

- DESIGN AND CONSTRUCTION:

 1. CONTRACTOR SHALL FIELD VERIFY DEPTH OF ALL EXITING UTILITIES SHOWN OR NOT SHOWN ON THIS DRAWING.

 1. 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.

 3. DESIGNED IN ACCORDANCE WITH CFR 49 195 & ASME B31.4

 4. CROSSING PIPE SPECIFICATION:
 HDD HORZ. LENGTH (L=):1436'
 HDD PIPE LENGTH (S=):1447'
 16" x 0.438" WT. X.70, APISL. PSL2. ERW RFW

16" x 0.438" W.T., X-70, API5L, PSL2, ERW, BFW

- INTERNAL DESIGN PRESSURE 1480 PSIG (SEAM FACTOR 1.0, DESIGH FACTOR 0.50).
 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

 10. CONDUCT 4-HOUR PRE-INSTALLATION HYDROTEST OF HDD PIPE STRING TO MINIMUM 1850 PSIG.

 11. SEE SUNDOCO 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.

PRELIMINARY DESIGN ONLY

L		COATING: 14-16 MILS FBE WITH 30-35 MIL ARO (POWERCRETE R95)												
	NOTES			REF. DR	AWING	REVISIONS								
	2. STATIONING IS BASED ON HORIZONTAL DISTANCES.	ES-5.04	то	ES-5.05	EROSION & SEDIMENT PLAN									
		SHEET 24	то	SHEET 24	AERIAL SITE PLAN	EP2	REVISED PER PADEP COMMENTS RECEIVED 09-06-16	MRS	10/07/16	RMB	10/07/16	AAW	10/07/16	
			\Box			EP1	REVISED PER PADEP COMMENTS	JTW	05/10/16	RMB	05/10/16	AAW	05/10/16	
			\Box			EP		MRS	03/15/16	RMB	03/15/16	AAW	03/15/16	
						1	DESIGN CHANGE	MRS	02/18/16	RMB	02/18/16	AAW	02/18/16	
			\Box			0	ISSUED FOR CONSTRUCTION	MRS	01/21/16	RMB	01/21/16	AAW	01/21/16	
	1	DWG NO		DWG NO	DESCRIPTION	NO.	DESCRIPTION	BY	DATE	CHK	DATE	APP	DATE	



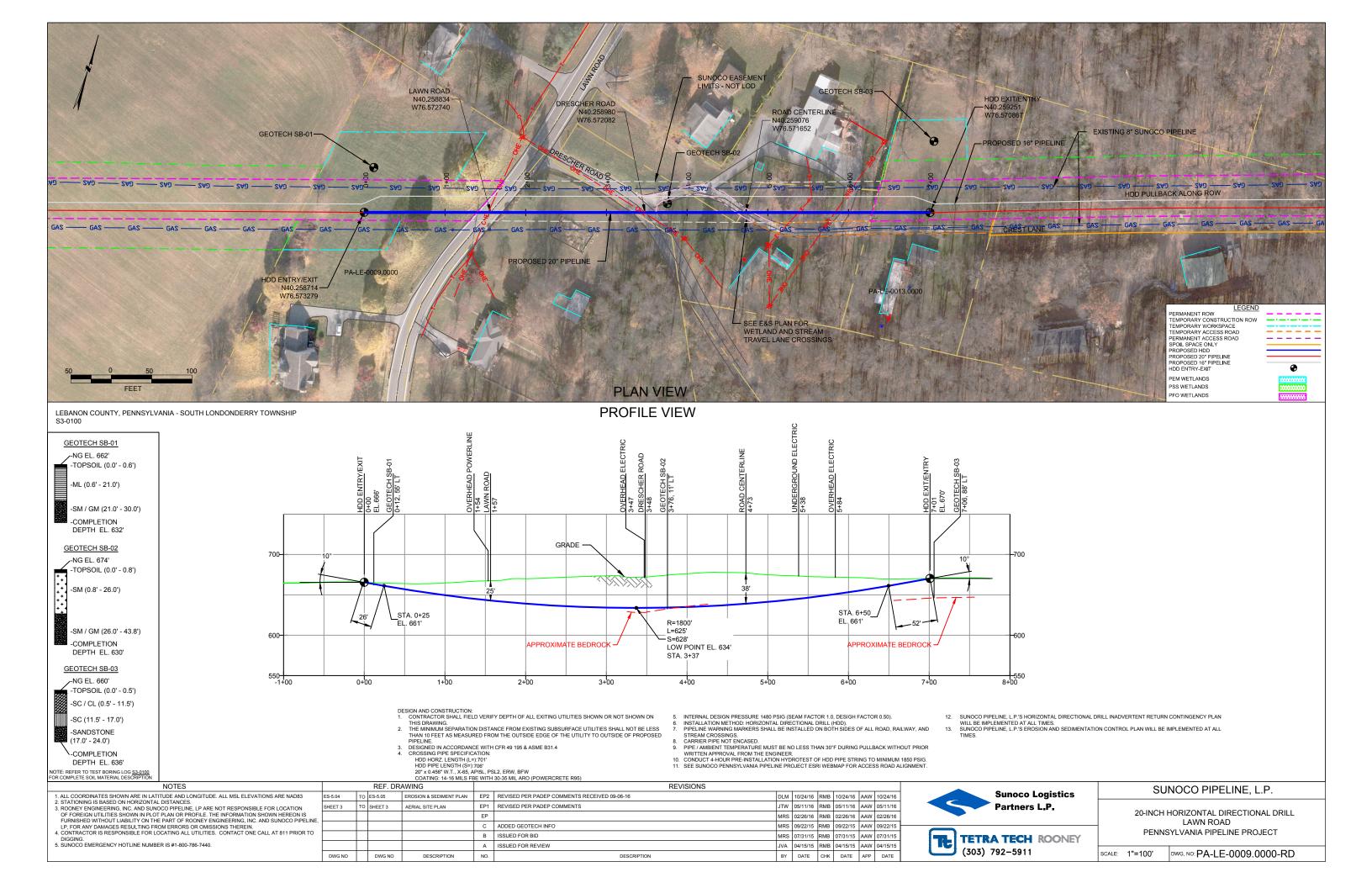
Sunoco Logistics Partners L.P.

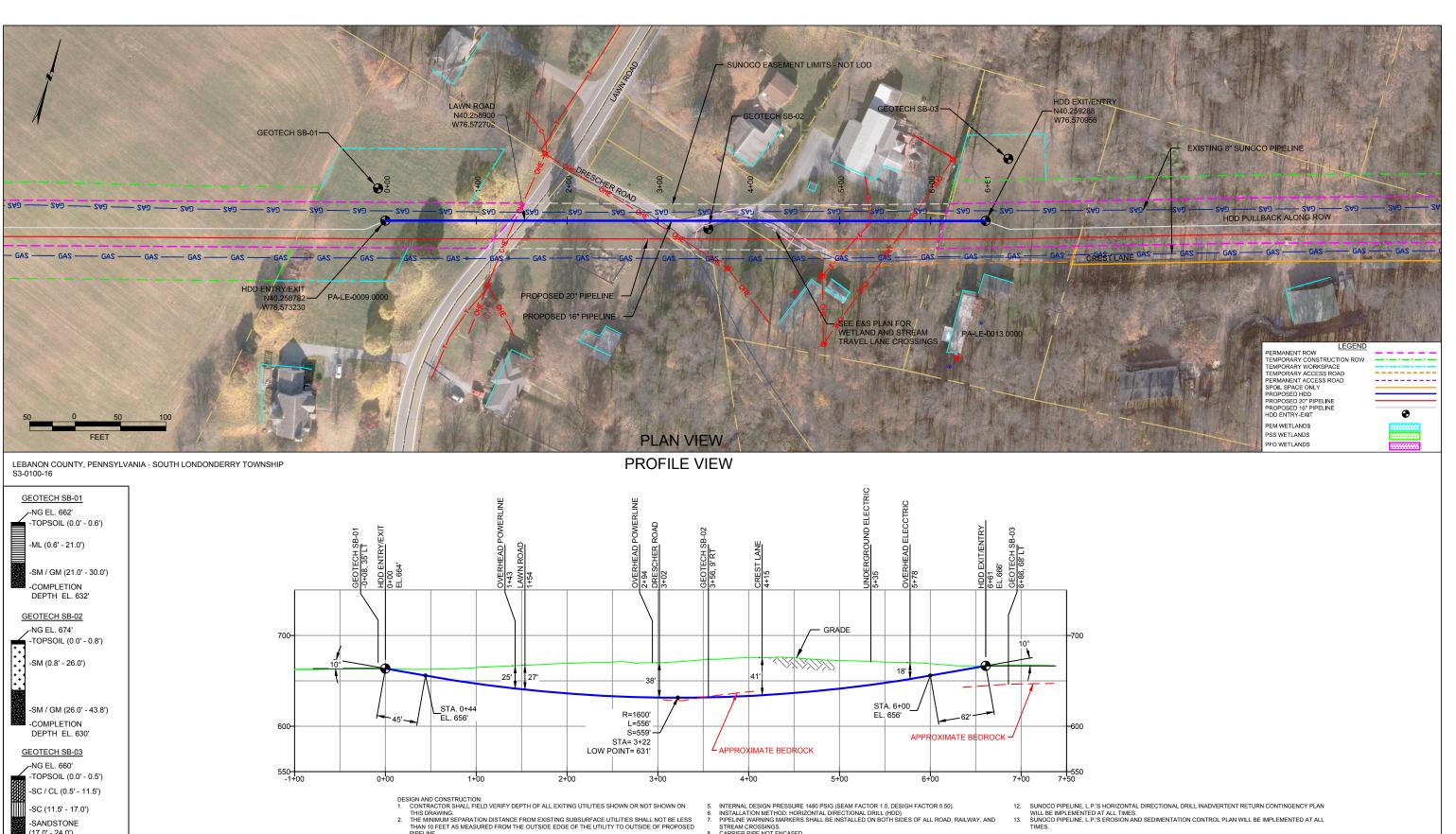
TETRA TECH ROONEY (303) 792-5911

SUNOCO PIPELINE, L.P.

16-INCH HORIZONTAL DIRECTIONAL DRILL SCHOOL HOUSE RD PENNSYLVANIA PIPELINE PROJECT

DWG. NO: PA-LE-0005.0000-RD-16





PIPELINE.
DESIGNED IN ACCORDANCE WITH CFR 49 195 & ASME B31.4
CROSSING PIPE SPECIFICATION: -COMPLETION WRITTEN APPROVAL FROM THE ENGINEER

10. CONDUCT 4-HOUR PRE-INSTALLATION HYDROTEST OF HDD PIPE STRING TO MINIMUM 1850 PSIG.

11. SEE SUNDOCO PENNSYLVANIA PIPELINE PROJECT ESRI WEBMAP FOR ACCESS ROAD ALIGNMENT. HDD HORZ. LENGTH (L=):661' HDD PIPE LENGTH (S=):666' DEPTH EL. 636' NOTE: REFER TO TEST BORING LOG <u>S3-0100</u> FOR COMPLETE SOIL MATERIAL DESCRIPTION 16" x 0.438" W.T., X-70, APISL, PSL2, ERW, BFW COATING: 14-16 MILS FBE WITH 30-35 MIL ARO (POWERCRETE R95) ALL COORDINATES SHOWN ARE IN LAT 2. STATIONING IS BASED ON HORIZONTA 3. ROONEY ENGINEERING, INC. AND SUN OF FOREIGN UTILITIES SHOWN IN PLO FURNISHED WITHOUT LIABILITY ON TH LP, FOR ANY DAMAGES RESULTING FEA

-SC (11.5' - 17.0') -SANDSTONE (17.0' - 24.0')

- INTERNAL DESIGN PRESSURE 1480 PSIG (SEAM FACTOR 1.0, DESIGH FACTOR 0.50).
 INSTALLATION METHOD: HORIZONTAL DIRECTIONAL DRILL (HDD).
 PIPELINE WARNING MARKERS SHALL BE INSTALLED ON BOTH SIDES OF ALL ROAD, RAILWAY, AND STREAM CROSSINGS. 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.
- CARRIER PIPE NOT ENCASED.
- PIPE / AMBIENT TEMPERATURE MUST BE NO LESS THAN 30°F DURING PULLBACK WITHOUT PRIOR

NOTES		REF. DRAWING				REVISIONS						
1. ALL COORDINATES SHOWN ARE IN LATITUDE AND LONGITUDE. ALL MSL ELEVATIONS ARE NAD83 2. STATIONING IS BASED ON HORIZONTAL DISTANCES 3. 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. 4. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES. CONTACT ONE CALL AT 811 PRIOR TO DIGGING. 5. SUNOCO EMERGENCY HOTLINE NUMBER IS #1-800-786-7440.	ES-5.04	то	ES-5.05	EROSION & SEDIMENT PLAN								
	SHEET 3	то	SHEET 3	AERIAL SITE PLAN	EP2	REVISED PER PADEP COMMENTS RECEIVED 09-06-16	MRS	10/24/16	RMB	10/24/16	AAW	10/24/16
	_				EP1	REVISED PER PADEP COMMENTS	JTW	05/17/16	RMB	05/17/16	AAW	05/17/16
	·				EP		MRS	02/26/16	RMB	02/26/16	AAW	02/26/16
					В	ADDED GEOTECH INFO	MRS	09/22/16	RMB	09/22/16	AAW	09/22/16
					Α	ISSUED FOR BID	MRS	08/31/15	RMB	08/31/15	AAW	08/31/15
	DWG NO		DWG NO	DESCRIPTION	NO.	DESCRIPTION	BY	DATE	СНК	DATE	APP	DATE



SUNOCO PIPELINE, L.P.



16-INCH HORIZONTAL DIRECTIONAL DRILL LAWN ROAD PENNSYLVANIA PIPELINE PROJECT

SCALE: 1"=100' DWG. NO: PA-LE-0009.0000-RD-16

