

U.S. Army Corps of Engineers (USACE)
APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT
 33 CFR 325. The proponent agency is CECW-CO-R.

*Form Approved -
 OMB No. 0710-0003
 Expires: 01-08-2018*

The public reporting burden for this collection of information, OMB Control Number 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR APPLICATION TO THE ABOVE EMAIL.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: <http://dpcl.d.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx>

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)


1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE
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(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME First - Steve Middle - Last - Beatty Company - Louisville Gas & Electric E-mail Address - Stephen.beatty@lge-ku.com			8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required) First - Timothy Middle - Last - Meeks Company - Cardno E-mail Address - timothy.meeks@cardno.com		
6. APPLICANT'S ADDRESS: Address- 6900 Enterprise Dr. City - Louisville State - KY Zip - 40214 Country -			9. AGENT'S ADDRESS: Address- 708 Roosevelt Road City - Walkerton State - IN Zip - 46574 Country - USA		
7. APPLICANT'S PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax 502-364-8332			10. AGENTS PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax 574-586-3400		

STATEMENT OF AUTHORIZATION

11. I hereby authorize, CARDNO to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.


STEPHEN A. BEATTY
AS PRINCIPAL ENGINEER FOR APPLICANT
2-25-19

SIGNATURE OF APPLICANT DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions) LG&E Bullitt County Gas Transmission Pipeline	
13. NAME OF WATERBODY, IF KNOWN (if applicable) Multiple see attached documentation	14. PROJECT STREET ADDRESS (if applicable) Address
15. LOCATION OF PROJECT Latitude: °N 37°58'10.50"N Longitude: °W 85°36'32.29"W	City - State- Zip-
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) State Tax Parcel ID Municipality Section - Township - Range -	

17. DIRECTIONS TO THE SITE

The total area of interest was 11.84 miles long with a survey width of 150 feet. To reach the midpoint of the proposed route while traveling south on I-65 exit the interstate at exit #116 for KY480. Travel east on KY480 for approximately 5.2 miles and the route crosses KY480 and a proposed permanent access road. The starting point for the survey (milepost 0.0) is located at approximately 1.0 miles east of the intersection of Grigsby Lane and Rummage Lane. The survey corridor extends west and south crossing Cedar Grove Road and Deatsville Road. The survey corridor terminus for the project (milepost 11.84) is located just east of Interstate 65 and north of Chapeze Lane via a gravel access road.

18. Nature of Activity (Description of project, include all features)

Louisville Gas & Electric proposes a pipeline installation for a NPS 12 inch steel pipe to carry natural gas to increase service capacity. This construction project will involve crossing jurisdictional resources in multiple locations and methods. Temporary and permanent impacts are proposed. All impacts are planned to meet the criteria of the Nationwide Permit #12. An attachment has been included in order to detail the proposed impacts to all resources within the proposed construction corridor.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

Louisville Gas & Electric proposes a new natural gas transmission pipeline to provide reliability to Bullitt County and the surrounding area by providing an additional natural gas source. The pipeline will also increase service to the area due to the demand upon the current LG&E facilities. This pipeline is needed to continue to meet the economic development and growth in Bullitt County.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Temporary discharge of materials are needed in order to construct sub-fluvial crossings. A permanent fill is proposed for a matted crossing at MP06 UNT2 in order to complete a permanent access road to the the Mainline Valve (MLV) access location. This matted crossing will maintain the stability of the crossing and limit any possible future sediment or bank impacts to the stream and reducing the risk of backing up water and allows the stream to maintain its pattern during high flow events.

The permanent impact to wetlands is proposed at MP06 W02. This wetland is a forested wetland (PFO) the trees will be cleared and the wetland within the permanent easement of the pipeline will be maintained as an herbaceous wetland (PEM).

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
open cell concrete mat	5.18 cubic yards	

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 0.003 acres of stream bed fill with an open cell revetment mattress for a permanent access road construction
or
Linear Feet 18 linear feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

The project route was chosen after extensive surveys to avoid stream and wetland features while working to cross the necessary features with perpendicular crossings and minimal impacts. The proposed alignment was chosen in order to limit the distances of stream impacts and have as few permanent impact locations as possible. All permanent wetland impact locations will be reseeded with seed mixes for the region.

24. Is Any Portion of the Work Already Complete? Yes No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address-

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
USFWS	Technical Assistance	2019-B-0038	2018-09-24		
401 KY WQC	Individual Certificatio		Pending		

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

STEPHEN A. BEATY
AS PRINCIPAL ENGINEER FOR APPLICANT
SABeaty 2-25-19 Timothy M. Neek 2019-01-18
 SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

TABLE 1: LRL-2017-1046: Proposed Impacts

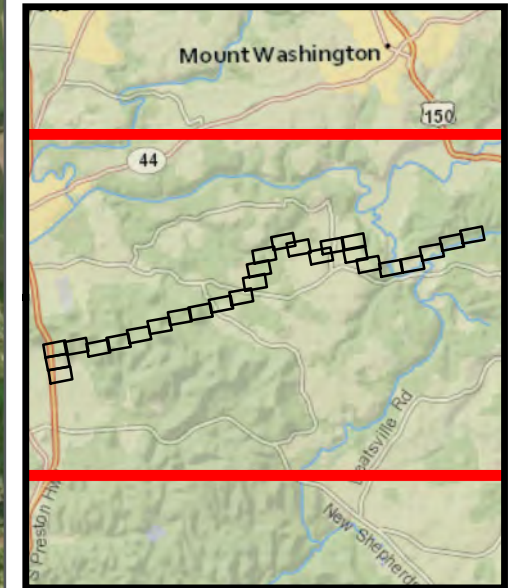
Site Number/ ID	Amount of aquatic resource in review area (acreage or linear feet)	Amount of aquatic resource Impact (acreage or linear feet)	Permanent or Temporary Impact	Type of Crossing	Type of aquatic resource	Watershed size upstream at pipeline crossing location*
MP06 W01	0.12 ac	0.05 ac	Temporary	Trenching	PEM	N/A
MP06 W02	0.5 ac	0.16 ac	Permanent conversion	Trenching	PFO	N/A
MP09 W01	0.17 ac	0.07 ac	Temporary	Trenching	PEM	N/A
MP11 W01	0.32 ac	0.15 ac	Temporary	Trenching	PEM	N/A
MP00 UNT0	443	0	None	N/A	Intermittent	N/A
MP00 UNT1	135	101	Temporary	Trenching	Perennial	.44 square miles
MP00 UNT2	301	102	Temporary	Trenching	Intermittent	0.0912 square miles
MP00 UNT3	192	102	Temporary	Trenching	Intermittent	0.0799 square miles
MP01 UNT1	172	85	Temporary	Trenching	Intermittent	0.038 square miles
MP01 UNT2	240	101	Temporary	Trenching	Ephemeral	watershed not mapped
MP02 Cox Creek	192	0	None	HDD	Perennial	HDD no impact
MP02 Rocky Run	240	0	None	HDD	Perennial	HDD no impact
Cedar Creek	192	192	Temporary	Trenching	Perennial	1.01 square miles
MP05 UNT1	471	0	None	N/A	Intermittent	not crossing
MP05 UNT2	274	122	Temporary	Trenching	Perennial	0.63 square miles
MP05 W01 PUB	0.10 ac	0.07 ac	Temporary	Trenching	Pond Open Water	N/A
Greens Branch	556	129	Temporary	Trenching	Perennial	2.14 square miles
UNT1 to Greens Branch	978	0	None	N/A	Perennial	0.061 square miles
UNT1A to Greens Branch	128	128	Temporary	Trenching	Ephemeral	watershed not mapped
MP06 UNT2A	604	179	Temporary	Trenching	Ephemeral	watershed not mapped
MP06 UNT2**	325	18	Permanent	Access Road	Intermittent	0.48 square miles
MP06 UNT2**	325	95	Temporary	Trenching	Intermittent	0.48 square miles
MP06 UNT1	220	77	Temporary	Trenching	Perennial	2.07 square miles

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MP07 UNT1	191	0	None	HDD	Perennial	0.19 square miles
MP07 UNT2	171	84	Temporary	Trenching	Intermittent	0.0902 square miles
MP07 UNT3	408	170	Temporary	Trenching	Intermittent	0.0848 square miles
MP7.5 W01	0.18 ac	0 ac	None	N/A	PUB	watershed not mapped
Coyler UNT1	86	15	Temporary	Trenching	Ephemeral	watershed not mapped
Coyler UNT2	81	15	Temporary	Trenching	Ephemeral	watershed not mapped
Coyler UNT3	69	15	Temporary	Trenching	Ephemeral	watershed not mapped
Coyler UNT4	55	15	Temporary	Trenching	Ephemeral	watershed not mapped
MP08 UNT1	265	164	Temporary	Trenching	Intermittent	0.0725 square miles
MP08 UNT2	223	79	Temporary	Trenching	Perennial	0.98 square miles
MP08 UNT1 to Licksillet	378	248	Temporary	Trenching	Ephemeral	watershed not mapped
Licksillet Creek	200	98	Temporary	Trenching	Perennial	0.61 square miles
MP09 UNT1	811	144	Temporary	Trenching	Intermittent	watershed not mapped
MP09 UNT2	64	25	Temporary	Trenching	Perennial	0.0992 square miles
MP09 UNT3	198	119	Temporary	Trenching	Perennial	0.0992 square miles
MP09 UNT4	170	77	Temporary	Trenching	Perennial	0.0869 square miles
MP09 UNT5	152	77	Temporary	Trenching	Ephemeral	watershed not mapped
MP09 UNT6	76	33	Temporary	Trenching	Ephemeral	watershed not mapped
MP09 UNT7	209	99	Temporary	Trenching	Ephemeral	watershed not mapped
MP09 UNT8	147	80	Temporary	Trenching	Intermittent	watershed not mapped
MP10 UNT1	567	147	Temporary	Trenching	Ephemeral	watershed not mapped
MP10 UNT2	78	49	Temporary	Trenching	Ephemeral	watershed not mapped
MP10 UNT3	80	40	Temporary	Trenching	Ephemeral	watershed not mapped
MP10 UNT4	66	9	Temporary	Trenching	Ephemeral	watershed not mapped
MP10 UNT5	157	106	Temporary	Trenching	Ephemeral	watershed not mapped
MP10 UNT6	267	124	Temporary	Trenching	Intermittent	watershed not mapped
MP10 UNT6A	35	1.1	Temporary	Trenching	Ephemeral	watershed not mapped
MP10 UNT7	149	77	Temporary	Trenching	Intermittent	0.0409 square miles
MP10 UNT7A	144	86	Temporary	Trenching	Ephemeral	watershed not mapped

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MP10 UNT7A1	312	114	Temporary	Trenching	Ephemeral	watershed not mapped
MP10 UNT8	148	81	Temporary	Trenching	Intermittent	watershed not mapped
MP10 UNT9	139	78	Temporary	Trenching	Ephemeral	watershed not mapped
MP10 UNT10	63	13	Temporary	Trenching	Ephemeral	watershed not mapped
MP10 UNT11	410	178	Temporary	Trenching	Intermittent	watershed not mapped
MP10 UNT12	36	0	None	N/A	Ephemeral	watershed not mapped
MP11 UNT1	517	104	Temporary	Trenching	Intermittent	watershed not mapped
MP11 UNT1A	341	348	Temporary	Trenching	Ephemeral	watershed not mapped
MP11 UNT2	50	50	Temporary	Trenching	Ephemeral	watershed not mapped
MP11 UNT3	183	77	Temporary	Trenching	Intermittent	0.0821 square miles
MP11 UNT4	262	117	Temporary	Trenching	Intermittent	watershed not mapped
MP11 UNT4A	135	90	Temporary	Trenching	Ephemeral	watershed not mapped
MP11 UNT5	180	79	Temporary	Trenching	Ephemeral	0.0359 square miles
MP11.67 UNT1	320	254	Temporary	Trenching	Ephemeral	watershed not mapped
MP11.67 UNT1A	115	73	Temporary	Trenching	Ephemeral	watershed not mapped
MP11.67 UNT1B	119	66	Temporary	Trenching	Ephemeral	watershed not mapped
MP11.67 UNT1C	175	116	Temporary	Trenching	Ephemeral	watershed not mapped
MP11.67 UNT2	133	104	Temporary	Trenching	Ephemeral	watershed not mapped
MP11.67 UNT3	149	149	Temporary	Trenching	Ephemeral	watershed not mapped
MP11.67 UNT4	262	124	Temporary	Trenching	Intermittent	watershed not mapped
MP11.67 UNT4A	210	104	Temporary	Trenching	Ephemeral	watershed not mapped
MP11.67 UNT4B	140	103	Temporary	Trenching	Ephemeral	watershed not mapped
MP11.67 UNT5	335	132	Temporary	Trenching	Ephemeral	watershed not mapped



Legend

- Proposed Pipeline
- Sheet Index

1 inch = 5,000 feet
 0 2,500 5,000 10,000 Feet

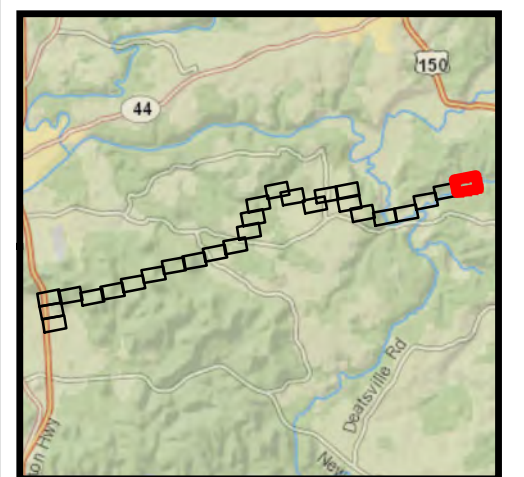
Figure 6. Delineation Key Map

Bullitt County Gas Transmission Line Pipeline Project
EN Engineering LLC
Bullitt County, Kentucky



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- Legend**
- 100 Yr Floodway
 - Cox Creek Drill Points
 - Property Lines
 - Existing LGE Easement
 - Proposed Fence
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1 inch = 250 feet
 0 125 250 500 Feet

Figure 7. Delineation Page 1 of 27
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 EN Engineering
 Bullitt County, Kentucky

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Project No. J16X404800

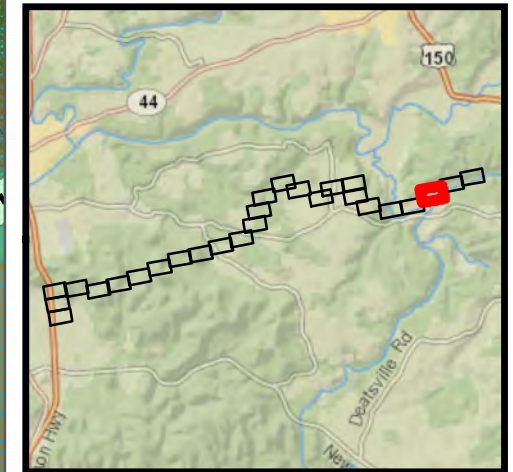
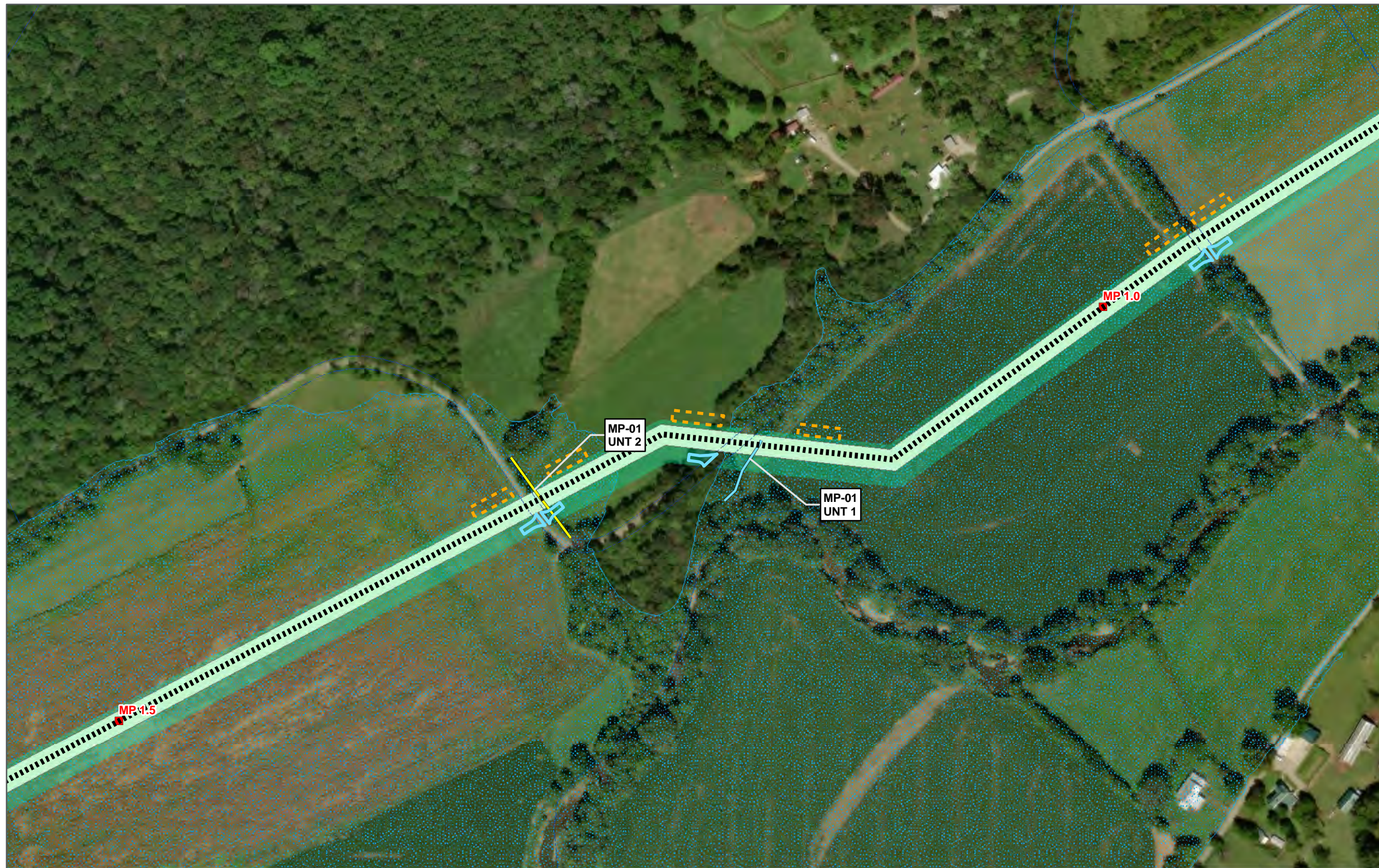
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EN Engineering
Bullitt County, Kentucky



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Saved By: christine.dittmar



Legend

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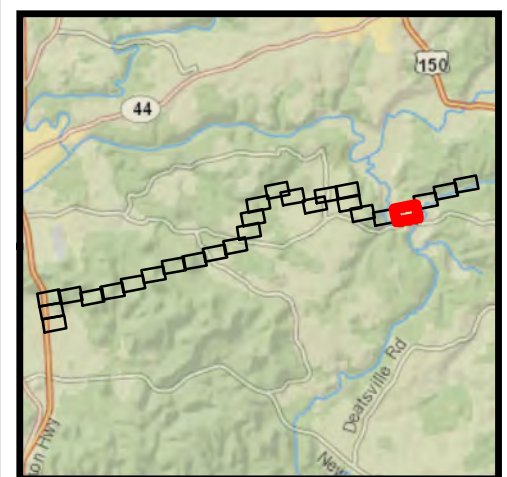
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 EN Engineering
 Bullitt County, Kentucky

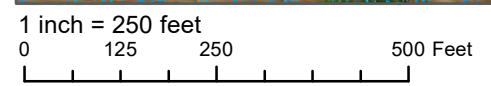


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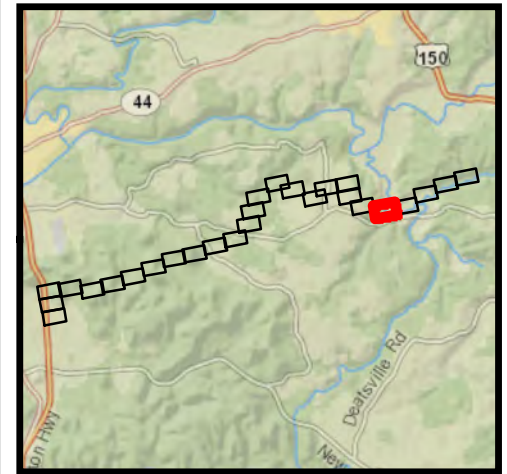
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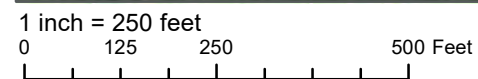
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EN Engineering
Bullitt County, Kentucky



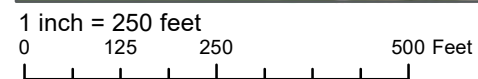
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Legend

- 100 Yr Floodway
- Cox Creek Drill Points
- Property Lines
- Existing LGE Easement
- Proposed Fence
- Proposed Pipeline
- Proposed Easement
- Temporary Work Space
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- ATWS
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- Mile Posts
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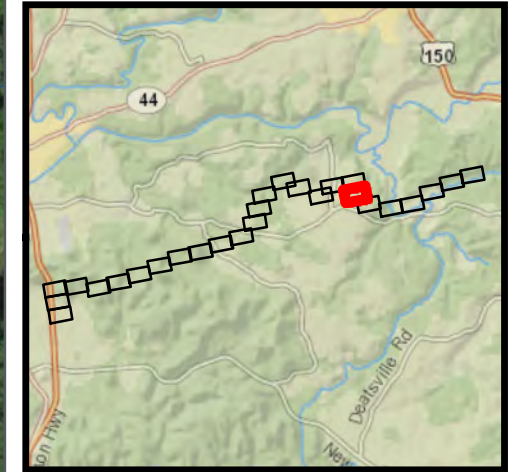
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Figure 7. Delineation Page 6 of 27
Bullitt County Gas Transmission Line Pipeline Project
EN Engineering
Bullitt County, Kentucky





























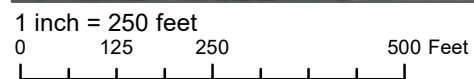
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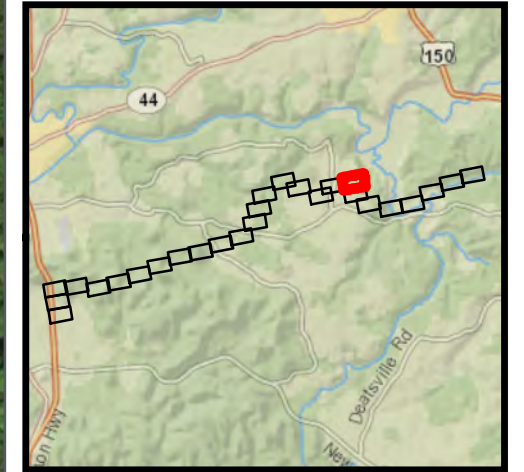
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Figure 7. Delineation Page 7 of 27
Bullitt County Gas Transmission Line Pipeline Project
EN Engineering
Bullitt County, Kentucky





























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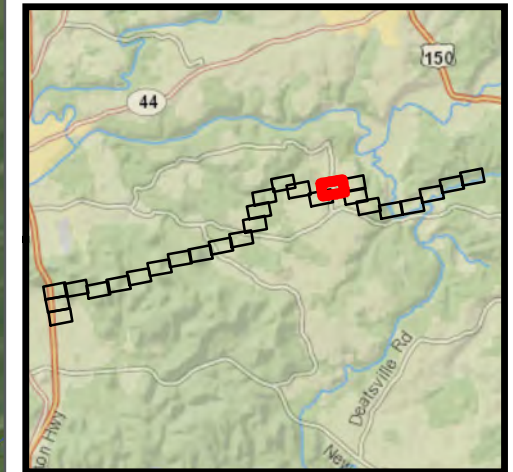
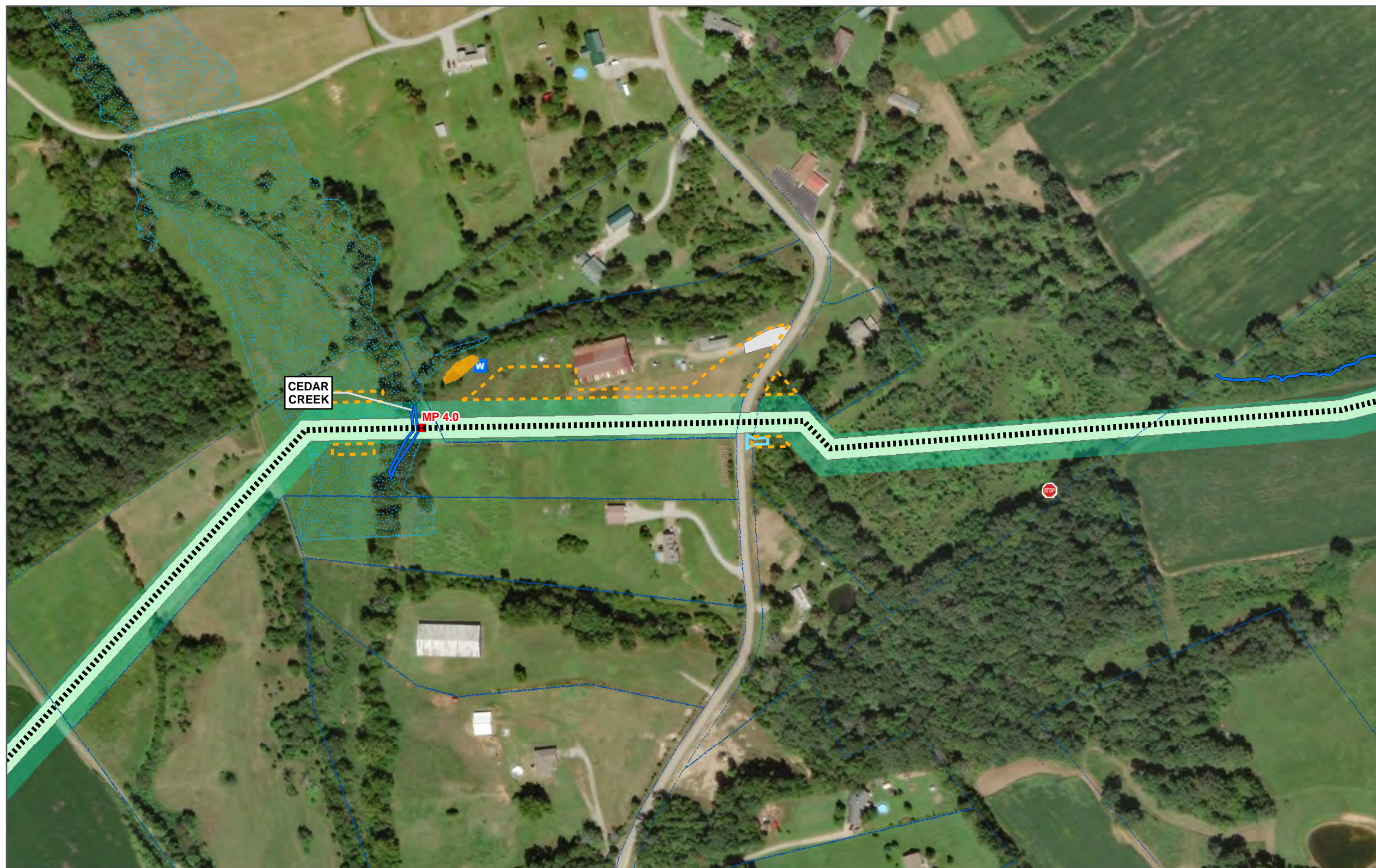
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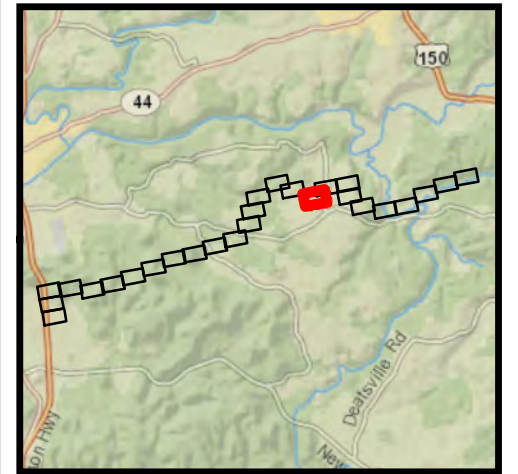
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Figure 7. Delineation Page 9 of 27
Bullitt County Gas Transmission Line Pipeline Project
EN Engineering
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





















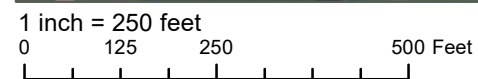
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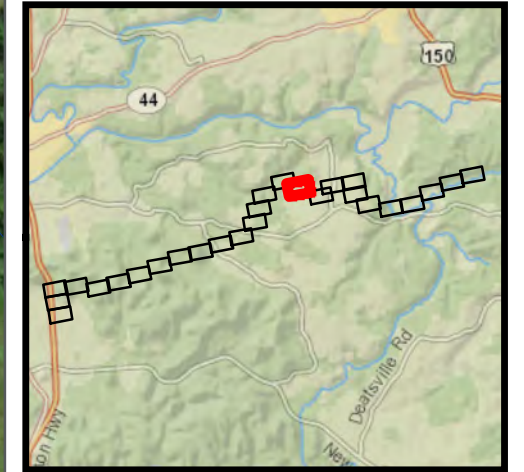
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Figure 7. Delineation Page 10 of 27
Bullitt County Gas Transmission Line Pipeline Project
EN Engineering
Bullitt County, Kentucky



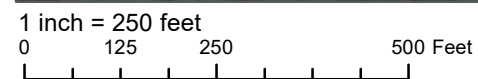
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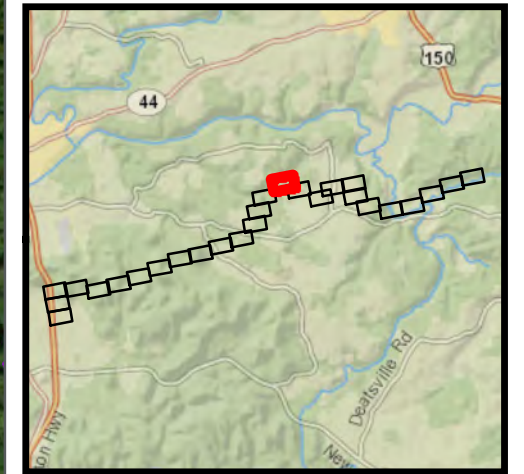
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Bullitt County Gas Transmission Line Pipeline Project
EN Engineering
Bullitt County, Kentucky





























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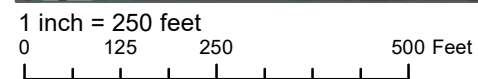


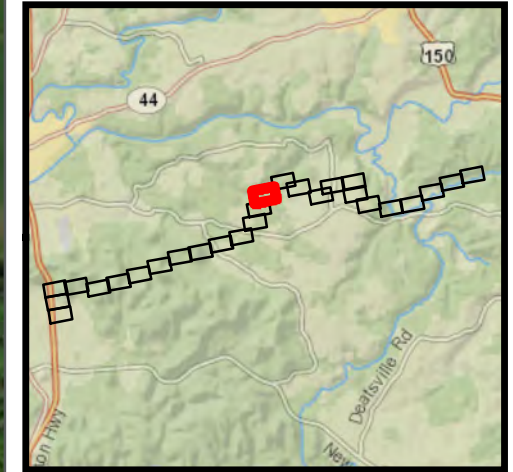
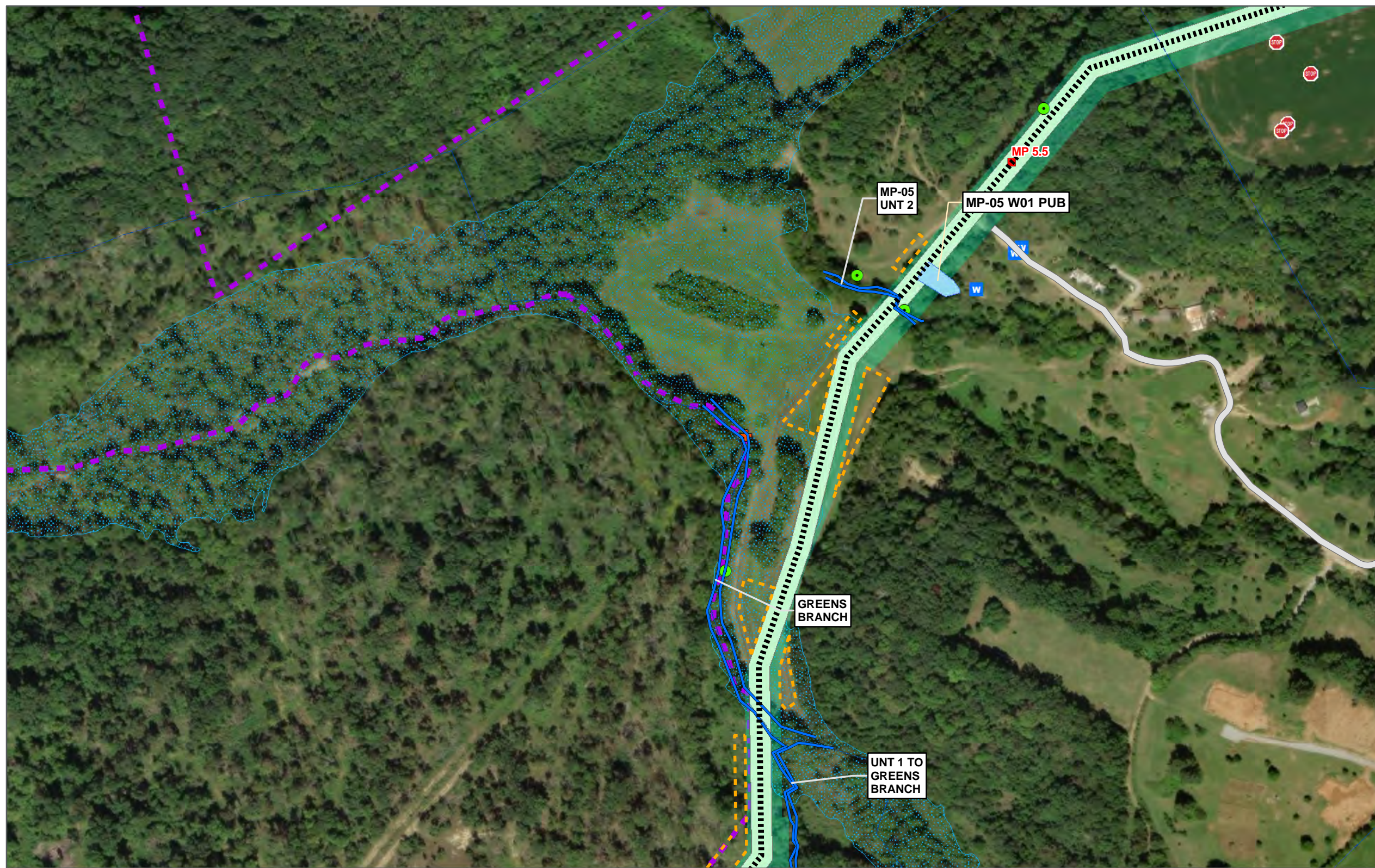
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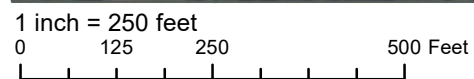


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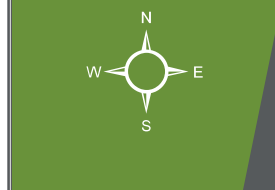
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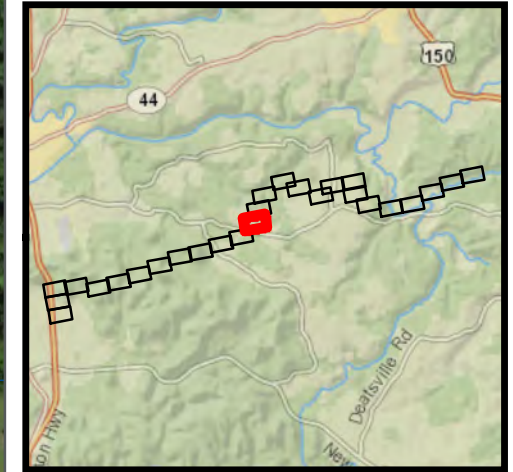
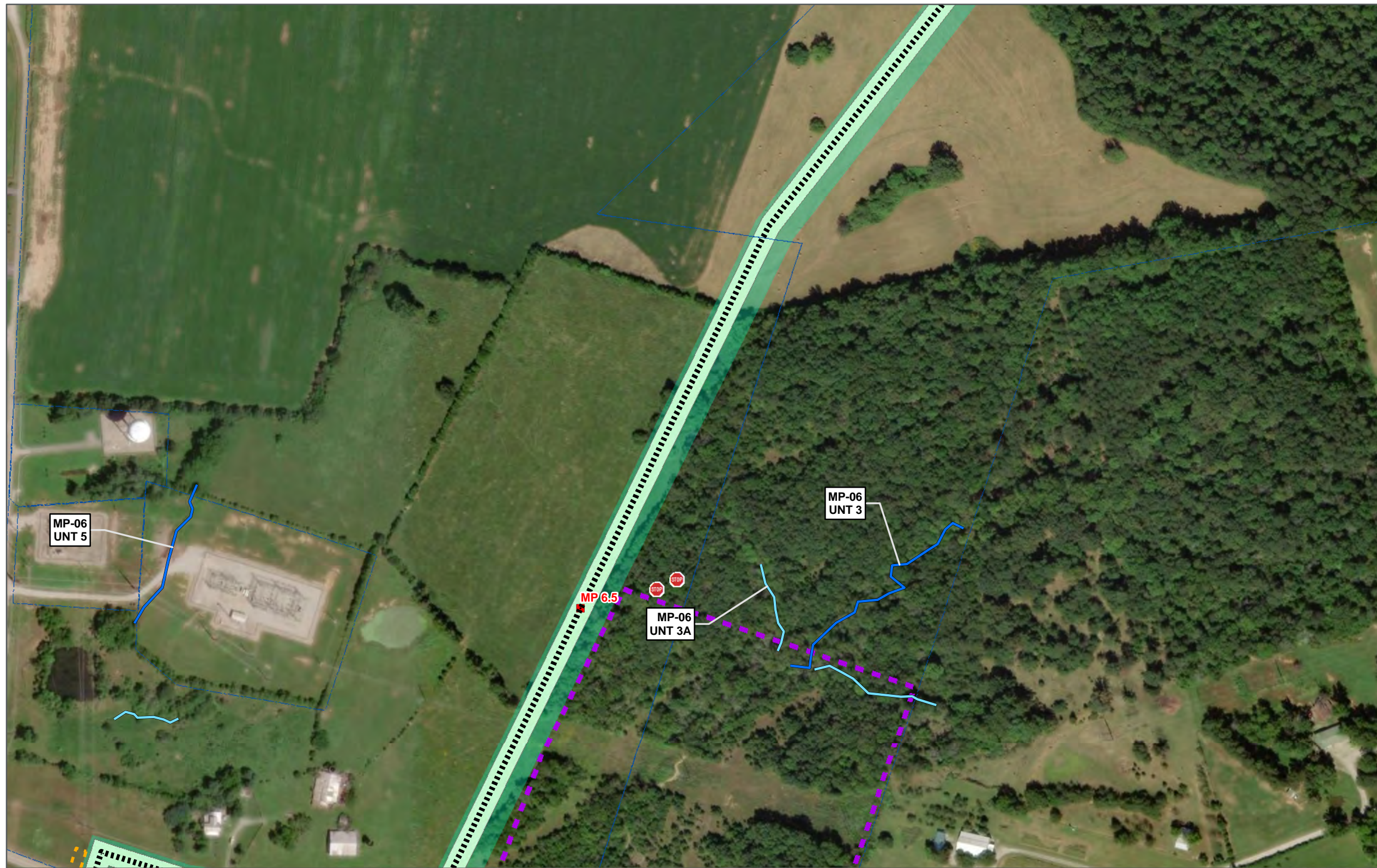
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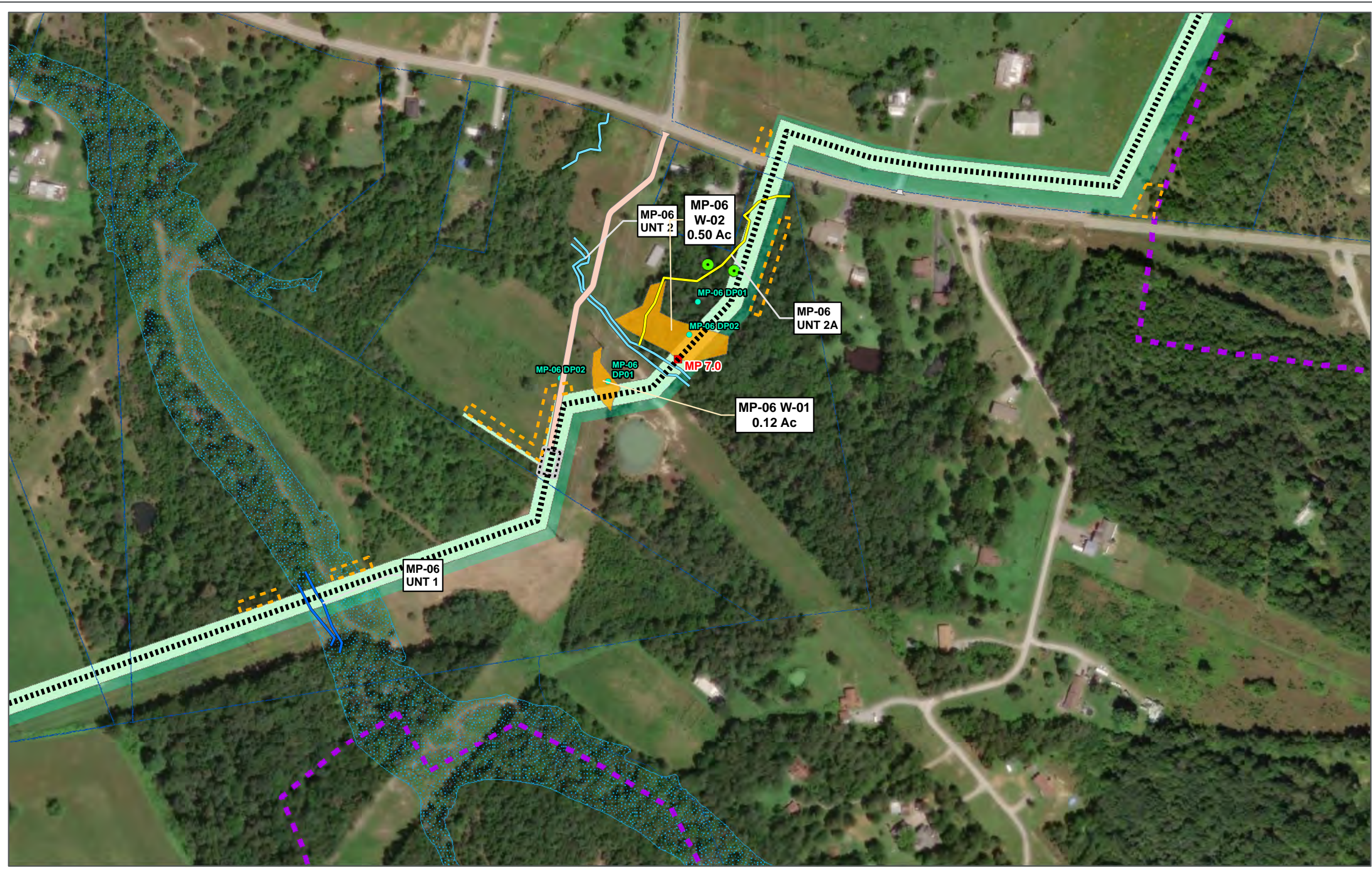
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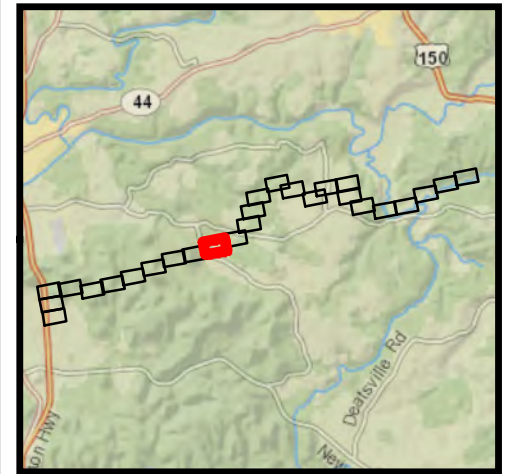
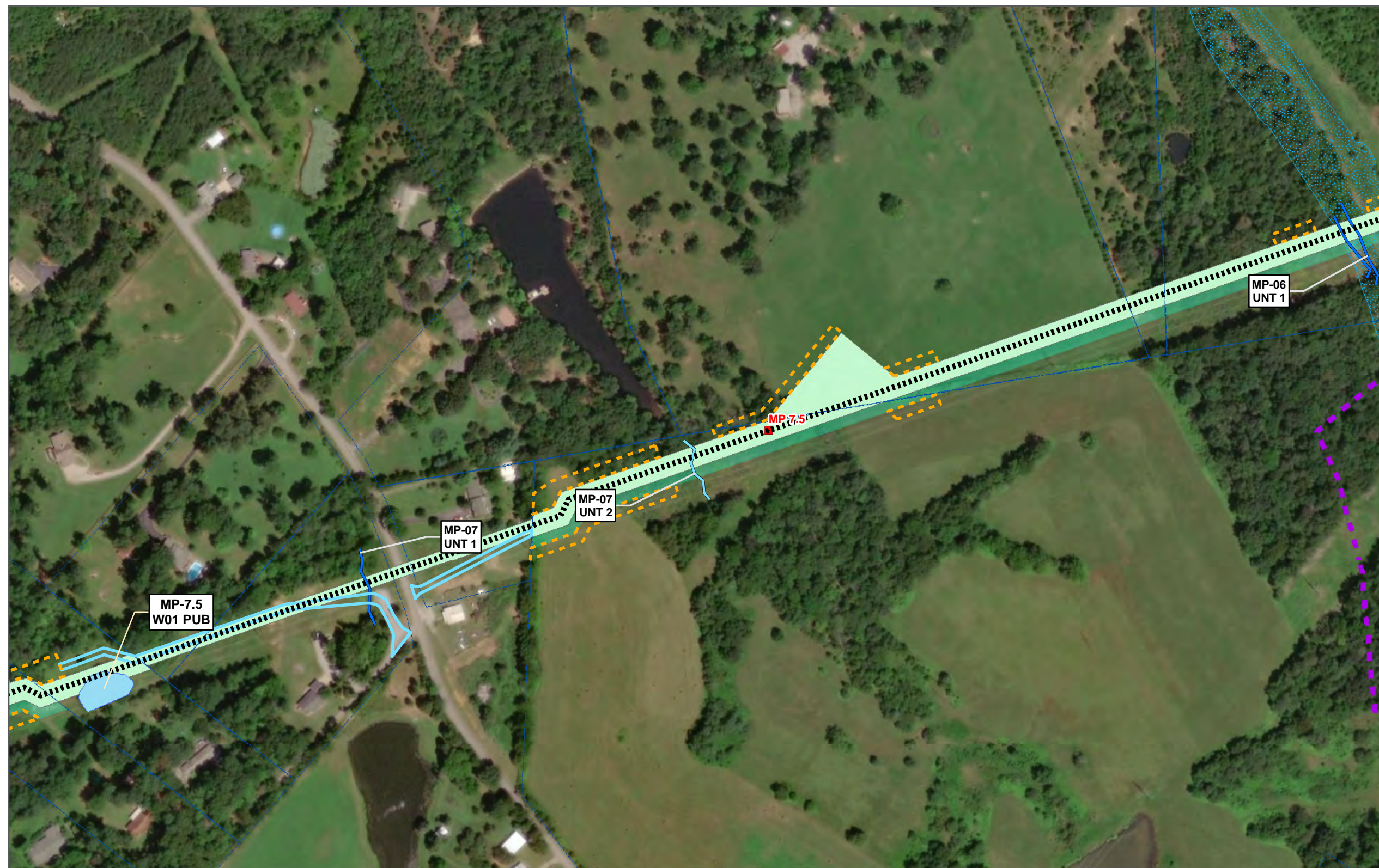


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Figure 7. Delineation Page 16 of 27
Bullitt County Gas Transmission Line Pipeline Project
EN Engineering
Bullitt County, Kentucky



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Legend

- 100 Yr Floodway
- Cox Creek Drill Points
- Property Lines
- Existing LGE Easement
- Proposed Fence
- Proposed Pipeline
- Proposed Easement
- Temporary Work Space
- Construction Storage Yard
- ATWS
- Permanent Access Road
- Mile Posts
- Proposed Regulator Station
- Construction Entrance
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- Exposed Pipeline in Waterway
- Spring
- Possible Sink Hole
- Potential Roost Tree
- Data Point
- Open Water
- Federally Designated Critical Habit Area
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream

1 inch = 250 feet
 0 125 250 500 Feet



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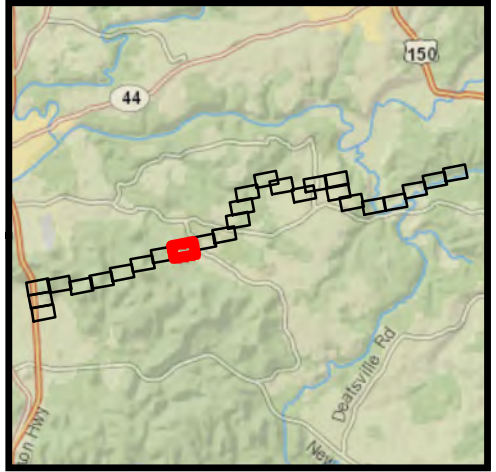
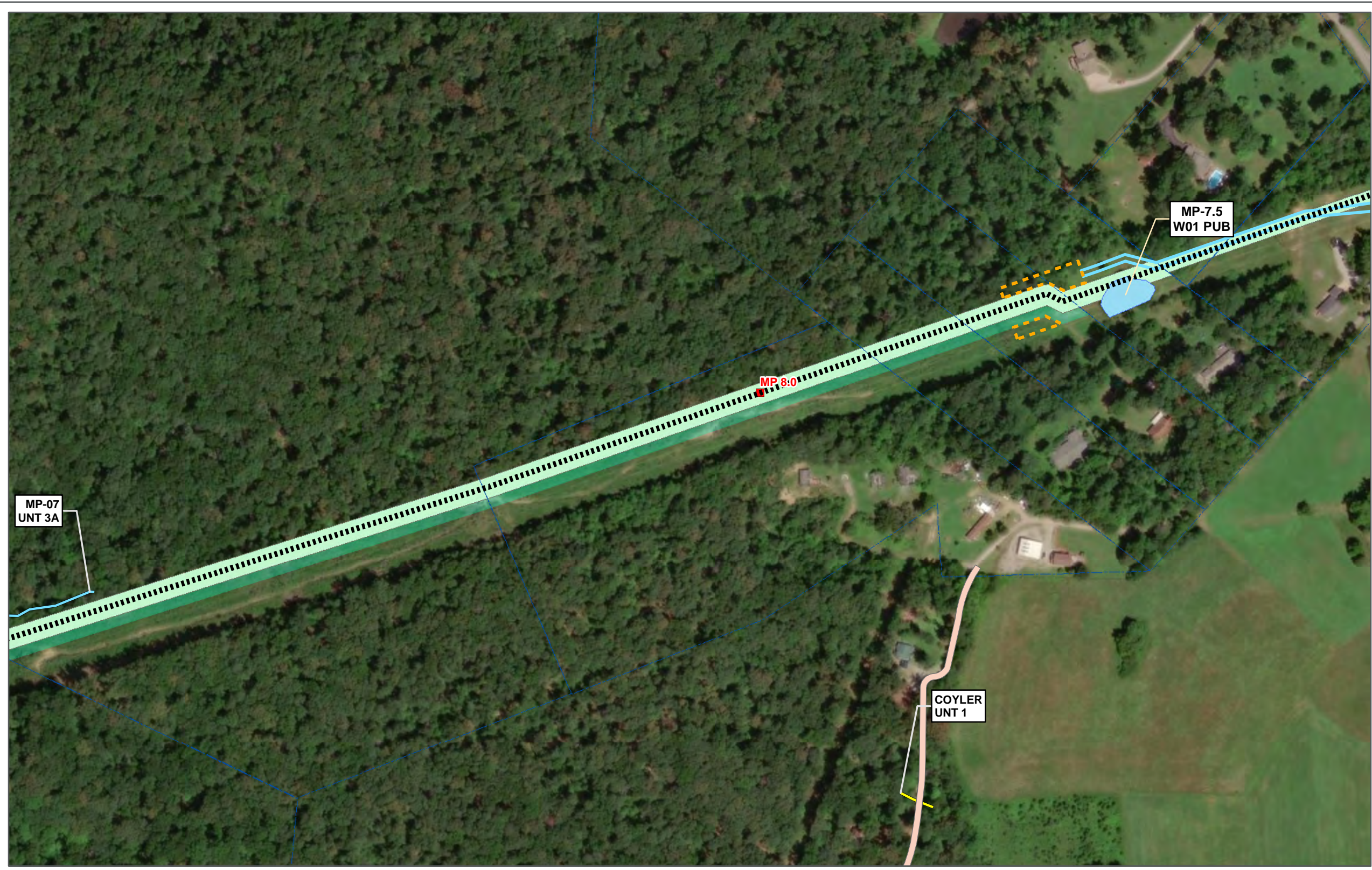
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Figure 7. Delineation Page 17 of 27
Bullitt County Gas Transmission Line Pipeline Project
EN Engineering
Bullitt County, Kentucky



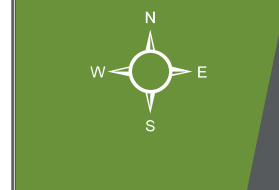
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- Legend**
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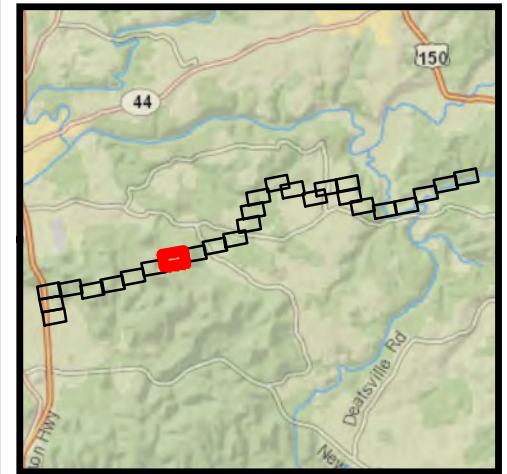
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Figure 7. Delineation Page 18 of 27
 Bullitt County Gas Transmission Line Pipeline Project
 EN Engineering
 Bullitt County, Kentucky



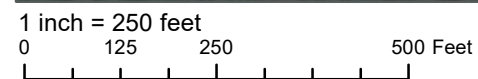
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Legend

- 100 Yr Floodway
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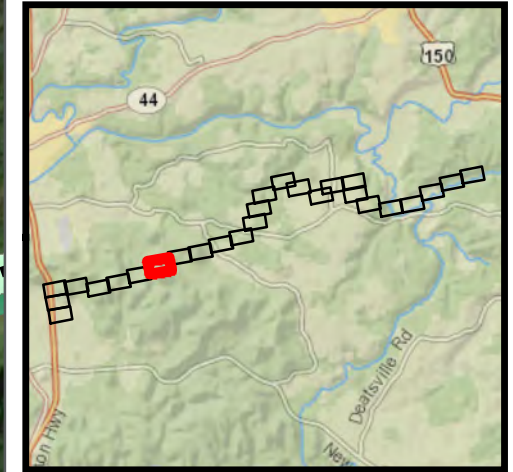
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Figure 7. Delineation Page 19 of 27
 Bullitt County Gas Transmission Line Pipeline Project
 EN Engineering
 Bullitt County, Kentucky



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Legend

- 100 Yr Floodway
- Cox Creek Drill Points
- Property Lines
- Existing LGE Easement
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1 inch = 250 feet
 0 125 250 500 Feet



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Bullitt County, Kentucky



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- Legend**
- 100 Yr Floodway
 - Cox Creek Drill Points
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 - Existing LGE Easement
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1 inch = 250 feet
 0 125 250 500 Feet

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Bullitt County Gas Transmission Line Pipeline Project
EN Engineering
Bullitt County, Kentucky

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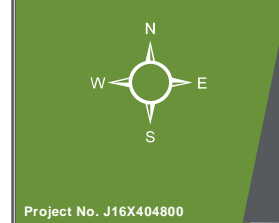
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- Legend**
- 100 Yr Floodway
 - Cox Creek Drill Points
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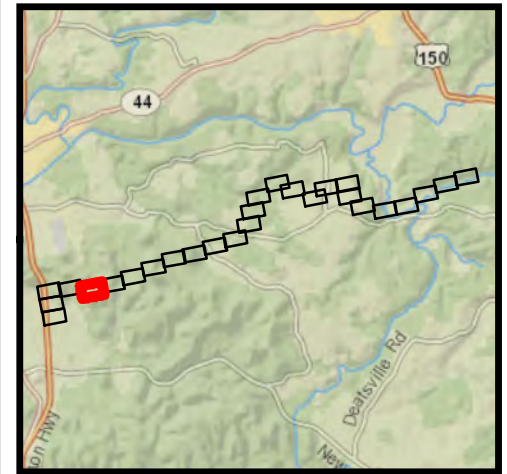
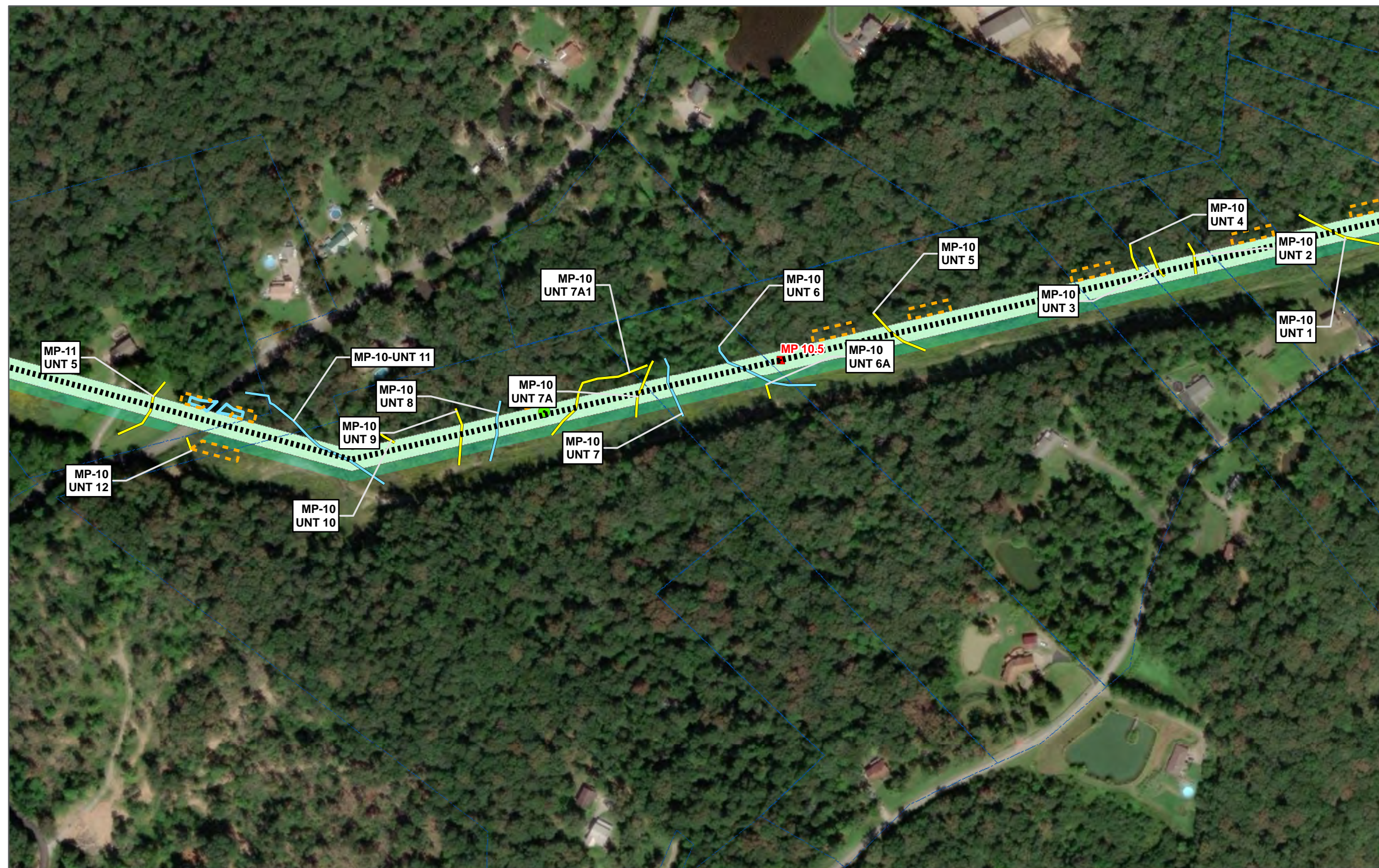
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Bullitt County Gas Transmission Line Pipeline Project
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Bullitt County, Kentucky



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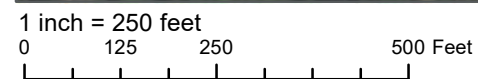


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Legend

- 100 Yr Floodway
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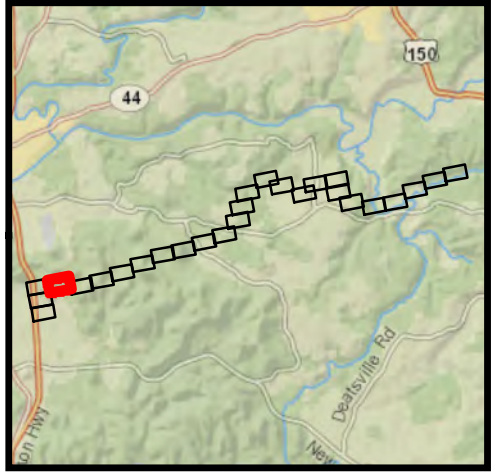
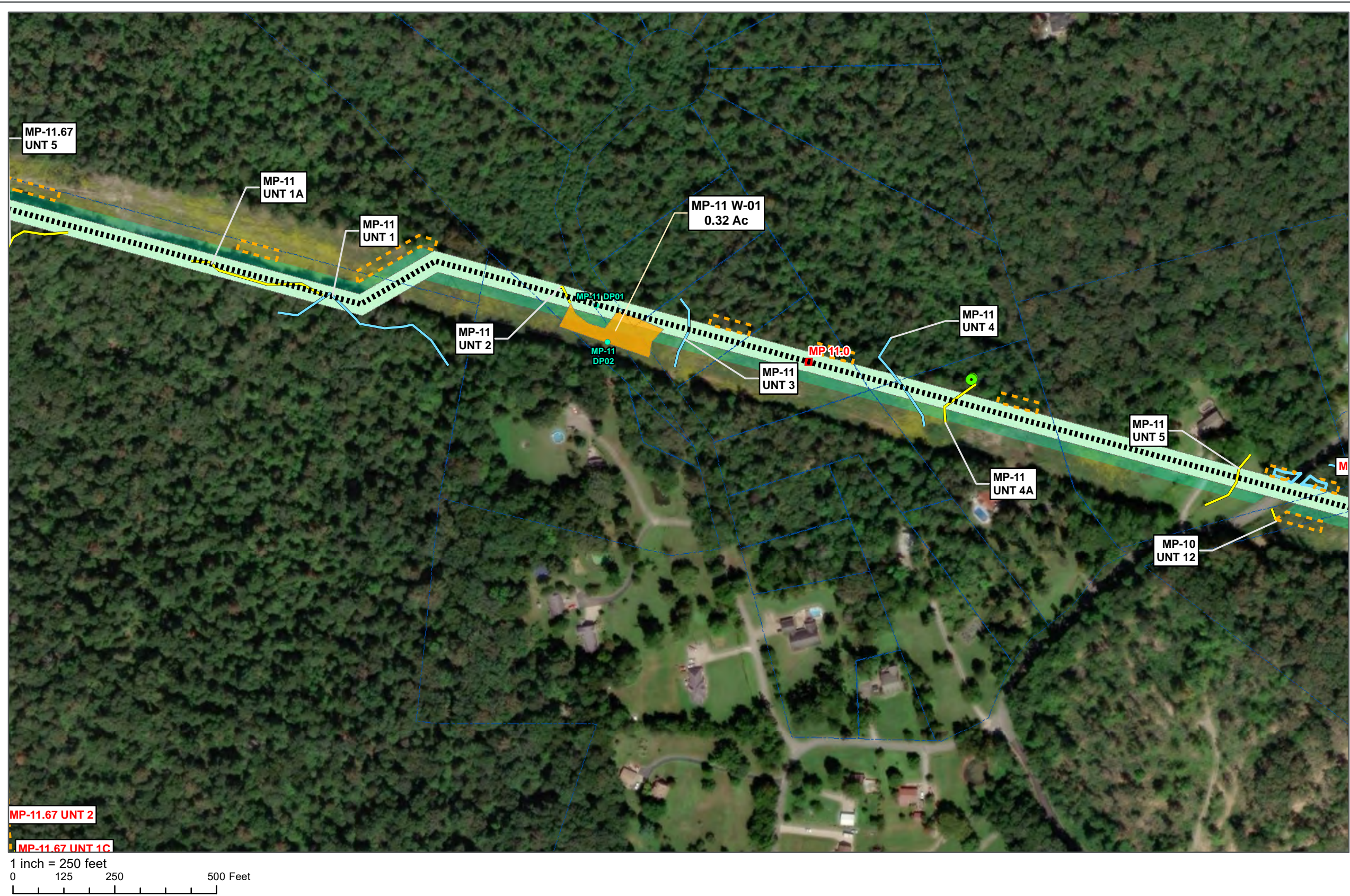
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Bullitt County, Kentucky



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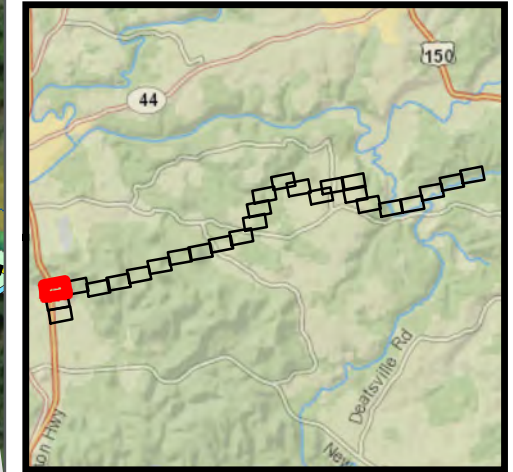
- Legend**
- 100 Yr Floodway
 - Cox Creek Drill Points
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 - Existing LGE Easement
 - Proposed Fence
 - Proposed Pipeline
 - Proposed Easement
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MP-11.67 UNT 2
 MP-11.67 UNT 1C
 1 inch = 250 feet
 0 125 250 500 Feet

Figure 7. Delineation Page 24 of 27
 Bullitt County Gas Transmission Line Pipeline Project
 EN Engineering
 Bullitt County, Kentucky

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Legend

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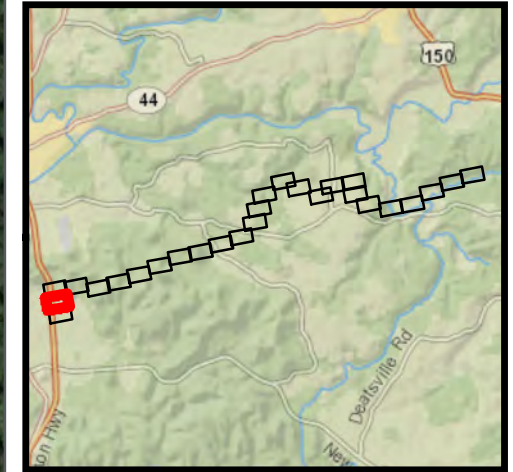
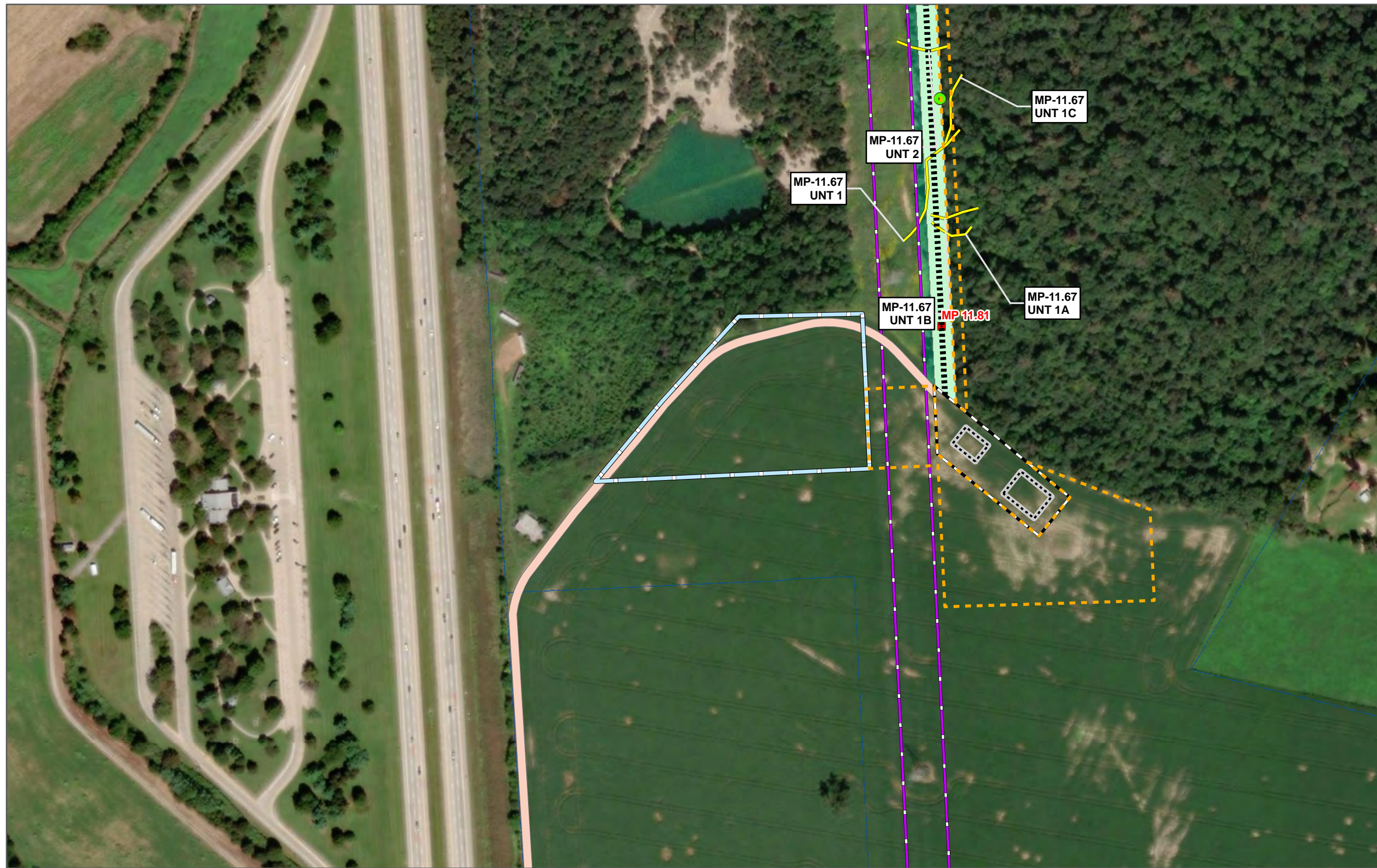
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Bullitt County, Kentucky



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Legend

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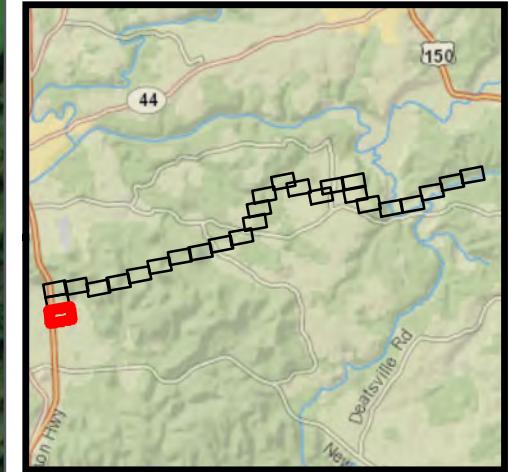
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Figure 7. Delineation Page 26 of 27
Bullitt County Gas Transmission Line Pipeline Project
EN Engineering
Bullitt County, Kentucky





























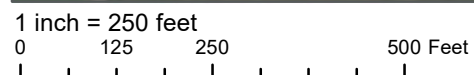
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Legend

-  100 Yr Floodway
-  Cox Creek Drill Points
-  Property Lines
-  Existing LGE Easement
-  Proposed Fence
-  Proposed Pipeline
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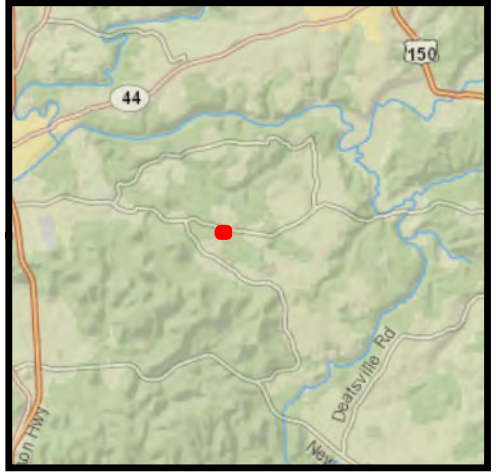
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Figure 7. Delineation Page 27 of 27
Bullitt County Gas Transmission Line Pipeline Project
EN Engineering
Bullitt County, Kentucky



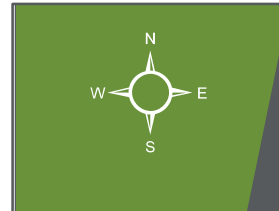
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- Legend**
- Permanent Wetland Impact (0.16 Ac)
 - Temporary Wetland Impact (0.05 Ac)
 - Cox Creek Drill Points
 - Property Lines
 - Existing LGE Easement
 - Proposed Fence
 - Proposed Pipeline
 - Proposed Easement
 - Temporary Work Space
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 - 100 Yr Floodway

1 inch = 60 feet
 0 30 60 120 Feet



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Figure 8. Wetland Impact
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 Bullitt County, Kentucky



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 Phone (+1) 574-586-3400 Fax (+1) 574-586-3446
 www.cardno.com

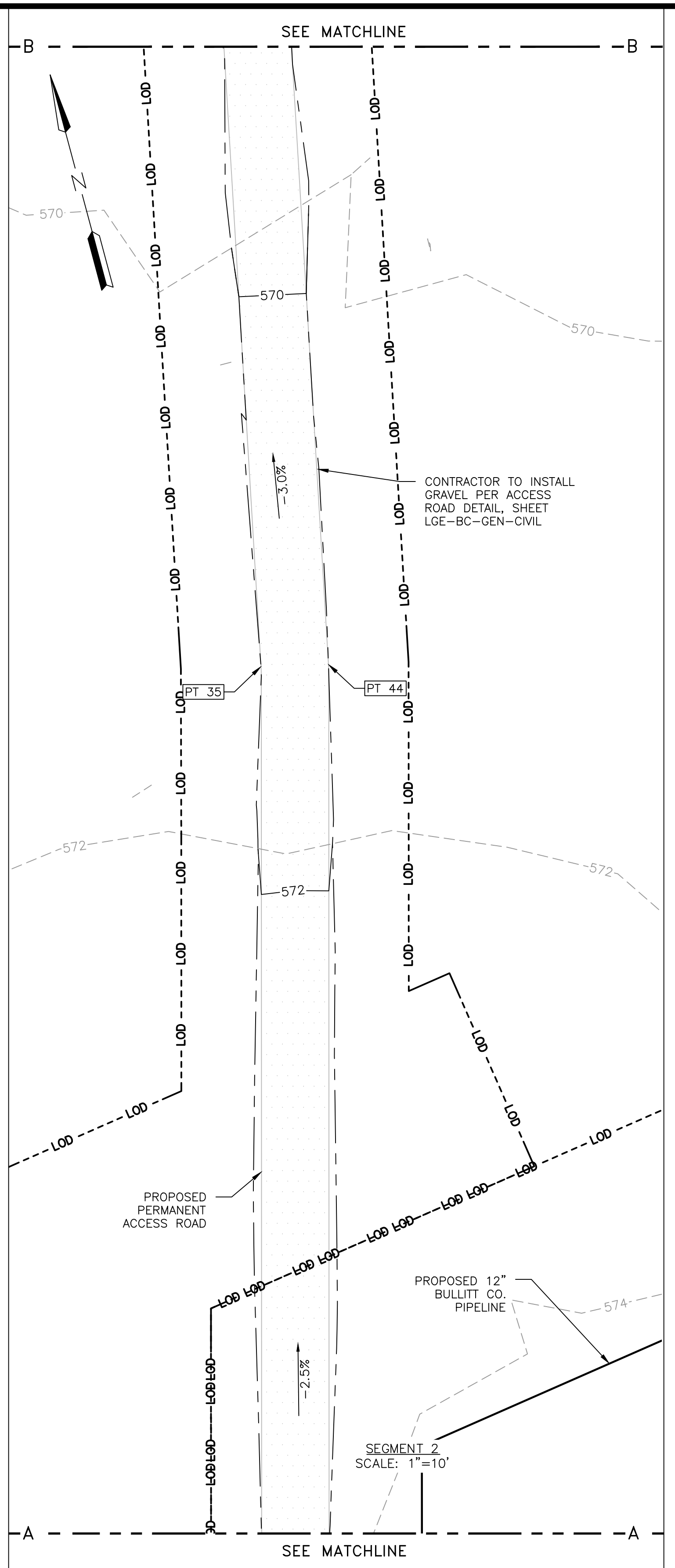
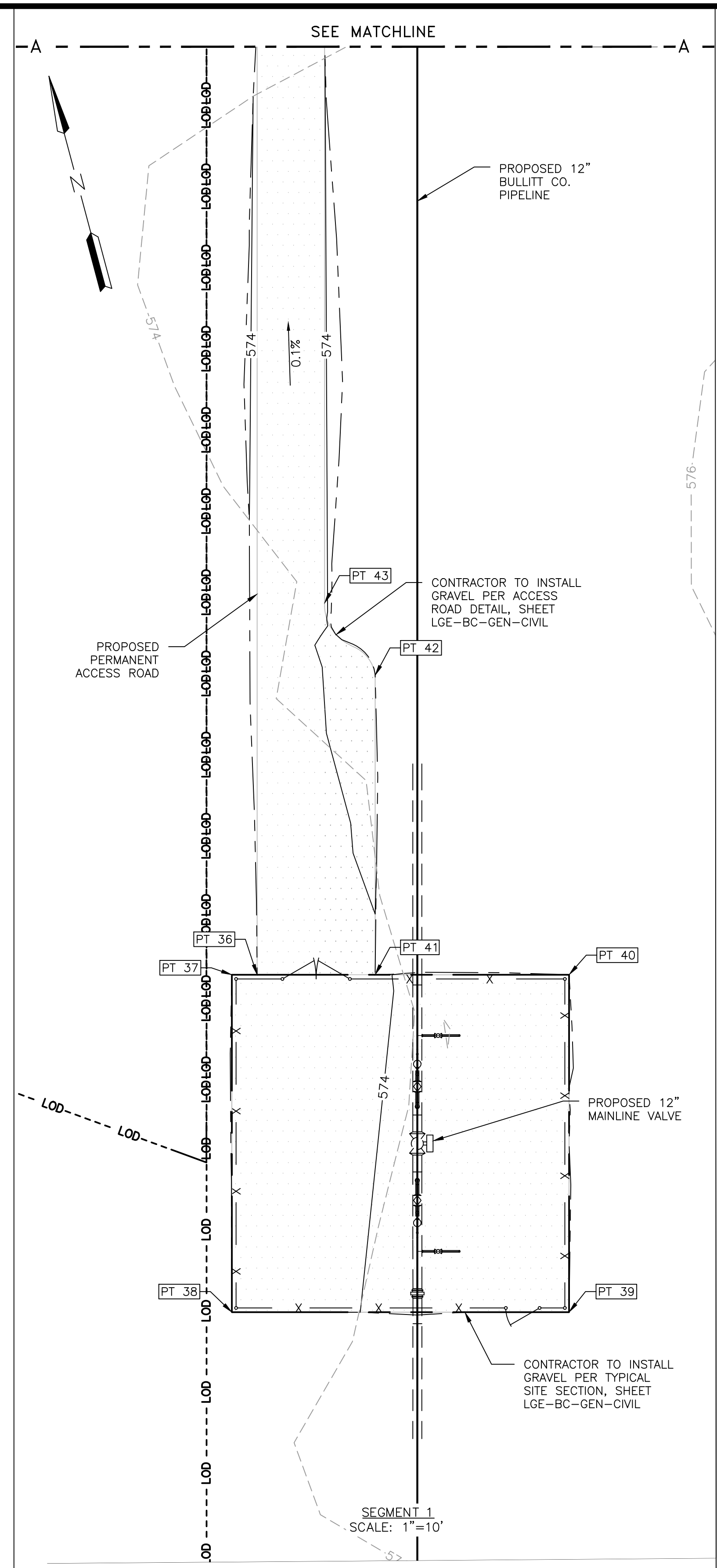
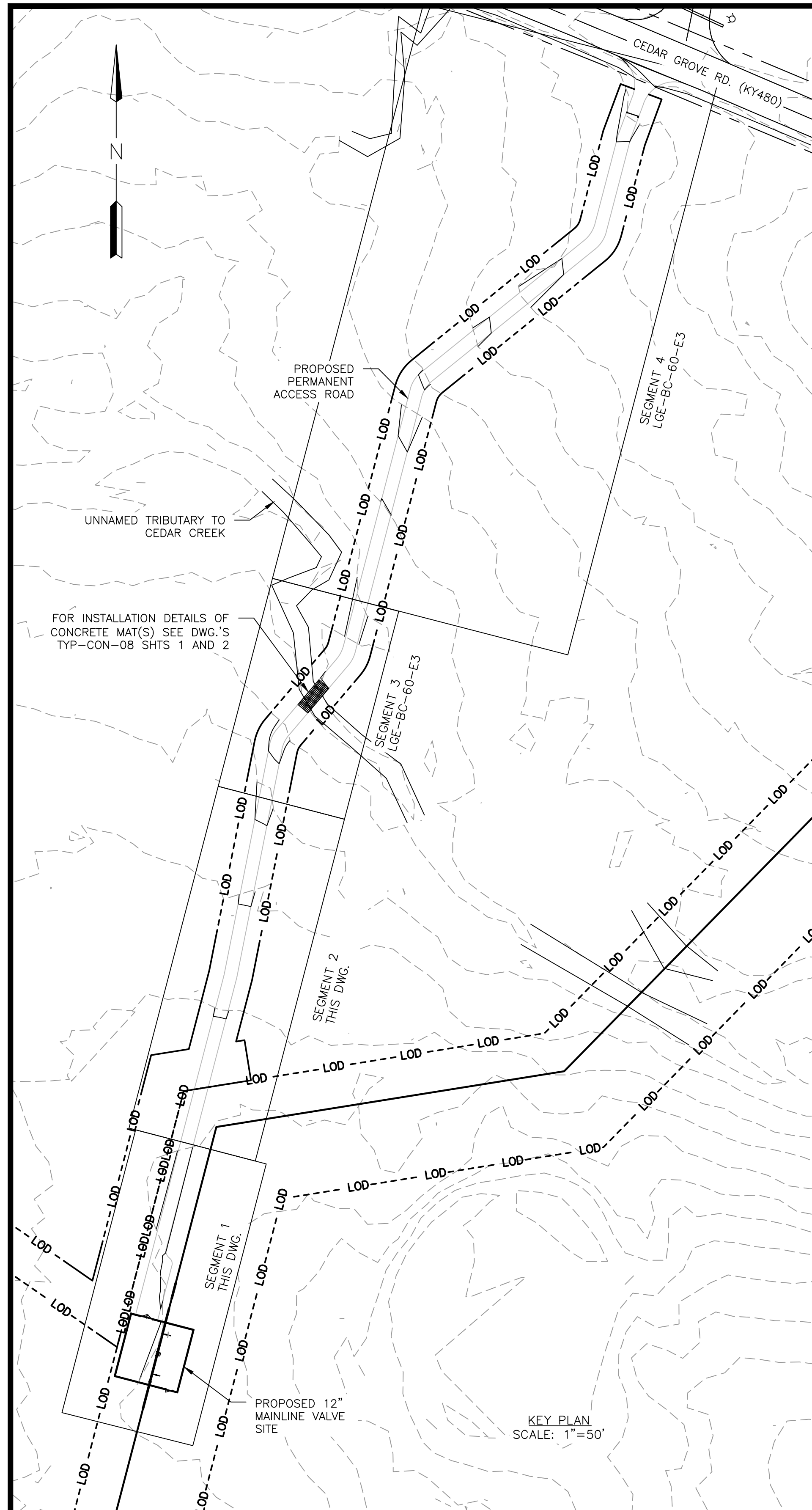
Emergent Wetland Seed Mix		
<u>Botanical Name</u>	<u>Common Name</u>	<u>PLS Ounces/Acre</u>
Permanent Grasses/Sedges/Rushes:		
<i>Bolboschoenus fluviatilis</i>	River Bulrush	1.00
<i>Carex comosa</i>	Bristly Sedge	2.50
<i>Carex lacustris</i>	Common Lake Sedge	0.25
<i>Carex lurida</i>	Bottlebrush Sedge	4.00
<i>Carex stricta</i>	Common Tussock Sedge	1.00
<i>Carex vulpinoidea</i>	Brown Fox Sedge	6.00
<i>Eleocharis palustris</i>	Great Spike Rush	1.00
<i>Juncus effusus</i>	Common Rush	1.00
<i>Leersia oryzoides</i>	Rice Cut Grass	3.00
<i>Schoenoplectus acutus</i>	Hard-stemmed Bulrush	2.50
<i>Schoenoplectus americanus</i>	Chairmaker's Rush	3.00
<i>Schoenoplectus tabernaemontani</i>	Softstem Bulrush	6.00
	Total	31.25
Temporary Cover:		
<i>Avena sativa</i>	Common Oat	360.00
<i>Lolium multiflorum</i>	Annual Rye	100.00
	Total	460.00
Forbs:		
<i>Acorus americanus</i>	Sweet Flag	0.50
<i>Alisma spp.</i>	Water Plantain (Various Mix)	2.00
<i>Asclepias incarnata</i>	Swamp Milkweed	1.50
<i>Cephalanthus occidentalis</i>	Buttonbush	6.00
<i>Decodon verticillatus</i>	Swamp Loosestrife	0.50
<i>Eutrochium maculatum</i>	Spotted Joe-Pye Weed	0.50
<i>Hibiscus spp.</i>	Rosemallow (Various Mix)	4.00
<i>Iris virginica</i>	Blue Flag	6.00
<i>Lobelia cardinalis</i>	Cardinal Flower	0.25
<i>Lobelia siphilitica</i>	Great Blue Lobelia	0.25
<i>Lycopus americanus</i>	Common Water Horehound	0.25
<i>Mimulus ringens</i>	Monkey Flower	1.00
<i>Peltandra virginica</i>	Arrow Arum	16.00
<i>Penthorum sedoides</i>	Ditch Stonecrop	0.50
<i>Polygonum spp.</i>	Pinkweed (Various Mix)	0.50
<i>Pontederia cordata</i>	Pickereel Weed	10.00
<i>Sagittaria latifolia</i>	Common Arrowhead	2.00
<i>Sparganium eurycarpum</i>	Common Bur Reed	6.00
<i>Verbena hastata</i>	Blue Vervain	1.00
	Total	58.75

Figure 9. Plant List

Bullitt County Gas Transmission Line Pipeline Project
 EN Engineering LLC
 Bullitt County, Kentucky



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SPOT GRADE ELEVATION TABLE				
POINT	DESCRIPTION	FG ELEVATION	NORTHING	EASTING
PT 35	SITE	571.33'	173354.85	1248336.29
PT 36	SITE	573.53'	173145.15	1248281.69
PT 37	SITE	573.45'	173145.91	1248278.78
PT 38	SITE	573.62'	173107.20	1248268.70
PT 39	SITE	574.62'	173097.12	1248307.41
PT 40	SITE	574.78'	173135.82	1248317.49
PT 41	SITE	573.93'	173141.62	1248295.24
PT 42	SITE	574.29'	173175.97	1248304.19
PT 43	SITE	573.88'	173185.77	1248300.54
PT 44	SITE	571.29'	173353.07	1248344.09

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- - - LIMIT OF GRADING
- - - - - LIMIT OF DISTURBANCE
- X - X - FENCE LINE
- ▨ GRAVEL

NOTE:
 1. REFER TO LGE-BC-GEN-CIVIL FOR ADDITIONAL NOTES AND INFORMATION.

DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND QTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

NO.	DATE	BY	DATE	BY	DESCRIPTION
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ISSUED FOR BID

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28100 TORCH PARKWAY
 WARRENVILLE, IL 60555
 TEL. 630.353.4000
 FAX 630.353.7777
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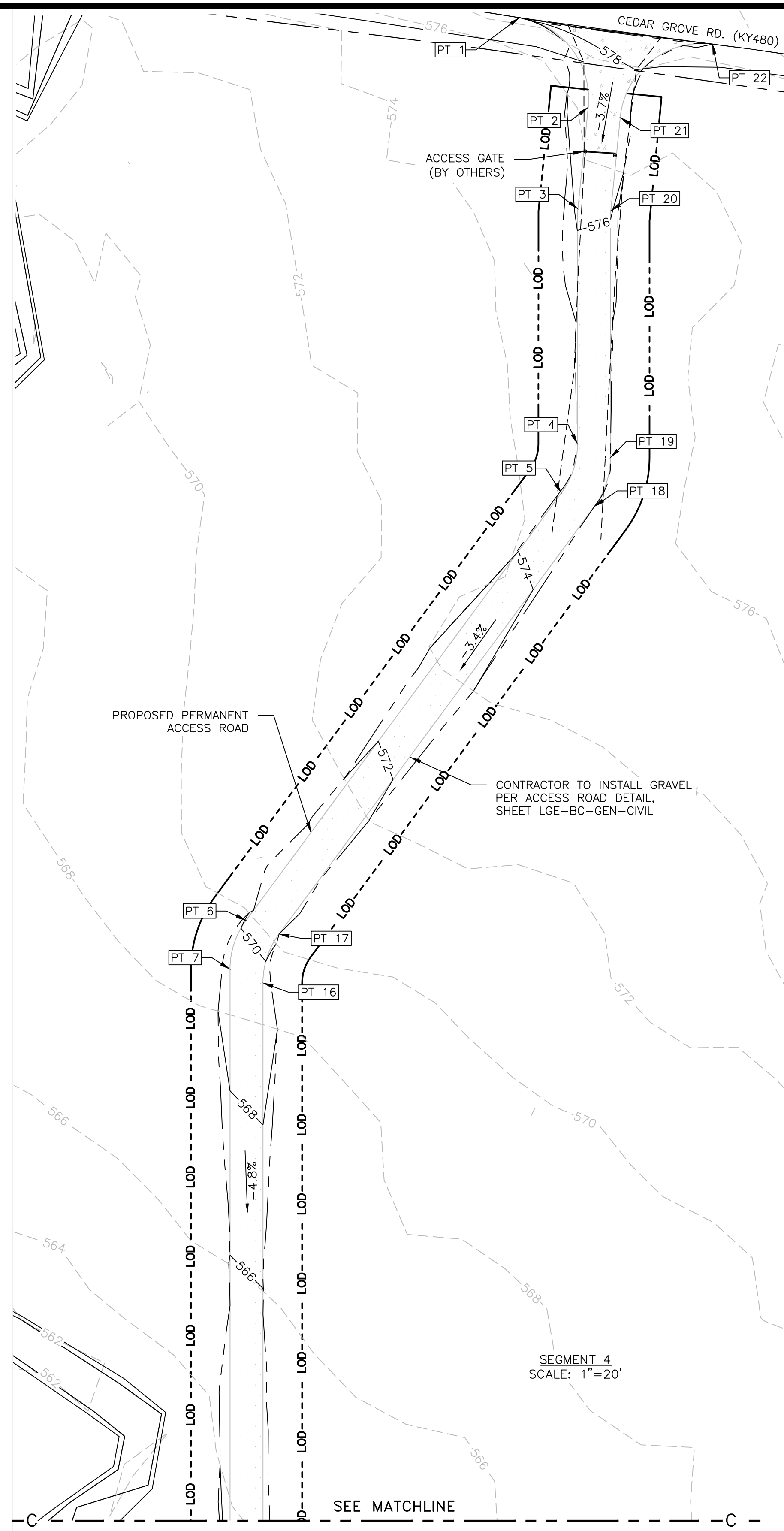
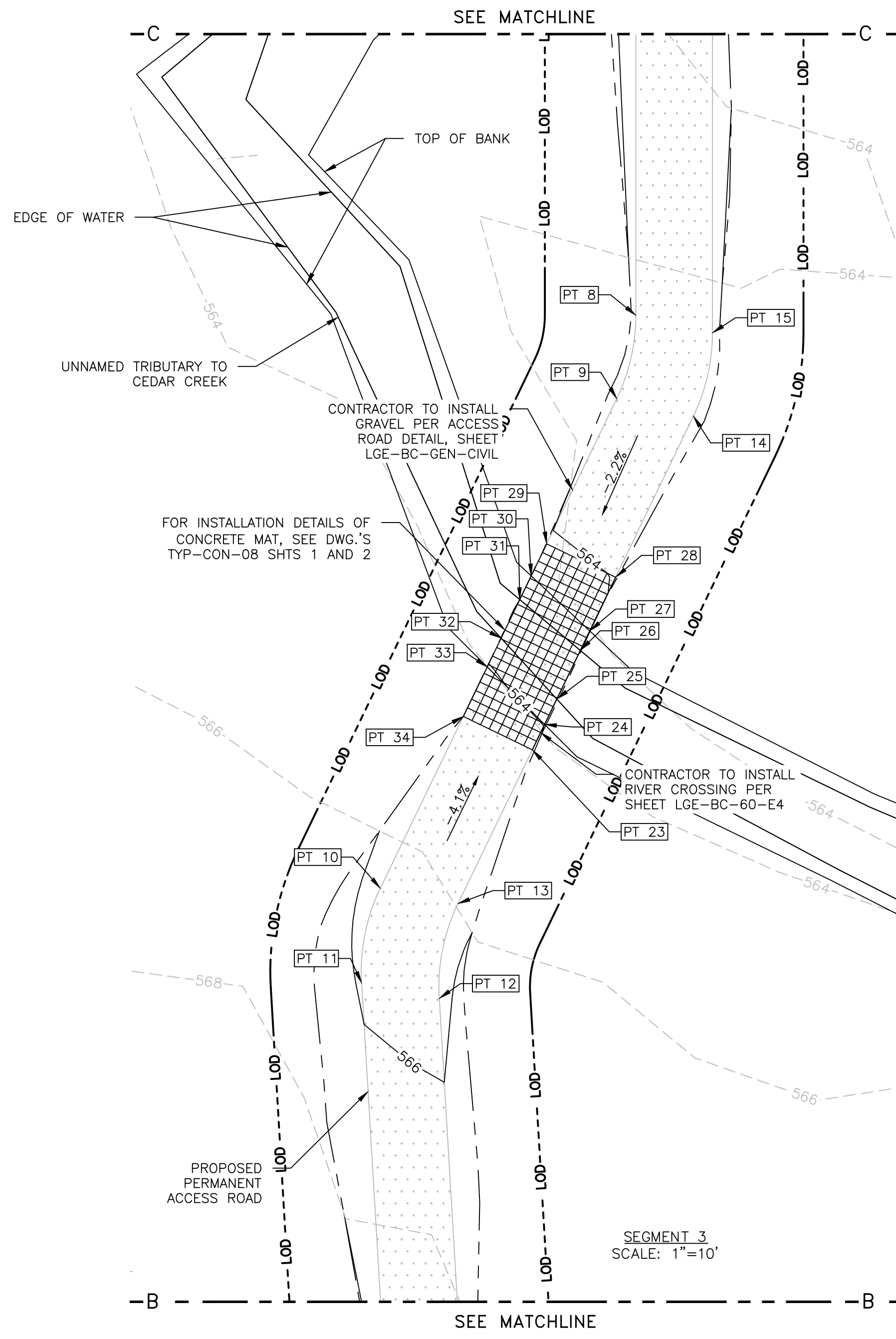
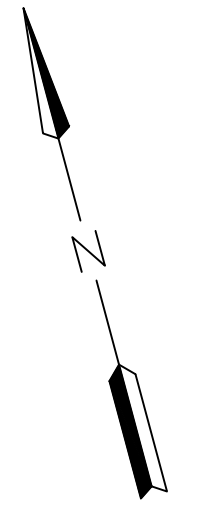
DWG NUMBER	TITLE
LGE-BC-25-E2	MAINLINE VALVE SITE PLAN
LGE-BC-GEN-CIVIL	GENERAL CIVIL NOTES
	REFERENCE DRAWINGS

ISSUED FOR BID	PROJECT I.D.
ISSUED FOR CONSTRUCTION	DRAWING SIZE D

**12" BULLITT COUNTY PIPELINE
 MAINLINE VALVE
 GRADING/DRAINAGE PLAN**

BULLITT COUNTY KY

DRWN	CHK. BY	SCALE	AS NOTED	DATE	07/13/17
BMD	ELW	FILE NO.			
PROJECT ENGR. / ELW	PROJECT MGR. MDW	LGE-BC-60-E2			
				62 OF 94	



SPOT GRADE ELEVATION TABLE				
POINT	DESCRIPTION	FG ELEVATION	NORTHING	EASTING
PT 1	SITE	578.02'	173920.51	1248577.02
PT 2	SITE	577.69'	173895.24	1248587.72
PT 3	SITE	576.28'	173871.97	1248579.07
PT 4	SITE	574.80'	173816.76	1248564.58
PT 5	SITE	574.61'	173806.25	1248557.81
PT 6	SITE	570.11'	173725.12	1248457.54
PT 7	SITE	569.48'	173714.62	1248450.77
PT 8	SITE	564.16'	173556.61	1248409.60
PT 9	SITE	564.34'	173548.69	1248405.48
PT 10	SITE	565.29'	173505.47	1248368.71
PT 11	SITE	565.80'	173496.40	1248364.32
PT 12	SITE	565.55'	173492.80	1248371.76
PT 13	SITE	565.04'	173501.87	1248376.15
PT 14	SITE	564.43'	173544.90	1248412.76
PT 15	SITE	564.25'	173552.82	1248416.88
PT 16	SITE	569.74'	173709.39	1248457.67
PT 17	SITE	570.37'	173719.90	1248464.45
PT 18	SITE	574.87'	173801.03	1248564.71
PT 19	SITE	575.06'	173811.53	1248571.48
PT 20	SITE	576.15'	173869.56	1248586.71
PT 21	SITE	577.51'	173890.85	1248594.62
PT 22	SITE	578.79'	173902.45	1248620.81
PT 23	RIVER CROSSING	564.22'	173515.45	1248387.70
PT 24	TOP OF BANK	563.98'	173517.69	1248389.61
PT 25	EDGE OF WATER	563.92'	173519.93	1248391.51
PT 26	EDGE OF WATER	563.94'	173524.22	1248395.16
PT 27	TOP OF BANK	563.99'	173525.95	1248396.63
PT 28	RIVER CROSSING	564.00'	173530.69	1248400.66
PT 29	RIVER CROSSING	563.97'	173535.87	1248394.57
PT 30	TOP OF BANK	563.94'	173533.04	1248392.16
PT 31	EDGE OF WATER	563.89'	173530.95	1248390.38
PT 32	EDGE OF WATER	563.93'	173527.54	1248387.48
PT 33	TOP OF BANK	564.01'	173525.01	1248385.33
PT 34	RIVER CROSSING	564.60'	173520.64	1248381.61

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- LIMIT OF GRADING
- LOD --- LIMIT OF DISTURBANCE
- X — X — FENCE LINE
- [Pattern] GRAVEL
- [Pattern] CONCRETE

NOTE:
1. REFER TO LGE-BC-GEN-CIVIL FOR ADDITIONAL NOTES AND INFORMATION.

DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND QTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

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ENEngineering
 28100 TORCH PARKWAY
 WARRENVILLE, IL 60555
 TEL. 630.353.4000
 FAX 630.353.7777
 WWW.ENENGINEERING.COM

DWG NUMBER	TITLE
LGE-BC-60-E2	MAINLINE VALVE GRADING/DRAINAGE PLAN
LGE-BC-25-E2	MAINLINE VALVE SITE PLAN
LGE-BC-GEN-CIVIL	GENERAL CIVIL NOTES

REFERENCE DRAWINGS

LGE
a PPL company

ISSUED FOR BID	PROJECT I.D.
ISSUED FOR CONSTRUCTION	DRAWING SIZE D

**12" BULLITT COUNTY PIPELINE
 MAINLINE VALVE
 GRADING/DRAINAGE PLAN, CONT.**

BULLITT COUNTY KY

SCALE AS NOTED	DATE 08/01/18
PROJECT ENGR. / PROJECT MGR. ELW / MDW	LGE-BC-60-E3 63 OF 94

**SEQUENCE FOR CONSTRUCTION OF
PERM. ACCESS ROAD & STREAM
CROSSING**

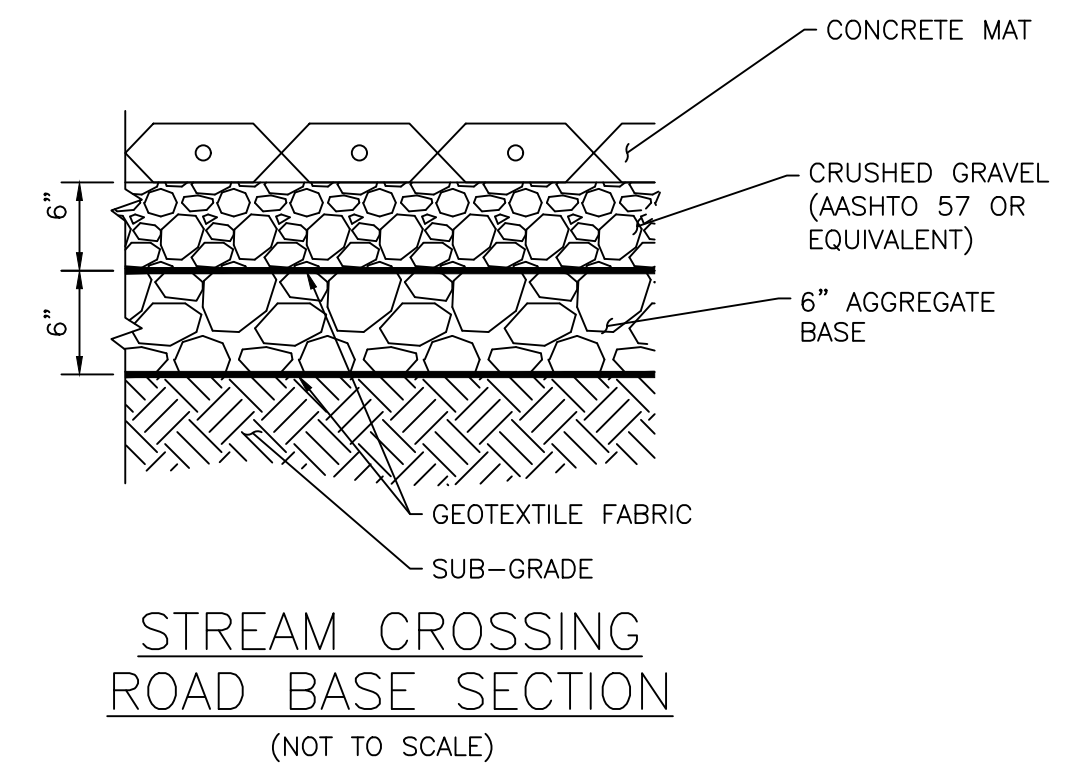
1. CLEAR AND GRUB FOR SEDIMENT AND EROSION CONTROL MEASURES OR DEVICES ONLY.
2. INSTALL ALL PERIMETER SEDIMENT CONTROL MEASURES, INCLUDING SILT FENCE.
3. NOTIFY SEDIMENT CONTROL INSPECTOR UPON COMPLETION OF SAID INSTALLATION.
4. WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR, CLEAR AND GRUB REMAINDER OF SITE, INSTALL SANDBAG DIVERSION, AND DE-WATER WORK AREA (SEE DWG.'S TYP-CON-08 SHTS 1 AND 2 FOR DETAIL).
5. GRADE STREAM BANK AND INSTALL CONCRETE MATS AS SHOWN, ALL SLOPES ADJACENT TO THE CHANNEL SHALL BE STABILIZED WITH STONE.
6. UPON STABILIZATION OF THE SITE WITH ESTABLISHED VEGETATION AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL MEASURES AND STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS.

GENERAL NOTES

1. CONTRACTOR SHALL USE ACCESS ROAD TEMPORARILY DURING CONSTRUCTION, USE OF GRAVEL DURING THIS TIME IS OPTIONAL. CONTRACTOR SHALL INSTALL TEMPORARY STREAM CROSSING USING WOOD MATTING OR APPROVED EQUIVALENT METHOD, PER DWG. TYP-CON-09. THE PERMANENT ACCESS ROAD FOR MAINTENANCE AND PERMANENT STREAM CROSSING, AS SHOWN IN DWG.'S LGE-BC-60-E2 TO LGE-BC-60-E4, IS NOT RATED FOR HEAVY EQUIPMENT DURING CONSTRUCTION.
2. ACTIVITIES IN THE WETLAND AND WETLAND BUFFERS ARE CONSIDERED NECESSARY.
3. ACTIVITIES QUALIFY FOR USACE AND KY DIVISION OF WATER NWP 12 FOR UTILITY LINE ACTIVITIES.
4. WORK WILL ADHERE TO ALL GENERAL AND REGIONAL CONDITIONS OF NWP 12.
5. SEDIMENT CONTROL WILL INCLUDE SILT FENCE TO PREVENT SEDIMENT FROM ENTERING UNNAMED TRIBUTARY TO CEDAR CREEK.
6. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO CURRENT BMPs FOR EROSION AND SEDIMENT CONTROL.
7. ROAD/STONE BASE IS NOT REQUIRED IF CREEK BOTTOM IS SOLID ROCK.

OVERALL SITE ANALYSIS

AREA DISTURBED	(40 S.F.)
TOTAL CUT	2.06 CU. YD.
TOTAL FILL	2.06 CU. YD.



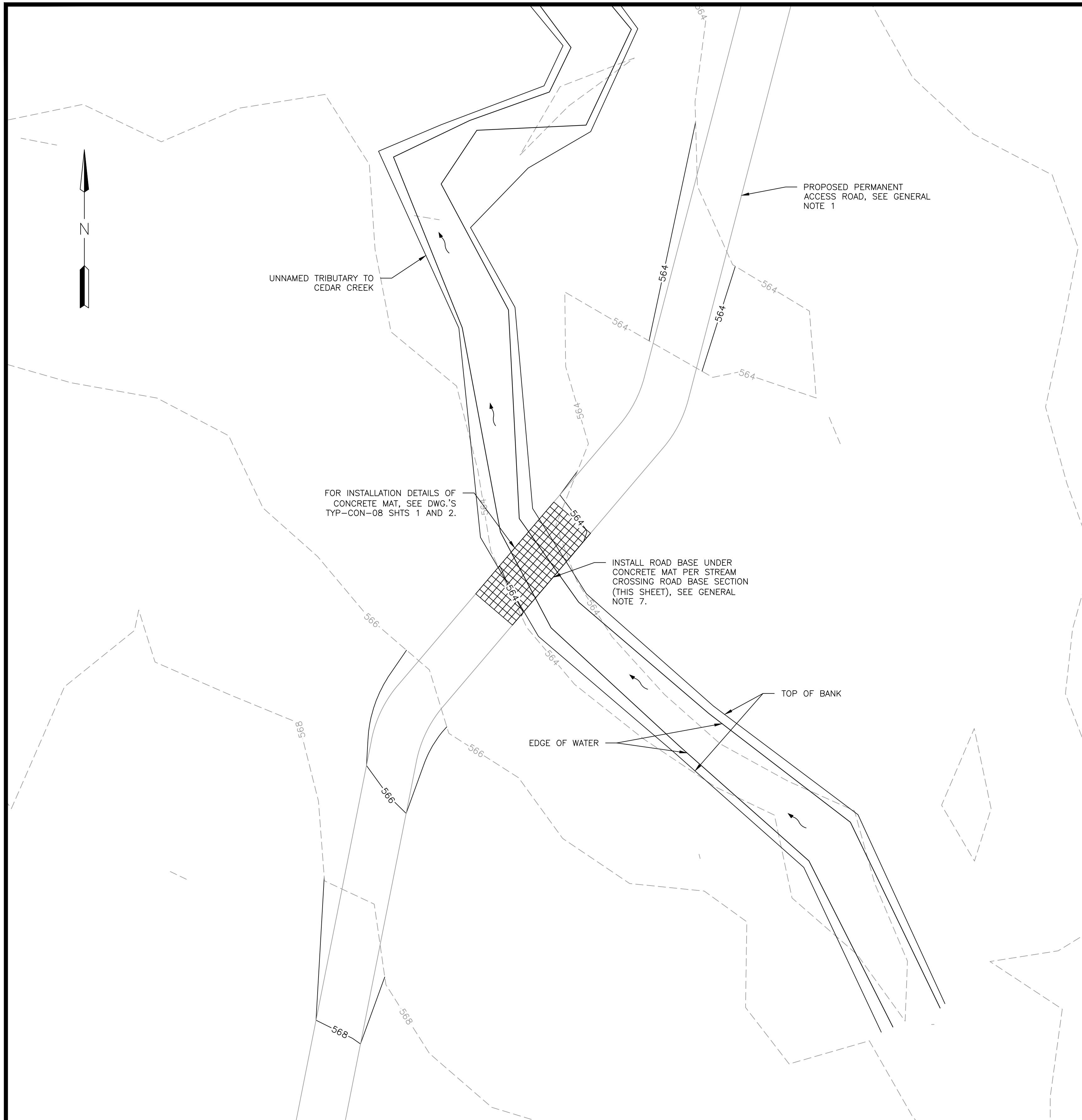
LEGEND:

- - - - - EXISTING CONTOUR
- PROPOSED CONTOUR

NOTE:

1. REFER TO LGE-BC-GEN-CIVIL FOR ADDITIONAL NOTES AND INFORMATION.

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0	01/17/19	ELW			ISSUED FOR BID	ELW	01/17/19	MDW	
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ENEngineering
 28100 TORCH PARKWAY
 WARRENVILLE, IL 60555
 TEL. 630.353.4000
 FAX 630.353.7777
 WWW.ENENGINEERING.COM

DWG NUMBER	TITLE
LGE-BC-60-E3	MAINLINE VALVE GRADING/DRAINAGE PLAN, CONT.
LGE-BC-60-E2	MAINLINE VALVE GRADING/DRAINAGE PLAN
LGE-BC-60-E1	CALVARY LINE INTERCONNECT GRADING/DRAINAGE PLAN
LGE-BC-25-E2	MAINLINE VALVE SITE PLAN
LGE-BC-GEN-CIVIL	GENERAL CIVIL NOTES
	REFERENCE DRAWINGS

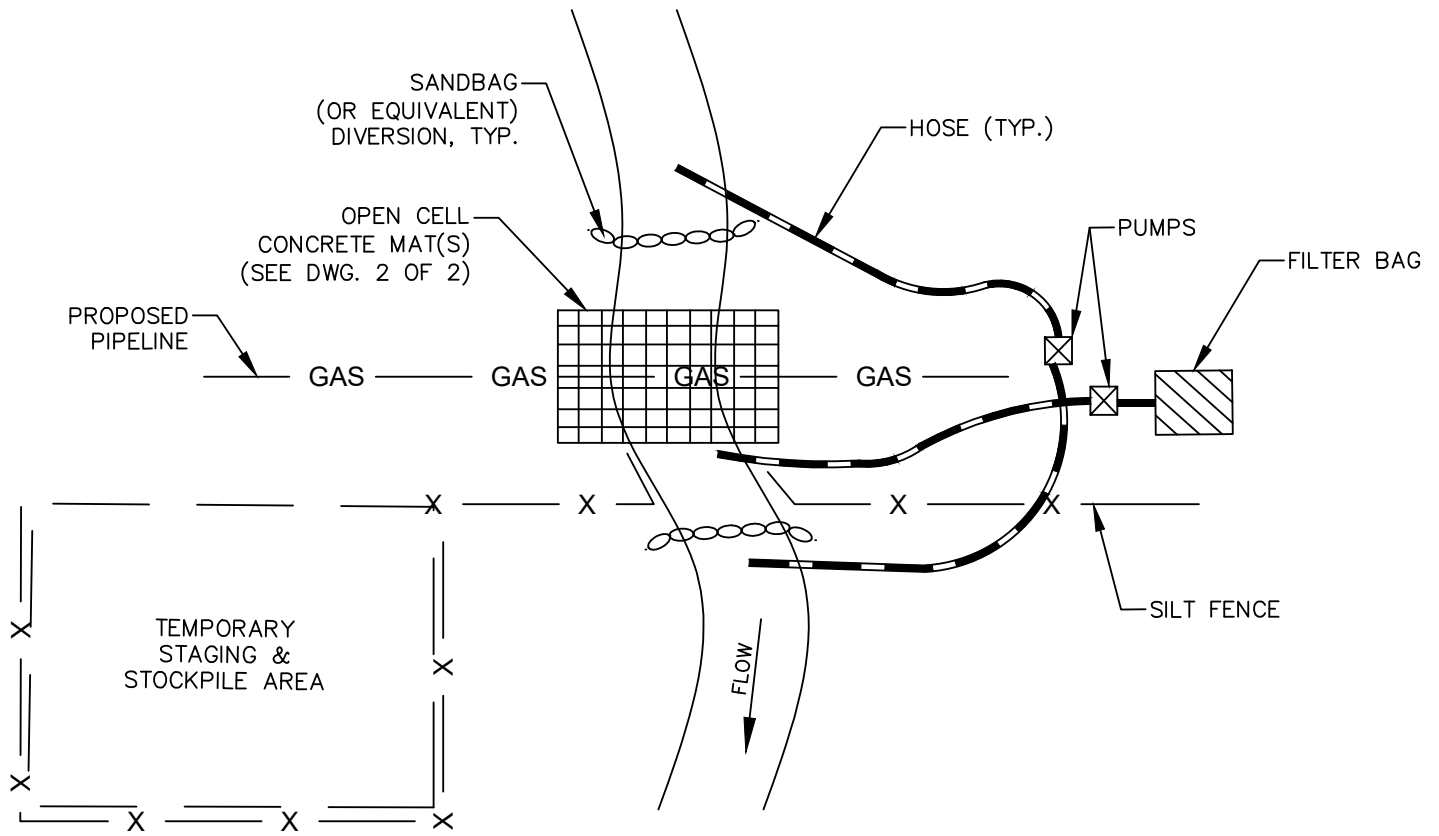
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ISSUED FOR BID	PROJECT I.D.
ISSUED FOR CONSTRUCTION	DRAWING SIZE D

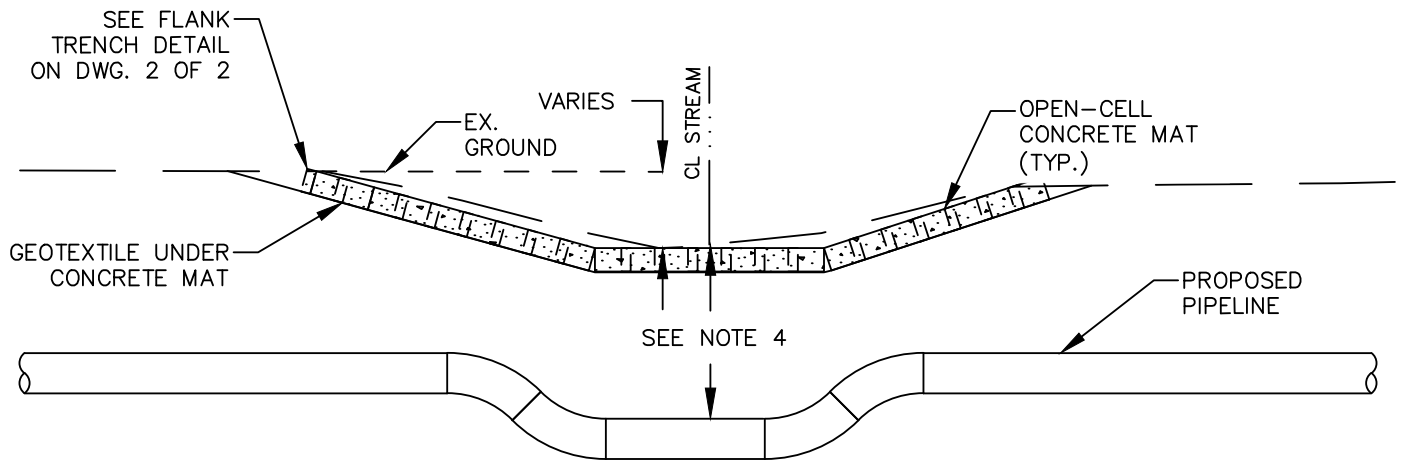
**12" BULLITT COUNTY PIPELINE
MAINLINE VALVE
STREAM CROSSING PLAN**

BULLITT COUNTY KY

DRAWN	CHK. BY.	SCALE	DATE
BMD	ELW	1" = 10'-0"	08/01/18
PROJECT ENGR. / PROJECT MGR.	FILE NO.	LGE-BC-60-E4 64 OF 94	
ELW / MDW			



PLAN



PROFILE

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TEL. 630-353-4000
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PROJECT ENG.	EW (ENE)
APPROVED BY	MW (ENE)
DATE	11-02-2018
SCALE	N.T.S

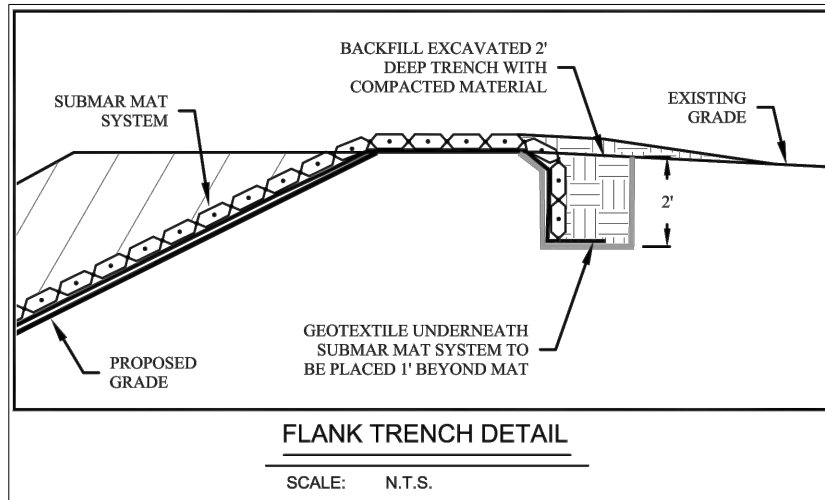
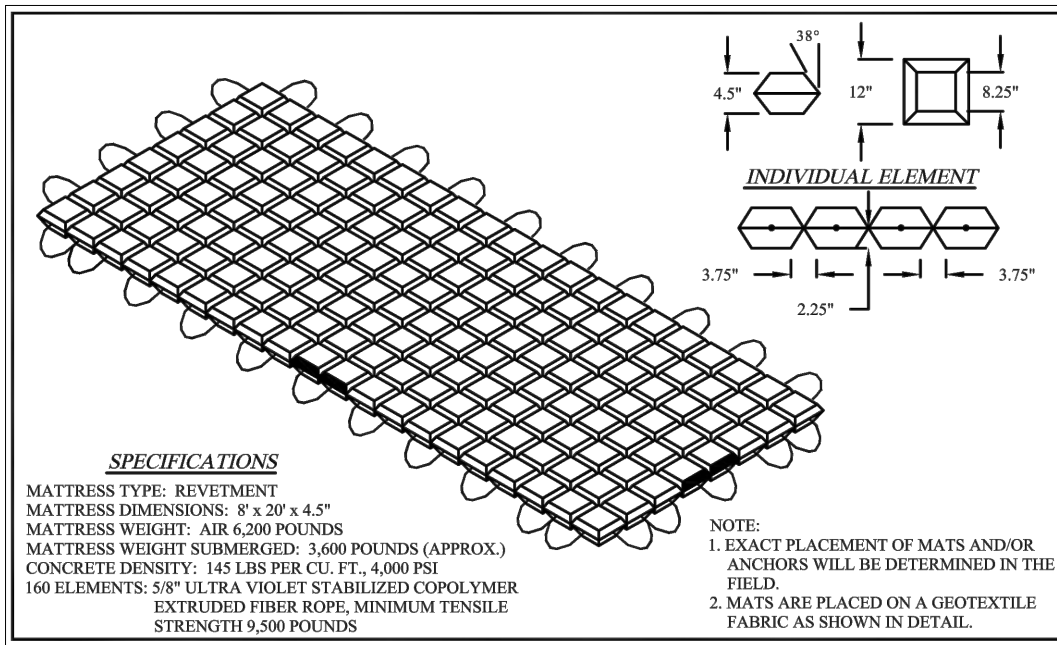
TYPICAL INSTALLATION OF
IN-STREAM CONCRETE MATS



DRAWING:

TYP-CON-08

SHT 1 OF 2



NOTES:

1. INSTALL EROSION CONTROL MEASURES, SUCH AS SILT FENCE.
2. INSTALL SANDBAG DIVERSION (OR EQUIVALENT) AND DE-WATER WORK AREA.
3. GRADE STREAM BANK (IF REQ'D) AND INSTALL CONCRETE MATS, AS SHOWN.
4. PIPELINE DEPTH OF COVER SHALL BE MINIMUM 24" IN CONSOLIDATED ROCK PER DOT 192, 30" FOR ERODIBLE CHANNELS PER KRS 151.250, OR AS SPECIFIED IN CONTRACT.

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28100 TORCH PARKWAY
 WARRENVILLE, IL. 60555
 TEL. 630-353-4000
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APPROVED BY	MW (ENE)
DATE	11-02-2018
SCALE	N.T.S

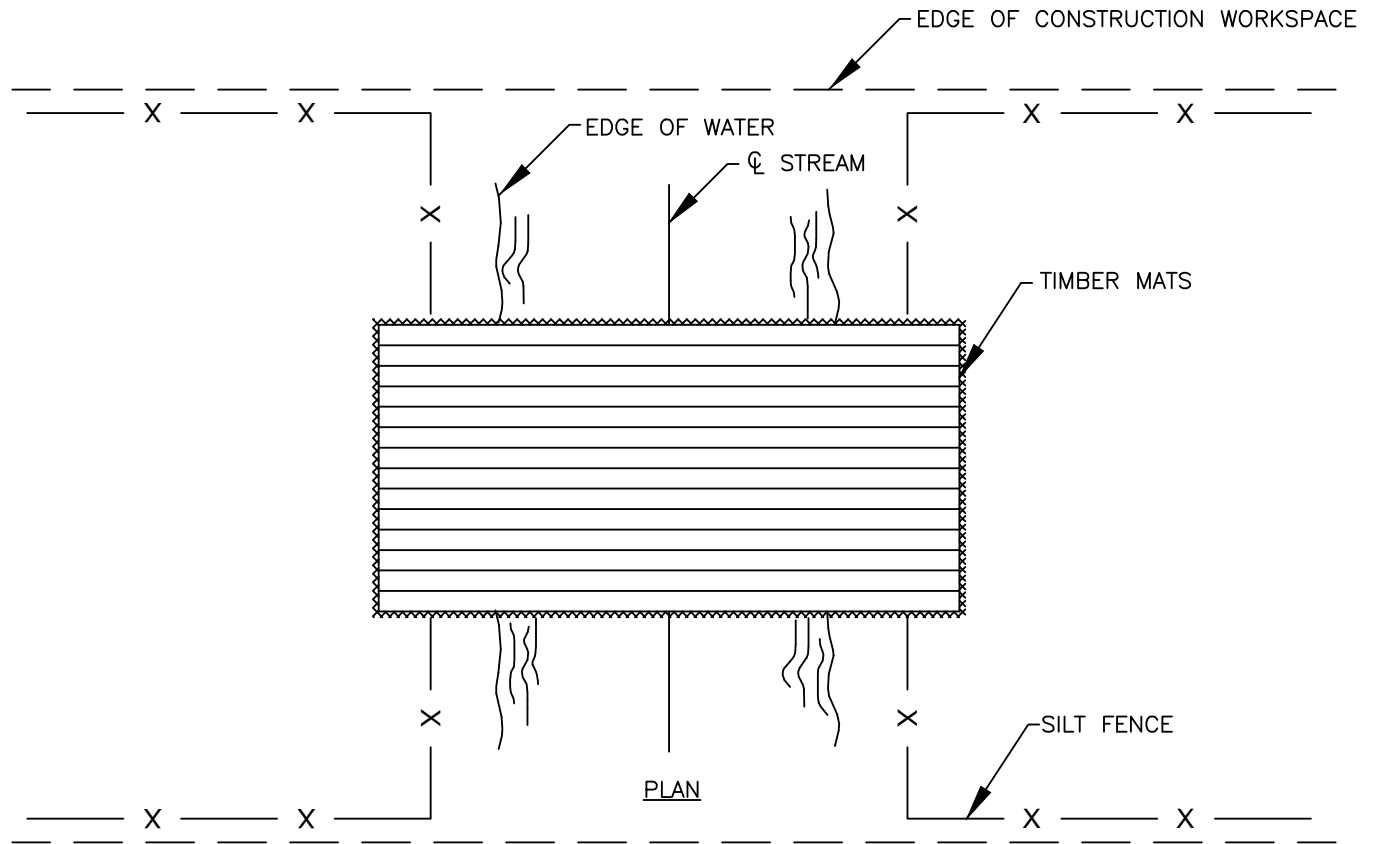
**TYPICAL INSTALLATION OF
 IN-STREAM CONCRETE MATS**

LGE
 a PPL company

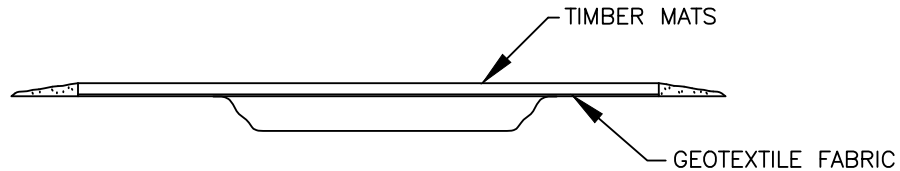
DRAWING:

TYP-CON-08

SHT 2 OF 2



PLAN



ELEVATION

NOTES:

1. THIS TYPE OF BRIDGE IS GENERALLY USED FOR SMALL STREAM CROSSINGS LESS THAN 20' IN WIDTH IN COMBINATION WITH A PROPER STREAM BANK CONFIGURATION.
2. BRIDGE WILL BE TEMPORARILY REMOVED IF HIGH WATER RENDERS IT UNSAFE FOR CROSSING.
3. SILT FENCE, HAYBALES OR SANDBAGS MAY BE USED INTERCHANGEABLY.
4. GEOTEXTILE FABRIC OR EQUIVALENT SHALL BE PLACED ON THE BOTTOM OF THE BRIDGE TO TRAP SEDIMENT AS NECESSARY.
5. INDIVIDUAL MATS SHALL BE ANCHORED AND BUTTED TIGHTLY TO MINIMIZE THE INTRODUCTION OF SEDIMENT TO THE WATERBODY.
6. STRAW BALES, WADDLES OR APPROPRIATE BARRIERS WILL BE PLACED AT THE EDGE OF EQUIPMENT BRIDGE AT THE END OF THE WORK DAY TO PREVENT EROSION BUT WILL BE REMOVED DURING CONSTRUCTION ACTIVITY.
7. SILT FENCE SHALL BE INSTALLED ALONG EDGE OF WORKSPACE AND STREAM BANKS TO PREVENT SEDIMENT FROM ENTERING STREAM.

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FAX 630-353-7777
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SCALE	N.T.S

TYPICAL TIMBER MAT BRIDGE
WITHOUT CULVERTS FOR
TEMPORARY STREAM CROSSING

LGE
a PPL company

DRAWING:

TYP-CON-09