

* ANCHOR ASSEMBLY FOR BEAM GUARD

○ INDICATES WING NUMBER

DESIGN DATA

LIVE LOAD:

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

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF
 200 S.F.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY, SLAB _____ $f'_c = 4,000$ 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.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB
 DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS** PER
 PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
 ESTIMATE 30 FT PILE LENGTHS AT BOTH 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.

TRAFFIC DATA

A.D.T. (2017) _____ 470
 A.D.T. (2037) _____ 570
 DESIGN SPEED _____ 50 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY _____
 DRAINAGE AREA _____ 6.4 SQ. MI.
 Q_{100} TOTAL _____ 1,670 C.F.S.
 THROUGH STRUCTURE _____ 1,670 C.F.S.
 OVERTOPPING ROADWAY _____ N/A C.F.S.
 VELOCITY - THROUGH STRUCTURE _____ 6.60 F.P.S.
 WATERWAY AREA - THROUGH STRUCTURE _____ 253.1 SQ. FT.
 HIGH WATER₁₀₀ ELEVATION _____ 763.48
 SCOUR CRITICAL CODE _____ 5

EROSION CONTROL _____
 Q_2 _____ 260 C.F.S.
 HIGH WATER₂ ELEVATION _____ 758.65

LIST OF DRAWINGS

GENERAL PLAN _____ 1.
 CROSS SECTION AND QUANTITIES _____ 2.
 SUBSURFACE EXPLORATION _____ 3.

TYPE, SIZE
& LOCATION
APPROVED

BY MLH
DATE 6-22-2016

HIGHEST BRIDGE OPENING
 ELEV. = $754.55' \times 1.5 + 2.5' = 8.16'$
 $(758.32 - 754.55)$

EXHIBIT A

DESIGN CONSULTANT
PATRICK BOLAND, PE
(608) 588-7484

BRIDGE OFFICE CONTACT
WILLIAM DREHER, PE
(608) 266-8489

JEWELL
 associates engineers, inc.
 Engineers - Architects - Surveyors
 560 SUNRISE DRIVE
 SPRING GREEN, WI 53588
 PHONE: (608) 588-7484
 FAX: (608) 588-9322

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

ACCEPTED _____
 CHIEF STRUCTURES DESIGN ENGINEER _____ DATE _____

STRUCTURE B-12-155

CTH B OVER CONWAY VALLEY CREEK

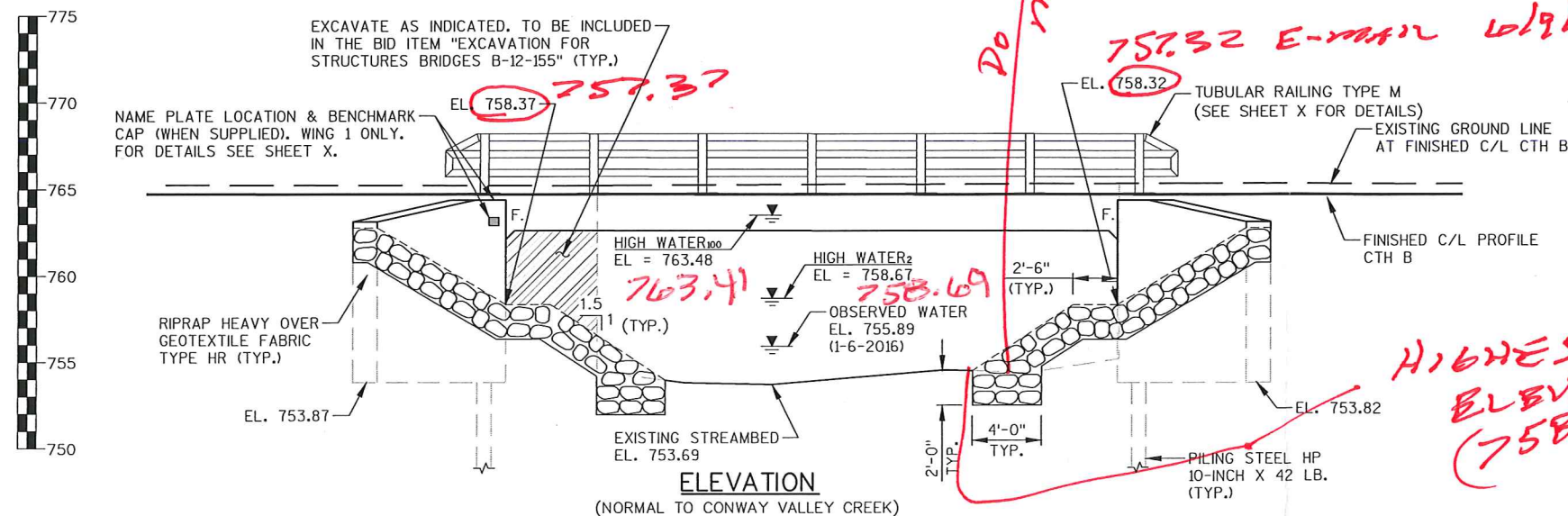
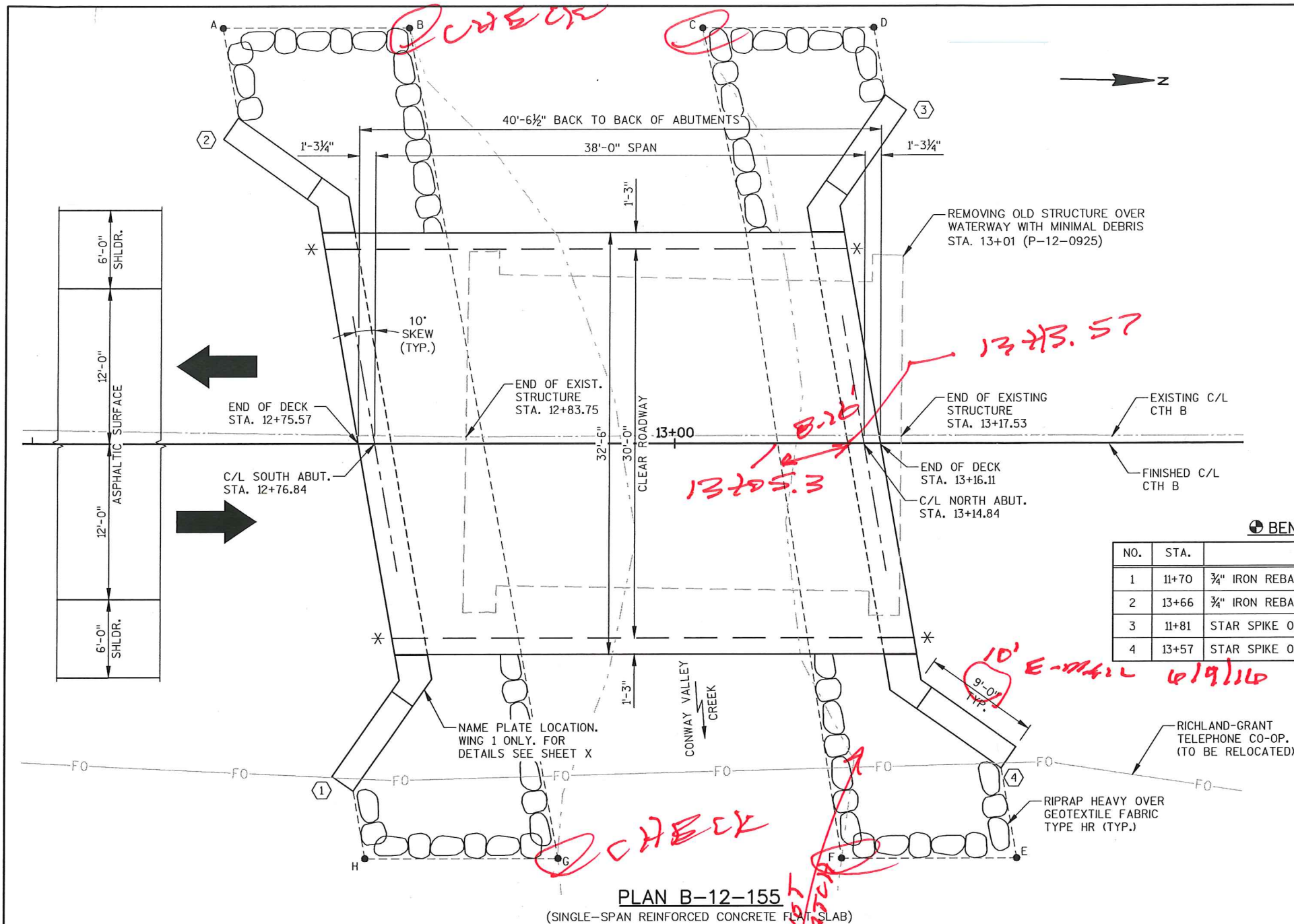
COUNTY CRAWFORD TOWN/ENCLAVE UTICA

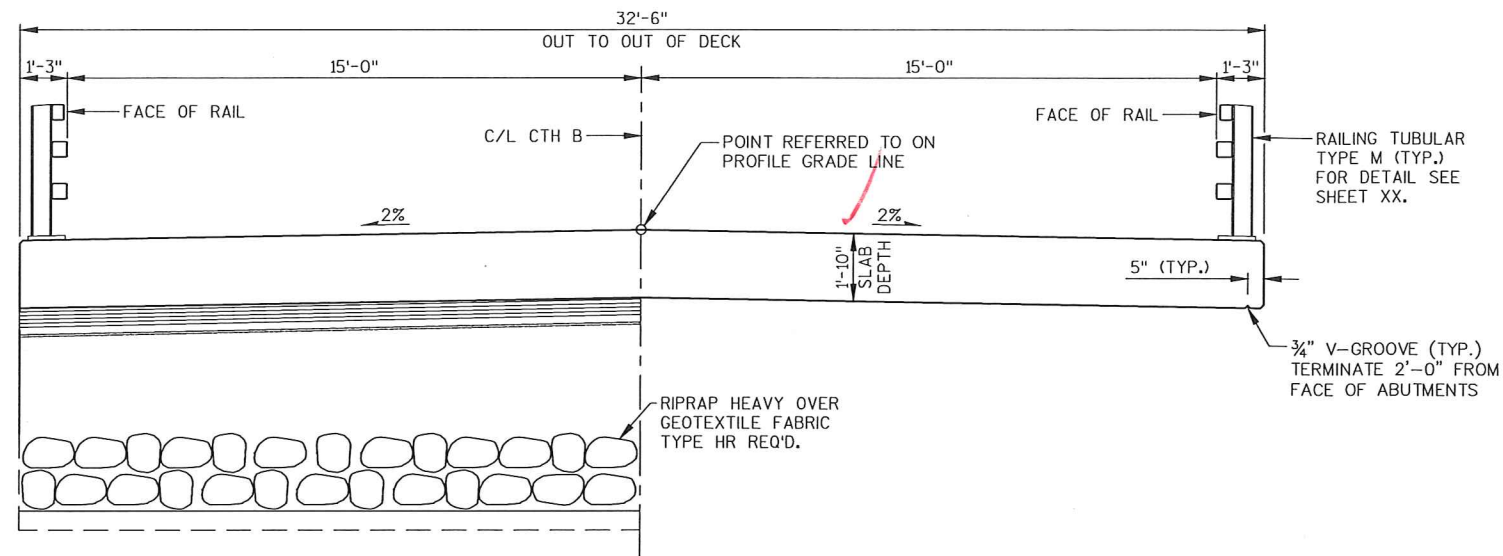
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY _____ DESIGN CK'D. _____ DRAWN BY _____ PLANS CK'D. _____ PTB

GENERAL PLAN

SHEET 1 OF 3

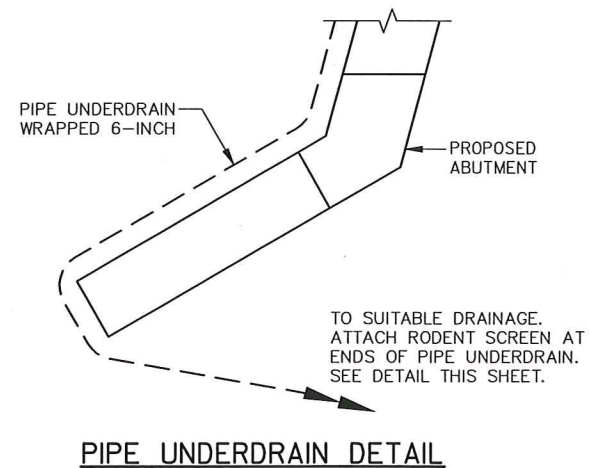




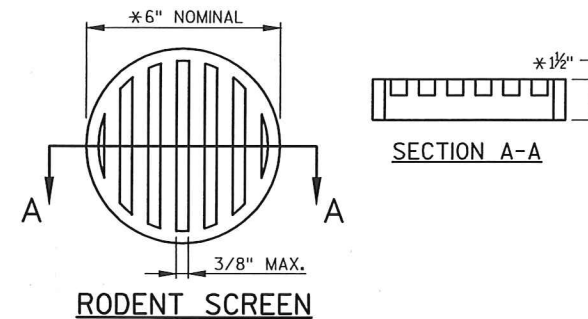
AT ABUTMENT

IN SPAN

PROPOSED CROSS-SECTION THROUGH ROADWAY (LOOKING NORTH)



PIPE UNDERDRAIN DETAIL



RODENT SCREEN

NOTES:

*DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

ORIENT SCREEN SO SLOTS ARE VERTICAL.

THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SCREEN SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SCREEN TO THE EXPOSED ENDS OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICA VERTICAL DATUM OF 1988 (NAVD 88).

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

JOINT FILLER SHALL CONFORM TO A.A.S.H.T.O. DESIGNATION M53, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M213.

THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE FABRIC TYPE HR TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS, OR AS DIRECTED BY THE ENGINEER IN THE FIELD.

AT THE BACK FACE 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. THE QUANTITY FOR BACKFILL STRUCTURE, BID ITEM 210.0100, IS CALCULATED BASED ON FIGURE 12.6-1 IN THE WISCONSIN DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL.

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE DECK, THE SIDES OF THE DECK AND EXTERIOR 12" OF THE UNDERSIDE OF THE DECK (CONCRETE MATERIAL ONLY).

THE EXISTING STRUCTURE (P-12-0925) IS A SINGLE-SPAN STEEL GIRDER, CONCRETE DECK STRUCTURE SUPPORTED ON TIMBER ABUTMENTS. THE STRUCTURE HAS A 23.7' CLEAR ROADWAY WIDTH AND A 34.0' OVERALL LENGTH AND SHALL BE REMOVED.

ALL STATIONS AND ELEVATIONS SHOWN ARE IN FEET.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

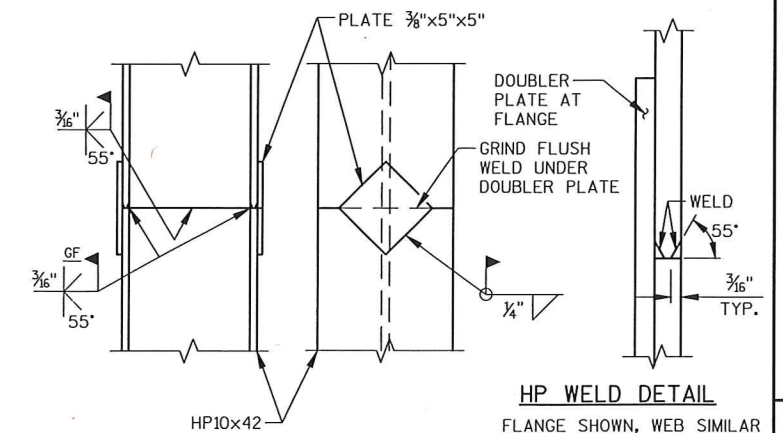
SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATIVE METHOD IS APPROVED BY THE ENGINEER IN THE FIELD.

THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

210.1500 Structure backfill type A, TON. Granular materials can be bid in units of cubic yard or tons. Structure plans (with a December 2016 letting or thereafter) should use the TON bid item, unless directed otherwise by the Region.

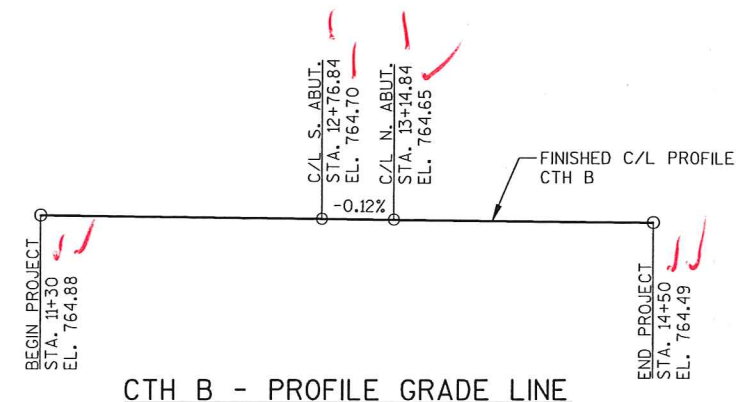
TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	S. ABUT.	SUPER	N. ABUT.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 13+01	LS	--	--	--	--
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-12-155	LS	--	--	--	--
210.0100	BACKFILL STRUCTURE	CY	--	--	--	--
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	--	--	--	--
513.4060	RAILING TUBULAR TYPE M B-12-155	LS	--	--	--	--
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	--	--	--	--
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 FABRIC TYPE HR	SY	--	--	--	--
NON-BID ITEMS						
	FILLER	SIZE	--	--	--	1/2" & 3/4"



PILE SPLICE DETAIL

STEEL "HP" PILE MATERIAL SHALL BE ASTM A 572 GRADE 50.



CTH B - PROFILE GRADE LINE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-12-155			
DRAWN BY JZ		PLANS CKD. PTB	
CROSS SECTION AND QUANTITIES			SHEET 2 OF 3



SOIL BORINGS

BORING NUMBER	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	02/01/01	246,486.3	389,388.9
2	02/02/01	246,532.1	389,397.6

BORINGS & REPORT COMPLETED BY: NUMMELIN TESTING SERVICES, INC.
5620 WOODLAND DRIVE
WAUNAKEE, WI 53597

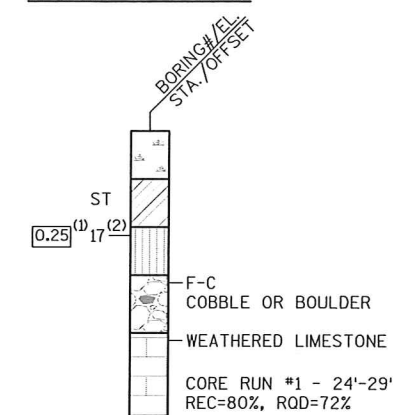
STATE PROJECT NUMBER

5426-00-71

MATERIAL SYMBOLS

Asphalt	Topsoil	Peat
Concrete	Fill	Gravel
Sand	Clay	Silt
Boulders or Cobbles	Limestone	Bedrock (unknown)
Shale	Sandstone	Igneous/meta

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED, THE SPT 'N' VALUE IS BASED ON AASHTO T-206 STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATIONS

AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

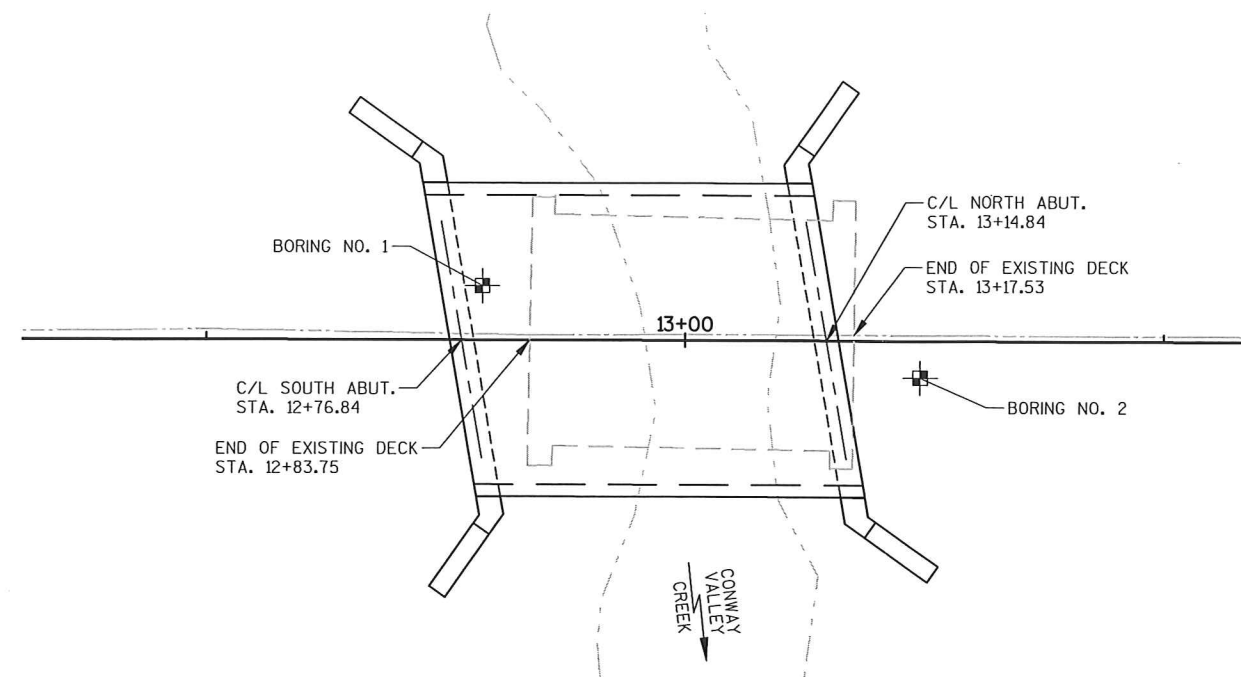
ABBREVIATIONS

F-FINE M-MEDIUM C-COURSE ST-SHELBY TUBE

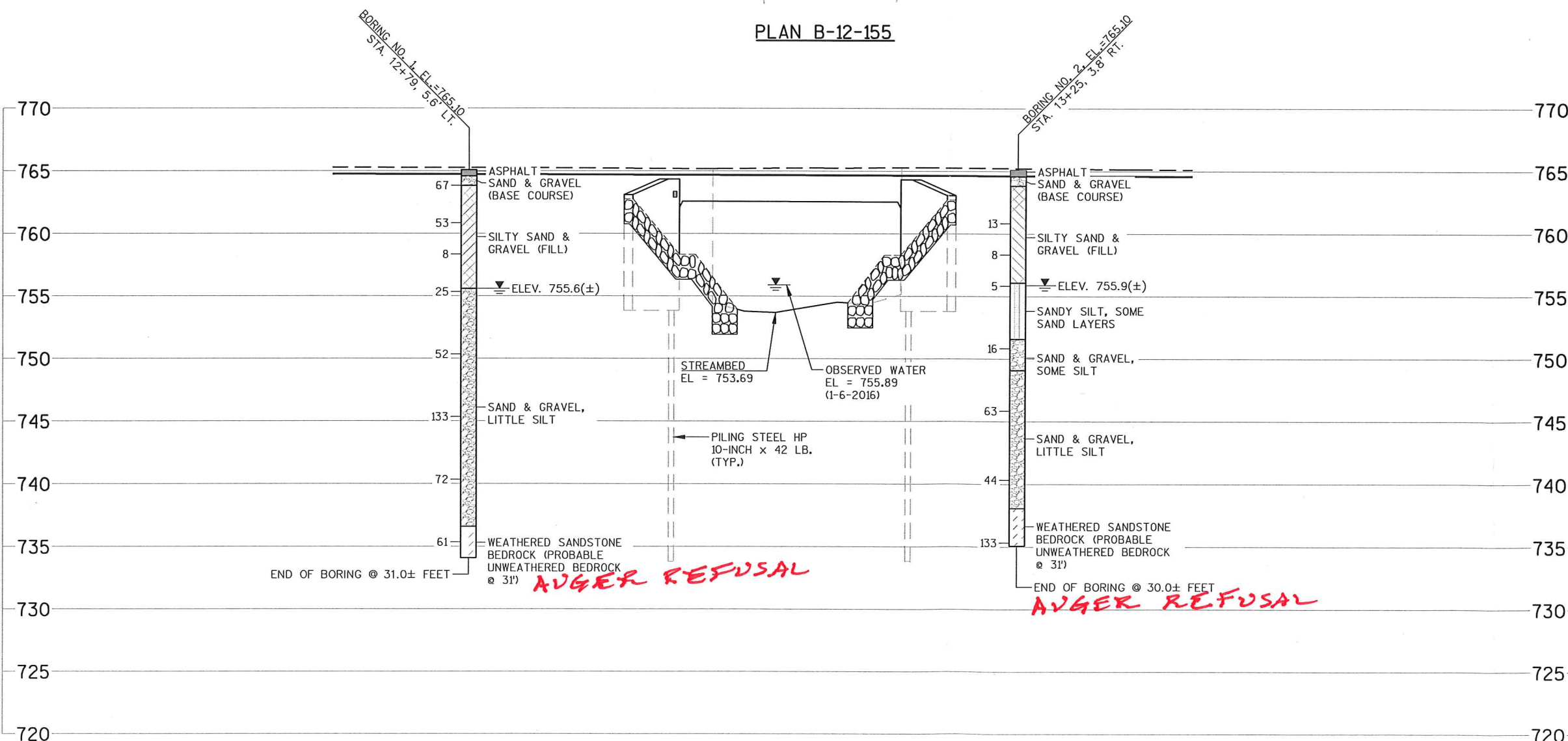
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-12-155			
DRAWN BY		PLANS CK'D.	PTB
SUBSURFACE EXPLORATION		SHEET 3 OF 3	



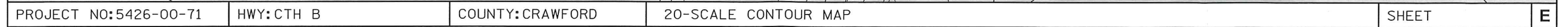
PLAN B-12-155



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8

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E

EXHIBIT C

