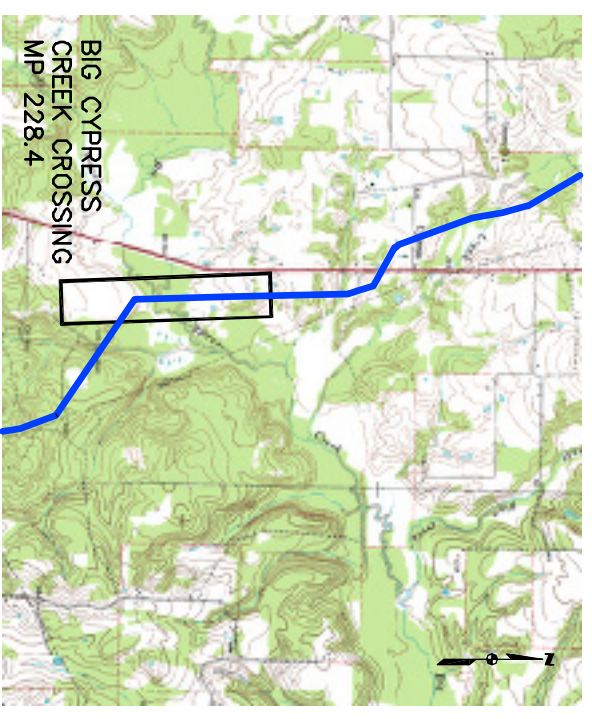


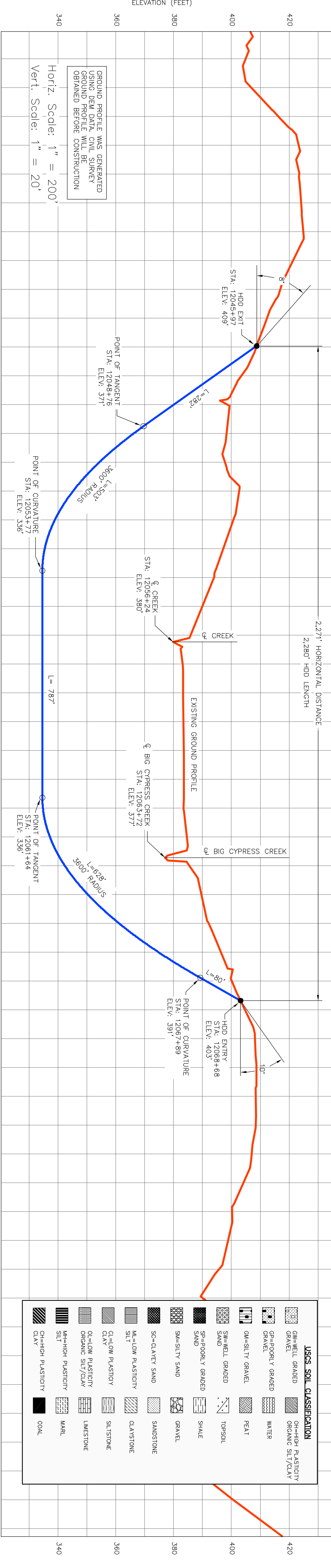
Scale: 1" = 200'

FRANKLIN COUNTY



INSTALLATION NOTES

- 1) ACCESS: ALL EQUIPMENT MUST ACCESS THE SITE ALONG THE EXISTING ROADS. ACCESS SHALL BE FROM SOUTH APPROXIMATE PRIVATE ROADS.
- 2) VEHICLE AND EQUIPMENT ACCESS CROSSING MAY BE INSTALLED & APPROVED BY THE ENVIRONMENTAL INSPECTOR.
- 3) WORK SPACE: WORK SPACE LIMITS ARE SPECIFIED. CLEANING WILL BE PERFORMED AT THE END OF EACH DAY. ALL DEBRIS SHALL BE REMOVED FROM THE WORK AREA. ALL EXCESS MATERIALS SHALL BE STORED IN A SECURE LOCATION. ALL EXCESS MATERIALS SHALL BE REMOVED FROM THE WORK AREA. ALL EXCESS MATERIALS SHALL BE STORED IN A SECURE LOCATION.
- 4) WATER SOURCE: DRAIN WATER AND PRE-INSTALLATION HYDROSTATIC TESTING WATER SHALL BE USED TO FILL THE PIPE. THE WATER SOURCE SHALL BE APPROVED BY THE ENVIRONMENTAL INSPECTOR. THE WATER SOURCE SHALL BE APPROVED BY THE ENVIRONMENTAL INSPECTOR.
- 5) HYDROSTATIC TEST: PRE-INSTALLATION HYDROSTATIC TEST SHALL BE CONDUCTED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. THE WATER SOURCE SHALL BE APPROVED BY THE ENVIRONMENTAL INSPECTOR. THE WATER SOURCE SHALL BE APPROVED BY THE ENVIRONMENTAL INSPECTOR.
- 6) SOILS: THE SOILS SHALL BE SET IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. THE SOILS SHALL BE SET IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
- 7) INSTALLATION: THE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. THE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
- 8) FROM TO PRE-FULLBACK, CONTRACTORS ACTUAL DRILL PROFILE SHALL BE SUBMITTED TO KETROFOR FOR APPROVAL.
- 9) INSTALLATION: THE PIPE SECTION FOR THE DRILLED CROSSING SHALL BE MADE CONTINUOUS FROM THE ENTRY POINT TO THE EXISTING GROUND PROFILE. THE PIPE SECTION FOR THE DRILLED CROSSING SHALL BE MADE CONTINUOUS FROM THE ENTRY POINT TO THE EXISTING GROUND PROFILE.
- 10) FULLBACK: THE CONTRACTOR SHALL FULLBACK THE PIPE IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. THE CONTRACTOR SHALL FULLBACK THE PIPE IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
- 11) VOID DISPOSAL: CONTRACTOR SHALL DISPOSE OF EXCESS DRILLING FLUID IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. THE CONTRACTOR SHALL DISPOSE OF EXCESS DRILLING FLUID IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
- 12) CLEANUP/RESTORATION: ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION. ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
- 13) NORMAL WORKING SPACE DIMENSIONS ARE SHOWN. LARGER AREAS MAY BE REQUIRED IN IRREGULAR TERMINAL UPDATED DIMENSIONS MAY BE PROVIDED WITH THE WORK. IRREGULAR DIMENSIONS ARE PERMITTED.

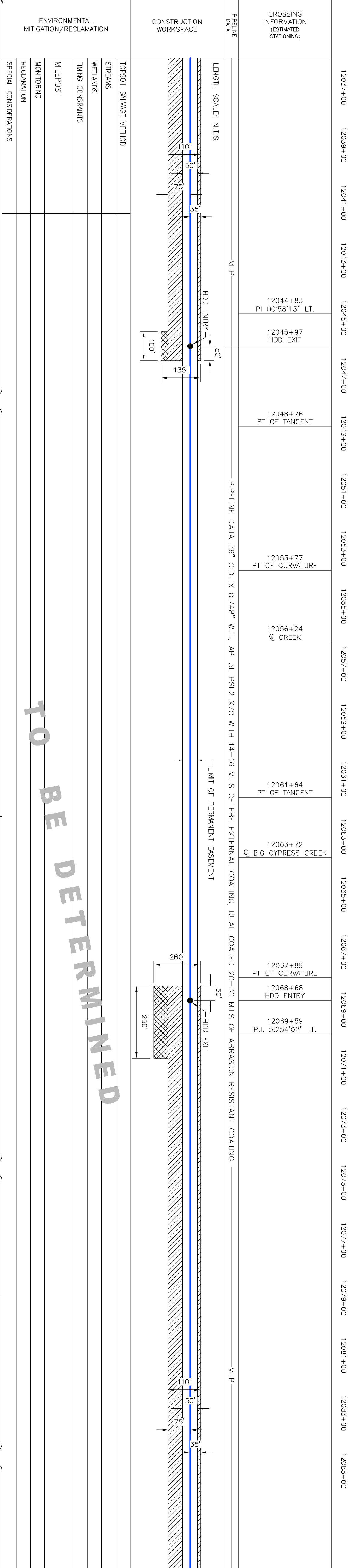


GROUND PROFILE WAS GENERATED USING DEM DATA. ONLY SURVEY DATA OBTAINED BEFORE CONSTRUCTION.

Horiz. Scale: 1" = 200'
Vert. Scale: 1" = 20'

USGS SOIL CLASSIFICATION

	CH-HELL GRADED GRAVEL		OH-HIGH PLASTICITY ORGANIC SILT/CLAY
	GP-FINELY GRADED GRAVEL		WATER
	GM-SILT GRAVEL		FEAT
	SW-MEDIUM GRADED SAND		TOPSOIL
	SP-SAND		SHALE
	SC-CLEAN SAND		GRAVEL
	SL-SILT		SANDSTONE
	CL-LOW PLASTICITY CLAY		QUARTZITE
	OL-LOW PLASTICITY ORGANIC SILT/CLAY		SLTSTONE
	OH-HIGH PLASTICITY ORGANIC SILT/CLAY		Limestone
	CH-HIGH PLASTICITY CLAY		MARL
	CLAY		COAL



LEGEND

	POINT OF INTERSECTION (P.I.)
	ENTRY OR EXIT POINT
	GEOTECHNICAL BENCHMARK
	POWERPOLE
	MANUAL PIPE
	PIPELINE
	FOREIGN PIPELINE
	EDGE OF WATER
	PRIVATE ACCESS ROAD RTV ROAD
	COUNTY BOUNDARY
	WATER LEVEL
	USACE CONSTRUCTION REFERENCE POINT
	WETLANDS
	PERMANENT EASEMENT
	TEMPORARY EASEMENT
	EXTRA WORKSPACE

ENVIRONMENTAL MITIGATION/RECLAMATION

TOPSOIL SALVAGE METHOD	
STREAMS	
WETLANDS	
TIMING CONSTRAINTS	
MILEPOST	
MONITORING	
RECLAMATION	
SPECIAL CONSIDERATIONS	

REFERENCE DRAWINGS

DRAWING NO	TITLE
11042 HDD XREF-15	11042 HDD XREF-15.dwg
TC_UD_BR_UJI	TC_UD_BR_UJI.dwg
NOTES-LEGEND	NOTES-LEGEND.dwg

REVISION

REV NO	DATE	DESCRIPTION
0	03.19.08	ISSUED FOR UNITED STATES DEPARTMENT OF STATE (7.31.08 CJ)
1	03.19.09	ISSUED FOR BID REVIEW
2	06.22.09	ISSUED FOR BID REVIEW
3	07.27.09	ISSUED FOR BID REVIEW
4	09.08.09	ISSUED FOR RFP PACKAGE
5	03.15.10	ISSUED FOR CONTRACT PRE-AWARD

APPROVAL

PROJECT CODE	DRAFTER	DRAFTING CHECKER	DESIGNER	DESIGN CHECKER	PROJECT MANAGER	COMPANY
	UEI	UEI	BM	JW	JH	UEI
	UEI	UEI	BM	JW	JH	UEI
	UEI	UEI	BM	JW	JH	UEI
	UEI	UEI	BM	JW	JH	UEI
	UEI	UEI	BM	JW	JH	UEI
	UEI	UEI	BM	JW	JH	UEI
	UEI	UEI	BM	JW	JH	UEI
	UEI	UEI	BM	JW	JH	UEI
	UEI	UEI	BM	JW	JH	UEI

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FA # 4382 CHAINAGE: 228.4 DISCIPLINE # 03

BIG CYPRESS CREEK HDD INSTALLATION
KEYSTONE XL PROJECT
FRANKLIN COUNTY, TEXAS

SCALE AS SHOWN DRAWING NO. 4382-03-ML-03-003 REV 5