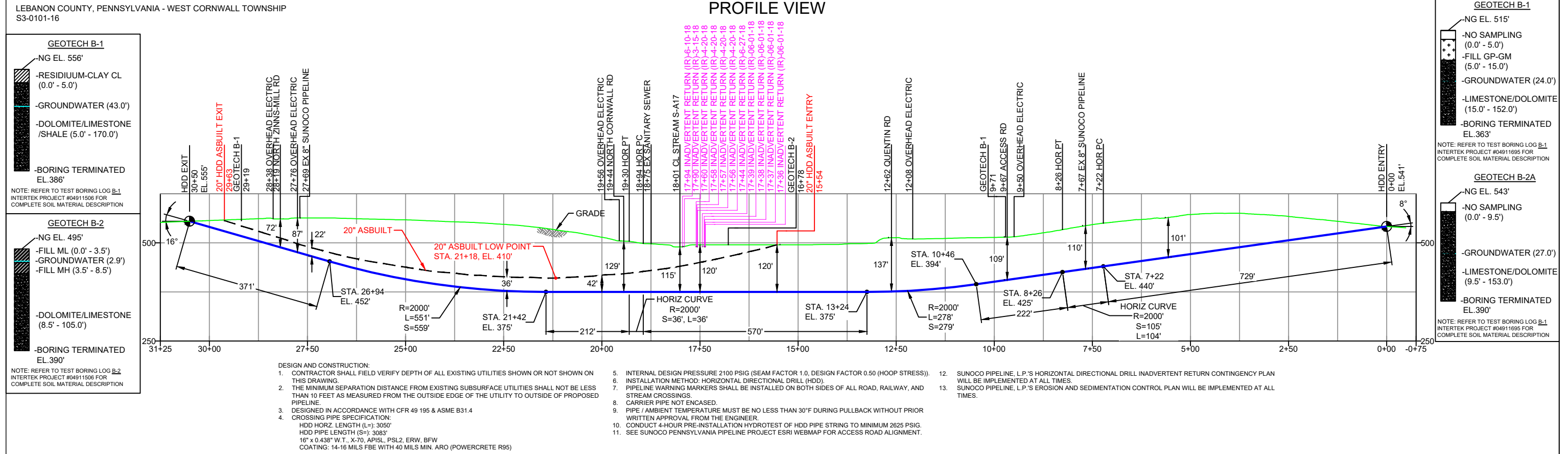


PLAN VIEW

PROFILE VIEW



- DESIGN AND CONSTRUCTION:
- CONTRACTOR SHALL FIELD VERIFY DEPTH OF ALL EXISTING UTILITIES SHOWN OR NOT SHOWN ON THIS DRAWING.
  - THE MINIMUM SEPARATION DISTANCE FROM EXISTING SUBSURFACE UTILITIES SHALL NOT BE LESS THAN 10 FEET AS MEASURED FROM THE OUTSIDE EDGE OF THE UTILITY TO OUTSIDE OF PROPOSED PIPELINE.
  - DESIGNED IN ACCORDANCE WITH CFR 49 195 & ASME B31.4
  - CROSSING PIPE SPECIFICATION:  
HDD HORZ. LENGTH (L=): 3050'  
HDD PIPE LENGTH (S=): 3083'  
16" x 0.438" W.T., X-70, APISL, PSL2, ERW, BFW  
COATING: 14-16 MILS FBE WITH 40 MILS MIN. ARO (POWERCRETE R95)
  - INTERNAL DESIGN PRESSURE 2100 PSIG (SEAM FACTOR 1.0, DESIGN FACTOR 0.50 (HOOP STRESS)).
  - INSTALLATION METHOD: HORIZONTAL DIRECTIONAL DRILL (HDD).
  - PIPELINE WARNING MARKERS SHALL BE INSTALLED ON BOTH SIDES OF ALL ROAD, RAILWAY, AND STREAM CROSSINGS.
  - CARRIER PIPE NOT ENCASED.
  - PIPE / AMBIENT TEMPERATURE MUST BE NO LESS THAN 30°F DURING PULLBACK WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER.
  - CONDUCT 4-HOUR PRE-INSTALLATION HYDROTEST OF HDD PIPE STRING TO MINIMUM 2625 PSIG.
  - SEE SUNOCO PENNSYLVANIA PIPELINE PROJECT ESRI WEBMAP FOR ACCESS ROAD ALIGNMENT.
  - SUNOCO PIPELINE, L.P.'S HORIZONTAL DIRECTIONAL DRILL INADVERTENT RETURN CONTINGENCY PLAN WILL BE IMPLEMENTED AT ALL TIMES.
  - SUNOCO PIPELINE, L.P.'S EROSION AND SEDIMENTATION CONTROL PLAN WILL BE IMPLEMENTED AT ALL TIMES.

**GEOTECH B-1**  
NG EL. 556'  
-RESIDUUM-CLAY CL (0.0' - 5.0')  
-GROUNDWATER (43.0')  
-DOLOMITE/LIMESTONE /SHALE (5.0' - 170.0')  
-BORING TERMINATED EL. 386'

NOTE: REFER TO TEST BORING LOG B-1 INTERTEK PROJECT #04911506 FOR COMPLETE SOIL MATERIAL DESCRIPTION

**GEOTECH B-2**  
NG EL. 495'  
-FILL ML (0.0' - 3.5')  
-GROUNDWATER (2.9')  
-FILL MH (3.5' - 8.5')  
-DOLOMITE/LIMESTONE (8.5' - 105.0')  
-BORING TERMINATED EL. 390'

NOTE: REFER TO TEST BORING LOG B-2 INTERTEK PROJECT #04911506 FOR COMPLETE SOIL MATERIAL DESCRIPTION

**GEOTECH B-1**  
NG EL. 515'  
-NO SAMPLING (0.0' - 5.0')  
-FILL GP-GM (5.0' - 15.0')  
-GROUNDWATER (24.0')  
-LIMESTONE/DOLOMITE (15.0' - 152.0')  
-BORING TERMINATED EL. 363'

NOTE: REFER TO TEST BORING LOG B-1 INTERTEK PROJECT #04911695 FOR COMPLETE SOIL MATERIAL DESCRIPTION

**GEOTECH B-2A**  
NG EL. 543'  
-NO SAMPLING (0.0' - 9.5')  
-GROUNDWATER (27.0')  
-LIMESTONE/DOLOMITE (9.5' - 153.0')  
-BORING TERMINATED EL. 390'

NOTE: REFER TO TEST BORING LOG B-1 INTERTEK PROJECT #04911695 FOR COMPLETE SOIL MATERIAL DESCRIPTION

NOTES

- ALL COORDINATES SHOWN ARE IN LATITUDE AND LONGITUDE. ALL MSL ELEVATIONS ARE NAD83
- STATIONING IS BASED ON HORIZONTAL DISTANCES.
- ROONEY ENGINEERING, INC. AND SUNOCO PIPELINE, LP ARE NOT RESPONSIBLE FOR LOCATION OF FOREIGN UTILITIES SHOWN IN PLOT PLAN OR PROFILE. THE INFORMATION SHOWN HEREON IS FURNISHED WITHOUT LIABILITY ON THE PART OF ROONEY ENGINEERING, INC. AND SUNOCO PIPELINE, LP. FOR ANY DAMAGES RESULTING FROM ERRORS OR OMISSIONS THEREIN.
- CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES. CONTACT ONE CALL AT 811 PRIOR TO DIGGING.
- SUNOCO EMERGENCY HOTLINE NUMBER IS #1-800-786-7440.

REF. DRAWING		REVISIONS	
ES-5.32	TO ES-5.32	EROSION & SEDIMENT PLAN	EP6 REDESIGNED PER CLIENT REQUEST AND ADDED GEOTECH INFORMATION
SHEET 18	TO SHEET 18	AERIAL SITE PLAN	EP5 UPDATED NOTE 5 AND 10 PER INCREASED 16" MOP
			EP4 REVISED DEPTH UNDER STREAM S-A17
			EP3 LENGTHENED DRILL AND LOWERED UNDER STREAM S-A17
			EP2 REVISED PER PADEP COMMENTS RECEIVED 09-06-16
			EP1 REVISED PER PADEP COMMENTS
DWG NO	DWG NO	DESCRIPTION	NO.

**Sunoco Logistics Partners L.P.**

**TETRA TECH ROONEY**  
(303) 792-5911

**SUNOCO PIPELINE, L.P.**

HORIZONTAL DIRECTIONAL DRILL  
N ZINNS MILL ROAD  
PENNSYLVANIA PIPELINE PROJECT

SCALE: 1"=250' DWG. NO. PA-LE-0055.0000-RD-16