

○ INDICATES WING NUMBER

STATE PROJECT NUMBER

5407-00-70

DESIGN DATA

DESIGN LOADING _____ HL-93 ✓
INVENTORY RATING FACTOR _____ X.XX
OPERATIONAL RATING FACTOR _____ X.XX
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) _____ 250 KIPS

ULTIMATE DESIGN STRESSES

CONCRETE MASONRY, SLAB _____ $f'_c = 4,000$ psi ✓
ALL OTHER _____ $f'_c = 3,500$ psi ✓
HIGH STRENGTH BAR STEEL REINFORCEMENT _____ $f_y = 60,000$ psi ✓

TRAFFIC DATA

ADT (2017) = <100
ADT (2037) = <100
DESIGN SPEED = MPH

FOUNDATION DATA

ABUTMENTS SUPPORTED ON HP10X42LB STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 180* TONS PER PILE AS REQUIRED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 25' LONG AT THE ABUTMENTS.

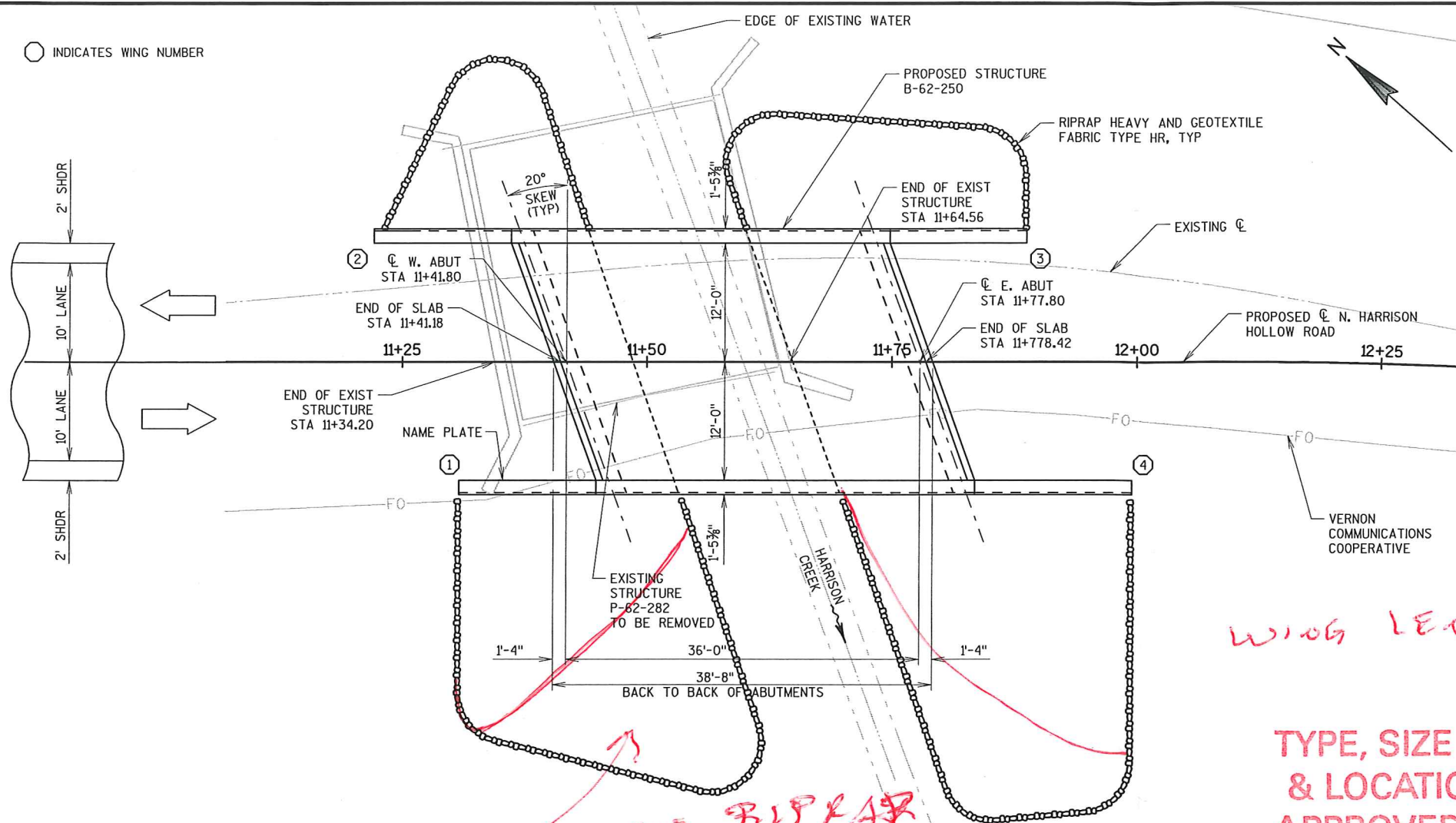
* THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA

100 YEAR FREQUENCY _____ 460 cfs ✓
 Q_{100} _____ 5.58 fps ✓
VELOCITY _____ 5.58 fps ✓
HIGH WATER _____ EL. 993.19 ✓
WATERWAY AREA _____ 237.3 ft^2 ✓
DRAINAGE AREA _____ 0.45 mi^2 ✓
SCOUR CRITICAL CODE _____ 8 ✓
OVERTOPPING FREQUENCY _____ N/A ✓
2 YEAR FREQUENCY _____ 80 cfs ✓
 Q_2 _____ 80 cfs ✓
HIGH WATER _____ EL. 991.60 ✓

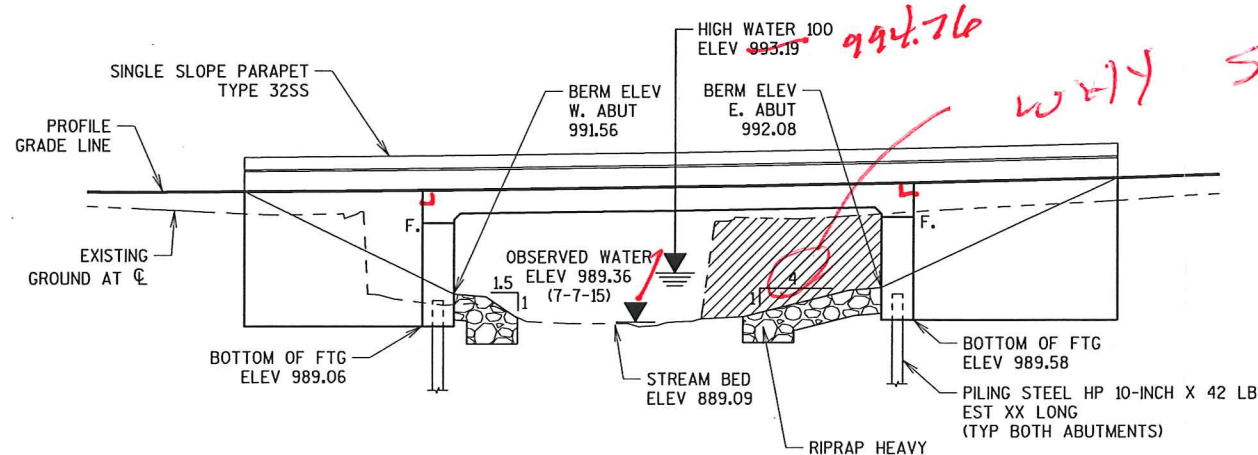
LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION



WHY ALL THIS RIPRAP
PLAN
SINGLE SPAN CONCRETE FLAT SLAB BRIDGE

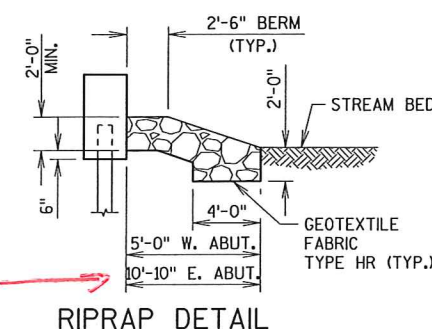
WING LENGTHS?
TYPE, SIZE
& LOCATION
APPROVED
BY MLH
DATE 4-6-2016



BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.

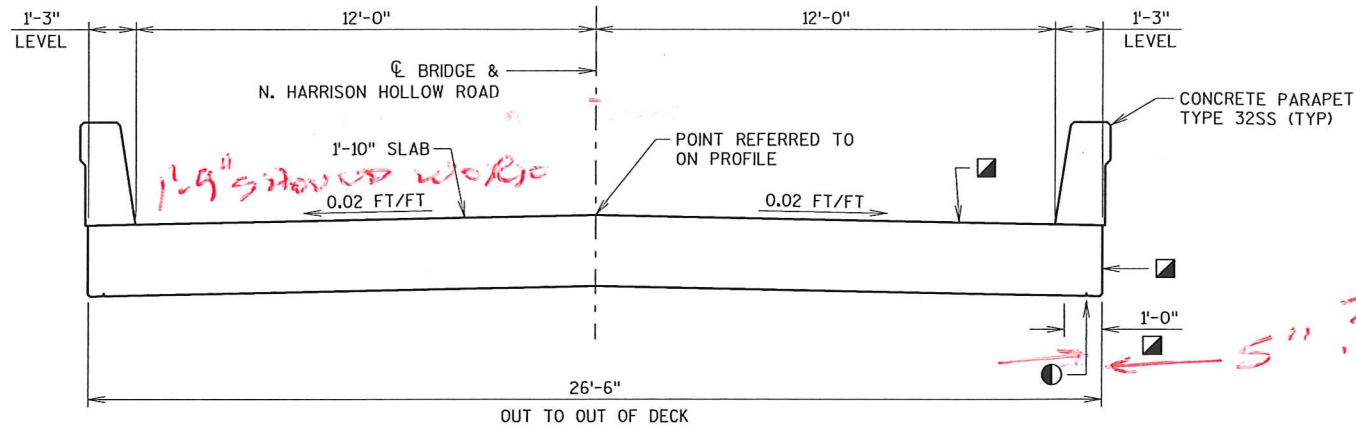
ELEVATION
(LOOKING NORTH)



BRIDGE OFFICE CONTACT
WILLIAM DREHER, P.E.
TELEPHONE: (608) 266-8489

CONSULTANT CONTACT
ERIC PRICE, P.E.
TELEPHONE: (608) 826-6146

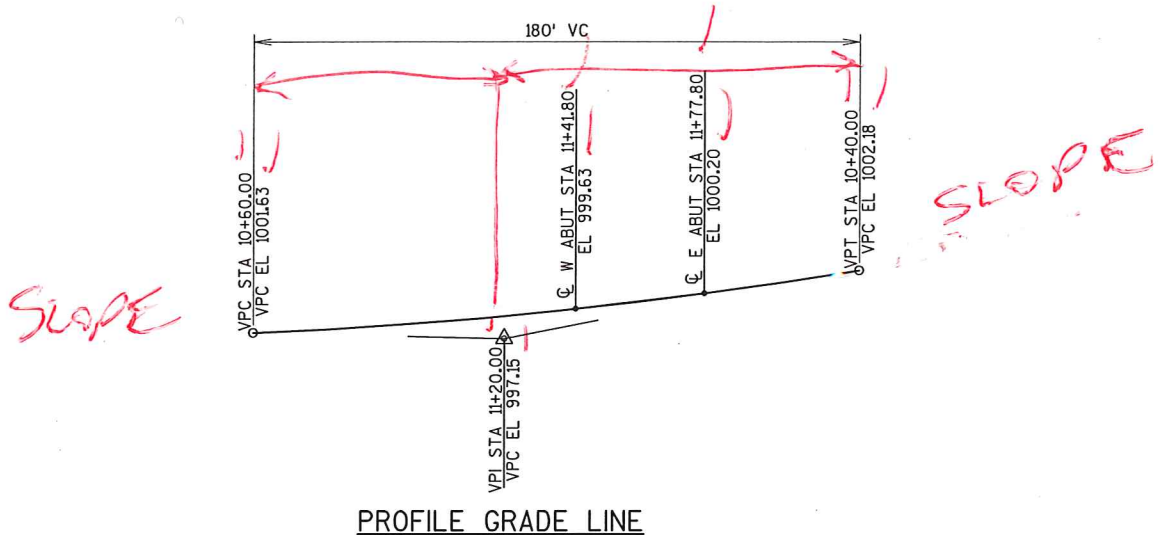
NO.	DATE	REVISION	BY
CORRE			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED _____ CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-62-250			
N HARRISON HOLLOW RD OVER HARRISON CREEK			
COUNTY	VERNON	TOWN/CITY/VILLAGE	VIROQUA
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY ERA	DESIGN CK'D. ETP	DRAWN BY PKF	PLANS CK'D. ETP
GENERAL PLAN			SHEET 1 OF 3



CROSS SECTION THRU BRIDGE
(LOOKING EAST)

LEGEND

- 3/4" V-GROOVE. TERMINATE 2'-0" FROM FRONT FACE OF ABUTMENTS.
- COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS.

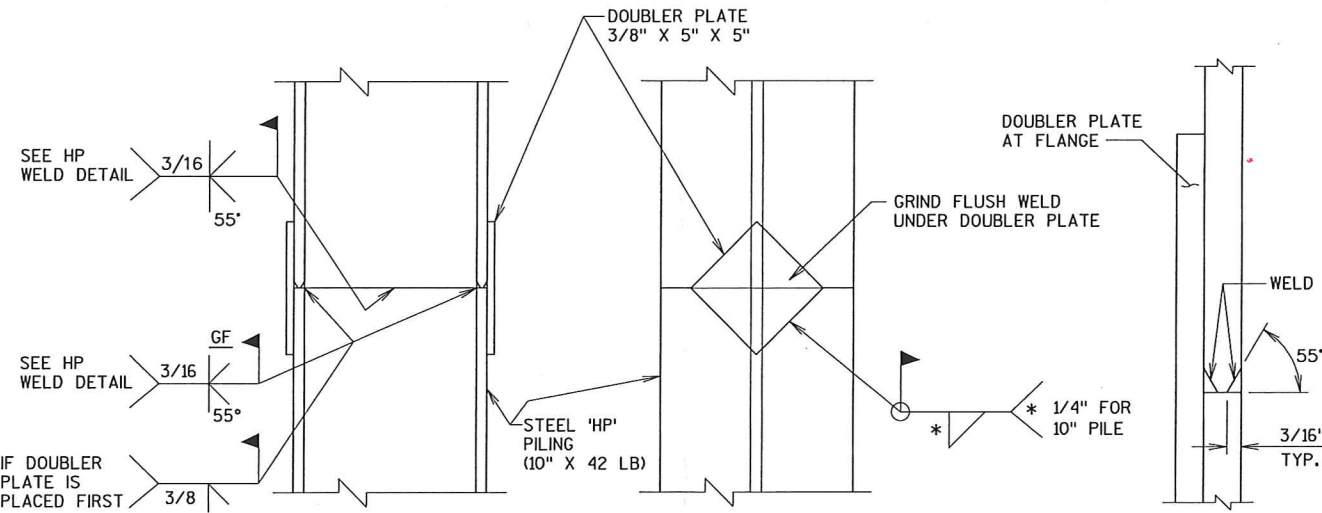


TOTAL ESTIMATED QUANTITIES

BID NUMBER	BID ITEM	UNIT	SOUTH ABUT	NORTH ABUT	SUPER	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 11+60	LS	----	----	----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-62-250	LS	----	----	----	1
210.0100	BACKFILL STRUCTURE	CY			----	
502.0100	CONCRETE MASONRY BRIDGES	CY				
502.3200	PROTECTIVE SURFACE TREATMENT	SY	----	----		
502.3210	PIGMENTED SURFACE SEALER	SY	----	----		
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB			----	
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB				
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY			----	
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF			----	
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF			----	
645.0120	GEOTEXTILE FABRIC TYPE HR	SY			----	
606.0700	RIPRAP HEAVY	CY			----	
NON-BID ITEMS						
	FILLER	SIZE	----	----	----	1/2" & 3/4"

GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
- THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.
- JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153 TYPE I, II OR III OR AASHTO DESIGNATION M213.
- THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE FABRIC TYPE HR TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.
- SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.
- THE EXISTING GROUND LINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.
- THE EXISTING STRUCTURE P-62-282, TO BE REMOVED, IS A SINGLE SPAN STEEL DECK GIRDER BRIDGE, 30.3 FT. LONG WITH A 27.4 FT. CLEAR ROADWAY WIDTH.
- AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.
- THE QUANTITY FOR BACKFILL STRUCTURE, BID ITEM 210.0100, IS CALCULATED BASED ON THE APPLICABLE FIGURES 12.6-1 AND 12.6-2 IN THE WISCONSIN DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL.



STEEL 'HP' PILING

STEEL 'HP' PILE MATERIAL SHALL BE A.S.T.M. DESIGNATION A36.

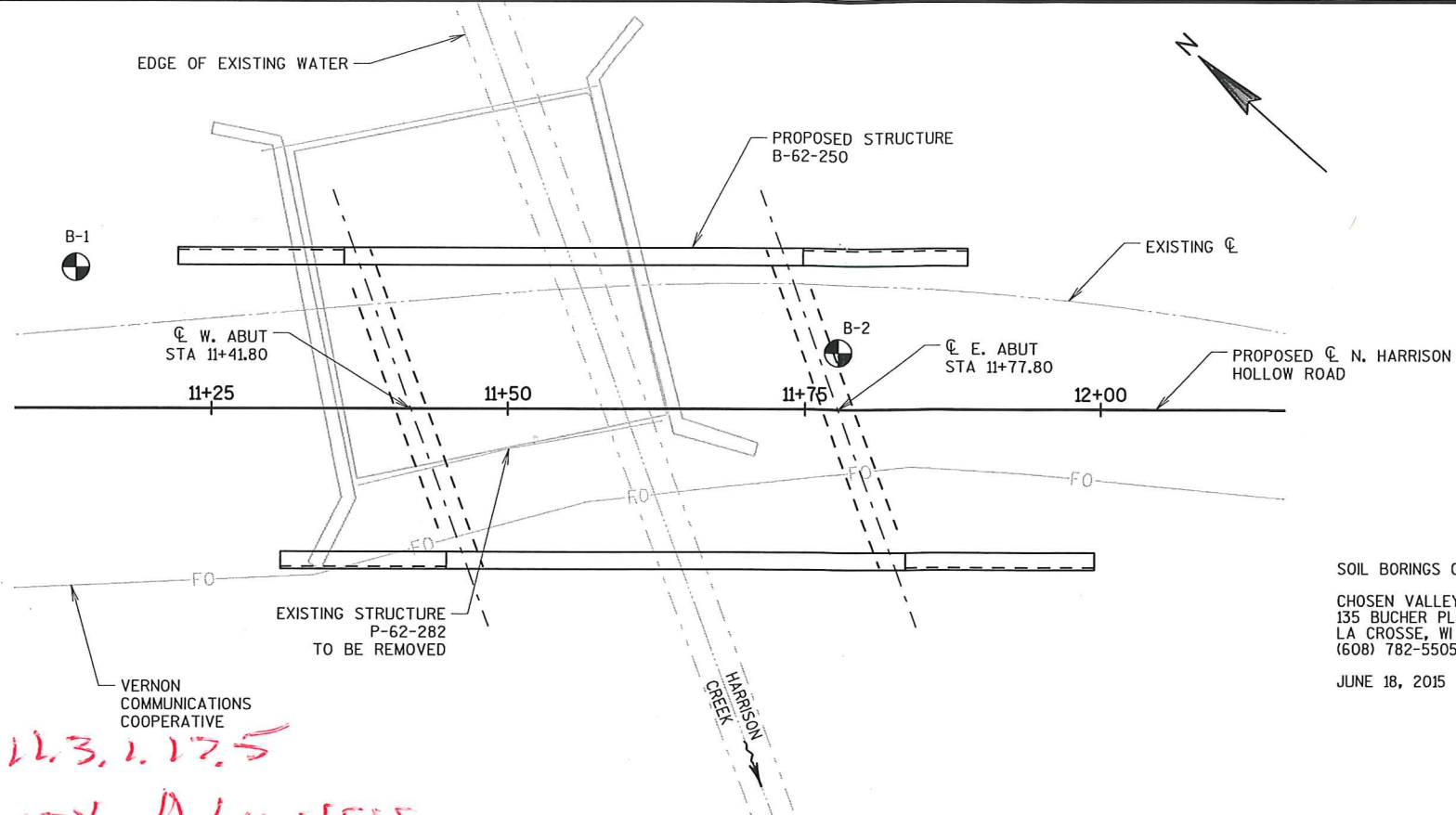
HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAILS

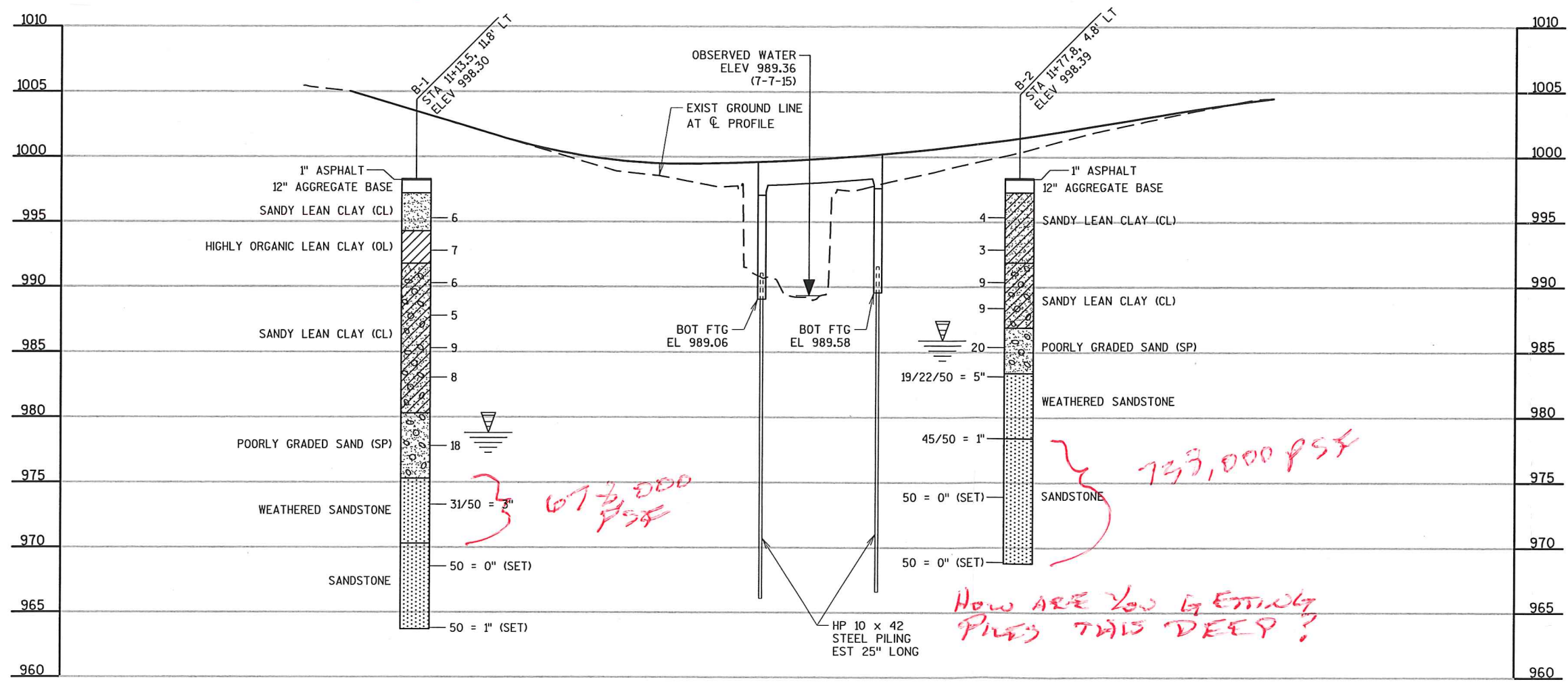
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-62-250			
DRAWN BY PKF		PLANS CK'D. ETP	
CROSS SECTION & QUANTITIES			SHEET 2 OF 3





SOIL BORINGS COMPLETED BY:
CHOSEN VALLEY TESTING TESTING, INC.
135 BUCHER PLACE
LA CROSSE, WI 54603
(608) 782-5505
JUNE 18, 2015

BRIDGE MANUAL 11.3.1.17.5
Provide Drivability Analysis



STATE PROJECT NUMBER
5407-00-70

ABBREVIATIONS
F— FINE M— MEDIUM C— COARSE
WS— WEATHERED SO— SOUND

MATERIAL SYMBOLS
TOPSOIL SILT SANDSTONE
SAND PEAT LIMESTONE
GRAVEL CLAY IGNEOUS ROCK

LEGEND OF PROBING
PROBING NO.
STA.
ELEVATION
95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING
BORING NO.
STA.
ELEV.
UNCONFINED STRENGTH → 7.7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY SAND
SO LIMESTONE

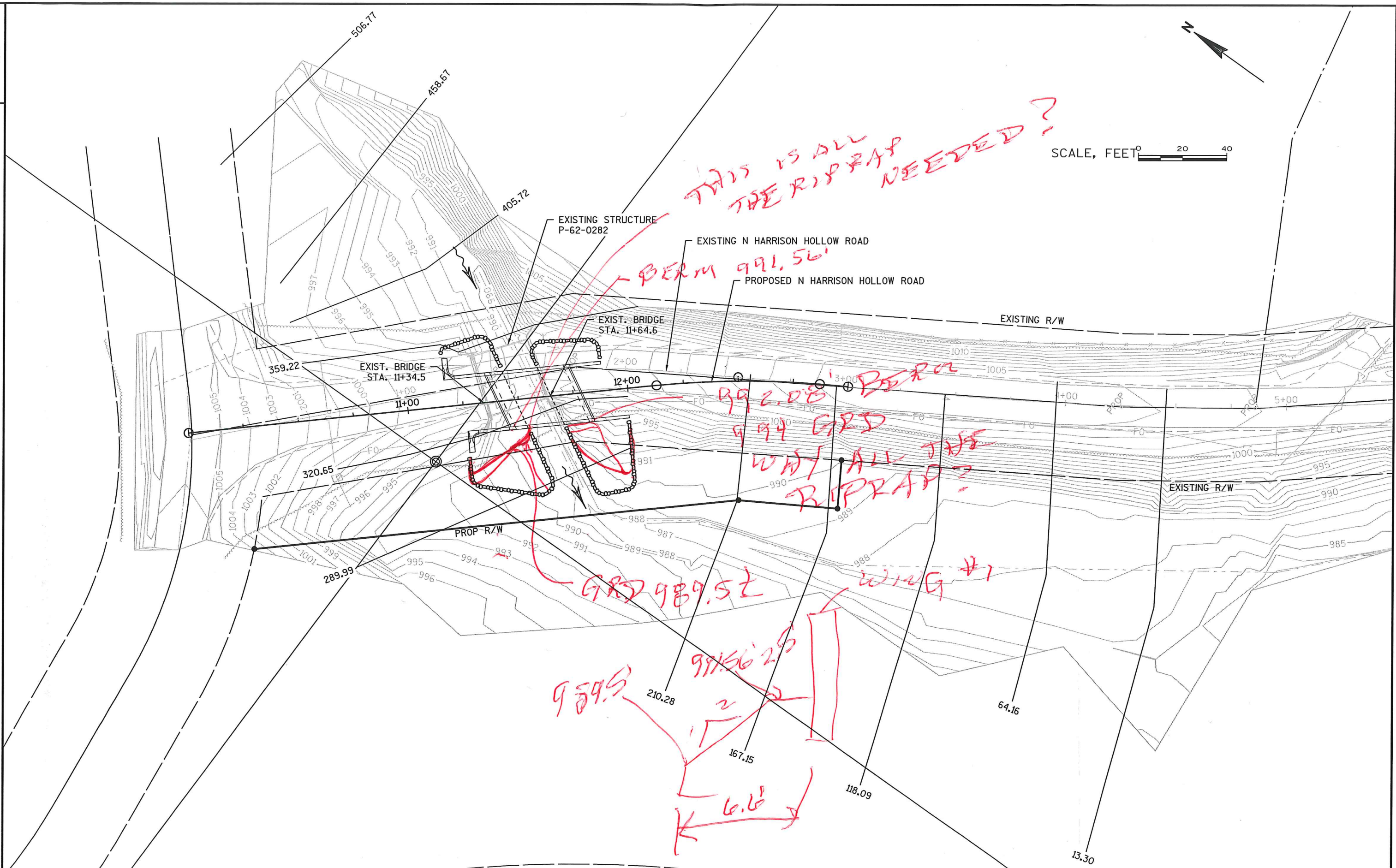
UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CAGED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

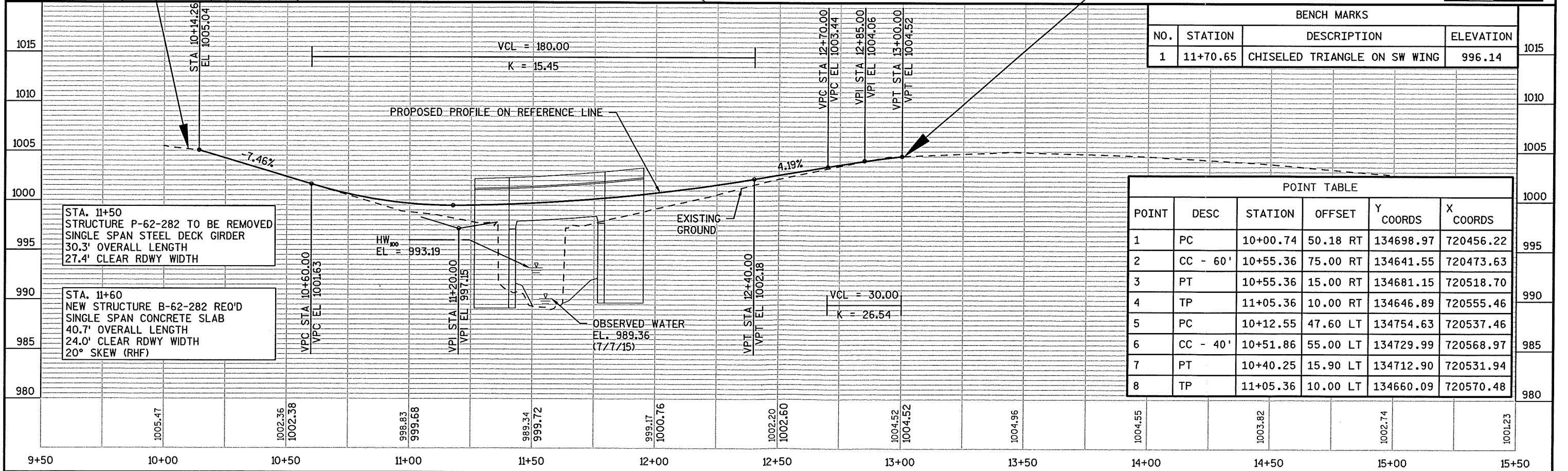
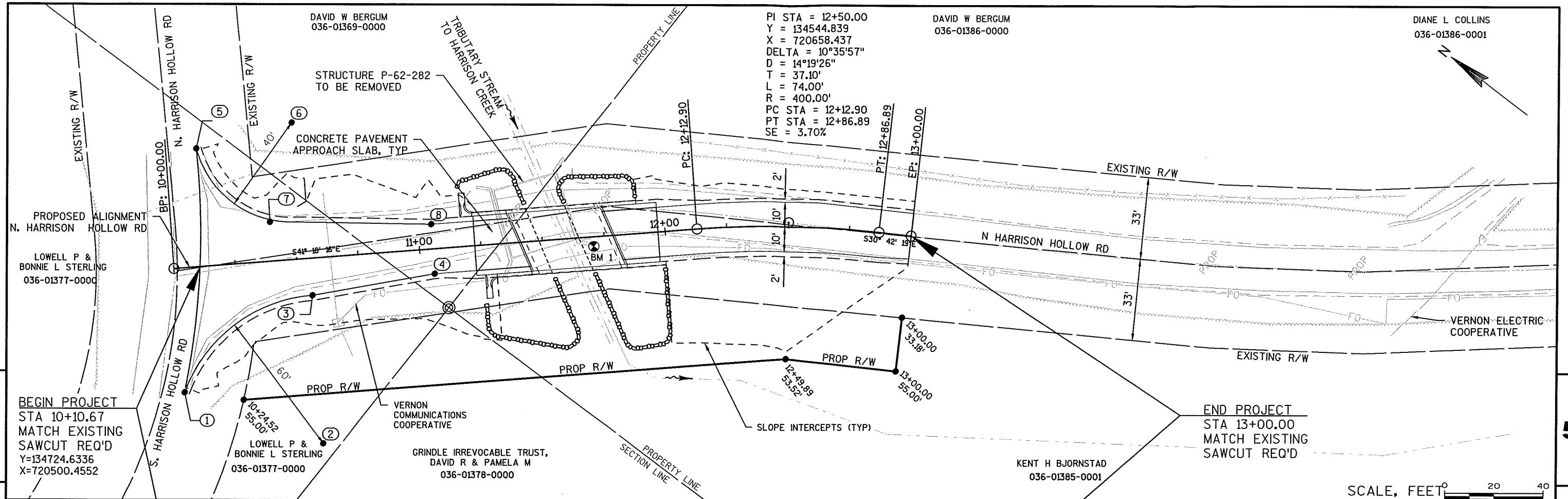
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION
TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-62-250			
DRAWN BY PKF		PLANS CK'D. ETP	
SOIL EXPLORATION			SHEET 3 OF 3

8

8





BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEVATION
1	11+70.65	CHISELED TRIANGLE ON SW WING	996.14

POINT TABLE					
POINT	DESC	STATION	OFFSET	Y COORDS	X COORDS
1	PC	10+00.74	50.18 RT	134698.97	720456.22
2	CC - 60'	10+55.36	75.00 RT	134641.55	720473.63
3	PT	10+55.36	15.00 RT	134681.15	720518.70
4	TP	11+05.36	10.00 RT	134646.89	720555.46
5	PC	10+12.55	47.60 LT	134754.63	720537.46
6	CC - 40'	10+51.86	55.00 LT	134729.99	720568.97
7	PT	10+40.25	15.90 LT	134712.90	720531.94
8	TP	11+05.36	10.00 LT	134660.09	720570.48