

TYPICAL SECTION THRU BRIDGE

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
 INVENTORY RATING FACTOR:
 OPERATING RATING FACTOR:
 WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #/S.F.

MATERIAL PROPERTIES:

CONCRETE MASONRY { SUPERSTRUCTURE f'c = 4,000 p.s.i.
 ALL OTHER f'c = 3,500 p.s.i.
 HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) f_y = 60,000 p.s.i.

HYDRAULIC DATA:

100 YEAR FREQUENCY
 DRAINAGE AREA = 15.5 sq. mi.
 WATERWAY AREA = 71.45 sq. ft.
 V = 6.8 f.p.s.
 Q₁₀₀ = 980 c.f.s.
 HIGH WATER₁₀₀ EL. 1273.9
 SCOUR CRITICAL CODE = 8
 NAVD 88 DATUM

2 YEAR FREQUENCY
 Q₂ = 320 c.f.s.
 VEL. = 7.5 f.p.s.
 HW₂ = EL. 1270.6

BRIDGE = 968 c.f.s.
 OVERFLOW = 12 c.f.s.

ROAD OVERTOPPING FREQUENCY

FREQUENCY = 83 YEARS
 Q₈₃ = 375 c.f.s.
 WATER SURFACE EL. 1273.8

FOUNDATION DATA:

SOUTH ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS # PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 35'-0".

NORTH ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS # PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 40'-0".

*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.

TRAFFIC DATA:

A.D.T. = 500 (2018)
 A.D.T. = 670 (2038)
 R.D.S. = 60 M.P.H.

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED		CHIEF STRUCTURES DESIGN ENGINEER	DATE
STRUCTURE B-60-933			
CTH T OVER MCKENZIE CREEK			
COUNTY	TAYLOR	TOWN/CITY/VILLAGE	MAPLEHURST
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	CBM	DESIGN CK'D.	DRAWN BY CJM
PRELIMINARY PLAN			SHEET 1 OF 3

BRIDGE OFFICE CONTACT:
 WILLIAM DREHER
 (608)-266-8489

CONSULTANT CONTACT:
 CHRIS MCMAHON
 (715)-834-3161

LIST OF DRAWINGS

1. PRELIMINARY PLAN
2. QUANTITIES AND NOTES
3. SUBSURFACE EXPLORATION

TYPE, SIZE & LOCATION APPROVED
 BY MLH
 DATE 10-17-2016

NEAREST 0.01 of A 7005

WING LENGTH?

45° WIND ARE A-5 ABUT.
 HYD REPORT HAD A-1.

SPRNAME\$ U:\42-1006.00 - Taylor County - CTH T+BRIDGE+421006.gp_prelim.dgn

DATE: DATE: DATE:

CHECKED BY: BACK CHECKED BY: CORRECTED BY:

8

8

COST OF EXCAVATION OR FILL IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-60-933".

\$PRNAME\$
U:\42-1006.00 - Taylor County - CTH T\BRIDGE\421006_gp_prelim.dgn

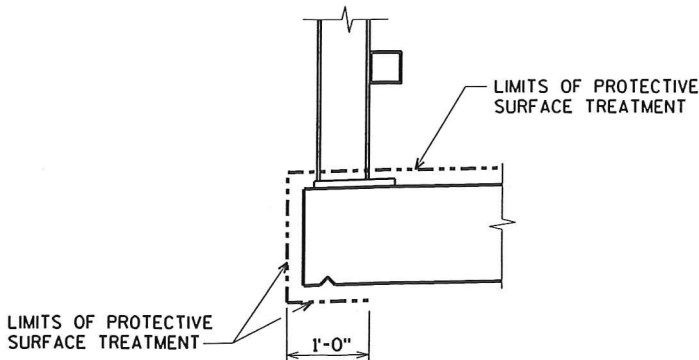
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STATE PROJECT NUMBER

8887-08-72

TOTAL ESTIMATED QUANTITIES

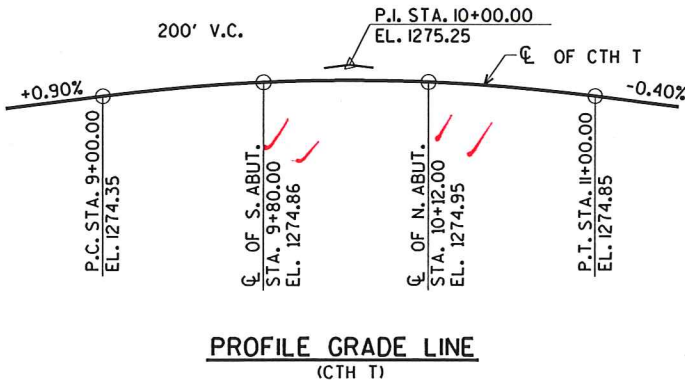
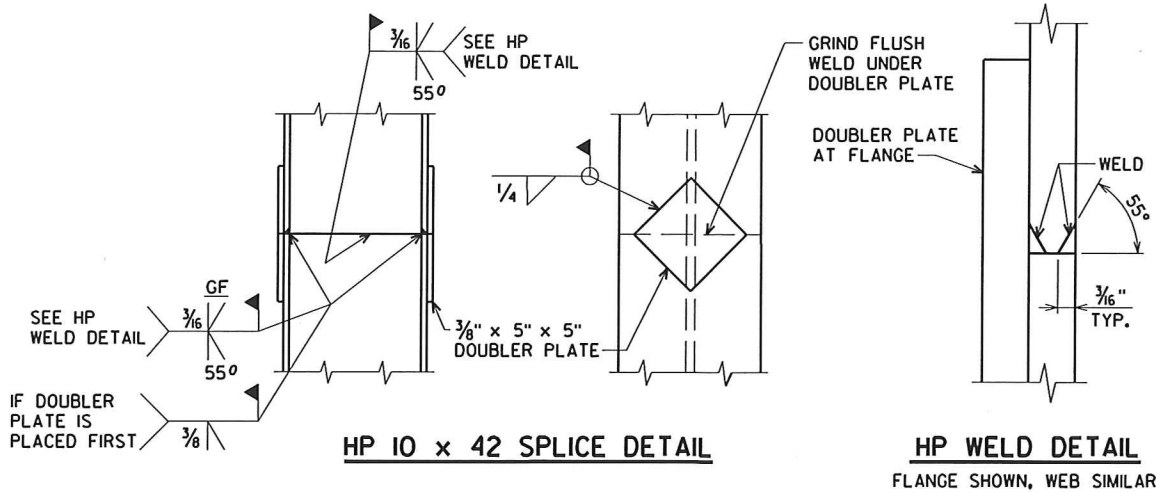
BID ITEM NUMBER	BID ITEMS	UNIT	S. ABUT.	N. ABUT.	SUPER.	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-60-933	LS	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON			-----	
502.0100	CONCRETE MASONRY BRIDGES	CY				
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-----	-----		
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB			-----	
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB				
513.4061	RAILING TUBULAR TYPE M B-60-933	LF	-----	-----		
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY			-----	
550.0500	PILE POINTS	EACH			-----	
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF			-----	
606.0300	RIPRAP HEAVY	CY			-----	
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF			-----	
645.0120	GEOTEXTILE TYPE HR	SY			-----	
NON-BID ITEMS						
	FILLER	SIZE	-----	-----	-----	1/2" & 3/4"



PROTECTIVE SURFACE TREATMENT DETAIL

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 A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE 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 OTHERWISE APPROVED BY THE ENGINEER.
THE EXISTING GROUND LINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.
THE EXISTING STRUCTURE, P-60-58, TO BE REMOVED, IS A SINGLE SPAN STEEL DECK GIRDER BRIDGE, 26.5 FT. LONG WITH AN APPROX. 24.4 FT. CLEAR ROADWAY WIDTH.
AT BACKFACE OF ABUTMENTS ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.
PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.
THE QUANTITY OF BACKFILL STRUCTURE TYPE A, BID ITEM 210.1500 IS CALCULATED BASED ON APPLICABLE FIGURES 12.6-1 AND 12.6-2 IN THE WISCONSIN DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL.



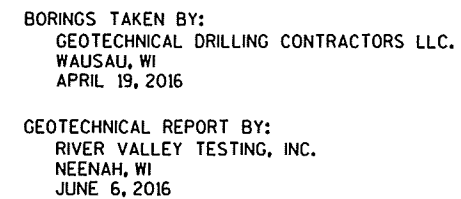
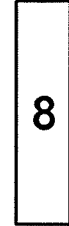
PROFILE GRADE LINE
(CTH T)

BENCH MARK:
CHISLED SQUARE ON SOUTHEAST ABUTMENT
STA. 9+87, 12' RT. OF Q.
EL. 1274.44

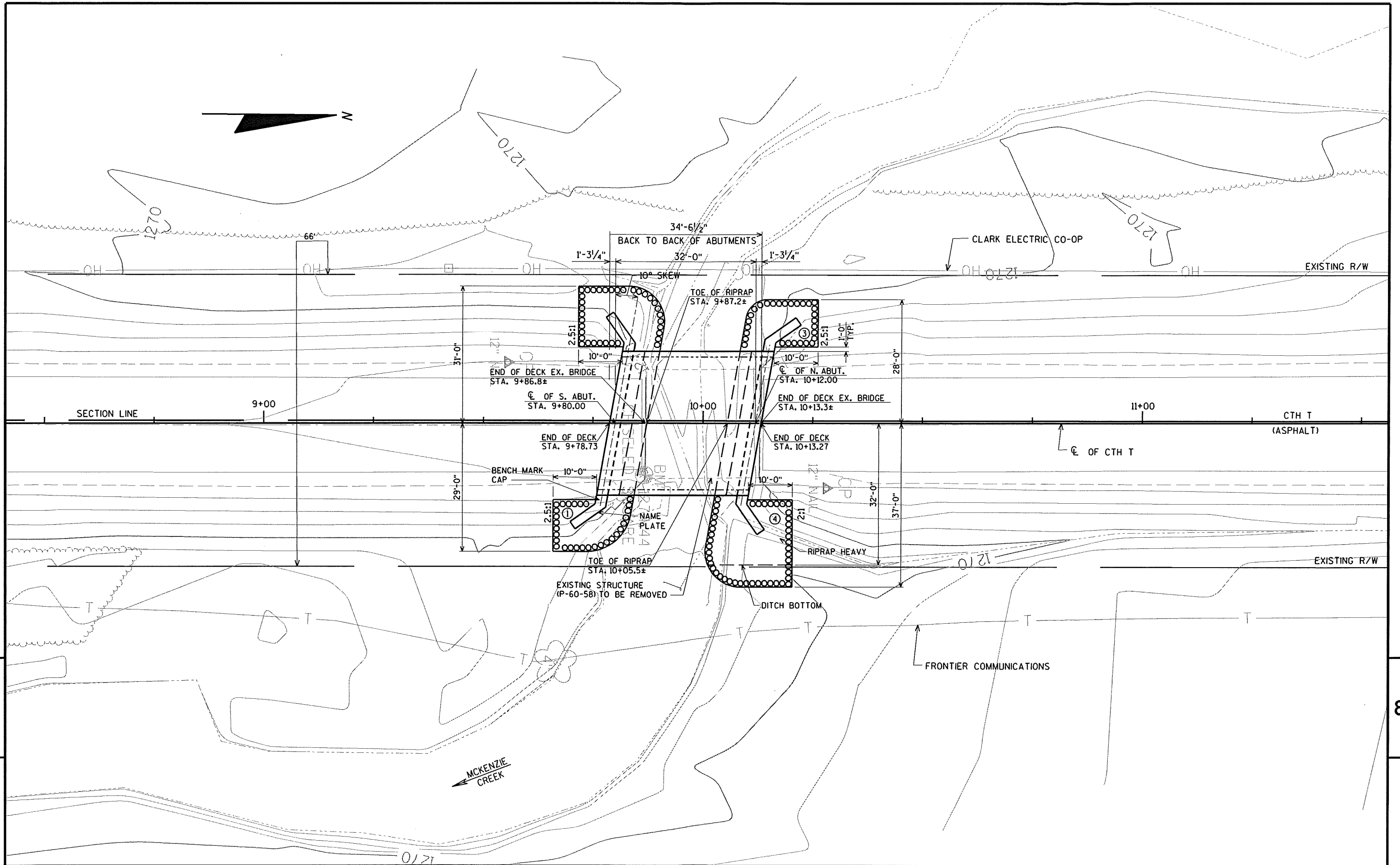
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-60-933			
DRAWN BY		CJM	PLANS CK'D.
QUANTITIES AND NOTES		SHEET 2 OF 3	

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STATE PROJECT NUMBER			
8887-08-72			
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			
LEGEND OF BORING			
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			
STRUCTURE B-60-933			
DRAWN BY		CJM	PLANS CK'D.
SUBSURFACE EXPLORATION			SHEET 3 OF 3



8

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BENCH MARKS			
NO.	STA.	DESCRIPTION	ELEV.
1	9+87	CHIS. SQ. AT TOP OF SE WINGWALL, 12' RT.	1274.44
2	11+78	NAIL IN POWER POLE, 33' LT.	1272.95

BEGIN CONSTRUCTION

STA. 7+75.38

Y = 313994.73

X = 573929.39

EXISTING R/W

SECTION LINE

EXISTING R/W

BEGIN PROJECT

STA. 8+50

(SAWCUT REQ'D.)

Y = 314069.35

X = 573929.70

EXISTING STRUCTURE
(P-60-58) TO BE REMOVED

SLOPE INTERCEPT

NEW R/W

CLARK ELECTRIC CO-OP

SLOPE INTERCEPT

END CONSTRUCTION

STA. 12+16.62

Y = 314435.96

X = 573931.23

CTH T

(ASPHALT)

CL OF CTH T

END PROJECT

STA. 11+50

(SAWCUT REQ'D.)

Y = 314369.35

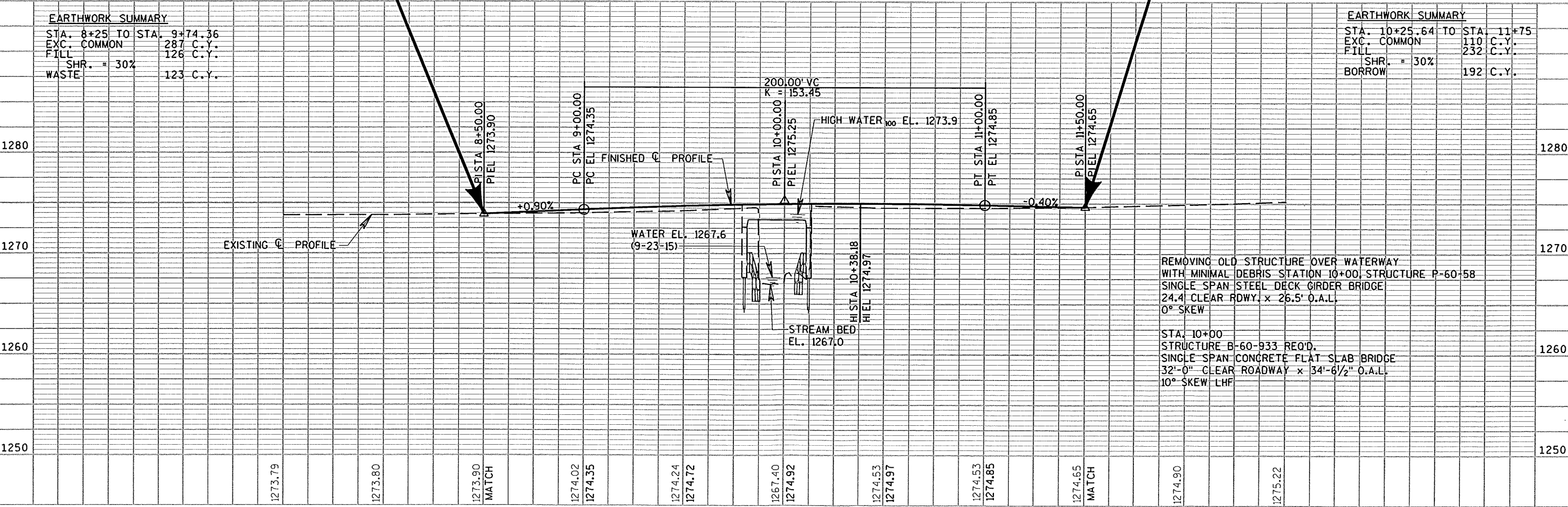
X = 573930.95

EARTHWORK SUMMARY

STA. 8+25 TO STA. 9+74.36
EXC. COMMON 287 C.Y.
FILL 126 C.Y.
SHR. = 30%
WASTE 123 C.Y.

EARTHWORK SUMMARY

STA. 10+25.64 TO STA. 11+75
EXC. COMMON 110 C.Y.
FILL 232 C.Y.
SHR. = 30%
BORROW 192 C.Y.



PROJECT NO: 8887-08-72

HWY: CTH T

COUNTY: TAYLOR

PLAN AND PROFILE

SCALE, FEET

SHEET

E