

FALCON ETHANE PIPELINE SYSTEM  
POST-CONSTRUCTION STORMWATER MANAGEMENT AND  
SITE RESTORATION PLAN  
WASHINGTON, ALLEGHENY, AND BEAVER COUNTIES, PA  
PREPARED FOR:  
SHELL PIPELINE COMPANY LP  
150 N DAIRY ASHFORD RD  
HOUSTON, TX 77079  
AUGUST, 2018

LOCATION COORDINATES  
PROJECT BEGINS:  
LATITUDE: 40°15'51.17"N LONGITUDE: 80°15'39.21"W  
PROJECT ENDS:  
LATITUDE: 40°39'45.97"N LONGITUDE: 80°20'22.08"W

\*BASED ON UTM ZONE 17F

GENERAL DESCRIPTION  
THE FALCON ETHANE PIPELINE SYSTEM (PROJECT) IS AN APPROXIMATELY 98-MILE PIPELINE THAT WILL TRANSPORT ETHANE FROM SOURCES IN SCIO AND CADIZ, OH AND HOUSTON, PA TO SHELL'S PETROCHEMICAL FACILITY LOCATED IN MONACA, PA. APPROXIMATELY 45.5 MILES OF PIPELINE ARE PROPOSED FOR THE PENNSYLVANIA PORTION OF THIS PROJECT. THE PORTION CROSSING THROUGH WASHINGTON COUNTY, PA, WILL CONSIST OF 12-INCH DIAMETER STEEL PIPELINE, WITHIN A SINGLE RIGHT-OF-WAY OF APPROXIMATELY 14.0 MILES IN LENGTH, AND APPROXIMATELY 192.5 ACRES OF DISTURBANCE. THE PORTION OF THE PROJECT CROSSING THROUGH ALLEGHENY COUNTY, PA, ALSO CONSISTS OF 12-INCH DIAMETER STEEL PIPELINE, WITHIN A SINGLE RIGHT-OF-WAY OF APPROXIMATELY 8.6 MILES IN LENGTH, AND APPROXIMATELY 110 ACRES OF DISTURBANCE. THE PORTION OF THE PROJECT CROSSING THROUGH BEAVER COUNTY, PA, WILL ALSO CONSIST OF 12-INCH DIAMETER STEEL PIPELINE, WITHIN TWO RIGHT-OF-WAYS TOTALING APPROXIMATELY 19.2 MILES IN LENGTH, AND 16-INCH DIAMETER STEEL PIPELINE, WITHIN ONE RIGHT-OF-WAY TOTALING APPROXIMATELY 3.7 MILES IN LENGTH, TOTALING APPROXIMATELY 305 ACRES OF DISTURBANCE. THE PROJECT WILL ALSO INCLUDE VARIOUS TEMPORARY AND PERMANENT ACCESS ROADS TO PROVIDE THE CONTRACTOR TO ACCESS ALL NECESSARY LOCATIONS ALONG THE CORRIDOR.

LAYDOWN AREAS AND TEMPORARY WORKSPACES WILL BE UTILIZED ALONG THE ROW DURING CONSTRUCTION. THIS PROJECT WILL INVOLVE OPEN CUTTING, CONVENTIONALLY BORING, AND/OR HORIZONTAL DIRECTIONAL DRILL (HDD) TO INSTALL THE PIPELINE. ONCE THE PIPELINE IS INSTALLED, THE LOD WILL BE RESTORED TO ORIGINAL TOPOGRAPHIC CONDITIONS, BEST MANAGEMENT PRACTICES (BMPs) WILL BE USED DURING ALL PHASES OF CONSTRUCTION.

FLOODPLAIN NOTE  
THE PROPOSED SITE IS NOT LOCATED IN THE 1% ANNUAL CHANCE FLOOD HAZARD ZONE

PA ONE CALL STATEMENT  
PA ONE CALL WILL BE CONTACTED BY THE CONTRACTOR AT LEAST 3 DAYS PRIOR TO THE START OF CONSTRUCTION FOR THIS PROJECT.

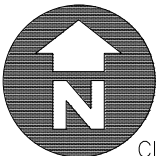
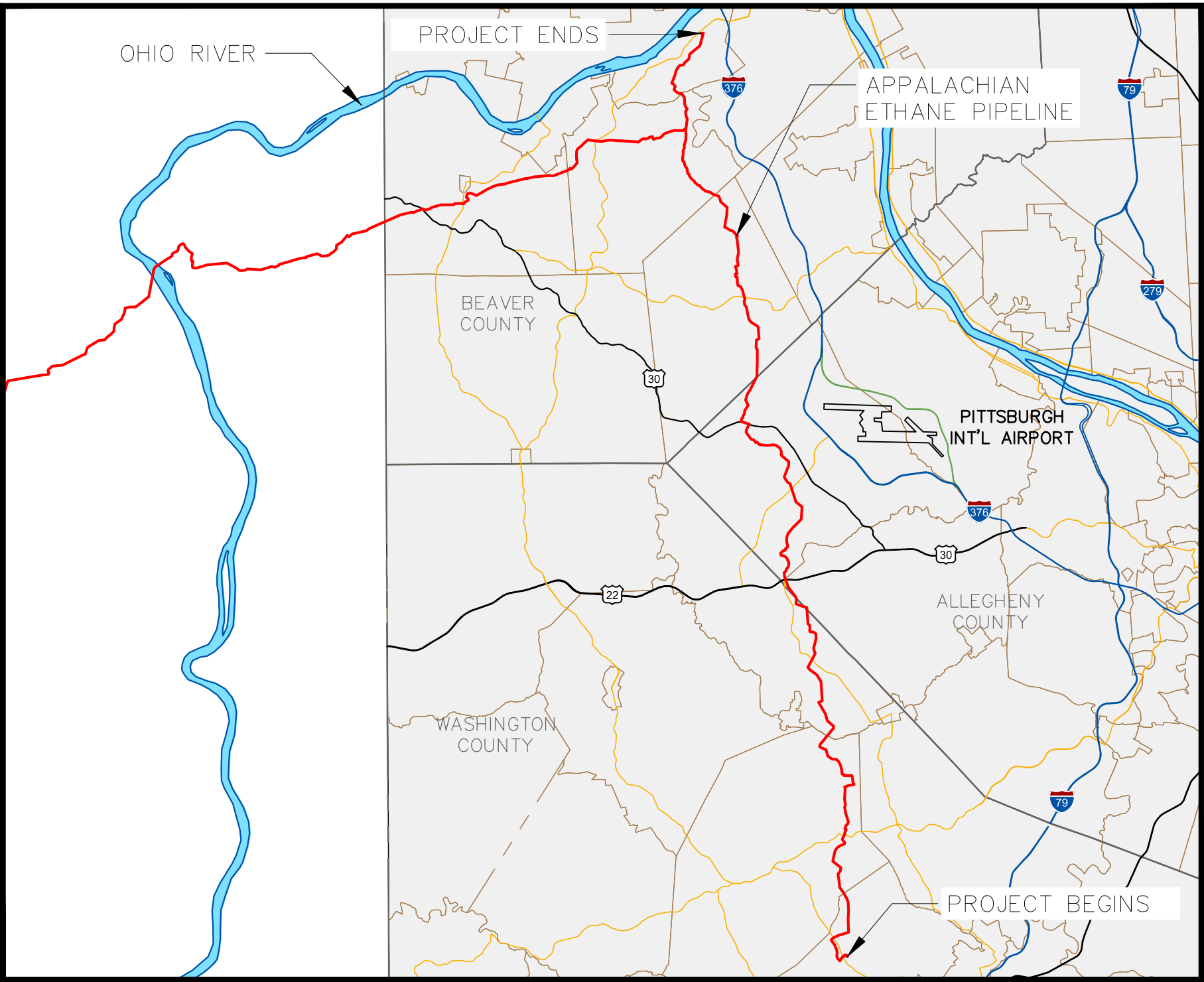
ENTRANCE PERMIT  
AN HIGHWAY OCCUPANCY PERMIT [HOP] WILL BE OBTAINED FROM [PENNDOT/LOCAL ROAD SUPERVISOR] PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES

WATERSHED NAME: SEE PLAN NARRATIVE  
RECEIVING STREAM (USGS BLUE LINE): SEE PLAN NARRATIVE

ENGINEER  
AECOM  
681 ANDERSEN DRIVE, SUITE 400  
PITTSBURGH, PA 15220-2749  
OFFICE: (412) 503-4700  
FAX: (412) 503-4701

TOPOGRAPHIC BASEFILE: PERCHERON, LLC  
USACE SURVEY

- REFERENCE (ALL SHEETS)
- SOILS INFORMATION FROM NATIONAL RESOURCES CONSERVATION SERVICE, JULY 2017. SOIL SURVEY GEOGRAPHIC DATABASE FOR BEAVER, ALLEGHENY, AND WASHINGTON COUNTIES, PENNSYLVANIA.
  - TOPOGRAPHY AND BACKGROUND IMAGES:  
U.S. GEOLOGICAL SURVEY, 2016. ALIQUIPPA, PA, 7.5-MINUTE SERIES TOPOGRAPHIC QUADRANGLE MAP.  
U.S. GEOLOGICAL SURVEY, 2016. BEAVER, PA, 7.5-MINUTE SERIES TOPOGRAPHIC QUADRANGLE MAP.  
U.S. GEOLOGICAL SURVEY, 2016. CLINTON, PA, 7.5-MINUTE SERIES TOPOGRAPHIC QUADRANGLE MAP.  
U.S. GEOLOGICAL SURVEY, 2016. EAST LIVERPOOL SOUTH, OH-WV-PA, 7.5-MINUTE SERIES TOPOGRAPHIC QUADRANGLE MAP.  
U.S. GEOLOGICAL SURVEY, 2016. HOOKSTOWN, PA, 7.5-MINUTE SERIES TOPOGRAPHIC QUADRANGLE MAP.  
U.S. GEOLOGICAL SURVEY, 2016. MIDLAND, PA, 7.5-MINUTE SERIES TOPOGRAPHIC QUADRANGLE MAP.  
U.S. GEOLOGICAL SURVEY, 2016. MIDWAY, PA, 7.5-MINUTE SERIES TOPOGRAPHIC QUADRANGLE MAP.
  - PROPERTY BOUNDARIES, TOPOGRAPHIC SURVEY, AND PLANIMETRIC DATA PROVIDED BY PERCHERON LLC, 2016-2017.
  - WETLAND INVESTIGATION WAS COMPLETED BY AECOM FROM FEBRUARY 2016 TO MAY 2017.
  - HORIZONTAL DATUM IS UTM83-17F. VERTICAL DATUM IS NAVD1988.
  - BATHYMETRIC SURVEY OF THE OHIO RIVER PROVIDED BY THE U.S. ARMY CORPS OF ENGINEERS ON 1/15/2016.
  - DEPTH OF COVER IS STANDARD 4 FEET EXCEPT FOR WETLANDS, STREAMS, ROADS AND RAILROAD CROSSINGS. WETLAND AND STREAM DEPTHS ARE A MINIMUM OF 5' BELOW RESOURCES; 5 FEET MINIMUM BELOW ROAD SURFACE.
  - PADEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL. MARCH 2012.
  - NATIONAL WETLAND INVENTORY MAP(S): <http://www.mapwv.gov/flood/>
  - AERIAL IMAGES WERE PROVIDED FROM GOOGLE EARTH, AUGUST 2017.



LOCATION MAP

SCALE: 1" = 20,000'  
USGS QUADS: ALIQUIPPA, PA; BEAVER, PA;  
CLINTON, PA; EAST LIVERPOOL SOUTH, OH-WV-PA;  
HOOKSTOWN, PA; MIDLAND, PA; MIDWAY, PA

NOT ALL UTILITIES ARE SHOWN



THE LOCATION OF ALL UTILITIES (ABOVE OR BELOW GROUND) SHOWN ON THESE DRAWINGS ARE APPROXIMATE & WERE OBTAINED FROM USGS TOPO MAPS AND/OR UTILITY OWNERS. AECOM DOES NOT GUARANTEE THAT LOCATION SHOWN ON THE DRAWINGS ARE CORRECT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE LOCATIONS OF EXISTING UTILITIES (ABOVE OR BELOW GROUND) & TO NOTIFY THE RESPECTIVE UTILITY OWNERS BEFORE BEGINNING CONSTRUCTION.

CALL BEFORE YOU DIG!  
PENNSYLVANIA LAW REQUIRES  
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE  
AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL  
PENNSYLVANIA ONE CALL SYSTEM INC.  
1-800-242-1776

PA ONE CALL DESIGN SERIAL NUMBERS:

- EXISTING: 1550 EXISTING CONTOURS (INDEX)  
--- EXISTING CONTOURS (INTERMEDIATE)  
--- EXISTING PROPERTY LINE  
--- EXISTING STREAM  
--- EXISTING WETLAND  
[MfB2] SOIL TYPE AND SOIL BOUNDARY  
--- X --- X --- FENCE LINE  
--- E --- E --- E --- ELECTRIC UTILITY  
--- C --- C --- C --- GAS LINE  
--- --- --- CULVERT  
--- --- --- TREE / BRUSH LINE  
--- --- --- UTILITY POLE, GAS LINE MAKER
- PROPOSED: STUDY ENVIRONMENTAL STUDY BOUNDARY  
--- ACCESS ROAD CENTERLINE  
--- PROPOSED PIPELINE  
--- PROPOSED LIMIT OF DISTURBANCE  
--- ACCESS ROAD CENTERLINE  
--- PROPOSED WATERBAR  
[X] PROPOSED EROSION CONTROL BLANKET

GENERAL NOTES:

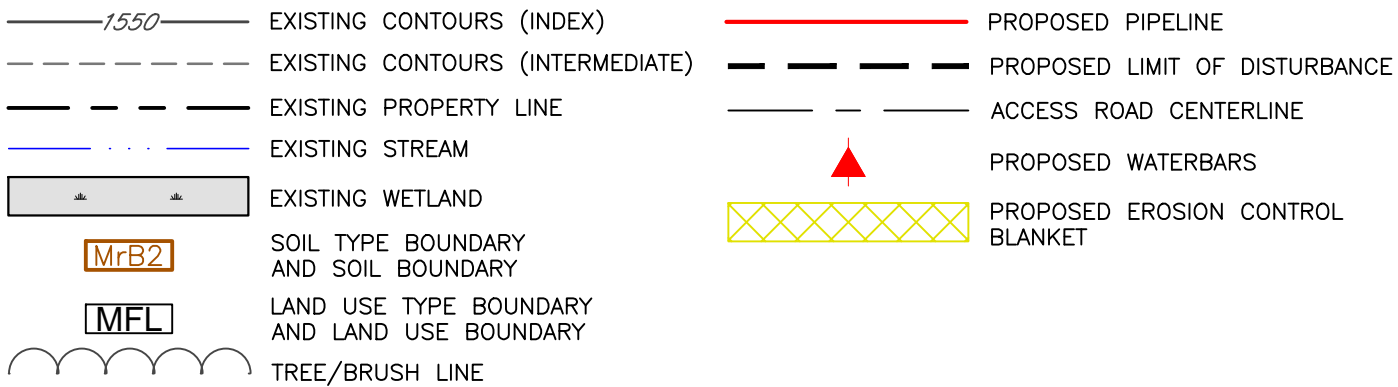
| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | BMW | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



| FALCON ETHANE PIPELINE SYSTEM<br>SHELL PIPELINE COMPANY LP  |  | SITE RESTORATION PLAN<br>COVER<br>WASHINGTON, ALLEGHENY, AND BEAVER CO. PENNSYLVANIA<br>MULTIPLE TOWNSHIPS |                               |
|---|--|--|-------------------------------|
| THIS DOCUMENT IS CONFIDENTIAL AND IT SHALL NOT BE REPRODUCED OR REDISTRIBUTED WITHOUT PRIOR PERMISSION. NEITHER THE OPERATOR NOR THE OWNER MAKE ANY WARRANTY AS TO THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION CONTAINED ON THIS DRAWING, AND THE USER ASSUMES ALL RISK OF LOSS TO PERSONS AND PROPERTY AS A RESULT OF RELIANCE THEREON. |  | SCALE: 1"=50'<br>DRAWN: TLM  | DATE: 09/14/17<br>REVISION: 2 |



F:\PROJECTS\7473\SHELL\GOM\BBS - FALCON\GOM-HPRA\01-ENVIRONMENTAL\20-SHEETS\VENUS\MANA\SR-H-LANS\COVER\_PA-SDWG  
Last saved by: UNCOA.N.SCHAEFER (7/31/2018 11:06 AM)      Last Plotter: 2018-07-31 (7/31/2018 12:31 PM)



GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | BMW | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



| FALCON ETHANE PIPELINE SYSTEM   |        | SITE RESTORATION PLAN                 |              |
|---|--------|---------------------------------------|--------------|
| SHELL PIPELINE COMPANY LP   |        | INDEX00                               |              |
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| SCALE   | 1"=50' | DATE                                  | REVISION     |
| DRAWN   | TLM    | 09/14/17                              | 2            |









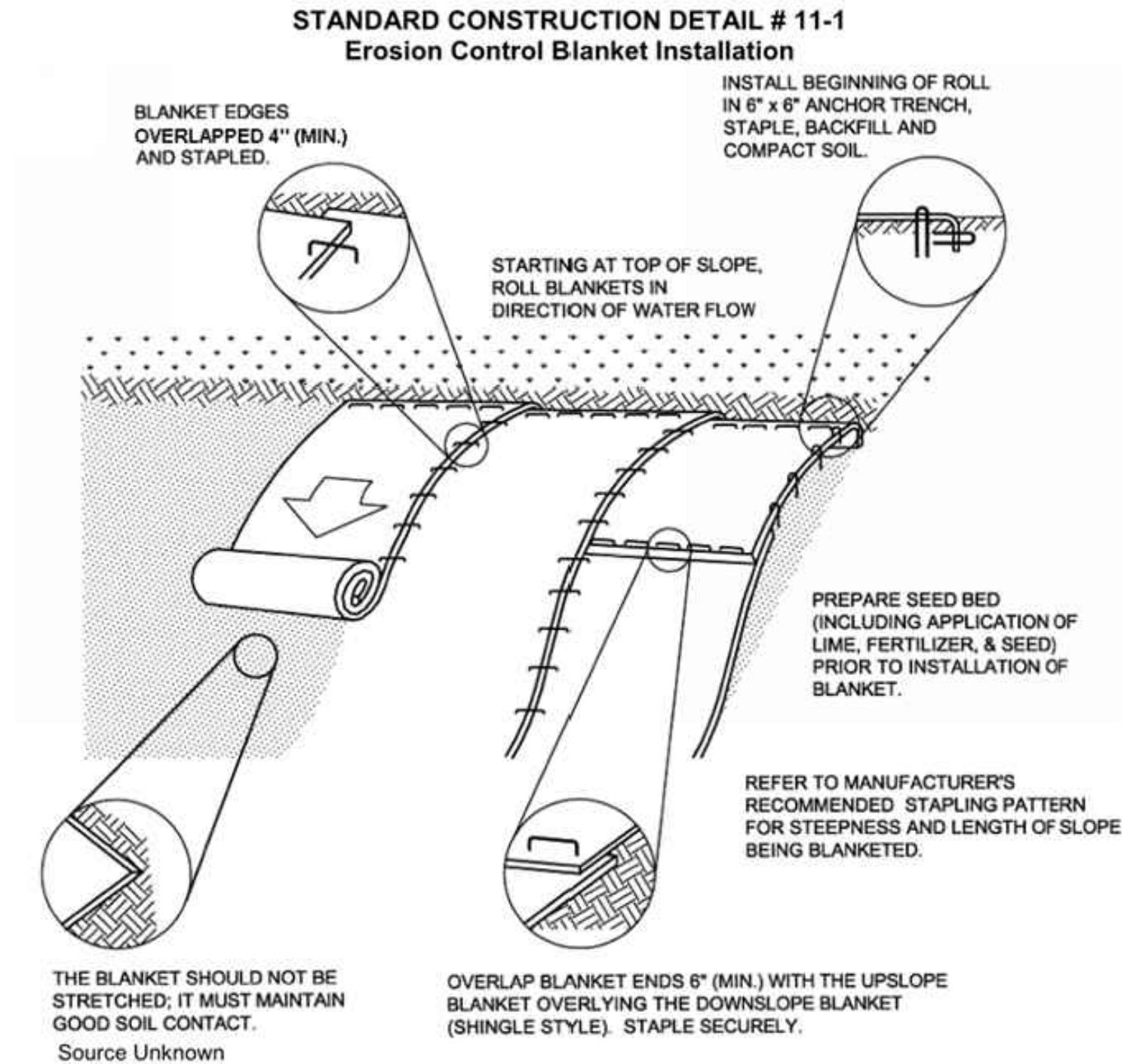








Project: 1747-SHELL-4049885 - FALCON 900-WORK-911-ENVIRONMENTAL-20-SHEETS-PENNSYLVANIA (SR-PLANS) SR DETAILS.DWG  
Last saved by: ALEXANDER CURTICE (7/31/2018 8:42 AM) Last Plotted: 2018-07-31 (7/31/2018 8:53 AM)



Seed and soil amendments shall be applied according to the rates in the plan drawings prior to installing the blanket.

Provide anchor trench at toe of slope in similar fashion as at top of slope.

Slope surface shall be free of rocks, clods, sticks, and grass.

Blanket shall have good continuous contact with underlying soil throughout entire length. Lay blanket loosely and stake or staple to maintain direct contact with soil. Do not stretch blanket.

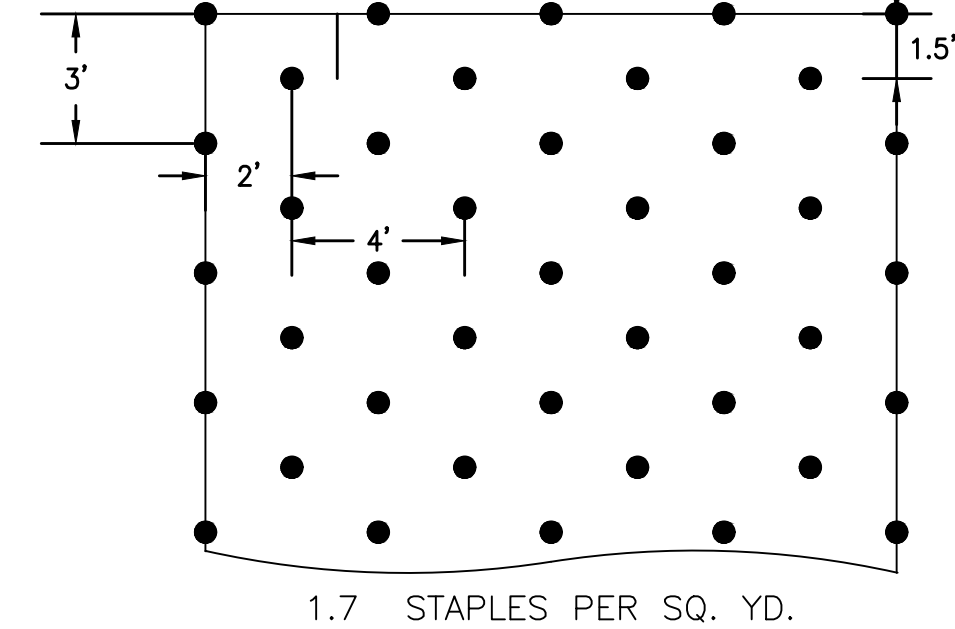
The blanket shall be stapled in accordance with the manufacturer's recommendations.

Blanketed areas shall be inspected weekly and after each runoff event until perennial vegetation is established to a minimum uniform 70% coverage throughout the blanketed area. Damaged or displaced blankets shall be restored or replaced within 4 calendar days.

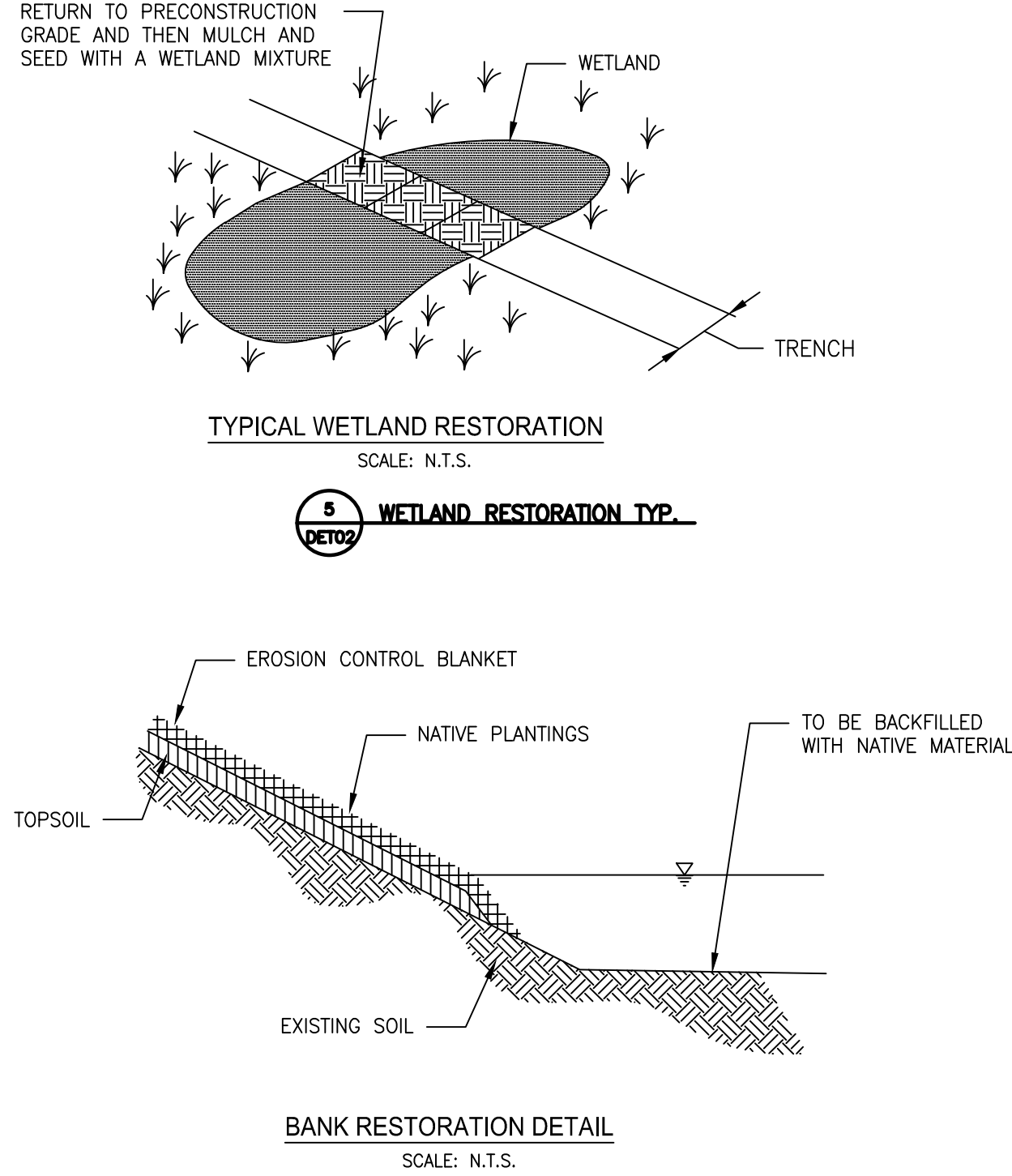
Source: PaDEP, E&S Pollution Control Manual, March 2012

Note: Contractor to use single mat straw fiber matrix for all slopes 3:1 and flatter. Use double mat straw fiber matrix on all slopes greater than 3:1. Hydraulically applied erosion control blankets may be used in lieu of erosion control blankets.

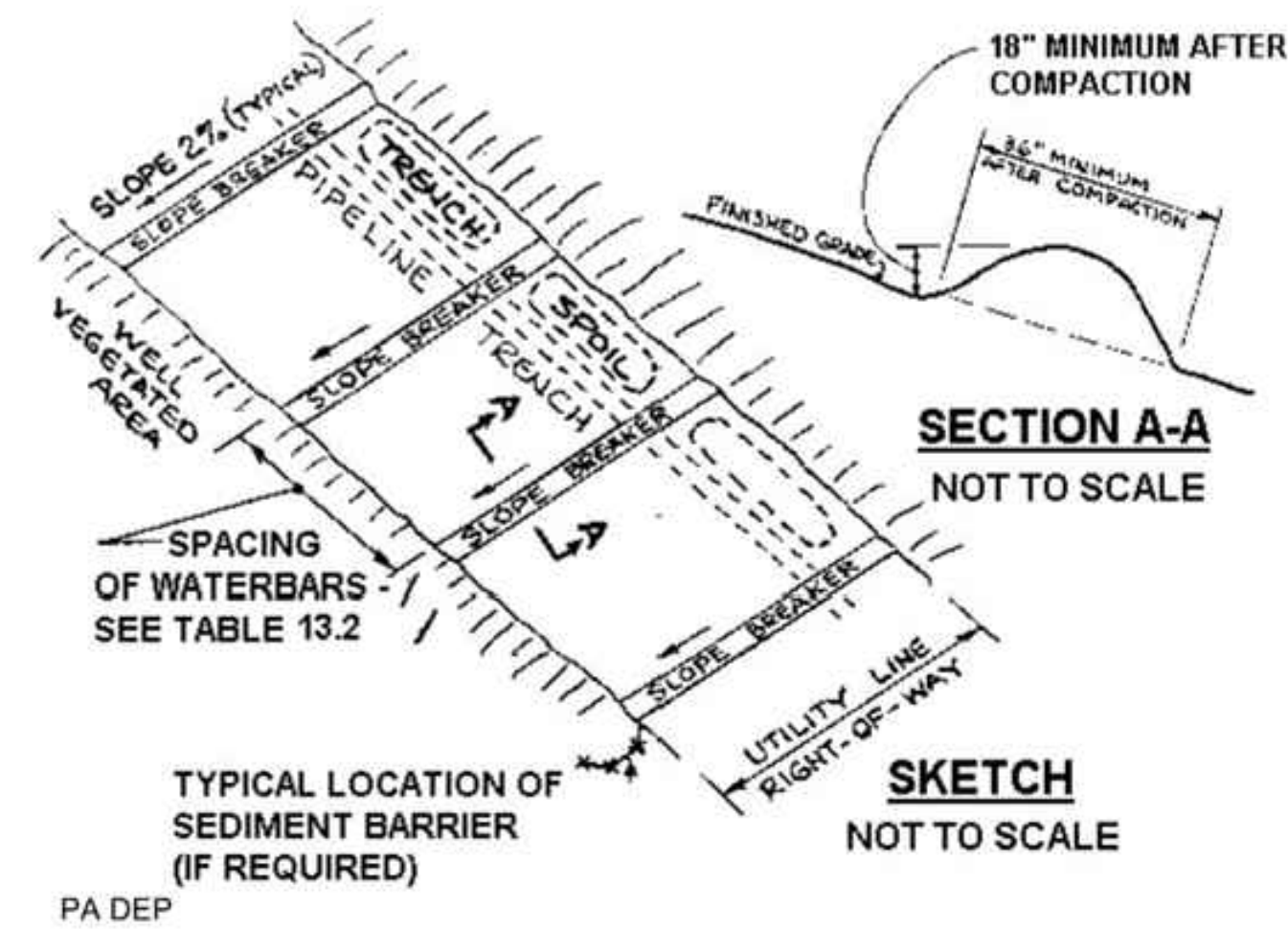
TYPICAL EROSION CONTROL BLANKET STAPLE PATTERN DETAIL



**1**  
**DET02** **EROSION CONTROL BLANKET**



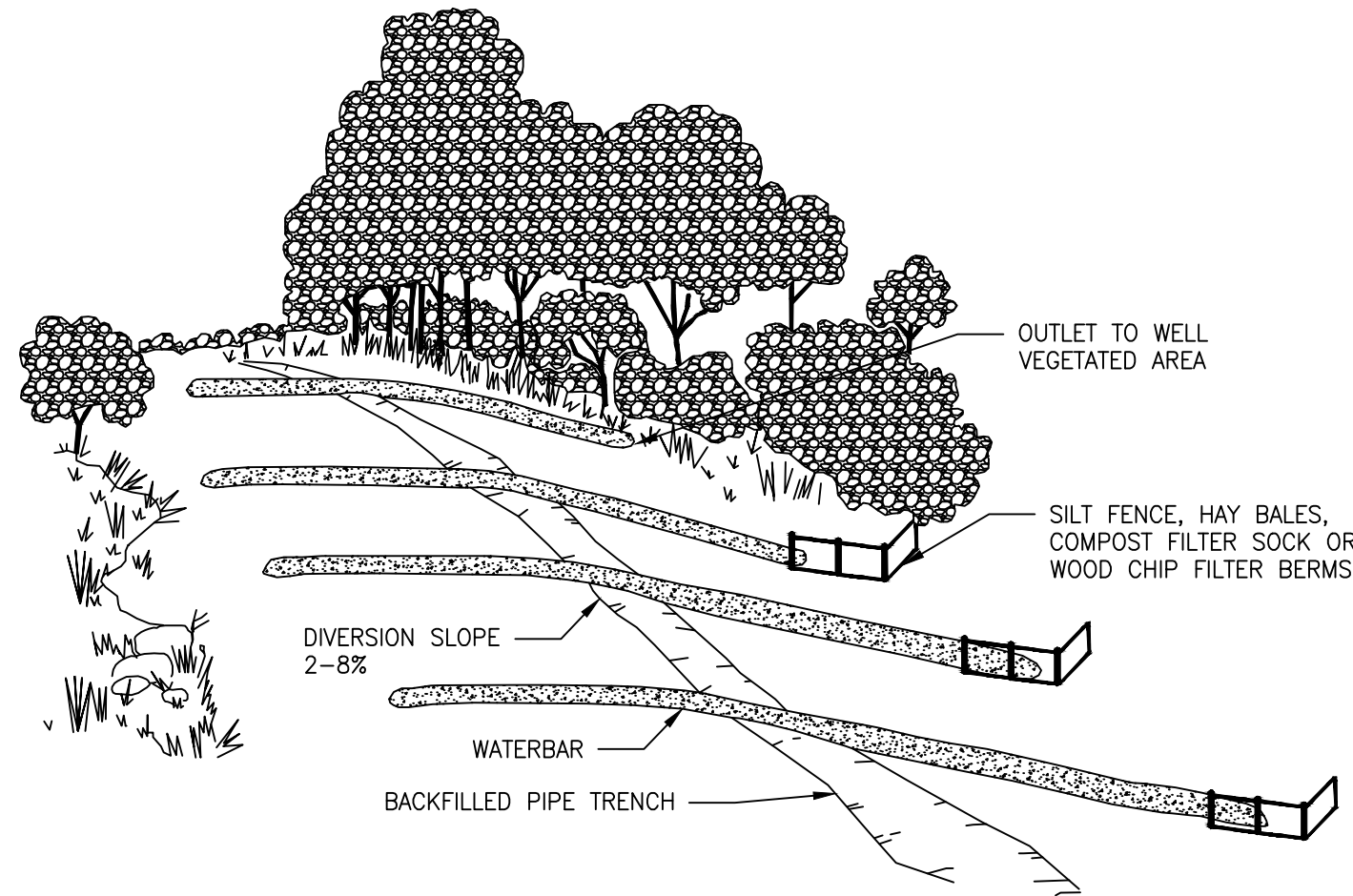
**FIGURE 13.1**  
**Waterbar Installation on a Utility Line Right-of-way**



**TABLE 13.2**  
**Maximum Spacing for Permanent Waterbars on a Utility Line Right-of-way**

| Percent Slope | Spacing (FT) |
|---------------|--------------|
| < 5           | 250          |
| 5 - 15        | 150          |
| 15 - 30       | 100          |
| > 30          | 50           |

Source: PaDEP, E&S Pollution Control Manual, March 2012



**INSTALLATION REQUIREMENTS:**

- INSTALL PERMANENT WATERBARS IN ALL AREAS EXCEPT RESIDENTIAL OR AGRICULTURAL AS NECESSARY TO AVOID EXCESSIVE EROSION (UNLESS AUTHORIZED BY LANDOWNER OR LAND MANAGING AGENCY IN AGRICULTURAL OR RESIDENTIAL AREA.)
- MUST BE INSTALLED ON SLOPES GREATER THAN 5% WHERE THE BASE OF THE SLOPE IS LESS THAN 50 FEET FROM A WATERBODY, WETLAND OR ROAD CROSSING AT THE FOLLOWING MINIMUM SPACING.
- POSITION OUTFALL TO PREVENT SEDIMENT DISCHARGE INTO WETLANDS, WATERBODIES, OR OTHER SENSITIVE RESOURCES.
- FILTER RUN-OFF WATER BY CONSTRUCTING THE OUTFALL IN A WELL VEGETATED STABLE AREA, OR BY USING AN ENERGY DISSIPATING DEVICE (SILT FENCE, HAY BALES, COMPOST FILTER SOCK, OR WOOD CHIP FILTER BERMS).

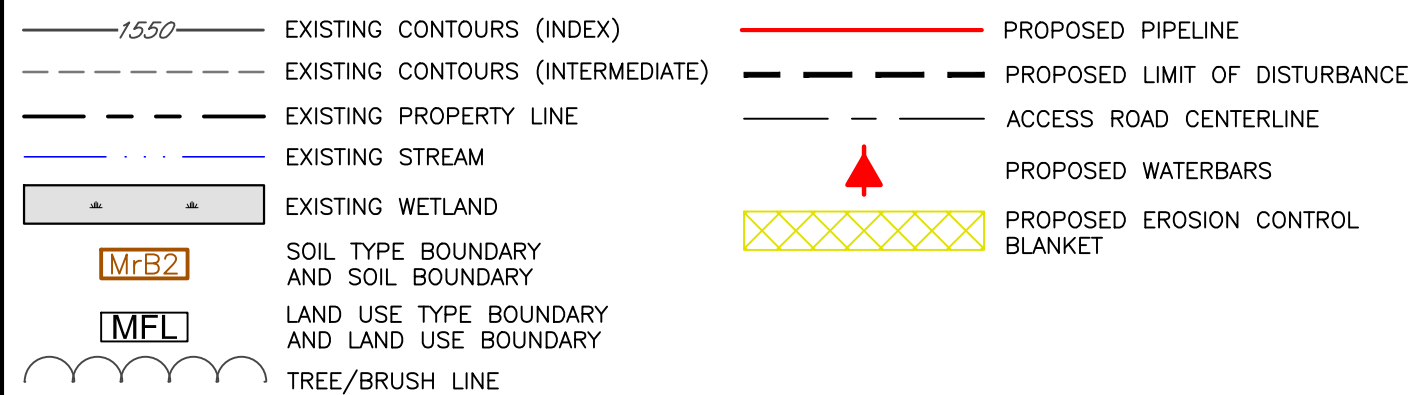
**MAINTENANCE REQUIREMENTS:**

- INSPECT DURING CONSTRUCTION AND REGRADE IF NECESSARY.
- KEEP THE CHANNEL FREE OF DEBRIS AND OBSTRUCTIONS.
- SEED AND MULCH PERMANENT WATERBARS FOLLOWING CONSTRUCTION.

**WATERBAR INSTALLATION AND MAINTENANCE**

SCALE: N.T.S.

**2**  
**DET04** **WATERBAR**



**GENERAL NOTES:**

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | BMW | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



**FALCON ETHANE PIPELINE SYSTEM**  
**SHELL PIPELINE COMPANY LP**

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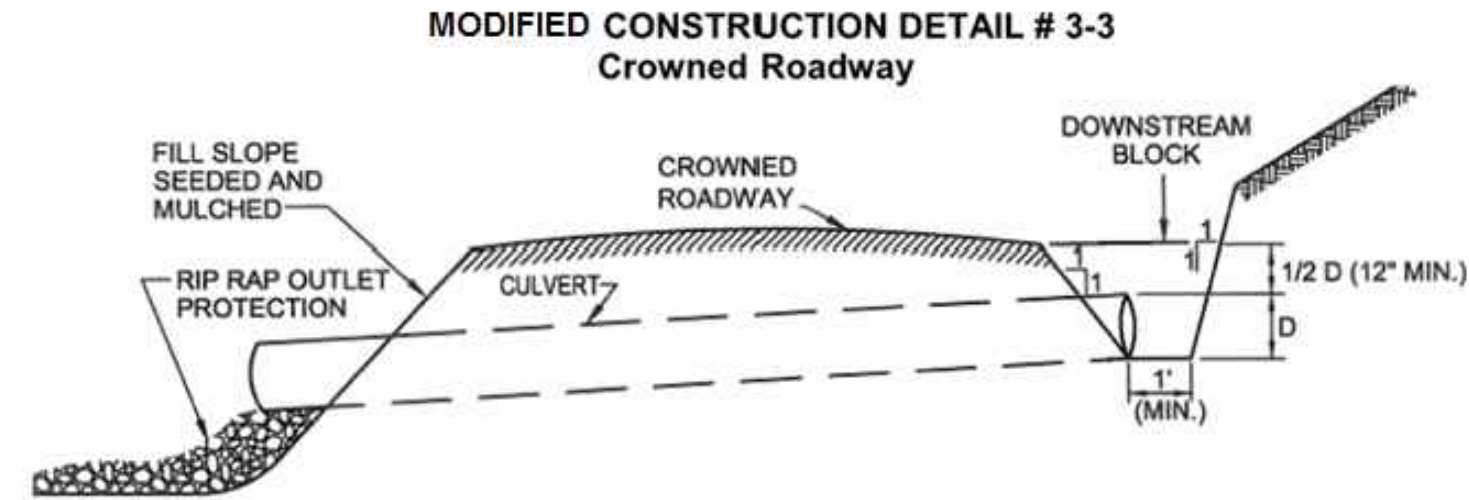
**SITE RESTORATION PLAN**  
**DET02**  
**WASHINGTON, ALLEGHENY, AND BEAVER CO. PENNSYLVANIA**  
**MULTIPLE TOWNSHIPS**

|       |     |      |          |                      |          |   |
|-------|-----|------|----------|----------------------|----------|---|
| SCALE | NTS | DATE | 09/14/17 | SPLC-GOM-AE-SD120096 | REVISION | 2 |
| DRAWN | TLM |      |          |                      |          |   |

ANY DETAIL NOT BEING USED ON THE PROJECT.



Project: V:\PROJECTS\1747\SHELL\4049885 - FALCON 900-WORK\911-ENVIRONMENTAL\20-SHEETS\PENNSYLVANIA\SR-PLANS\SR\_DETAILS.DWG  
 Plotted by: ALEXANDER CURTICE (7/31/2018 8:42 AM) / Last Plotted: 2018-07-31 (7/31/2018 8:53 AM)



Source: Adapted from Pa DEP, E&S Pollution Control Manual, March 2012.  
TYPICAL CROWNED ROADWAY WITH CULVERT DETAIL  
SCALE: N.T.S.

CROWNED ROADWAY NOTES:

CUT AND FILL SLOPES SHALL BE STABILIZED IMMEDIATELY UPON COMPLETION OF ROADWAY GRADING. THESE AREAS SHALL BE BLANKETED WHEREVER THEY ARE LOCATED WITH 50 FEET OF A SURFACE WATER OR WITHIN 100 FEET OF AN HQ OR EV SURFACE WATER OR WHERE A SUITABLE VEGETATIVE FILTER STRIP DOES NOT EXIST.

A TOP DRESSING COMPOSED OF HARD, DURABLE STONE SHALL BE PROVIDED FOR SOILS HAVING LOW STRENGTH.

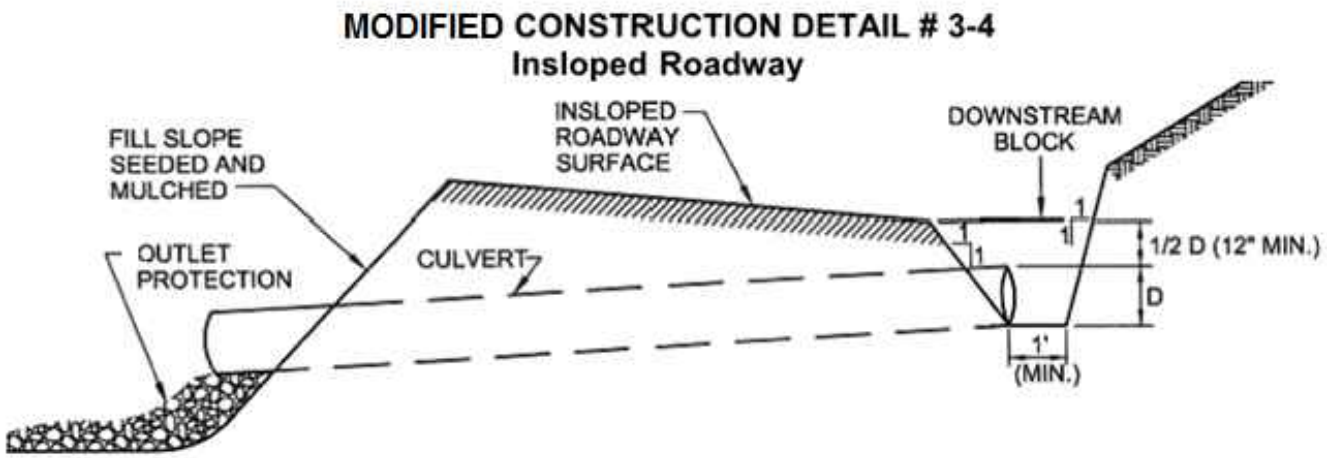
ROADSIDE DITCHES SHALL BE PROVIDED WITH ADEQUATE PROTECTIVE LINING WHEREVER RUNOFF CANNOT SHEET FLOW AWAY FROM THE ROADWAY.

ADEQUATELY SIZED CULVERTS OR OTHER SUITABLE CROSS DRAINS SHALL BE PROVIDED AT ALL SEEPS, SPRINGS, AND DRAINAGE COURSES. DITCH RELIEF CULVERTS OR TURNOUTS SHALL BE PROVIDED AT THE INTERVALS INDICATED ON THIS SHEET FOR THE ROADSIDE DITCHES. TRANSITION MAT, OR RIP RAP OUTLET PROTECTION TO BE SIZED ACCORDING TO ANTICIPATED DISCHARGE VELOCITY.

ROADWAY WILL BE INSPECTED ANNUALLY. DAMAGED ROADWAYS, DITCHES, OR CROSS DRAINS SHALL BE REPAIRED IMMEDIATELY.

2  
DETOS

CROWNED ROADWAY



Source: Adapted from Pa DEP, E&S Pollution Control Manual, March 2012.  
TYPICAL INSLOPED ROADWAY WITH CULVERT DETAIL  
SCALE: N.T.S.

INSLOPED ROADWAY NOTES:

CUT AND FILL SLOPES SHALL BE STABILIZED IMMEDIATELY UPON COMPLETION OF ROADWAY GRADING. THESE AREAS SHALL BE BLANKETED WHEREVER THEY ARE LOCATED WITH 50 FEET OF A SURFACE WATER OR WITHIN 100 FEET OF AN HQ OR EV SURFACE WATER OR WHERE A SUITABLE VEGETATIVE FILTER STRIP DOES NOT EXIST.

A TOP DRESSING COMPOSED OF HARD, DURABLE STONE SHALL BE PROVIDED FOR SOILS HAVING LOW STRENGTH.

ROADSIDE DITCHES SHALL BE PROVIDED WITH ADEQUATE PROTECTIVE LINING.

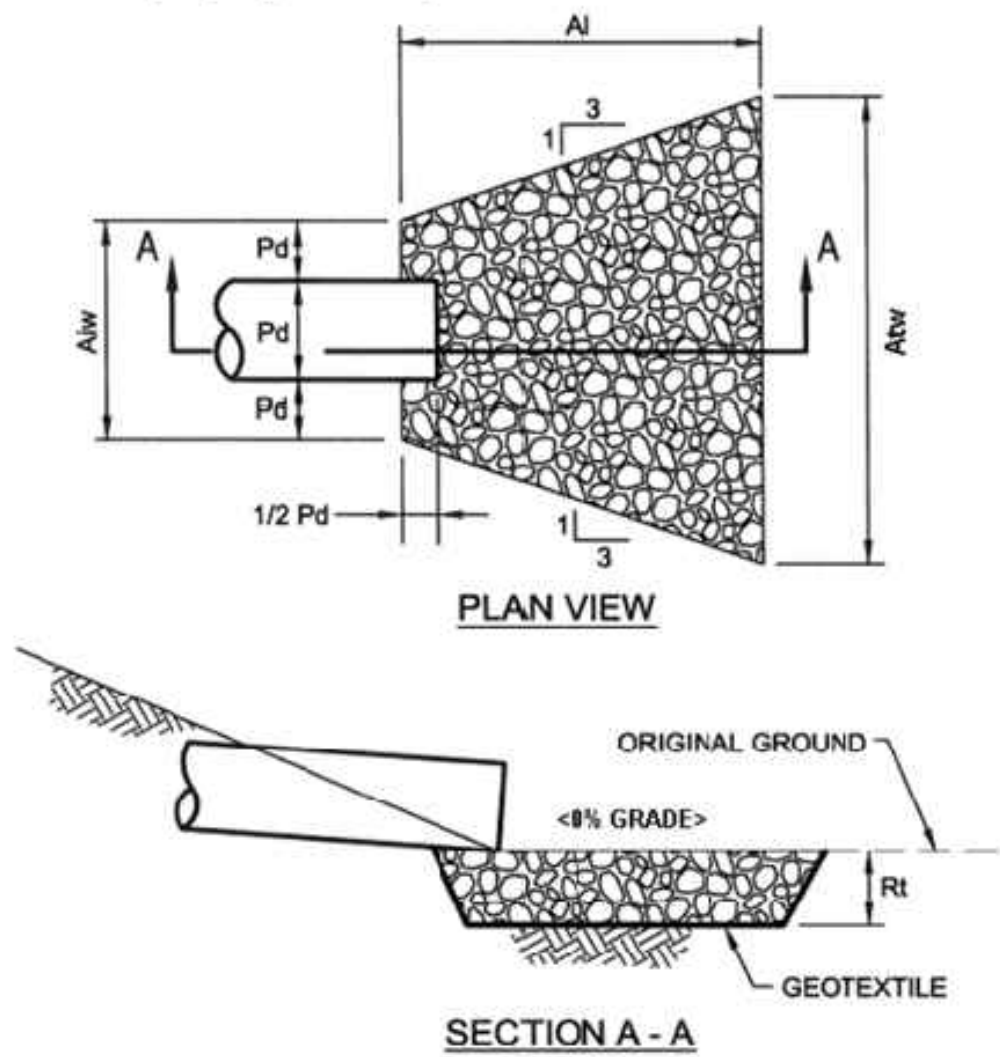
ADEQUATELY SIZED CULVERTS OR OTHER SUITABLE CROSS DRAINS SHALL BE PROVIDED AT ALL SEEPS, SPRINGS, AND DRAINAGE COURSES. DITCH RELIEF CULVERTS OR TURNOUTS SHALL BE PROVIDED AT THE INTERVALS INDICATED ON THIS SHEET FOR THE ROADSIDE DITCHES. TRANSITION MAT, OR RIP RAP OUTLET PROTECTION TO BE SIZED ACCORDING TO ANTICIPATED DISCHARGE VELOCITY.

ROADWAY WILL BE INSPECTED ANNUALLY. DAMAGED ROADWAYS, DITCHES, OR CROSS DRAINS SHALL BE REPAIRED IMMEDIATELY.

3  
DETOS

INSLOPED ROADWAY

MODIFIED CONSTRUCTION DETAIL # 9-2  
Riprap Apron at Pipe Outlet without Flared Endwall



Adapted from USDOT, FHA HEC-14

NOTE: This table is intentionally blank and should be filled in by the plan preparer. \*

| OUTLET NO. | PIPE DIA Pd (IN) | RIPRAP     |                | APRON          |                        | TERMINAL WIDTH Atw (FT) |
|------------|------------------|------------|----------------|----------------|------------------------|-------------------------|
|            |                  | SIZE (R- ) | THICK. Rt (IN) | LENGTH Al (FT) | INITIAL WIDTH Alw (FT) |                         |
| A-1        | 18"              | R-3        | 9"             | 10'            | 4.5'                   | 8.5'                    |

All aprons shall be constructed to the dimensions shown. Terminal widths shall be adjusted as necessary to match receiving channels.

All aprons shall be inspected at least weekly and after each runoff event. Displaced riprap within the apron shall be replaced immediately. \*\*

Extend riprap on back side of apron to at least 1/2 depth of pipe on both sides to prevent scour around the pipe.

\* Table completed for permitting as applicable.

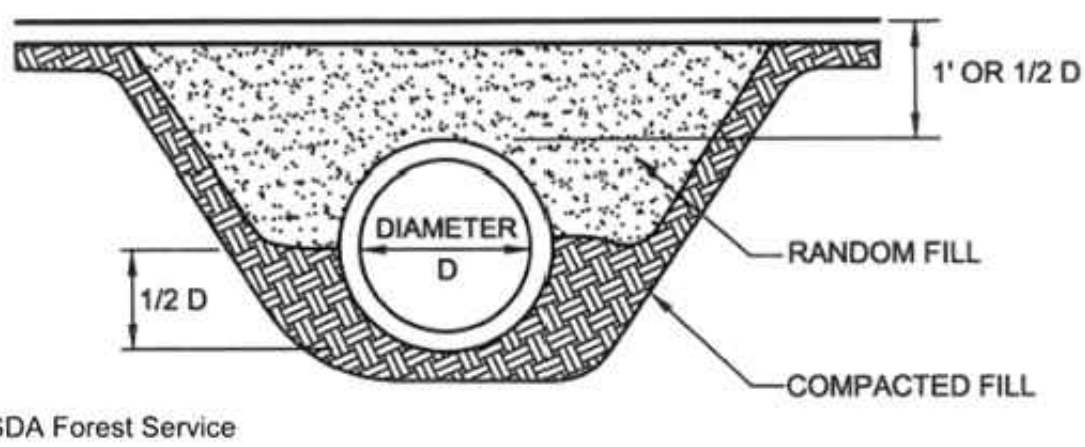
\*\* For permanent installations inspections shall be performed periodically. Maintenance shall be performed immediately upon inspection.

Source: Adapted from PA DEP, E&S Pollution Control Manual, March 2012

2  
DETOS

RIPRAP APRON

MODIFIED CONSTRUCTION DETAIL #3-10  
Ditch Relief Culvert



USDA Forest Service

DITCH RELIEF CULVERT NOTES:

1. MINIMUM DIAMETER FOR ANY CULVERT IS 18"; OTHERWISE CULVERT SHALL BE SIZED FOR ANTICIPATED PEAK FLOW. PLACE CULVERT SO BOTTOM IS AT SAME LEVEL AS BOTTOM OF DITCH OR ADJOINING SLOPE. CULVERTS SHALL BE PLACED WITH A SLOPE OF 2 TO 4%. LOWER END SHALL BE AT LEAST 2" BELOW UPPER END.

2. EXTEND CULVERT 12" BEYOND BASE OF ROAD FILL ON BOTH SIDES. FIRMLY PACK FILL AROUND CULVERT, ESPECIALLY THE BOTTOM HALF. MINIMUM LENGTH OF CULVERT IS 45'.

3. PROVIDE SUITABLE OUTLET PROTECTION\* AND, WHERE APPROPRIATE, INLET PROTECTION. CULVERTS WILL BE INSPECTED ANNUALLY. ANY BUILD UP WILL BE REMOVED UPON DISCOVERY AND ADDITIONAL MAINTENANCE WILL BE PERFORMED AS NEEDED.

4. THIS DETAIL MAY BE USED FOR DITCH RELIEF CULVERTS AND FOR CROSSINGS OF ROADSIDE DITCHES. IT IS NOT APPROPRIATE FOR STREAM CROSSINGS.

5. CULVERTS WILL BE INSPECTED ANNUALLY. ANY BUILD UP WILL BE REMOVED UPON DISCOVERY AND ADDITIONAL MAINTENANCE WILL BE PERFORMED AS NEEDED.

\*FOR STEEP SLOPE (≥2H:1V) OUTFALLS, A MINIMUM 20 FOOT LONG R-5 APRON IS RECOMMENDED FOR TEMPORARY ACCESS ROADS WHERE THE RECOMMENDED CULVERT SPACING IS USED. FOR PERMANENT ACCESS ROADS, A MINIMUM R-6 ROCK SIZE IS RECOMMENDED

Source: Adapted from PA DEP, E&S Pollution Control Manual, March 2012.

TABLE 3.3 - Sizing and Spacing of Ditch Relief Culverts for Temporary Access Roads

| Road Grade (%) | Culvert Spacing* (ft) | Length of Upslope Drainage (ft) |           |           |           |      |
|----------------|-----------------------|---------------------------------|-----------|-----------|-----------|------|
|                |                       | < 300                           | 300 - 400 | 400 - 500 | 500 - 600 | >600 |
|                |                       | Minimum Culvert Size (in)       |           |           |           |      |
| 2              | 300                   | 12                              | 15        | 15        | 15        | 18   |
| 3              | 235                   | 12                              | 15        | 15        | 15        | 18   |
| 4              | 200                   | 12                              | 15        | 15        | 15        | 18   |
| 5              | 180                   | 12                              | 12        | 15        | 15        | 15   |
| 6              | 165                   | 12                              | 12        | 12        | 15        | 15   |
| 7              | 155                   | 12                              | 12        | 12        | 12        | 15   |
| 8              | 150                   | 12                              | 12        | 12        | 12        | 15   |
| 9              | 145                   | 12                              | 12        | 12        | 12        | 15   |
| 10             | 140                   | 12                              | 12        | 12        | 12        | 15   |
| 12             | 135                   | 12                              | 12        | 12        | 12        | 15   |

Adapted from Maryland DOE

\*Culvert spacing may be adjusted slightly to take advantage of natural drainage courses.

Source: PaDEP, E&S Pollution Control Manual, March 2012

TABLE 3.4 - Recommended Maximum Spacing of Ditch Relief Culverts (18" dia. CMP)  
For Permanent Access Roads

| Road Grade Percent | Soil Type in Ditch                          |                               |  |  |  |
|--------------------|---|-------------------------------|--|--|--|
|                    | Gravels, Sandy Gravels, Aggregate Surfacing | Silty Gravels, Clayey Gravels | Plastic and Nonplastic Inorganic Clays | Inorganic Silts, Silty or Clayey Sands | Sands, Silty Sands, and Gravelly Sands |
|                    | Culvert Spacing Feet*                       |                               |  |  |  |
| 2                  | 390   | 315                           | 245                                    | 170                                    | 95                                     |
| 4                  | 335   | 275                           | 210                                    | 145                                    | 85                                     |
| 6                  | 285   | 230                           | 180                                    | 125                                    | 75                                     |
| 8                  | 240   | 195                           | 150                                    | 105                                    | 65                                     |
| 10                 | 200   | 160                           | 125                                    | 90                                     | 55                                     |
| 12                 | 160   | 130                           | 105                                    | 75                                     | 45                                     |
| 14                 | 135   | 110                           | 85                                     | 60                                     | 35                                     |

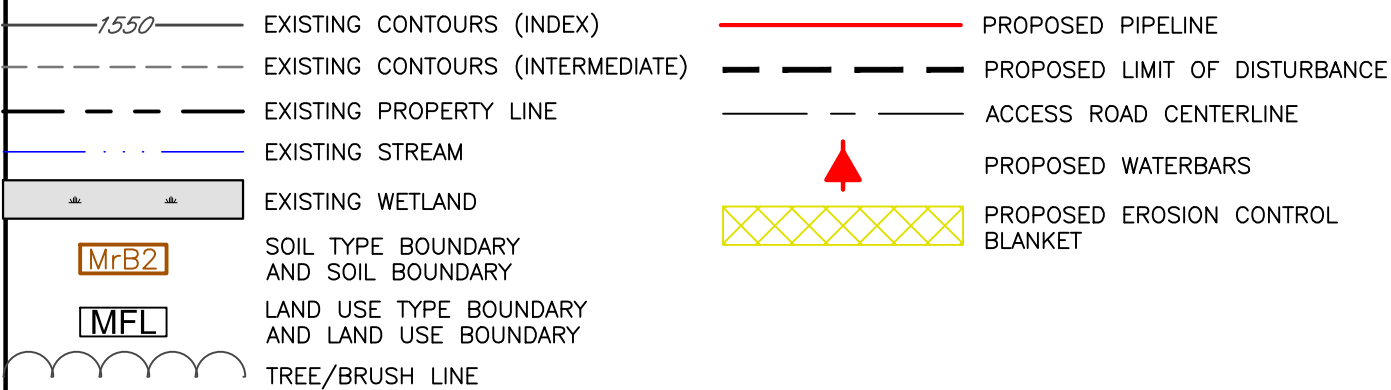
Adapted from USDA Forest Service

\*Culvert spacing may be adjusted slightly to take advantage of natural drainage courses.

Source: PaDEP, E&S Pollution Control Manual, March 2012

4  
DETOS

DITCH RELIEF CULVERT



GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
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FALCON ETHANE PIPELINE SYSTEM  
SHELL PIPELINE COMPANY LP

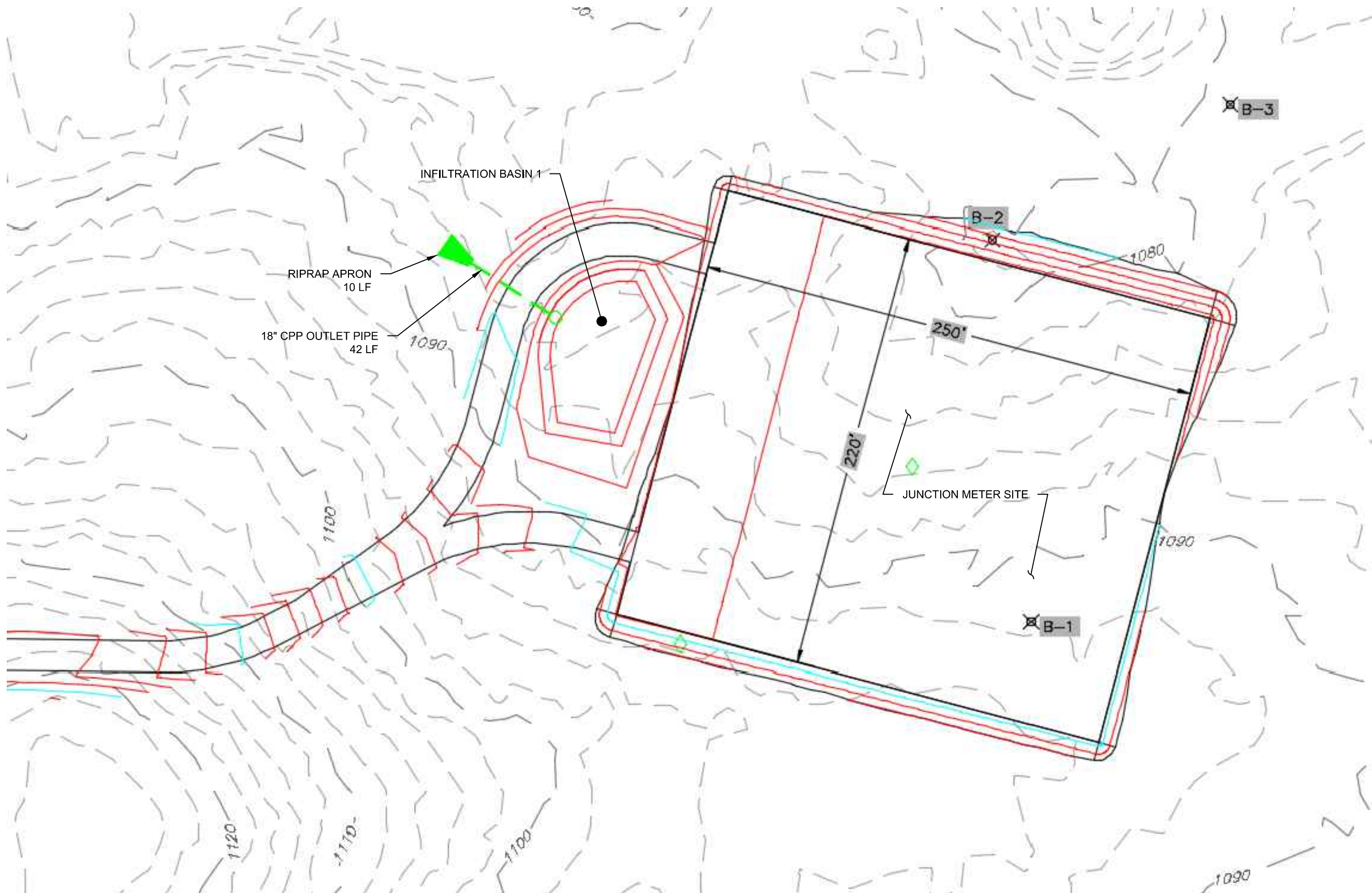
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| SITE RESTORATION PLAN<br>DET03 |  | WASHINGTON, ALLEGHENY, AND BEAVER CO. PENNSYLVANIA |  |
|--------------------------------|--|--|--|
| SCALE: NTS                     |  | DATE: 09/14/17                                     |  |
| DRAWN: TLM                     |  | SPLC-GOM-AE-SD120097                               |  |
| REVISION: 2                    |  |  |  |



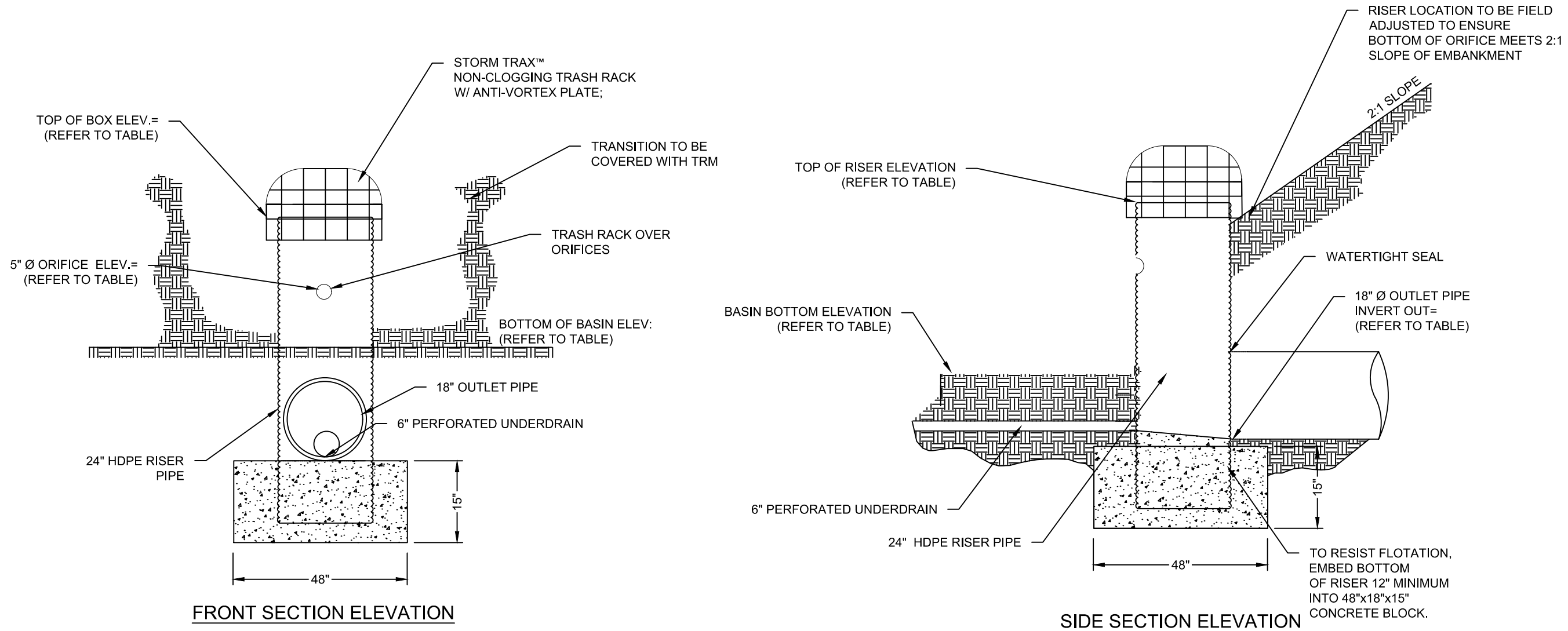
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 Created by: ALEXANDER CURTICE 7/31/2018 8:42 AM  
 Last Potted: 2018-07-31 7/31/2018 8:53 AM



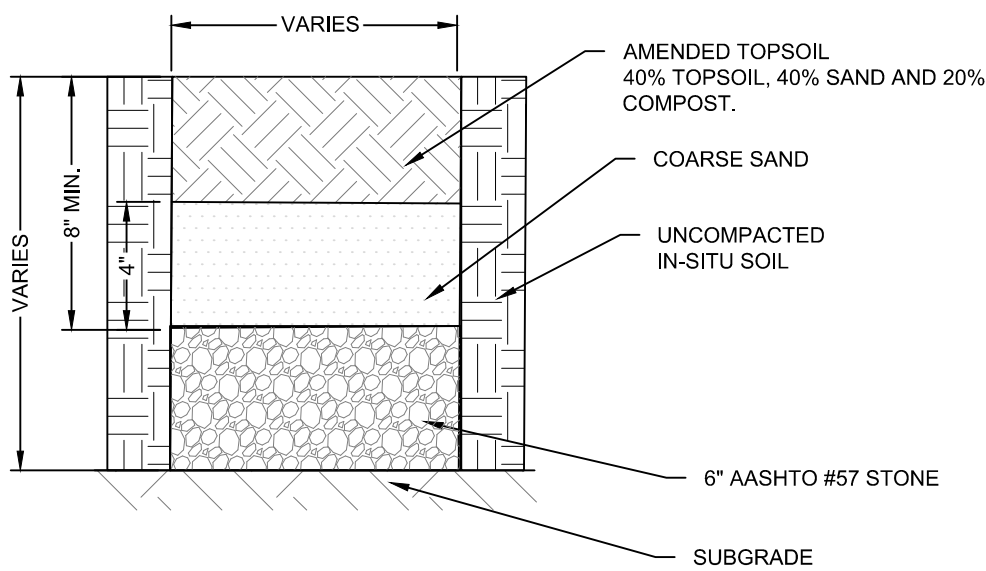


| BASIN NO. | TOP OF BERM ELEVATION | EMERGENCY SPILLWAY ELEVATION | EMERGENCY SPILLWAY WIDTH (LF) | BASIN BOTTOM ELEVATION | OUTFALL INV. ELEVATION | TOP OF RISER ELEVATION | RISER ORIFICE SIZE/ELEVATION (IN) |
|-----------|-----------------------|------------------------------|-------------------------------|------------------------|------------------------|------------------------|-----------------------------------|
| 1         | 1088.50               | 1088.00                      | 30                            | 1084.00                | 1725.50                | 1087.50                | 24                                |

INFILTRATION BASIN 1 DETAIL  
N.T.S.



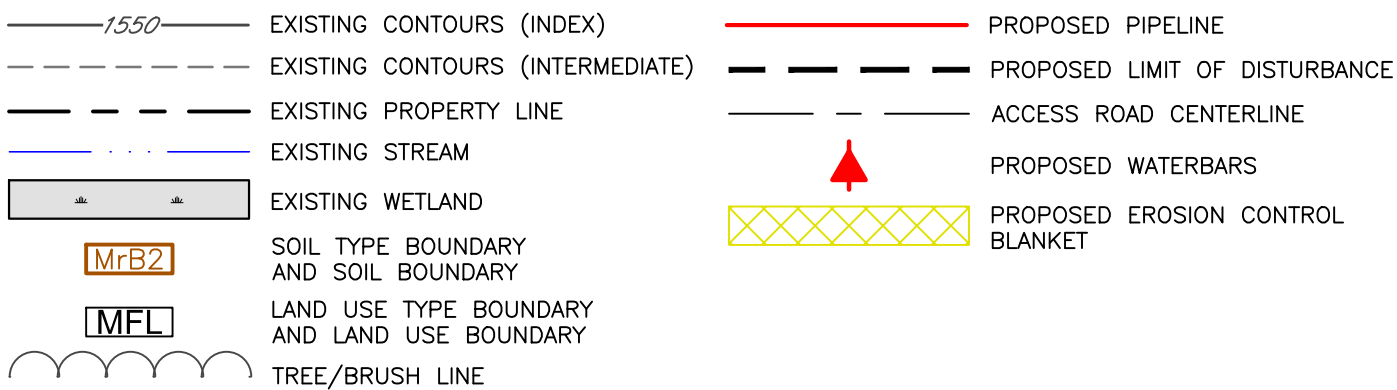
INFILTRATION BASIN 1 OUTLET STRUCTURE  
N.T.S.



AMENDED SOILS CROSS SECTION

| AMENDED SOIL PARAMETERS                                 |                            |  |  |
|---|----------------------------|--|--|
| SOIL TEXTURE  | IDEAL BULK DENSITIES g/cm³ | BULK DENSITIES THAT MAY AFFECT ROOT GROWTH g/cm³ | BULK DENSITIES THAT RESTRICT ROOT GROWTH g/cm³ |
| SANDS, LOAMY SANDS                                      | < 1.60                     | 1.69   | 1.80   |
| SANDY LOAMS, LOAMS                                      | < 1.40                     | 1.63   | 1.80   |
| SANDY CLAY LOAMS, LOAMS, CLAY LOAMS                     | < 1.40                     | 1.60   | 1.75   |
| SILT, SILT LOAMS  | < 1.30                     | 1.60   | 1.75   |
| SILT LOAMS, SILTY CLAY LOAMS                            | < 1.10                     | 1.55   | 1.65   |
| SANDY CLAYS, SILTY CLAYS, SOME CLAY LOAMS (35-45% CLAY) | < 1.10                     | 1.49   | 1.58   |
| CLAYS (> 45% CLAY)                                      | < 1.10                     | 1.39   | 1.47   |

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| FALCON ETHANE PIPELINE SYSTEM   |     | SITE RESTORATION PLAN                              |            |
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| SHELL PIPELINE COMPANY LP   |     | DET05  |            |
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|   |     | MULTIPLE TOWNSHIPS                                 |            |
| SCALE   | NTS | DATE   | 09/14/17   |
| DRAWN   | TLM |  |            |
| SPLC-GOM-AE-SD120099  |     |  | REVISION 2 |



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**SURFACE WATER CLASSIFICATION**

AECOM completed a wetland and watercourse investigation of the project area. A full report containing the findings of this investigation is included in the corresponding PA Chapter 105 permit application. If the full wetland and watercourse report is needed for ESCGP-2 review, please contact AECOM.

The Project is located in several watersheds across the three counties. See below for a summary. The receiving waters are designated as Chapter 93 designations: Example: Warm Water Fishes (WWF), Cold Water Fishes (CWF, Trout Stocked Fishes, and High Quality (HQ), under PA Code 25 Chapter 93.

Washington County: Millers Run (WWF); Robinson Run (WWF); Little Raccoon Creek (WWF); Westland Run (WWF); Potato Garden Run (WWF); and Chartiers Run (WWF)  
Allegheny County: Millers Run (WWF); Raredon Run (WWF); Little Raccoon Creek (WWF); Potato Garden Run (WWF); and Raccoon Creek (WWF)  
Beaver County: Haden Run (WWF); Raredon Run (WWF); Raccoon Creek (WWF); Gurns (WWF); Frames Run (WWF); Fishpot Run (WWF); Peggs Run (WWF) Sixmile Run (WWF); Service Creek, Source to J.C. Bacon Dam (HQ-CWF); North Fork Tomlinson Creek (WWF); and Mill Creek (WWF);

**BMP DESCRIPTION NARRATIVE**

The post-construction runoff and peak rates will be approximately the same as the existing (pre\_construction) runoff and peak rates. The construction will occur so that the post-construction contours will be approximately the same as the pre\_construction contours, leaving existing drainage patterns intact. The contours will be maintained after the construction is completed. Natural measures described below will be used to promote pollution reduction.

The proposed Project ROW will be scarified, fertilized, seeded, limed, and mulched upon completion of the earth moving activities according to the specifications listed in the following guidelines. This revegetation will be achieved via seed and nutrient application at optimum moisture conditions to promote the development of a minimum uniform 70 percent perennial vegetative cover that will hold the soil in place while controlling and filtering the sediment.

The structural BMPs to be used for this Project will be infiltration basin downslope of the permanent Junction Meter Site in Raccoon Township, Beaver County. The graveled pad will be graded to direct stormwater into the BMP. Please see Appendix A for a summary of calculations performed to design the permanent access road BMPs.

Stormwater runoff will also be mitigated by vegetation inside the LOD once it has established a minimum uniform 70 percent perennial vegetative cover.

**PERMANENT VEGETATIVE PRACTICES**

Permanent Vegetative Stabilization. Immediately upon completion of final grading, disturbed areas will receive topsoil and permanent vegetative stabilization, defined as a minimum uniform 70 percent perennial vegetative cover. The disturbed areas will be permanently stabilized in accordance with Table 3. For disturbed areas, the topsoil will be segregated and replaced following construction. The vegetative restoration method will be determined with consultation with the landowner in cultivated or rotated cropland. Please note specialized seed mix for Northern Harrier and Short Eared Owl to meet restoration recommendations from the Pennsylvania Game Commission.

Mulching. The purpose of mulch is to reduce runoff and erosion, prevent surface compaction or crusting, conserve moisture, aid in establishing plant cover, and control weeds. Mulch shall be applied on any area subject to erosion, or which has unfavorable conditions for plant establishment and growth. The practice may be used alone or in conjunction with other structural and vegetative conservation practices, such as waterways, ponds, sediment traps or critical area planting. On sediment producing areas where the period of exposure is less than 2 months, mulch materials shall be applied according to the following guidelines:

- Straw mulch shall be applied at the rate of 3 tons per acre. Chemically treated or salted straw is not acceptable as mulch.
- Straw mulch shall be anchored immediately after application by at least 1 of the following methods.
  - "Crimped" into the soil using tractor drawn equipment (straight bladed couler or similar). This method is limited to slopes no steeper than 3:1. Machinery should be operated on the contour. (Crimping of hay or straw by running it over with tracked machinery is not recommended)
  - Asphalt, either emulsified or cut-back, containing no solvents or other diluting agents toxic to plant or animal life, uniformly applied at the rate of 31 gallons per 1,000 square feet.
  - Synthetic binders (chemical binders) may be used as recommended by the manufacturer to anchor mulch provided sufficient documentation is provided to show that it is non-toxic to native plant and animal species.
  - Lightweight plastic, fiber, or paper nets may be stapled over the mulch according to the manufacturer's recommendations.

Mulched areas shall be checked weekly and after each runoff event (e.g., rain, snowmelt, etc.) for damage until the desired purpose of the mulching is achieved. Damaged portions of the mulch or tie\_down material shall be repaired upon discovery.

**Fertilizing Practices**

- Fertilization Rates: For permanent stabilization apply 10-20-20 at 1,000 pounds per acre and for temporary stabilization apply 10-10-10 at 500 pounds per acre, unless the soil test determines that the rate can be less than these minimums. Soil testing will occur on each property and land type to obtain site specific fertilization rates. Results will be provided to construction contractors and environmental inspectors at time of restoration.
- Fertilizer and lime are not to be used in stream or wetland areas.

**BMP INSTALLATION SEQUENCE NARRATIVE**

**GENERAL**

After the trench has been backfilled and earth disturbance has ceased, the site shall immediately have topsoil restored, replaced, amended, seeded, mulched, or otherwise permanently stabilized and protected from accelerated erosion. The recommended application rates for permanent seeding and mulching are provided in Table 2. Temporary BMPs will be implemented and maintained until a minimum uniform 70 percent perennial vegetative cover is achieved.

- Install temporary sediment and erosion control BMPs as per the Project drawings and the Pennsylvania Erosion and Sediment Pollution Control Program Manual.
- Complete site grading and stabilize within the limit of disturbance except where infiltration basin will be constructed; make every effort to minimize berm footprint and necessary zone of disturbance (including both removal of existing vegetation and disturbance of empty soil) in order to maximize infiltration
- Lightly scarify the soil in the area of the proposed berm before delivering soil to site.
- Temporary seeding and mulching shall be required on all freshly graded areas immediately following earthmoving procedures. (see the standard seeding table in the detail drawings for seeding mixtures)
- Bring in fill material to make up the major portion of the berm. Soil should be added in 8-inch lifts. The slope and shape of the berm should be graded out as soil is added.
- The infiltration area of the proposed berm will be over excavated by a minimum 24 inches to the depth of the clay loam layer and the existing soil replaced with a minimum of 6 inches of filter media and a minimum of 6 inches of high quality top soil. The berm filter media shall consist of 20 to 45 percent sand, 15 to 55 percent silt, 27 to 40 percent clay and 1 to 5 percent organics material. The sand and soil fines of the filter media shall be from alluvial deposits and not derived from shot or crushed rock. Biodegradable netting may be used to prevent wind losses until several wet-dry cycles have occurred. Fill material from within the Project area may be utilized if the above criteria are met.
- Protect the surface ponding area at the base of the basin from compaction. Avoid running heavy equipment over the infiltration area at the base of the berms.
- Basin media shall be spread out using equipment from the side of the berm to minimize compaction. If compaction of this area does occur, scarify soil to a depth of at least 8 inches.
- Complete final grading of the basin after the top layer of soil is added. Tamp soil down lightly and smooth sides of the berm. The crest and base of the berm should be at level grade.
- Basin side slopes should not exceed 2:1. Erosion Control Blanket (ECB) shall be immediately installed on the berm slopes to prevent erosion.
- Install permanent basin planting material and seeding similar to existing vegetation. (see the standard seeding table in the detail drawings for seeding mixtures)
- The basin shall be maintained during and after permanent stabilization as described in Section 11.2 and on the PCSM drawings.

**LONG-TERM OPERATION AND MAINTENANCE SCHEDULE**

**MONITORING**

SLPC's personnel will perform visual inspections on an annual basis after permit closure, by qualified personnel, trained and experienced in PCSM, to ascertain that the BMPs are functioning and operating effectively to ensure the pipeline is causing no undue burden on the property owner or adjacent owners. Any deficiencies will be repaired within 10 business days of discovery.

The post-construction stormwater management facilities (i.e., vegetated filter strips) proposed for this project will be protected under a Surface Site and Right-of-Way and Road Easement for the life of the facility. Williams obtains these easements from landowners and records each easement at the county recorder of deeds office with Instrument Numbers.

The recorded easement restricts the use of post-construction stormwater management facilities (i.e., vegetated filter strips) and includes a Long Term Maintenance Plan (LTMP) that outlines maintenance procedures intended to protect and ensure the continued operation of these BMPs. The LTMPs are prepared in accordance with ESCGP-2, NOI, and PADEP's Stormwater Management Manual (2006). The recorded instruments and easements are then submitted to PADEP upon submission of the Notice of Termination (NOT).

**MAINTENANCE BMPs**

Areas not identified as having maintained permanent stabilization (minimum uniform 70 percent perennial vegetative cover) will require action to be taken, such as reseeded, removal of excessive mulch, or other stabilization methods. These areas shall be monitored until permanent stabilization has become established. Revegetated areas will be maintained over the life of the project, or until a uniform 70% cover regrowth been has been achieved.

If E&S BMPs are found to be inoperative or ineffective during an inspection, the PaDEP should be contacted within 24 hours, followed by the submission of a written noncompliance report to the PaDEP within 5 days of the initial inspection.

For situations where the potential magnitude or scale of the situation (i.e., post\_tropical storm or flooding events) involves more substantial corrective measures, temporary BMPs will be installed within 72 hours with permanent corrective measures to be installed following this time period as may be necessary. If concentrated flow areas form due to any storm event and any area becomes unstable, the area will be stabilized by installing rock filters or additional BMPs such as riprap aprons in the concentrated flow areas. Any required repairs or maintenance shall be made within 72 hours.

- Waterbars are to be inspected weekly and after runoff events. Accumulated sediment shall be removed from waterbars. Worn and ineffective waterbars shall be replaced as soon as practicable, but no more than 72 hours after discovering the damage.
- When encountering blanket movement or a wash-out (i.e., visible rilling/gullies) of erosion control blankets and hydraulically applied erosion control blankets used on slopes, these areas will be regraded, reseeded, and mulched per manufacturer's specifications within 4 calendar days of inspection.
- Discharge locations shall be inspected to ascertain effectiveness of controls. Repair, maintenance, and additional control measures will be implemented as soon as practicable, but no more than 72 hours after discovering the damage.
- The filter strip will be inspected weekly and after runoff events. The area will be inspected for sediment buildup, debris, vegetation density, and erosion and compaction. Maintenance will be performed as needed to correct any deficiencies found during inspection. Vegetative filter strip shall be maintained to its full dimension and infiltration capacity for the life of the project requiring the PCSM BMP.
- All riprap aprons will be inspected at least weekly and after each runoff event. Displaced riprap within the apron shall be replaced immediately.
- Culverts will be consistently maintained and inspected for any build-up or damage. Replace any damaged culvert pipe and remove any debris within 8 hours of discovery. Damaged culvert pipe includes: crushed ends, out of round pipe, separation, cracks, and voids in the pipe.
- Transition mats are to be inspected periodically. Failure of a transition mat has occurred when a rill forms under the mat. Wherever that occurs, the mat should be removed, the rill graded, and a higher form of protection provided.
- Vegetated Roadside Ditches are to be inspected periodically for sediment, build-up, erosion debris, and damage due to traffic. Ditches should be maintained to ensure that the specified design dimensions and vegetative lining are available at all times. A ditch should be cleaned whenever total depth is reduced by 25 percent at any location. No more than one-third of the shoot (grass leaf) shall be removed in any mowing. Grass height shall be maintained between 2 and 3 inches unless otherwise specified. Excess vegetation shall be removed from permanent channels to ensure sufficient channel capacity.
- Tree plantings in riparian buffer areas will be monitored for growth status for a period of at least five years, with bi-annual monitoring reports submitted to PADEP the first two years post-construction and annually for three years thereafter.
- In order to facilitate restoration of native vegetation, grading and stump removal conducted during construction shall be limited to the trenchline through wetland and riparian areas, except as required to create a safe and level workspace.
- Routine vegetation mowing or clearing of the permanent right-of-way in wetlands should not exceed a width of 50 feet, centered on the pipeline. To facilitate periodic inspection and maintenance activities, a maximum 75-foot-wide corridor centered on the pipeline may be cleared at a frequency necessary to maintain the 50-foot corridor in an herbaceous state. In addition, trees within 25 feet of the pipeline with roots that could compromise the integrity of pipeline coating may be selectively cut and removed from the permanent right-of-way. The remaining portion of the right-of-way shall be allowed to permanently re-vegetate with native plant species. Do not conduct any routine vegetation mowing or clearing in wetlands or riparian buffers located between HDD entry and exit points.

**CRITICAL STAGES FOR POST-CONSTRUCTION COMPLIANCE**

PCSM BMPs are proposed to mitigate the minimal increases in stormwater runoff and rate associated with the permanent gravel access road and Meter Site. The pipeline portion of the project will be restored to pre\_construction contours and revegetated to a uniform perennial 70 percent vegetative cover.

Infiltration Basin is proposed as the PCSM BMP and will not be installed until a uniform 70 percent vegetative cover has been obtained in areas tributary to the BMP. The basin will be maintained to their full dimension and infiltration capacity for the life of the project. The PE or designee trained and experienced in post-construction stormwater management will perform a site visit to review the area of the proposed PCSM BMP.

The PE or designee trained and experienced in post-construction stormwater management will perform a site visit to review the area of the proposed PCSM BMP.

The licensed professional or designee shall be present onsite and be responsible during implementation of critical stages of the approved PCSM Plan. The licensed professional or designee shall document (ie notes, photos) pre-PCSM BMP site conditions, the proper installation and implementation of each PCSM BMP (ie site preparation, construction etc.) and stabilization of each PCSM BMP to ensure that each PCSM BMP will operate as designed. In the event that a PCSM BMP cannot be implemented as authorized in the permit, the following steps will be taken:

- The licensed professional or designee onsite will inform the Compliance Specialist who will then inform the Permit Manager.
- The Permit Manager will work with the Engineer to determine a revised plan for the location and/or design of the PCSM BMP.
- The Permit Manager will submit a Minor Modification to the Conservation District.

**MATERIAL RECYCLING AND DISPOSAL**

**MATERIAL WASTE HANDLING AND RECYCLING**

Excess material brought into the site areas to facilitate construction access will be completely removed prior to rough grading and final surface stabilization. Expected construction wastes will consist of packaging material and sediment cleaned from BMPs. Packaging from the materials brought on site will be disposed of by a licensed hauler. Sediment removed from BMPs will either be spread in a protected area to dry and then recycled as fill material or disposed of off-site. Garbage must be properly disposed of at a permitted facility. The scrap material must be removed from the site and disposed of or recycled at a properly licensed/permitted facility. The Contractor shall be responsible to assure that all materials are handled and disposed of in accordance with applicable laws, rules, and regulations, including, but not limited to, those issued by the Environmental Protection Agency, PaDEP, Local County Conservation District, and Occupational Safety and Health Administration (OSHA).

Off\_site spoil and/or borrow sites greater than 1-acre must be operated under a current NPDES Permit.

A Preparedness, Prevention, and Contingency (PPC) Plan for Construction Activities has been created for this Project. See Appendix A of the NOI application package.

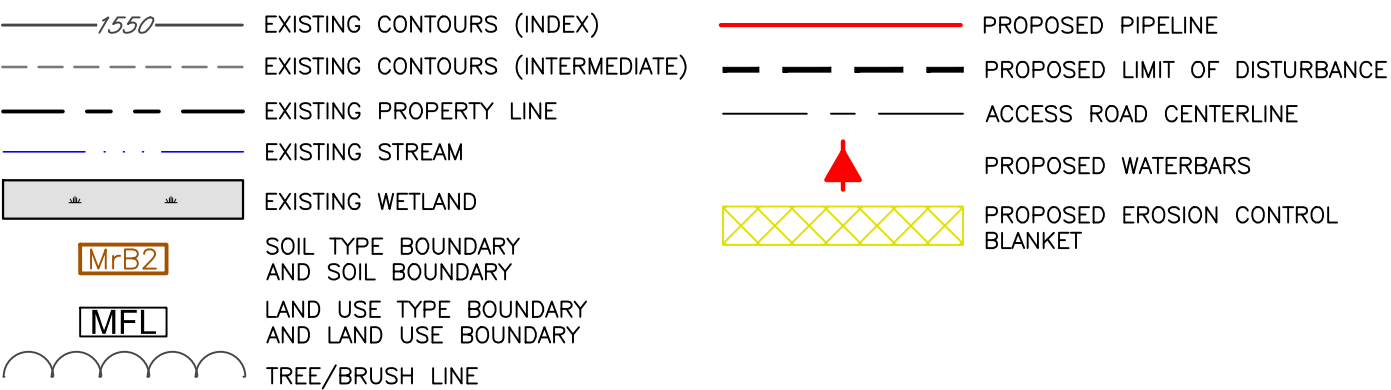
**THERMAL IMPACTS**

Thermal impacts associated with this Project will be avoided to the maximum extent possible and minimal permanent changes in land cover are being proposed. The following provisions related to thermal impacts are included in the E&S Drawings:

- Use of BMPs to allow runoff from the Project area to be reintroduced as sheet flow.
- Immediate revegetation (or mulch in non-germinating season) when earth disturbing activities are complete and minimal disturbance within 50 feet of streams.
- Limit removal of vegetation, especially tree cover, to only that necessary for construction.
- Minimizing impervious surfaces.
- Maximizing the use of vegetated areas to cool runoff prior to discharge.
- Maintaining canopy cover that limit ground surface exposure to direct sunlight.
- Use of conventional boring instead of open cuts for utility crossings will limit vegetation disturbance and exposure of the ground surface to sunlight.
- Use of horizontal directional drilling (HDD) instead of open cuts for utility crossings will limit vegetation disturbance and exposure of the ground surface to sunlight.
- The Project will have 1 permanent access road and graveled meter site. Runoff from the permanent gravel areas will be collected as part of the Post-Construction Stormwater Management (PCSM) Plan in Section 6 of the ESCGP-2 Application Binder. Runoff will be routed to Stormwater BMP to reduce potential thermal impacts downslope of the Project site.

**UPDATES**

The PCSM/SR Plan will be updated as necessary to remain consistent with applicable changes to the protection of surface water resources in E&S site plans or site permits, or stormwater management site plans or site permits approved by state or local officials for whom Williams receives written notice.



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| FALCON ETHANE PIPELINE SYSTEM   |  | SITE RESTORATION PLAN        |                  |
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| WASHINGTON, ALLEGHENY, AND BEAVER CO.   |  | PENNSYLVANIA                 |                  |
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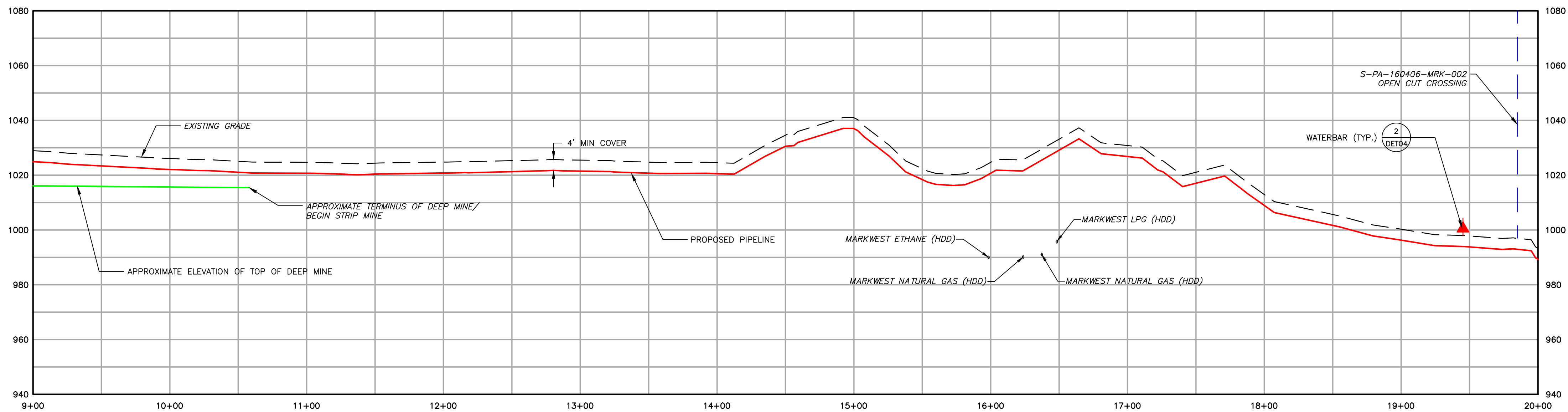






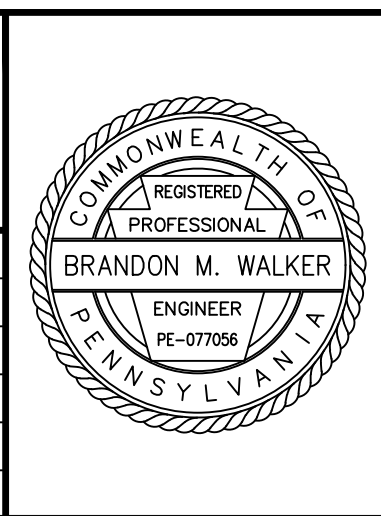


|                                     |       |       |       |       |       |       |       |        |       |
|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|--------|-------|
| LAND USE                            | FIELD | WOODS | FIELD | WOODS | FIELD | WOODS | FIELD | STREAM | FIELD |
| MIN DEPTH OF COVER (TO TOP OF PIPE) |       | 4'    |       |       |       |       |       | 5'     |       |



|       |  |                                  |
|-------|--|----------------------------------|
| 1,550 | EXISTING CONTOURS (INDEX)                    | PROPOSED PIPELINE                |
| ---   | EXISTING CONTOURS (INTERMEDIATE)             | PROPOSED LIMIT OF DISTURBANCE    |
| ---   | EXISTING PROPERTY LINE                       | ACCESS ROAD CENTERLINE           |
| ---   | EXISTING STREAM                              | PROPOSED WATERBAR                |
| ---   | EXISTING WETLAND                             | PROPOSED EROSION CONTROL BLANKET |
| ---   | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         | WATERSHED BOUNDARY               |
| ---   | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |                                  |
| ---   | TREE/BRUSH LINE                              |                                  |

| GENERAL NOTES: |          |                            |                         |     |
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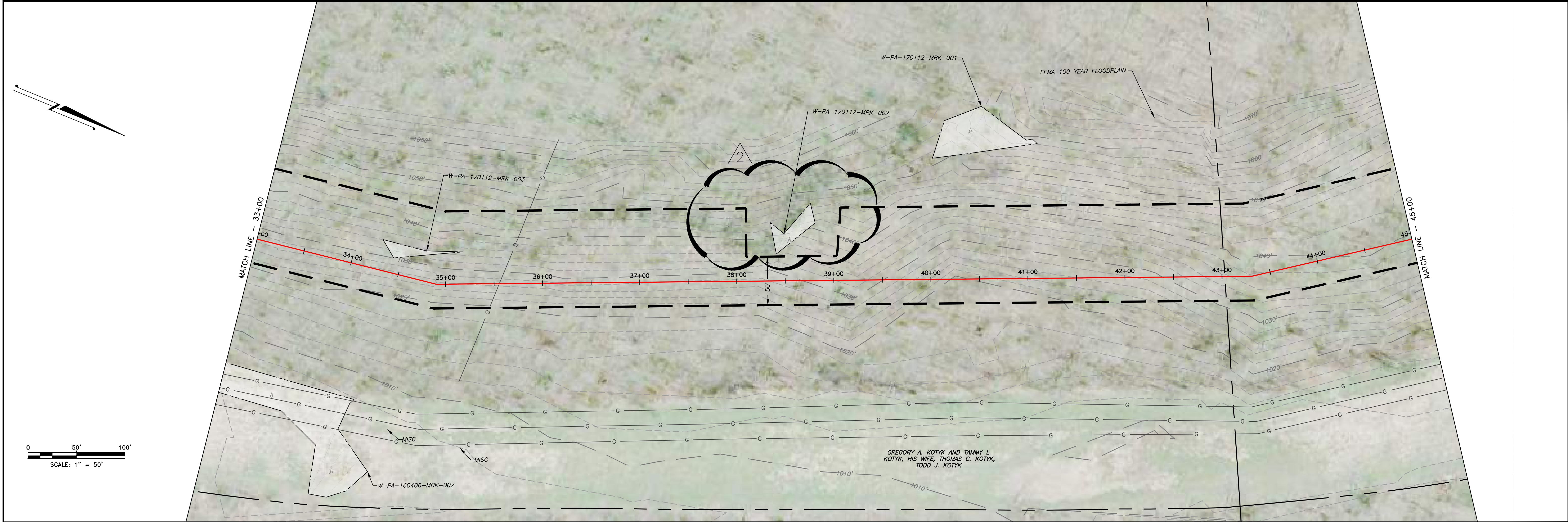
| FALCON ETHANE PIPELINE SYSTEM   |        | SITE RESTORATION PLAN                                   |            |
|---|--------|---|------------|
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| SCALE   | 1"=50' | DATE  | 09/14/17   |
| DRAWN   | ARC    | SPLC-GOM-AE-SD119876                                    | REVISION 2 |

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Last saved by: ALEXANDER CURTICE (7/20/2018 1:33 PM) Last Plotted: 2018-07-30 (7/20/2018 9:40 PM)

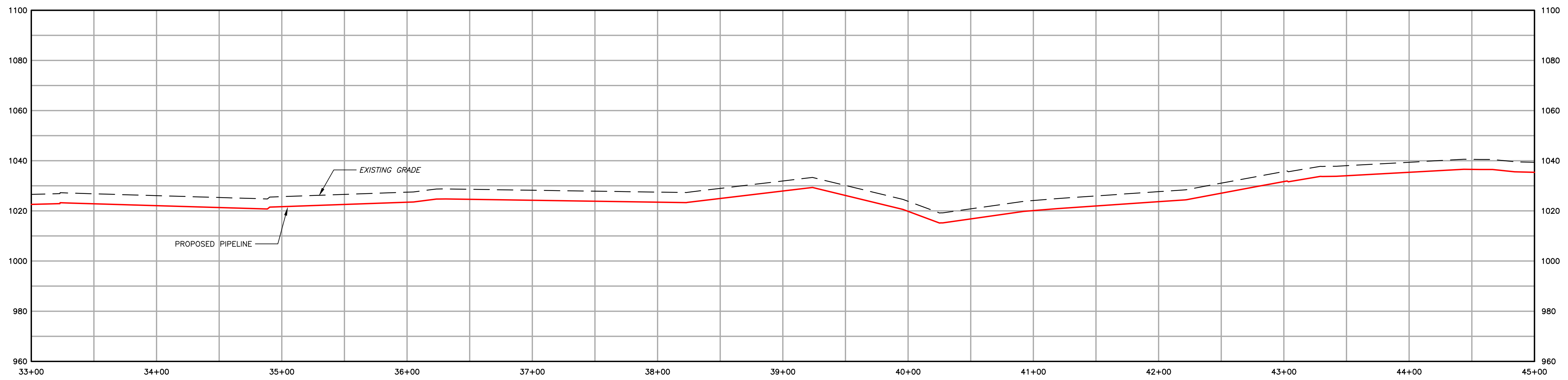






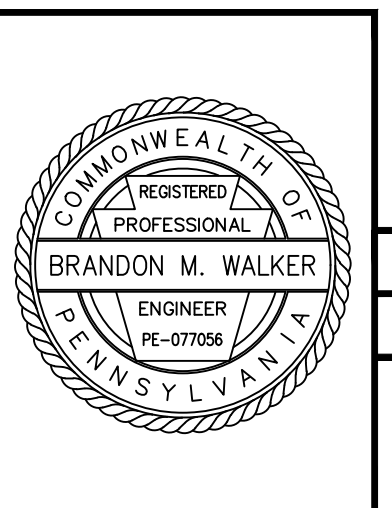


|                                     |       |       |
|-------------------------------------|-------|-------|
| LAND USE                            | WOODS | WOODS |
| MIN DEPTH OF COVER (TO TOP OF PIPE) | 4'    |       |



|  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBAR                |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  | WATERSHED BOUNDARY               |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

| GENERAL NOTES: |          |                            |     |     |  |
|----------------|----------|----------------------------|-----|-----|--|
|                |          |                            |     |     |  |
| 2              | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |  |
| 1              | 12/05/17 | REVISED PER CCD/DEP REVIEW | LJS | JWR |  |
| 0              | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |  |
| REV NO         | DATE     | DESCRIPTION OF REVISION    | CHK | APP |  |



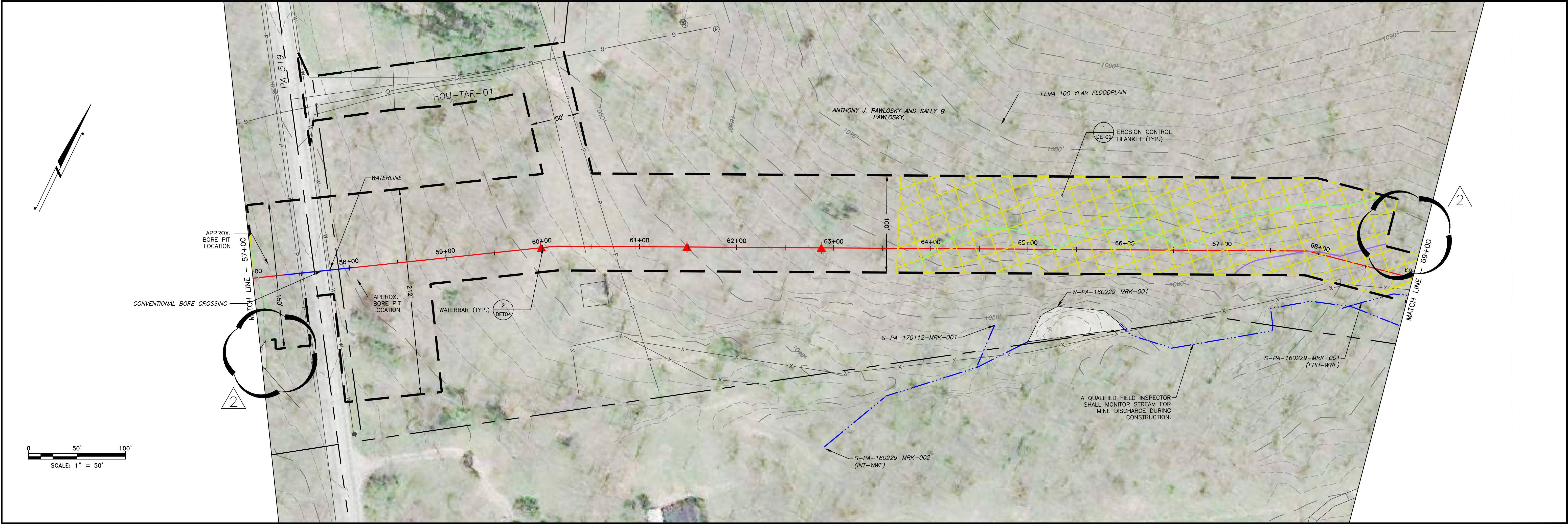
|   |  |                                    |               |
|---|--|------------------------------------|---------------|
| FALCON ETHANE PIPELINE SYSTEM   |  | SITE RESTORATION PLAN              |               |
| HOUSTON TO JUNCTION   |  | SR004 - (STA. 33+00 TO STA. 45+00) |               |
|   |  | WASHINGTON COUNTY                  |               |
|   |  | CHARTIERS TOWNSHIP                 |               |
|   |  | PENNSYLVANIA                       |               |
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| DRAWN ARC   |  | SPLC-GOM-AE-SD119878               | REVISION 2    |

Filename: \\PROJECTS\1747\SHILL\60489885 - FALCON 900-WORK\911-ENVIRONMENTAL\20-SHEETS\PENNSYLVANIA\SR-PLANS\SR\_PLAND04.DWG  
Last saved by: ALEXANDER CURTICE (7/20/2018 1:33 PM) Last Plotted: 2018-07-30 (7/20/2018 5:42 PM)

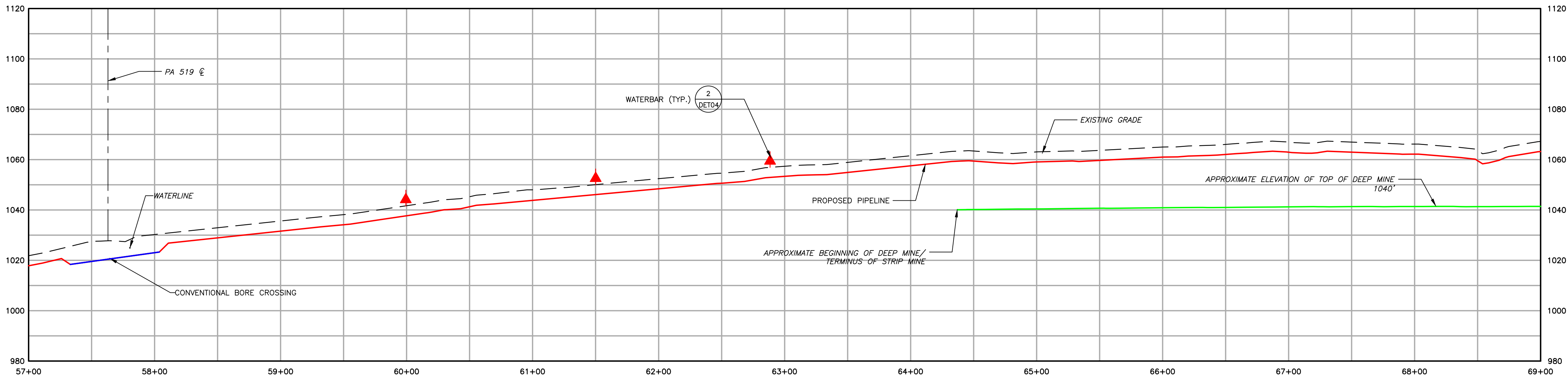








|                                     |       |      |       |
|-------------------------------------|-------|------|-------|
| LAND USE                            | WOODS | ROAD | WOODS |
| MIN DEPTH OF COVER (TO TOP OF PIPE) | 4'    | 5'   | 4'    |



|  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBAR                |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  | WATERSHED BOUNDARY               |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

| GENERAL NOTES: |          |                            |     |     |  |
|----------------|----------|----------------------------|-----|-----|--|
|                |          |                            |     |     |  |
| 2              | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |  |
| 1              | 12/05/17 | REVISED PER CCD/DEP REVIEW | LJS | JWR |  |
| 0              | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |  |
| REV NO         | DATE     | DESCRIPTION OF REVISION    | CHK | APP |  |



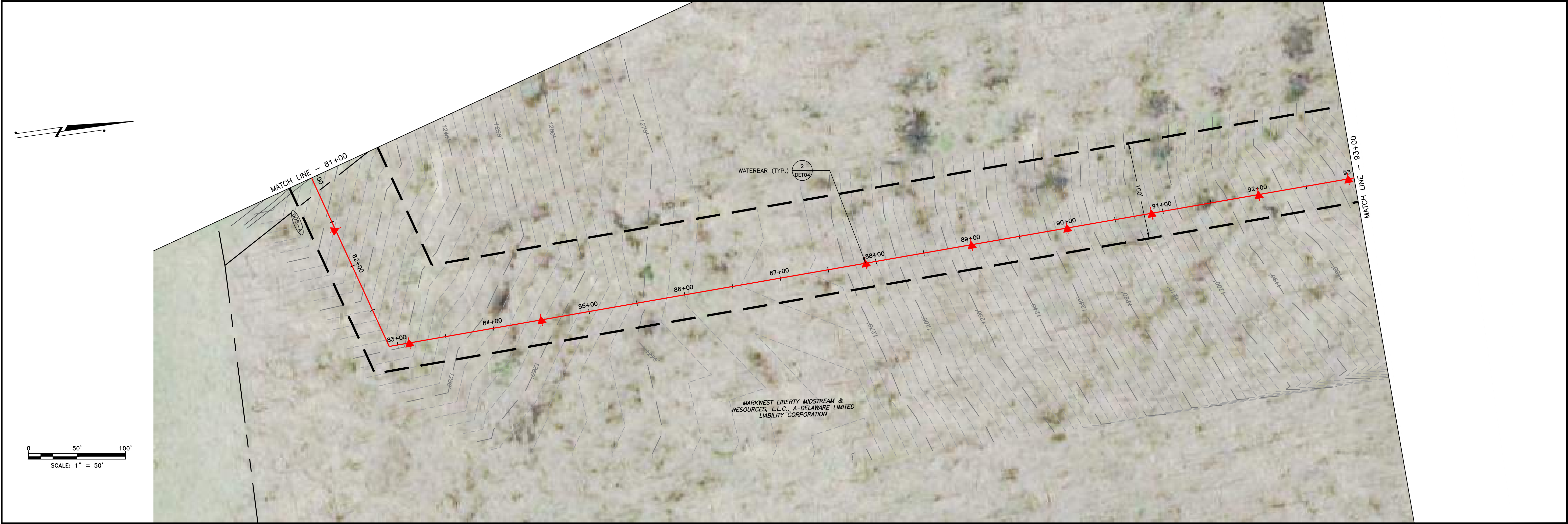
| FALCON ETHANE PIPELINE SYSTEM   |        | SITE RESTORATION PLAN                                   |            |
|---|--------|---|------------|
| HOUSTON TO JUNCTION   |        | SR006 - (STA. 57+00 TO STA. 69+00)                      |            |
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| SCALE   | 1"=50' | DATE  | 09/14/17   |
| DRAWN   | ARC    |   |            |
| SPLC-GOM-AE-SD119880  |        |   | REVISION 2 |

Filename: \\projects\1747\shell\4048885 - FALCON ETHANE PIPELINE SYSTEM\20-SHEETS\PENNSYLVANIA\SR-PLANS\SR-PLANS.DWG  
Last saved by: ALEXANDER CURTIS (7/20/2018 1:29 PM) Last Plotted: 2018-07-30 (7/20/2018 5:44 PM)

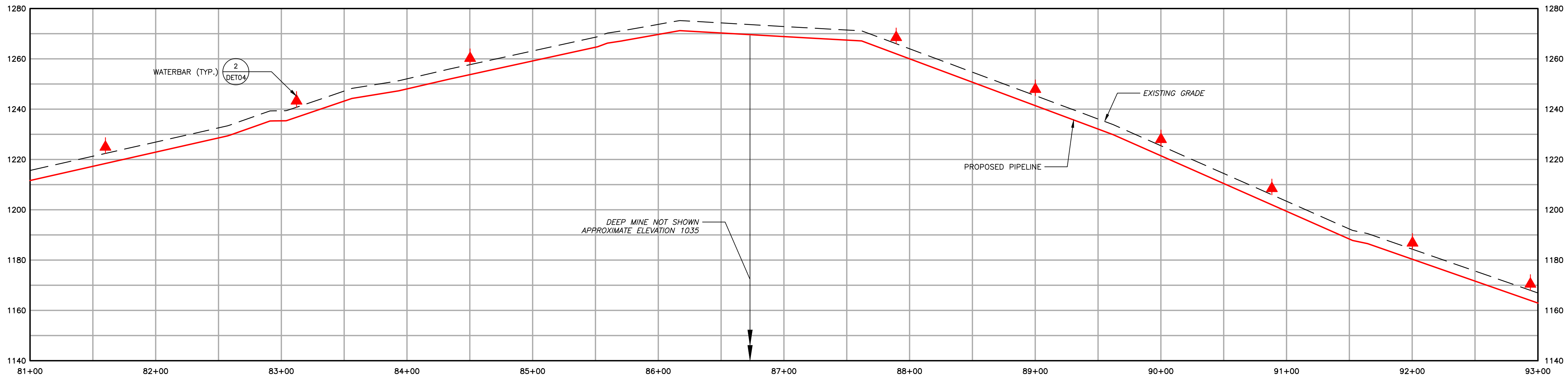






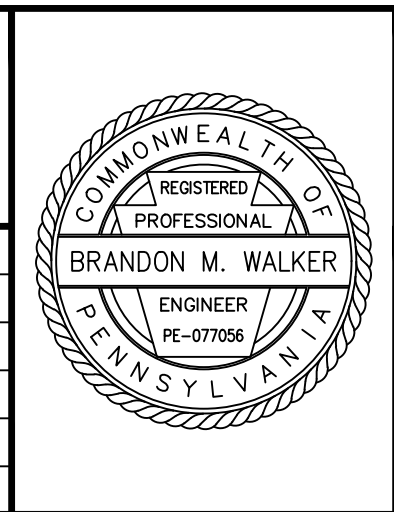


|                                     |       |       |
|-------------------------------------|-------|-------|
| LAND USE                            | FIELD | WOODS |
| MIN DEPTH OF COVER (TO TOP OF PIPE) |       | 4'    |



|        |  |                                  |
|--------|--|----------------------------------|
| 1,550' | EXISTING CONTOURS (INDEX)                    | PROPOSED PIPELINE                |
| ---    | EXISTING CONTOURS (INTERMEDIATE)             | PROPOSED LIMIT OF DISTURBANCE    |
| ---    | EXISTING PROPERTY LINE                       | ACCESS ROAD CENTERLINE           |
| ---    | EXISTING STREAM                              | PROPOSED WATERBAR                |
| ---    | EXISTING WETLAND                             | PROPOSED EROSION CONTROL BLANKET |
| ---    | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         | WATERSHED BOUNDARY               |
| ---    | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |                                  |
| ---    | TREE/BRUSH LINE                              |                                  |

|                |          |                            |     |     |  |
|----------------|----------|----------------------------|-----|-----|--|
| GENERAL NOTES: |          |                            |     |     |  |
| 2              | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |  |
| 1              | 12/05/17 | REVISED PER CCD/DEP REVIEW | LJS | JWR |  |
| 0              | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |  |
| REV NO         | DATE     | DESCRIPTION OF REVISION    | CHK | APP |  |



|   |        |   |            |
|---|--------|---|------------|
| FALCON ETHANE PIPELINE SYSTEM   |        | SITE RESTORATION PLAN                   |            |
| HOUSTON TO JUNCTION   |        | SR008 - (STA. 81+00 TO STA. 93+00)      |            |
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| SCALE   | 1"=50' | DATE                                    | 09/14/17   |
| DRAWN   | ARC    |   |            |
| SPLC-GOM-AE-SD119882  |        |   | REVISION 2 |

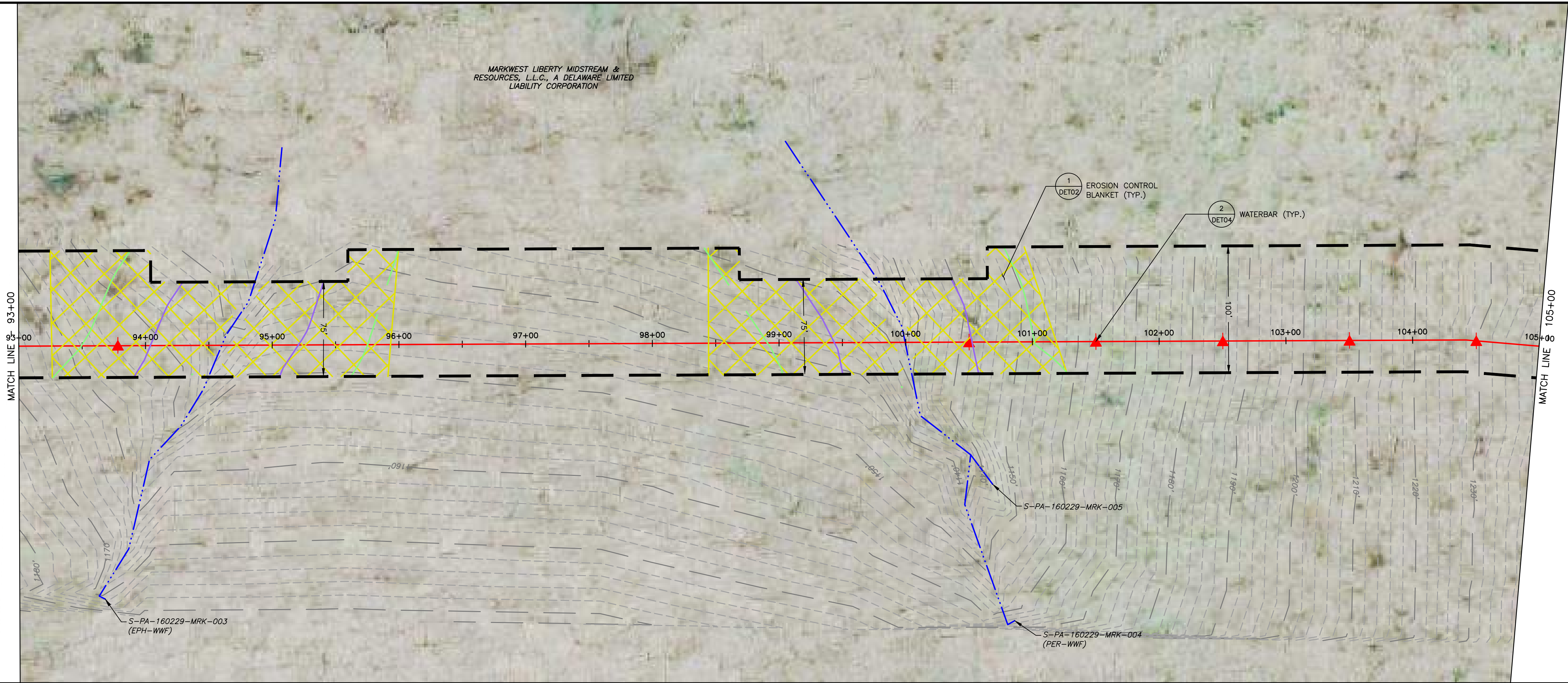
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Last saved by: ALEXANDER CURTICE (7/20/2018 1:29 PM) Last Plotted: 2018-07-30 (7/20/2018 5:46 PM)



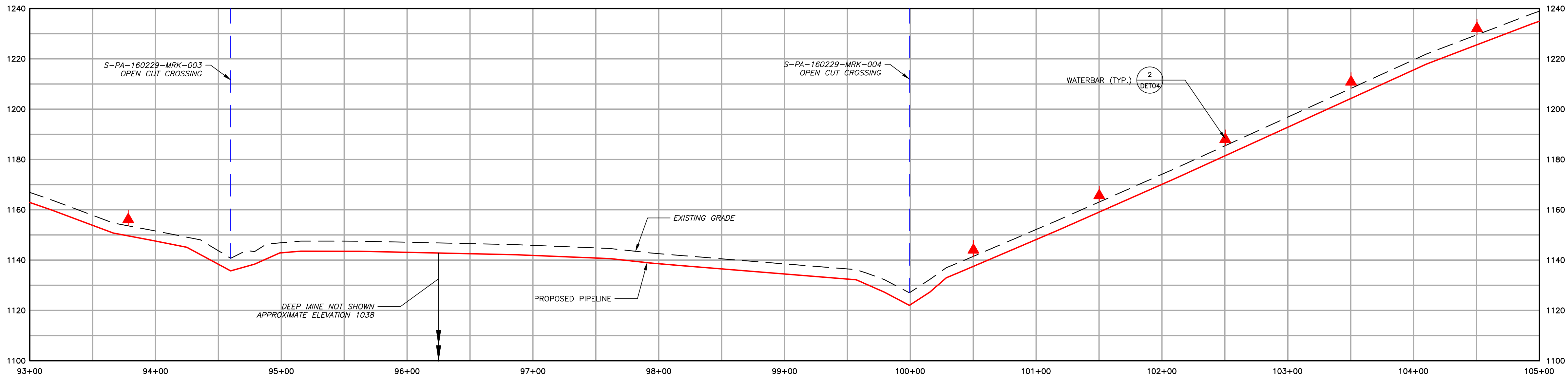
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Last saved by: ALEXANDER CURTICE (7/20/2018 1:29 PM) Last Plotted: 2018-07-30 (7/20/2018 5:47 PM)



0 50' 100'  
SCALE: 1" = 50'



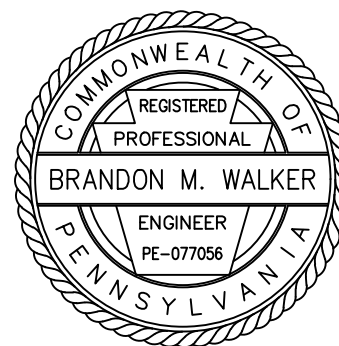
| LAND USE                            | WOODS | STREAM | WOODS | STREAM | WOODS |
|-------------------------------------|-------|--------|-------|--------|-------|
| MIN DEPTH OF COVER (TO TOP OF PIPE) | 4'    |        | 4'    |        | 4'    |



|  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBAR                |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  | WATERSHED BOUNDARY               |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | LJS | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

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SITE RESTORATION PLAN  
SR009 - (STA. 93+00 TO STA. 105+00)  
WASHINGTON COUNTY  
CHARTIERS TOWNSHIP  
PENNSYLVANIA

|       |        |      |          |                      |          |   |
|-------|--------|------|----------|----------------------|----------|---|
| SCALE | 1"=50' | DATE | 09/14/17 | SPLC-GOM-AE-SD119883 | REVISION | 2 |
| DRAWN | ARC    |      |          |                      |          |   |







Filename: \\projects\1747\shell\6049885 - FALCON 900-WORK\911-ENVIRONMENTAL\20-SHEETS\PENNSYLVANIA\SR-PLANS\SR\_PLAN011.DWG  
Last saved by: ALEXANDER CURTICE (7/20/2018 1:29 PM) Last Plotted: 2018-07-30 (7/20/2018 9:50 PM)

- EXISTING CONTOURS (INDEX)
- EXISTING CONTOURS (INTERMEDIATE)
- EXISTING PROPERTY LINE
- EXISTING STREAM
- EXISTING WETLAND
- SOIL TYPE BOUNDARY  
AND SOIL BOUNDARY
- LAND USE TYPE BOUNDARY  
AND LAND USE BOUNDARY
- TREE/BRUSH LINE
- PROPOSED PIPELINE
- PROPOSED LIMIT OF DISTURBANCE
- ACCESS ROAD CENTERLINE
- PROPOSED WATERBAR
- PROPOSED EROSION CONTROL  
BLANKET
- WATERSHED BOUNDARY

GENERAL NOTES:

| REV | NO       | DATE                       | DESCRIPTION OF REVISION | CHK | APP |
|-----|----------|----------------------------|-------------------------|-----|-----|
| 2   | 08/01/18 | REVISED PER CCD/DEP REVIEW |                         | ARG | BMW |
| 1   | 12/05/17 | REVISED PER CCD/DEP REVIEW |                         | LJS | JWR |
| 0   | 09/14/17 | ISSUED FOR PERMIT          |                         | BMW | JWR |



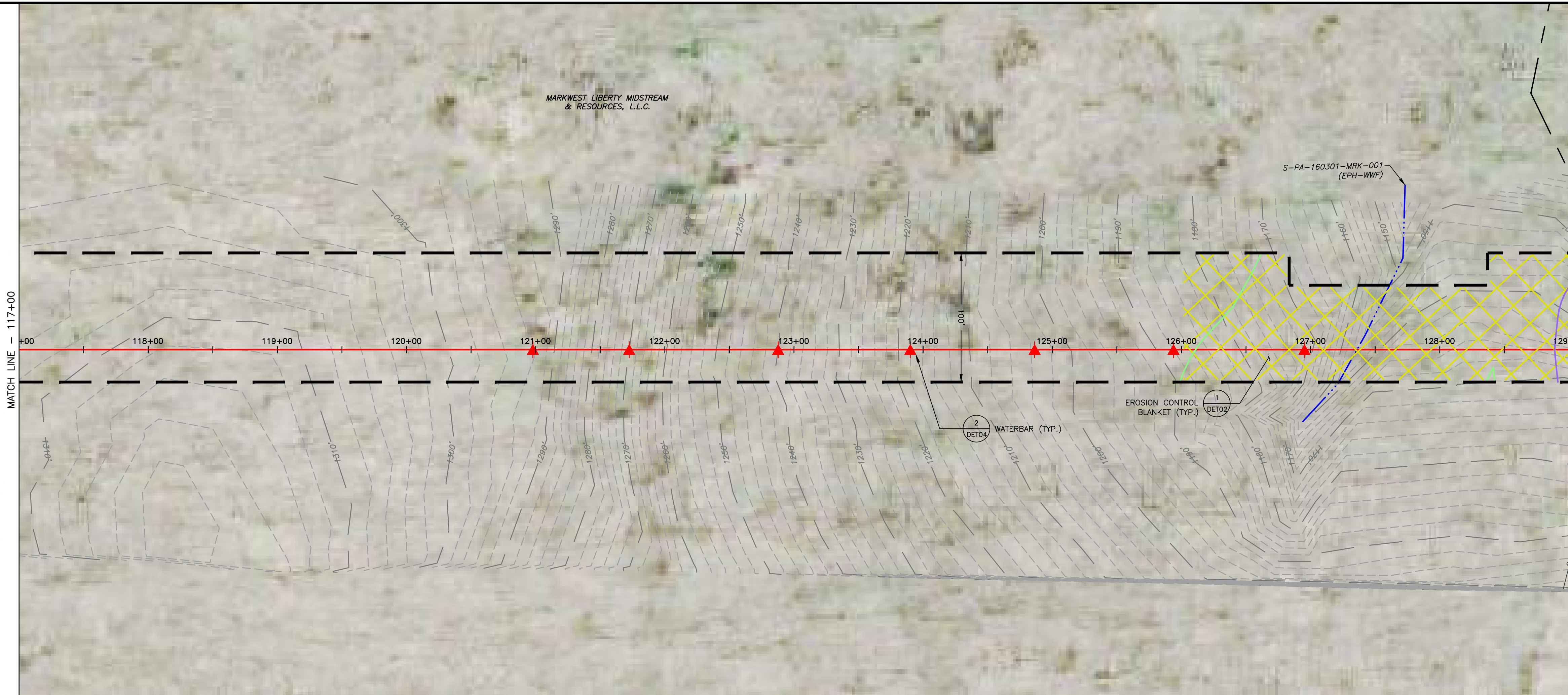
FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

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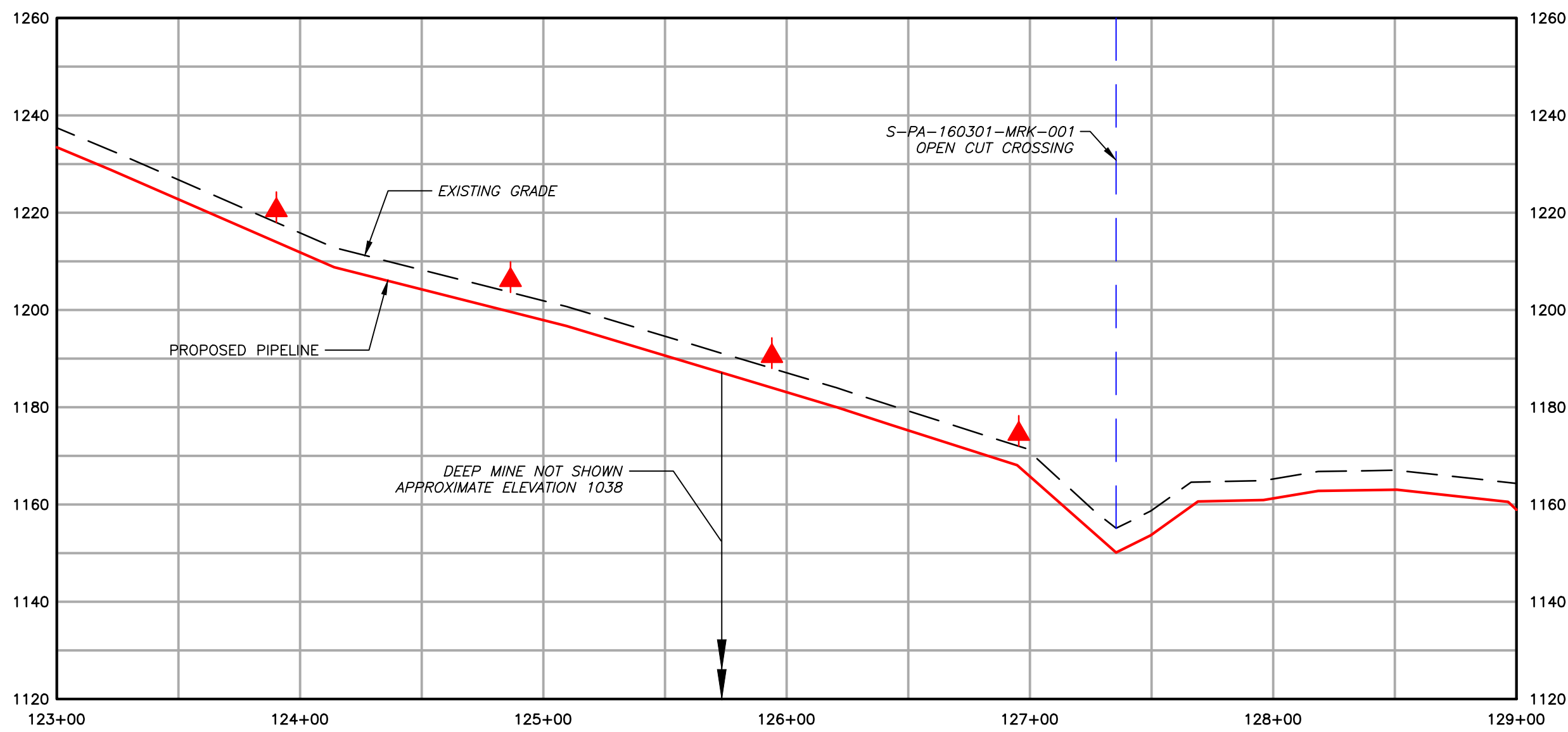
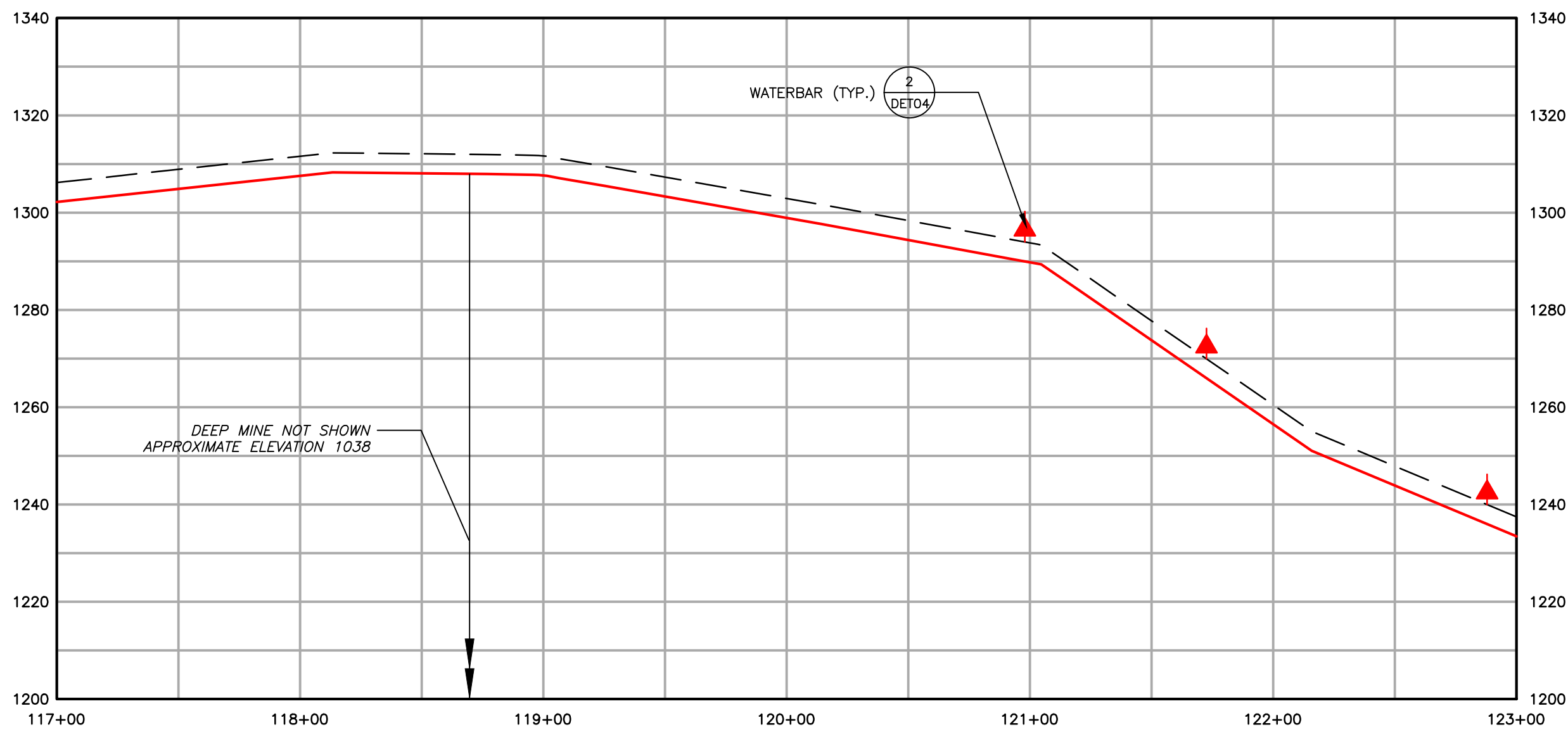
|       |        |      |          |                      |          |   |
|-------|--------|------|----------|----------------------|----------|---|
| SCALE | 1"=50' | DATE | 09/14/17 | SPLC-GOM-AE-SD119885 | REVISION | 2 |
| DRAWN | ARC    |      |          |                      |          |   |



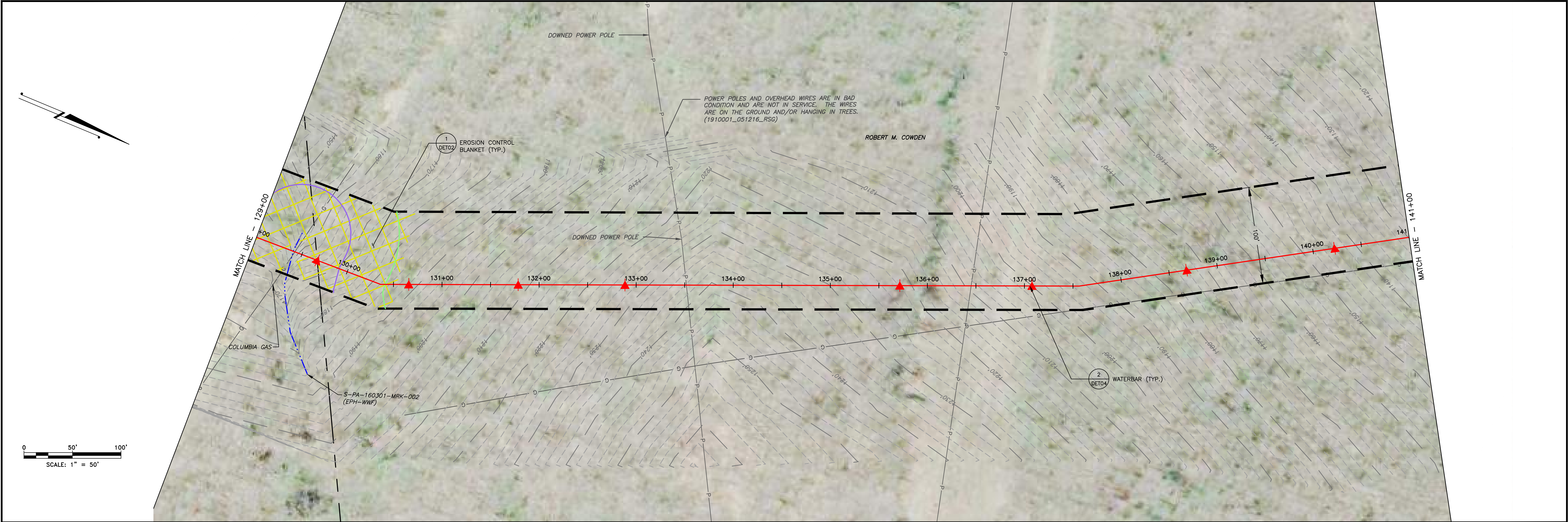
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SCALE: 1" = 50'



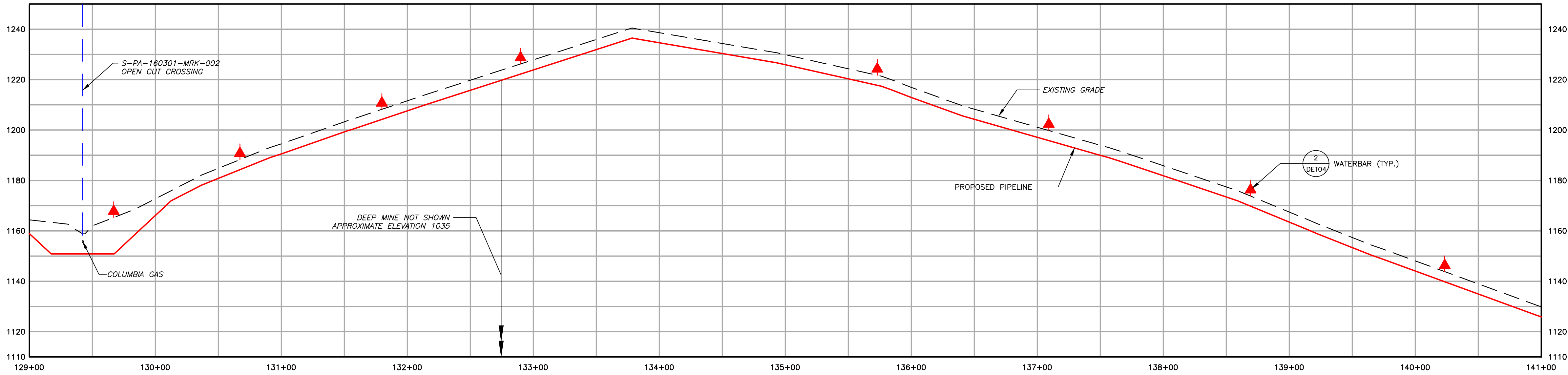
|                                     |       |       |        |       |
|-------------------------------------|-------|-------|--------|-------|
| LAND USE                            | WOODS | WOODS | STREAM | WOODS |
| MIN DEPTH OF COVER (TO TOP OF PIPE) | 4'    | 4'    | 5'     | 4'    |





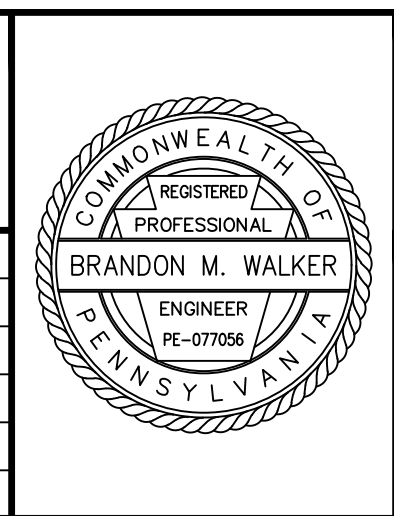


|                                     |       |       |       |       |
|-------------------------------------|-------|-------|-------|-------|
| LAND USE                            | WOODS | WOODS | FIELD | WOODS |
| MIN DEPTH OF COVER (TO TOP OF PIPE) | 4' 5' | 4'    |       |       |



|  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBAR                |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  | WATERSHED BOUNDARY               |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

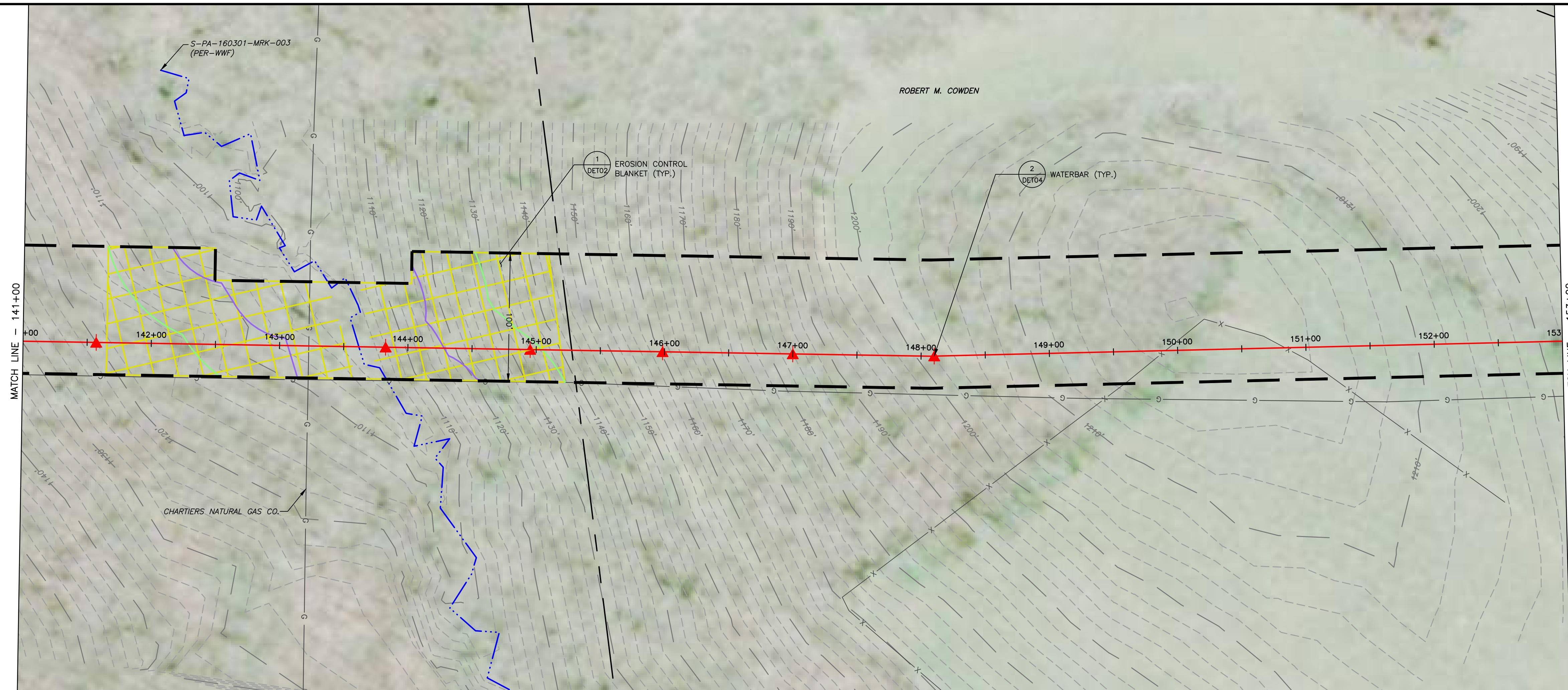
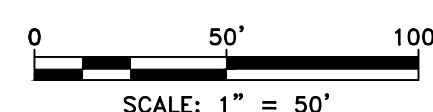
| GENERAL NOTES: |          |                            |     |     |  |
|----------------|----------|----------------------------|-----|-----|--|
| 2              | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |  |
| 1              | 12/05/17 | REVISED PER CCD/DEP REVIEW | LJS | JWR |  |
| 0              | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |  |
| REV NO         | DATE     | DESCRIPTION OF REVISION    | CHK | APP |  |



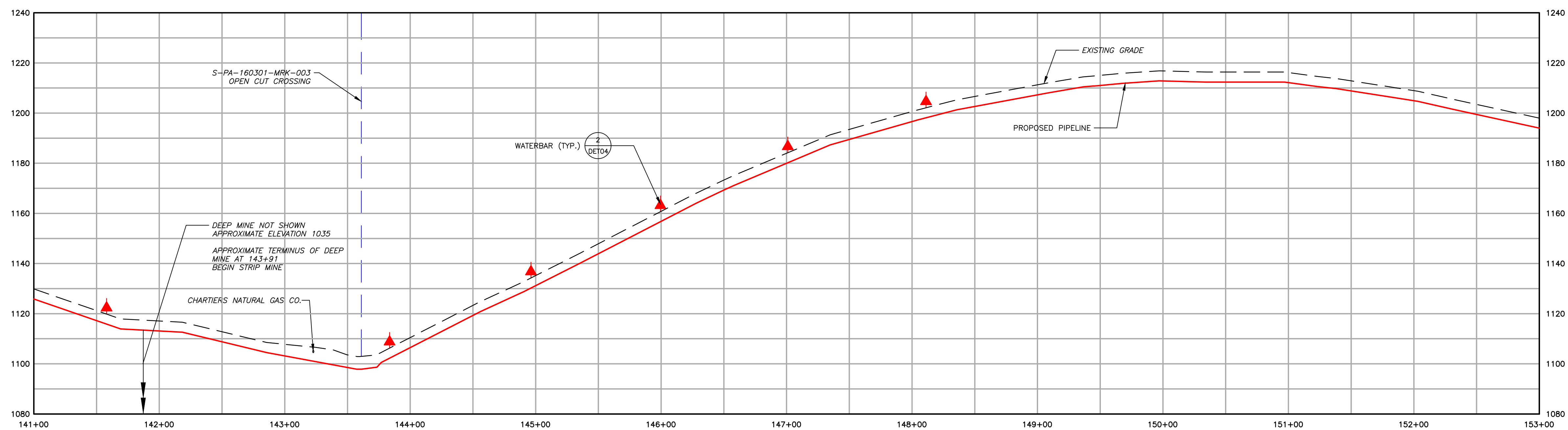
| FALCON ETHANE PIPELINE SYSTEM   |        | SITE RESTORATION PLAN                   |            |
|---|--------|---|------------|
| HOUSTON TO JUNCTION   |        | SR012 - (STA. 129+00 TO STA. 141+00)    |            |
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| SCALE   | 1"=50' | DATE                                    | 09/14/17   |
| DRAWN   | ARC    |   |            |
| SPLC-GOM-AE-SD119886  |        |   | REVISION 2 |

Filename: \\projects\1747\shell\6049885 - FALCON\_900-WORK\911-ENVIRONMENTAL\20-SHEETS\PENNSYLVANIA\SR-PLANS\SR\_PLAN012.DWG  
Last saved by: ALEXANDER CURTICE (7/20/2018 1:29 PM) Last Plotted: 2018-07-30 (7/20/2018 9:51 PM)





|                                     |       |        |       |       |
|-------------------------------------|-------|--------|-------|-------|
| LAND USE                            | WOODS | STREAM | WOODS | FIELD |
| MIN DEPTH OF COVER (TO TOP OF PIPE) | 4'    | 5'     | 4'    |       |



|  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBAR                |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  | WATERSHED BOUNDARY               |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

GENERAL NOTES:

[illegible]

FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

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SITE RESTORATION PLAN

SR013 - (STA. 141+00 TO STA. 153+00)

WASHINGTON COUNTY                      PENNSYLVANIA

CHARTIERS AND MOUNT PLEASANT TOWNSHIP

|       |        |          |                      |               |
|-------|--------|----------|----------------------|---------------|
| SCALE | 1"=50' | DATE     | SPLC-GOM-AE-SD119887 | REVISION<br>2 |
| DRAWN | ARC    | 09/14/17 |                      |               |

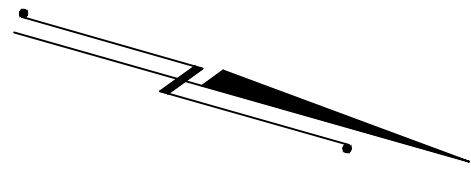
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 Last saved by: ALEXANDER CURTICE (7/30/2018 1:29 PM) Last Plotted: 2018-07-30 (7/30/2018 5:52 PM)







File name: \\projects\1747\shell\60498885 - FALCON 900-WORK\911-ENVIRONMENTAL\20-SHEETS\PENNSYLVANIA\SR-PLANS\SR-PLAN014.DWG  
Last saved by: ALEXANDER CURTICE (7/21/2018 8:08 AM) Last Plotted: 2018-07-31 (7/31/2018 10:21 AM)



0 50' 100'  
SCALE: 1" = 50'

- |  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBARS               |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  |                                  |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | BMW | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

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SITE RESTORATION PLAN  
SR014A - (HOU-TAR-02)  
WASHINGTON COUNTY  
MOUNT PLEASANT TOWNSHIP  
PENNSYLVANIA

|       |        |      |          |                      |          |   |
|-------|--------|------|----------|----------------------|----------|---|
| SCALE | 1"=50' | DATE | 09/14/17 | SPLC-GOM-AE-SD120110 | REVISION | 2 |
| DRAWN | ARC    |      |          |                      |          |   |









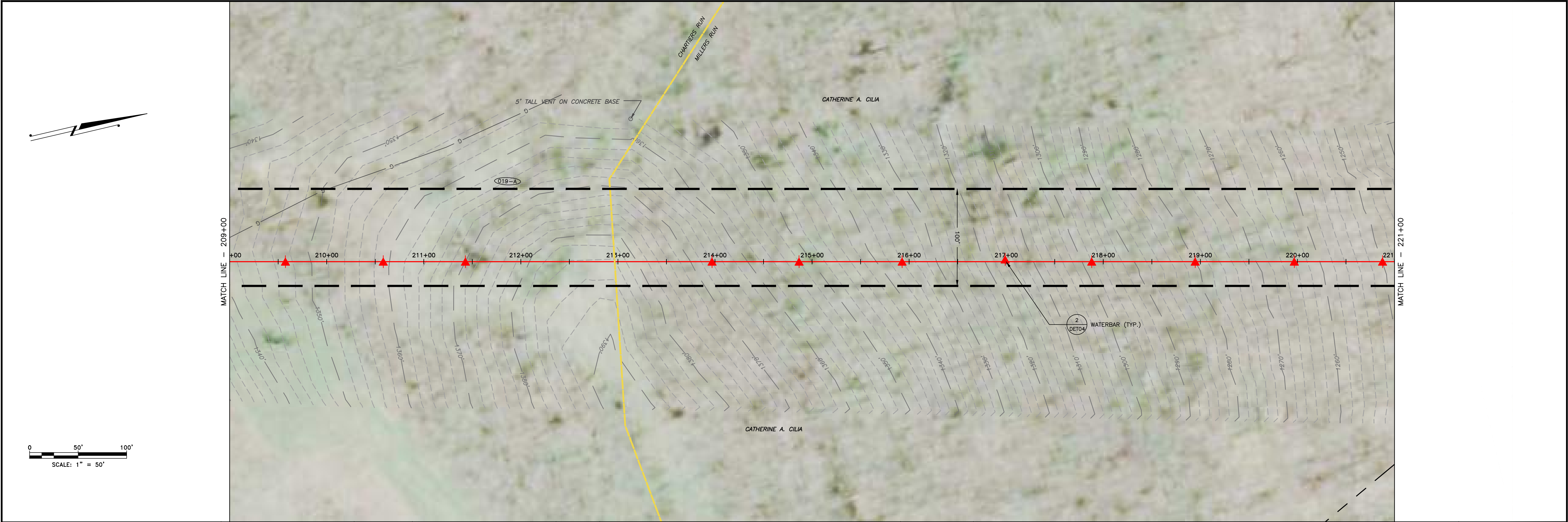




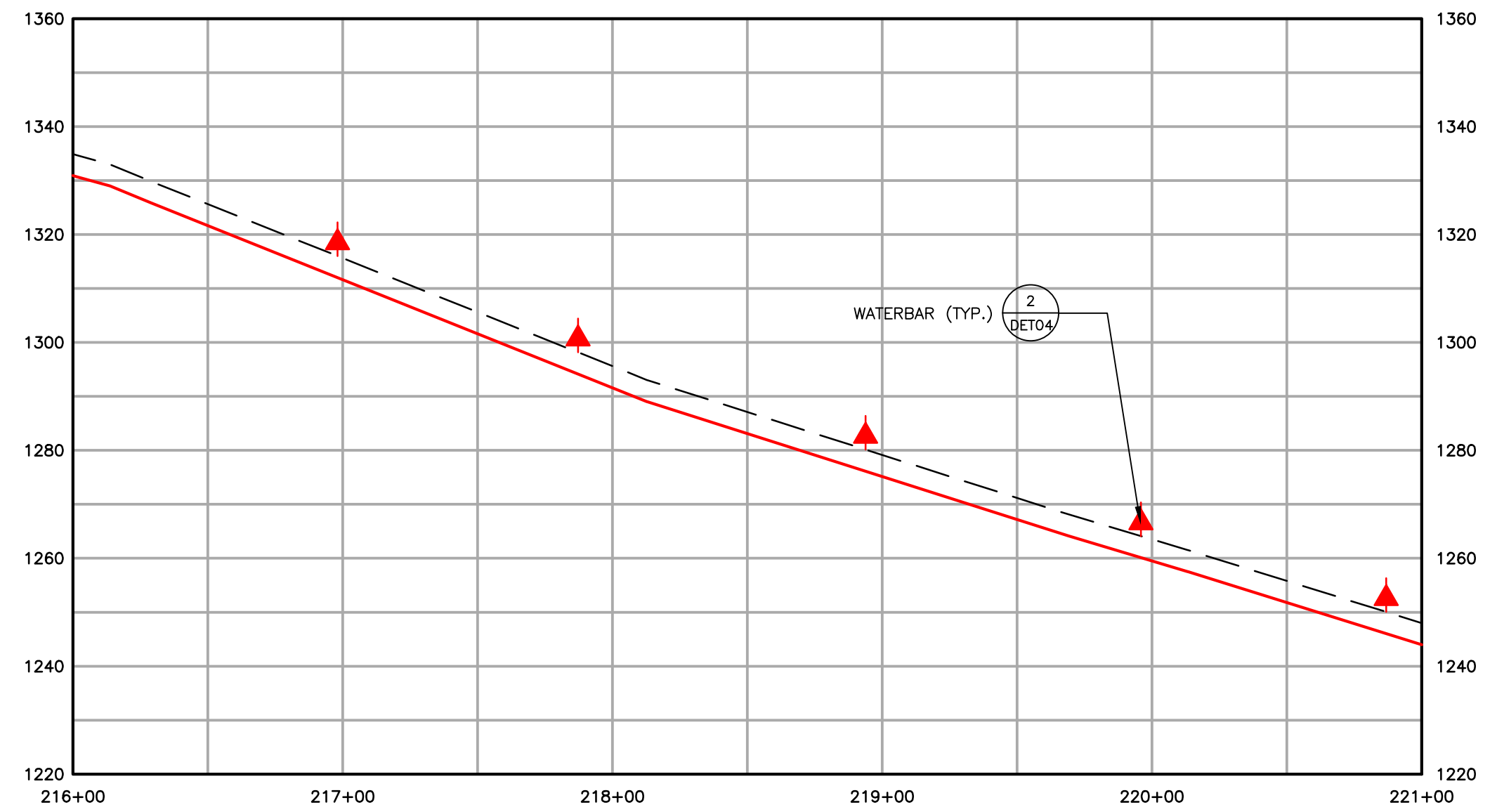
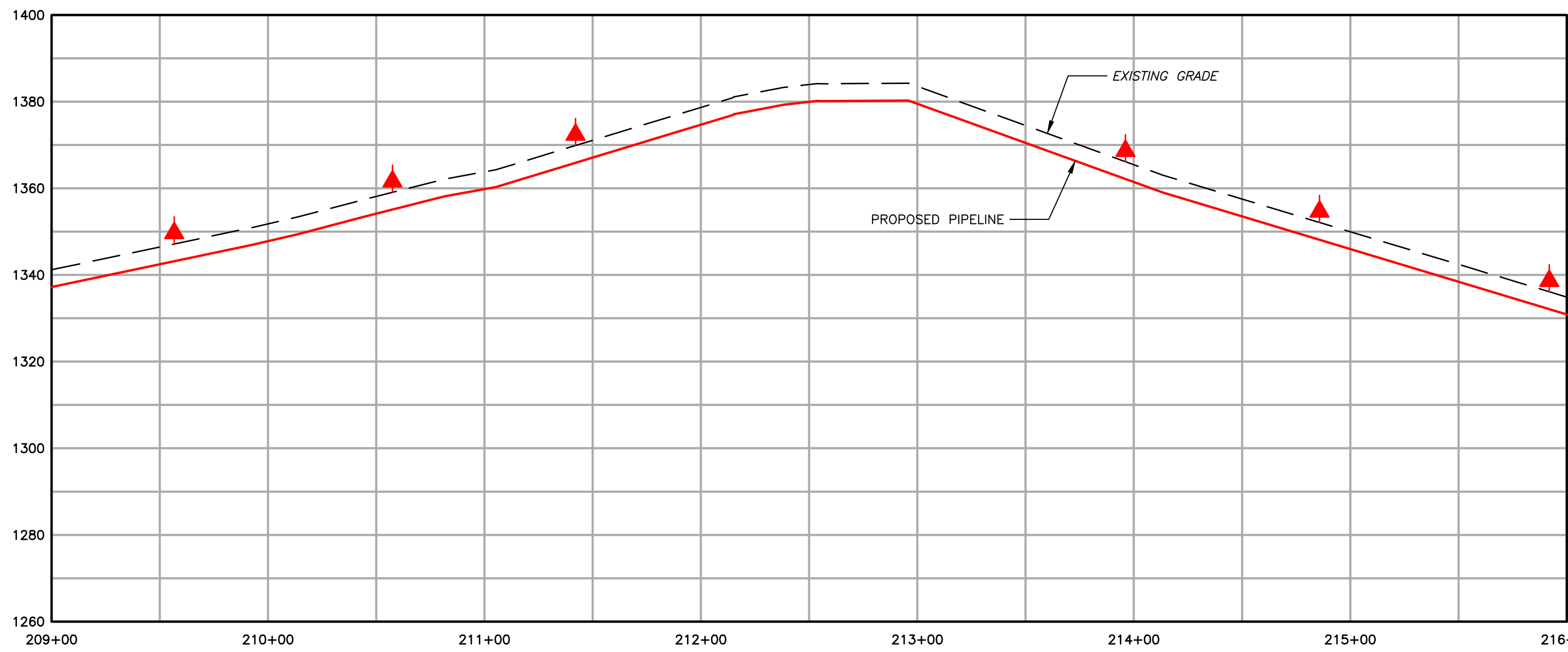






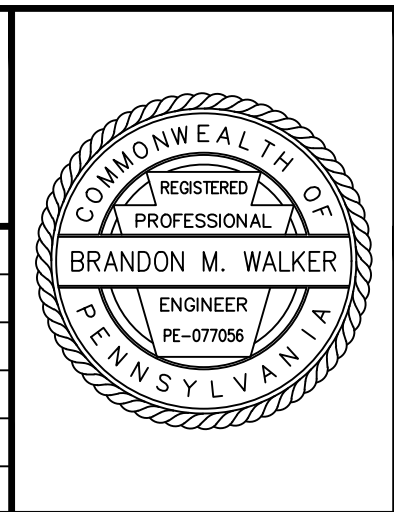


|                                     |       |       |       |       |       |       |
|-------------------------------------|-------|-------|-------|-------|-------|-------|
| LAND USE                            | WOODS | FIELD | WOODS | FIELD | WOODS | WOODS |
| MIN DEPTH OF COVER (TO TOP OF PIPE) |       |       | 4'    |       |       | 4'    |



|        |  |                                  |
|--------|--|----------------------------------|
| 1,550' | EXISTING CONTOURS (INDEX)                    | PROPOSED PIPELINE                |
| ---    | EXISTING CONTOURS (INTERMEDIATE)             | PROPOSED LIMIT OF DISTURBANCE    |
| ---    | EXISTING PROPERTY LINE                       | ACCESS ROAD CENTERLINE           |
| ---    | EXISTING STREAM                              | PROPOSED WATERBAR                |
| ---    | EXISTING WETLAND                             | PROPOSED EROSION CONTROL BLANKET |
| ---    | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         | WATERSHED BOUNDARY               |
| ---    | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |                                  |
| ---    | TREE/BRUSH LINE                              |                                  |

| GENERAL NOTES: |          |                            |     |     |  |
|----------------|----------|----------------------------|-----|-----|--|
| 2              | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |  |
| 1              | 12/05/17 | REVISED PER CCD/DEP REVIEW | LJS | JWR |  |
| 0              | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |  |
| REV NO         | DATE     | DESCRIPTION OF REVISION    | CHK | APP |  |



|   |        |  |            |
|---|--------|--|------------|
| FALCON ETHANE PIPELINE SYSTEM   |        | SITE RESTORATION PLAN  |            |
| HOUSTON TO JUNCTION   |        | SR019 - (STA. 209+00 TO STA. 221+00)                         |            |
| THIS DOCUMENT IS CONFIDENTIAL AND IT SHALL NOT BE REPRODUCED OR REDISTRIBUTED WITHOUT PRIOR PERMISSION. NEITHER THE OPERATOR NOR THE OWNER MAKE ANY WARRANTY AS TO THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION CONTAINED ON THIS DRAWING, AND THE USER ASSUMES ALL RISK OF LOSS TO PERSONS AND PROPERTY AS A RESULT OF RELIANCE THEREON. |        | WASHINGTON COUNTY<br>MOUNT PLEASANT TOWNSHIP<br>PENNSYLVANIA |            |
| SCALE   | 1"=50' | DATE   | 09/14/17   |
| DRAWN   | ARC    |  |            |
| SPLC-GOM-AE-SD119893  |        |  | REVISION 2 |

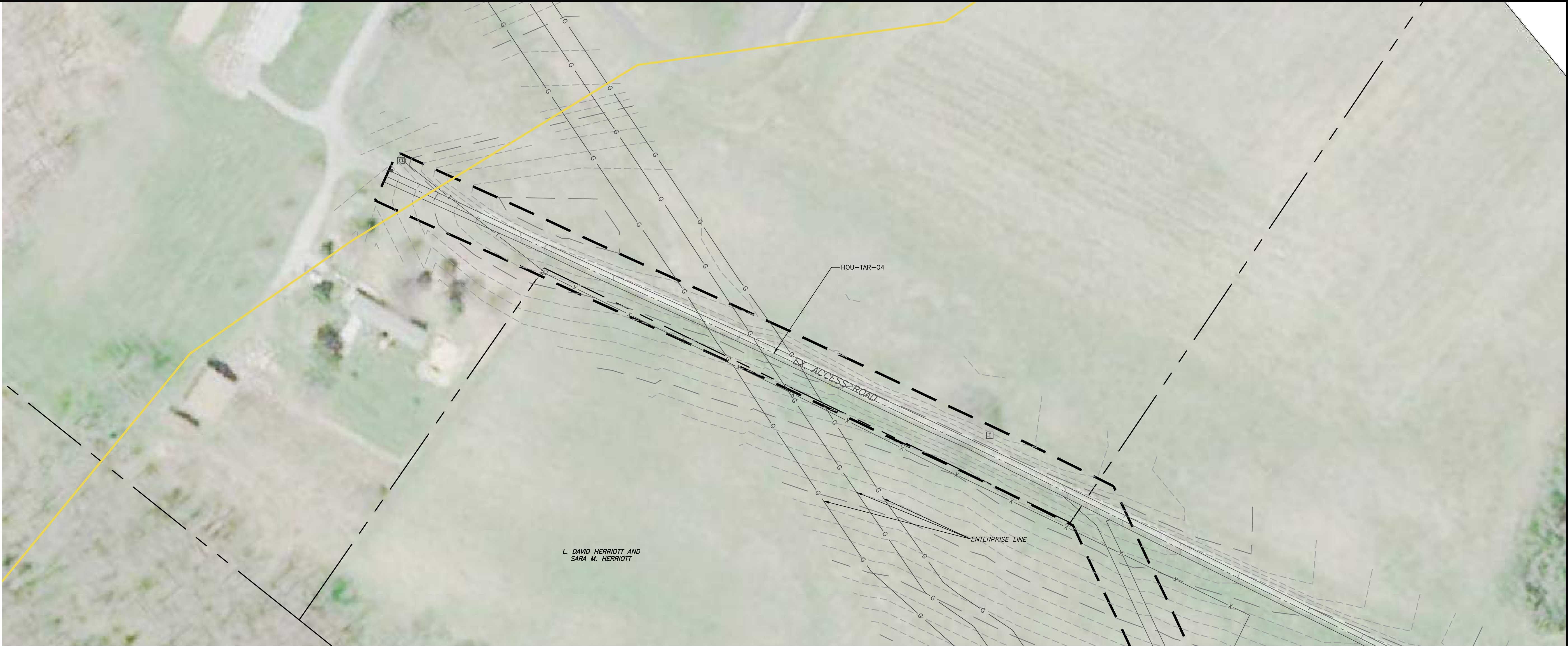
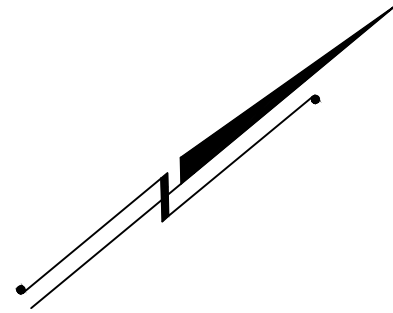
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Last saved by: ALEXANDER CURTICE (7/20/2018 1:05 PM) Last Plotted: 2018-07-30 (7/20/2018 5:58 PM)



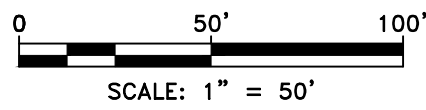




Filename: \\projects\1747\shell\60498885 - FALCON 900-WORK\911-ENVIRONMENTAL\20-SHEETS\PENNSYLVANIA\SR-PLANS\SR-PLAN02A.DWG  
Last saved by: ALEXANDER CURTICE (7/20/2018 4:34 PM) Last Plotted: 2018-07-31 (7/31/2018 10:22 AM)



MATCH LINE - SEE SR020



- |  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBARS               |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  |                                  |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | BMW | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

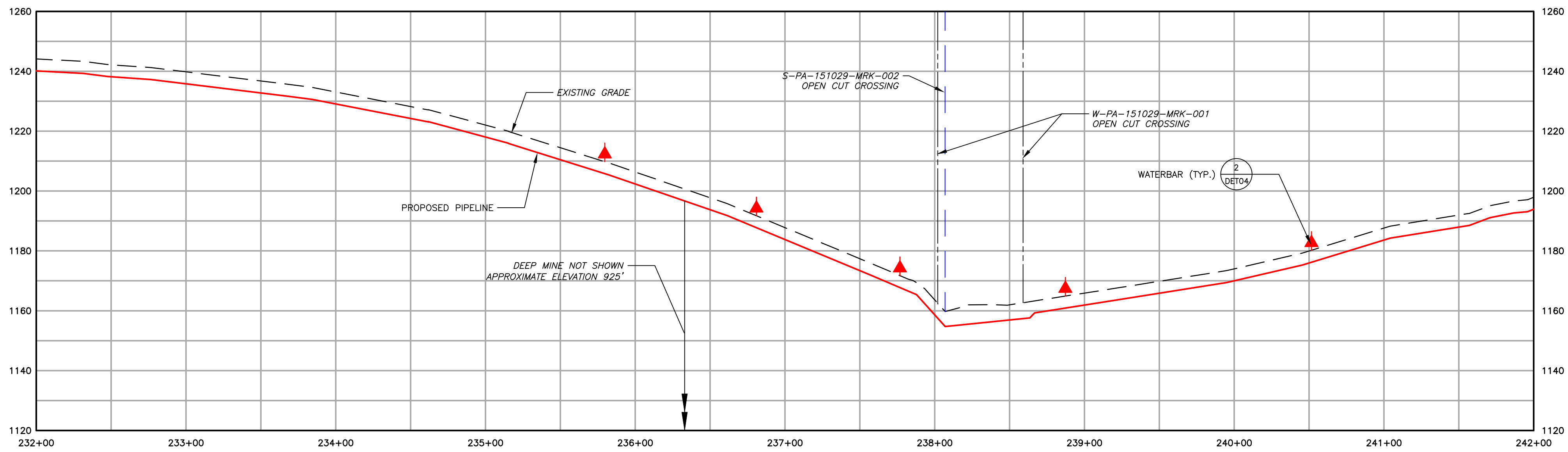
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| SITE RESTORATION PLAN<br>SR020A - (HOU-TAR-04)<br>WASHINGTON COUNTY<br>MOUNT PLEASANT TOWNSHIP<br>PENNSYLVANIA |        |                      |            |
|--|--------|----------------------|------------|
| SCALE  | 1"=50' | DATE                 | 09/14/17   |
| DRAWN  | ARC    | SPLC-GOM-AE-SD120111 | REVISION 2 |





|                                     |       |       |        |         |       |       |       |
|-------------------------------------|-------|-------|--------|---------|-------|-------|-------|
| LAND USE                            | FIELD | WOODS | STREAM | WETLAND | WOODS | FIELD | WOODS |
| MIN DEPTH OF COVER (TO TOP OF PIPE) | 4'    | 5'    | 4'     |         |       |       |       |



|  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBAR                |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  | WATERSHED BOUNDARY               |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | LJS | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

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SITE RESTORATION PLAN  
SR021 - (STA. 232+00 TO STA. 242+00)  
WASHINGTON COUNTY  
MOUNT PLEASANT TOWNSHIP  
PENNSYLVANIA

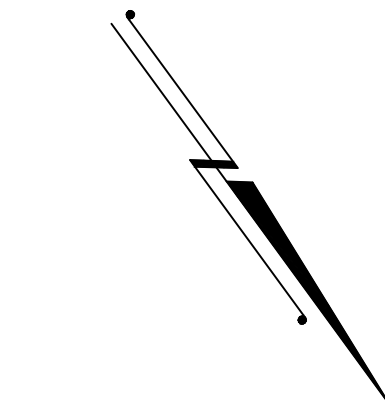
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|-------|--------|------|----------|----------|---|
| SCALE | 1"=50' | DATE | 09/14/17 | REVISION | 2 |
| DRAWN | ARC    |      |          |          |   |



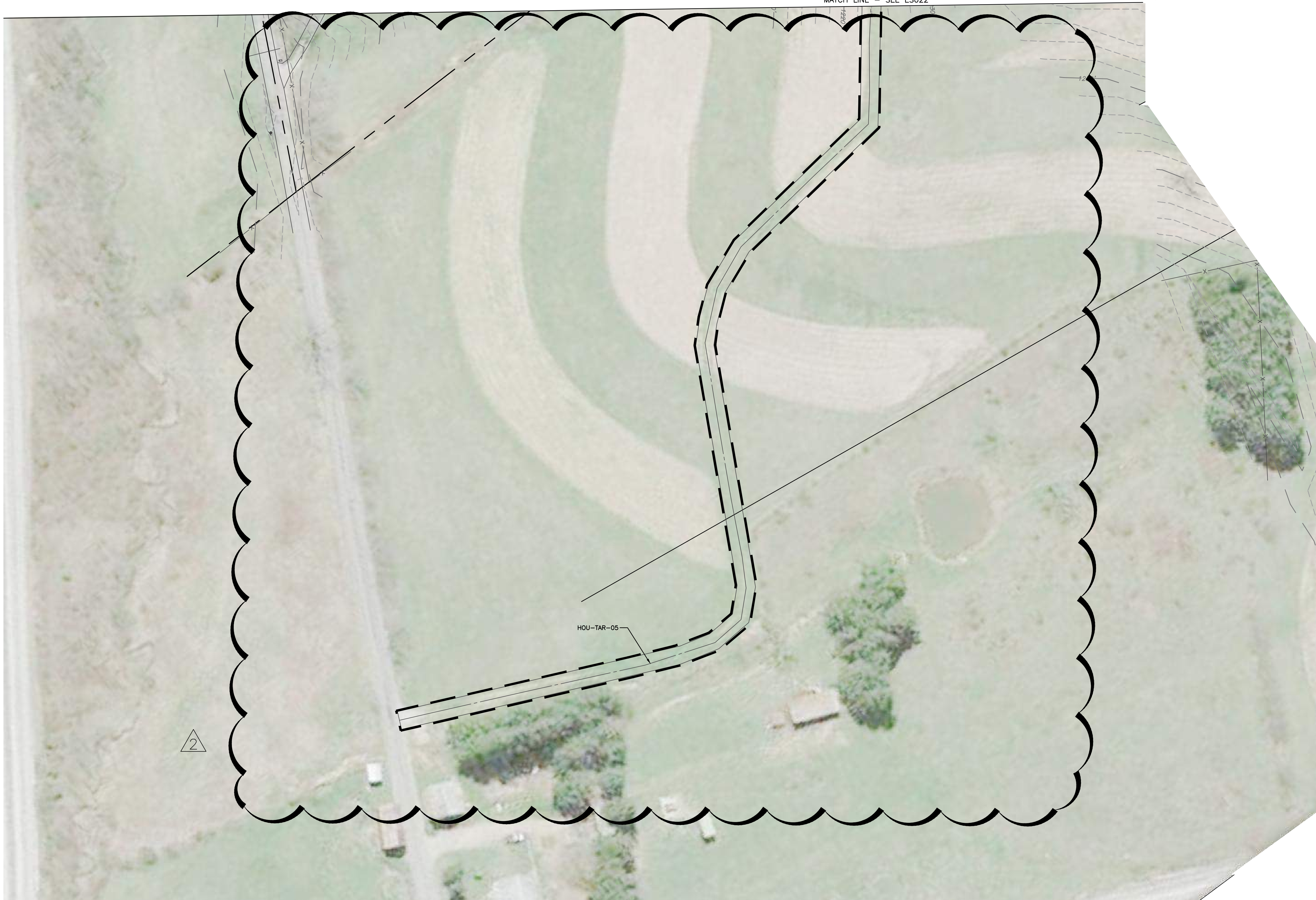




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Last saved by: ALEXANDER CURTICE (7/27/2018 9:34 AM) Last Plotted: 2018-07-31 (7/31/2018 10:23 AM)



0 50' 100'  
SCALE: 1" = 50'



- |  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBARS               |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  |                                  |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | BMW | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

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EROSION AND SEDIMENT CONTROL PLAN  
ES022A - (HOU-TAR-05)  
WASHINGTON COUNTY  
MOUNT PLEASANT TOWNSHIP  
PENNSYLVANIA

|       |        |      |            |                      |          |
|-------|--------|------|------------|----------------------|----------|
| SCALE | 1"=50' | DATE | 09/14/2017 | SPLC-GOM-AE-SD119306 | REVISION |
| DRAWN | ARC    |      |            |                      | 2        |

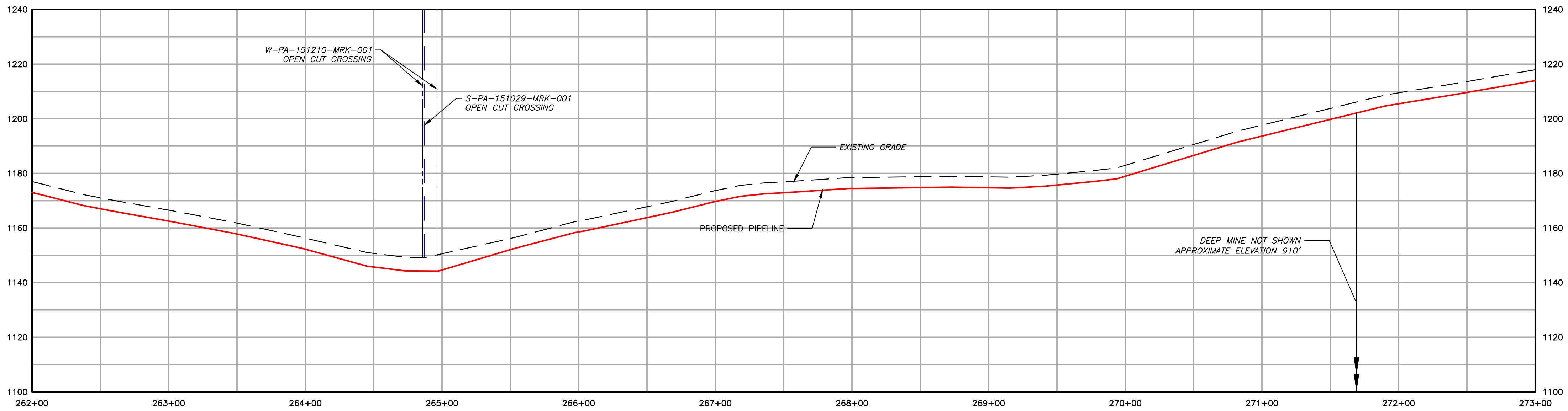








| LAND USE                            | FIELD | WOODS | WETLAND | STREAM | WOODS | FIELD |
|-------------------------------------|-------|-------|---------|--------|-------|-------|
| MIN DEPTH OF COVER (TO TOP OF PIPE) | 4'    |       | 5'      |        | 4'    |       |



- /550— EXISTING CONTOURS (INDEX)
- - - - - EXISTING CONTOURS (INTERMEDIATE)
- - - - - EXISTING PROPERTY LINE
- - - - - EXISTING STREAM
- ▲— EXISTING WETLAND
- ▲— PROPOSED PIPELINE
- - - - - PROPOSED LIMIT OF DISTURBANCE
- - - - - ACCESS ROAD CENTERLINE
- ▲ PROPOSED WATERBAR
- ▲— PROPOSED EROSION CONTROL BLANKET
- ▲— WATERSHED BOUNDARY
- ▲— SOIL TYPE BOUNDARY AND SOIL BOUNDARY
- ▲— LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY
- ▲— TREE/BRUSH LINE

GENERAL NOTES:

| REV | NO       | DATE                       | DESCRIPTION OF REVISION | CHK | APP |
|-----|----------|----------------------------|-------------------------|-----|-----|
| 2   | 08/01/18 | REVISED PER CCD/DEP REVIEW |                         | ARG | BMW |
| 1   | 12/05/17 | REVISED PER CCD/DEP REVIEW |                         | LJS | JWR |
| 0   | 09/14/17 | ISSUED FOR PERMIT          |                         | BMW | JWR |

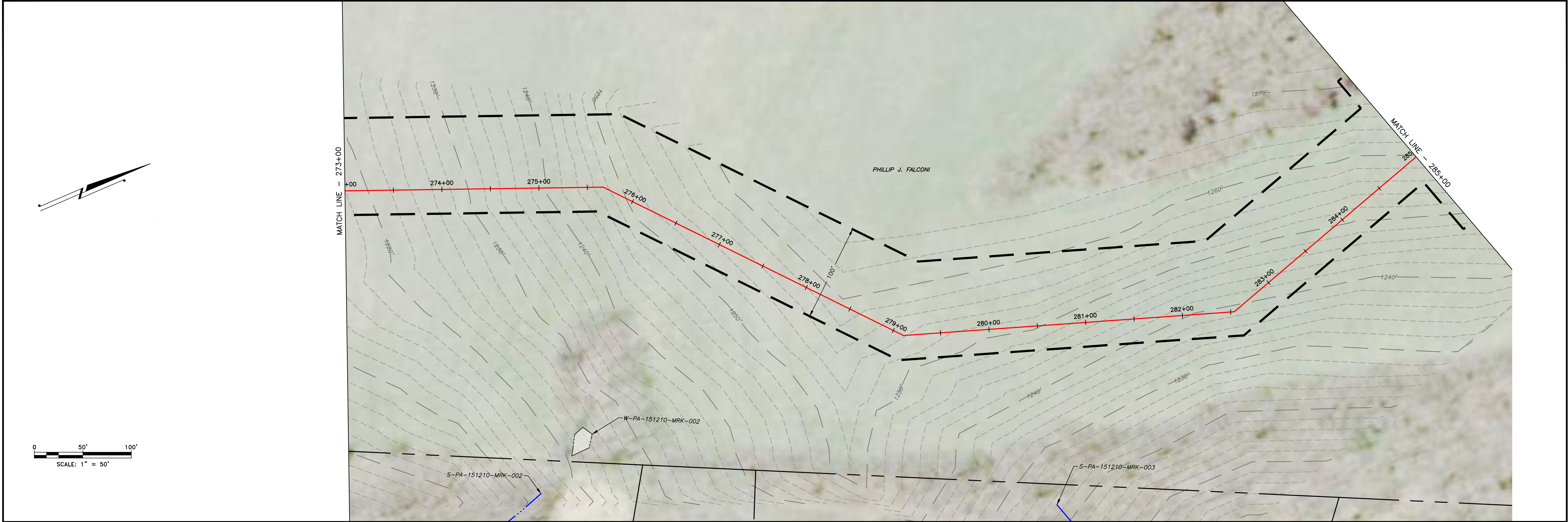


FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

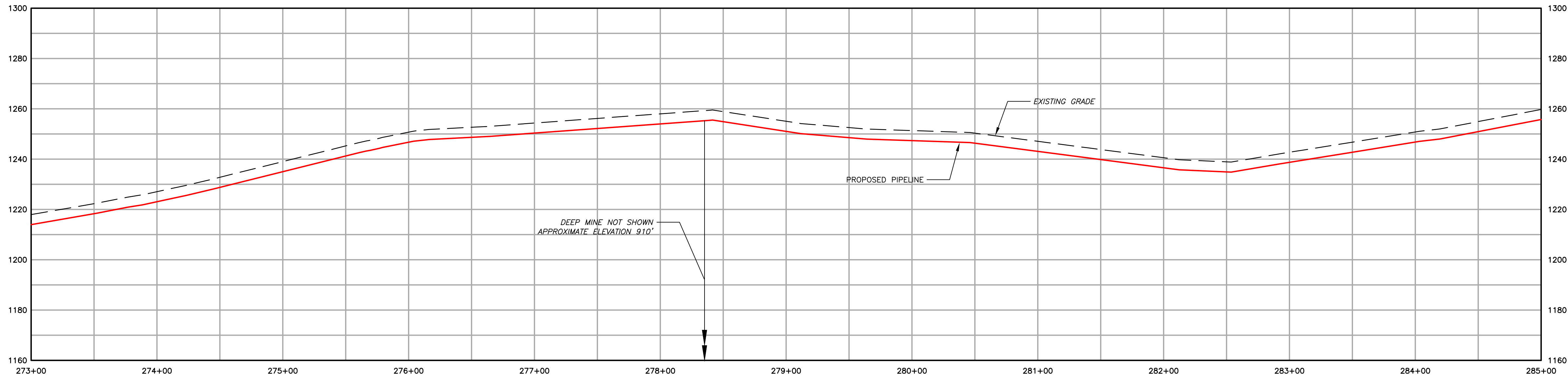
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| SITE RESTORATION PLAN |        | SR024 - (STA. 262+00 TO STA. 273+00) |          |
|-----------------------|--------|--------------------------------------|----------|
| WASHINGTON COUNTY     |        | MOUNT PLEASANT TOWNSHIP              |          |
| PENNSYLVANIA          |        |                                      |          |
| SCALE                 | 1"=50' | DATE                                 | 09/14/17 |
| DRAWN                 | ARC    | REVISION                             | 2        |





|                                     |       |
|-------------------------------------|-------|
| LAND USE                            | FIELD |
| MIN DEPTH OF COVER (TO TOP OF PIPE) | 4'    |



- Legend:
- EXISTING CONTOURS (INDEX)
  - EXISTING CONTOURS (INTERMEDIATE)
  - EXISTING PROPERTY LINE
  - EXISTING STREAM
  - EXISTING WETLAND
  - SOIL TYPE BOUNDARY AND SOIL BOUNDARY
  - LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY
  - TREE/BRUSH LINE
  - PROPOSED PIPELINE
  - PROPOSED LIMIT OF DISTURBANCE
  - ACCESS ROAD CENTERLINE
  - PROPOSED WATERBAR
  - PROPOSED EROSION CONTROL BLANKET
  - WATERSHED BOUNDARY

GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | LJS | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

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SITE RESTORATION PLAN  
SR025 - (STA. 273+00 TO STA. 285+00)  
WASHINGTON COUNTY  
MOUNT PLEASANT TOWNSHIP  
PENNSYLVANIA

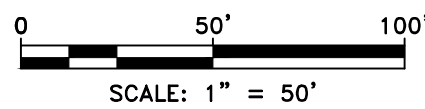
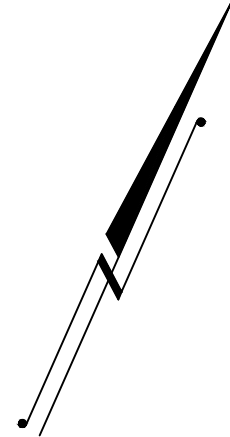
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| SCALE | 1"=50' | DATE | 09/14/17 | REVISION | 2 |
| DRAWN | ARC    |      |          |          |   |







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Last saved by: ALEXANDER CURTICE (7/20/2018 4:35 PM) Last Plotted: 2018-07-31 (7/31/2018 10:24 AM)



MATCH LINE - SEE ES026B

MATCH LINE - SEE SR026

- EXISTING CONTOURS (INDEX)
- EXISTING CONTOURS (INTERMEDIATE)
- EXISTING PROPERTY LINE
- EXISTING STREAM
- EXISTING WETLAND
- SOIL TYPE BOUNDARY AND SOIL BOUNDARY
- LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY
- TREE/BRUSH LINE
- PROPOSED PIPELINE
- PROPOSED LIMIT OF DISTURBANCE
- ACCESS ROAD CENTERLINE
- PROPOSED WATERBARS
- PROPOSED EROSION CONTROL BLANKET

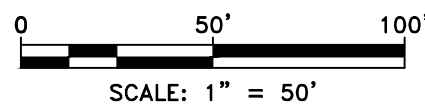
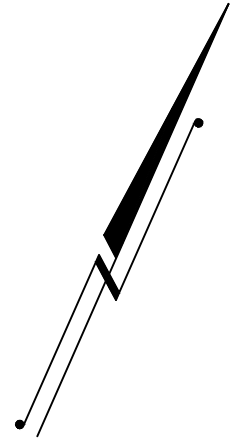
GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | BMW | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |

| FALCON ETHANE PIPELINE SYSTEM   |  | SITE RESTORATION PLAN                        |                  |
|---|--|--|------------------|
| HOUSTON TO JUNCTION   |  | SR026A - (HOU-TAR-06)                        |                  |
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|   |  | SCALE<br>DRAWN                               | DATE<br>09/14/17 |
|   |  | SPLC-GOM-AE-SD120112                         | REVISION<br>2    |



Filepath: \\PROJECTS\1747\SHL\60489885 - FALCON 900-WORK\911-ENVIRONMENTAL\20-SHEETS\PENNSYLVANIA\SR-PLANS\SR\_PLANS\SR026B.DWG  
Last saved by: ALEXANDER CURTICE (7/20/2018 4:35 PM) Last Plotted: 2018-07-31 (7/31/2018 10:25 AM)



- |  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBARS               |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  |                                  |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | BMW | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

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| SITE RESTORATION PLAN<br>SR026B - (HOU-TAR-06)<br>WASHINGTON COUNTY<br>MOUNT PLEASANT TOWNSHIP<br>PENNSYLVANIA |        |          |                      |
|--|--------|----------|----------------------|
| SCALE  | 1"=50' | DATE     | SPLC-GOM-AE-SD120113 |
| DRAWN  | ARC    | 09/14/17 | REVISION<br>2        |

MATCH LINE - SEE SR026A

PHILLIP J. FALCONI

HOU-TAR-06

1210'

1220'

1230'

1240'

1250'

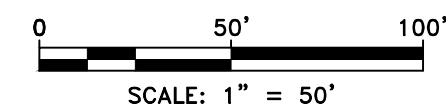
1260'

1270'









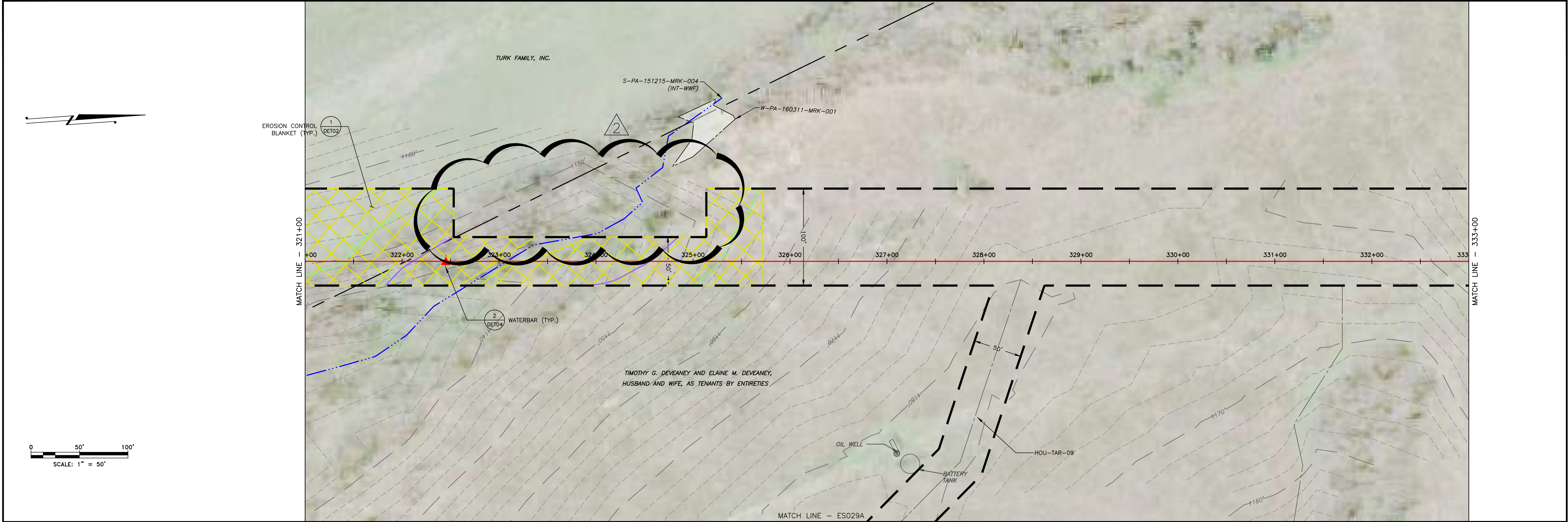
Legend:

- 1550 EXISTING CONTOURS (INDEX)
- EXISTING CONTOURS (INTERMEDIATE)
- EXISTING PROPERTY LINE
- EXISTING STREAM
- EXISTING WETLAND
- SOIL TYPE BOUNDARY AND SOIL BOUNDARY (MrB2)
- LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY (MFL)
- TREE/BRUSH LINE
- PROPOSED PIPELINE
- PROPOSED LIMIT OF DISTURBANCE
- ACCESS ROAD CENTERLINE
- PROPOSED WATERBAR
- PROPOSED EROSION CONTROL BLANKET
- WATERSHED BOUNDARY

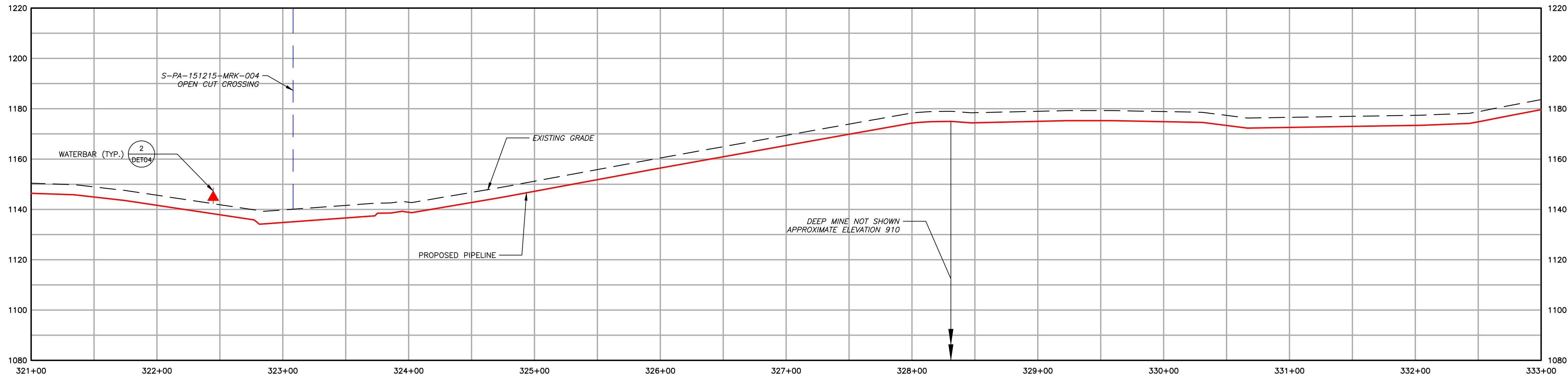
COMMONWEALTH OF  
REGISTERED  
PROFESSIONAL  
BRANDON M. WALKER  
ENGINEER  
PE-977056  
PENNSYLVANIA

|  |  |  |  |
|--|--|--|--|
| <p align="center"><b>FALCON ETHANE PIPELINE SYSTEM</b></p> <p align="center"><b>HOUSTON TO JUNCTION</b></p>  |  | <p align="center"><b>SITE RESTORATION PLAN</b></p> <p align="center"><b>SR028 – (STA. 309+00 TO STA. 321+00)</b></p> <p align="center"><b>WASHINGTON COUNTY</b></p> <p align="center"><b>MOUNT PLEASANT TOWNSHIP</b></p> |  |
| <p>THIS DOCUMENT IS CONFIDENTIAL AND IT SHALL NOT BE REPRODUCED OR REDISTRIBUTED WITHOUT PRIOR PERMISSION. NEITHER THE OPERATOR NOR THE OWNER MAKE ANY WARRANTY AS TO THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION CONTAINED ON THIS DRAWING, AND THE USER ASSUMES ALL RISK OF LOSS TO PERSONS AND PROPERTY AS A RESULT OF RELIANCE THEREON.</p> |  | <p>SCALE 1"=50'</p> <p>DRAWN ARC</p>   | <p>DATE 09/14/17</p> <p>SPLC-GOM-AE-SD119902</p> |
|  |  |  | <p>REVISION 2</p>                                |



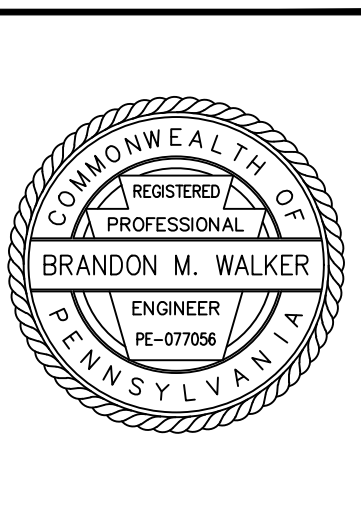


| LAND USE                            | FIELD | WOODS | STREAM | WOODS | FIELD |
|-------------------------------------|-------|-------|--------|-------|-------|
| MIN DEPTH OF COVER (TO TOP OF PIPE) |       | 4'    | 5'     |       | 4'    |



|  |   |
|--|---|
|  | EXISTING CONTOURS (INDEX)<br>EXISTING CONTOURS (INTERMEDIATE)<br>EXISTING PROPERTY LINE<br>EXISTING STREAM<br>EXISTING WETLAND<br>SOIL TYPE BOUNDARY AND SOIL BOUNDARY<br>LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY<br>TREE/BRUSH LINE |
|  | PROPOSED PIPELINE<br>PROPOSED LIMIT OF DISTURBANCE<br>ACCESS ROAD CENTERLINE<br>PROPOSED WATERBAR<br>PROPOSED EROSION CONTROL BLANKET<br>WATERSHED BOUNDARY   |

| GENERAL NOTES: |          |                            |     |     |  |
|----------------|----------|----------------------------|-----|-----|--|
| 2              | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |  |
| 1              | 12/05/17 | REVISED PER CCD/DEP REVIEW | LJS | JWR |  |
| 0              | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |  |
| REV NO         | DATE     | DESCRIPTION OF REVISION    | CHK | APP |  |



| FALCON ETHANE PIPELINE SYSTEM   |                  | SITE RESTORATION PLAN  |               |
|---|------------------|--|---------------|
| HOUSTON TO JUNCTION   |                  | SR029 - (STA. 321+00 TO STA. 333+00)                         |               |
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| SCALE<br>1"=50'   | DATE<br>09/14/17 | SPLC-GOM-AE-SD119903   | REVISION<br>2 |

Filename: \\PROJECTS\747\SHIELD\60488888 - FALCON ETHANE PIPELINE SYSTEM\10-SHEETS\PENNSYLVANIA\SR-PLANS\SR\_PLANS029.DWG  
Last saved by: CESARDA (7/20/2018 5:28 PM)  
Last Plotted: 2018-07-30 (7/30/2018 5:49 PM)





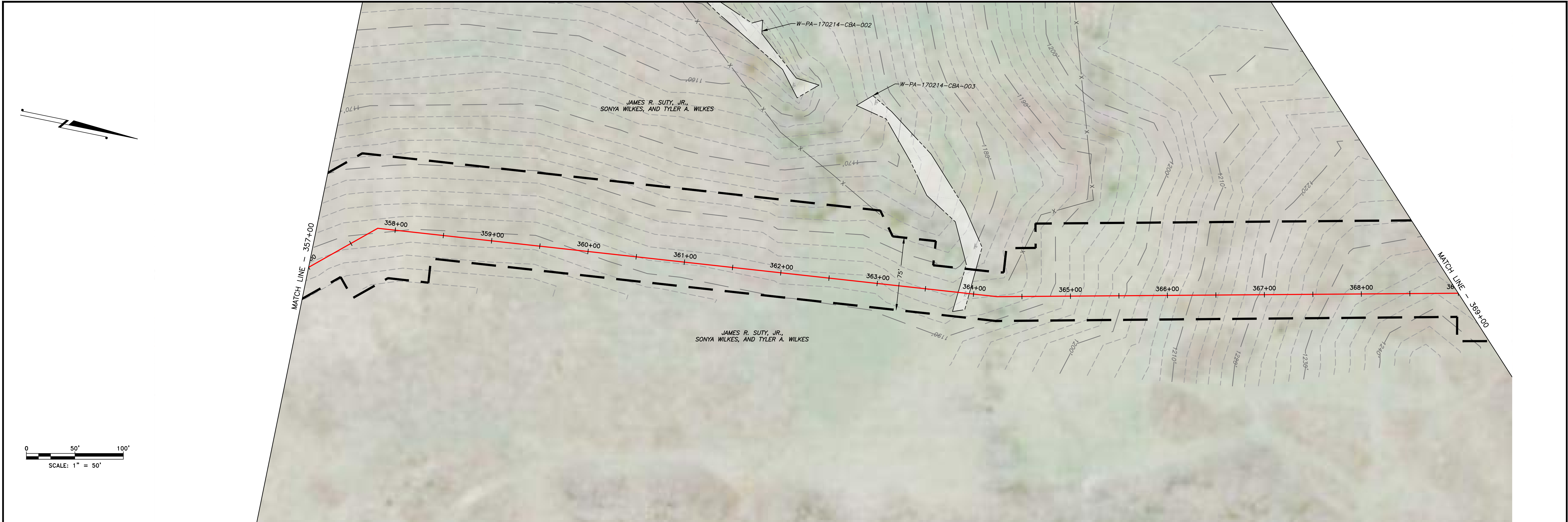




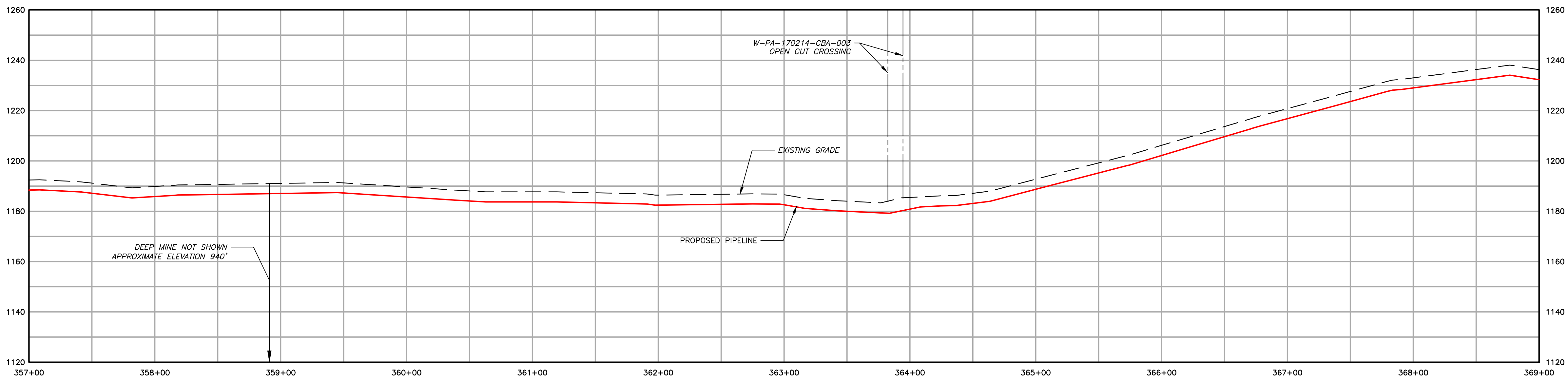








|                                     |       |         |       |
|-------------------------------------|-------|---------|-------|
| LAND USE                            | FIELD | WETLAND | FIELD |
| MIN DEPTH OF COVER (TO TOP OF PIPE) | 4'    | 5'      | 4'    |



- Legend:
- EXISTING CONTOURS (INDEX)
  - EXISTING CONTOURS (INTERMEDIATE)
  - EXISTING PROPERTY LINE
  - EXISTING STREAM
  - EXISTING WETLAND
  - SOIL TYPE BOUNDARY AND SOIL BOUNDARY
  - LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY
  - TREE/BRUSH LINE
  - PROPOSED PIPELINE
  - PROPOSED LIMIT OF DISTURBANCE
  - ACCESS ROAD CENTERLINE
  - PROPOSED WATERBAR
  - PROPOSED EROSION CONTROL BLANKET
  - WATERSHED BOUNDARY

GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | LJS | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

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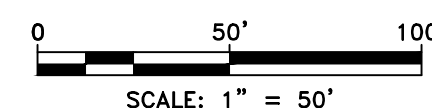
SITE RESTORATION PLAN  
SR032 - (STA. 357+00 TO STA. 369+00)  
WASHINGTON COUNTY  
MOUNT PLEASANT TOWNSHIP  
PENNSYLVANIA

|              |               |                      |            |
|--------------|---------------|----------------------|------------|
| SCALE 1"=50' | DATE 09/14/17 | SPLC-GOM-AE-SD119906 | REVISION 2 |
|--------------|---------------|----------------------|------------|

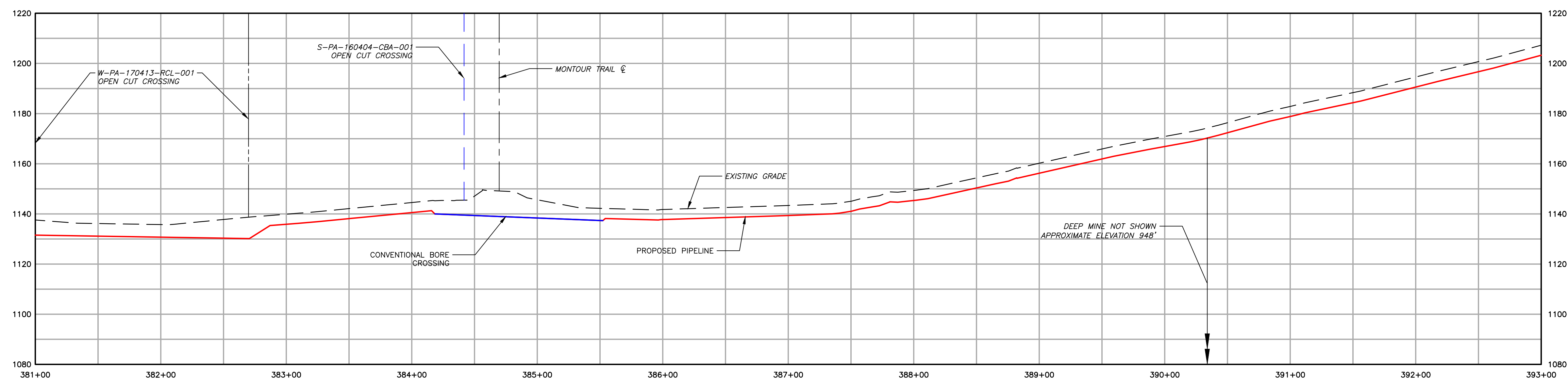








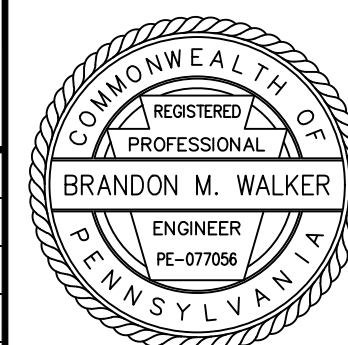
|                                     |         |       |       |       |        |       |       |       |
|-------------------------------------|---------|-------|-------|-------|--------|-------|-------|-------|
| LAND USE                            | WETLAND | WOODS | FIELD | WOODS | STREAM | WOODS | WOODS | FIELD |
| MIN DEPTH OF COVER (TO TOP OF PIPE) | 5'      |       | 4'    | 5'    | 4'     | 5'    | ROAD  | 4'    |



|  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBAR                |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  | WATERSHED BOUNDARY               |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

GENERAL NOTES:

| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW |  | ARG | BMW |
|--------|----------|----------------------------|--|-----|-----|
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW |  | LJS | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          |  | BMW | JWR |
| REV NO | DATE     | DESCRIPTION OF REVISION    |  | CHK | APP |



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FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

THIS DOCUMENT IS CONFIDENTIAL AND IT SHALL NOT BE REPRODUCED OR REDISTRIBUTED WITHOUT PRIOR PERMISSION. NEITHER THE OPERATOR NOR THE OWNER MAKE ANY WARRANTY AS TO THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION CONTAINED ON THIS DRAWING, AND THE USER ASSUMES ALL RISK OF LOSS TO PERSONS AND PROPERTY AS A RESULT OF RELIANCE THEREON.

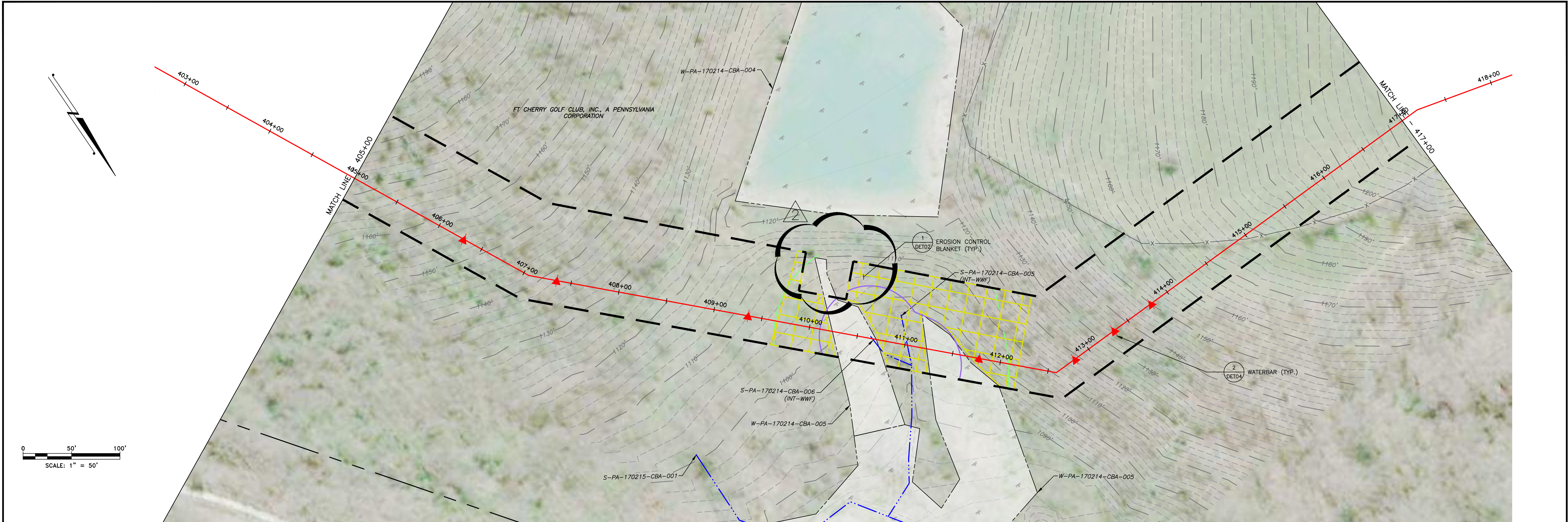
|  |  |
|--|--|
| SITE RESTORATION PLAN<br>SR034 - (STA. 381+00 TO STA. 393+00)<br>WASHINGTON COUNTY PENNSYLVANIA<br>MOUNT PLEASANT TOWNSHIP |  |
|--|--|

|       |        |          |                      |               |
|-------|--------|----------|----------------------|---------------|
| SCALE | 1"=50' | DATE     | SPLC-GOM-AE-SD119908 | REVISION<br>2 |
| DRAWN | ARC    | 09/14/17 |                      |               |

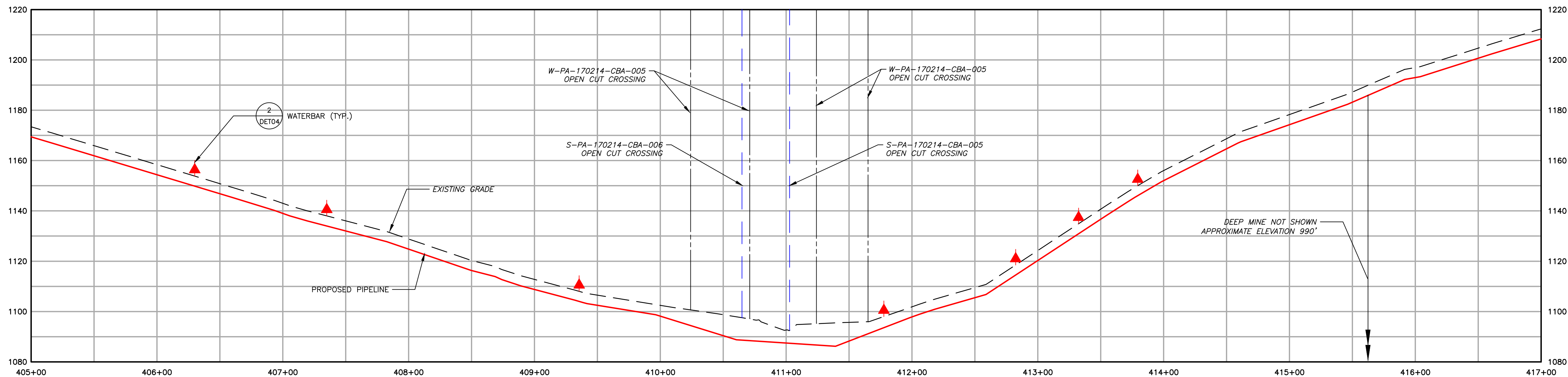








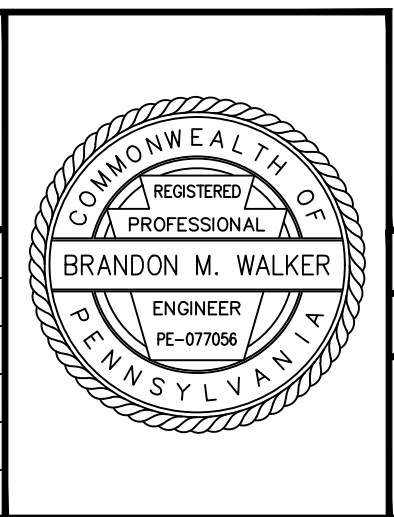
|                                     |       |         |       |         |       |       |
|-------------------------------------|-------|---------|-------|---------|-------|-------|
| LAND USE                            | WOODS | WETLAND | WOODS | WETLAND | WOODS | FIELD |
| MIN DEPTH OF COVER (TO TOP OF PIPE) | 4'    | 5'      | 4'    | 5'      | 4'    |       |



Filename: \\PROJECTS\747\SHIELD\6048885 - FALCON SR036-WORPA\11-ENVIRONMENTAL\20-SHEETS\PENNSYLVANIA\SR-PLANS\SR\_PLANS025.DWG  
Last saved by: CESARDA (7/20/2018 5:28 PM)  
Last Plotted: 2018-07-30 (7/30/2018 5:57 PM)

|  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBAR                |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  | WATERSHED BOUNDARY               |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

| GENERAL NOTES: |          |                            |     |     |  |
|----------------|----------|----------------------------|-----|-----|--|
| 2              | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |  |
| 1              | 12/05/17 | REVISED PER CCD/DEP REVIEW | LJS | JWR |  |
| 0              | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |  |
| REV NO         | DATE     | DESCRIPTION OF REVISION    | CHK | APP |  |



|   |                  |  |               |
|---|------------------|--|---------------|
| FALCON ETHANE PIPELINE SYSTEM   |                  | SITE RESTORATION PLAN  |               |
| HOUSTON TO JUNCTION   |                  | SR036 - (STA. 405+00 TO STA. 417+00)                         |               |
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| SCALE<br>1"=50'   | DATE<br>09/14/17 | SPLC-GOM-AE-SD119910   | REVISION<br>2 |

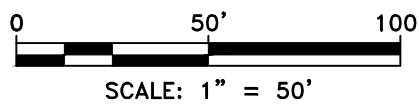








MATCH LINE - SEE SR037



- |        |  |                                  |
|--------|--|----------------------------------|
| 1,550' | EXISTING CONTOURS (INDEX)                    | PROPOSED PIPELINE                |
| ---    | EXISTING CONTOURS (INTERMEDIATE)             | PROPOSED LIMIT OF DISTURBANCE    |
| ---    | EXISTING PROPERTY LINE                       | ACCESS ROAD CENTERLINE           |
| ---    | EXISTING STREAM                              | PROPOSED WATERBARS               |
| ---    | EXISTING WETLAND                             | PROPOSED EROSION CONTROL BLANKET |
| MrB2   | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |                                  |
| MEL    | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |                                  |
| ---    | TREE/BRUSH LINE                              |                                  |

GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | BMW | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



| FALCON ETHANE PIPELINE SYSTEM   |  | SITE RESTORATION PLAN |               |
|---|--|-----------------------|---------------|
| HOUSTON TO JUNCTION   |  | SR037A - (HOU-TAR-11) |               |
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| MOUNT PLEASANT TOWNSHIP   |  | SCALE 1"=50'          | DATE 09/14/17 |
| DRAWN ARC   |  | SPLC-GOM-AE-SD120115  | REVISION 2    |

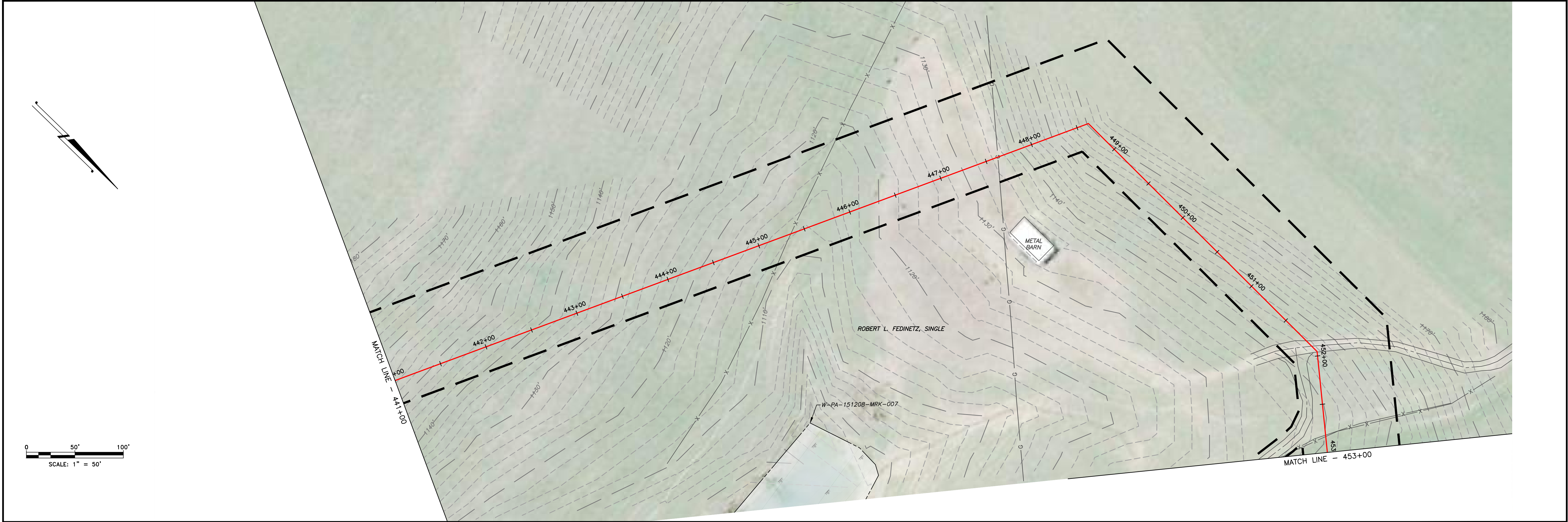




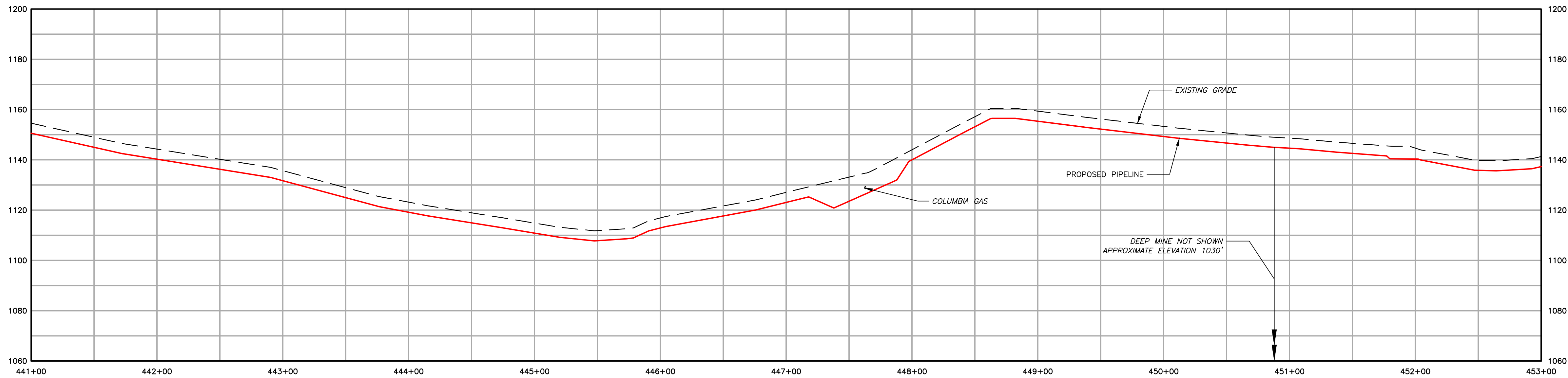








|                                     |       |
|-------------------------------------|-------|
| LAND USE                            | FIELD |
| MIN DEPTH OF COVER (TO TOP OF PIPE) | 4'    |



|  |                                  |
|--|----------------------------------|
|  |                                  |
| EXISTING CONTOURS (INDEX)                    | PROPOSED PIPELINE                |
| EXISTING CONTOURS (INTERMEDIATE)             | PROPOSED LIMIT OF DISTURBANCE    |
| EXISTING PROPERTY LINE                       | ACCESS ROAD CENTERLINE           |
| EXISTING STREAM                              | PROPOSED WATERBAR                |
| EXISTING WETLAND                             | PROPOSED EROSION CONTROL BLANKET |
| SOIL TYPE BOUNDARY AND SOIL BOUNDARY         | WATERSHED BOUNDARY               |
| LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |                                  |
| TREE/BRUSH LINE                              |                                  |

| GENERAL NOTES: |          |                            |     |     |  |
|----------------|----------|----------------------------|-----|-----|--|
| 2              | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |  |
| 1              | 12/05/17 | REVISED PER CCD/DEP REVIEW | LJS | JWR |  |
| 0              | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |  |
| REV NO         | DATE     | DESCRIPTION OF REVISION    | CHK | APP |  |

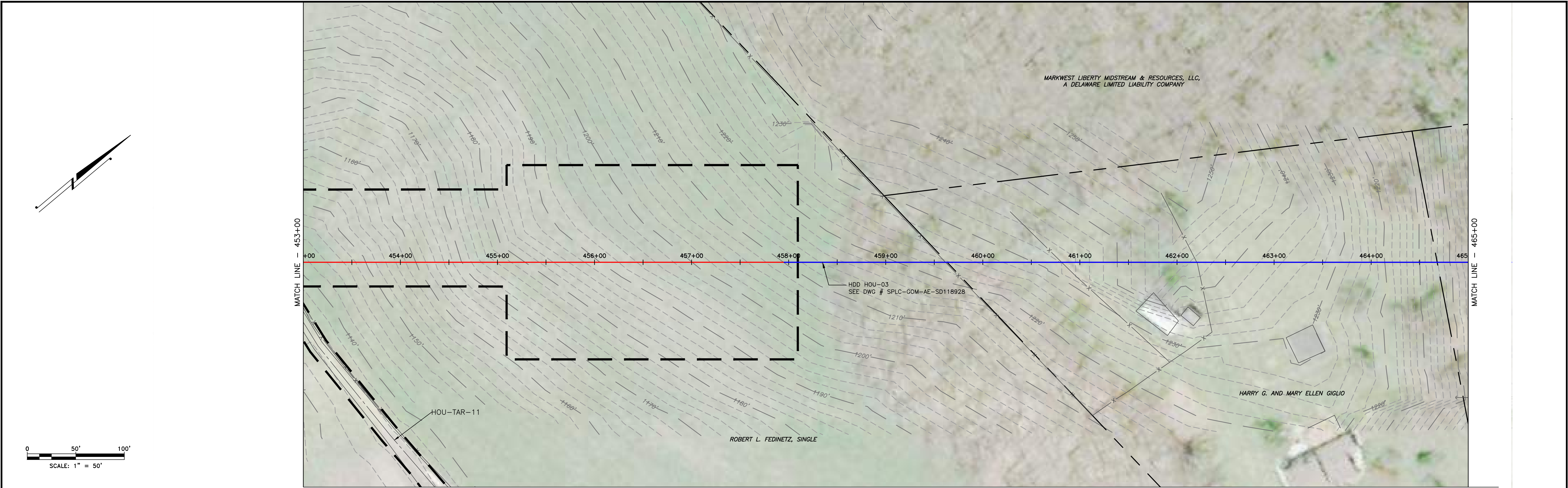


|   |                  |  |               |
|---|------------------|--|---------------|
| FALCON ETHANE PIPELINE SYSTEM   |                  | SITE RESTORATION PLAN  |               |
| HOUSTON TO JUNCTION   |                  | SR039 - (STA. 441+00 TO STA. 453+00)                         |               |
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| SCALE<br>1"=50'   | DATE<br>09/14/17 | SPLC-GOM-AE-SD119913   | REVISION<br>2 |

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Last saved by: ALEXANDER.CURTICE (7/30/2018 1:36 PM) Last Plotted: 2018-07-30 (7/30/2018 5:37 PM)



| LAND USE                            | FIELD | WOODS | FIELD | FIELD | WOODS |
|-------------------------------------|-------|-------|-------|-------|-------|
| MIN DEPTH OF COVER (TO TOP OF PIPE) | 4'    |       | 4'    | 4'    |       |



- 1550'

EXISTING CONTOURS (INDEX)

1550'

EXISTING CONTOURS (INTERMEDIATE)

EXISTING PROPERTY LINE

EXISTING STREAM

EXISTING WETLAND

SOIL TYPE BOUNDARY AND SOIL BOUNDARY

EXISTING WETLAND

LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY

TREE/BRUSH LINE

PROPOSED PIPELINE

PROPOSED LIMIT OF DISTURBANCE

ACCESS ROAD CENTERLINE

PROPOSED WATERBAR

PROPOSED EROSION CONTROL BLANKET

WATERSHED BOUNDARY

GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | LJS | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



| FALCON ETHANE PIPELINE SYSTEM   |                  | SITE RESTORATION PLAN  |               |
|---|------------------|--|---------------|
| HOUSTON TO JUNCTION   |                  | SR040 - (STA. 453+00 TO STA. 465+00)                         |               |
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| SCALE<br>1"=50'   | DATE<br>09/14/17 | SPLC-GOM-AE-SD119914   | REVISION<br>2 |





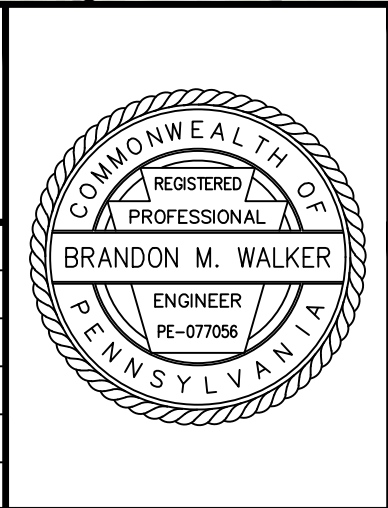


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Last saved by: ALEXANDER CURTICE (7/20/2018 4:23 PM) Last Plotted: 2018-07-31 (7/31/2018 10:28 AM)



|  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBARS               |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  |                                  |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

| GENERAL NOTES: |          |                            |     |     |  |
|----------------|----------|----------------------------|-----|-----|--|
|                |          |                            |     |     |  |
| 2              | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |  |
| 1              | 12/05/17 | REVISED PER CCD/DEP REVIEW | BMW | JWR |  |
| 0              | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |  |
| REV NO         | DATE     | DESCRIPTION OF REVISION    | CHK | APP |  |



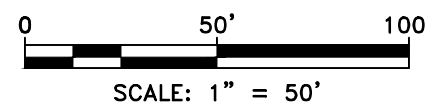
| FALCON ETHANE PIPELINE SYSTEM   |        | SITE RESTORATION PLAN                |          |
|---|--------|--------------------------------------|----------|
| HOUSTON TO JUNCTION   |        | SR041A - (HOU-TAR-13)                |          |
| THIS DOCUMENT IS CONFIDENTIAL AND IT SHALL NOT BE REPRODUCED OR REDISTRIBUTED WITHOUT PRIOR PERMISSION. NEITHER THE OPERATOR NOR THE OWNER MAKE ANY WARRANTY AS TO THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION CONTAINED ON THIS DRAWING, AND THE USER ASSUMES ALL RISK OF LOSS TO PERSONS AND PROPERTY AS A RESULT OF RELIANCE THEREON. |        | WASHINGTON COUNTY                    |          |
|   |        | MOUNT PLEASANT AND ROBINSON TOWNSHIP |          |
| SCALE   | 1"=50' | DATE                                 | 09/14/17 |
| DRAWN   | ARC    | REVISION                             | 2        |







Filename: \\projects\1747\shell\6048885 - FALCON 900-WORK\911-ENVIRONMENTAL\20-SHEETS\PENNSYLVANIA\SR-PLANS\SR-PLAN042A.DWG  
Last saved by: ALEXANDER CURTICE (7/20/2018 4:22 PM) Last Plotted: 2018-07-31 (7/31/2018 10:29 AM)



- |  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBARS               |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  |                                  |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | BMW | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

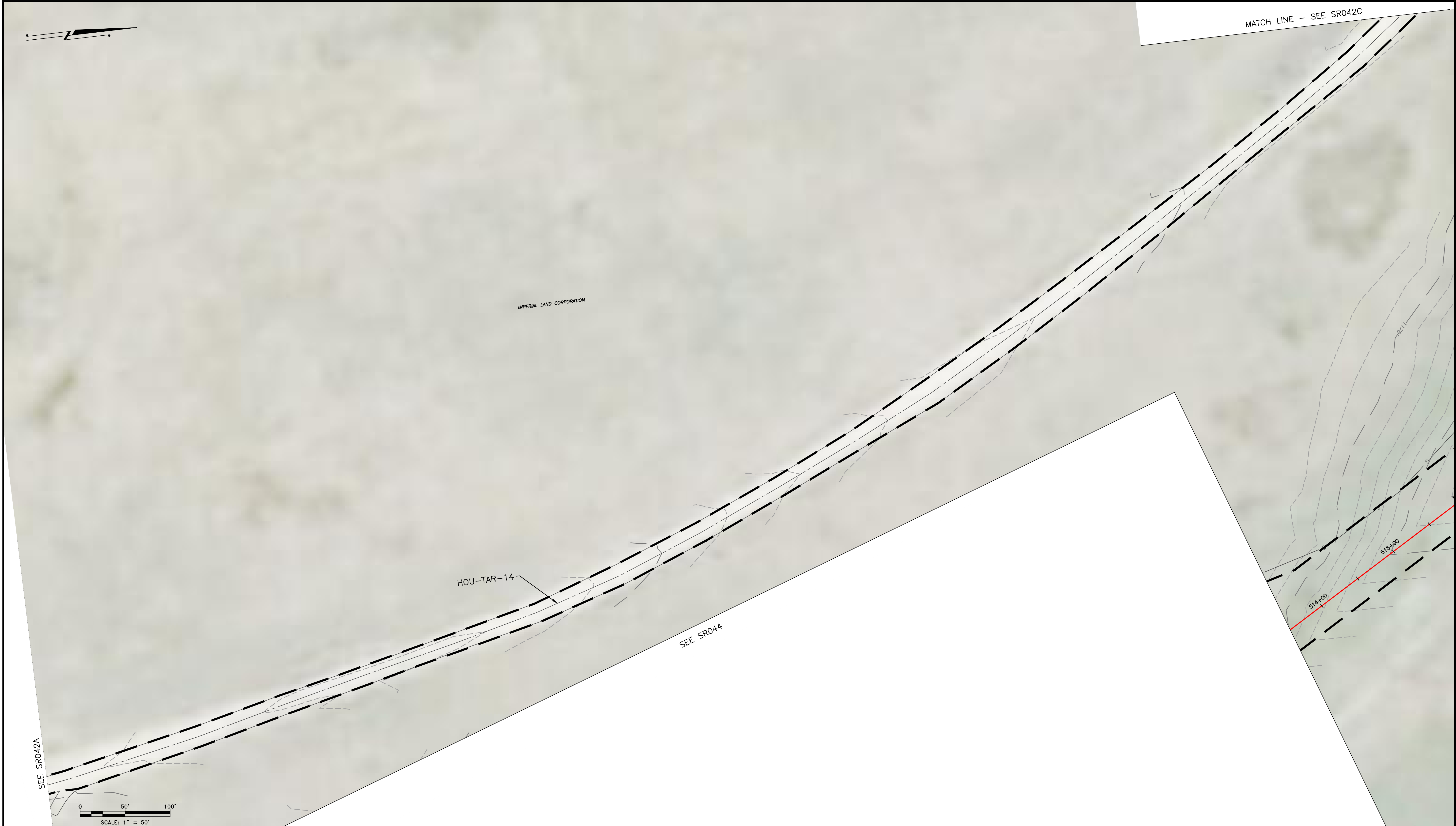
THIS DOCUMENT IS CONFIDENTIAL AND IT SHALL NOT BE REPRODUCED OR REDISTRIBUTED WITHOUT PRIOR PERMISSION. NEITHER THE OPERATOR NOR THE OWNER MAKE ANY WARRANTY AS TO THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION CONTAINED ON THIS DRAWING, AND THE USER ASSUMES ALL RISK OF LOSS TO PERSONS AND PROPERTY AS A RESULT OF RELIANCE THEREON.

SITE RESTORATION PLAN  
SR042A - (HOU-TAR-14)  
WASHINGTON COUNTY  
ROBINSON TOWNSHIP  
PENNSYLVANIA

|       |        |      |          |                      |          |   |
|-------|--------|------|----------|----------------------|----------|---|
| SCALE | 1"=50' | DATE | 09/14/17 | SPLC-GOM-AE-SD120118 | REVISION | 2 |
| DRAWN | ARC    |      |          |                      |          |   |



Filename: \\projects\1747\shell\60489885 - FALCON 900-WORK\911-ENVIRONMENTAL\20-SHEETS\PENNSYLVANIA\SR-PLANS\SR-PLAN042B.DWG  
Last saved by: ALEXANDER CURTICE (7/20/2018 4:21 PM) Last Plotted: 2018-07-31 (7/31/2018 10:30 AM)



- |           |  |           |                                  |
|-----------|--|-----------|----------------------------------|
| — 1,550 — | EXISTING CONTOURS (INDEX)                    | — — — — — | PROPOSED PIPELINE                |
| - - - - - | EXISTING CONTOURS (INTERMEDIATE)             | - - - - - | PROPOSED LIMIT OF DISTURBANCE    |
| - - - - - | EXISTING PROPERTY LINE                       | - - - - - | ACCESS ROAD CENTERLINE           |
| - - - - - | EXISTING STREAM                              | ▲         | PROPOSED WATERBARS               |
| - - - - - | EXISTING WETLAND                             | XXXXXX    | PROPOSED EROSION CONTROL BLANKET |
| MrB2      | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |           |                                  |
| MEL       | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |           |                                  |
| ~~~~~     | TREE/BRUSH LINE                              |           |                                  |

GENERAL NOTES:

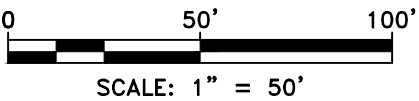
| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | BMW | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



| FALCON ETHANE PIPELINE SYSTEM   |  | SITE RESTORATION PLAN                  |                  |
|---|--|--|------------------|
| HOUSTON TO JUNCTION   |  | SR042B - (HOU-TAR-14)                  |                  |
| THIS DOCUMENT IS CONFIDENTIAL AND IT SHALL NOT BE REPRODUCED OR REDISTRIBUTED WITHOUT PRIOR PERMISSION. NEITHER THE OPERATOR NOR THE OWNER MAKE ANY WARRANTY AS TO THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION CONTAINED ON THIS DRAWING, AND THE USER ASSUMES ALL RISK OF LOSS TO PERSONS AND PROPERTY AS A RESULT OF RELIANCE THEREON. |  | WASHINGTON COUNTY<br>ROBINSON TOWNSHIP |                  |
|   |  | SCALE<br>1"=50'                        | DATE<br>09/14/17 |
|   |  | SPLC-GOM-AE-SD120119                   |                  |
|   |  | REVISION<br>2                          |                  |



Filepath: \\projects\1747\shell\60489885 - FALCON 900-WORK\911-ENVIRONMENTAL\20-SHEETS\PENNSYLVANIA\SR-PLANS\SR\_PLAN042C.DWG  
Last saved by: ALEXANDER CURTICE (7/20/2018 4:20 PM) Last Plotted: 2018-07-31 (7/31/2018 10:31 AM)



- |  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBARS               |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  |                                  |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | BMW | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

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SITE RESTORATION PLAN  
SR042C - (HOU-TAR-14)  
WASHINGTON COUNTY  
ROBINSON TOWNSHIP  
PENNSYLVANIA

|       |        |      |          |                      |          |
|-------|--------|------|----------|----------------------|----------|
| SCALE | 1"=50' | DATE | 09/14/17 | SPLC-GOM-AE-SD120120 | REVISION |
| DRAWN | ARC    |      |          |                      | 2        |



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Last saved by: ALEXANDER CURTICE (7/20/2018 4:18 PM) Last Plotted: 2018-07-31 (7/31/2018 10:31 AM)



- |       |  |                                  |
|-------|--|----------------------------------|
| 1,550 | EXISTING CONTOURS (INDEX)                    | PROPOSED PIPELINE                |
| ---   | EXISTING CONTOURS (INTERMEDIATE)             | PROPOSED LIMIT OF DISTURBANCE    |
| ---   | EXISTING PROPERTY LINE                       | ACCESS ROAD CENTERLINE           |
| ---   | EXISTING STREAM                              | PROPOSED WATERBARS               |
| ---   | EXISTING WETLAND                             | PROPOSED EROSION CONTROL BLANKET |
| MrB2  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |                                  |
| MEL   | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |                                  |
| ---   | TREE/BRUSH LINE                              |                                  |

GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | BMW | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

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| SITE RESTORATION PLAN<br>SR042D - (HOU-TAR-15)<br>WASHINGTON COUNTY<br>ROBINSON TOWNSHIP<br>PENNSYLVANIA |        |          |               |
|--|--------|----------|---------------|
| SCALE  | 1"=50' | DATE     |               |
| DRAWN  | ARC    | 09/14/17 |               |
| SPLC-GOM-AE-SD120121   |        |          | REVISION<br>2 |



Filename: \\projects\1747\shell\60489885 - FALCON 900-WORK\911-ENVIRONMENTAL\20-SHEETS\PENNSYLVANIA\SR-PLANS\SR\_PLAN042E.DWG  
Last saved by: ALEXANDER CURTICE (7/20/2018 4:16 PM) Last Plotted: 2018-07-31 (7/31/2018 10:32 AM)



- |       |  |                                  |
|-------|--|----------------------------------|
| 1,550 | EXISTING CONTOURS (INDEX)                    | PROPOSED PIPELINE                |
| ---   | EXISTING CONTOURS (INTERMEDIATE)             | PROPOSED LIMIT OF DISTURBANCE    |
| ---   | EXISTING PROPERTY LINE                       | ACCESS ROAD CENTERLINE           |
| ---   | EXISTING STREAM                              | PROPOSED WATERBARS               |
| ---   | EXISTING WETLAND                             | PROPOSED EROSION CONTROL BLANKET |
| ---   | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |                                  |
| ---   | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |                                  |
| ---   | TREE/BRUSH LINE                              |                                  |

GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | BMW | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

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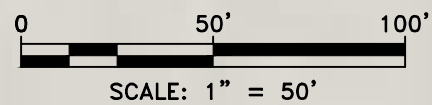
SITE RESTORATION PLAN  
SR042E - (HOU-TAR-14)  
WASHINGTON COUNTY  
ROBINSON TOWNSHIP  
PENNSYLVANIA

|       |        |      |          |          |   |
|-------|--------|------|----------|----------|---|
| SCALE | 1"=50' | DATE | 09/14/17 | REVISION | 2 |
| DRAWN | ARC    |      |          |          |   |

SPLC-GOM-AE-SD120122



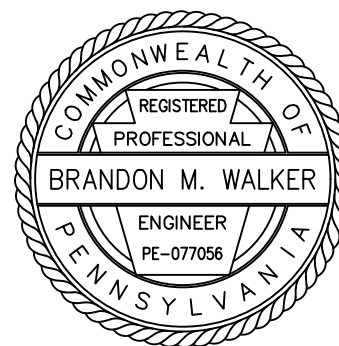
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Last saved by: ALEXANDER CURTICE (7/20/2018 4:03 PM) Last Plotted: 2018-07-31 (7/31/2018 10:33 AM)



- |  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBARS               |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  |                                  |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | BMW | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

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SITE RESTORATION PLAN  
SR042F - (HOU-TAR-15)  
WASHINGTON COUNTY  
ROBINSON TOWNSHIP  
PENNSYLVANIA

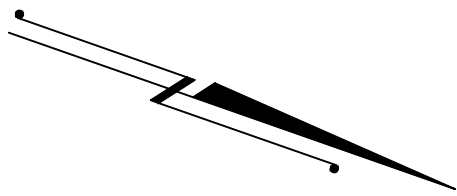
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| SCALE | 1"=50' | DATE | 09/14/17 | SPLC-GOM-AE-SD120123 | REVISION |
| DRAWN | ARC    |      |          |                      | 2        |



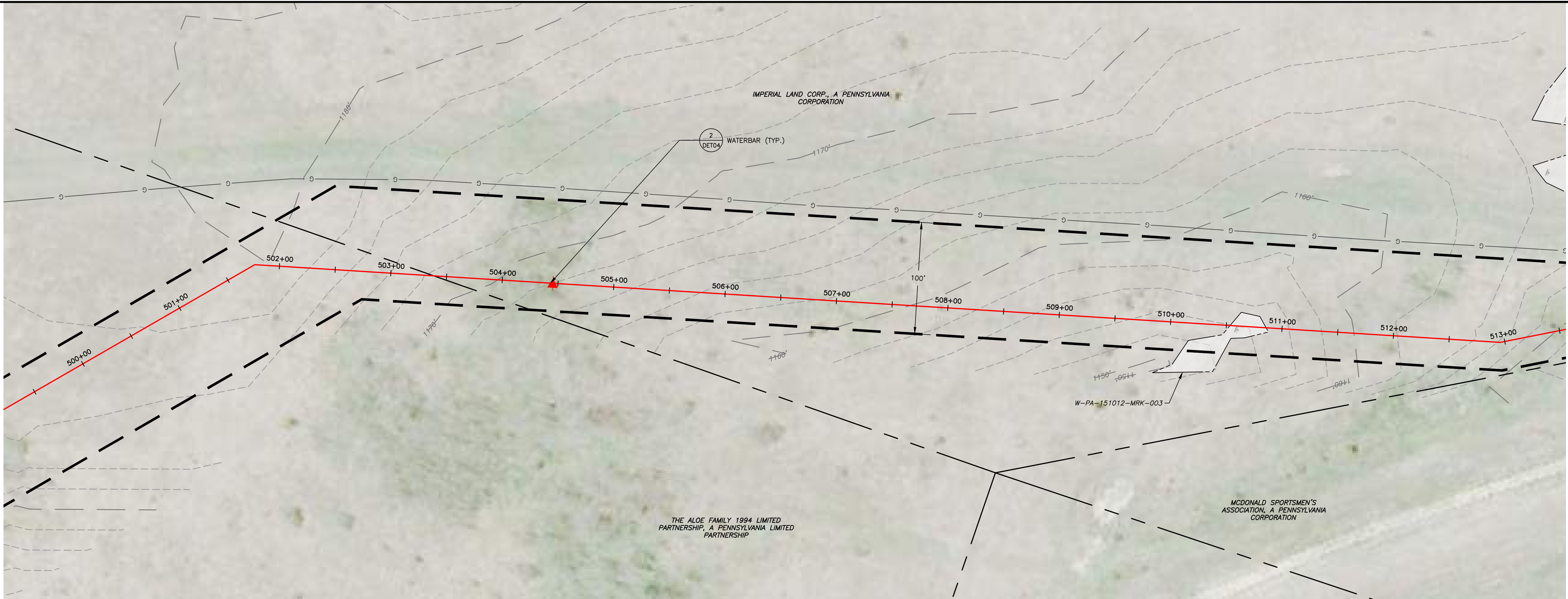




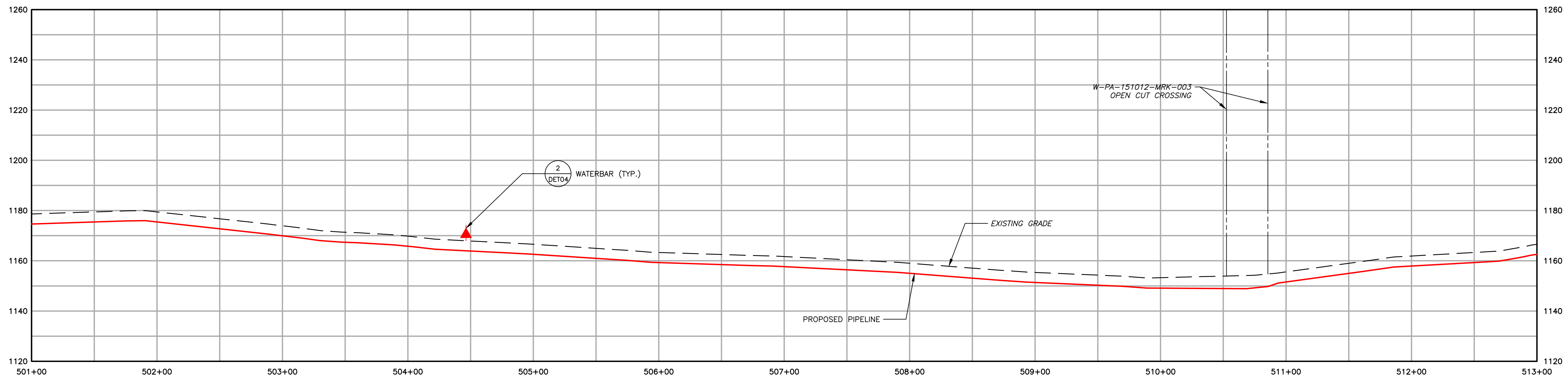
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Last saved by: ALEXANDER.CURTICE (7/30/2018 1:35 PM) Last Plotted: 2018-07-30 (7/30/2018 5:47 PM)



0 50' 100'  
SCALE: 1" = 50'



| LAND USE                            | FIELD | WOODS | FIELD | WETLAND | FIELD |
|-------------------------------------|-------|-------|-------|---------|-------|
| MIN DEPTH OF COVER (TO TOP OF PIPE) |       | 4'    |       | 5'      | 4'    |



- |  |  |  |                                  |
|--|--|--|----------------------------------|
|  | EXISTING CONTOURS (INDEX)                    |  | PROPOSED PIPELINE                |
|  | EXISTING CONTOURS (INTERMEDIATE)             |  | PROPOSED LIMIT OF DISTURBANCE    |
|  | EXISTING PROPERTY LINE                       |  | ACCESS ROAD CENTERLINE           |
|  | EXISTING STREAM                              |  | PROPOSED WATERBAR                |
|  | EXISTING WETLAND                             |  | PROPOSED EROSION CONTROL BLANKET |
|  | SOIL TYPE BOUNDARY AND SOIL BOUNDARY         |  | WATERSHED BOUNDARY               |
|  | LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |  |                                  |
|  | TREE/BRUSH LINE                              |  |                                  |

GENERAL NOTES:

| REV NO | DATE     | DESCRIPTION OF REVISION    | CHK | APP |
|--------|----------|----------------------------|-----|-----|
| 2      | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |
| 1      | 12/05/17 | REVISED PER CCD/DEP REVIEW | LJS | JWR |
| 0      | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |



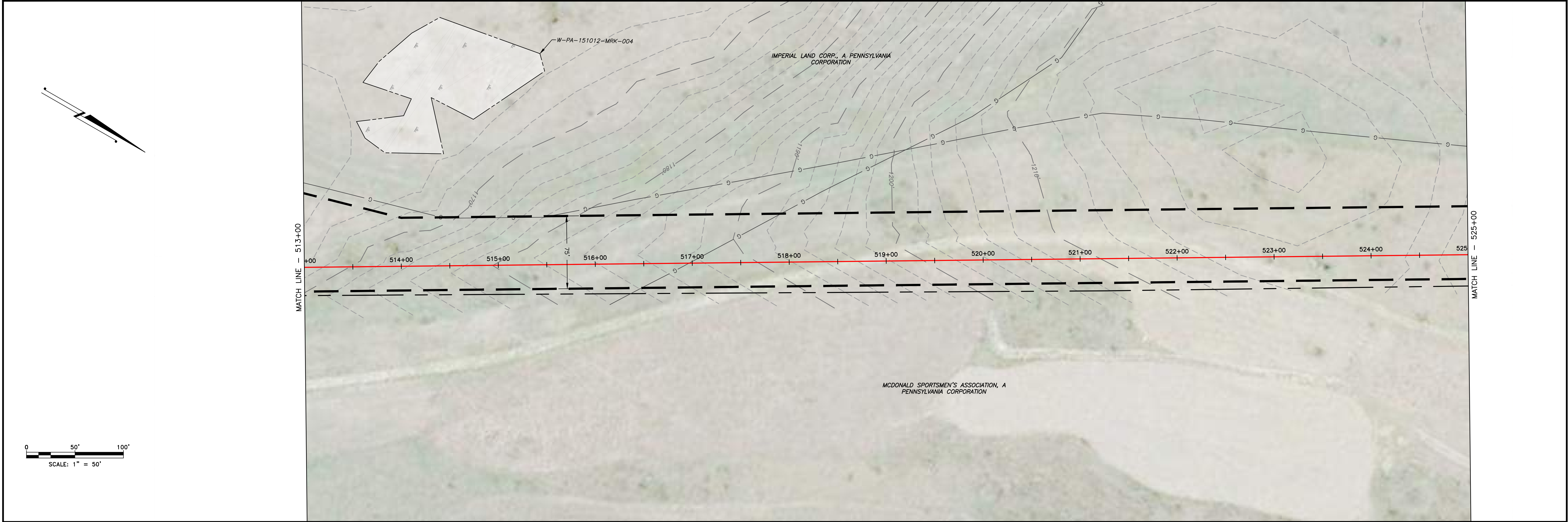
FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

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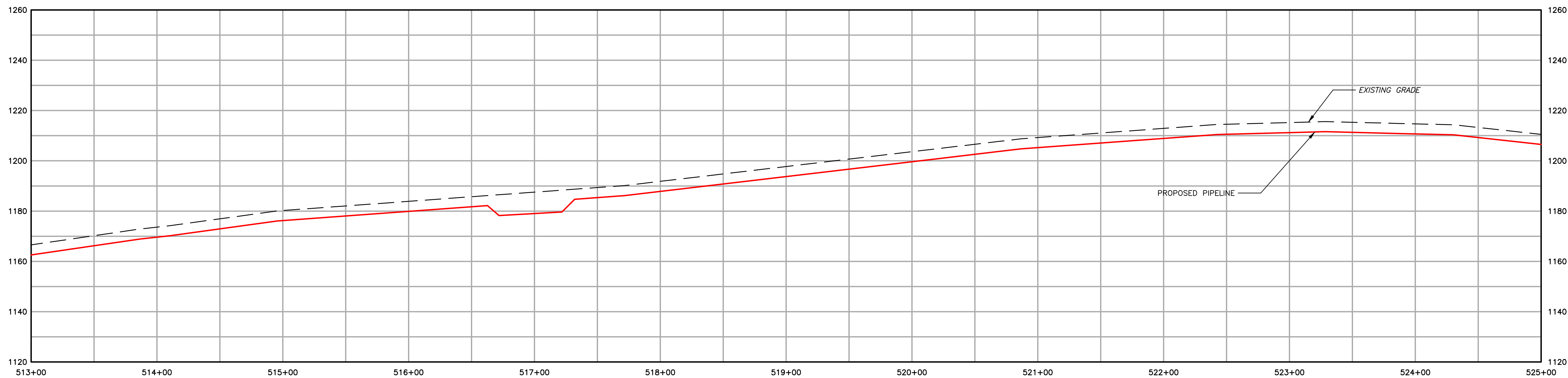
SITE RESTORATION PLAN  
SR044 - (STA. 501+00 TO STA. 513+00)  
WASHINGTON COUNTY  
ROBINSON TOWNSHIP  
PENNSYLVANIA

|               |                |                      |             |
|---------------|----------------|----------------------|-------------|
| SCALE: 1"=50' | DATE: 09/14/17 | SPLC-GOM-AE-SD119918 | REVISION: 2 |
| DRAWN: ARC    |                |                      |             |





|                                     |       |
|-------------------------------------|-------|
| LAND USE                            | FIELD |
| MIN DEPTH OF COVER (TO TOP OF PIPE) | 4'    |



1550

EXISTING CONTOURS (INDEX)

EXISTING CONTOURS (INTERMEDIATE)

EXISTING PROPERTY LINE

EXISTING STREAM

EXISTING WETLAND

MrB2

SOIL TYPE BOUNDARY AND SOIL BOUNDARY

MFL

LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY

TREE/BRUSH LINE

PROPOSED PIPELINE

PROPOSED LIMIT OF DISTURBANCE

ACCESS ROAD CENTERLINE

PROPOSED WATERBAR

PROPOSED EROSION CONTROL BLANKET

WATERSHED BOUNDARY

| GENERAL NOTES: |          |                            |     |     |  |
|----------------|----------|----------------------------|-----|-----|--|
| REV NO         | DATE     | DESCRIPTION OF REVISION    | CHK | APP |  |
| 2              | 08/01/18 | REVISED PER CCD/DEP REVIEW | ARG | BMW |  |
| 1              | 12/05/17 | REVISED PER CCD/DEP REVIEW | LJS | JWR |  |
| 0              | 09/14/17 | ISSUED FOR PERMIT          | BMW | JWR |  |

FALCON ETHANE PIPELINE SYSTEM

HOUSTON TO JUNCTION

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SITE RESTORATION PLAN

SR045 - (STA. 513+00 TO STA. 525+00)

WASHINGTON COUNTY

ROBINSON TOWNSHIP

PENNSYLVANIA

SCALE 1"=50'

DATE 09/14/17

DRAWN ARC

SPLC-GOM-AE-SD119919

REVISION 2

Filename: \\PROJECTS\\1747\\SHEL\\6048885 - FALCON\\300-WORK\\311-ENVIRONMENTAL\\20-SHEETS\\PENNSYLVANIA\\SR-PLANS\\SR\_PLANS045.DWG  
Last saved by: ALEXANDER.CURTICE (7/30/2018 12:20 PM) Last Plotter: 2018-07-30 (7/30/2018 5:48 PM)