD	59 CUYD
LT	46+00	2' OUTLET DT	CL IV	1.0'	2' SEE PIPE SHEET	-
LT	46+00 - 48+30	6' FB	GR CL IV	3.5'	2' 546 CUYD	115 CUYD
LT	ENTR LT 48+80	4' INLET DT	CL IV	2.0'	2' SEE PIPE SHEET	-
RT	45+00 - 46+00	SPEC V	ECB	1.0'	- 89 SOYD	-
RT	46+00	2' INLET DT	CL IV	1.0'	2' SEE PIPE SHEET	-
RT	46+00 - 49+57	SPEC V	CL IV	1.0'	2' 185 CUYD	-

* DITCH LINING NOT REQUIRED IF DURABLE ROCK IS ENCOUNTERED

- (A) N 87°20'58"W - 341.23'
(B) S 57°59'50"W - 59.57'
(C) S 38°22'25"W - 52.55'
(D) Arc = 419', R = 1687.26
Chord = N 55°39'15"E 419'
(E) Arc = 205.78', R = 826.98'
Chord = N 62°51'10"E 205.23'
(F) Arc = 9.56', R = 826.98'
Chord = N 70°18'43"E 9.56'
(G) Arc = 164.49', R = 1100.54'
Chord = N 74°55'30"E 164.34'
(H) Arc = 162.66', R = 3700.21'
Chord = N 80°27'58"E 162.65'
(I) Arc = 99.69', R = 910.00'
Chord = N 78°35'14"E 99.64'
(J) N 54°56'5"E - 29.80'

- (K) Arc = 103.77', R = 970.00'
Chord = S 78°39'38"W 103.72'
(L) N 55°19'18"E - 182.54'
(M) Arc = 232.67', R = 1627.26'
Chord = S 51°37'44"W 232.48'
(N) Arc = 199.70', R = 766.98'
Chord = S 63°11'03"W 199.13'
(O) Arc = 85.24', R = 1040.54'
Chord = S 72°59'24"W 85.21'
(P) Arc = 70.29', R = 1040.54'
Chord = S 77°16'18"W 70.27'
(Q) Arc = 160.02', R = 3640.21'
Chord = S 80°27'58"W 160.01'
(R) N 63°11'25"W - 2.91'
(S) N 77°09'37"W - 35.02'

BEGIN CUT ENCASUREMENT
STA. 44+00
for 4" PVC, 15 L.F.
(Normal Depth)

Connect to existing 4" Waterline with 4"x4" Tapping Sleeve & Valve
OF EDGE KEY

Cut & Cap exist. W.L.

SHEET QUANTITIES				
Bid Code	Item Description	Unit	Total	Abandoned
14058	W Pipe PVC 4-inch	LF	910	915
14013	W Encasement Steel Open Cut Range 2	LF	55	
14089	W Tapping Sleeve & Valve Size 1	EA	1	
14003	W Cap Existing Main	EA	1	
14028	W Meter 3/4-inch	EA	1	
14085	W Serv PE/PLST Short Side 3/4-inch	EA	1	

COUNTY OF	ITEM NO.	SHEET NO.
JACKSON & OWSLEY	10-279.61 11-287.30	U5

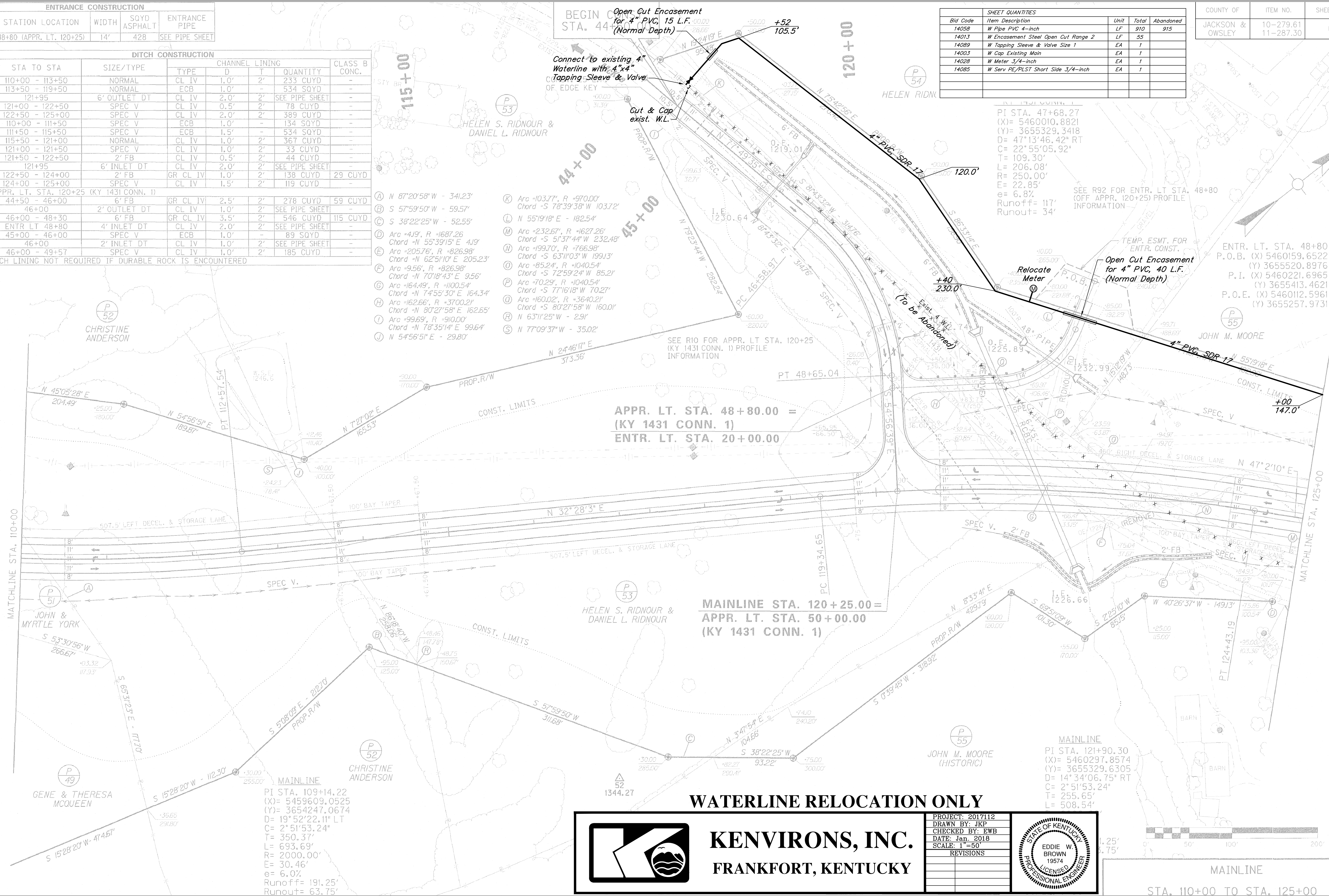
PI STA. 47+68.27
(X)= 5460010.8821
(Y)= 3655329.3418
D= 47°13'46.42" RT
C= 22°55'05.92"
T= 109.30'
L= 206.08'
R= 250.00'
E= 22.85'
e= 6.8%
Runoff= 117'
Runout= 34'

SEE R92 FOR ENTR. LT STA. 48+80
(OFF APPR. 120+25) PROFILE
INFORMATION

Open Cut Encasement
for 4" PVC, 40 L.F.
(Normal Depth)

Relocate
Meter

ENTR. LT. STA. 48+80
P.O.B. (X) 5460159.6522
(Y) 3655520.8976
P.I. (X) 5460221.6965
(Y) 3655413.4621
P.O.E. (X) 5460112.5961
(Y) 3655257.9731

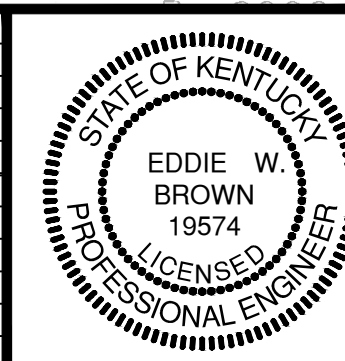


WATERLINE RELOCATION ONLY



KENVIRONS, INC.
FRANKFORT, KENTUCKY

PROJECT: 2017112
DRAWN BY: JKP
CHECKED BY: EWB
DATE: Jan. 2018
SCALE: 1"=50'
REVISIONS



MAINLINE
STA. 110+00 TO STA. 125+00

- (P 56) CLAYTON BANK AND TRUST
(P 57) FRANKLIN ROWLAND
(P 59) HOWARD GENE & TERESA MCQUEEN
(P 60) LOUIS MARKS
(P 61) LONNIE & YVONNE GABBARD
(P 62) GLENNA JO SANDERS
(P 63) WILLIAM & WANDA FIELDS
(P 65) LONNIE & YVONNE GABBARD
(P 69) PAUL MARKS

WOODLAND DRIVE
PI STA. 49+21.86
(X)= 5460785.6049
(Y)= 3655890.9122
D= 11°45'19.90" RT
C= 22°55'05.92"
T= 25.74'
L= 51.29'
R= 250.00'
E= 1.31'
e= N/A
Runoff= N/A
Runout= N/A
(See R12 for
Special Super Diagram)

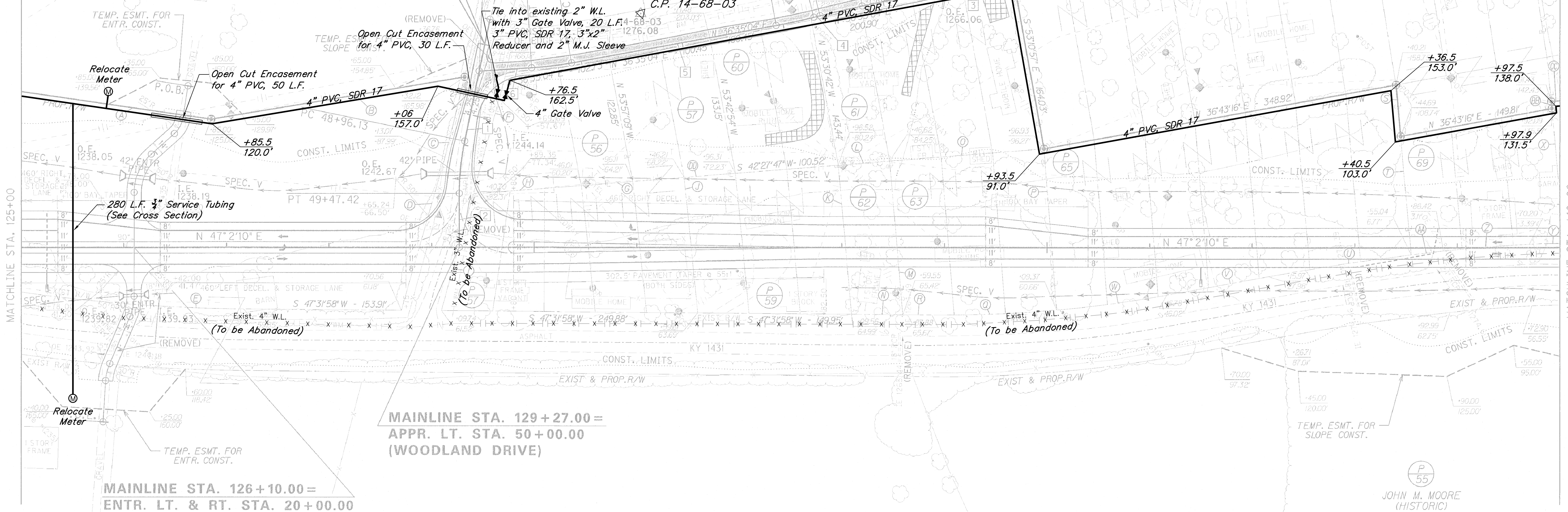
- 1 S 31°12'30" E C.P. 14-68-03
2 S 42°57'50" E Station 131+03.71
3 S 35°15'14" W Offset 227.79'
4 S 32°50'15" W Northing: 3656120.73
5 S 36°40'55" W Easting: 5460813.05
6 S 43°23'14" W Desc.: Conc. Monument
Elevation: 1276.08

WOODLAND DRIVE STA. 48+26.45=
JACKSON DRIVE LT. STA. 50+00.00

BEGIN CONST.
STA. 48+00.00

JOHN M. MOORE

SEE R12 FOR APPR. LT. STA. 129+27
(WOODLAND DR) PROFILE INFORMATION



MAINLINE STA. 126+10.00=
ENTR. LT. & RT. STA. 20+00.00

(P 55)
JOHN M. MOORE
(HISTORIC)

SEE R92 FOR ENTR. LT & RT
STA. 126+10 PROFILE
INFORMATION

ENTR. LT. & RT. STA. 126+10
P.O.B. (X) 5460538.1836
(Y) 3655768.3834
P.I. (X) 5460560.9846
(Y) 3655734.2249
P.I. (X) 5460555.2282
(Y) 3655673.1484
P.I. (X) 5460646.4337
(Y) 3655575.2192
P.I. (X) 5460669.6748
(Y) 3655510.3867
P.O.E. (X) 5460700.5699
(Y) 3655472.7047

- (A) N 55°19'18" E - 402.90'
(B) N 37°37'16" E - 250.49'
(C) S 29°14'30" E - 80.28'
(D) S 27°03'25" E - 155.11'
(E) Arc +232.67', R +1627.26'
Chord +S 51°37'44" W 232.48'
(F) N 27°44'55" W - 118.00'
(G) S 42°27'47" W - 50.26'
(H) S 42°45'05" W - 105.60'
(I) N 27°44'55" W - 117.97'
(J) S 48°45'57" E - 132.58'
(K) S 48°05'49" E - 145.81'
(L) N 42°27'47" E - 50.26'
(M) N 47°54'03" W - 150.22'
(N) S 47°31'58" W - 49.99'
(O) N 42°27'47" E - 150.79'
(P) N 47°29'55" W - 157.42'

- (Q) Arc +121.65', R +1220.00'
Chord +S 44°40'34" W 121.60'
(R) S 47°31'58" W - 28.33'
(S) S 48°04'53" E - 50.20'
(T) S 48°04'53" E - 115.98'
(U) Arc +140.69', R +2456.35'
Chord +S 38°22'05" W 140.67'
(V) S 36°43'38" W - 100.82'
(W) Arc +108.43', R +1220.00'
Chord +S 39°16'24" W 108.39'
(X) S 48°23'41" E - 132.00'
(Y) Arc +34.39', R +755.05'
Chord +S 45°45'34" W 34.39'
(Z) Arc +84.05', R +1298.51'
Chord +S 42°36'01" W 84.05'
(AA) Arc -31.59', R +2456.35'
Chord +S 40°22'39" W 31.59'
(AB) N 48°23'41" W - 6.90'
(AC) N 41°52'33" E - 153.42'
(AD) S 42°27'47" W - 50.27'

ENTRANCE CONSTRUCTION				
LT/ RT	STATION LOCATION	WIDTH	SOYD ASPHALT	ENTRANCE PIPE
LT	126+10	14'	200	42" - 52 LF
RT	126+10	14'	180	30" - 50 LF

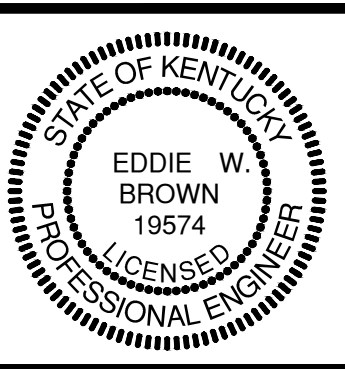
DITCH CONSTRUCTION				
LT/ RT	STA TO STA	SIZE/TYPE	CHANNEL LINING	CLASS B CONC.
LT	125+00 - 126+10	42" - 52 LF	2-42" P.C. HDWL'S.	-
RT	126+31 - 127+42	30" - 50 LF	2-30" P.C. HDWL'S.	-

WATERLINE RELOCATION ONLY



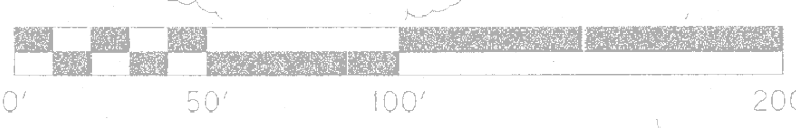
KENVIRONS, INC.
FRANKFORT, KENTUCKY

PROJECT: 2017112
DRAWN BY: JKP
CHECKED BY: EWB
DATE: Jan. 2018
SCALE: 1"=50'
REVISIONS



REMOVE PAVEMENT			
LT/ RT	STATION LOCATION	SOYD	TYPE
LT	44+75 - 45+08	77	GRAVEL
LT	45+53 - 46+00	83	GRAVEL
LT	46+77 - 47+37	160	GRAVEL

OVERLAY ONLY



MAINLINE
STA. 125+00 TO STA. 140+00

SHEET QUANTITIES				
Bid Code	Item Description	Unit	Total	Abandoned
14058	W Pipe PVC 4-inch	LF	1730	1505
14057	W Pipe PVC 3-inch	LF	20	245
14013	W Encasement Steel Open Cut Range 2	LF	80	
14104	W Valve 4-inch	EA	1	
14103	W Valve 3-inch	EA	1	
14091	W Tie-in 2-inch	EA	1	
14028	W Meter 3/4-inch	EA	2	
14085	W Serv PE/PLST Short Side 3/4-inch	EA	1	
14080	W Serv PE/PLST Long Side 3/4-inch	EA	1	

COUNTY OF	ITEM NO.	SHEET NO.
JACKSON & OWSLEY	10-279.61 11-287.30	U6

STA. 140+00 TO STA. 155+00

(A) N 47°55'22" E - 182.64'
(B) Arc +133.43', R = 256.48'
Chord +N 86°33'10" E 131.93'
(C) N 45°36'01" E - 13.33'
(D) N 2°50'48" E - 52.83'
(E) N 22°29'40" W - 48.97'
(F) N 71°13'41" E - 72.00'
(G) N 12°17'57" E - 36.02'
(H) N 70°00'28" E - 78.75'
(I) N 28°11'02" W - 40.82'
(J) N 2°59'21" E - 75.87'
(K) S 81°8'17" E - 65.60'
(L) S 30°30'19" E - 53.44'
(M) S 89°59'56" E - 48.17'
(N) N 20°53'53" E - 65.72'
(O) S 89°05'47" E - 51.67'
(P) N 11°44'43" E - 36.82'
(Q) N 70°44'53" E - 47.57'
(R) N 48°56'56" E - 71.48'
(S) N 68°50'53" E - 52.87'
(T) N 26°32'40" E - 111.22'

(U) Arc +103.82', R = 256.48'
Chord +S 66°58'50" E 103.11'
(V) S 55°21'05" E - 56.38'
(X) S 26°23'42" E - 14.47'
(Y) S 37°40'21" E - 34.94'
(Z) S 62°28'15" W - 8.94'
(AA) S 31°35'43" E - 71.61'
(BB) S 63°50'12" E - 42.65'
(CC) S 85°41'48" E - 14.38'
(DD) S 54°18'26" E - 60.80'
(EE) S 57°24'11" E - 44.51'
(FF) S 23°55'23" E - 21.80'
(GG) S 35°33'36" E - 69.81'
(HH) S 62°28'06" W - 20.13'
(II) Arc +258.13', R = 300.00'
Chord +S 30°42'06" E 250.24'
(JJ) N 19°39'14" W - 53.19'
(KK) N 3°47'06" W - 86.68'
(LL) Arc +168.68', R = 316.48'
Chord +S 88°46'41" W 166.69'
(MM) N 45°35'16" E - 47.36'

(NN) Arc +15.84', R = 540.00'
Chord +N 44°44'50" E 15.84'
(OO) S 35°37'05" E - 47.58'
(PP) N 55°21'05" W - 69.38'
(QQ) N 56°25'12" W - 40.00'
(RR) N 46°18'21" W - 150.00'
(SS) N 55°21'05" W - 27.27'
(TT) Arc -113.79', R = 316.48'
Chord +N 65°39'07" W 113.18'
(UU) N 49°37'30" E - 24.91'
(VV) S 25°55'59" E - 48.99'
(WW) N 55°21'05" W - 49.11'
(XX) N 47°55'22" E - 182.64'
(YY) N 55°21'05" W - 185.26'
(ZZ) N 55°21'05" W - 120.01'

EXISTING
KY 30 NO. 1
PI STA. 28+14.55
(X)= 5465683.1831
(Y)= 3662309.1390
D= 13°52'25.75" LT
C= 11°14'04.08"
T= 62.05'
L= 123.49'
R= 510.00'
E= 3.76'
e= N/A
Runoff= N/A
Runout= N/A

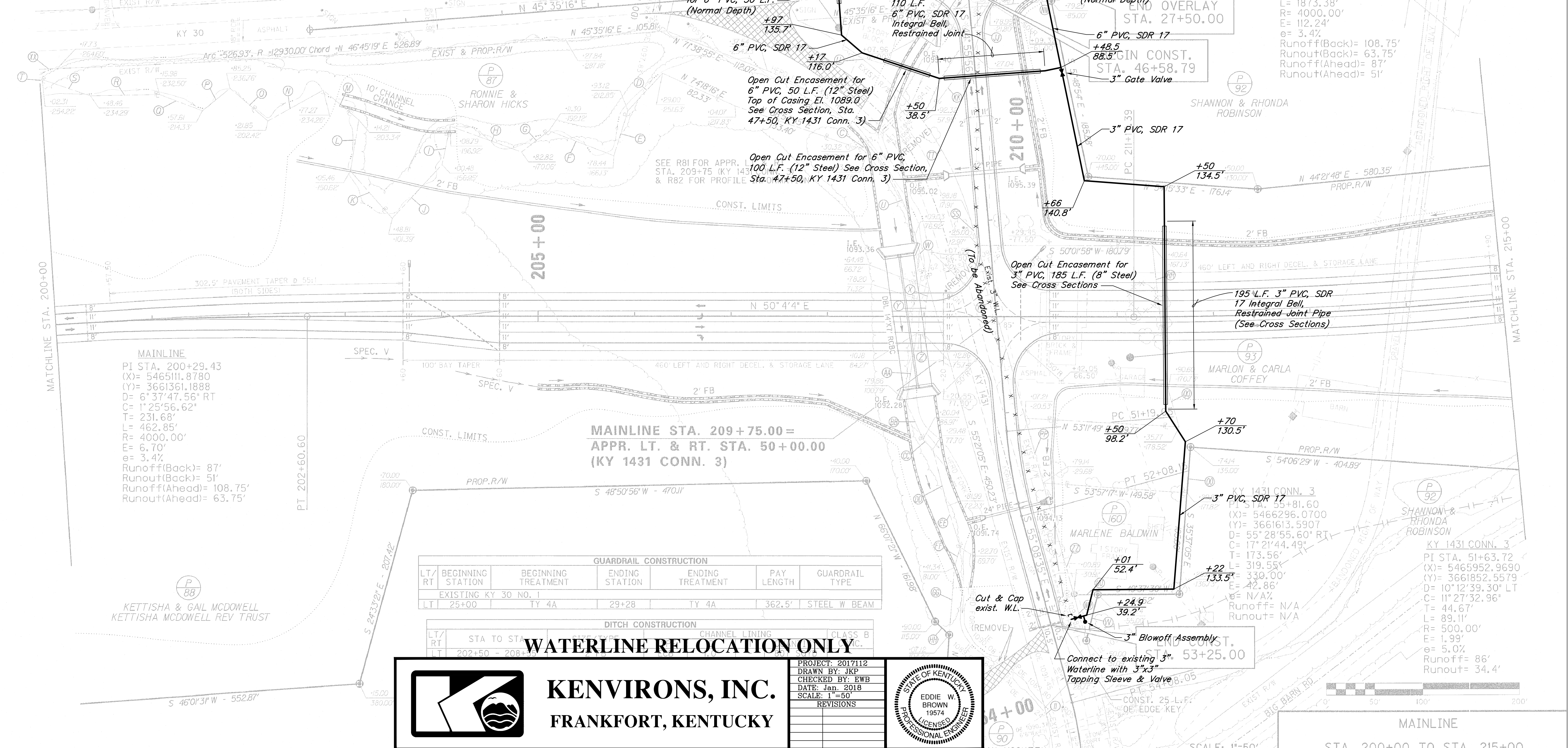
EXISTING
KY 30 NO. 1
PI STA. 29+61.03
(X)= 5465760.5050
(Y)= 3662434.2650
D= 14°12'57.32" LT
C= 8°24'05.86"
T= 85.04'
L= 169.20'
R= 681.96'
E= 5.28'
e= N/A
Runoff= N/A
Runout= N/A

REMOVE PAVEMENT
LT/RT STATION LOCATION SQYD
EXISTING KY 30 NO. 1 (OFF APPR. 2) RT 23+45 - 25+75 577
C.P. 14-68-46
Station 208+79.96
Offset -359.51'
Northing: 3662183.13
Easting: 5465533.70
Elevation: 1102.87
Desc.: Conc. Monument
KY 1431 CONN. 3 STA. 46+48
EXISTING KY 30 NO. 1 STA. 26+83.07
BEGIN OVERLAY
STA. 26+00.00

SHEET QUANTITIES				
Bid Code	Item Description	Unit	Total	Abandoned
14059	W Pipe PVC 6-inch	LF	330	215
14059*	W Pipe PVC 6-inch Restrained Joint**	LF	110	
14057	W Pipe PVC 3-inch	LF	560	720
14057*	W Pipe PVC 3-inch Restrained Joint**	LF	195	
14014	W Encasement Steel Open Cut Range 3	LF	60	
14008	W Encasement Steel Bored Range 3	LF	150	
14013	W Encasement Steel Open Cut Range 2	LF	185	
14089	W Tapping Sleeve & Valve Size 1	EA	3	
14103	W Valve 3-inch	EA	1	
14023	W Flushing Assembly	EA	2	
14003	W Cap Existing Main	EA	1	

*Products delivered under this bid code shall be manufactured only from water distribution pipe and couplings conforming to ASTM D2241. The restrained joint pipe system shall also meet all short and long term pressure test requirements of ASTM D2241. Pipe, couplings and locking splices shall be completely non-metallic to eliminate corrosion problems. Pipe shall be joined using non-metallic couplings to form an integral system for maximum reliability and interchangeability. High-strength, flexible thermostatic splices shall be inserted into mating, precision-machined grooves in the pipe and coupling to provide full 360° restraint with evenly distributed loading. The pipe and couplings shall be Certa-Lok Yelamine restrained-joint pipe from Certeant Corporation or approved equal.

COUNTY OF	ITEM NO.	SHEET NO.
JACKSON & OWSLEY	10-279.61 11-287.30	U8



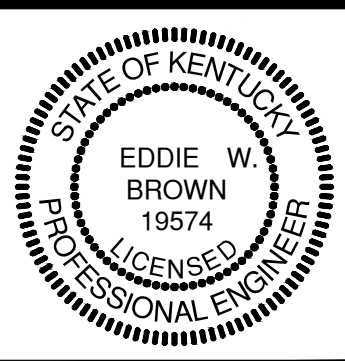
MAINLINE
PI STA. 200+29.43
(X)= 5465111.8780
(Y)= 3661361.1888
D= 6°37'47.56" RT
C= 1°25'56.62"
T= 231.68'
L= 462.85'
R= 4000.00'
E= 6.70'
e= 3.4%
Runoff(Back)= 87'
Runout(Back)= 51'
Runoff(Ahead)= 108.75'
Runout(Ahead)= 63.75'

GUARDRAIL CONSTRUCTION					
LT/RT	BEGINNING STATION	BEGINNING TREATMENT	ENDING STATION	ENDING TREATMENT	PAY LENGTH
LT	25+00	TY 4A	29+28	TY 4A	362.5'
DITCH CONSTRUCTION					
LT/RT	STA TO STA	CHANNEL LINING	CLASS	REVISIONS	
LT	202+50 - 208+36	CONCRETE	B		



KENVIRONS, INC.
FRANKFORT, KENTUCKY

PROJECT: 2017112
DRAWN BY: JKP
CHECKED BY: EWB
DATE: Jan. 2018
SCALE: 1"=50'
REVISIONS



MAINLINE
STA. 200+00 TO STA. 215+00

GUARDRAIL CONSTRUCTION					
LT/RT	BEGINNING STATION	BEGINNING TREATMENT	ENDING STATION	ENDING TREATMENT	PAY LENGTH
MAINLINE					
LT	330+00	MATCH LINE	338+85	MATCH APPROACH	900'
RT	330+00	MATCH LINE	334+50	TY 4A	412.5'
APPR. LT. STA. 339+00 (EXIST. KY 30 CONN. 1)					
LT	47+03	MATCH APPROACH	49+25	TY 4A	200'
RT	43+75	TY 4A	49+25	MATCH MAINLINE	512.5'
APPR. LT. STA. 46+90 (EXIST. KY 30 CONN. 2)					
LT	46+50	TY 4A	49+43	MATCH APPROACH	262.5'

Connect to existing 4" Waterline with 4"x4" Tapping Sleeve & Valve

Cut & Cap exist. WL.

C.P. 31
Station 338+06.06
Offset 599.41'
Northing: 13671511.28
Easting: 5476374.96
Elevation: 1093.35
Desc.: Iron Pin & Cap

APPR. LT. STA. 46+90.00
(EXIST. KY 30 CONN. 1) =
APPR. LT. STA. 50+00.00
(EXIST. KY 30 CONN. 2)

SEE R42 FOR APPR. LT. STA. 339+00
(EXIST. KY 30 CONN. 1)
PROFILE INFORMATION

EXIST.

SHEET QUANTITIES				
Bid Code	Item Description	Unit	Total	Abandoned
14058	W Pipe PVC 4-inch	LF	650	620
14089	W Tapping Sleeve & Valve Size 1	EA	2	
14023	W Flushing Assembly	EA	1	
14003	W Cap Existing Main	EA	2	

PI S
(X)=
(Y)=
D= 12'
C= 12'
T= 7'
L= 140.11'
R= 450.00'
E= 6.05'
e= 6.4%
Runoff= 116'
Runout= 36'

DAVID MILLER &
SANDRA MILLER (WF)

COUNTY OF	ITEM NO.	SHEET NO.
JACKSON & OWSLEY	10-279.61 11-287.30	U9

REMOVE PAVEMENT		
STATION LOCATION	SOYD	TYPE
LT 335+50 - 337+75	203	DIRT

MAINLINE

PI STA. 343+74.20
(X)= 5473756.2262
(Y)= 3672586.8112
D= 12'20"/34.32' RT
C= 1'25'/56.62'
T= 432.52'
L= 861.69'
R= 4000.00'
E= 23.32'
e= 3.4%
Runoff(Back)= 108.75'
Runout(Back)= 63.75'
Runoff(Ahead)= 87'
Runout(Ahead)= 51'

BEGIN CONST.
STA. 46+25.00

DAVID MILLER &
SANDRA MILLER (WF)

LENA FLANNERY, ET AL

MAINLINE STA. 339+00.00 =
APPR. LT. STA. 50+00.00
(EXIST. KY 30 CONN. 1)

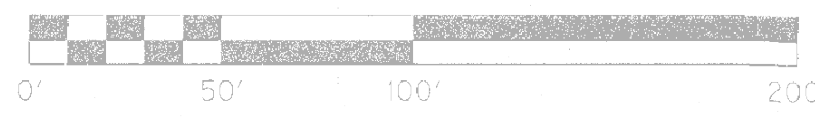
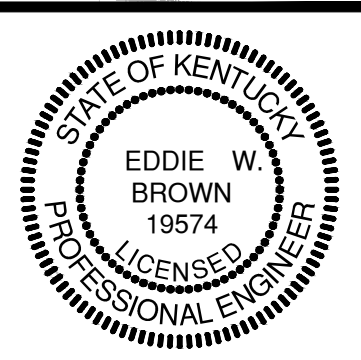
JASON WAYNE FLANNERY
& JENNIFER M. WILSON

WATERLINE RELOCATION ONLY



KENVIRONS, INC.
FRANKFORT, KENTUCKY

PROJECT: 2017112
DRAWN BY: JKP
CHECKED BY: EWB
DATE: Jan. 2018
SCALE: 1"=50'



SCALE: 1"=50'

MAINLINE
STA. 330+00 TO STA. 345+00

P 105
DAVID MILLER &
SANDRA MILLER (WF)

P 104
LENA FLANNERY, ET AL

350+00

GUARDRAIL CONSTRUCTION					
LT/RT	BEGINNING STATION	BEGINNING TREATMENT	ENDING STATION	ENDING TREATMENT	PAY LENGTH
MAINLINE					
LT	345+00	TY 4A	354+28	BEC TY A	875'
LT	359+21	BEC TY A	360+00	MATCH LINE	62.5'
RT	349+59	T.S. NO. 1	354+28	BEC TY A	462.5'
RT	359+21	BEC TY A	360+00	MATCH LINE	62.5'
EXISTING KY 30 NO. 2					
LT	48+50	N/A	48+62	N/A	12.5'
LT	48+50	TIE TO EXISTING	48+76	MATCH APPROACH	50'
LT	48+93	MATCH APPROACH	53+15	TY 4A	412.5'
CREECH RD					
LT	48+76	TY 7	49+64	MATCH APPROACH	37.5'
RT	47+75	TY 7	49+60	MATCH APPROACH	137.5'

NOTE: USE 37'-6" GUARDRAIL STEEL W BEAM-S FACE (NESTED) ACROSS FLUME OPENING PER STD. DWG. NO. RDD-021-07

355+00

SHEET QUANTITIES			
Bid Code	Item Description	Unit	Total
14003	W Cap Existing Main	EA	1
14023	W Flushing Assembly	EA	1
14035	W Pipe Dctlt. Iron 4-inch	LF	200
14089	W Tapping Sleeve & Valve Size 1	EA	1

COUNTY OF	ITEM NO.	SHEET NO.
JACKSON & OWSLEY	10-279.61 11-287.30	U10

CREECH ROAD

PI STA. 48+02.68
(X)= 5474620.0030
(Y)= 3673972.6501
D= 13°56'34.40" RT
C= 16°22'12.80"
L= 42.80'
T= 85.17'
R= 350.00'
E= 2.61'
e= N/A

BEGIN OVERLAY
STA. 48+50.00

EXISTING KY 30 NO. 2 STA. 48+85.00 =
CREECH ROAD STA. 50+00.00

END CONST.
STA. 50+00.00

MAINLINE STA. 349+50.00 =
ENTR. RT. STA. 20+00.00

MAINLINE STA. 358+06.01 =
EXISTING KY 30 NO. 2 STA. 50+00.00

SEE R94 FOR ENTR. RT STA. 349+50
PROFILE INFORMATION

ENTR. RT. STA. 349+50
P.O.B. (X) 5474105.4225
(Y) 3673048.8429
P.O.E. (X) 5474225.0894
(Y) 3672958.4006

LENA FLANNERY, ET AL

BRIDGE END DRAINAGE		
LOCATION	ISLAND HEADER CURB TY. II	**FLUME INLET TYPE II MODIFIED
EB-SW QUAD	25 L.F.	1 EA. - STA 353+96
EB-SE QUAD	25 L.F.	
WB-NW QUAD	25 L.F.	1 EA. - STA 353+96
WB-NE QUAD	25 L.F.	

**NOTE: FLUMES MUST BE MODIFIED TO ACCOMMODATE 4 INCH ISLAND HEADER CURB

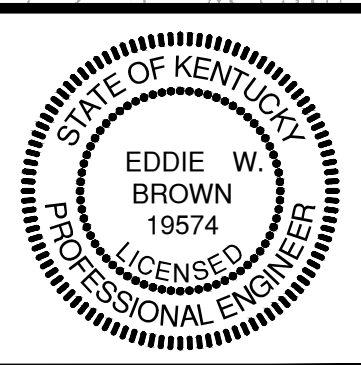
DITCH CONSTRUCTION					
LT/RT	STA TO STA	SIZE/TYPE	TYPE	QUANTITY	CLASS B CONC.
LT	346+00 - 352+00	4' FB	CL IV	3.5'	1022 CUYD
LT	352+00 - 353+50	6' FB	CL IV	2.0'	189 CUYD
LT	353+50 - 355+65	6' FB	GR CL IV	2.0'	301 CUYD
LT	353+95 (FLUME)	2' FB	CL IV	0.5'	30 CUYD
LT	353+95 (FLUME)	2' FB	CL IV	1.0'	133 CUYD
LT	353+95 (FLUME)	2' FB	CL IV	1.5'	96 CUYD

WATERLINE RELOCATION ONLY

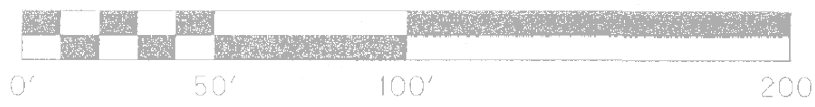
KENVIRONS, INC.
FRANKFORT, KENTUCKY



PROJECT: 2017112
DRAWN BY: JKP
CHECKED BY: EWB
DATE: Jan. 2018
SCALE: 1"=50'



EXISTING KY 30		EXISTING KY 30 NO. 2	
PI STA. 49+70.48	(X)= 5474603.7094	PI STA. 52+58.14	(X)= 5474790.9783
(Y)= 3673758.5296		(Y)= 3673537.1579	
D= 22°27'02.40" RT		D= 11°26'45.25" LT	
C= 12°43'56.62"		C= 5°43'46.48"	
T= 89.31'		T= 100.22'	
L= 176.33'		L= 199.77'	
R= 450.00'		R= 1000.00'	
E= 8.78'		E= 5.01'	
e= N/A		e= N/A	



SCALE: 1"=50'

MAINLINE
STA. 345+00 TO STA. 360+00

MAINLINE
PI STA. 343+74.20
(X)= 5473756.2262
(Y)= 3672586.8112
D= 12°20'34.32" RT
C= 1°25'56.62"
T= 432.52'
L= 861.69'
R= 4000.00'
E= 23.32'
e= 3.4%
Runoff(Back)= 108.75'
Runout(Back)= 63.75'
Runoff(Ahead)= 87'
Runout(Ahead)= 51'

- (A) Arc =263.48', R =1970.00'
Chord =N 46°18'19" E 263.28'
- (B) Arc =89.91', R =880.00'
Chord =N 47°12'36" E 89.87'
- (C) Arc =216.68', R =470.00'
Chord =N 31°04'32" E 214.77'
- (D) Arc =58.64', R =830.00'
Chord =N 15°50'38" E 58.63'
- (E) Arc =180.28', R =495.00'
Chord =S 50°44'41" E
- (F) Arc =73.89', R =895.00'
Chord =S 42°40'34" E
- (G) Arc =60.63', R =835.00'
Chord =N 42°23'28" E
- (H) Arc =130.49', R =555.00'
Chord =N 47°02'48" E

- (I) N 9°44'53" W - 29.20'
- (J) N 21°13'22" E - 1.32'
- (K) Arc =59.41', R =615.00'
Chord =N 18°23'38" E 59.38'
- (L) N 73°57'05" E - 75.00'
- (M) Arc =67.60', R =835.00'
Chord =S 13°45'19" W 67.59'

WENDELL KILBURN &
LINDA KILBURN (WF)

SHEET QUANTITIES				
Bid Code	Item Description	Unit	Total	Abandoned
14035	W Pipe Dctl. Iron 4-Inch	LF	380	22
14046	W Pipe Dctl. Iron 4-Inch Restrained Joint	LF	190	
14013	W Encasement Steel Open Cut Range 2	LF	170	
14089	W Tapping Sleeve & Valve Size 1	EA	1	
14028	W Meter 3/4-Inch	EA	1	
14085	W Serv PE/PLST Short Side 3/4-Inch	EA	1	
14003	W Cap Existing Main	EA	1	

COUNTY OF	ITEM NO.	SHEET NO.
JACKSON & OWSLEY	10-279.61 11-287.30	U11

MAINLINE
PI STA. 366+36.24
(X)= 5475122.1375
(Y)= 3674394.0880
D= 3°16'36.99" LT
C= 0°34'22.65"
T= 286.05'
L= 571.93'
R= 10000.00'
E= 4.09'
e= N.C.

CREECH ROAD
PI STA. 48+02.68
(X)= 5474620.0030
(Y)= 3673972.6501
D= 13°56'34.40" RT
C= 16°22'12.80"
T= 42.80'
L= 85.17'
R= 350.00'
E= 2.61'
e= N/A

WENDELL KILBURN & LINDA KILBURN (WF)

LENA FLANNERY, ET AL

LENA FLANNERY, ET AL

LENA FLANNERY, ET AL

BEGIN CONST. STA. 360+00

Connect to existing 4" Waterline with 4"x4" Tapping Sleeve & Valve

Cut & Cap exist. W.L. Exist. 4" W.L. (To be Abandoned)

Relocate Meter

Open Cut Encasement for 4" D.I., CL 350, 30 L.F. (10" Steel)

4" D.I., CL 350
+55.6
153.6'
40 L.F. 4" D.I., CL 350, Restrained Joint

Open Cut Encasement for 4" D.I., CL 350, 140 L.F. (10" Steel) See Cross Sections

150 L.F. 4" D.I., CL 350, Restrained Joint (See Cross Sections)

4" D.I., CL 350
+50
114.5'

REMOVE PAVEMENT			
LT/RT	STATION LOCATION	SOYD	TYPE
RT	374+15 - 374+90	52	GRAVEL

GUARDRAIL CONSTRUCTION					
LT/RT	BEGINNING STATION	BEGINNING TREATMENT	ENDING STATION	ENDING TREATMENT	PAY LENGTH
MAINLINE					
LT	360+00	MATCH LINE	368+50	TY 4A	812.5'
RT	360+00	MATCH LINE	362+25	TY 4A	187.5'

DITCH CONSTRUCTION					
LT/RT	STA TO STA	SIZE/TYPE	CHANNEL TYPE	LINING	CLASS B CONC.
LT	366+40 - 368+00	2' FB	GR CL IV	0.5'	2'
LT	368+00 - 368+50	SPEC V	CL IV	1.0'	2'
LT	368+50 - 375+00	NORMAL	CL IV	1.0'	2'
RT	360+00 - 361+50	4' FB	GR CL IV	1.0'	2'
RT	361+50 - 375+00	NORMAL	CL IV	1.5'	2'
CREECH ROAD (OFF EXISTING KY 30)					
LT	47+50 - 48+00	SPEC V	ECB	1.0'	47 SOYD
* DITCH LINING NOT REQUIRED IF DURABLE ROCK IS ENCOUNTERED					

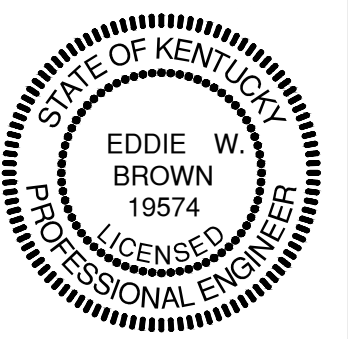
- (A) Arc +68.53°, R +1065.00'
Chord -N 13°47'00" E 68.51'
(B) N 81°27'00" W - 23.44'
(C) S 4°04'22" W - 15.52'
(D) Arc +75.80°, R +390.00'
Chord -S 1°29'43" E 75.80'
(E) S 7°03'49" E - 10.53'
(F) Arc +42.72°, R +85.00'
Chord -S 7°20'08" W 42.72'
(G) S 21°44'04" W - 43.38'
(H) Arc +52.79°, R +145.00'
Chord -S 1°18'19" W 52.79'
(I) S 89°22'54" W - 44.22'
(J) N 4°04'22" E - 15.42'
(K) Arc +79.69°, R +410.00'
Chord -N 1°29'43" W 79.69'
(L) N 7°03'49" W - 10.53'
(M) Arc +32.67°, R +65.00'
Chord -N 1°29'43" W 32.67'

WATERLINE RELOCATION ONLY



KENVIRONS, INC.
FRANKFORT, KENTUCKY

PROJECT: 2017112
DRAWN BY: JKP
CHECKED BY: FWB
DATE: Jan. 2018
SCALE: 1"=50'
REVISIONS



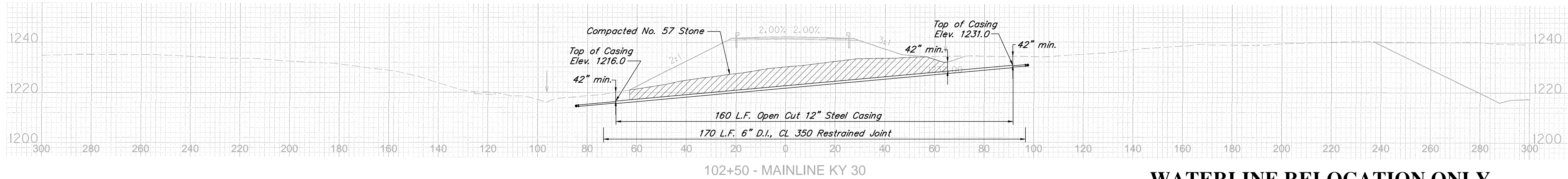
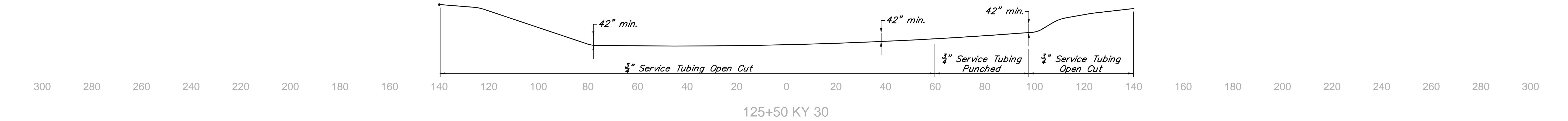
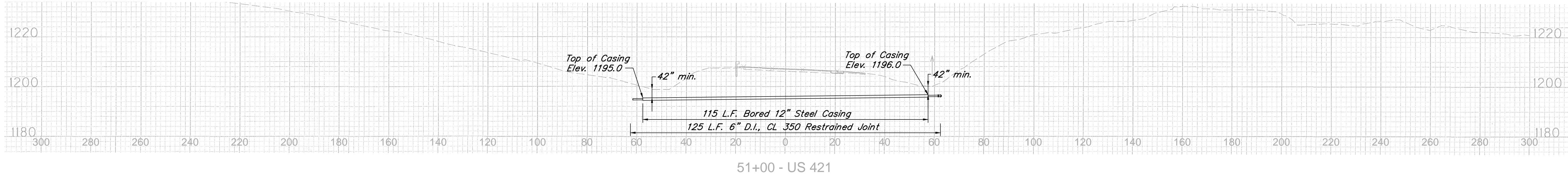
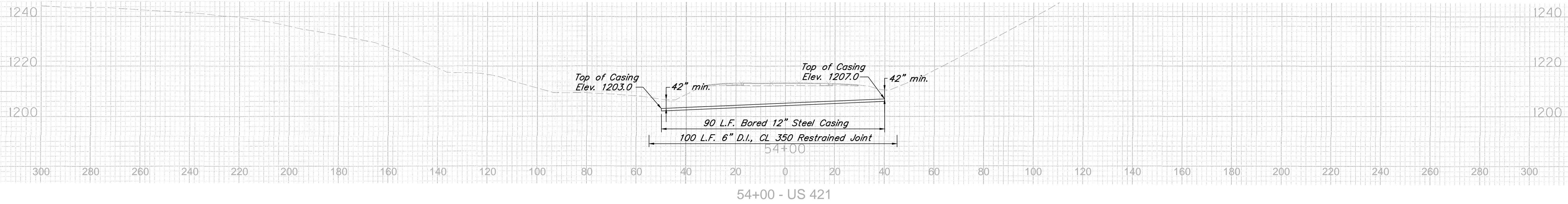
HICKORY FLAT ROAD
PI STA. 55+84.95
(X)= 5475722.4977
(Y)= 3674953.1193
D= 24°34'21.69" LT
C= 38°11'49.87"

CYNTHIA BINGHAM & BRENT BINGHAM (HUSB)



MAINLINE
STA. 360+00 TO STA. 375+00

COUNTY OF	ITEM NO.	SHEET NO.
JACKSON & OWSLEY	10-279.61 11-287.30	U12



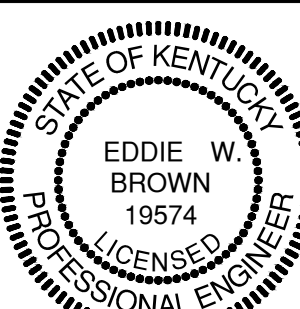
WATERLINE RELOCATION ONLY



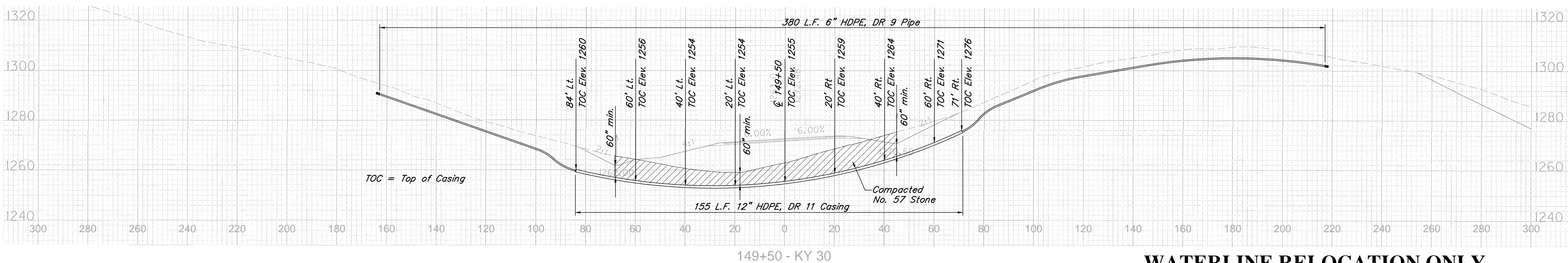
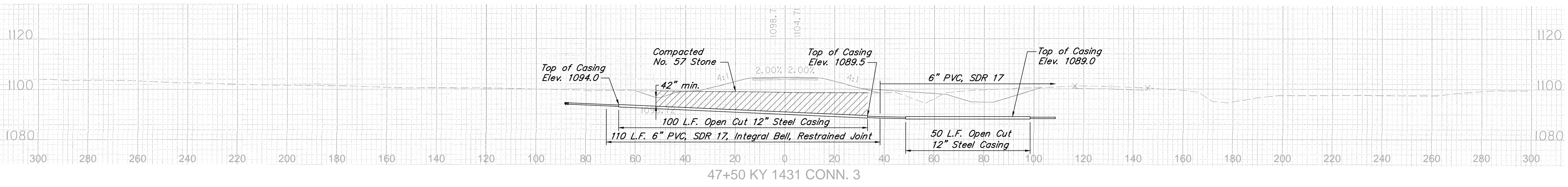
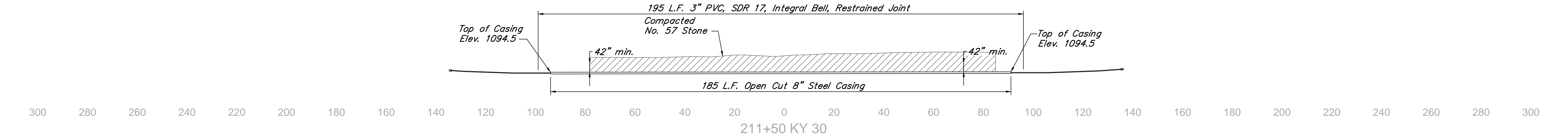
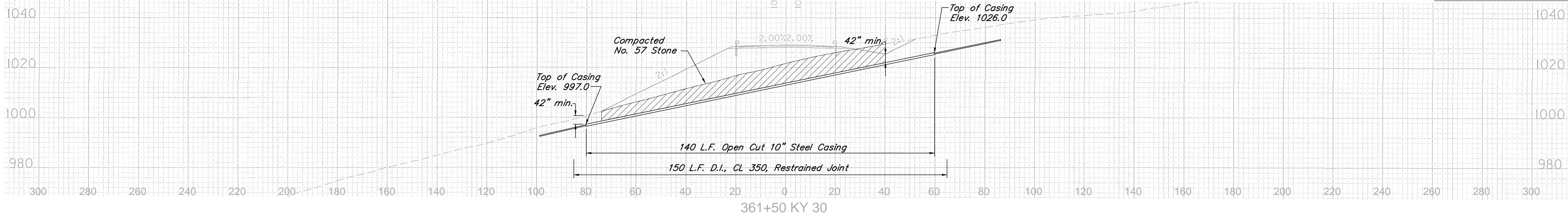
KENVIRONS, INC.
FRANKFORT, KENTUCKY

PROJECT: 2017112
DRAWN BY: JKP
CHECKED BY: EWB
DATE: Jan. 2018
SCALE: As Shown

REVISIONS



COUNTY OF	ITEM NO.	SHEET NO.
JACKSON & OWSLEY	10-279.61 11-287.30	U13

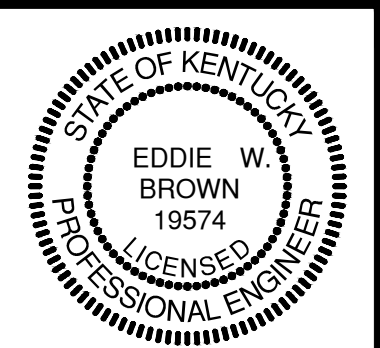


WATERLINE RELOCATION ONLY

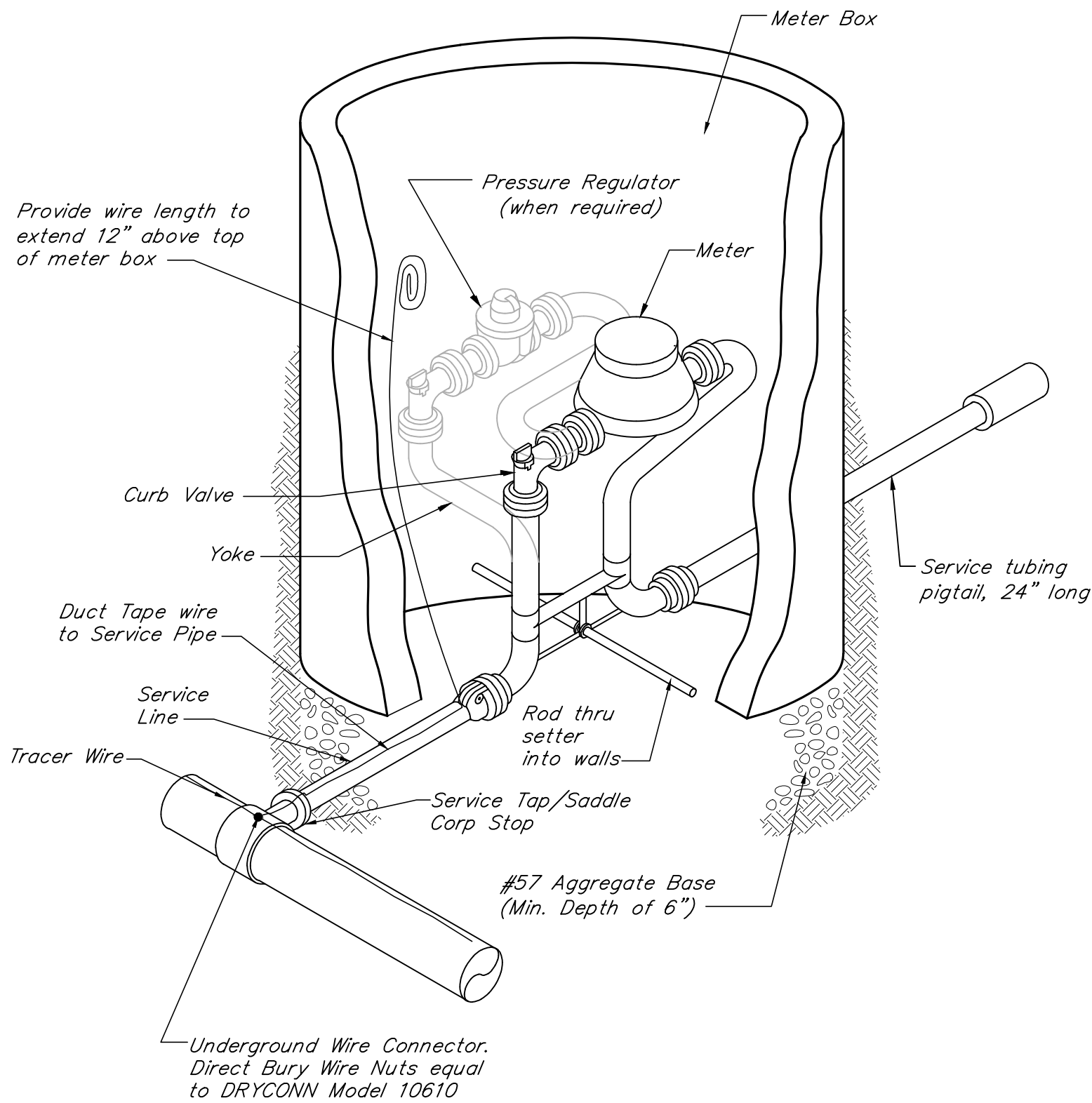


KENVIRONS, INC.
FRANKFORT, KENTUCKY

PROJECT: 2017112
DRAWN BY: JKP
CHECKED BY: EWB
DATE: Jan. 2018
SCALE: As Shown
REVISIONS



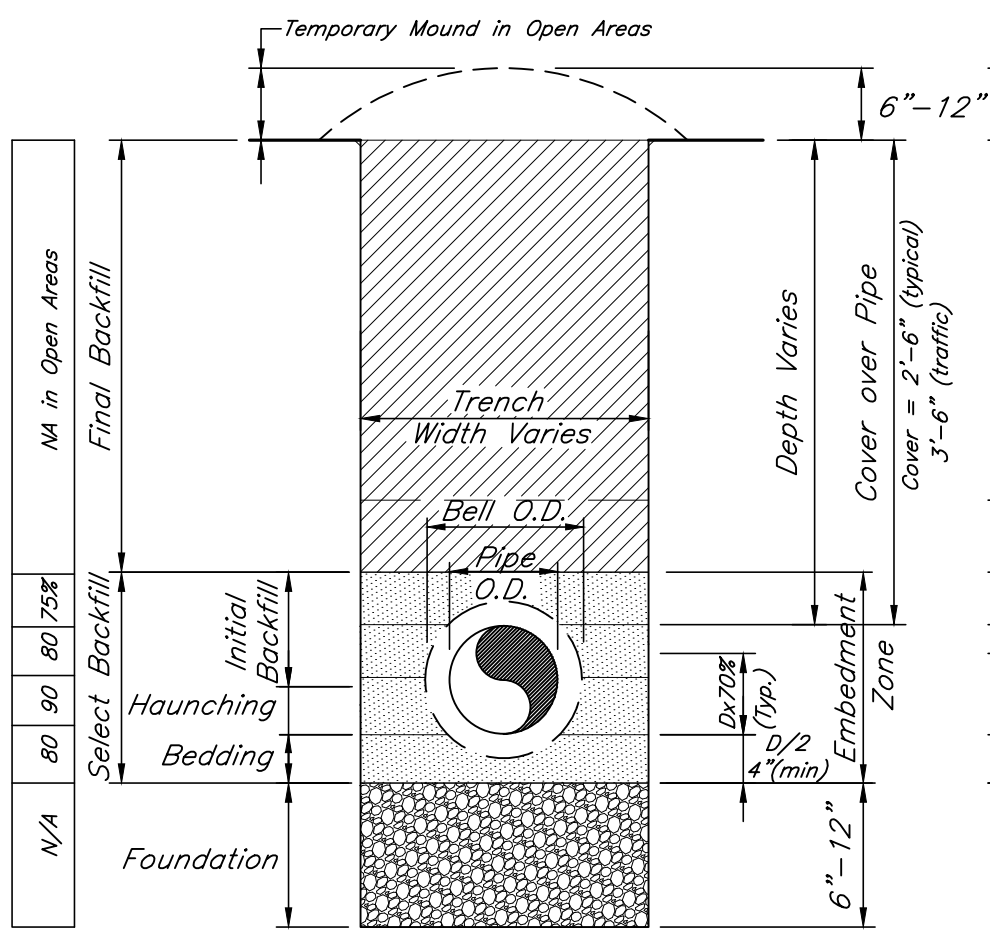
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- NOTES:
1. This drawing typical for meters 1" and smaller (w/std. press reg.)
 2. Meter setting shall be placed inside property line as directed by the Engineer.
 3. Tracer Wire not required on Meter Settings less than 10 feet from water main.
 4. Service tubing pigtail to be incidental to Meter Setting.

METER SETTING

Mar., 2011 N.T.S.



NOTES: No rocks larger than 1-1/2" allowed in embedment zone.

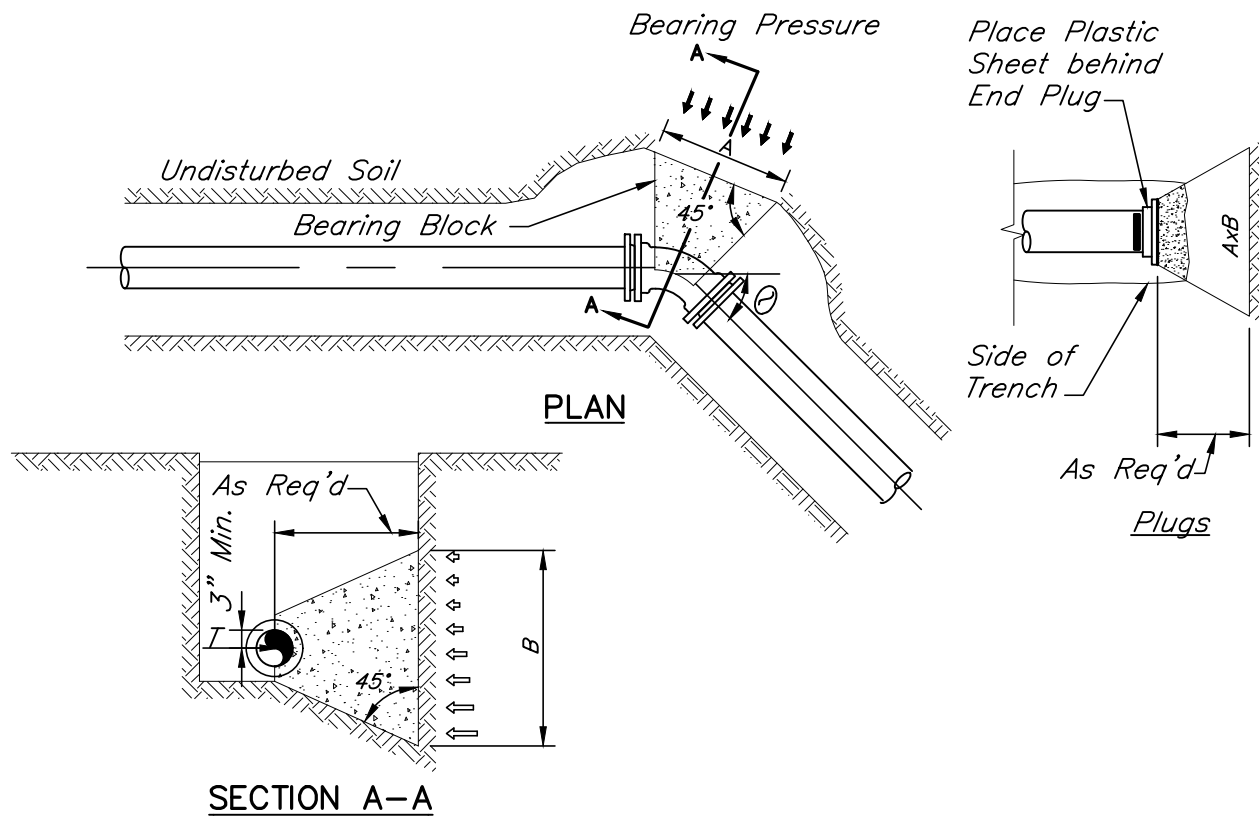
Typical desired densities in open areas are depicted above in the boxes to the left of the figure. In other laying situations, more stringent selection, placement and compaction will be required.

Trench width should be no wider than necessary for adequate work room and to assure safe working conditions. Nominal outside diameter (O.D.) pipe plus 6" on each side is typically considered minimal.

TRENCH BACKFILL OPEN AREAS - PLASTIC PIPE

Oct. 2016

Scale: 3/4"=1'-0"



NOTES:

1. Thrust restraint table is based on pipeline pressure of 200 psi and earth bearing capacity of 1500 psf. During construction, the specific soil type may be evaluated and concrete thrust block size revised at the discretion of the Engineer.
2. On large diameter pipes where space limitations or construction difficulties render concrete thrust blocks not feasible or impractical, a joint restraint system may be used. This restrained joint system must be approved by the Engineer.
3. Concrete shall be 3000 psi minimum conforming to KTC Specifications 601.
4. Accessibility to fittings and bolts must be maintained.
5. Wrap fittings in plastic prior to placing concrete.

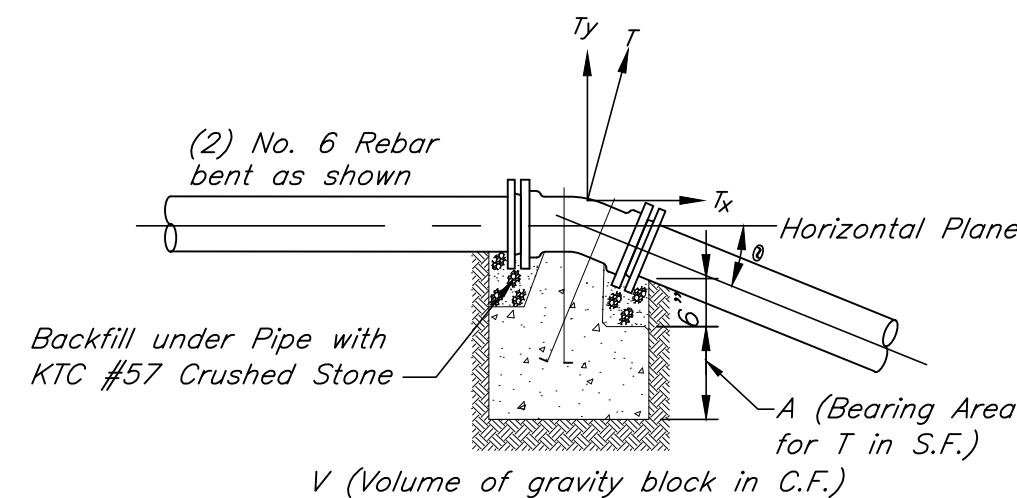
HORIZONTAL THRUST BLOCK SCHEDULE

PIPE SIZE (INCHES)	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE, DEAD END	
	A	B	A	B	A	B	A	B	A	B
3 & 4	3'-3"	1'-8"	2'-4"	1'-2"	1'-8"	1'-0"	1'-0"	2'-8"	1'-4"	
6	4'-8"	2'-4"	3'-5"	1'-8"	2'-6"	1'-3"	1'-6"	3'-10"	2'-0"	
8	6'-0"	3'-0"	4'-5"	2'-3"	3'-2"	1'-7"	2'-3"	5'-0"	2'-6"	
10	7'-6"	3'-9"	5'-5"	2'-9"	3'-10"	2'-0"	2'-9"	1'-5"	6'-3"	3'-2"
12	8'-10"	4'-5"	6'-6"	3'-3"	4'-8"	2'-4"	3'-4"	1'-8"	7'-5"	3'-9"
14	10'-3"	5'-2"	7'-6"	3'-9"	5'-4"	2'-8"	3'-10"	2'-0"	8'-8"	4'-4"
16	11'-8"	5'-10"	8'-7"	4'-4"	6'-1"	3'-0"	4'-4"	2'-2"	9'-9"	4'-11"
18	13'-0"	6'-6"	9'-7"	4'-9"	6'-10"	3'-5"	4'-10"	2'-5"	11'-0"	5'-6"
20	14'-5"	7'-3"	10'-7"	5'-4"	7'-7"	3'-9"	5'-4"	2'-8"	12'-2"	6'-1"
24	17'-3"	8'-8"	12'-8"	6'-4"	9'-0"	4'-6"	6'-5"	3'-3"	14'-6"	7'-3"

HORIZONTAL THRUST BLOCK

July, 2015

Scale: 3/8"=1'-0"



NOTES:

1. Thrust restraint table is based on pipeline pressure of 200 psi and earth bearing capacity of 1500psf. During construction, the specific soil type may be evaluated and concrete thrust block size revised at the discretion of the Engineer.
2. On large diameter pipes where space limitations or construction difficulties render concrete thrust blocks not feasible or impractical, a joint restraint system may be used. This restrained joint system must be approved by the Engineer.
3. Concrete shall be 3000 psi minimum conforming to KTC Specifications 601.
4. Accessibility to fittings and bolts must be maintained.
5. Wrap fittings in plastic prior to placing concrete.

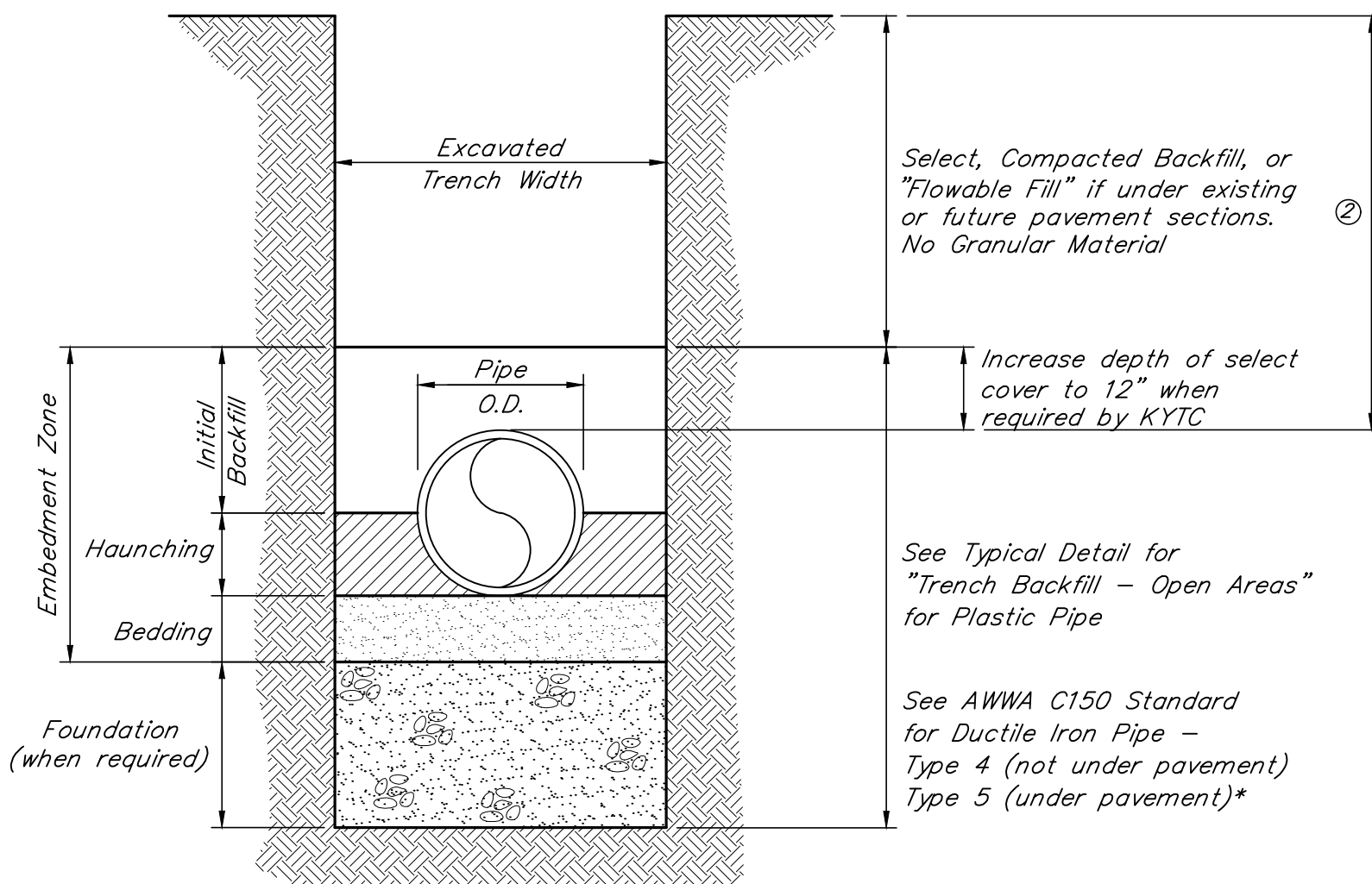
VERTICAL THRUST BLOCK SCHEDULE

PIPE SIZE (INCHES)	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND	
	V	A	V	A	V	A	V	A
3 & 4	29	2	20	1	11	1	6	1
6	64	5	46	2	25	1	13	1
8	114	8	81	4	43	1	23	1
10	174	12	123	5	66	2	35	1
12	248	17	176	8	95	2	50	1
14	337	23	238	10	128	3	67	1
16	439	29	311	13	167	4	88	1
18	555	37	393	16	211	5	111	1
20	685	46	484	20	260	6	137	2
24	985	66	686	29	374	8	197	2

VERTICAL THRUST BLOCK

July, 2015

Scale: 1/2"=1'-0"

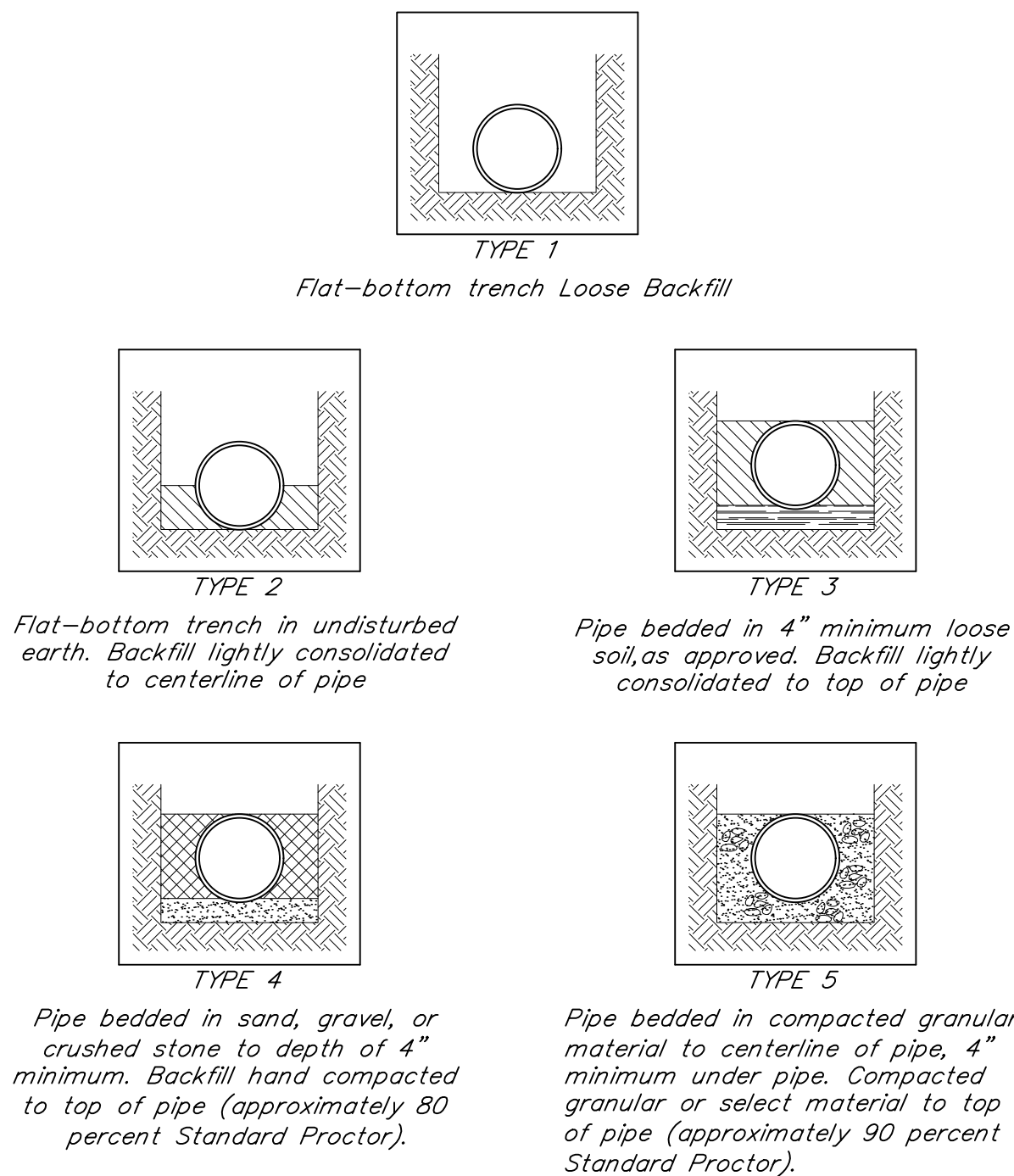


- ① When "open-cutting" of State Highway is permitted, pipe laying, encasement requirements, backfill placement, pavement replacement, etc. shall be as required by the encroachment permit issued by the Kentucky Transportation Cabinet (KYTC). By reference, such permit(s) shall become part of the contract. It shall be the CONTRACTOR'S responsibility to maintain a copy of KYTC permit(s) on the job site at all times.
- ② Underground utilities on state right of way shall be installed at a minimum depth of 42" under roadways, ramps, and ditch lines, and in accordance with the latest edition of the KYTC Permits Manual in all other KYTC right of way areas.

TRENCH BACKFILL ON HIGHWAY RIGHT

Dec., 2010

N.T.S.



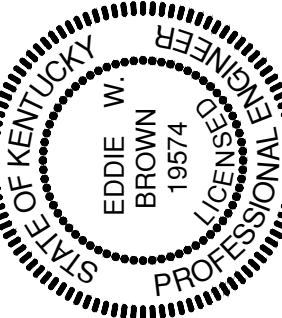
LAYING CONDITIONS FOR DUCTILE IRON PIPE

Dec., 2010

N.T.S.
Ref. AWWA C150

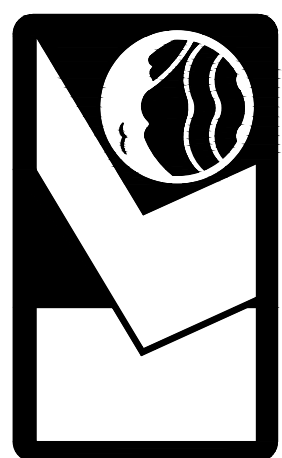
MISCELLANEOUS DETAILS

JACKSON COUNTY WATER ASSOCIATION
KY 30 RECONSTRUCTION
WATERLINE RELOCATION - KYTC ITEM 10-279.61
JACKSON COUNTY, KENTUCKY



DRAWN BY: JKP
CHECKED BY: EWB
DATE: 01/18
SCALE: As Noted
REVISIONS

KENVIRONS, INC.
FRANKFORT, KENTUCKY



PROJECT NO.

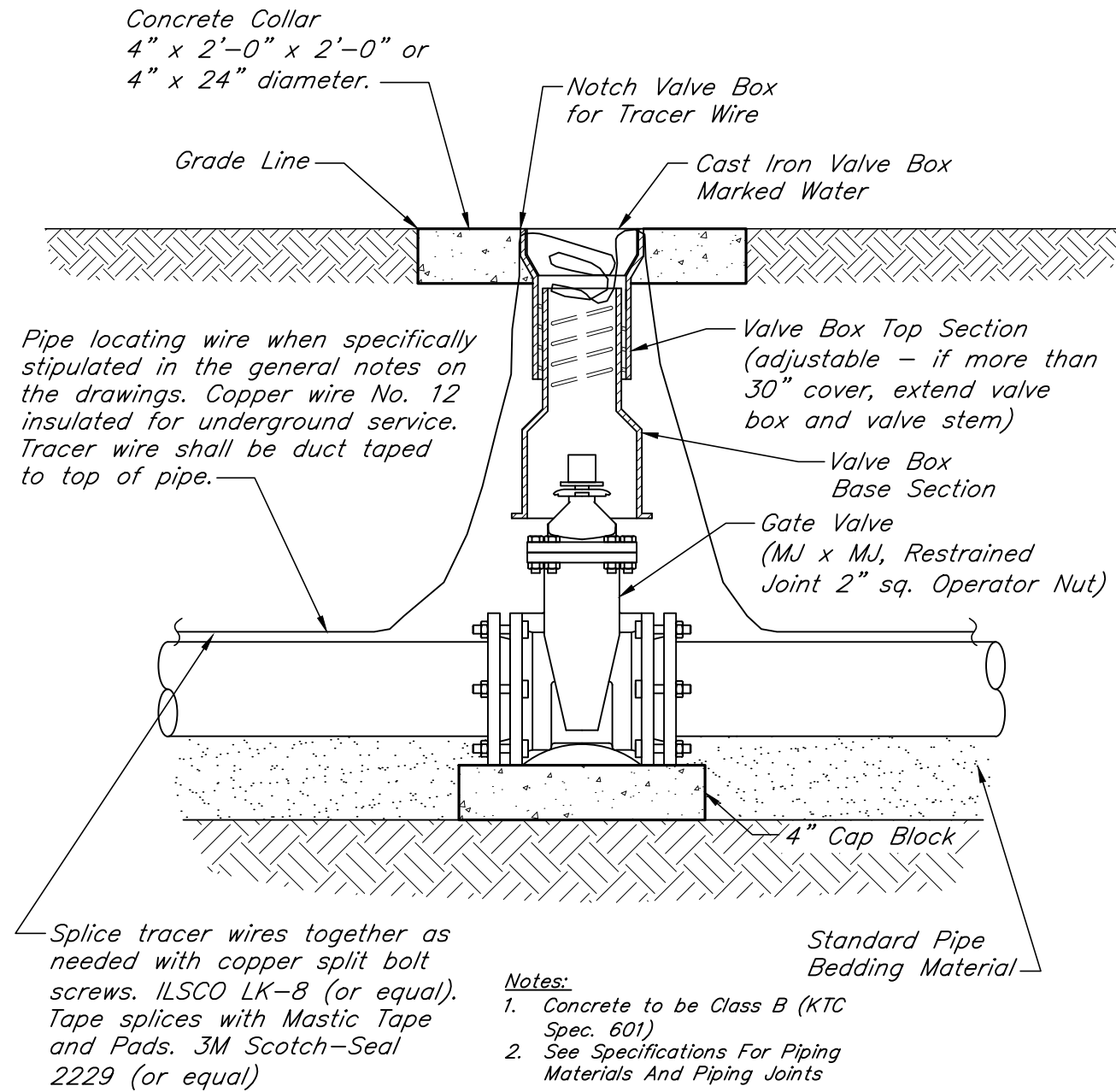
2017112

SHEET NO.

U14

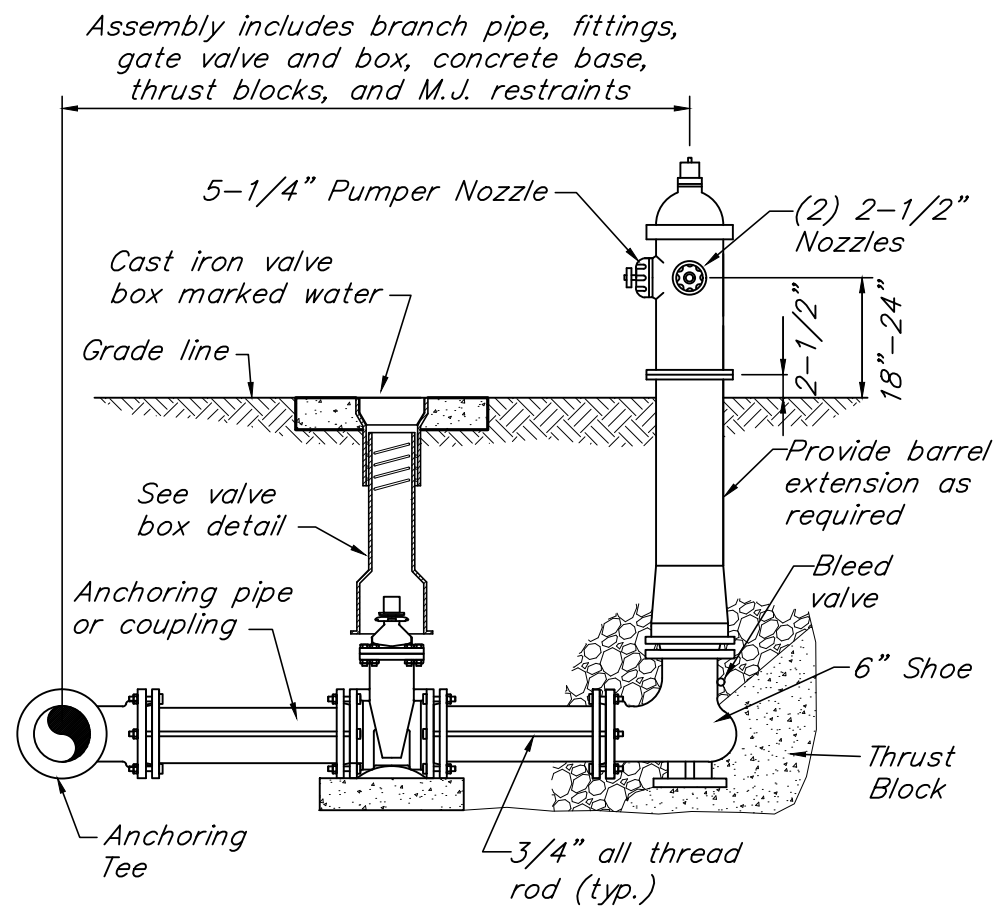
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COUNTY OF	ITEM NO.	SHEET NO.
JACKSON & OWSLEY	10-279.61 11-287.30	U15



VALVE BOX INSTALLATION

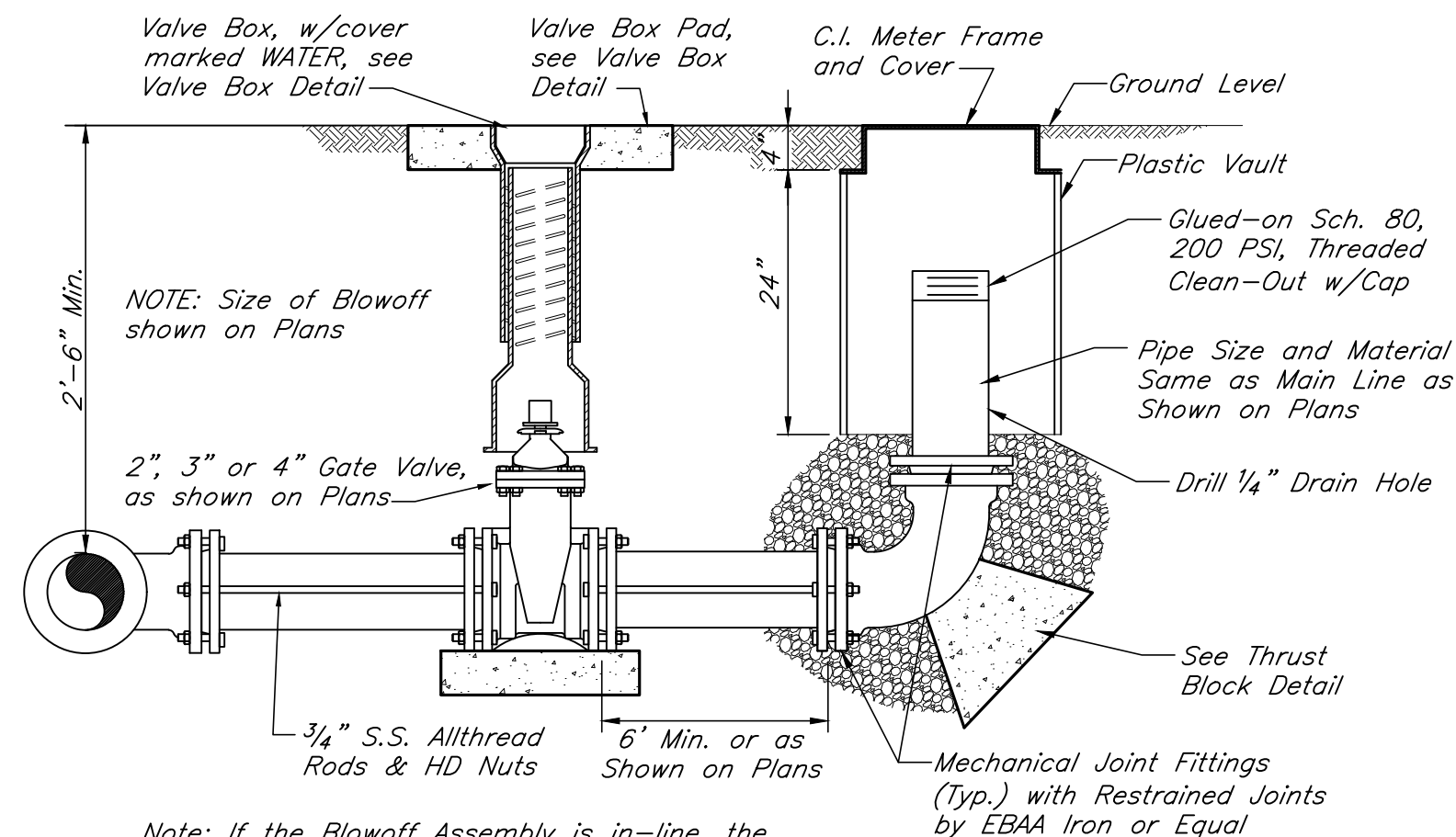
July 2015 Scale: 1"=1'-0"



Notes : See specifications for piping materials and piping joints. Bleed valve not to be encased in concrete.

FIRE HYDRANT

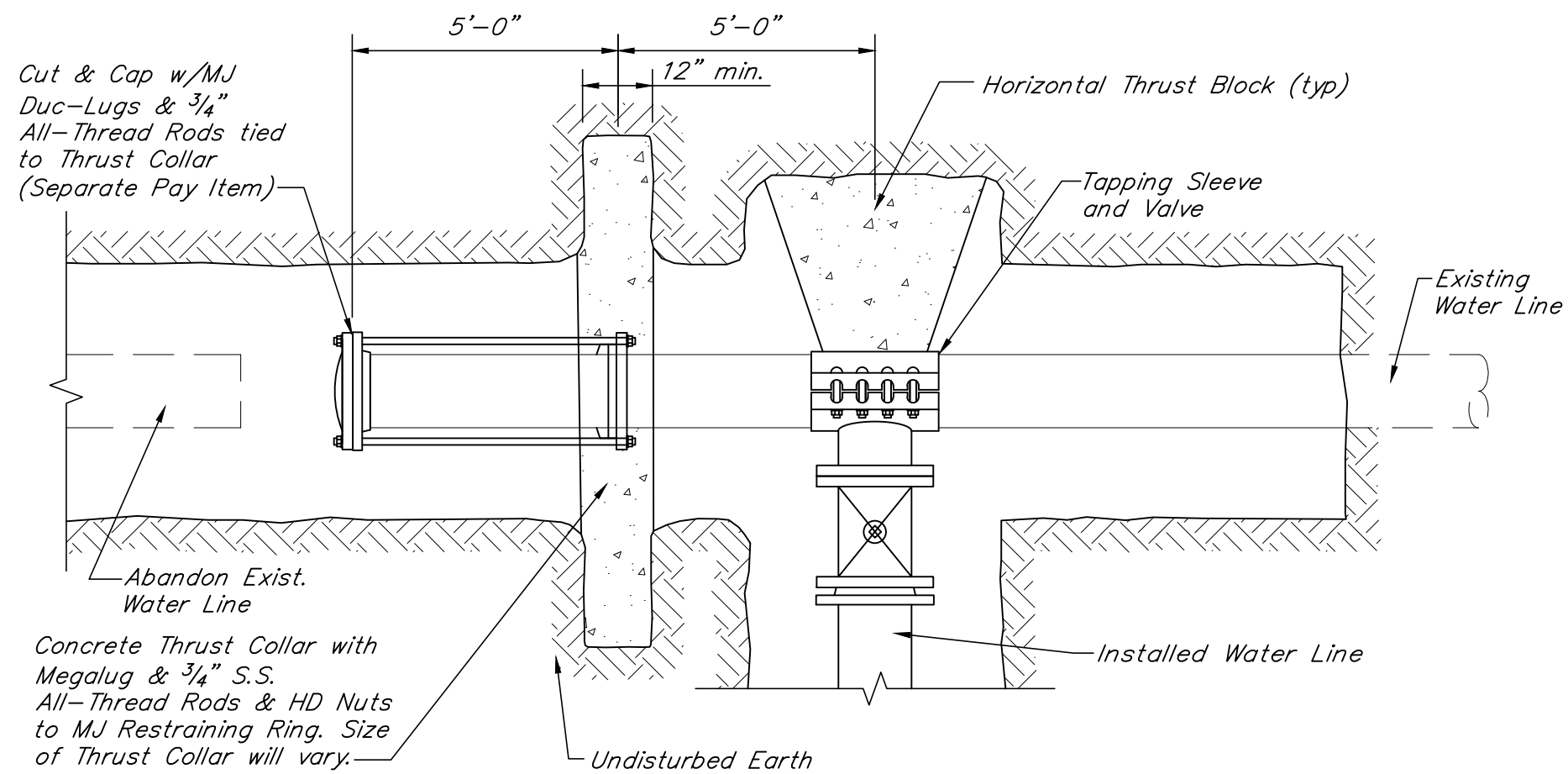
Scale: 1/2"=1'-0"
Dec. 2014



Note: If the Blowoff Assembly is in-line, the assembly shall have all-thread rods threaded to the M.J. Tee and Retainer Glands.

BLOWOFF ASSEMBLY DETAIL

Feb. 2015 Scale: 3/4"=1'-0"



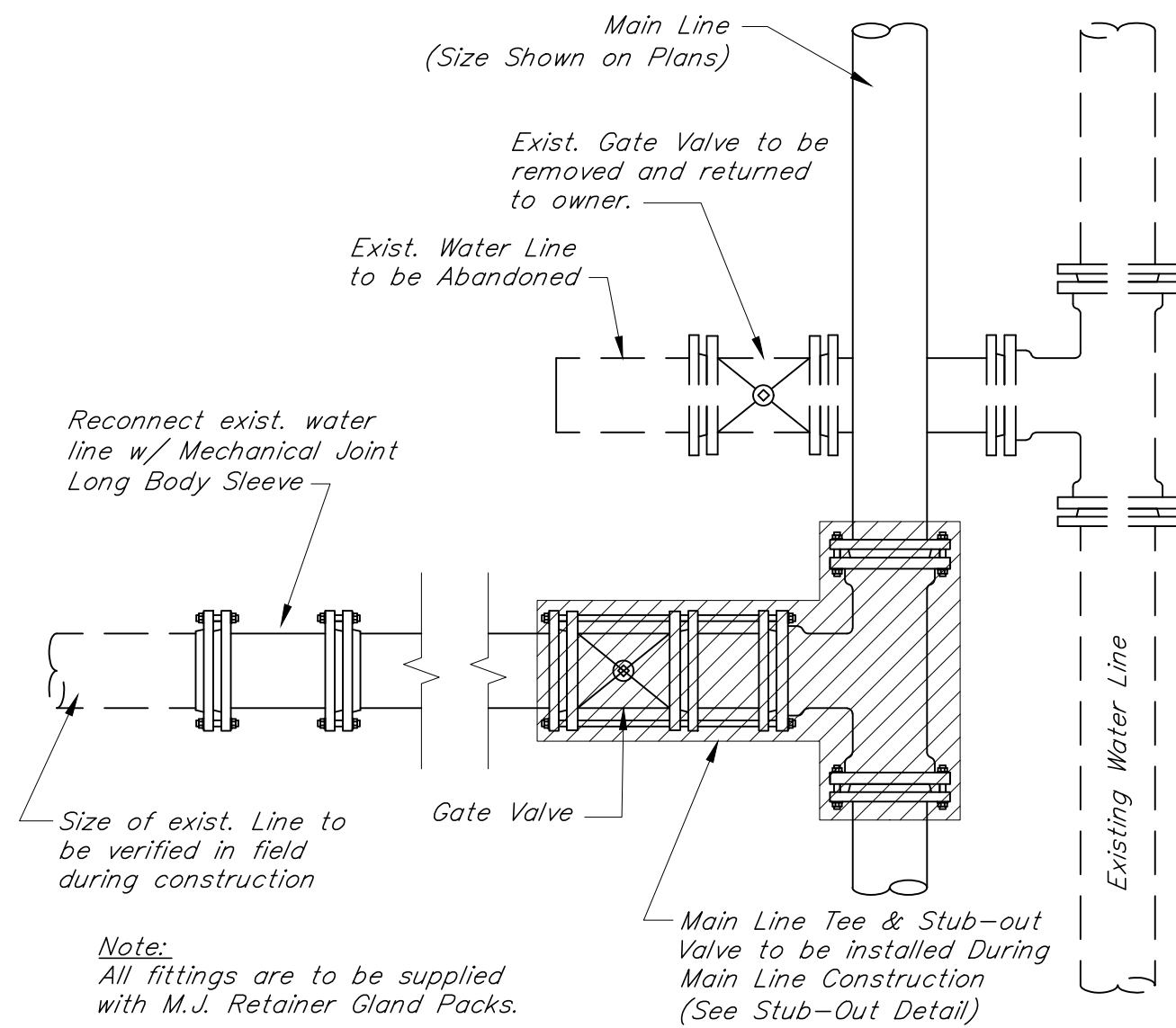
NOTES:

- Number of All-Thread Rods and type of Duc-Lugs depends on pressure on line.
- Vertical offsets: All-Thread Rod fitting to fitting and bore if applicable.

TAPPING SLEEVE & VALVE TIE-IN

Oct. 2017

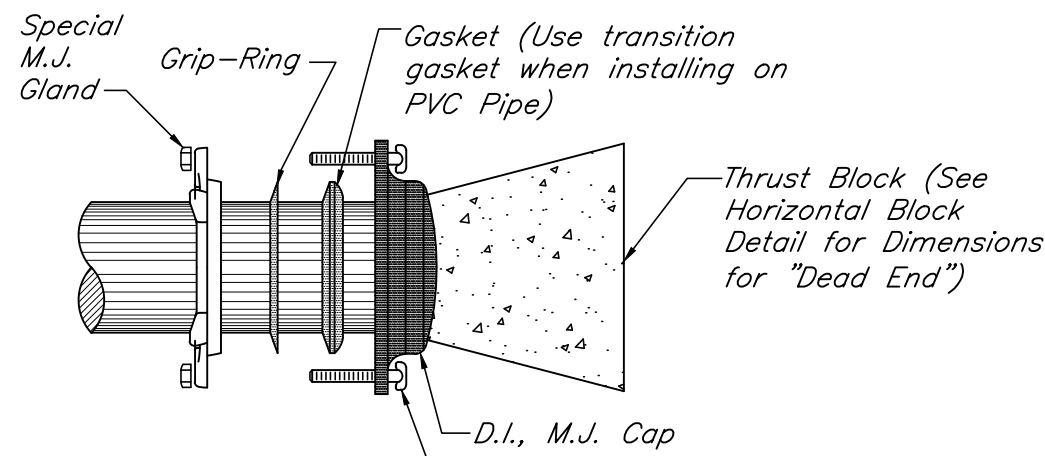
N.T.S.



Note: All fittings are to be supplied with M.J. Retainer Gland Packs.

SLEEVED TIE-IN

Scale: 3/4"=1'-0"
Oct. 2017

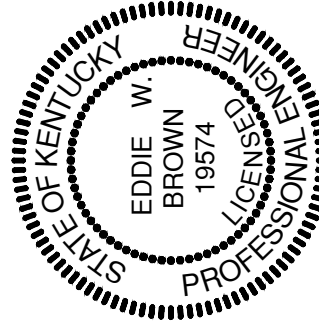


NOTE: Restraint system to be as manufactured by Star Pipe Products, Inc., Romac Industries, Inc., or equivalent

END CAP

Dec., 2010 N.T.S.

JACKSON COUNTY WATER ASSOCIATION
KY 30 RECONSTRUCTION
WATERLINE RELOCATION - KYTC ITEM 10-279.61
JACKSON COUNTY, KENTUCKY



DRAWN BY: JKP
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KENVIRONS, INC.
FRANKFORT, KENTUCKY



PROJECT NO.

2017112

SHEET NO.

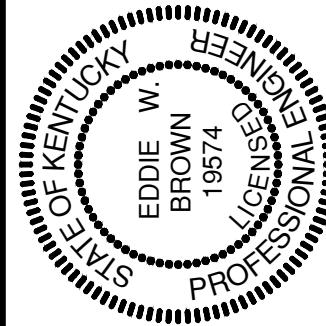
U15

MISCELLANEOUS DETAILS

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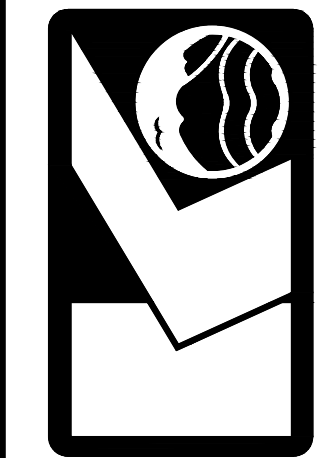
COUNTY OF	ITEM NO.	SHEET NO.
JACKSON & OWSLEY	10-279.61 11-287.30	U15

JACKSON COUNTY WATER ASSOCIATION
KY 30 RECONSTRUCTION
WATERLINE RELOCATION - KYTC ITEM 10-279.61
JACKSON COUNTY, KENTUCKY

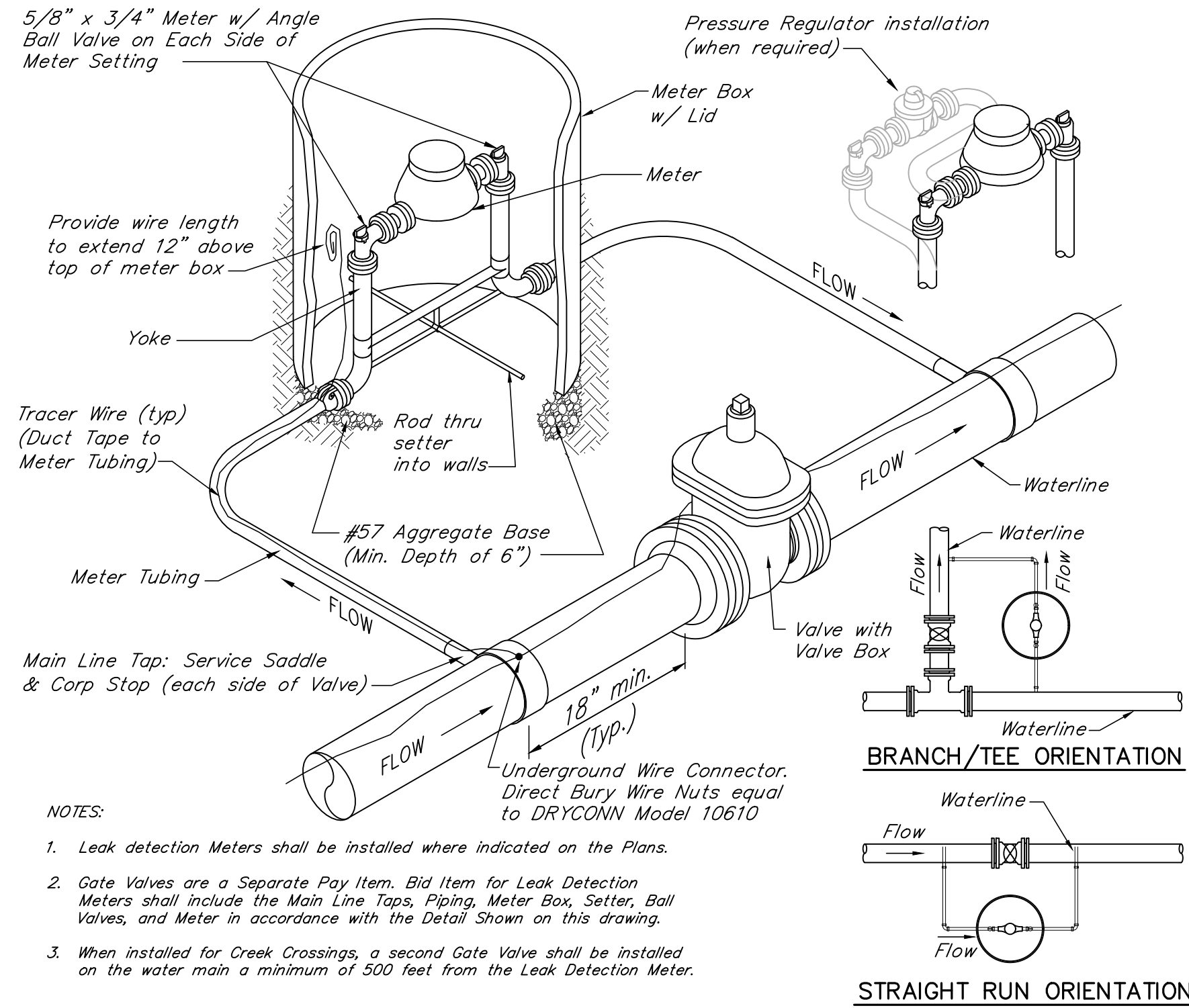
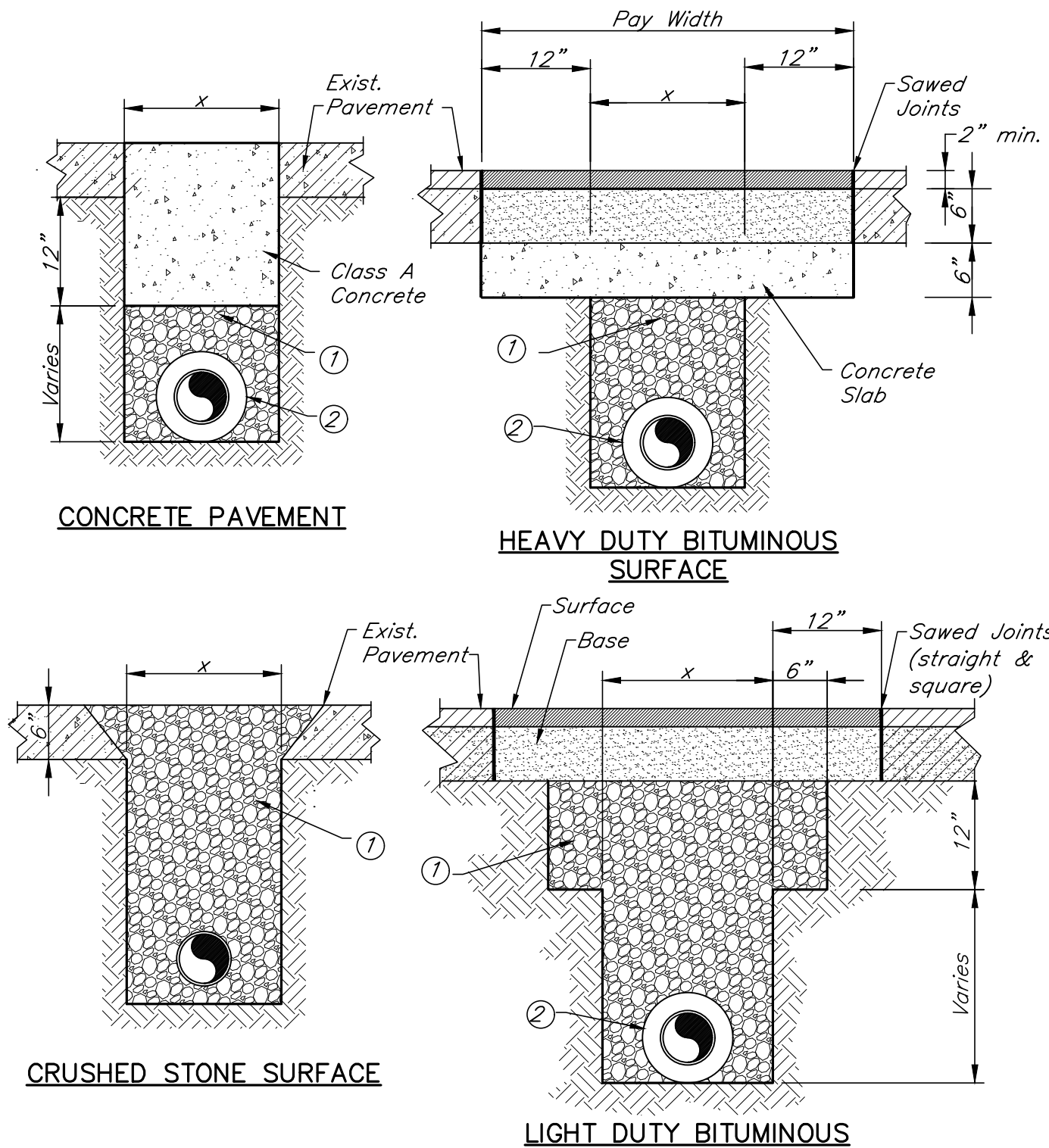
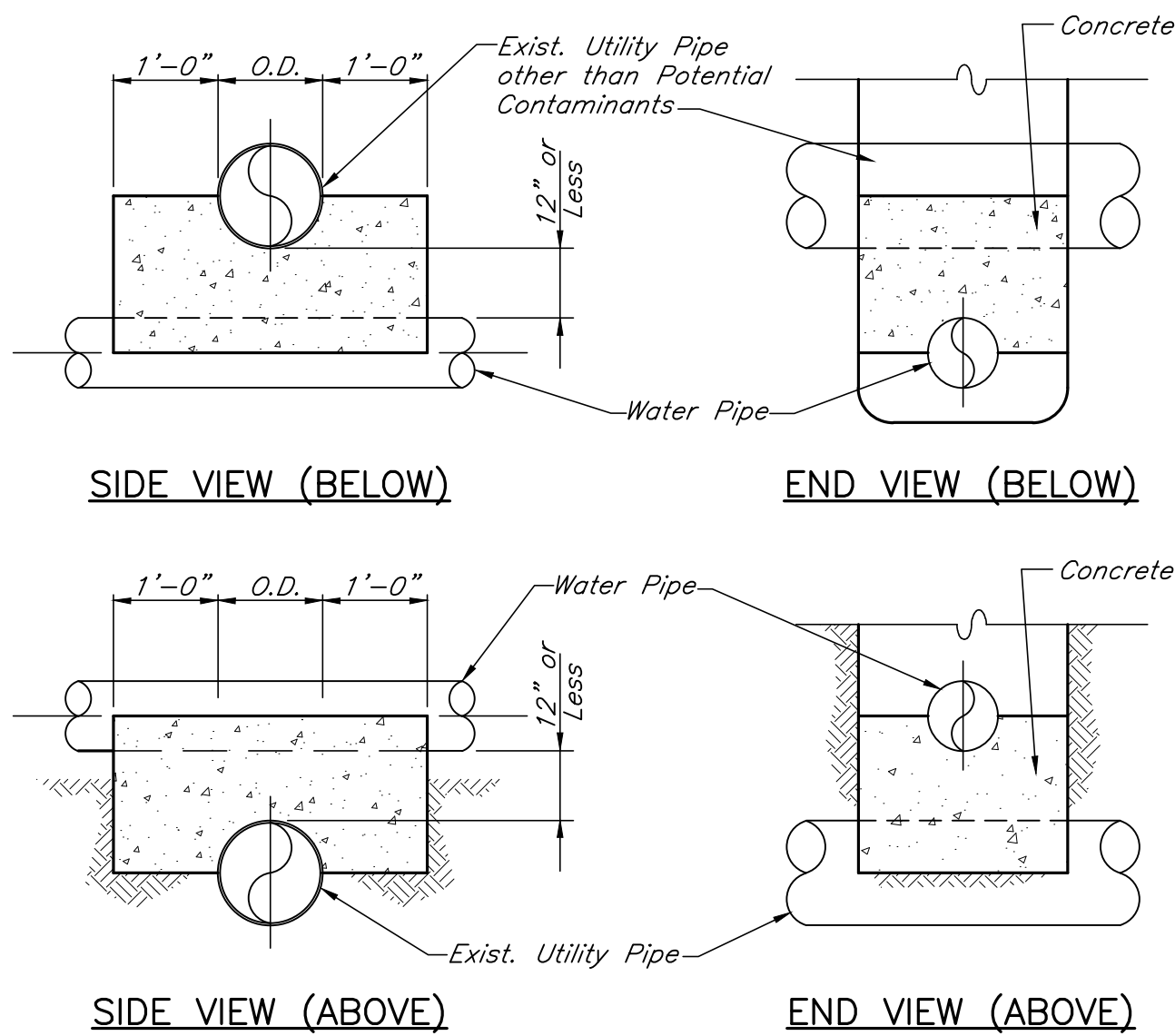
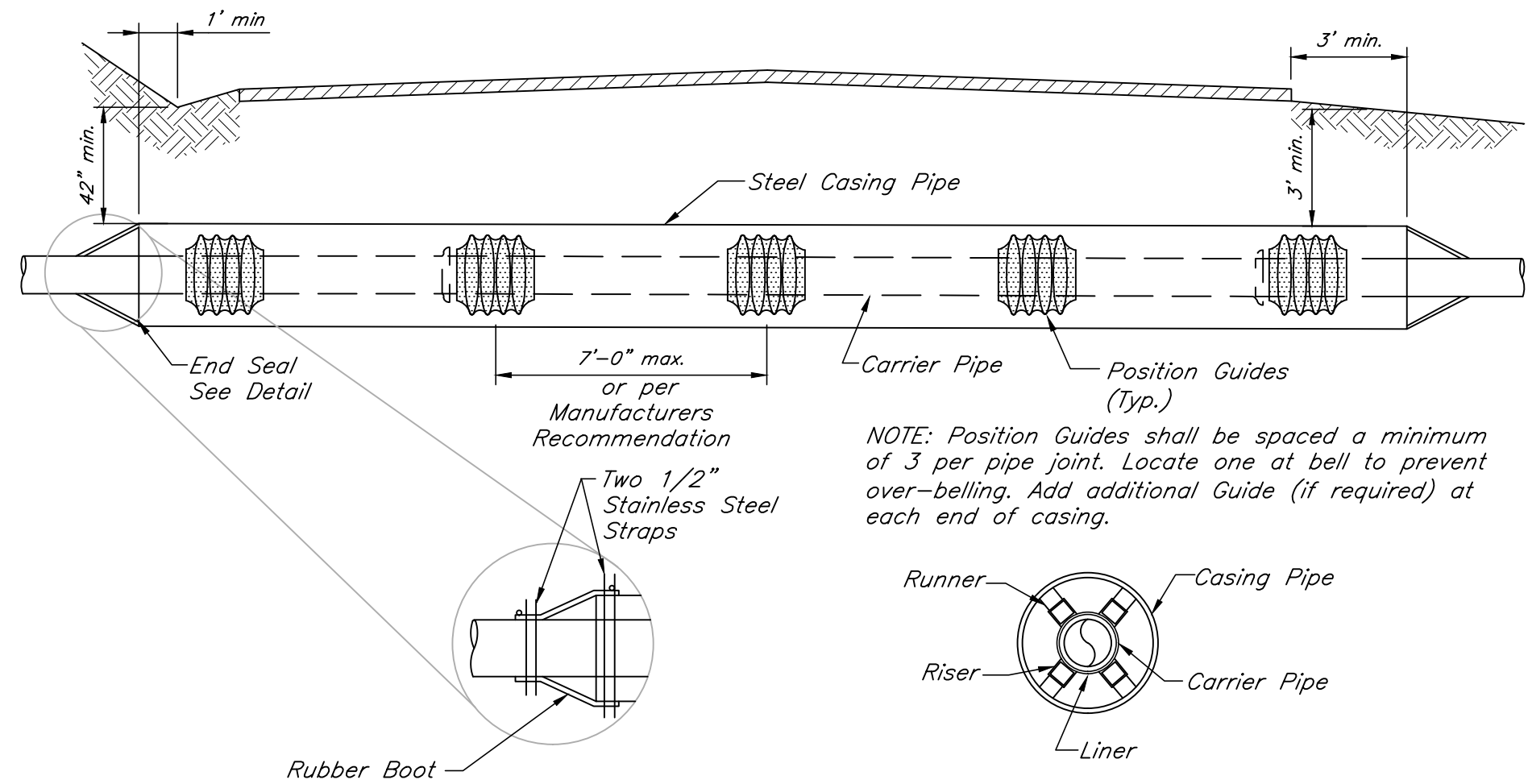
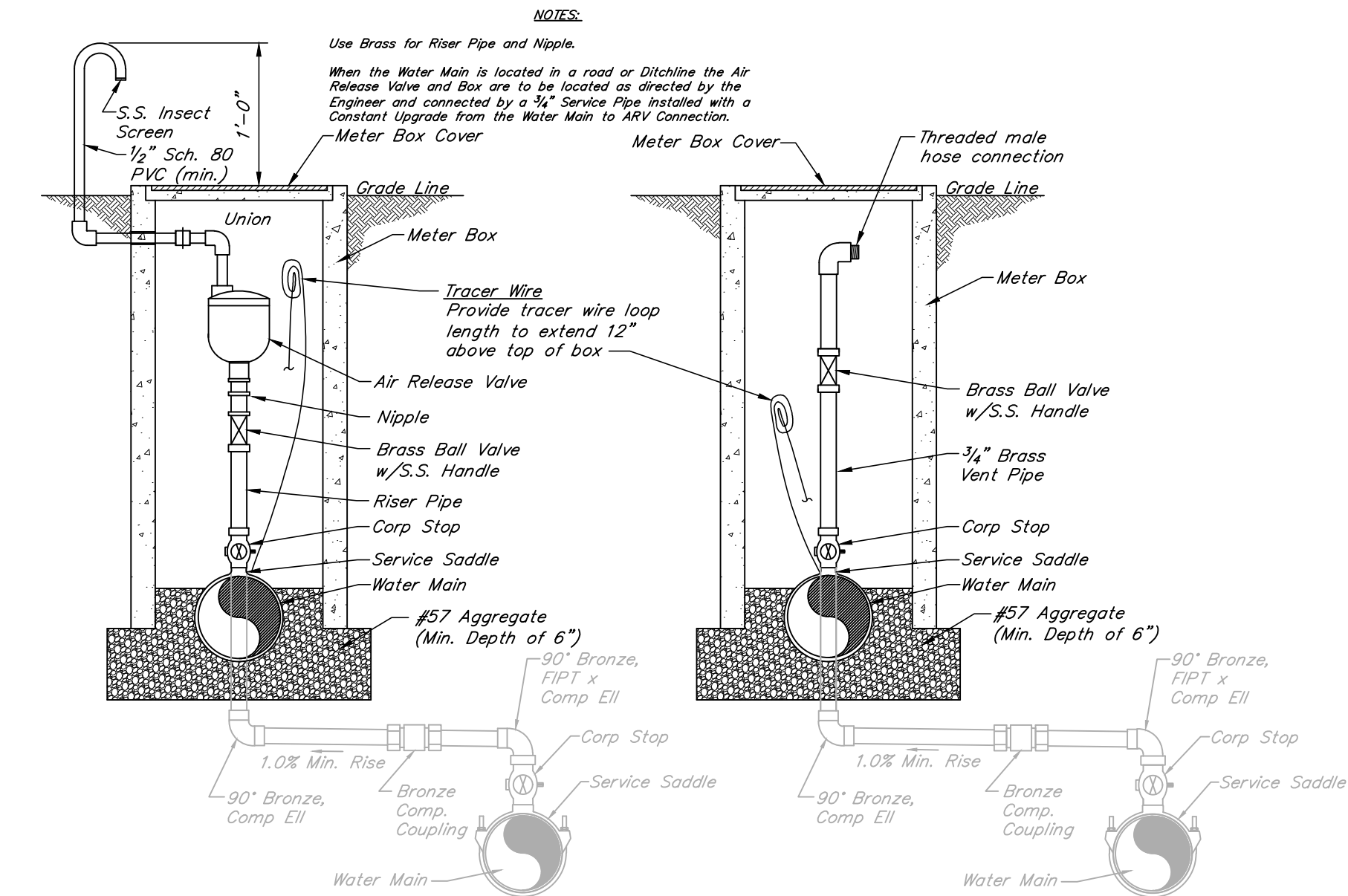


DRAWN BY: JKP	CHECKED BY: FWB
DATE: 07/18	SCALE: As Noted
REVISIONS	

KENVIRONS, INC.
FRANKFORT, KENTUCKY



PROJECT NO.
2017112
SHEET NO.
U16



MISCELLANEOUS DETAILS

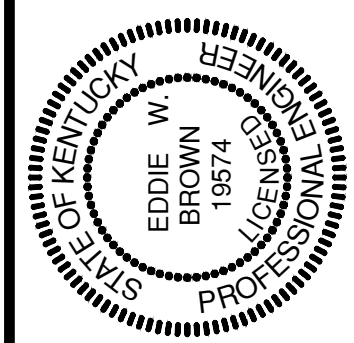
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COUNTY OF	ITEM NO.	SHEET NO.
JACKSON & OWSLEY	10-279.61 11-287.30	U17

SUMMARY OF QUANTITIES

BID CODE	ITEM	UNITS	U4		U5		U6		U7		U8		U9		U10		U11		TOTAL	
			PROPOSED	ABANDONED	PROPOSED	ABANDONED	PROPOSED	ABANDONED	PROPOSED	ABANDONED	PROPOSED	ABANDONED	PROPOSED	ABANDONED	PROPOSED	ABANDONED	PROPOSED	ABANDONED	PROPOSED	ABANDONED
14003	W Cap Existing Main	EA	2		1				1		1		2		1		1		9	
14008	W Encasement Steel Bored Range 3	LF	180								150								330	
14013	W Encasement Steel Open Cut Range 2	LF			55		80		205		185						170		695	
14014	W Encasement Steel Open Cut Range 3	LF	205								60								265	
14019	W Fire Hydrant Assembly	EA	1																1	
14023	W Flushing Assembly	EA							1		2		1		1				5	
14028	W Meter 3/4-inch	EA	2		1		2		2								1		8	
14035	W Pipe Dctl. Iron 4-Inch	LF													200	440	380	22	580	462
14036	W Pipe Dctl Iron 6-inch	LF	735	490															735	490
14046	W Pipe Dctl. Iron 4-Inch Restrained Joint	LF															190		190	
14047	W Pipe Dctl. Iron Restrained Joint 6-inch	LF	395																395	
14057	W Pipe PVC 3-inch	LF					20	245			560	720							580	965
14057*	W Pipe PVC 3-inch Restrained Joint*	LF									195								195	
14058	W Pipe PVC 4-inch	LF			910	915	1730	1505	1365	1390			650	620					4655	4430
14059	W Pipe PVC 6-inch	LF									330	215							330	215
14059*	W Pipe PVC 6-inch Restrained Joint*	LF									110								110	
14069	W Pipe PE/PLST 6-inch	LF							380										380	
14072	W Pipe PE/PLST 12-inch	LF							115										115	
14080	W Serv PE/PLST Long Side 3/4-inch	EA					1												1	
14085	W Serv PE/PLST Short Side 3/4-inch	EA	2		1		1		2								1		7	
14089	W Tapping Sleeve & Valve Size 1	EA	2		1				1		1		1		1		1		8	
14091	W Tie-in 2-inch	EA					1												1	
14103	W Valve 3-inch	EA					1				3								4	
14104	W Valve 4-inch	EA					1		1										2	
14153	W Leak Detection Meter	EA							1										1	

SHEET QUANTITIES



DRAWN BY: PTH	CHECKED BY: EWB
DATE: 08/02/18	SCALE: N/A
REVISIONS	

KENVIRONS, INC.
FRANKFORT, KENTUCKY



PROJECT NO.
2017112
SHEET NO.
U17

JACKSON COUNTY WATER ASSOCIATION
KY 30 RECONSTRUCTION
WATERLINE RELOCATION - KYTC ITEM 10-279.61
JACKSON COUNTY, KENTUCKY