SWL

DEC 2015

PROJECT ID: 5992-08-85

WITH: N/A

COUNTY: DANE

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details (Includes Erosion Control Plan)
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right-of-way Plat
Section No.	5	Plan & Profile
Section No.	6	Standard Detail Drawings
Section No.	8	Structure Plans
Section No.	9	Cross Sections

TOTAL SHEETS = 138

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

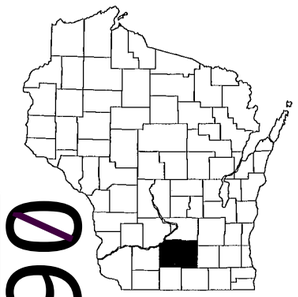
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5992-08-85	WISC 2015635	1

LOWER YAHARA RIVER TRAIL PHASE ONE

(CAPITAL CITY TRAIL TO MCDANIEL PARK)

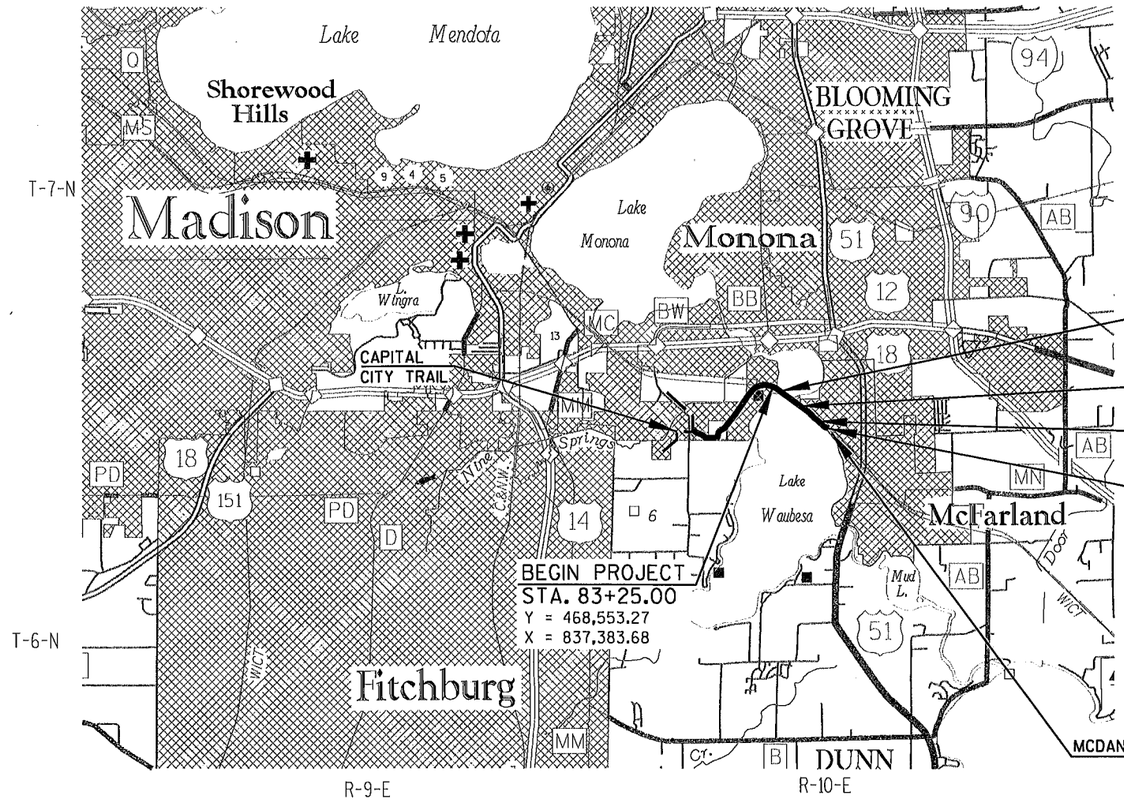
NON HIGHWAY
DANE COUNTY

STATE PROJECT NUMBER
5992-08-85



06





LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 1.026 MI.

Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), Dane County, NAD 1983 (97). Utilizing the WISCORS VRS Network. All in US Survey Foot.

Elevations shown on the plan are referenced to the North American Vertical Datum of 1988 (NAVD88)

DESIGN DESIGNATION

A.A.D.T. (2010)	=	N/A
A.A.D.T. (2030)	=	N/A
D.H.V.	=	N/A
D.D.	=	N/A
T.	=	N/A
DESIGN SPEED	=	20 MPH
ESALS	=	N/A

CONVENTIONAL SYMBOLS

PLAN

CORPORATE LIMITS

REFERENCE LINE

COMBUSTIBLE FLUIDS — CAUTION

UTILITIES

OVERHEAD ELECTRIC	OH
ELECTRIC	E
FIBER OPTIC	FO
GAS	G
SANITARY SEWER	SAN
STORM SEWER	SS
TELEPHONE	T
WATER	W
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

ACCEPTED FOR

COUNTY of DANE

2-21-15 (Date)

Kris Connors Director (Signature and Title of Official)

ORIGINAL PLANS PREPARED BY

GRAEF

WISCONSIN
STEVE L. HUBERTY
32396
WAUWATOSA, WI
PROFESSIONAL ENGINEER

DATE: 7/24/15 (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor: OUAM ENGINEERING, LLC / GRAEF

Designer: GRAEF

Management Consultant: KJOHNSON ENGINEERS, INC.

APPROVED FOR THE DEPARTMENT

DATE: 7/30/15 (Management Consultant Signature)

E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\010101_t1.dgn

PLOT DATE : 7/22/2015

PLOT BY : GRAEF

PLOT NAME :

PLOT SCALE : 10560.0000 sf / in.

WISDOT/CADDS SHEET 14

GENERAL NOTES

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER. COORDINATE TREE REMOVAL WITH DANE COUNTY FORESTER PRIOR TO BEGINNING CLEARING OPERATIONS. TREE LIMITS SHOWN ON PLANS IN HEAVY BRUSH AND TREE LINE AREAS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.

THE CONTRACTOR SHALL NOT OPERATE MACHINERY OUTSIDE THE EASEMENT AREAS IDENTIFIED IN THE PLANS.

THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS, FLOODWAY OR FLOODPLAIN OF ANY WATERWAY.

THE EROSION CONTROL FEATURES SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. ALL EROSION CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, SHALL BE RESTORED WITH TOPSOIL, FERTILIZER, SEED AND MULCH AS DIRECTED BY THE ENGINEER.

SEED AND MULCH ALL TOPSOILED AREAS WITHIN 5 CALENDAR DAYS AFTER GRADING WORK IS COMPLETED.

AGENCIES

WISCONSIN DEPT. OF NATURAL RESOURCES

MR. ERIC HEGGLUND
WISCONSIN DEPT. OF NATURAL RESOURCES
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
(608) 275-3301

DANE COUNTY LAND & WATER RESOURCES

MR. CHRIS JAMES
1 FEN COURT, NO. 234
MADISON, WI 53718
(608) 224-3763
JAMES@COUNTYOFDANE.COM

DESIGN CONSULTANT

MR. STEVE HUBERTY
GRAEF
125 S. 84TH STREET, SUITE 401
MILWAUKEE, WI 53214
(414) 259-1500 / FAX: (414) 259-0037
STEVE.HUBERTY@GRAEF-USA.COM

UTILITIES

UTILITY TYPE	CONTACT INFORMATION
GAS & ELECTRIC	ALLIANT ENERGY BRAD NOACK 1521 PROGRESS LANE STOUGHTON, WI 53589 (608) 751-7691 BRADLEY.NOACK@ALLIANTENERGY.COM
WATER	VILLAGE OF MCFARLAND ALLAN COVILLE 5915 MILWAUKEE STREET MCFARLAND, WI 53558 (608) 838-7287 ALLAN.COVILLE@MCFARLAND.WI.US
ELECTRIC	MADISON GAS & ELECTRIC RICHARD PARKER 133 SOUTH BLAIR STREET MADISON, WI 536788 (608) 252-7379 RPARKER@MGE.COM

STANDARD ABBREVIATIONS

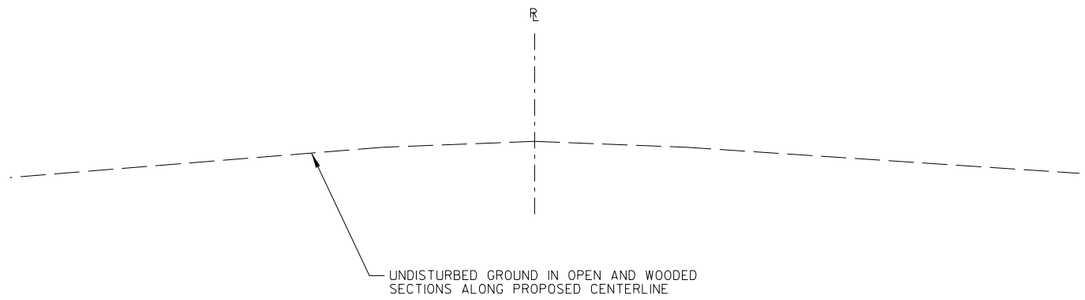
BM	BENCHMARK
HMA	HOT MIX ASPHALT
NTS	NOT TO SCALE
R/W	RIGHT-OF-WAY
STA	STATION
TYP	TYPICAL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPCS	CULVERT PIPE CORRUGATED STEEL
TLE	TEMPORARY LIMITED EASEMENT
PLE	PERMANENT LIMITED EASEMENT
NWL	NORMAL WATER LEVEL

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

2



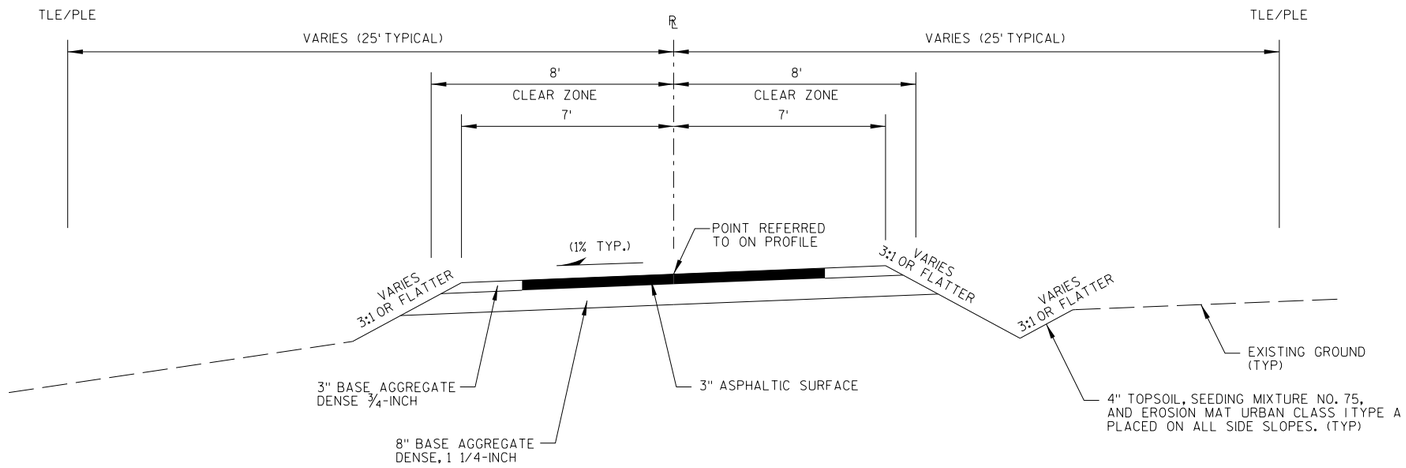
PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY:DANE	PROJECT OVERVIEW	SHEET 3	E



NOTE: PORTIONS OF THE PROPOSED TRAIL REFERENCE LINE EXTEND OVER LAKE WAUBESA

TYPICAL EXISTING SECTION

STA. 83+25.00 TO STA. 137+44.52

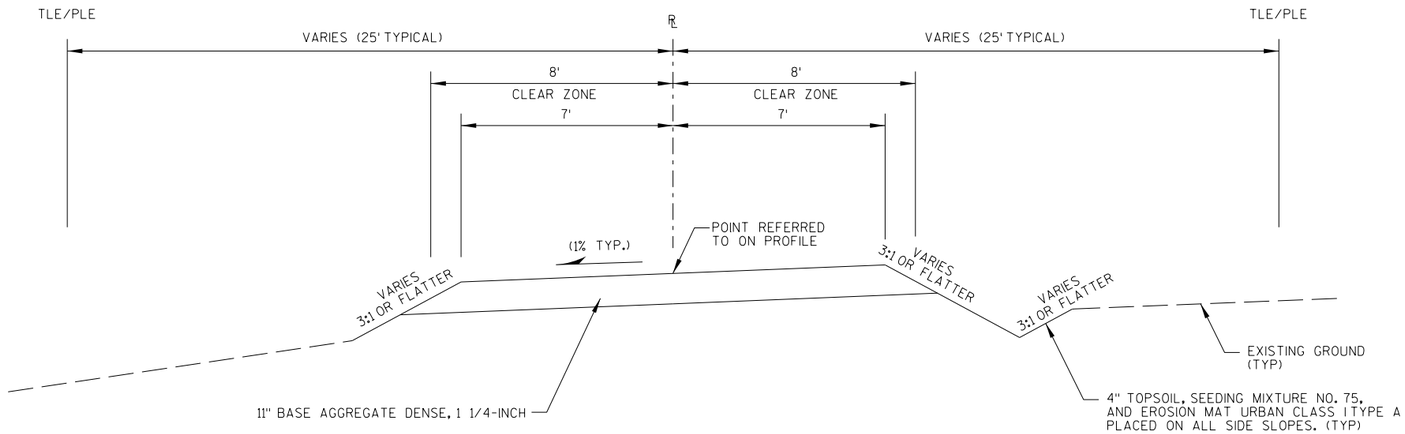


TYPICAL FINISHED SECTION - BY OTHERS

AT-GRADE TRAIL

STA. 8+35 TO STA. 83+25

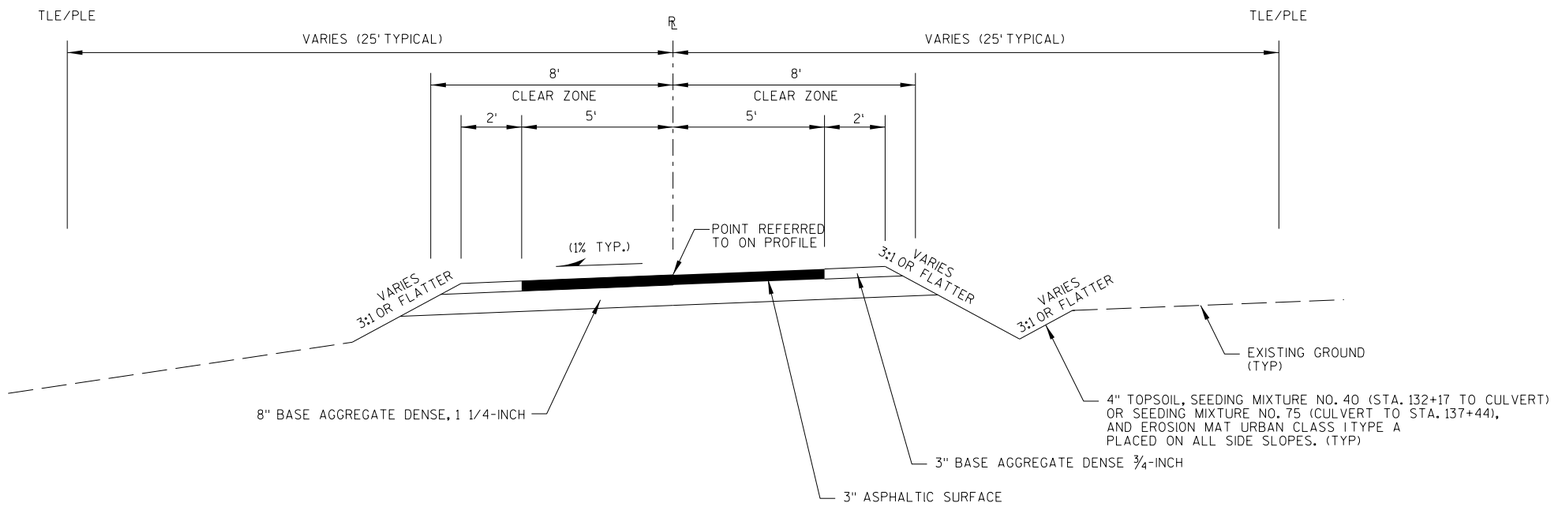
NOTE: THE AT-GRADE PATH FROM STA. 8+35 TO 83+25 IS BEING CONSTRUCTED BY DANE COUNTY. DANE COUNTY PLANS TO CONSTRUCT THE BASE AGGREGATE DENSE 1¼" BASE LAYER IN THE FALL OF 2015. THE APHALT SURFACE AND BASE AGGREGATE DENSE ¾" SHOULDERS IS PLANNED TO BE CONSTRUCTED AFTER THE COMPLETION OF THE CONTRACT WORK BEING CONSTRUCTED AS PART OF PROJECT ID 5992-08-85.



TYPICAL FINISHED SECTION

AT-GRADE TRAIL

STA. 83+25 TO STA. 83+70



TYPICAL FINISHED SECTION

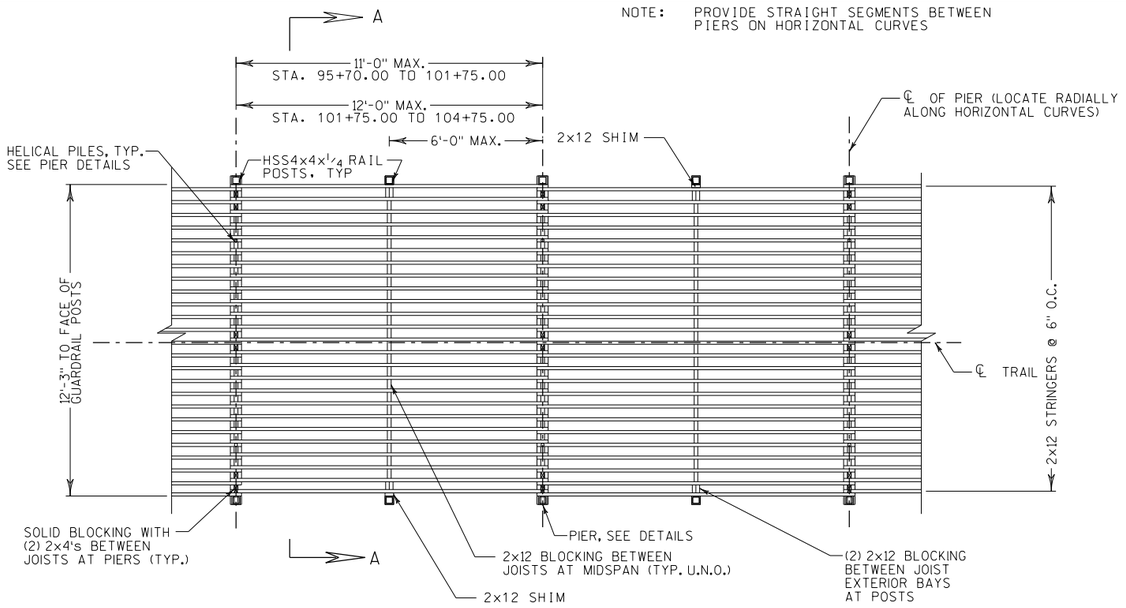
AT-GRADE TRAIL

STA. 132+17 TO STA. 137+44

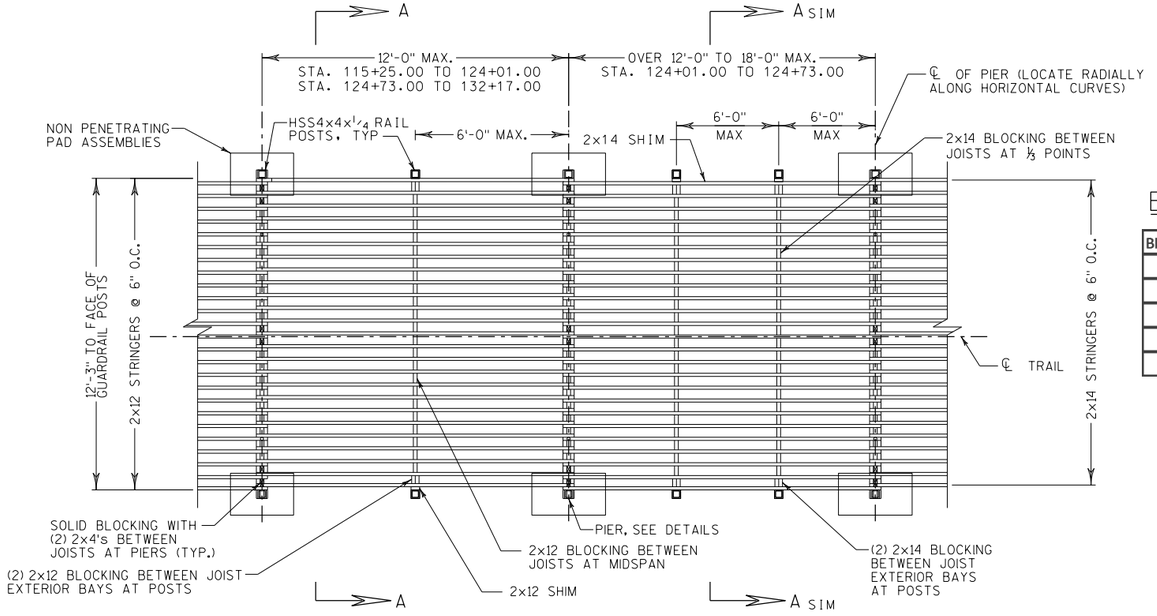
NOTE

REFER TO THE STRUCTURES PLANS AND WETLAND BOARDWALK CONSTRUCTION DETAILS FOR FINISHED TYPICAL SECTIONS OUTSIDE OF STATION LIMITS SHOWN ABOVE.

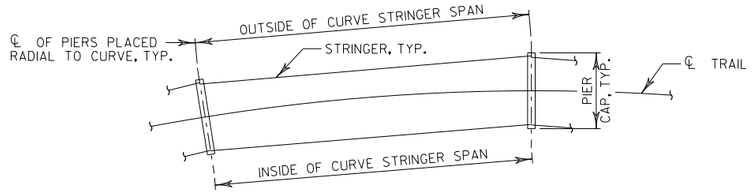
PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	TYPICAL SECTIONS	SHEET 5	E



PLAN - HELICAL PILE SUPPORTED PIERS

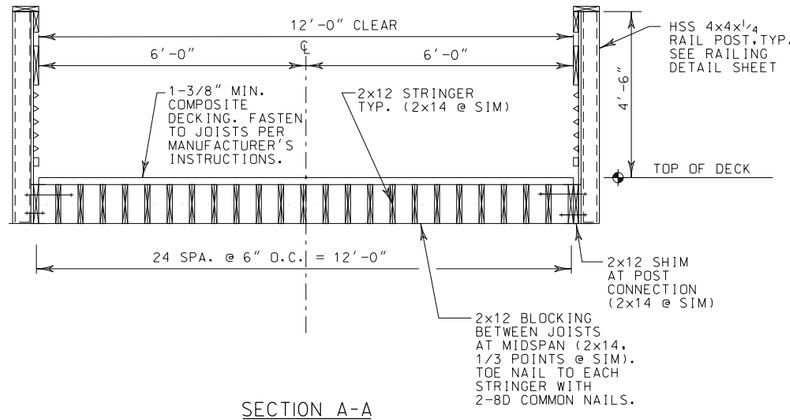


PLAN - NON-PENETRATING PAD ASSEMBLY SUPPORTED PIERS



BOARDWALK STRINGER LAYOUT ON CURVED ALIGNMENT

(INTERIOR STRINGERS NOT SHOWN FOR CLARITY)



SECTION A-A

WETLAND BOARDWALK SECTION

BOARDWALK TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	TOTAL
507.0200	TREATED LUMBER AND TIMBER	MBM	186.4
SPV.0060.01	HELICAL PILE	EACH	256
SPV.0060.02	NON-PENETRATING PAD ASSEMBLY	EACH	278
SPV.0090.01	RAILING SYSTEM FOR ELEVATED BOARDWALK	LF	5,192
SPV.0165.01	COMPOSITE DECKING	SF	31,798

BILL OF TIMBER - ONE SPAN

SIZE	NO. REQ'D.	APPROXIMATE LENGTH	DESCRIPTION
2"X12"	25	11'-6"	STRINGERS STA. 95+70 TO 101+75
2"X12"	25	12'-6"	STRINGERS STA. 101+75 TO 104+75
2"X12"	25	12'-9"	STRINGERS STA. 115+25 TO 124+01 AND STA. 124+73 TO 132+17
2"X14"	25	VARIES 14'-0" TO 19'-0"	STRINGERS STA. 124+01 TO 124+73
2"X12"	4	16'-10"	PIER P1
2"X12"	4	14'-0"	PIER P2
2"X12"	6	14'-0"	PIER P3
2"X12"	8	14'-0"	PIER P4
2"X12"	26	4-1/2"	MIDSPAN BLOCKING
2"X14"	52	4-1/2"	1/3 POINT BLOCKING
2"X12"	1	11"	MIDSPAN POST SHIM
2"X12"	2	11"	1/3 POINT POST SHIM
2"X4"	48	11-1/4"	PIER SOLID BLOCKING

DESIGN DATA

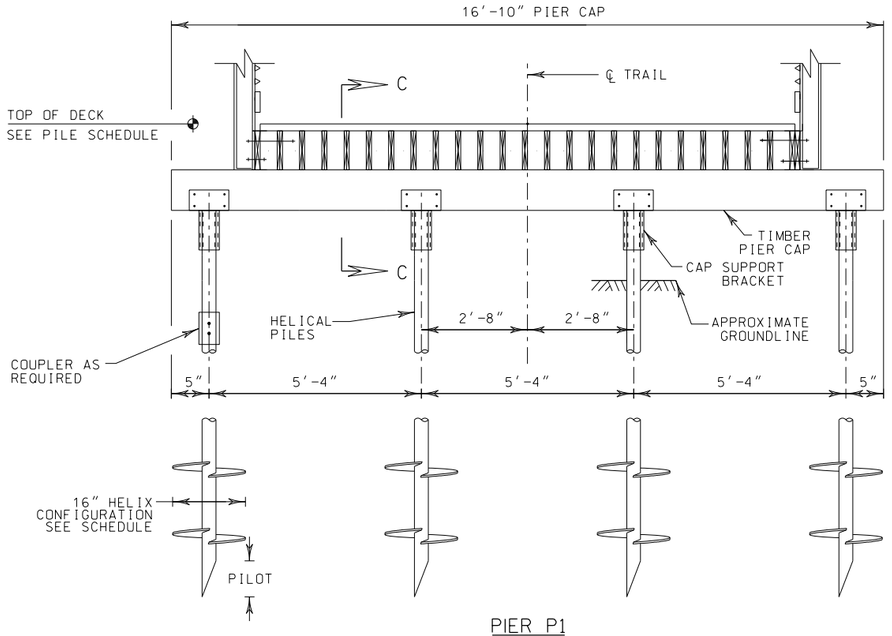
LIVE LOAD:

VEHICLE DESIGN LOAD: H-5
PEDESTRIAN DESIGN LOAD: 90 PSF

GENERAL NOTES:

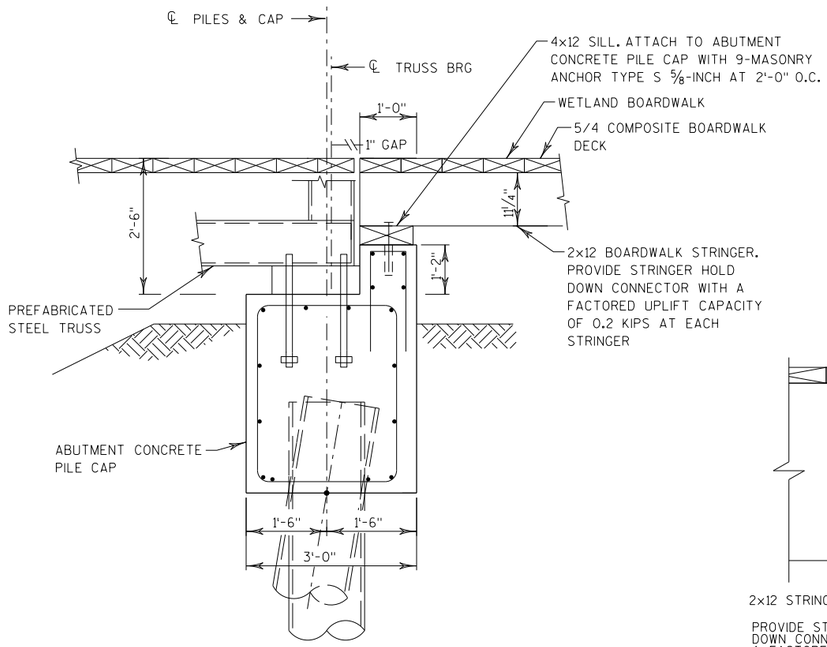
1. ALL LUMBER SHALL BE NO. 1 SOUTHERN PINE.

2. COMPOSITE DECKING SHALL BE 5/4" MIN. THICKNESS.



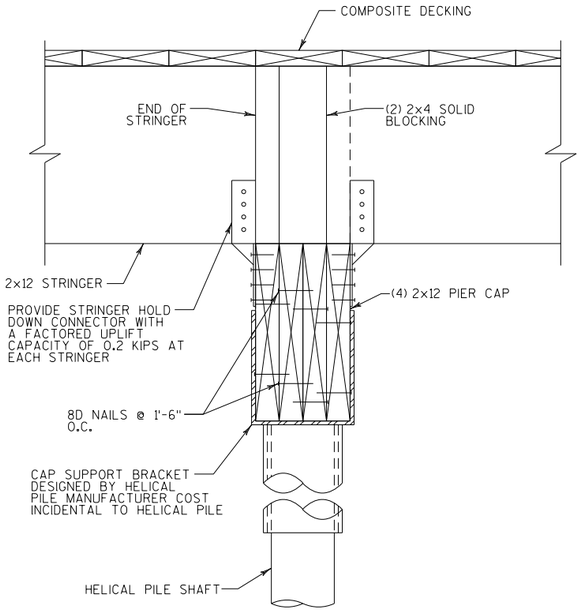
PIER P1

STA. 95+81.00 TO 100+98.00

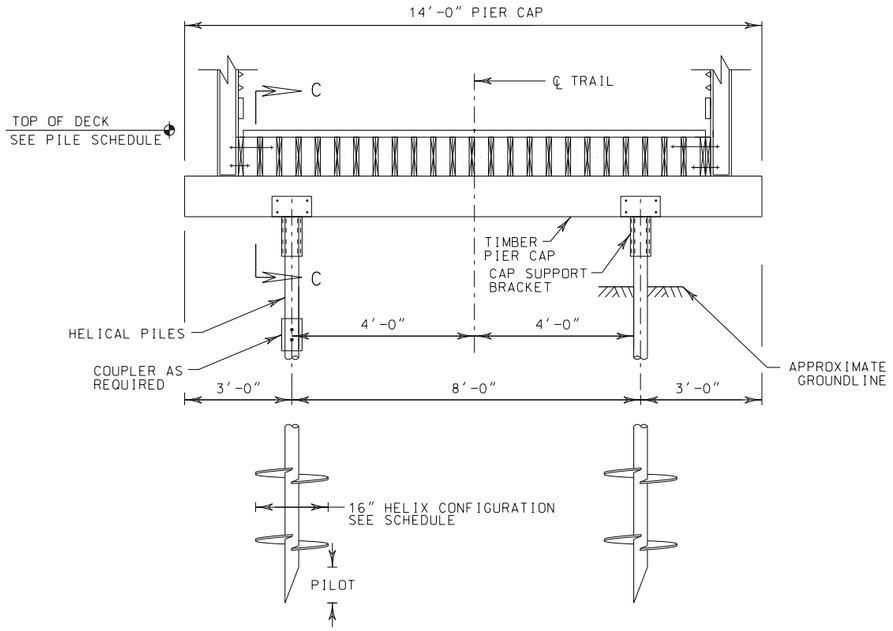


BOARDWALK SECTION

AT STATIONS 95+70.00, 104+75.00, AND 115+25.00

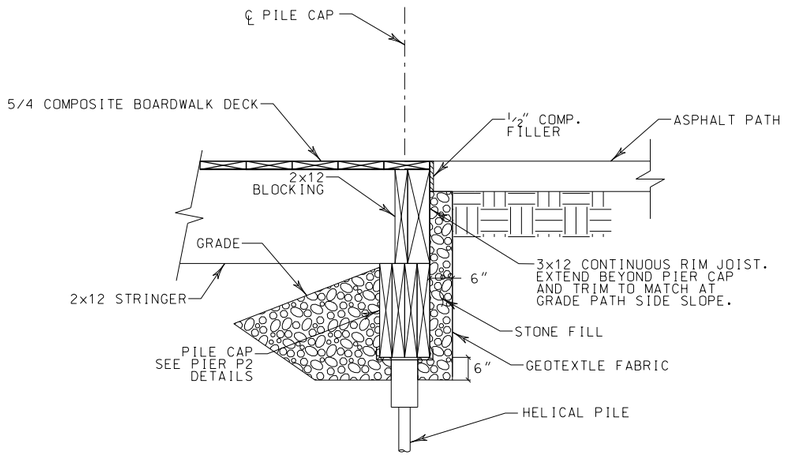


SECTION C-C



PIER P2

STA. 101+09.00 TO 104+63.00, AND STA. 132+17.00



ASPHALT TO WETLAND BOARDWALK TRANSITION

AT STA. 132+17.00

NOTES

BOARDWALK PIERS FROM STA. 95+81.00 TO 100 +98.00 TO BE SUPPORTED ON 16in/16in HELICAL PILES INSTALLED TO A MINIMUM ULTIMATE AXIAL RESISTANCE OF 5.5 TONS** PER PILE. ESTIMATED 10-FT LONG.

BOARDWALK PIERS FROM STA. 101+09.00 TO 104+63.00 TO BE SUPPORTED ON 16in/16in HELICAL PILES INSTALLED TO A MINIMUM ULTIMATE AXIAL RESISTANCE OF 14.5 TONS** PER PILE. ESTIMATED 15-FT LONG.

**THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR THE DESIGN IS THE REQUIRED ULTIMATE AXIAL RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5.

2

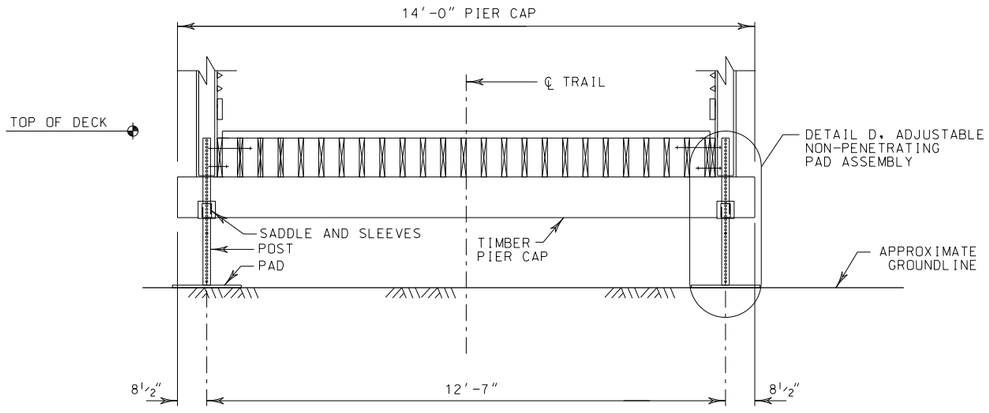
WETLAND BOARDWALK - HELICAL PILE SCHEDULE

PIER NUMBER	STATION	PIER TYPE	PATH PROFILE ELEV.	BOTTOM OF PILE CAP ELEV.	APPROX. EXIST. GRADE ELEV.	APPROX. PILE TIP ELEV.	FACTORED PILE AXIAL LOAD (KIPS)	APPROXIMATE PILE LENGTH (FT)	REQUIRE NO. OF PILES	HELIX CONFIGURATION
1	95+81.00	P1	850.00	848.03	846.0	836.0	5.2	12.0	4	16 in./16 in.
2	95+92.00	P1	850.00	848.03	846.0	836.0	5.2	12.0	4	16 in./16 in.
3	96+03.00	P1	850.00	848.03	846.0	836.0	5.2	12.0	4	16 in./16 in.
4	96+14.00	P1	850.00	848.03	846.0	836.0	5.2	12.0	4	16 in./16 in.
5	96+25.00	P1	850.00	848.03	846.0	836.0	5.2	12.0	4	16 in./16 in.
6	96+36.00	P1	850.00	848.03	846.0	836.0	5.2	12.0	4	16 in./16 in.
7	96+47.00	P1	850.00	848.03	846.0	836.0	5.2	12.0	4	16 in./16 in.
8	96+58.00	P1	850.00	848.03	846.0	836.0	5.2	12.0	4	16 in./16 in.
9	96+69.00	P1	850.00	848.03	846.0	836.0	5.2	12.0	4	16 in./16 in.
10	96+80.00	P1	850.00	848.03	846.0	836.0	5.2	12.0	4	16 in./16 in.
11	96+91.00	P1	850.00	848.03	846.0	836.0	5.2	12.0	4	16 in./16 in.
12	97+02.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
13	97+13.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
14	97+24.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
15	97+35.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
16	97+46.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
17	97+57.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
18	97+68.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
19	97+79.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
20	97+90.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
21	98+01.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
22	98+12.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
23	98+23.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
24	98+34.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
25	98+45.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
26	98+56.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
27	98+67.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
28	98+78.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
29	98+89.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
30	99+00.00	P1	850.00	848.03	845.0	835.0	5.2	13.0	4	16 in./16 in.
31	99+11.00	P1	850.00	848.03	845.0	835.0	5.2	13.0	4	16 in./16 in.
32	99+22.00	P1	850.00	848.03	845.0	835.0	5.2	13.0	4	16 in./16 in.
33	99+33.00	P1	850.00	848.03	845.0	835.0	5.2	13.0	4	16 in./16 in.
34	99+44.00	P1	850.00	848.03	845.0	835.0	5.2	13.0	4	16 in./16 in.
35	99+55.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
36	99+66.00	P1	850.00	848.03	845.5	835.5	5.2	12.5	4	16 in./16 in.
37	99+77.00	P1	850.03	848.06	845.5	835.5	5.2	12.6	4	16 in./16 in.
38	99+88.00	P1	850.09	848.12	846.0	836.0	5.2	12.1	4	16 in./16 in.
39	99+99.00	P1	850.18	848.21	846.0	836.0	5.2	12.2	4	16 in./16 in.
40	100+10.00	P1	850.30	848.33	846.0	836.0	5.2	12.3	4	16 in./16 in.
41	100+21.00	P1	850.46	848.49	846.0	836.0	5.2	12.5	4	16 in./16 in.
42	100+32.00	P1	850.64	848.67	846.0	836.0	5.2	12.7	4	16 in./16 in.
43	100+43.00	P1	850.86	848.89	846.5	836.5	5.2	12.4	4	16 in./16 in.
44	100+54.00	P1	851.08	849.11	846.5	836.5	5.2	12.6	4	16 in./16 in.
45	100+65.00	P1	851.30	849.33	846.5	836.5	5.2	12.8	4	16 in./16 in.
46	100+76.00	P1	851.50	849.53	847.0	837.0	5.2	12.5	4	16 in./16 in.
47	100+87.00	P1	851.66	849.69	847.0	837.0	5.2	12.7	4	16 in./16 in.
48	100+98.00	P1	851.79	849.82	847.5	837.5	5.2	12.3	4	16 in./16 in.
49	101+09.00	P2	851.89	849.92	847.5	832.5	11.3	17.4	2	16 in./16 in.
50	101+20.00	P2	851.96	849.99	848.0	833.0	11.3	17.0	2	16 in./16 in.
51	101+31.00	P2	852.00	850.03	848.0	833.0	11.3	17.0	2	16 in./16 in.
52	101+42.00	P2	852.00	850.03	848.0	833.0	11.3	17.0	2	16 in./16 in.
53	101+53.00	P2	852.00	850.03	848.0	833.0	11.3	17.0	2	16 in./16 in.
54	101+64.00	P2	852.00	850.03	848.0	833.0	11.3	17.0	2	16 in./16 in.
55	101+75.00	P2	852.00	850.03	848.0	833.0	11.3	17.0	2	16 in./16 in.
56	101+87.00	P2	852.00	850.03	848.0	833.0	11.3	17.0	2	16 in./16 in.
57	101+99.00	P2	852.00	850.03	848.0	833.0	11.3	17.0	2	16 in./16 in.
58	102+11.00	P2	852.00	850.03	848.0	833.0	11.3	17.0	2	16 in./16 in.
59	102+23.00	P2	852.00	850.03	848.0	833.0	11.3	17.0	2	16 in./16 in.
60	102+35.00	P2	852.00	850.03	848.0	833.0	11.3	17.0	2	16 in./16 in.

WETLAND BOARDWALK - HELICAL PILE SCHEDULE (CONTINUED)

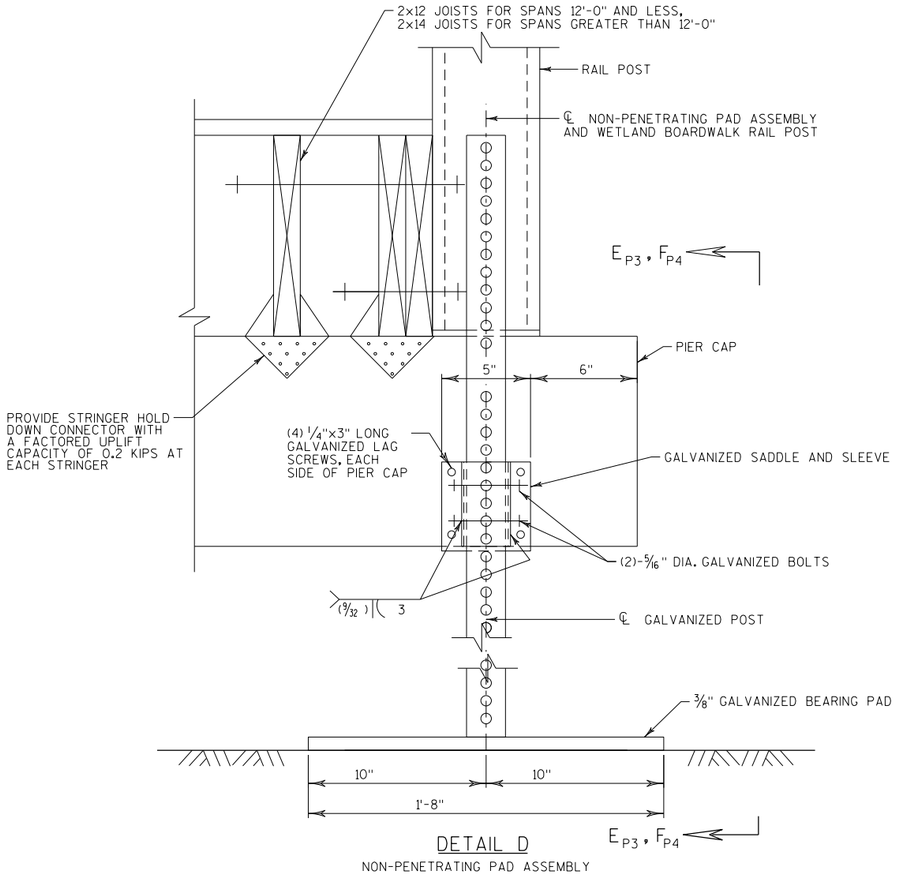
PIER NUMBER	STATION	PIER TYPE	PATH PROFILE ELEV.	BOTTOM OF PILE CAP ELEV.	APPROX. EXIST. GRADE ELEV.	APPROX. PILE TIP ELEV.	FACTORED PILE AXIAL LOAD (KIPS)	APPROXIMATE PILE LENGTH (FT)	REQUIRE NO. OF PILES	HELIX CONFIGURATION
61	102+47.00	P2	852.00	850.03	847.5	832.5	11.3	17.5	2	16 in./16 in.
62	102+59.00	P2	852.00	850.03	847.0	832.0	11.3	18.0	2	16 in./16 in.
63	102+71.00	P2	852.00	850.03	847.0	832.0	11.3	18.0	2	16 in./16 in.
64	102+83.00	P2	852.00	850.03	847.0	832.0	11.3	18.0	2	16 in./16 in.
65	102+95.00	P2	852.00	850.03	847.0	832.0	11.3	18.0	2	16 in./16 in.
66	103+07.00	P2	852.00	850.03	847.0	832.0	11.3	18.0	2	16 in./16 in.
67	103+19.00	P2	852.00	850.03	847.0	832.0	11.3	18.0	2	16 in./16 in.
68	103+31.00	P2	852.00	850.03	847.5	832.5	11.3	17.5	2	16 in./16 in.
69	103+43.00	P2	852.00	850.03	848.0	833.0	11.3	17.0	2	16 in./16 in.
70	103+55.00	P2	852.00	850.03	848.5	833.5	11.3	16.5	2	16 in./16 in.
71	103+67.00	P2	852.00	850.03	848.5	833.5	11.3	16.5	2	16 in./16 in.
72	103+79.00	P2	852.00	850.03	848.5	833.5	11.3	16.5	2	16 in./16 in.
73	103+91.00	P2	852.00	850.03	848.5	833.5	11.3	16.5	2	16 in./16 in.
74	104+03.00	P2	852.00	850.03	848.5	833.5	11.3	16.5	2	16 in./16 in.
75	104+15.00	P2	852.00	850.03	848.5	833.5	11.3	16.5	2	16 in./16 in.
76	104+27.00	P2	852.00	850.03	848.5	833.5	11.3	16.5	2	16 in./16 in.
77	104+39.00	P2	852.00	850.03	848.5	833.5	11.3	16.5	2	16 in./16 in.
78	104+51.00	P2	852.00	850.03	848.5	833.5	11.3	16.5	2	16 in./16 in.
79	104+63.00	P2	852.00	850.03	848.5	833.5	11.3	16.5	2	16 in./16 in.
219	132+17.00	P2	849.70	847.73	846.5	831.5	11.3	16.2	2	16 in./16 in.

2

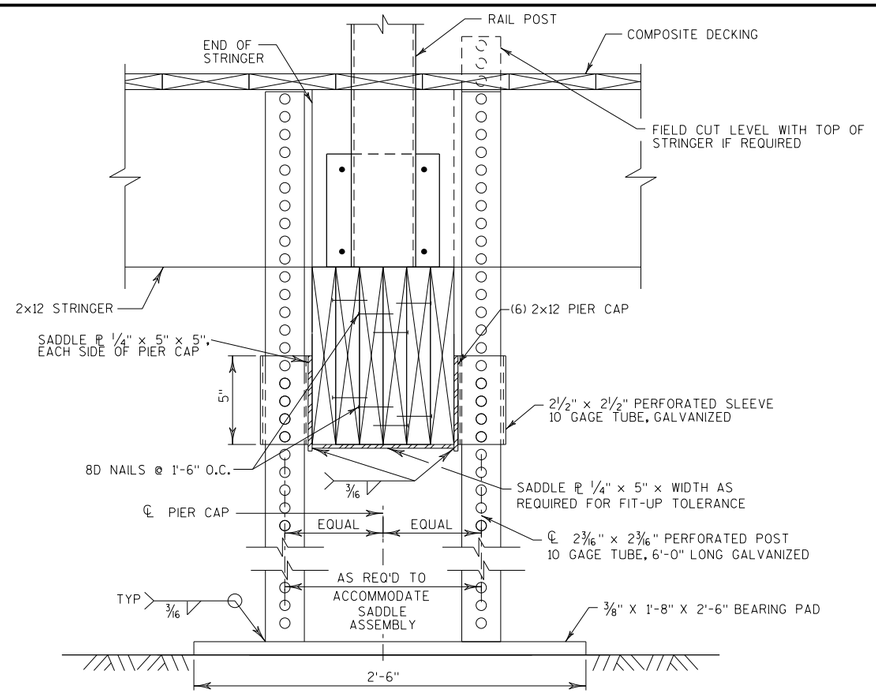


PIERS P3 & P4

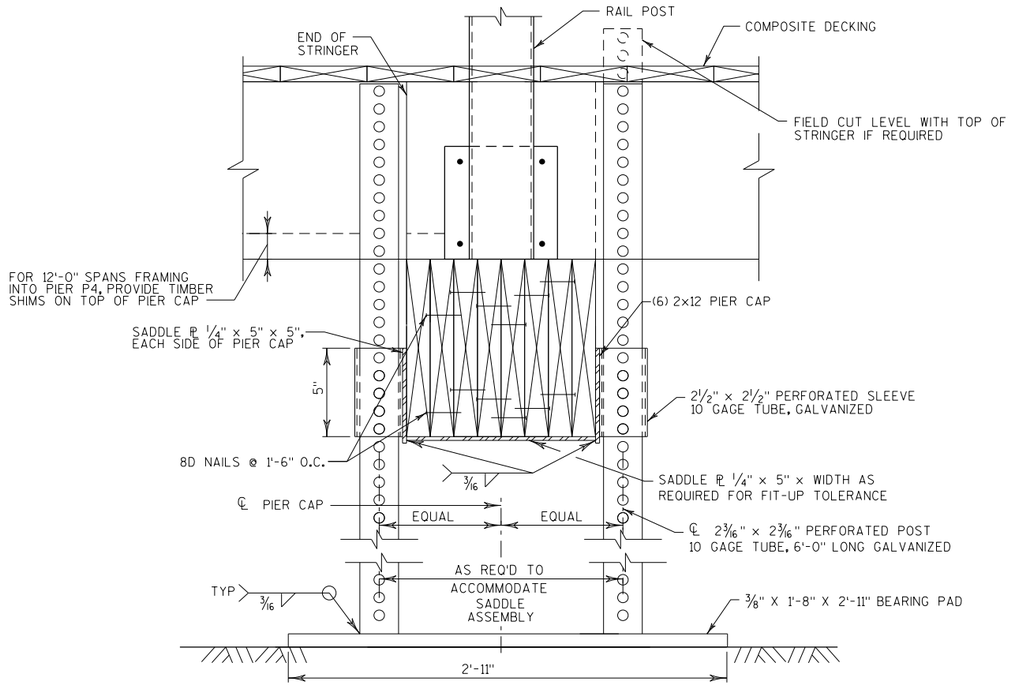
PIER P3 STA. 115+37.00 TO 123+89.00, 124+85.00 TO 132+05.00
PIER P4 STA. 124+01.00 TO 124+73.00



DETAIL D
NON-PENETRATING PAD ASSEMBLY



SECTION E-E PIER P3



SECTION F-F PIER P4

PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET 9	E

WETLAND BOARDWALK - NON-PENETRATING PAD ASSEMBLY SCHEDULE

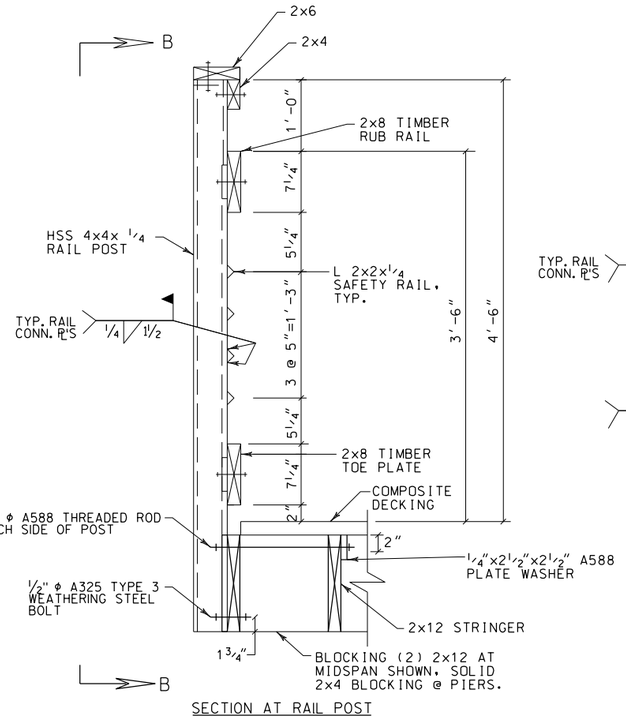
PIER NUMBER	STATION	PIER TYPE	NUMBER OF NON-PENETRATING PAD ASSEMBLIES
80	115+37.00	P3	2
81	115+49.00	P3	2
82	115+61.00	P3	2
83	115+73.00	P3	2
84	115+85.00	P3	2
85	115+97.00	P3	2
86	116+09.00	P3	2
87	116+21.00	P3	2
88	116+33.00	P3	2
89	116+45.00	P3	2
90	116+57.00	P3	2
91	116+69.00	P3	2
92	116+81.00	P3	2
93	116+93.00	P3	2
94	117+05.00	P3	2
95	117+17.00	P3	2
96	117+29.00	P3	2
97	117+41.00	P3	2
98	117+53.00	P3	2
99	117+65.00	P3	2
100	117+77.00	P3	2
101	117+89.00	P3	2
102	118+01.00	P3	2
103	118+13.00	P3	2
104	118+25.00	P3	2
105	118+37.00	P3	2
106	118+49.00	P3	2
107	118+61.00	P3	2
108	118+73.00	P3	2
109	118+85.00	P3	2
110	118+97.00	P3	2
111	119+09.00	P3	2
112	119+21.00	P3	2
113	119+33.00	P3	2
114	119+45.00	P3	2
115	119+57.00	P3	2
116	119+69.00	P3	2
117	119+81.00	P3	2
118	119+93.00	P3	2
119	120+05.00	P3	2
120	120+17.00	P3	2
121	120+29.00	P3	2
122	120+41.00	P3	2
123	120+53.00	P3	2
124	120+65.00	P3	2
125	120+77.00	P3	2
126	120+89.00	P3	2
127	121+01.00	P3	2
128	121+13.00	P3	2
129	121+25.00	P3	2
130	121+37.00	P3	2
131	121+49.00	P3	2
132	121+61.00	P3	2
133	121+73.00	P3	2
134	121+85.00	P3	2
135	121+97.00	P3	2
136	122+09.00	P3	2
137	122+21.00	P3	2
138	122+33.00	P3	2
139	122+45.00	P3	2
140	122+57.00	P3	2
141	122+69.00	P3	2

WETLAND BOARDWALK - NON-PENETRATING PAD ASSEMBLY SCHEDULE (CONTINUED)

PIER NUMBER	STATION	PIER TYPE	NUMBER OF NON-PENETRATING PAD ASSEMBLIES
142	122+81.00	P3	2
143	122+93.00	P3	2
144	123+05.00	P3	2
145	123+17.00	P3	2
146	123+29.00	P3	2
147	123+41.00	P3	2
148	123+53.00	P3	2
149	123+65.00	P3	2
150	123+77.00	P3	2
151	123+89.00	P3	2
152	124+01.00	P4	2
153	124+14.00	P4	2
154	124+27.00	P4	2
155	124+45.00	P4	2
156	124+59.00	P4	2
157	124+73.00	P4	2
158	124+85.00	P3	2
159	124+97.00	P3	2
160	125+09.00	P3	2
161	125+21.00	P3	2
162	125+33.00	P3	2
163	125+45.00	P3	2
164	125+57.00	P3	2
165	125+69.00	P3	2
166	125+81.00	P3	2
167	125+93.00	P3	2
168	126+05.00	P3	2
169	126+17.00	P3	2
170	126+29.00	P3	2
171	126+41.00	P3	2
172	126+53.00	P3	2
173	126+65.00	P3	2
174	126+77.00	P3	2
175	126+89.00	P3	2
176	127+01.00	P3	2
177	127+13.00	P3	2
178	127+25.00	P3	2
179	127+37.00	P3	2
180	127+49.00	P3	2
181	127+61.00	P3	2
182	127+73.00	P3	2
183	127+85.00	P3	2
184	127+97.00	P3	2
185	128+09.00	P3	2
186	128+21.00	P3	2
187	128+33.00	P3	2
188	128+45.00	P3	2
189	128+57.00	P3	2
190	128+69.00	P3	2
191	128+81.00	P3	2
192	128+93.00	P3	2
193	129+05.00	P3	2
194	129+17.00	P3	2
195	129+29.00	P3	2
196	129+41.00	P3	2
197	129+53.00	P3	2
198	129+65.00	P3	2
199	129+77.00	P3	2
200	129+89.00	P3	2
201	130+01.00	P3	2
202	130+13.00	P3	2
203	130+25.00	P3	2

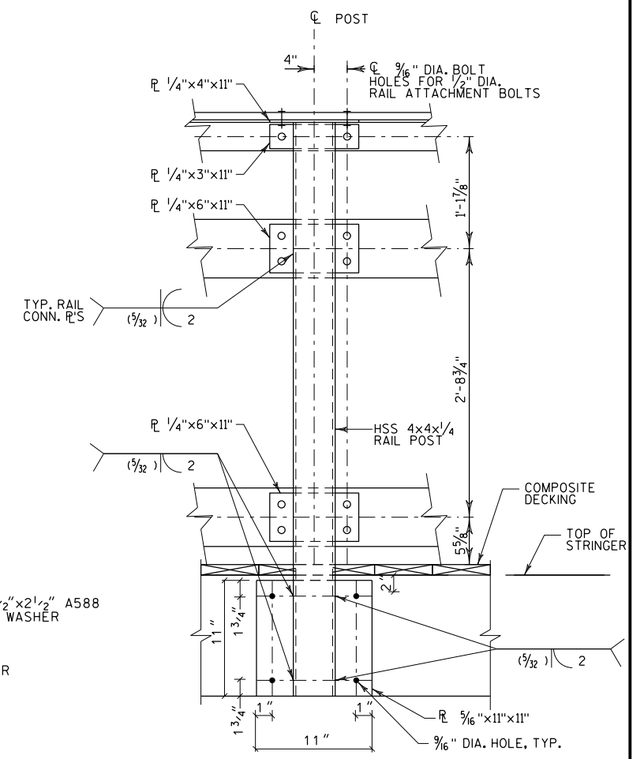
WETLAND BOARDWALK - NON-PENETRATING PAD ASSEMBLY SCHEDULE (CONTINUED)

PIER NUMBER	STATION	PIER TYPE	NUMBER OF NON-PENETRATING PAD ASSEMBLIES
204	130+37.00	P3	2
205	130+49.00	P3	2
206	130+61.00	P3	2
207	130+73.00	P3	2
208	130+85.00	P3	2
209	130+97.00	P3	2
210	131+09.00	P3	2
211	131+21.00	P3	2
212	131+33.00	P3	2
213	131+45.00	P3	2
214	131+57.00	P3	2
215	131+69.00	P3	2
216	131+81.00	P3	2
217	131+93.00	P3	2
218	132+05.00	P3	2



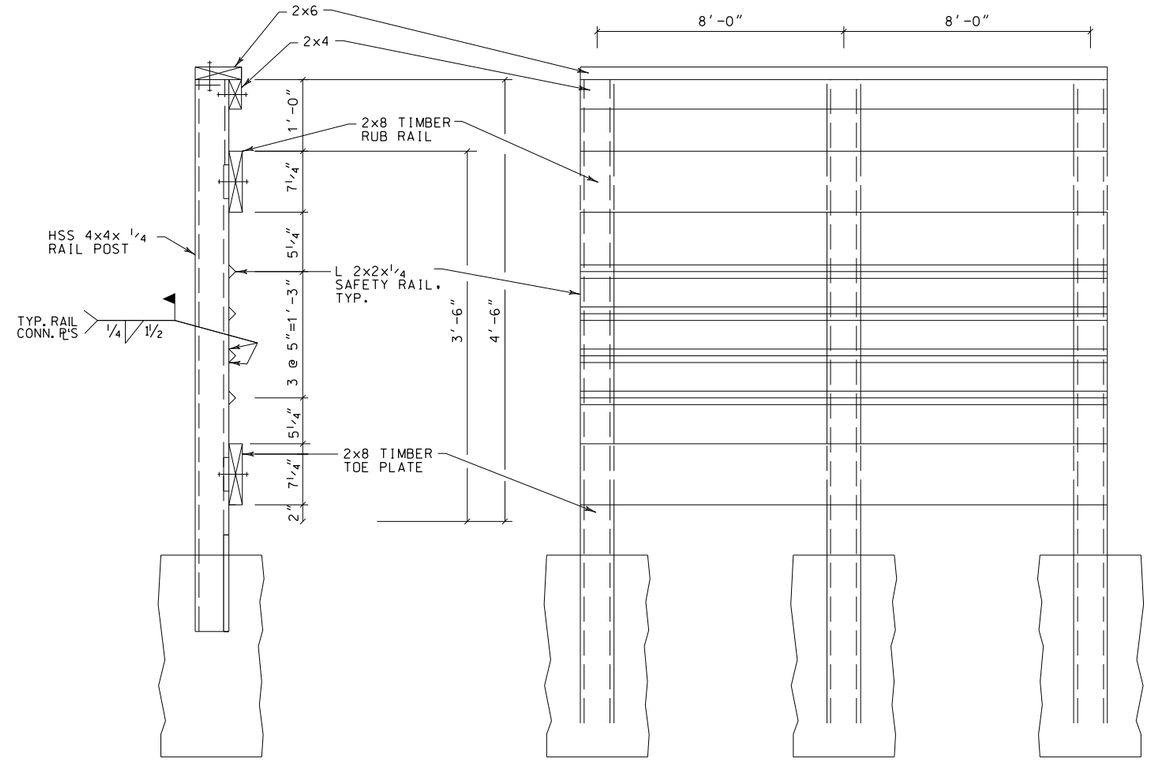
SECTION AT RAIL POST

WETLAND BOARDWALK RAILING



SECTION B-B *

* COMMERCIALLY AVAILABLE GUARDRAIL POST CONNECTORS MAY BE USED AT THE APPROVAL OF THE ENGINEER. OUTWARD HORIZONTAL LOAD ON RAIL POST 4'-6" ABOVE DECK = 300 LB SERVICE, 480 LB FACTORED.



SECTION AT RAIL POST

16' LENGTH FLARED APPROACH RAILING

STRUCTURE APPROACH RAILING

(PAID FOR AS RAIL SYSTEM FOR ELEVATION BOARDWALK (SPV.0090.01) AND SHALL INCLUDED CONCRETE BASES FOR RAILING

2

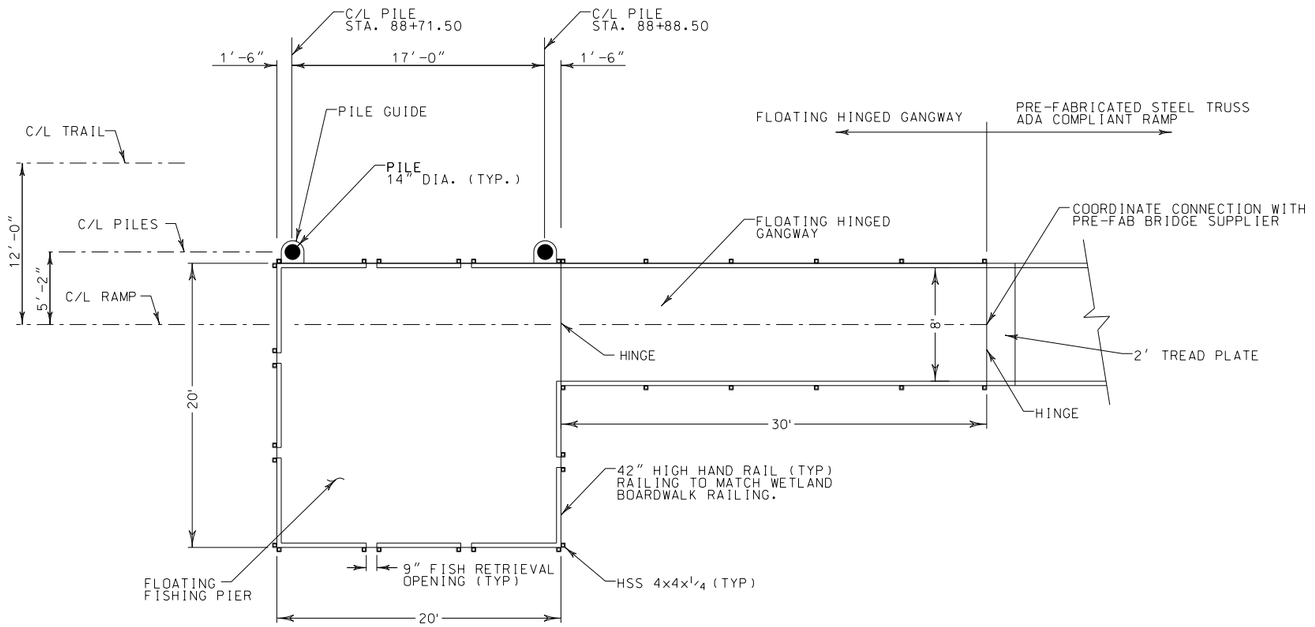
DESIGN CRITERIA

1. DESIGN THE FLOATING FISHING PIER AND GANGWAY IN ACCORDANCE TO THE MOST RECENT EDITION OF THE AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, CHAPTER 10, SECTION 1005 FISHING PIERS AND PLATFORMS.

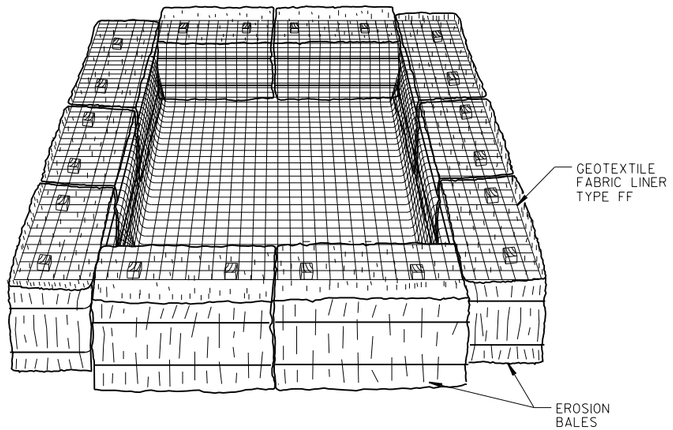
2. DESIGN THE FLOATING FISHING PIER FOR VERTICAL LIVE LOADS OF 100 PSF FOR STRUCTURE AND 50 PSF FOR BUOYANCY. DESIGN THE FLOATING FISHING PIER FOR A HORIZONTAL LIVE LOAD OF 150 PLF.

3. DESIGN THE FLOATING FISHING PIER TO MAINTAIN A FREEBOARD OF 24" UNDER THE COMBINED PIER AND SUPPORTED GANGWAY SELF WEIGHT DEAD LOADS. MAINTAIN 18" +/- 2" OF FREEBOARD UNDER DEAD LOAD PLUS A 30 PSF UNIFORMLY DISTRIBUTED LIVE LOAD ON THE PIER AND SUPPORTED GANGWAY. MAINTAIN 12" OF FREEBOARD UNDER DEAD LOAD PLUS A 50 PSF UNIFORMLY DISTRIBUTED LIVE LOAD ON THE PIER AND SUPPORTED GANGWAY. PROVIDE THE NECESSARY FLOATATION SUCH THAT THE FISHING PIER DOES NOT COME INTO CONTACT WITH THE LAKE BOTTOM UNDER COMBINED DEAD AND LIVE LOADING.

4. DESIGN FLOATING FISHING PIER SO THAT CONNECTIONS OF FLOATATION UNITS ACT AS A SINGLE UNIT SUCH THAT ONE FLOATATION UNIT DOES NOT DEFLECT WITHOUT ADJACENT UNITS DEFLECTING.



FLOATING FISHING PIER



TEMPORARY SETTLING BASIN

(SIZE TO BE DETERMINED IN FIELD AS INDICATED BELOW:)

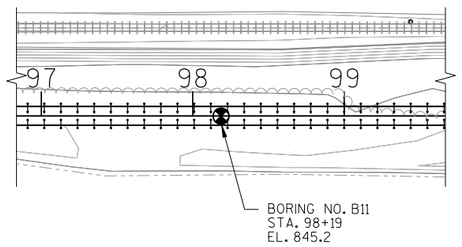
STORAGE VOLUME (C.F.) = 16 X GPM (PUMP RATE)

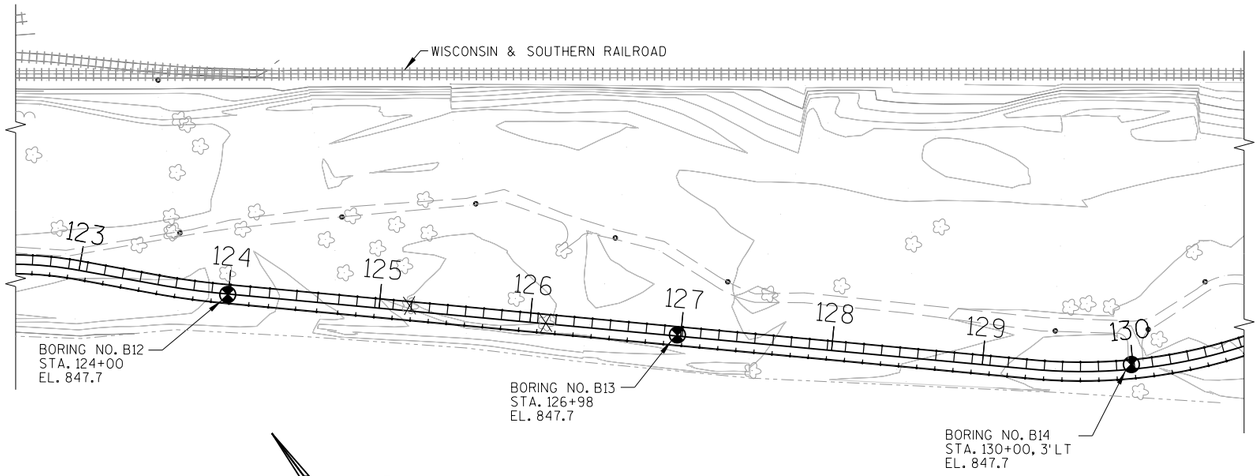
EXAMPLE:
CONTRACTOR INDICATES PUMP CAPABLE OF 50 GPM
HEIGHT OF BALES = 1.5 FT.

SOLUTION:
SV (C.F.) = 16 X 50
SV = 800 C.F.

$\frac{800\ C.F.}{1.5\ FT.}$ = 533 S.F.

2

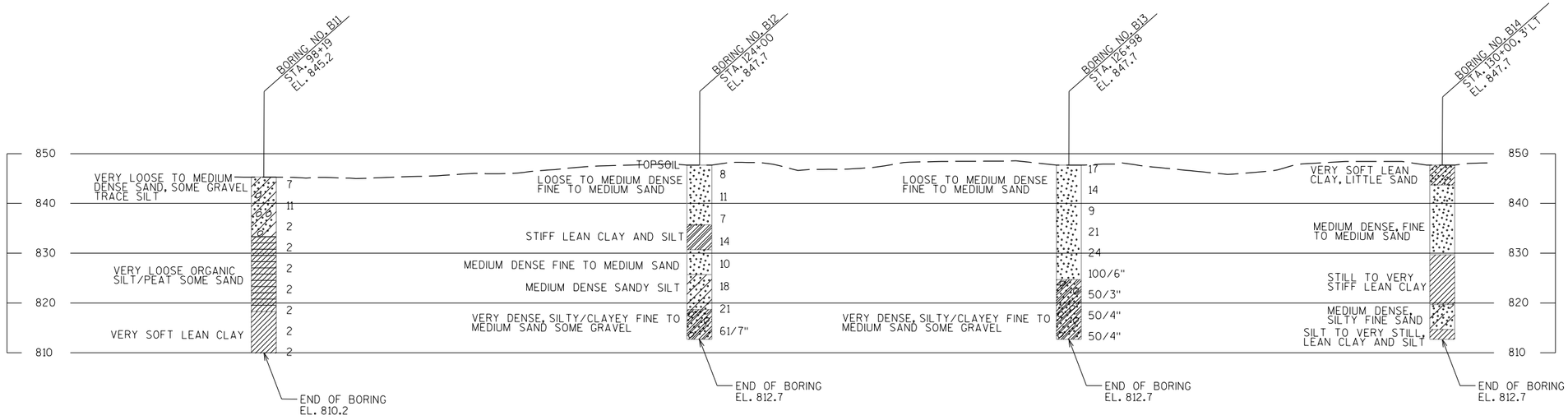




PLAN

SOIL EXPLORATION PERFORMED BY:
CGC, INC.
2921 PERRY STREET
MADISON, WI 53713
(608) 288-4100

B11 - MARCH 11, 2014
B12 - MARCH 6, 2014
B13 - MARCH 5, 2014
B14 - MARCH 5, 2014



STATE PROJECT NUMBER

5992-08-85

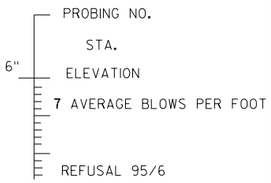
ABBREVIATIONS

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

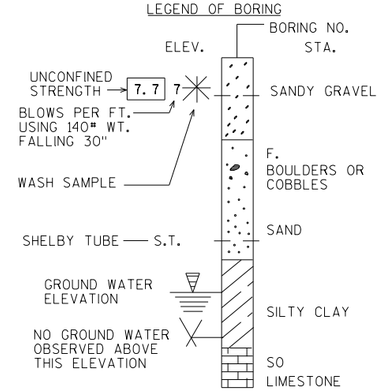
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



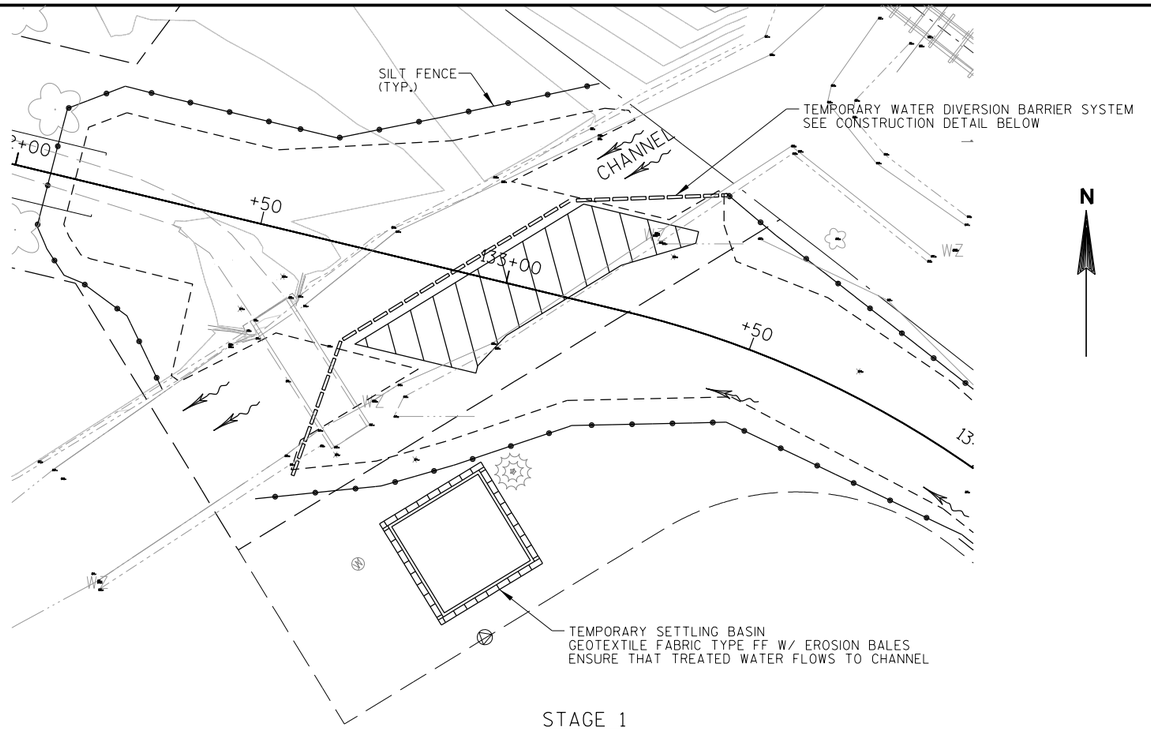
LEGEND OF BORING



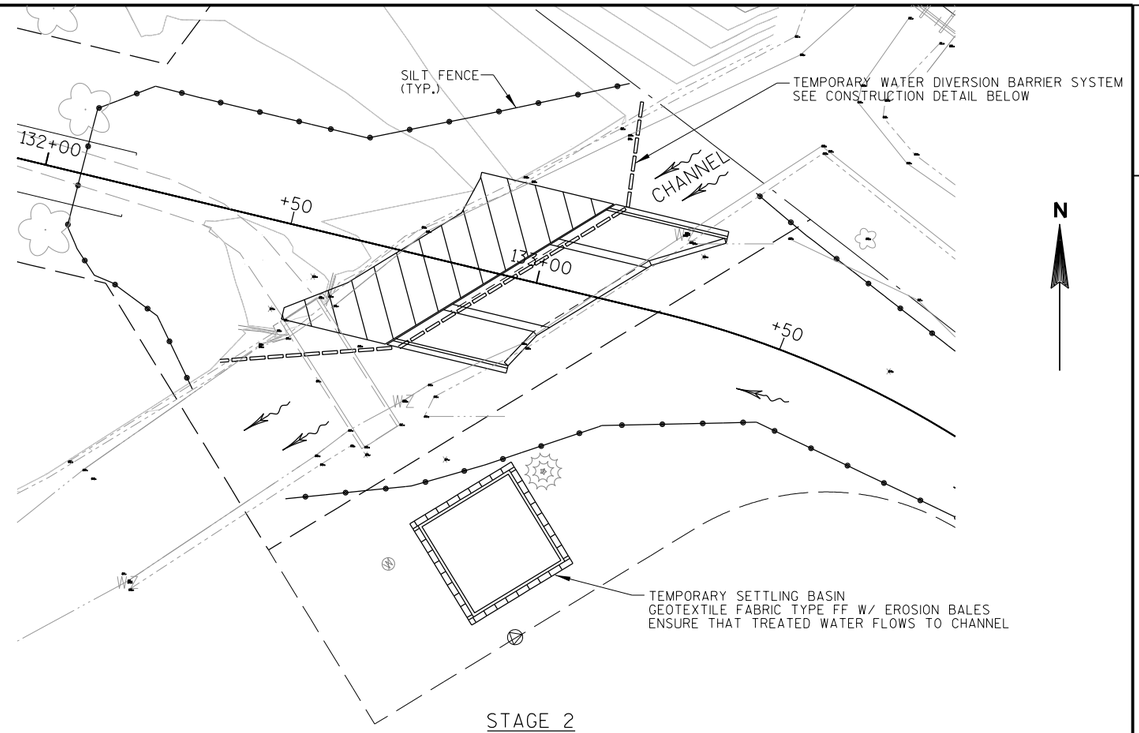
UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE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

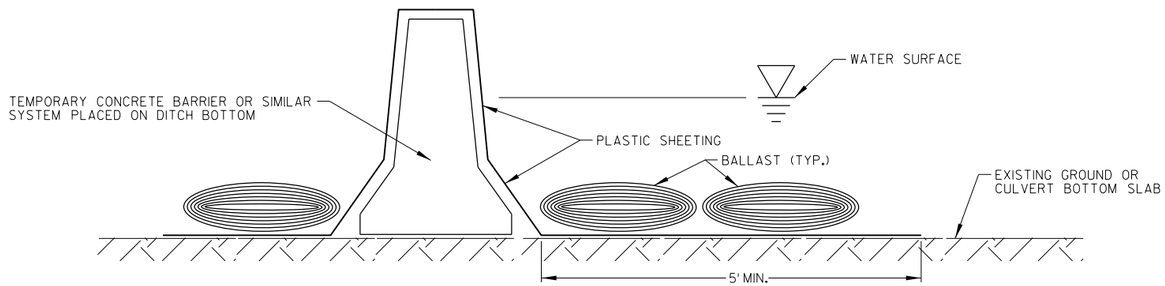


STAGE 1



STAGE 2

2



* SUGGESTED TEMPORARY WATER DIVERSION SYSTEM
TYPICAL SECTION

* CONTRACTOR TO PROVIDE TEMPORARY WATER DIVERSION SYSTEM THAT ALLOWS FOR DEWATERING OF CONSTRUCTION AREA. THE FINAL CONFIGURATION AND COMPONENTS USED FOR THE WATER DIVERSION SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

DEWATERING EFFORTS SHALL BE RUN THROUGH A SETTLING BASIN AS DETAILED IN THE PLANS.

THE COST OF DEWATERING AND PROVIDING A DEWATERING BARRIER SYSTEM SHALL BE CONSIDERED INCIDENTAL TO THE BOX CULVERT B-13-837 CONSTRUCTION.

2

2

N

TLE

STA. 14+42.65
23.9'LT

FENCE SAFETY

TLE

STA. 19+42.29
256.5'LT

TLE

FENCE SAFETY

STA. 14+85.57
23.2'RT

STAGING AREA

FENCE SAFETY

TLE

STA. 19+36.42
25.1'LT

TLE

CONTRACTOR PROJECT SITE ACCESS POINT
16'x50' TRACKING PAD REQUIRED W/
CULVERT PIPE TEMPORARY 12-INCH (20 LF)
SEE S.D.D. "TRACKING PAD" FOR ADDT'L DETAILS

STA. 16+64.55
224.1'RT

R/W

OH

LIBBY ROAD

NOTE:

ACCESS TO THE SITE THROUGH LAKE FARM COUNTY PARK SHALL BE CONFINED TO BE WITHIN THE EASEMENT AND CONSTRUCTION PERMIT AREAS IDENTIFIED IN THE PLANS.

PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY:DANE	CONSTRUCTION DETAILS - SITE ACCESS AND STAGING AREA	SHEET 16	E

2

GENERAL NOTES:

1. PLACE SIGNS ON TYPE III BARRICADE OR TEMPORARY POST
2. SIGNS TO BE PLACED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER

BELTLINE

UPPER MUD LAKE

BEGIN PROJECT
STA. 83+25.00

PLACE SIGNS SOUTHEAST OF THE LUSSIER FAMILY HERITAGE CENTER PARKING LOT.

STA. 11+00 OR AS DIRECTED BY THE ENGINEER.

ROAD WORK AHEAD W20-1

DO NOT ENTER R5-1 30" X 30"

CAPITAL CITY STATE TRAIL

LAKE FARM COUNTY PARK

PLACE SIGNS IN ADVANCE OF PROJECT LIMIT.

STA. 83+00 OR AS DIRECTED BY THE ENGINEER.

PLACE SIGNS AT END PROJECT LIMIT.

STA. 137+45 OR AS DIRECTED BY ENGINEER.

N

0 500' 1,000'

USH 51 (STOUGHTON ROAD)

LIBBY ROAD

LAKE FARM ROAD

PLACE SIGNS AT ENTRANCE TO STAGING AREA.

STA. 16+65 OR AS DIRECTED BY THE ENGINEER.

PLACE SIGNS AT EXITING ACCESS ROAD.

STA. 27+00, 660' RT OR AS DIRECTED BY ENGINEER.

LAKE WAUBESA

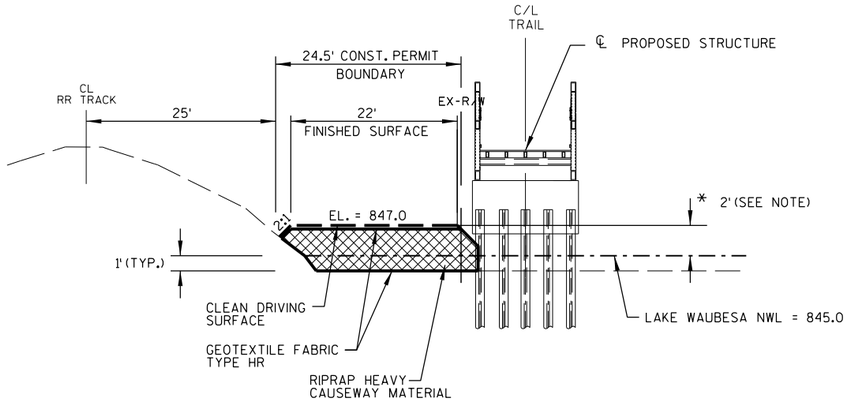
END PROJECT
STA. 137+44.52

MCDANIEL PARK

ERLING AVENUE

SIGGELKOW ROAD

PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	CONSTRUCTION DETAIL - ADVANCE WARNING SIGNING	SHEET 17	E



CONSTRUCTION DETAIL

TEMPORARY CAUSEWAY

STA. 86+50 - STA. 87+70
STA. 88+70 - STA. 96+50
STA. 104+00 - STA. 116+28

NOTES

PAYMENT FOR RIPRAP HEAVY, GEOTEXTILE FABRIC TYPE 'HR', AND CLEAN DRIVING SURFACE MATERIAL IS INCLUDED IN PAY ITEM "SPV.0105.02 TEMPORARY CAUSEWAYS." APPROXIMATE QUANTITIES FOR RIPRAY HEAVY AND GEOTEXTILE FABRIC TYPE 'HR' ARE SHOWN BELOW FOR INFORMATION ONLY.

TEMPORARY CAUSEWAY CONFIGURATION SHOWN FOR INFORMATION ONLY. SECTION 404 PERMIT TEMPORARY CAUSEWAY IMPACT IS BASED ON CONFIGURATION SHOWN.

TOTAL STREAMBED IMPACT IS LIMITED TO 1.56 ACRE AT ANY GIVEN TIME PER SECTION 404 PERMIT. THE CONTRACTOR MAY UTILIZE DIFFERENT CAUSEWAY CONFIGURATIONS THAT DO NOT EXCEED THE LIMIT IN THE 404 PERMIT.

AFTER USE OF CAUSEWAY, REMOVE CAUSEWAY MATERIAL TO ORIGINAL STREAMBED ELEVATION AS DIRECTED BY THE ENGINEER.

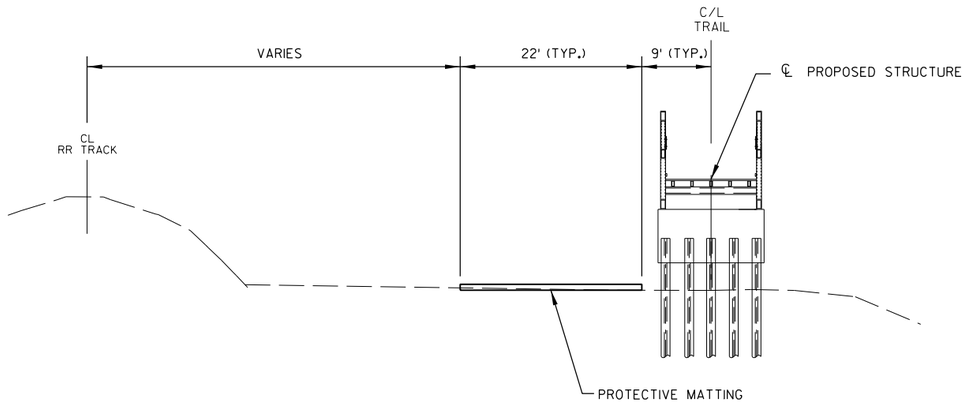
* MAXIMUM ASSUMED DEPTH OF WATER AT LOCATIONS OF TEMPORARY CAUSEWAY IS 4'-0" AT CHANNEL AND 1'-0" TYPICAL IN WETLAND AREA. ASSUMED HEIGHT OF CAUSEWAY ABOVE NORMAL WATER LINE IS 2'-0".

UPON REMOVAL OF THE TEMPORARY CAUSEWAYS, RESTORE ALL DISTURBED UPLAND AND WETLAND AREAS ALONG LAKE BANK WITH NO. 60 SEED.

TEMPORARY CAUSEWAY QUANTITIES (FOR INFORMATION ONLY)

6,500 CY - RIPRAP HEAVY

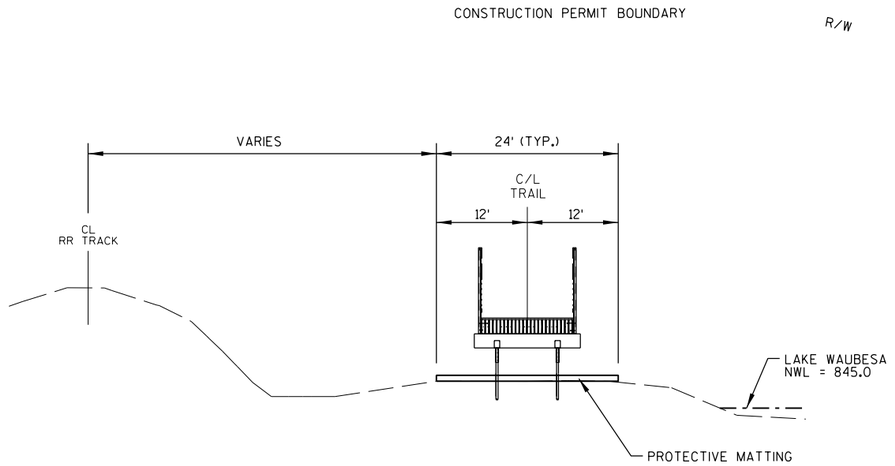
13,162 SY - GEOTEXTILE FABRIC TYPE 'HR'



CONSTRUCTION DETAIL

PROTECTIVE MATTING

STA. 84+00 - STA. 86+50 LT



CONSTRUCTION DETAIL

PROTECTIVE MATTING

STA. 95+70 - STA. 104+74.50
STA. 115+25.50 - STA. 132+50

PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN DETAIL: TEMPORARY CAUSEWAYS AND PROTECTIVE MATTING	SHEET 18	E

2

LEGEND

TEMPORARY CAUSEWAY

PROTECTIVE MATTING

N

CONSTRUCTION PERMIT BOUNDARY

R/W

EXISTING GRASS TRAIL

STA. 84+00
31.00' LT

STA. 84+00
9.00' LT

22'

MATCH LINE STA. 82+50

83+00

84+00

85+00

86+00

87+00

+50

SLOPE INTERCEPT
(TYP)

BEGIN PROJECT
STA. 83+25.00

EXISTING 14' AGGREGATE
PATH BY OTHERS

WETLAND BOUNDARY
(TYP)

CONSTRUCTION PERMIT BOUNDARY

℄ WISCONSIN & SOUTHERN RAILROAD

STA. 86+50
36.50' LT

25'

49.5' R/W

22' FINISHED SURFACE

STA. 87+70
31.00' LT

STA. 87+70
9.00' LT

MATCH LINE STA. 88+00

STRUCTURE B-13-811
PREFABRICATED STEEL TRUSS

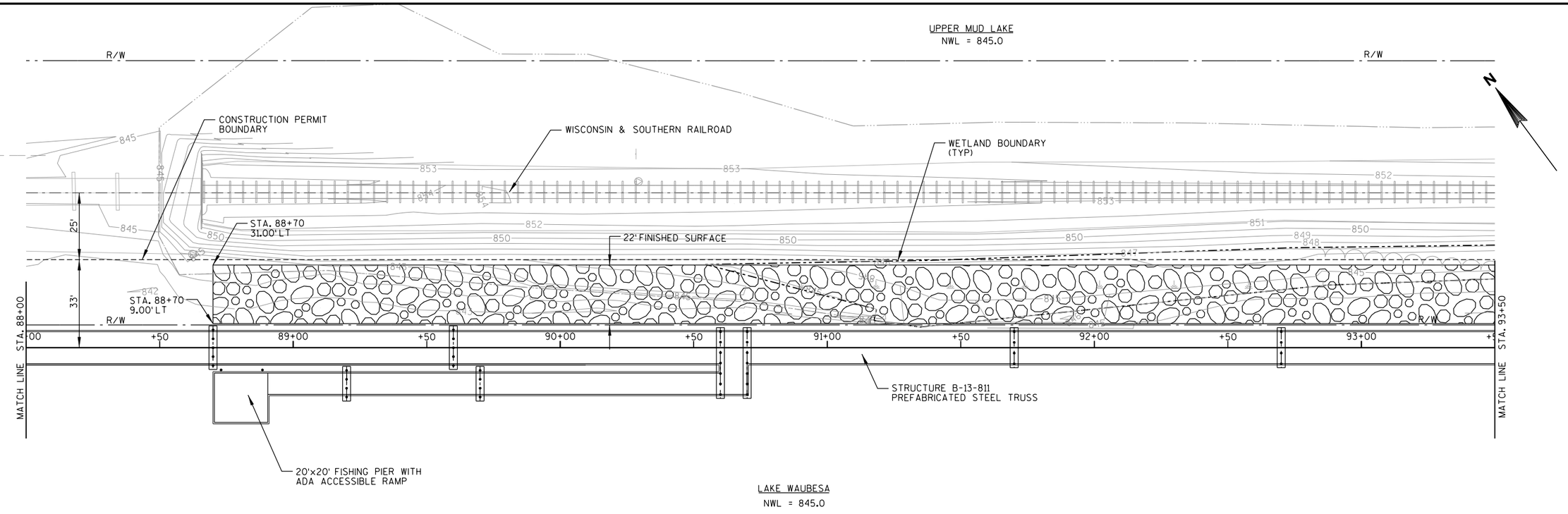
PEDESTRIAN VIEWING
PLATFORM (10' X 50')

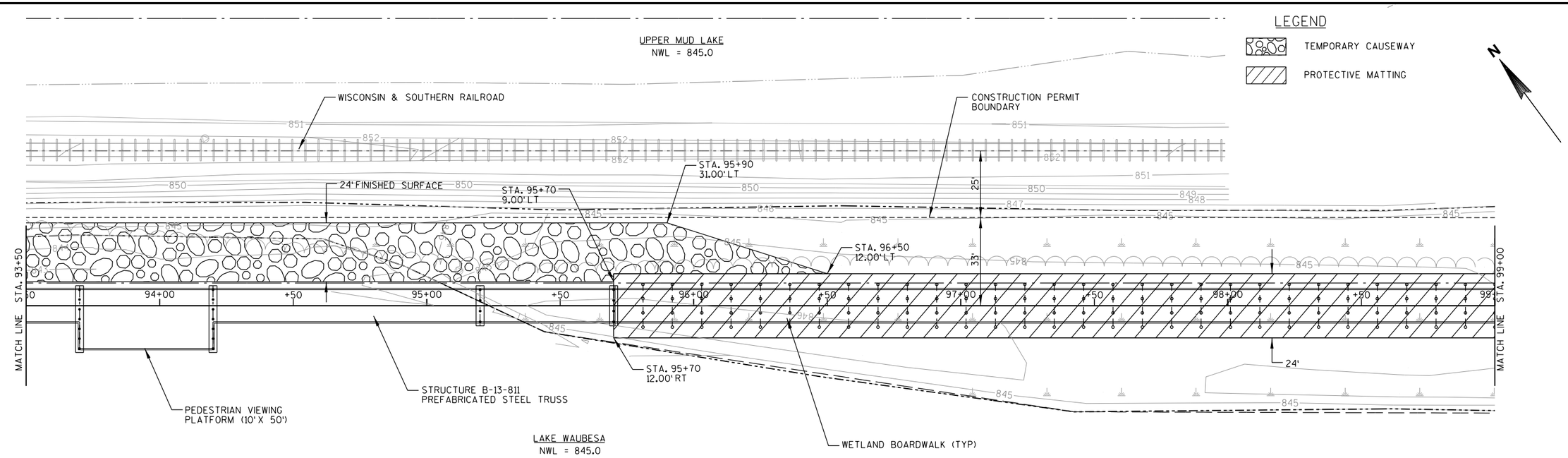
LAKE WAUBESA
NWL = 845.0

PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN DETAIL: TEMPORARY CAUSEWAYS AND PROTECTIVE MATTING	SHEET 19	E

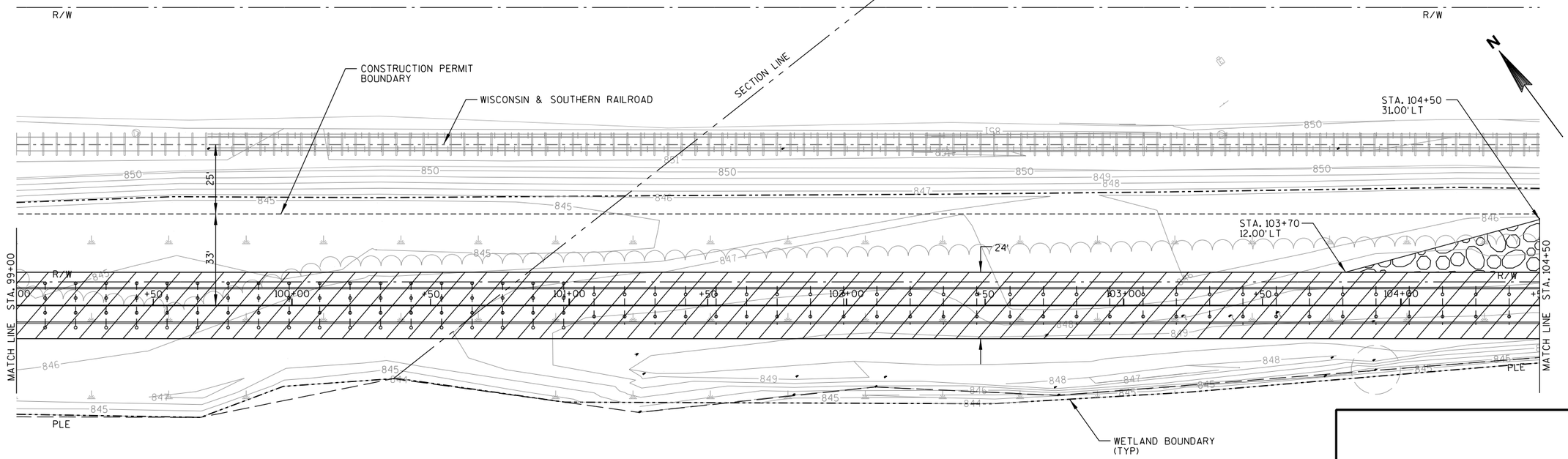
FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\021201_pd.dgn PLOT DATE : 7/22/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

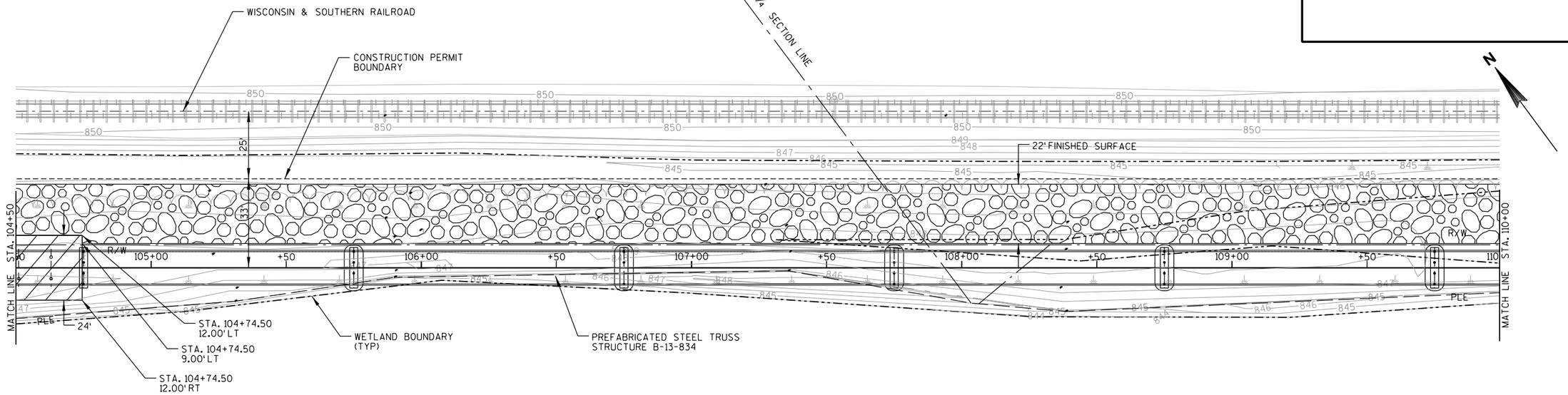
WISDOT/CADDS SHEET 42





PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN DETAIL: TEMPORARY CAUSEWAYS AND PROTECTIVE MATTING	SHEET 20	E





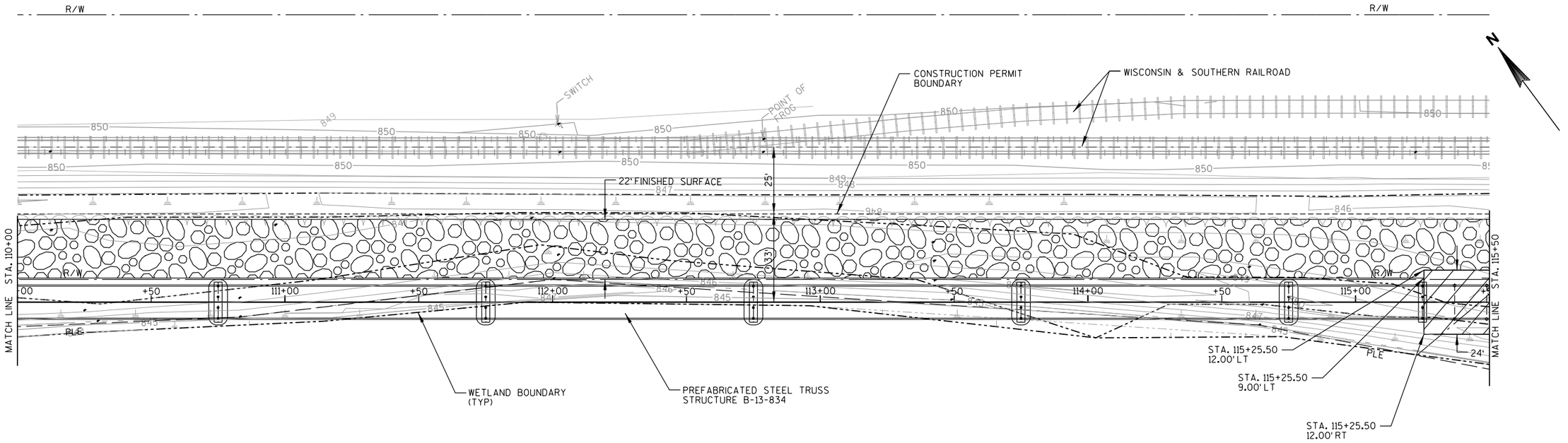
LAKE WAUBESA
NWL = 845.0

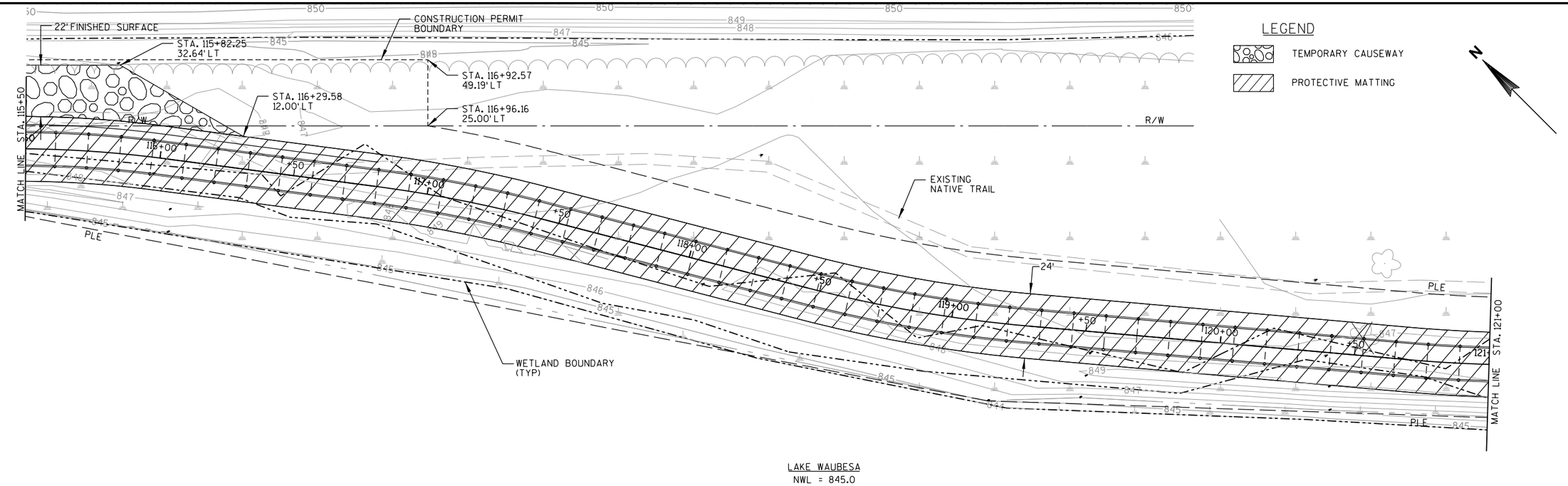
LEGEND

TEMPORARY CAUSEWAY

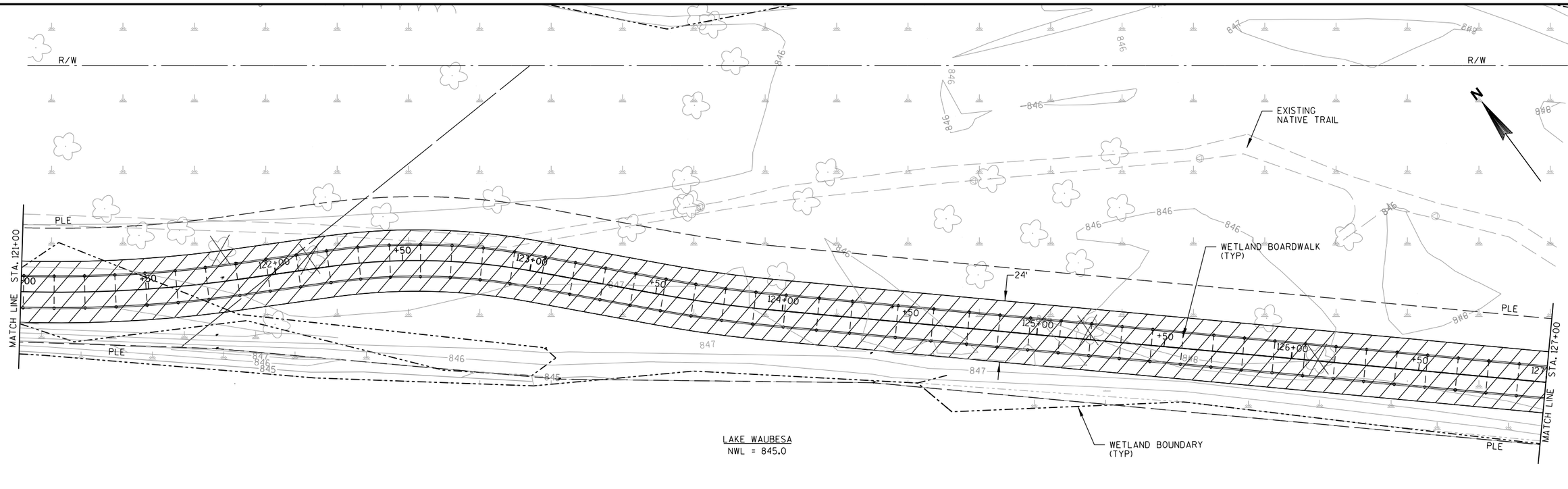
PROTECTIVE MATTING

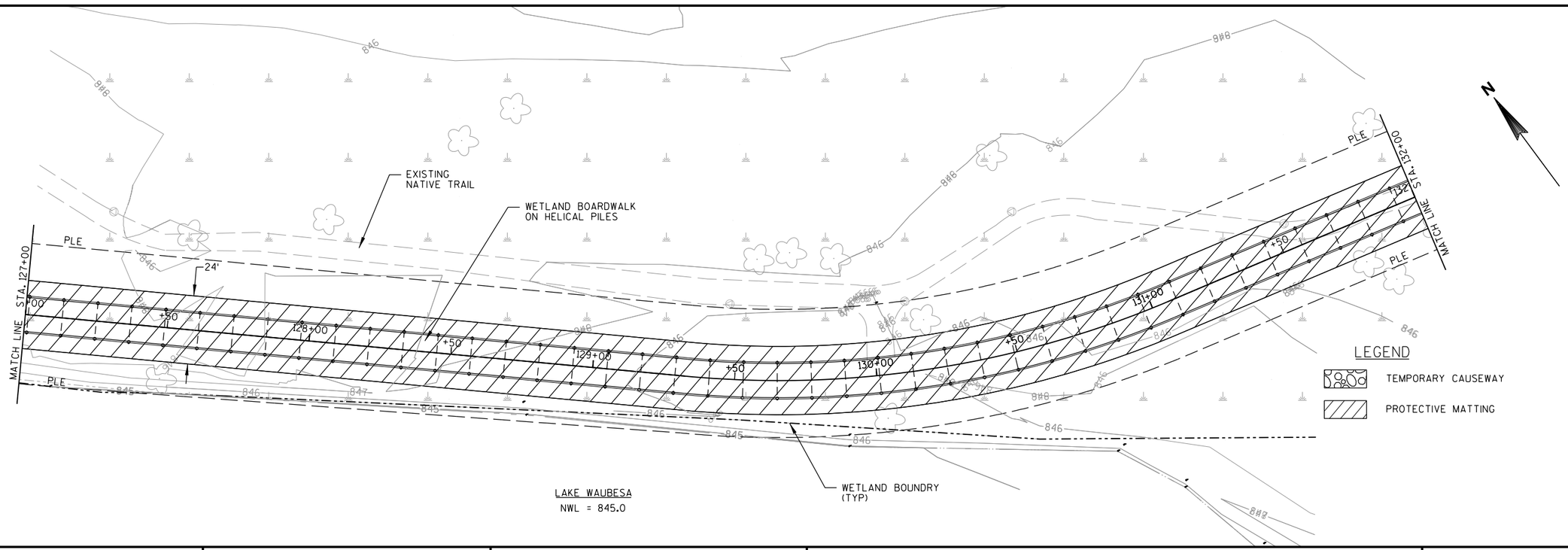
PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN DETAIL: TEMPORARY CAUSEWAYS AND PROTECTIVE MATTING	SHEET 21	E



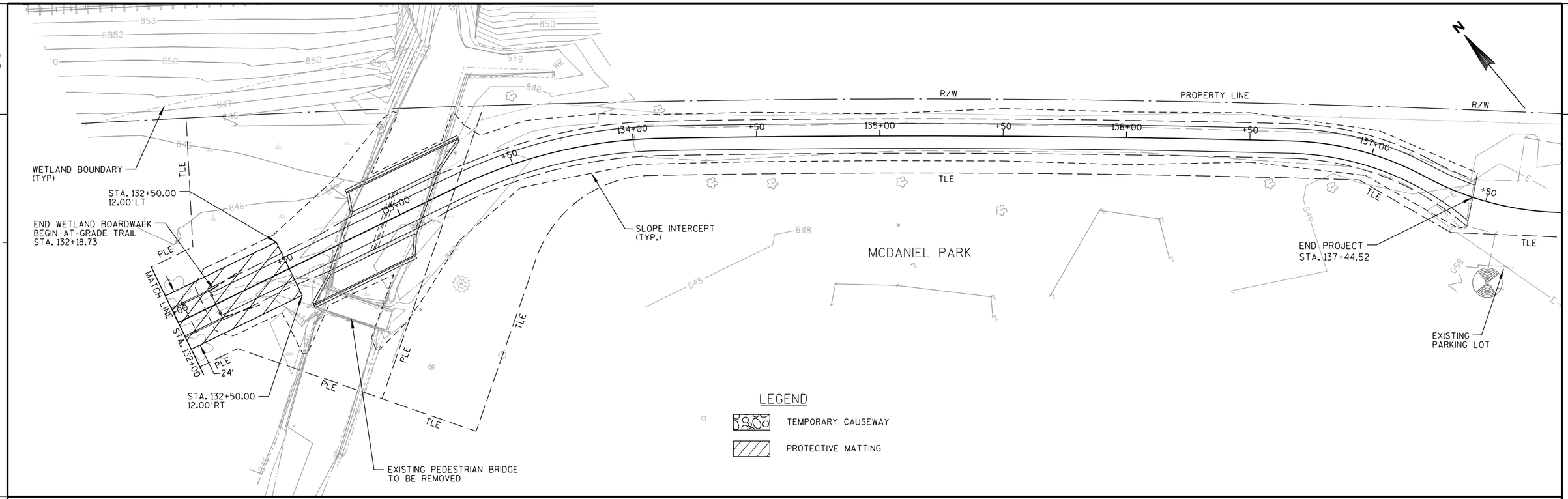


PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN DETAIL: TEMPORARY CAUSEWAYS AND PROTECTIVE MATTING	SHEET 22	E





PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY:DANE	PLAN DETAIL: TEMPORARY CAUSEWAYS AND PROTECTIVE MATTING	SHEET 23	E



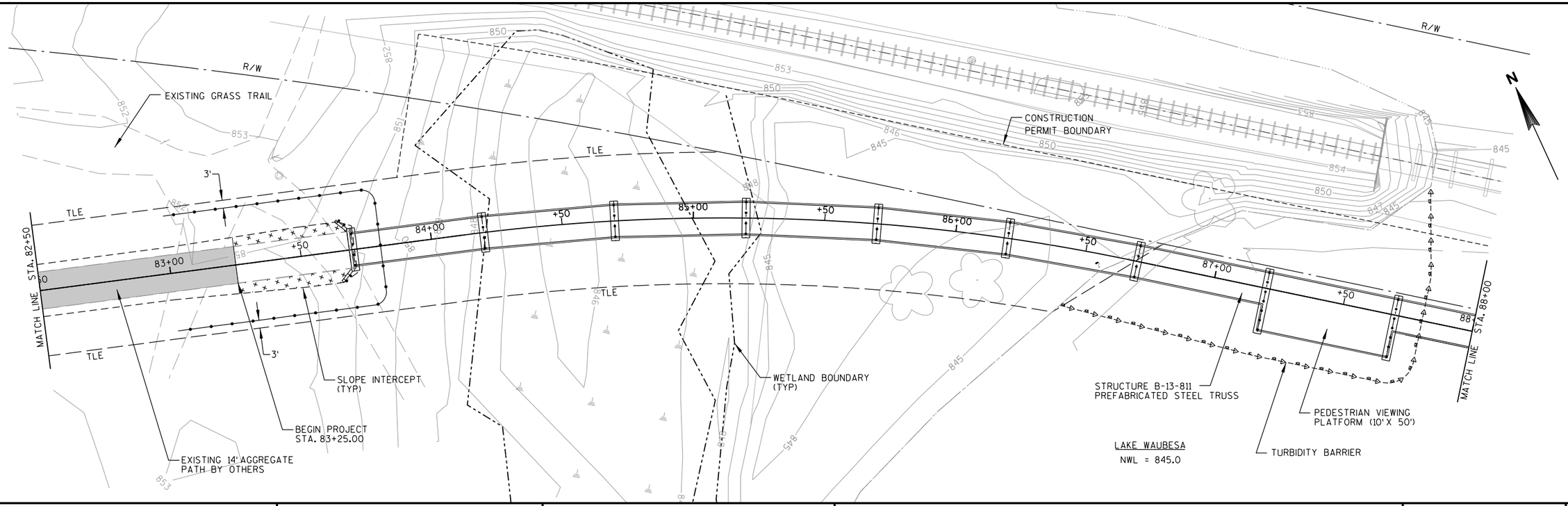
PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY:DANE	PLAN DETAIL: TEMPORARY CAUSEWAYS AND PROTECTIVE MATTING	SHEET 24	E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\021206_pd.dgn PLOT DATE : 7/22/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.
WISDOT/CADDS SHEET 42

2

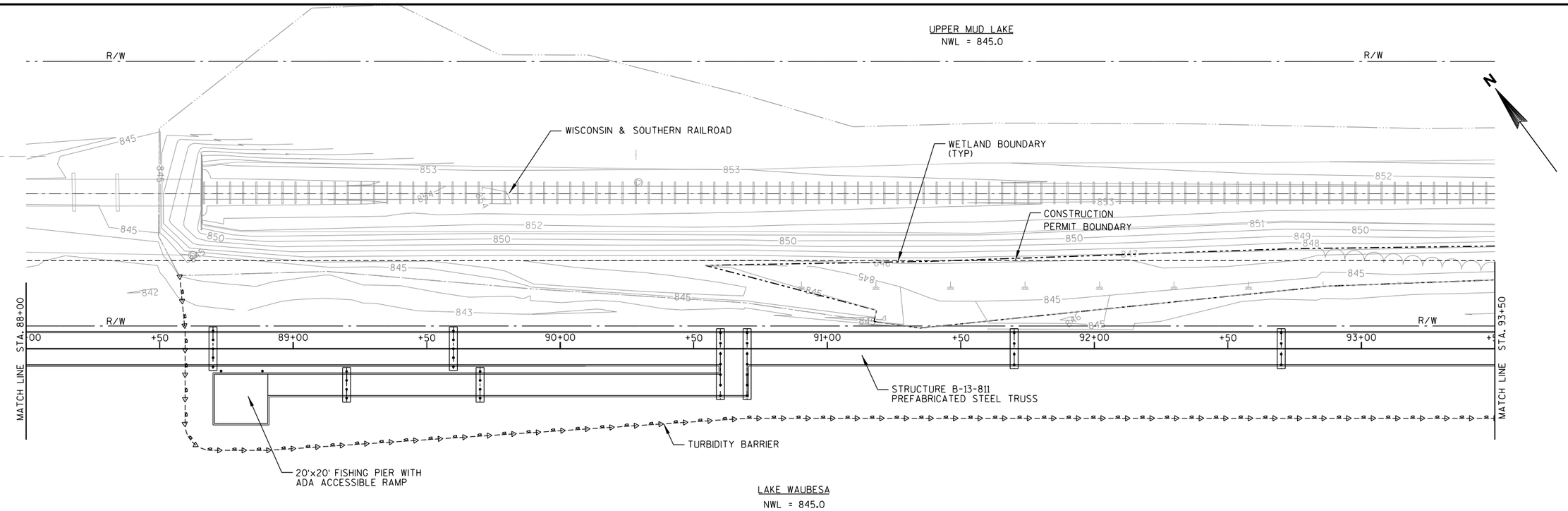
LEGEND

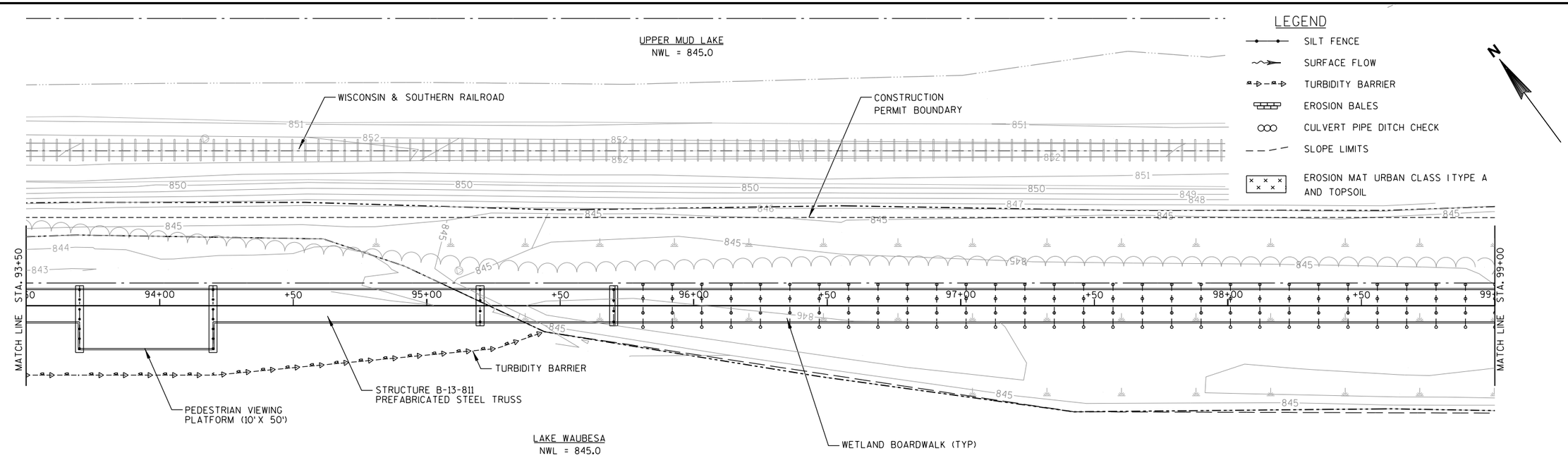
- SILT FENCE
- SURFACE FLOW
- TURBIDITY BARRIER
- EROSION BALES
- CULVERT PIPE DITCH CHECK
- SLOPE LIMITS
- EROSION MAT URBAN CLASS I TYPE A AND TOPSOIL



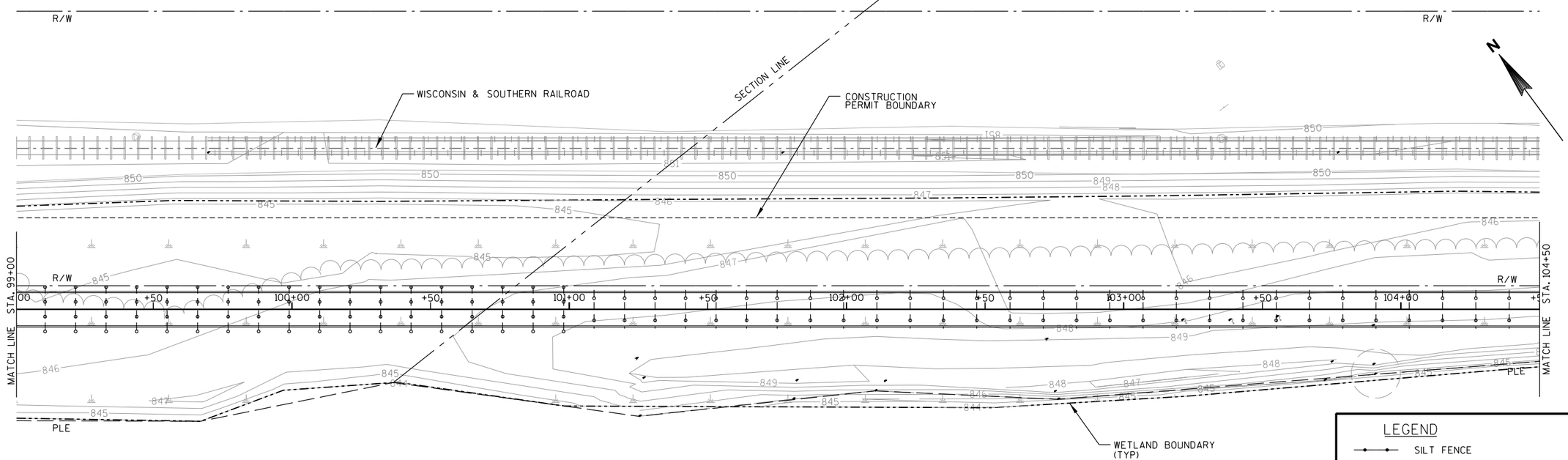
PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	EROSION CONTROL PLAN	SHEET 25	E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\022008_ec.dgn PLOT DATE : 7/22/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.



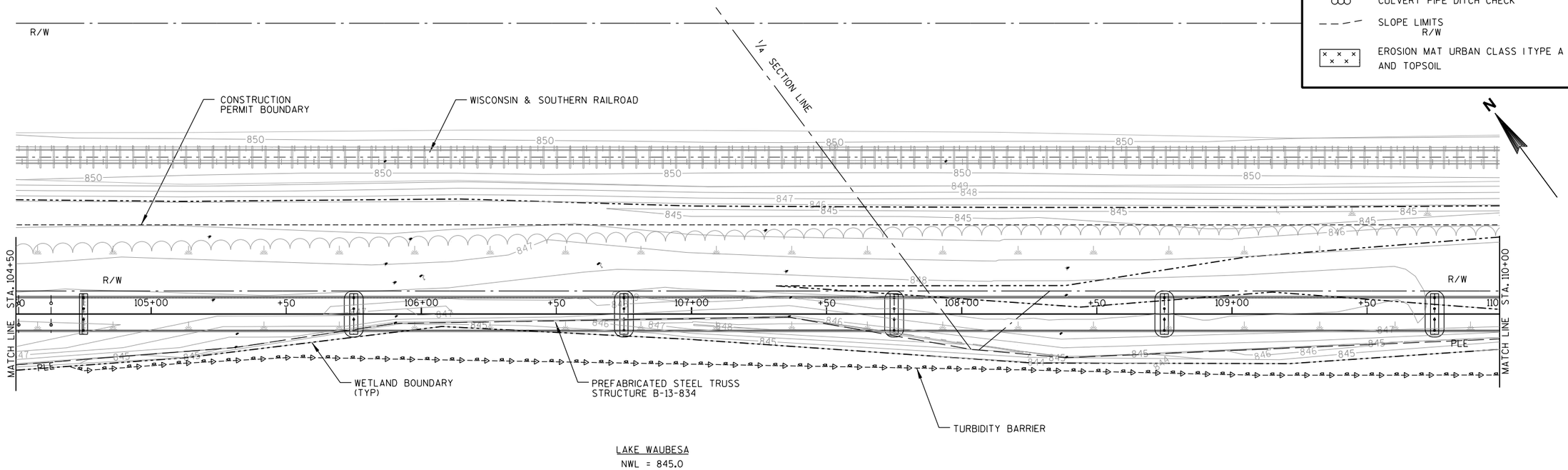


PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY:DANE	EROSION CONTROL PLAN	SHEET 26	E



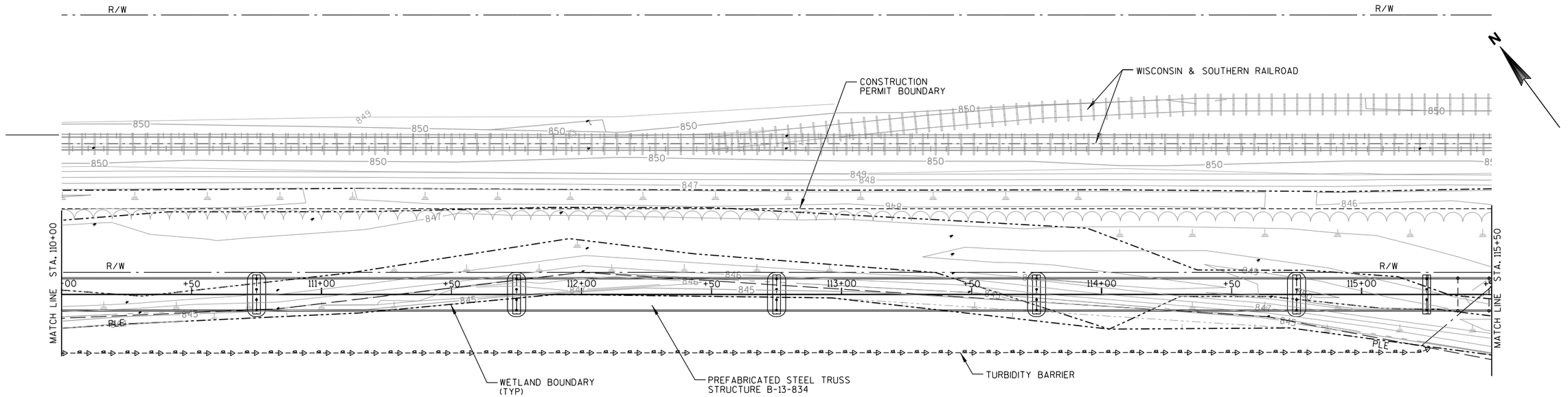
LEGEND

- SILT FENCE
- SURFACE FLOW
- TURBIDITY BARRIER
- EROSION BALES
- CULVERT PIPE DITCH CHECK
- SLOPE LIMITS R/W
- EROSION MAT URBAN CLASS I TYPE A AND TOPSOIL

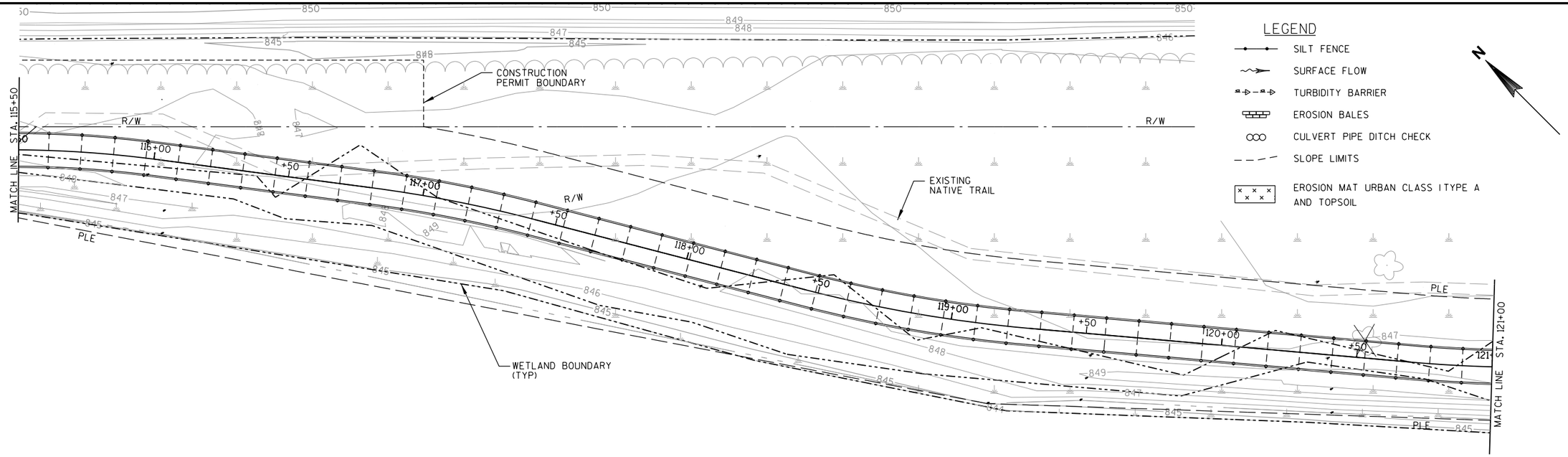


LAKE WAUBESA
NWL = 845.0

PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	EROSION CONTROL PLAN	SHEET 27	E

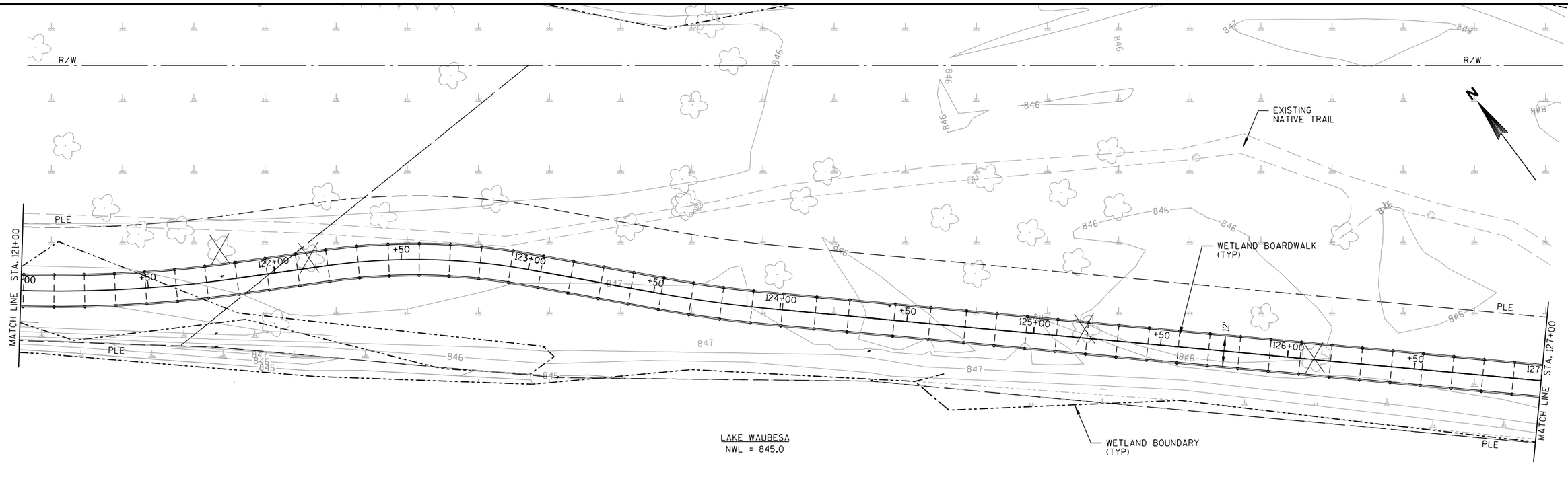


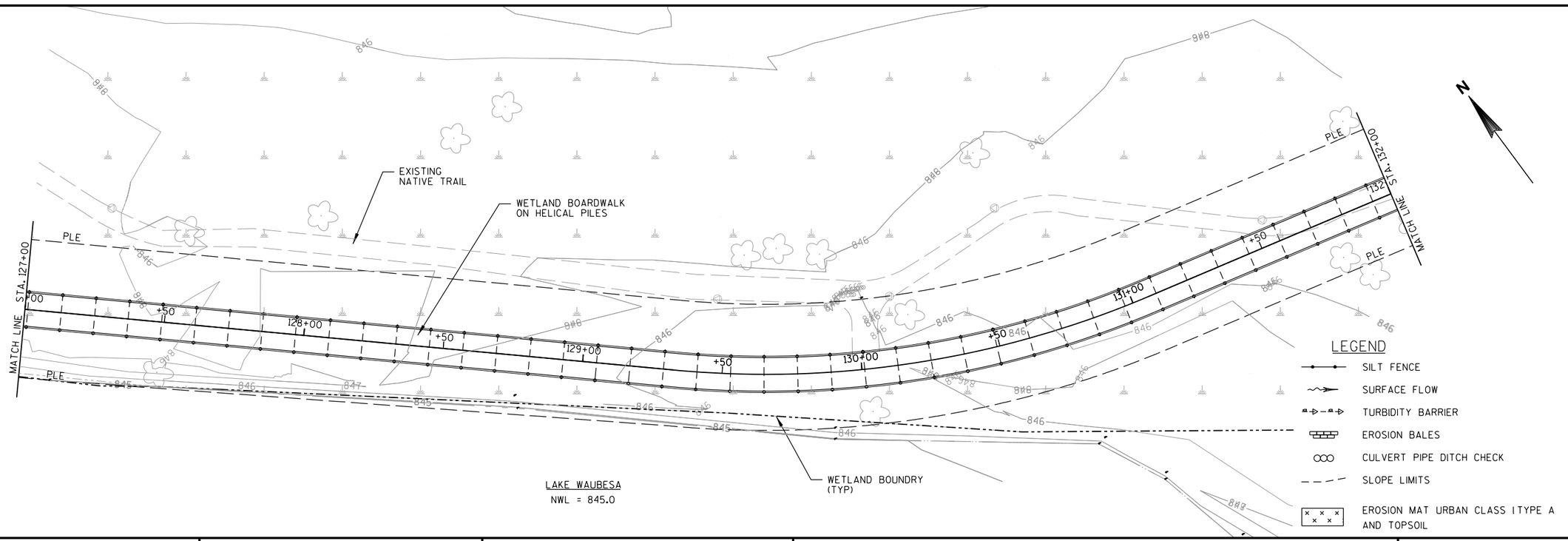
LAKE WAUBESA
NWL = 845.0



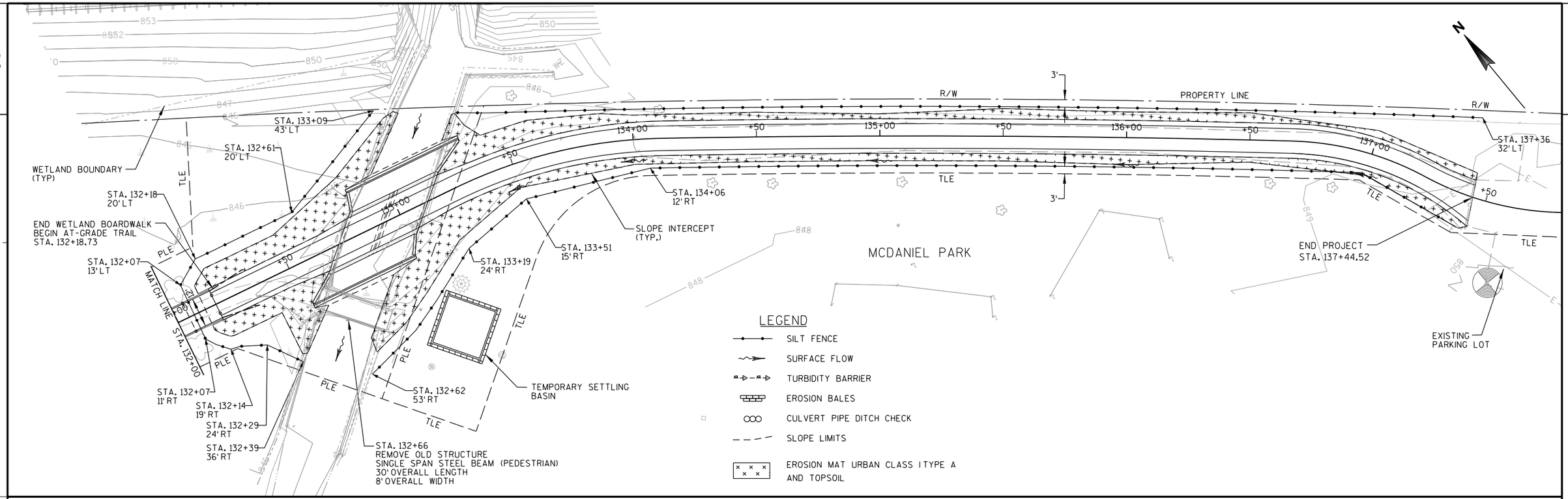
LAKE WAUBESA
NWL = 845.0

PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	EROSION CONTROL PLAN	SHEET 28	E





PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY:DANE	EROSION CONTROL PLAN	SHEET 29	E



PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY:DANE	EROSION CONTROL PLAN	SHEET 30	E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\022013_ec.dgn PLOT DATE : 9/29/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 42

CURVE DATA

CURVE 1
P.I. = 8+64.08
Y = 465,499.49
X = 831,932.43
DELTA = 37° 17' 17" (RT)
D = 38° 11' 50"
T = 50.61'
L = 97.62'
R = 150.00'
P.C. = 8+13.47
P.T. = 9+11.09

CURVE 2
P.I. = 10+21.18
Y = 465,368.81
X = 832,025.95
DELTA = 31° 47' 57" (LT)
D = 19° 05' 55"
T = 85.45'
L = 166.50'
R = 300.00'
P.C. = 9+35.72
P.T. = 11+02.22

CURVE 3
P.I. = 15+71.27
Y = 465,155.62
X = 832,537.83
DELTA = 22° 58' 51" (RT)
D = 28° 38' 52"
T = 40.66'
L = 80.22'
R = 200.00'
P.C. = 15+30.62
P.T. = 16+10.83

CURVE 4
P.I. = 18+28.68
Y = 464,970.95
X = 832,718.72
DELTA = 45° 34' 59" (LT)
D = 28° 38' 52"
T = 84.04'
L = 159.12'
R = 200.00'
P.C. = 17+44.64
P.T. = 19+03.76

CURVE 5
P.I. = 26+72.31
Y = 464,970.82
X = 833,571.31
DELTA = 83° 21' 34" (LT)
D = 57° 17' 45"
T = 89.03'
L = 145.49'
R = 100.00'
P.C. = 25+83.28
P.T. = 27+28.77

CURVE 6A
P.I. = 30+11.13
Y = 465,339.72
X = 833,614.32
DELTA = 37° 25' 24" (RT)
D = 28° 38' 52"
T = 67.74'
L = 130.63'
R = 200.00'
P.C. = 29+43.39
P.T. = 30+74.03

CURVE 6B
P.I. = 32+68.93
Y = 465,528.42
X = 833,797.00
DELTA = 27° 24' 35" (RT)
D = 38° 11' 50"
T = 36.58'
L = 71.76'
R = 150.00'
P.C. = 32+32.35
P.T. = 33+04.11

CURVE 7
P.I. = 34+83.60
Y = 465,597.04
X = 834,001.90
DELTA = 33° 22' 07" (LT)
D = 16° 22' 13"
T = 104.90'
L = 203.84'
R = 350.00'
P.C. = 33+78.70
P.T. = 35+82.54

CURVE 8
P.I. = 38+46.05
Y = 465,886.90
X = 834,229.29
DELTA = 1° 23' 33" (RT)
D = 5° 43' 46"
T = 12.15'
L = 24.30'
R = 1,000.00'
P.C. = 38+33.90
P.T. = 38+58.20

HORIZONTAL CONTROL POINTS

NO.	TYPE	STATION	NORTHING	EASTING
CP-1	SECTION CORNER W 1/4 CORNER 32-7-10	9+94.7, 680' RT	464,898.02	831,550.05
CP-2	SECTION CORNER CENTER CORNER 32-7-10	27+16.7, 631' RT	464,899.51	834,192.63

PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY:DANE	ALIGNMENT PLAN	SHEET 31	E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\027201_ad.dgn PLOT DATE : 7/22/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 200.0001 sf / in.

WISDOT/CADDS SHEET 42

2

CURVE DATA

CURVE 9
P.I. = 44+78.36
Y = 466,374.77
X = 834,631.55
DELTA = 2° 42' 09" (LT)
D = 5° 43' 46"
T = 23.59'
L = 47.17'
R = 1,000.00'
P.C. = 44+54.77
P.T. = 45+01.94

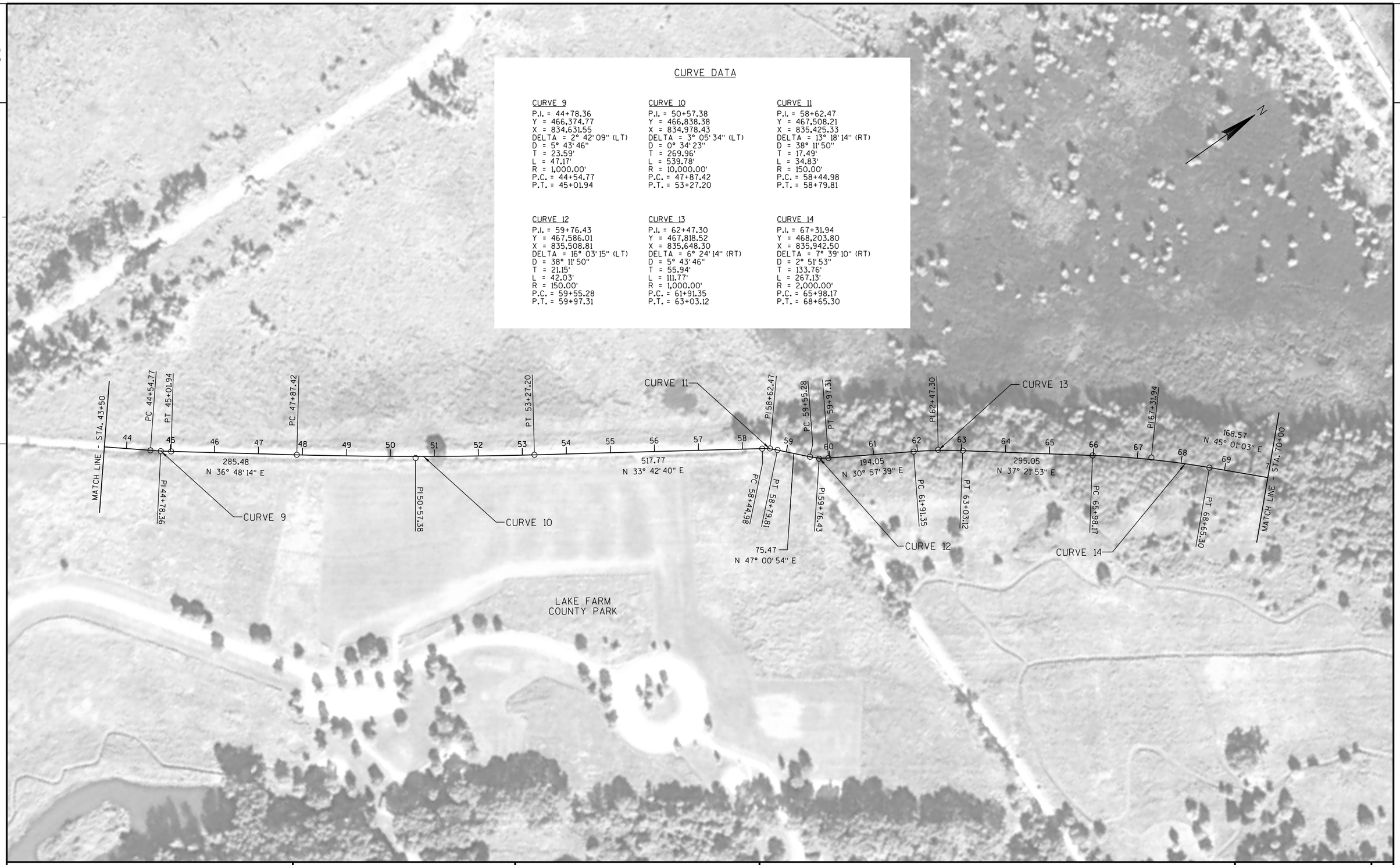
CURVE 10
P.I. = 50+57.38
Y = 466,838.38
X = 834,978.43
DELTA = 3° 05' 34" (LT)
D = 0° 34' 23"
T = 269.96'
L = 539.78'
R = 10,000.00'
P.C. = 47+87.42
P.T. = 53+27.20

CURVE 11
P.I. = 58+62.47
Y = 467,508.21
X = 835,425.33
DELTA = 13° 18' 14" (RT)
D = 38° 11' 50"
T = 17.49'
L = 34.83'
R = 150.00'
P.C. = 58+44.98
P.T. = 58+79.81

CURVE 12
P.I. = 59+76.43
Y = 467,586.01
X = 835,508.81
DELTA = 16° 03' 15" (LT)
D = 38° 11' 50"
T = 21.15'
L = 42.03'
R = 150.00'
P.C. = 59+55.28
P.T. = 59+97.31

CURVE 13
P.I. = 62+47.30
Y = 467,818.52
X = 835,648.30
DELTA = 6° 24' 14" (RT)
D = 5° 43' 46"
T = 55.94'
L = 111.77'
R = 1,000.00'
P.C. = 61+91.35
P.T. = 63+03.12

CURVE 14
P.I. = 67+31.94
Y = 468,203.80
X = 835,942.50
DELTA = 7° 39' 10" (RT)
D = 2° 51' 53"
T = 133.76'
L = 267.13'
R = 2,000.00'
P.C. = 65+98.17
P.T. = 68+65.30



PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY:DANE	ALIGNMENT PLAN	SHEET 32	E

HORIZONTAL CONTROL POINTS

NO.	TYPE	STATION	NORTHING	EASTING
CP-3	3/8" REBAR MEANDER CORNER, S.E. CORNER 29-7-10	76+91.2, 896' RT	467,752.46	836,840.05



CURVE DATA

CURVE 15	CURVE 16	CURVE 17
P.I. = 71+31.92	P.I. = 77+61.09	P.I. = 85+41.16
Y = 468,486.83	Y = 468,731.51	Y = 468,489.33
X = 836,225.69	X = 836,808.01	X = 837,590.17
DELTA = 22° 11' 26" (RT)	DELTA = 39° 59' 46" (RT)	DELTA = 19° 15' 49" (RT)
D = 11° 27' 33"	D = 4° 24' 27"	D = 7° 34' 44"
T = 98.05'	T = 473.11'	T = 128.30'
L = 193.65'	L = 907.49'	L = 254.18'
R = 500.00'	R = 1,300.00'	R = 756.00'
P.C. = 70+33.87	P.C. = 72+87.98	P.C. = 84+12.86
P.T. = 72+27.52	P.T. = 81+95.47	P.T. = 86+67.04

CURVE DATA

CURVE 18
P.I. = 115+73.52
Y = 466,685.53
X = 840,030.71
DELTA = 7° 27' 29" (RT)
D = 14° 08' 50"
T = 26.40'
L = 52.72'
R = 405.00'
P.C. = 115+47.12
P.T. = 115+99.84

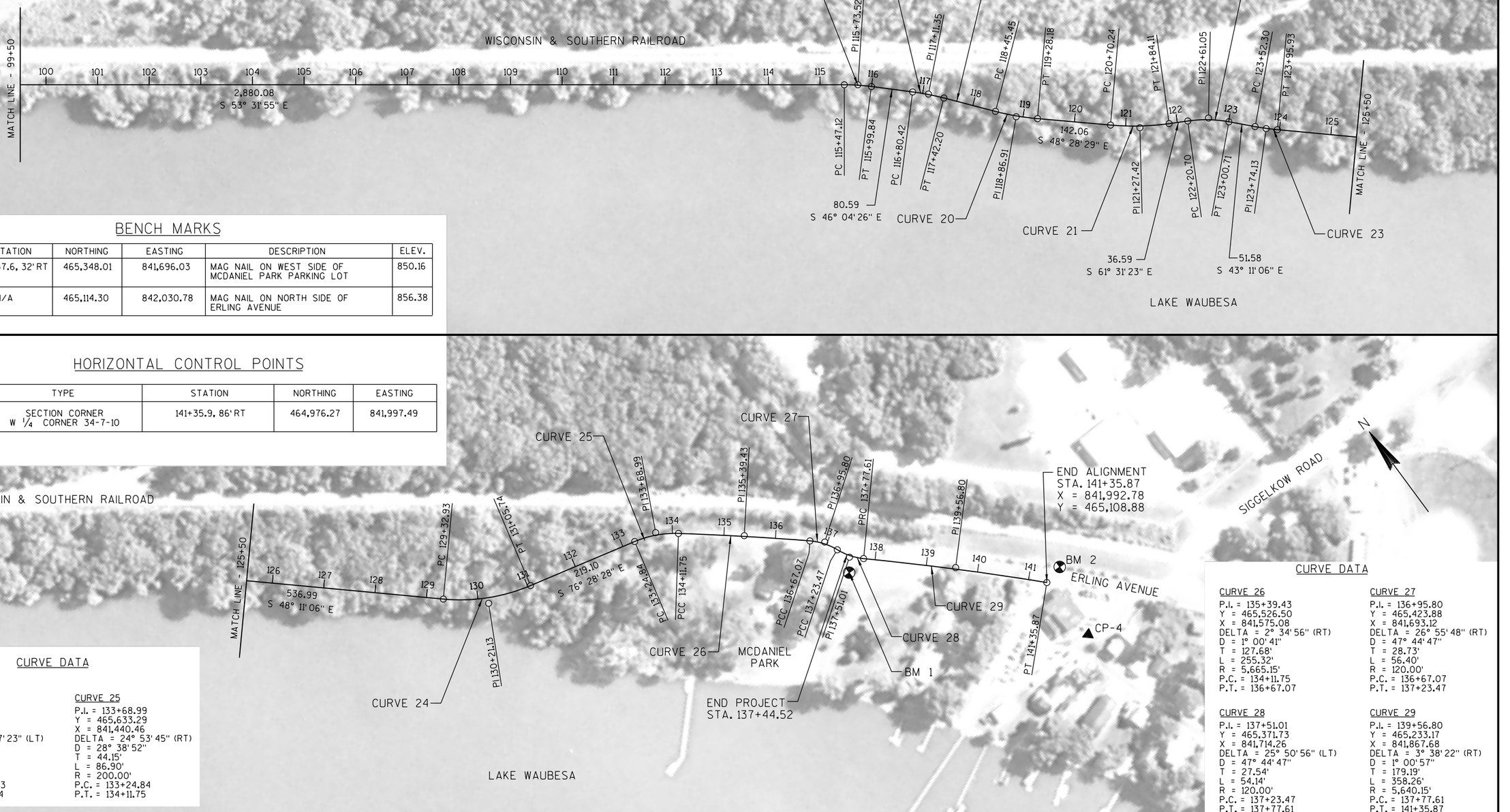
CURVE 19
P.I. = 117+11.35
Y = 466,589.86
X = 840,130.04
DELTA = 7° 04' 44" (RT)
D = 11° 27' 33"
T = 30.93'
L = 61.78'
R = 500.00'
P.C. = 116+80.42
P.T. = 117+42.20

CURVE 20
P.I. = 118+86.91
Y = 466,453.36
X = 840,240.56
DELTA = 9° 28' 46" (LT)
D = 11° 27' 33"
T = 41.46'
L = 82.72'
R = 500.00'
P.C. = 118+45.45
P.T. = 119+28.18

CURVE 21
P.I. = 121+27.42
Y = 466,293.78
X = 840,420.76
DELTA = 13° 02' 55" (LT)
D = 11° 27' 33"
T = 57.18'
L = 113.87'
R = 500.00'
P.C. = 120+70.24
P.T. = 121+84.11

CURVE 22
P.I. = 122+61.05
Y = 466,229.83
X = 840,538.66
DELTA = 18° 20' 18" (RT)
D = 22° 55' 06"
T = 40.35'
L = 80.02'
R = 250.00'
P.C. = 122+20.70
P.T. = 123+00.71

CURVE 23
P.I. = 123+74.13
Y = 466,146.88
X = 840,616.51
DELTA = 5° 00' 00" (LT)
D = 11° 27' 33"
T = 21.83'
L = 43.63'
R = 500.00'
P.C. = 123+52.30
P.T. = 123+95.93



BENCH MARKS

NO.	STATION	NORTHING	EASTING	DESCRIPTION	ELEV.
BM 1	137+57.6, 32' RT	465,348.01	841,696.03	MAG NAIL ON WEST SIDE OF MCDANIEL PARK PARKING LOT	850.16
BM 2	N/A	465,114.30	842,030.78	MAG NAIL ON NORTH SIDE OF ERLING AVENUE	856.38

HORIZONTAL CONTROL POINTS

NO.	TYPE	STATION	NORTHING	EASTING
CP-4	SECTION CORNER W 1/4 CORNER 34-7-10	141+35.9, 86' RT	464,976.27	841,997.49

CURVE DATA

CURVE 24
P.I. = 130+21.13
Y = 465,715.48
X = 841,098.75
DELTA = 28° 17' 23" (LT)
D = 16° 22' 13"
T = 88.21'
L = 172.81'
R = 350.00'
P.C. = 129+32.93
P.T. = 131+05.74

CURVE 25
P.I. = 133+68.99
Y = 465,633.29
X = 841,440.46
DELTA = 24° 53' 45" (RT)
D = 28° 38' 52"
T = 44.15'
L = 86.90'
R = 200.00'
P.C. = 133+24.84
P.T. = 134+11.75

CURVE DATA

CURVE 26
P.I. = 135+39.43
Y = 465,526.50
X = 841,575.08
DELTA = 2° 34' 56" (RT)
D = 1° 00' 41"
T = 127.68'
L = 255.32'
R = 5,665.15'
P.C. = 134+11.75
P.T. = 136+67.07

CURVE 27
P.I. = 136+95.80
Y = 465,423.88
X = 841,693.12
DELTA = 26° 55' 48" (RT)
D = 47° 44' 47"
T = 28.73'
L = 56.40'
R = 120.00'
P.C. = 136+67.07
P.T. = 137+23.47

CURVE 28
P.I. = 137+51.01
Y = 465,371.73
X = 841,714.26
DELTA = 25° 50' 56" (LT)
D = 47° 44' 47"
T = 27.54'
L = 54.14'
R = 120.00'
P.C. = 137+23.47
P.T. = 137+77.61

CURVE 29
P.I. = 139+56.80
Y = 465,233.17
X = 841,867.68
DELTA = 3° 38' 22" (RT)
D = 1° 00' 57"
T = 179.19'
L = 358.26'
R = 5,640.15'
P.C. = 137+77.61
P.T. = 141+35.87

PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	ALIGNMENT PLAN	SHEET 34	E

DATE 16OCT15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5992-08-85 QUANTITY
0010	201.0105	Clearing	STA	4.000	4.000
0020	201.0120	Clearing	ID	48.000	48.000
0030	201.0205	Grubbing	STA	4.000	4.000
0040	201.0220	Grubbing	ID	48.000	48.000
0050	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 132+66	LS	1.000	1.000
0060	205.0100	Excavation Common	CY	152.000	152.000
0070	206.1000	Excavation for Structures Bridges (structure) 01. B-13-811	LS	1.000	1.000
0080	206.1000	Excavation for Structures Bridges (structure) 02. B-13-834	LS	1.000	1.000
0090	206.2000	Excavation for Structures Culverts (structure) 04. B-13-837	LS	1.000	1.000
0100	208.0100	Borrow	CY	223.000	223.000
0110	210.0100	Backfill Structure	CY	83.000	83.000
0120	305.0110	Base Aggregate Dense 3/4-Inch	TON	41.000	41.000
0130	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	528.000	528.000
0140	311.0110	Breaker Run	TON	40.000	40.000
0150	465.0105	Asphaltic Surface	TON	99.000	99.000
0160	502.0100	Concrete Masonry Bridges	CY	230.000	230.000
0170	502.6105	Masonry Anchors Type S 5/8-Inch	EACH	8.000	8.000
0180	502.6120	Masonry Anchors Type S 1-Inch	EACH	48.000	48.000
0190	504.0100	Concrete Masonry Culverts	CY	46.000	46.000
0200	504.2000.S	Precast Concrete Box Culvert (ft X ft) 01. 12FT X 4FT	LF	54.000	54.000
0210	505.0100	Bar Steel Reinforcement Structures	LB	2,130.000	2,130.000
0220	505.0400	Bar Steel Reinforcement HS Structures	LB	54,920.000	54,920.000
0230	505.0600	Bar Steel Reinforcement HS Coated	LB	20,890.000	20,890.000
0240	506.8005.S	Prefabricated Steel Truss Pedestrian Bridge LRFD (structure) 01. B-13-811	LS	1.000	1.000
0250	506.8005.S	Prefabricated Steel Truss Pedestrian Bridge LRFD (structure) 02. B-13-834	LS	1.000	1.000
0260	507.0200	Treated Lumber and Timber	MBM	186.800	186.800
0270	516.0500	Rubberized Membrane Waterproofing	SY	4.000	4.000
0280	520.2012	Culvert Pipe Temporary 12-Inch	LF	20.000	20.000
0290	550.2144	Piling CIP Concrete 14 X 0.25-Inch	LF	10,410.000	10,410.000
0300	616.0700.S	Fence Safety	LF	1,340.000	1,340.000
0310	619.1000	Mobilization	EACH	1.000	1.000
0320	624.0100	Water	MGAL	11.000	11.000
0330	625.0100	Topsoil	SY	698.000	698.000
0340	628.1104	Erosion Bales	EACH	48.000	48.000
0350	628.1504	Silt Fence	LF	1,471.000	1,471.000
0360	628.1520	Silt Fence Maintenance	LF	1,471.000	1,471.000
0370	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0380	628.1910	Mobilizations Emergency Erosion Control	EACH	6.000	6.000
0390	628.2006	Erosion Mat Urban Class I Type A	SY	698.000	698.000
0400	628.6005	Turbidity Barriers	SY	1,232.000	1,232.000
0410	628.7560	Tracking Pads	EACH	1.000	1.000
0420	629.0205	Fertilizer Type A	CWT	8.000	8.000
0430	630.0140	Seeding Mixture No. 40	LB	8.000	8.000
0440	630.0160	Seeding Mixture No. 60	LB	57.000	57.000
0450	630.0175	Seeding Mixture No. 75	LB	5.000	5.000
0460	642.5001	Field Office Type B	EACH	1.000	1.000
0470	643.0420	Traffic Control Barricades Type III	DAY	4,580.000	4,580.000

3

DATE 16OCT15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5992-08-85 QUANTITY
0480	643.0900	Traffic Control Signs	DAY	9,160.000	9,160.000
0490	645.0105	Geotextile Fabric Type C	SY	153.000	153.000
0500	645.0111	Geotextile Fabric Type DF Schedule A	SY	18.000	18.000
0510	650.4500	Construction Staking Subgrade	LF	571.000	571.000
0520	650.5000	Construction Staking Base	LF	571.000	571.000
0530	650.6500	Construction Staking Structure Layout (structure) 01. B-13-834	LS	1.000	1.000
0540	650.6500	Construction Staking Structure Layout (structure) 02. B-13-837	LS	1.000	1.000
0550	650.6500	Construction Staking Structure Layout (structure) 03. B-13-811	LS	1.000	1.000
0560	650.9910	Construction Staking Supplemental Control (project) 01. 5992-08-85	LS	1.000	1.000
0570	650.9920	Construction Staking Slope Stakes	LF	571.000	571.000
0580	715.0502	Incentive Strength Concrete Structures	DOL	1,646.000	1,646.000
0590	ASP.1T0A	On-the-Job Training Apprentice at $5. 00/HR	HRS	900.000	900.000
0600	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	600.000	600.000
0610	SPV.0060	Special 01. Helical Pile	EACH	256.000	256.000
0620	SPV.0060	Special 02. Non-Penetrating Pad Assembly	EACH	278.000	278.000
0630	SPV.0090	Special 01. Railing System for Elevated Boardwalk	LF	5,192.000	5,192.000
0640	SPV.0090	Special 02. Railing System for Structure B-13-837	LF	140.000	140.000
0650	SPV.0105	Special 01. Floating Fishing Pier and Gangway	LS	1.000	1.000
0660	SPV.0105	Special 02. Temporary Causeways	LS	1.000	1.000
0670	SPV.0165	Special 01. Composite Decking	SF	31,798.000	31,798.000
0680	SPV.0165	Special 02. Protective Matting	SF	68,731.000	68,731.000
0690	SPV.0180	Special 01. Geotextile Fabric Type FF	SY	62.000	62.000

3

CLEARING & GRUBBING

LOCATION	CLEARING 201.0105 STA	GRUBBING 201.0205 STA	CLEARING 201.0120 ID	GRUBBING 201.0220 ID
YAHARA RIVER TRAIL - UNDISTRIBUTED	4	4	48	48
PROJECT TOTAL	4	4	48	48

REMOVING OLD STRUCTURE OVER WATERWAY
WITH MINIMAL DEBRIS, STATION 132+66

LOCATION	STATION	OFFSET	203.0600.S LS
MCDANIEL PARK	132+66	27.0 RT	1
PROJECT TOTAL			1

3

EARTHWORK SUMMARY

Division	From/To Station	Location	Common Excavation (1) Cut (2)	(item # 205.0100) EBS Excavation (3)	Salvaged/ Unusable Pavement Material (4)	Available Material (5) (16)	Unexpanded Fill	Expanded Fill (13) Factor 1.20	Mass Ordinate +/- (14)	Waste	Borrow (15) (item #208.0100)	Comment:
LAKE FARM PARK SEGMENT	STA. 83+25 - STA. 83+70	PATH	1	0	0	1	19	23	-22	-	22	
MCDANIEL PARK SEGMENT	STA. 132+19 - STA. 137+45	PATH	131	0	0	131	167	201	-201	131	201	(16)
UNDISTRIBUTED		PATH	0	20	0	0	0	0	0	0	-	(16)
			132	20								
CATEGORY 0010 SUBTOTAL			Total Common Exc 152		0	132	186	223	-223	131	223	

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Breaker Run. See quantities elsewhere for Item number 311.0110
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
13) Expanded Fill. Factor = 1.20
Depending on selections:

Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced EBS) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh) * Fill Factor
Expanded Fill = Unexpanded Fill * Fill Factor

14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.
15) Borrow Excavation
16) Common Excavation to be wasted off-site

BASE AGGREGATE DENSE & WATER

STREET	STATION	TO	STATION	LOCATION	BASE AGGREGATE DENSE 3/4-INCH 305.0110 TON	BASE AGGREGATE DENSE 1 1/4-INCH 305.0120 TON	WATER 624.0100 MGAL
LAKE FARM PARK SEGMENT	83+25	-	83+70	PATH BASE	0	52	1
MCDANIEL PARK	132+19	-	137+45	PATH BASE	41	476	10
				PROJECT TOTALS	41	528	11

BREAKER RUN

LOCATION	EBS CY	311.0110 TON
UNDISTRIBUTED	20	40
PROJECT TOTAL		40

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED.

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\030201_mq.dgn PLOT DATE : 10/6/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 200.0000 sf / in.
WISDOT/CADDS SHEET 43

3

ASPHALTIC SURFACE

LOCATION	STATION	TO	STATION	465.0105 ASPHALTIC SURFACE TON
LAKE SEGMENT 3	132+19	-	137+45	99
PROJECT TOTAL				99

TREATED LUMBER AND TIMBER

LOCATION	FROM STATION	-	TO STATION	CATEGORY 10 507.0200 MBM	CATEGORY 20 507.0200 MBM
BOARDWALK	95+70	-	132+17	186.4	--
STRUCTURE B-13-811				--	0.4
PROJECT TOTAL				186.4	0.4

3

CULVERT PIPE TEMPORARY

LOCATION	STATION	TO	STATION	CULVERT PIPE TEMPORARY 12-INCH 520.2012 LF
CONTRACTOR STAGING AREA AT LIBBY ROAD	16+70	-	16+90	20
PROJECT TOTAL				20

FENCE SAFETY

LOCATION	STATION	TO	STATION	FENCE SAFETY 616.0700.S LF
CONTRACTOR STAGING AREA	14+42	-	19+36	879
MCDANIEL PARK	132+62	-	136+97	461
PROJECT TOTAL				1,340

MOBILIZATIONS EROSION CONTROL

PROJECT	MOBILIZATIONS EROSION CONTROL 628.1905 EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL 628.1910 EACH
5992-08-85	3	6
PROJECT TOTAL	3	6

EROSION CONTROL

LOCATION	STATION	TO	STATION	625.0100 TOPSOIL SY	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENCE LF	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	628.6005 TURBIDITY BARRIER SY	SPV.0180.01 GEOTEXTILE FABRIC TYPE FF SY
LAKE COUNTRY FARM PARK SEGMENT	83+25	-	83+70	40	--	201	201	40	--	--
LOWER YAHARA RIVER TRAIL	86+44	-	87+81	--	--	--	--	--	128	--
LOWER YAHARA RIVER TRAIL	88+58	-	95+44	--	--	--	--	--	457	--
LOWER YAHARA RIVER TRAIL	104+70	-	115+27	--	--	--	--	--	647	--
MCDANIEL PARK	132+12	-	132+72	172	--	175	175	172	--	--
MCDANIEL PARK	133+13	-	137+45	436	38	895	895	436	--	62
UNDISTRIBUTED				50	10	200	200	50	--	--
PROJECT TOTAL				698	48	1471	1471	698	1232	62

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED.

3

TRACKING PADS

PROJECT	TRACKING PADS 628.7560 EACH
5992-08-85	1
PROJECT TOTAL	1

RESTORATION AND LANDSCAPING

LOCATION	STATION	TO	STATION	629.0205 FERTILIZER TYPE A CWT	630.0140 SEEDING MIXTURE NO. 40 LB	630.0160 SEEDING MIXTURE NO. 60 LB	630.0175 SEEDING MIXTURE NO. 75 LB
LAKE COUNTRY FARM PARK SEGMENT	83+25	-	83+70	1	--	--	1
LOWER YAHARA RIVER TRAIL	86+50	-	87+70	1	--	2	--
LOWER YAHARA RIVER TRAIL	88+70	-	96+50	1	--	14	--
LOWER YAHARA RIVER TRAIL	103+75	-	116+28	2	--	39	--
MCDANIEL PARK	132+12	-	132+72	1	--	--	2
MCDANIEL PARK	133+13	-	137+45	1	4	1	--
UNDISTRIBUTED				1	4	1	2
PROJECT TOTAL				8	8	57	5

3

TRAFFIC CONTROL

LOCATION	PROJECT DURATION DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 DAYS
STA. 11+00, RT	458	1	458	2	916
STA. 16+65, RT	458	1	458	2	916
STA. 27+00, 660' RT	458	1	458	2	916
STA. 83+00, RT	458	1	458	2	916
STA. 137+45, RT	458	1	458	2	916
UNDISTRIBUTED	458	5	2,290	10	4,580
PROJECT TOTAL			4,580		9,160

CONSTRUCTION STAKING SUBGRADE AND BASE

LOCATION	SUBGRADE 650.4500 LF	BASE 650.5000 LF
LAKE FARM PARK SEGMENT	45	45
MCDANIEL PARK SEGMENT	526	526
PROJECT TOTALS	571	571

CONSTRUCTION STAKING STRUCTURE LAYOUT

STRUCTURE	CATEGORY	CONSTRUCTION STAKING STRUCTURE LAYOUT 650.6500 LS
01. B-13-811	20	1
02. B-13-834	30	1
03. B-13-837	40	1

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

PROJECT	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 650.9910 LS
5992-08-85	1
PROJECT TOTAL	1

CONSTRUCTION STAKING SLOPE STAKES

LOCATION	CONSTRUCTION STAKING SLOPE STAKES 650.9920 LF
LAKE FARM PARK SEGMENT	45
LAKE SEGMENT 3	526
PROJECT TOTAL	571

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED.

3

HELICAL PILE

LOCATION	FROM STATION - TO STATION	SPV.0060.01 EACH
BOARDWALK SEGMENT 1	95+81 - 100+98	192
BOARDWALK SEGMENT 2	101+09 - 104+63	62
BOARDWALK SEGMENT 3	132+17 - 132+17	2
PROJECT TOTAL		256

NON-PENETRATING PAD ASSEMBLY

LOCATION	FROM STATION - TO STATION	SPV.0060.02 EACH
BOARDWALK SEGMENT 3	115+37 132+05	278
PROJECT TOTAL		278

3

RAILING SYSTEM FOR ELEVATED BOARDWALK

LOCATION	FROM STATION - TO STATION	SPV.0090.01 LF
BOARDWALK	95+70 - 132+17	5,192
PROJECT TOTAL		5,192

FLOATING FISHING PIER AND GANGWAY

PROJECT	FLOATING FISHING PIER AND GANGWAY SPV.0105.01 EACH
5992-08-85	1
PROJECT TOTAL	1

TEMPORARY CAUSEWAYS

LOCATION	FROM STATION - TO STATION	SPV.0105.02 LS
LOWER YAHARA RIVER TRAIL	83+25 116+28	1
PROJECT TOTAL		1

COMPOSITE DECKING

LOCATION	FROM STATION - TO STATION	COMPOSITE DECKING SPV.0165.01 SF
BOARDWALK	95+70 - 104+74	11,080
BOARDWALK	115+26 - 132+17	20,718
PROJECT TOTAL		31,798

PROTECTIVE MATTING

LOCATION	FROM STATION - TO STATION	SPV.0165.02 SF
BOARDWALK	84+00 - 86+50	5,635
BOARDWALK	95+70 - 104+75	21,708
BOARDWALK	115+26 - 132+50	41,388
PROJECT TOTAL		68,731

ALL QUANTITIES ARE CATEGORY 10 UNLESS OTHERWISE NOTED.

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
5992-08-84		
FEDERAL PROJECT NUMBER	4.01	9

PLAT OF RIGHT-OF-WAY REQUIRED FOR

LOWER YAHARA RIVER TRAIL PHASE ONE

(CAPITAL CITY TRAIL TO MCDANIEL PARK)

NON HIGHWAY — DANE COUNTY

CONSTRUCTION PROJECT NUMBER

5992-08-85

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.		
HIGHWAY EASEMENT	H.E.		
LAND CONTRACT	LC		
MONUMENT	MON.		
PAGE	P.		
PERMANENT LIMITED EASEMENT	PLE		
PROPERTY LINE	P/L		
RECORDED AS	(100')		

CURVE DATA

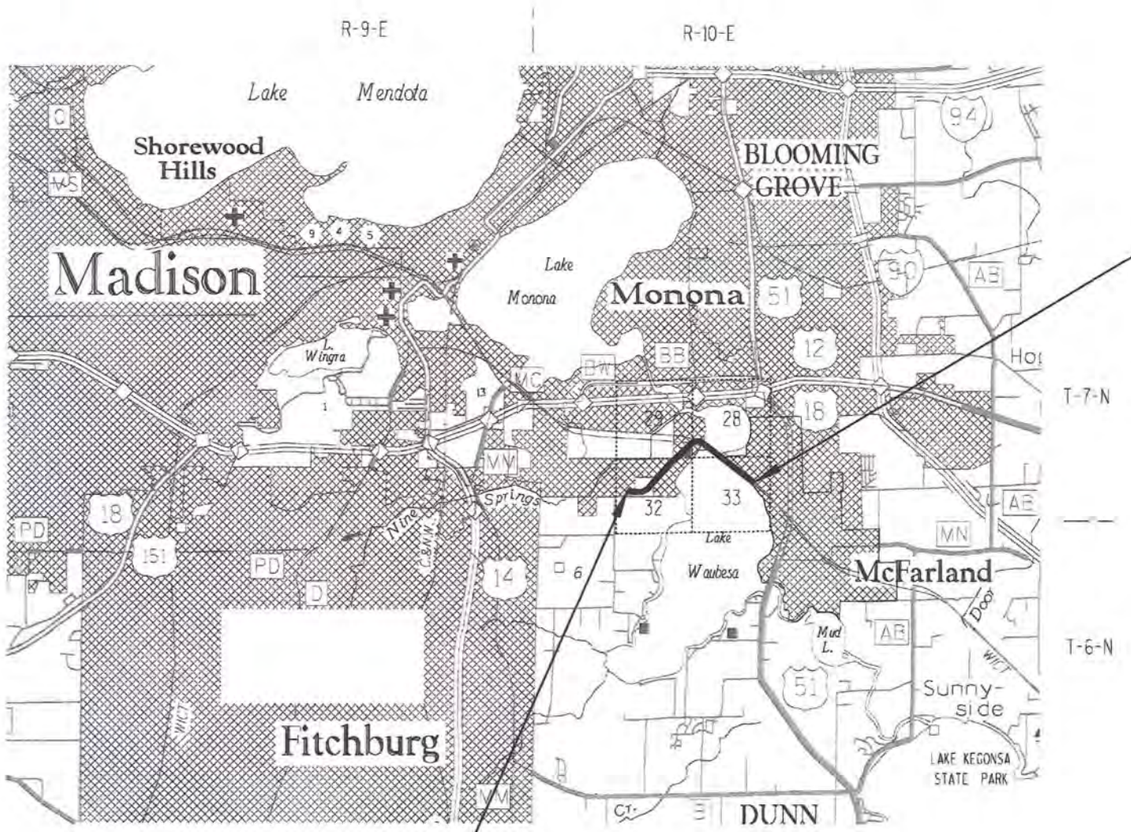
LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	(IF UNLESS NOTED)	PROPOSED R/W LINE	
R/W MONUMENT	● (SET)	EXISTING H.E. LINE	
R/W STANDARD	▲ (SET)	PROPERTY LINE	
SIGN	SIGN	LOT & TIE LINES	
SECTION CORNER MONUMENT	◉	SLOPE INTERCEPTS	
SECTION CORNER SYMBOL	(SEE SCM PAGE)	CORPORATE LIMITS	
FEE (HATCH VARIES)		NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY ACQUISITION)	
PERMANENT LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
CONSTRUCTION PERMIT		SECTION LINE	
R/W BOUNDARY POINT	RWB2D	QUARTER LINE	
PARCEL NUMBER	6	SIXTEENTH LINE	
UTILITY PARCEL NUMBER	92	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21-H	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	

CONVENTIONAL UTILITY SYMBOLS

WATER	—W—	
GAS	—G—	
TELEPHONE	—T—	
OVERHEAD TRANSMISSION LINES ELECTRIC	—OH—	
CABLE TELEVISION	—TV—	
FIBER OPTIC	—FO—	
SANITARY SEWER	—SAN—	
STORM SEWER	—SS—	
	NON COMPENSABLE	COMPENSABLE
POWER POLE	△	▲
TELEPHONE POLE	⌀	⌀
TELEPHONE PEDESTAL	⌑	⌑
ELECTRIC TOWER	⊠	



LAYOUT

SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 2.491 MI.

NOTES

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, DANE COUNTY ZONE, NAD83 (1997) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER SURVEYS OF PUBLIC RECORD.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: PLAT OF SURVEY BY WILLIAM F. KOTTLER R.L.S. 2348, DATED JUNE 12, 2009; CERTIFIED SURVEY MAP NUMBER 4798, STATION MAP OF LANDS, TRACKS AND STRUCTURES BY CHICAGO AND ST. PAUL RAILWAY COMPANY, DATED DECEMBER 24, 1920; AND DEEDS OF THE FRONTING PROPERTIES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLEs ARE TO TERMINATE ON THE DATE THE CONSTRUCTION OF THIS PROJECT IS COMPLETED.

ORIGINAL PLAT PREPARED BY

GRAEF

WISCONSIN
DAVID L. KOSLO
S-2437-008
KEWASKUM, WI
LAND SURVEYOR

DATE: 8/21/14

REVISION DATE	
10-17-2014	DANE COUNTY

APPROVED FOR THE COUNTY

DATE: 8/22/14 Todd Mark, P.E. (SIGNATURE) Commissioner/Director

E

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSED ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE COUNTY.

AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

					R/W ACRES REQUIRED						
PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	NEW	EXISTING	TOTAL	TOTAL ACRES REMAINING	P.L.E. ACRES	T.L.E. ACRES	PARCEL NUMBER
1	4.04	DANE COUNTY HERITAGE CENTER	TLE	---	---	---	---	---	00.00	3.54	1
2(2)	4.04	DANE COUNTY	TLE	---	---	---	---	---	00.00	2.13	2(2)
3	4.05 - 4.07	DANE COUNTY PARKS - LAKE FARM PARK	TLE	---	---	---	---	---	00.00	5.23	3
4	4.05	STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES	PLE	---	---	---	---	---	0.12	00.00	4
5	4.06	MADISON METROPOLITAN SEWERAGE DISTRICT	PLE	---	---	---	---	---	0.20	00.00	5
6	4.07-4.08	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	CONSTRUCTION PERMIT	---	---	---	---	---	00.00	1.11(CP)	6
7	4.07, 4.08	STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES	PLE	---	---	---	---	---	1.97	00.00	7
8(2)	4.09	VILLAGE OF MCFARLAND	PLE, TLE	---	---	---	---	---	1.41	0.62	8(2)
UTILITY NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED								UTILITY NUMBER
100	4.04	CITY OF MADISON	MUNICIPAL AGREEMENT	---	---	---	---	---	---	---	100
101	4.09	WISCONSIN POWER AND LIGHT, A WISCONSIN CORPORATION	RELEASE OF RIGHTS	---	---	---	---	---	---	---	101

4

4

REVISION DATE 10/17/2014

DATE 8/21/2014

SCALE. FEET
0 N/A

HWY: YAHARA RIVER TRAIL

COUNTY: DANE

STATE R/W PROJECT NUMBER 5992-08-84

CONSTRUCTION PROJECT NUMBER 5992-08-85

PLAT SHEET 4.02

PS&E SHEET 42

E

4

GN

LEGEND

(X) PARCEL NUMBER

CITY OF MADISON

TOWN OF BLOOMING GROVE

CITY OF MADISON

TOWN OF BLOOMING GROVE

VILLAGE OF McFARLAND

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

BEGIN RELOCATION ORDER
STA. 8+25.85
Y = 465,510.26
X = 831,895.73

END RELOCATION ORDER
STA. 139+51.01
Y = 465,263.95
X = 841,889.29

UPPER MUD LAKE

LAKE

WAUBESA

MEANDER CORNER

McDANIEL PARK

TERMINAL DR

USH 51

SIGGELKOW RD

ERLING AV

FARM RD

LIBBY RD

LAKE

REVISION DATE 10/17/2014	DATE 8/21/2014	0 500 1000 SCALE, FEET	HWY: YAHARA RIVER TRAIL	STATE R/W PROJECT NUMBER 5992-08-84	PLAT SHEET 4.03
			COUNTY: DANE	CONSTRUCTION PROJECT NUMBER 5992-08-85	PS&E SHEET 43 E

PLE/TLE CURVE DATA TABLE					
NAME	RADIUS	LENGTH	DELTA	C.B.	C.L.
TIE1	150.00'	12.38'	4°43'43"RT	S70°30'49"E	12.38'
TLE1A	175.00'	99.45'	32°33'35"RT	S51°52'10"E	98.12'
TLE1B	275.00'	152.63'	31°47'57"LT	S51°29'21"E	150.67'
TLE1C	325.00'	180.38'	31°47'57"RT	N51°29'21"W	178.07'
TLE1D	125.00'	71.03'	32°33'35"LT	N51°52'10"W	70.08'
TLE2A	75.00'	109.12'	83°21'34"LT	N48°19'46"E	99.75'
TLE2B1	225.00'	146.96'	37°25'24"RT	N25°21'41"E	144.36'
TLE2B2	175.00'	83.72'	27°24'35"RT	N57°46'40"E	82.92'
TLE2C	325.00'	189.28'	33°22'07"LT	N54°47'54"E	186.61'
TLE2D	1,025.00'	24.91'	1°23'33"RT	N38°48'37"E	24.91'
TLE2E	375.00'	218.40'	33°22'07"RT	S54°47'54"W	215.32'
TLE2F1	125.00'	59.80'	27°24'35"LT	S57°46'40"W	59.23'
TLE2F2	175.00'	114.30'	37°25'24"LT	S25°21'41"W	112.28'
TLE2G	125.00'	181.86'	83°21'34"RT	S48°19'46"W	166.24'

REFERENCE LINE CURVE DATA PLACED IN GENERAL LOCATION OF EACH CURVE

100 CITY OF MADISON
STORMWATER MANAGEMENT MEASURES
GENERAL DESCRIPTION PARCELS 1& 2
DOC. # 4049953

GN

4

4

T 7 N
30 29
31 32
R 10 E

TRUE CORNER
Y = 467,554.53
X = 831,614.82

25.00'

BRASS CAP
MEANDER CORNER
Y = 467,529.53
X = 831,614.21

CITY OF MADISON

SW-NW

100

BEGIN RELOCATION ORDER
STA. 8+25.85
Y = 465,510.26
X = 831,895.73

CURVE 1
P.I. = 8+64.08
Y = 465,499.49
X = 831,932.43
DELTA = 37° 17' 17" (RT)
D = 38° 11' 50"
T = 50.61'
L = 97.62'
R = 150.00'
P.C. = 8+13.47
P.T. = 9+11.09

2003.92'

N01°23'48"E.

LAKE FARM RD

SECTION LINE

628.38'

N21°51'03"E 25.00'

8+25.85 25.00

TLE1A

24.63

S35°35'23"E

TIE1

POT 7+98.54

PI 8+64.08

S.88°36'12"E. 304.52'

14.93

S72°52'40"E

N21°51'03"E 25.00'

8+25.85 25.00

PC 8+13.47

PT 9+11.09 TLE 25.00'RT.,LT.

TLE1D

TLE1B

PI 10+21.18 TLE 25.00'RT.,LT.

TLE1C

PT 11+02.22 TLE 25.00'RT.,LT.

N35°35'23"W 24.63'

DANE COUNTY HERITAGE CENTER

1

CURVE 3
P.I. = 15+71.27
Y = 465,155.62
X = 832,537.83
DELTA = 22° 58' 51" (RT)
D = 28° 38' 52"
T = 40.66'
L = 80.22'
R = 200.00'
P.C. = 15+30.62
P.T. = 16+10.83

TLE - GRADING (3.54 ACRES)

SLOPE INTERCEPT (TYP.)

25'

330.02'

428.39

S67°23'20"E 318.69'

14+32.24 25.00

N89°58'04"E 427.36'

19+47.42 261.46

15

PI 15+71.27

PC 15+30.62

PT 16+10.83

S44°24'28"E 133.81'

PC 17+44.64

CURVE 2
P.I. = 10+21.18
Y = 465,368.81
X = 832,025.95
DELTA = 31° 47' 57" (LT)
D = 19° 05' 55"
T = 85.45'
L = 166.50'
R = 300.00'
P.C. = 9+35.72
P.T. = 11+02.22

14+80.91 25.00

N01°27'44"E 235.84'

16+60.96 227.57

P/L

33'

LIBBY RD

QUARTER LINE

400.00'

S.01°27'44"W.

SIXTEENTH LINE

P/L

33.39'

236.54'

19+41.42 25.00

33.40'

19+74.82 25.00

19+74.18

20

PT 19+03.76

50.02'

608.46'

679.52

S89°59'28"E 609.73'

N.89°58'04"E. 2642.58'

25'

25

TLE - GRADING (2.16 ACRES)

SLOPE INTERCEPT (TYP.)

TLE2A

TLE2G

P/L

PI 18+28.68

19+40.15 25.00

S01°27'44"W 14.19'

19+39.79 39.19

19+73.55 25.00

33.40'

CURVE 4
P.I. = 18+28.68
Y = 464,970.95
X = 832,718.72
DELTA = 45° 34' 59" (LT)
D = 28° 38' 52"
T = 84.04'
L = 159.12'
R = 200.00'
P.C. = 17+44.64
P.T. = 19+03.76

NW-SW

NE-SW

T 7 N
31 32
31 32
R 10 E

BRASS CAP
Y = 464,898.02
X = 831,550.05

DANE COUNTY

2

100

TOWN OF BLOOMING GROVE

SE-NW

CURVE 6A
P.I. = 30+11.13
Y = 465,339.72
X = 833,614.32
DELTA = 37° 25' 24" (RT)
D = 28° 38' 52"
T = 67.74'
L = 130.63'
R = 200.00'
P.C. = 29+43.39
P.T. = 30+74.03

CURVE 6B
P.I. = 32+68.93
Y = 465,528.42
X = 833,797.00
DELTA = 27° 24' 35" (RT)
D = 38° 11' 50"
T = 36.58'
L = 71.76'
R = 150.00'
P.C. = 32+32.35
P.T. = 33+04.11

P/L

N71°28'57"E 74.60

N24°48'33"E 74.60

TLE2B2

TLE2F2

PT 33+04.11

PC 33+78.70 TLE 25.00'RT.,LT.

TLE2C

PI 34+83.60

TLE2E

PT 35+82.54 TLE 25.00'RT.,LT.

25

251.36'

N38°06'50"E 212.53'

38+61.32 25.00

N39°30'24"E 3.12'

38+58.20 25.00

TLE2D

38+33.90 25.00

41.31'

38+28.75

41.94'

37+95.07 25.00

1626.28'

BRASS CAP
Y = 467,540.29
X = 834,263.09

CURVE 7
P.I. = 34+83.60
Y = 465,597.04
X = 834,001.90
DELTA = 33° 22' 07" (LT)
D = 16° 22' 13"
T = 104.90'
L = 203.84'
R = 350.00'
P.C. = 33+78.70
P.T. = 35+82.54

N.1°31'42"E. 932.18'

QUARTER LINE MATCH LINE - SEE SHEET 4.05

158.32'

N44°04'23"E 158.32'

PC 32+32.35

PI 30+11.13

TLE2B1

TLE2F1

PT 30+74.03

PC 29+43.39 TLE 25.00'RT.,LT.

PC 25+83.28 TLE 25.00'RT.,LT.

214.63'

N6°38'59"E 214.63'

PT 27+28.77 TLE 25.00'RT.,LT.

P126+72.31

CURVE 5
P.I. = 26+72.31
Y = 464,970.82
X = 833,571.31
DELTA = 83° 21' 34" (LT)
D = 57° 17' 45"
T = 89.03'
L = 145.49'
R = 100.00'
P.C. = 25+83.28
P.T. = 27+28.77

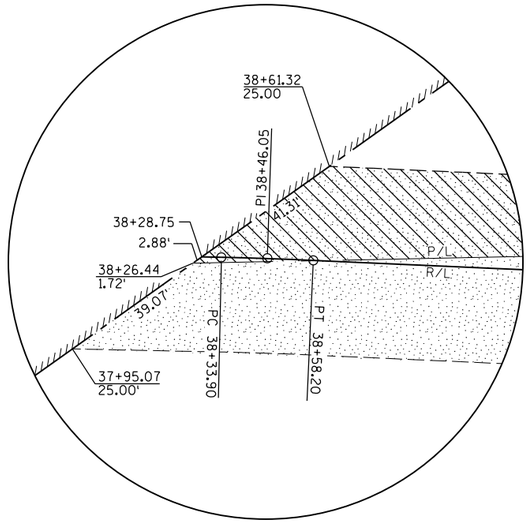
T 7 N
32 32
32 32
R 10 E

BRASS CAP
Y = 464,899.51
X = 834,192.63

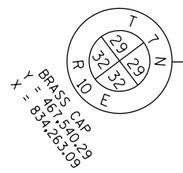
REVISION DATE 10/17/2014	DATE 8/21/2014	0 100 200 SCALE, FEET	HWY: YAHARA RIVER TRAIL	STATE R/W PROJECT NUMBER 5992-08-84	PLAT SHEET 4.04
			COUNTY: DANE	CONSTRUCTION PROJECT NUMBER 5992-08-85	PS&E SHEET 44 E

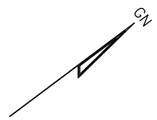
FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00\040404_rp.dgn PLOT DATE : 10/20/2014 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 200.00 sf / in.

WISDOT/CADDS SHEET 70



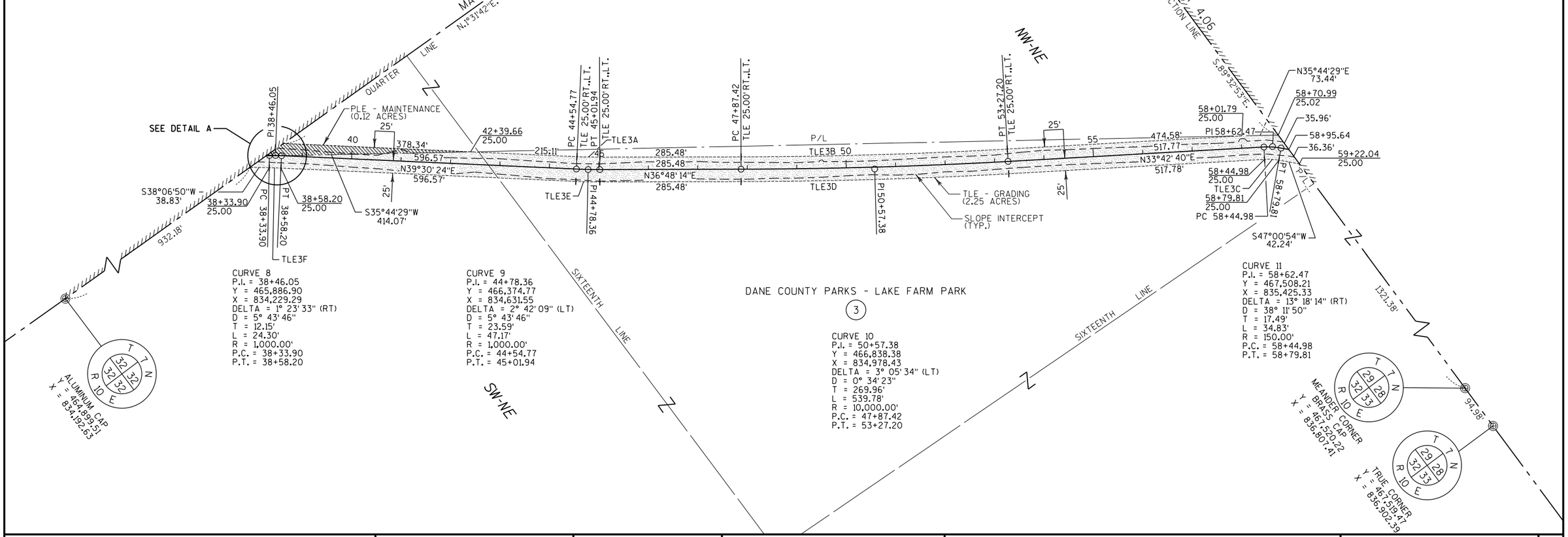
DETAIL A
N.T.S.





PLE/TLE CURVE DATA TABLE					
NAME	RADIUS	LENGTH	DELTA	C.B.	C.L.
TLE3A	975.00'	45.99'	2°42'09"LT	N38°09'19"E	45.99'
TLE3B	9,975.00'	538.43'	3°05'34"LT	N35°15'27"E	538.37'
TLE3C	125.00'	29.03'	13°18'14"LT	S40°21'47"W	28.96'
TLE3D	10,025.00'	541.13'	3°05'34"RT	S35°15'27"W	541.07'
TLE3E	1,025.00'	48.35'	2°42'09"RT	S38°09'19"W	48.34'
TLE3F	975.00'	23.70'	1°23'33"LT	S38°48'37"W	23.70'

REFERENCE LINE CURVE DATA PLACED IN GENERAL LOCATION OF EACH CURVE



REVISION DATE 10/17/2014	DATE 8/21/2014	0 100 200 SCALE, FEET	HWY: YAHARA RIVER TRAIL	STATE R/W PROJECT NUMBER 5992-08-84	PLAT SHEET 4.05	
			COUNTY: DANE	CONSTRUCTION PROJECT NUMBER 5992-08-85	PS&E SHEET 45	E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00\040405_rp.dgn PLOT DATE : 10/20/2014 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 200.0000 sf / in.

TOWN OF BLOOMING GROVE

SW-SE

MADISON METROPOLITAN SEWERAGE DISTRICT (5)

SIXTEENTH LINE

T 7 N
29 29
32 32
R 10 E

BRASS CAP
Y = 467,540.29
X = 834,263.09

CURVE 12
P.I. = 59+76.43
Y = 467,586.01
X = 835,508.81
DELTA = 16° 03' 15" (LT)
D = 38° 11' 50"
T = 21.15'
L = 42.03'
R = 150.00'
P.C. = 59+55.28
P.T. = 59+97.31

CURVE 14
P.I. = 67+31.94
Y = 468,203.80
X = 835,942.50
DELTA = 7° 39' 10" (RT)
D = 2° 51' 53"
T = 133.76'
L = 267.13'
R = 2,000.00'
P.C. = 65+98.17
P.T. = 68+65.30

CURVE 15
P.I. = 71+31.92
Y = 468,486.83
X = 836,225.69
DELTA = 22° 11' 26" (RT)
D = 11° 27' 33"
T = 98.05'
L = 193.65'
R = 500.00'
P.C. = 70+33.87
P.T. = 72+27.52

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

GN

T 7 N
29 28
29 28
R 10 E

NO INFORMATION OF RECORD

STREAM BANK CORRIDOR EASEMENT
DOCUMENT NUMBER 4105671

1157.69'

P/L

PC 59+55.28
PT 59+97.31
PI 59+76.43
PI 62+47.30
PI 67+31.94
PI 71+31.92
PI 77+61.09

107.66'
194.05'
200.28'
N30°57' 39"E
295.05'65
295.05
N37°21' 53"E
295.05'
168.57' 70
168.57
N45°01' 03"E
168.57'
N67°12' 26"E
60.46'
60.46
60.46'
25'
25'
25'
25'
75'
99'

TLE3G
TLE3H
TLE3P
TLE3I
TLE3J
TLE3N
TLE3O

PC 61+91.35
PT 63+03.12
PC 65+98.17
PT 68+65.30
PC 70+33.87
PT 72+27.52
PC 72+87.98

TLE 25.00'RT.,LT.

CURVE 16
P.I. = 77+61.09
Y = 468,731.51
X = 836,808.01
DELTA = 39° 59' 46" (RT)
D = 4° 24' 27"
T = 473.11'
L = 907.49'
R = 1,300.00'
P.C. = 72+87.98
P.T. = 81+95.47

SEE DETAL B

PLE - MAINTENANCE
(0.20 ACRES)

SLOPE INTERCEPT
(TYP.)
TLE - GRADING
(2.97 ACRES)

CURVE 13
P.I. = 62+47.30
Y = 467,818.52
X = 835,648.30
DELTA = 6° 24' 14" (RT)
D = 5° 43' 46"
T = 55.94'
L = 111.77'
R = 1,000.00'
P.C. = 61+91.35
P.T. = 63+03.12

DANE COUNTY PARKS - LAKE FARM PARK (3)

SE-SE

CITY OF MADISON

78+64.99
25.00
25.00'
78+65.40
0.00
25.00'
78+65.83
25.00

SECTION MATCH LINE - SEE SHEET 4.05

S.89°32'53"E.
1272.05'

SECTION MATCH LINE - SEE SHEET 4.07

94.98'

TRUE CORNER
Y = 467,519.47
X = 836,902.39

MEANDER CORNER
Y BRASS CAP
Y = 467,550.22
X = 836,807.41

DETAIL B
N.T.S.

STREAM BANK CORRIDOR EASEMENT
DOCUMENT NUMBER 4105671

58+75.21
20.00
N39°06'44"E
28.91'
N47°00'54"E
75.47'
58+95.64
85.69'
55.75'
59+57.13
58.93
PC 59+55.28
PT 59+97.31
PI 59+76.43
192.57'
60+83.69
25.00
10.52'
60+74.43
20.00
S02°35'52"W
R/L
42.10'
42.63'
60+37.38
59+91.97
25.11

SECTION LINE

PLE/TLE CURVE DATA TABLE					
NAME	RADIUS	LENGTH	DELTA	C.B.	C.L.
TLE3G	1,025.00'	114.56'	6°24'14"RT	N34°09'46"E	114.50'
TLE3H	2,025.00'	270.47'	7°39'10"RT	N41°11'28"E	270.27'
TLE3I	525.00'	203.33'	22°11'26"RT	N56°06'46"E	202.06'
TLE3J	1,325.00'	924.94'	39°59'46"RT	N87°12'22"E	906.27'
TLE3N	1,275.00'	890.03'	39°59'46"LT	S87°12'22"W	872.07'
TLE3O	475.00'	183.97'	22°11'26"LT	S56°06'46"W	182.82'
TLE3P	1,975.00'	263.79'	7°39'10"LT	S41°11'28"W	263.59'
TLE3O	975.00'	108.97'	6°24'14"LT	S34°09'46"W	108.92'

REFERENCE LINE CURVE DATA PLACED IN GENERAL LOCATION OF EACH CURVE

REVISION DATE 10/17/2014	DATE 8/21/2014	0 100 200 SCALE, FEET	HWY: YAHARA RIVER TRAIL	STATE R/W PROJECT NUMBER 5992-08-84	PLAT SHEET 4.06	
			COUNTY: DANE	CONSTRUCTION PROJECT NUMBER 5992-08-85	PS&E SHEET 46	E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00\040406_rp.dgn PLOT DATE : 10/20/2014 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 200.0000 sf / in.

PLE/TLE CURVE DATA TABLE					
NAME	RADIUS	LENGTH	DELTA	C.B.	C.L.
TLE3J	1,325.00'	924.94'	39°59'46"RT	N87°12'22"E	906.27'
TLE3K	781.00'	100.77'	7°23'33"RT	S69°05'58"E	100.70'
TLE3L	2,815.43'	33.88'	0°41'22"RT	S53°52'36"E	33.88'
TLE3M	731.00'	220.92'	17°18'56"LT	N64°08'16"W	220.08'
TLE3N	1,275.00'	890.03'	39°59'46"LT	S87°12'22"W	872.07'

REFERENCE LINE CURVE DATA PLACED IN GENERAL LOCATION OF EACH CURVE

CURVE 17
P.I. = 85+41.16
Y = 468,489.33
X = 837,590.17
DELTA = 19° 15' 49" (RT)
D = 7° 34' 44"
T = 128.30'
L = 254.18'
R = 756.00'
P.C. = 84+12.86
P.T. = 86+67.04

CURVE 16
P.I. = 77+61.09
Y = 468,731.51
X = 836,808.01
DELTA = 39° 59' 46" (RT)
D = 4° 24' 27"
T = 473.11'
L = 907.49'
R = 1,300.00'
P.C. = 72+87.98
P.T. = 81+95.47

T 7 N R 10 E — 29 28 29 28 — NO INFORMATION OF RECORD

T 7 N R 10 E — 28 28 33 33 — NO INFORMATION OF RECORD

T 7 N R 10 E — 29 28 32 33 — MEANDER CORNER BRASS CAP Y = 467,520.22 X = 836,801.41

T 7 N R 10 E — 29 28 32 33 — TRUE CORNER Y = 467,519.47 X = 836,902.39

T 7 N R 10 E — 33 33 33 33 — MEANDER CORNER NO INFORMATION OF RECORD

UPPER MUD LAKE

CITY OF MADISON

SW-SW

SE-SW

NE-MW

SECTION LINE

QUARTER LINE

MATCH LINE — SEE SHEET 4.08

MATCH LINE — SEE SHEET 4.06

GN

CONSTRUCTION PERMIT (0.07 ACRES)

CONSTRUCTION PERMIT (1.04 ACRES)

RAILROAD BRIDGE (6) — 66'

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

P/L

16.50'

SLOPE INTERCEPT (TYP.)

TLE - GRADING (2.97 ACRES)

25'

TLE3L 16.50' 85+10.40 25.00

TLE3K 85

TLE3J 80

TLE3N

TLE3M 86+41.33 25.00

PI 85+41.16

85+42.80 18.94 S53°31'55"E 138.02

200'

PC 84+12.86 TLE 25.00'RT.-L.T.

PT 81+95.47 TLE 25.00'RT.-L.T.

217.39' 217.39' S72°47'44"E 217.39'

S83°14'38"W 37.12'

PT 86+67.04

86+78.28 8.50 S83°14'38"W 12.41'

86+69.23

78+64.99 25.00 — 25.00'

78+65.40 0.00 — 25.00'

78+65.83 25.00

95+05.18 8.50 N28°24'30"W 42.97'

95+23.31

95+44.08 9.74

PLE - MAINTENANCE (TYP.)

APPROXIMATE LOCATION OF ORDINARY HIGH WATER MARK (TYP.)

N44°56'55"W 200.47'

97+42.31 39.66 N53°20'43"W 224.77'

99+67.07 40.39 N64°53'53"W 70.89'

100+36.57 26.42 N45°49'39"W 89.46'

101+25.20 38.60 N59°41'07"W 85.64'

102+10.34 29.42 N50°52'15"W 65.90'

102+76.17 32.48

S53°31'55"E. 2740.00'

S53°31'55"E. 2194.00'

2,880.08 S53°31'55"E

105+31.03 12.40 N58°02'12"W 255.65'

105+90.02 3.49 N54°28'03"W 145.83'

107+35.83 1.10 N43°30'38"W 68.66'

108+03.44 13.05

107+93.70

DANE COUNTY PARKS - LAKE FARM PARK (3)

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES (7)

LAKE

WAUBESA

94.98'

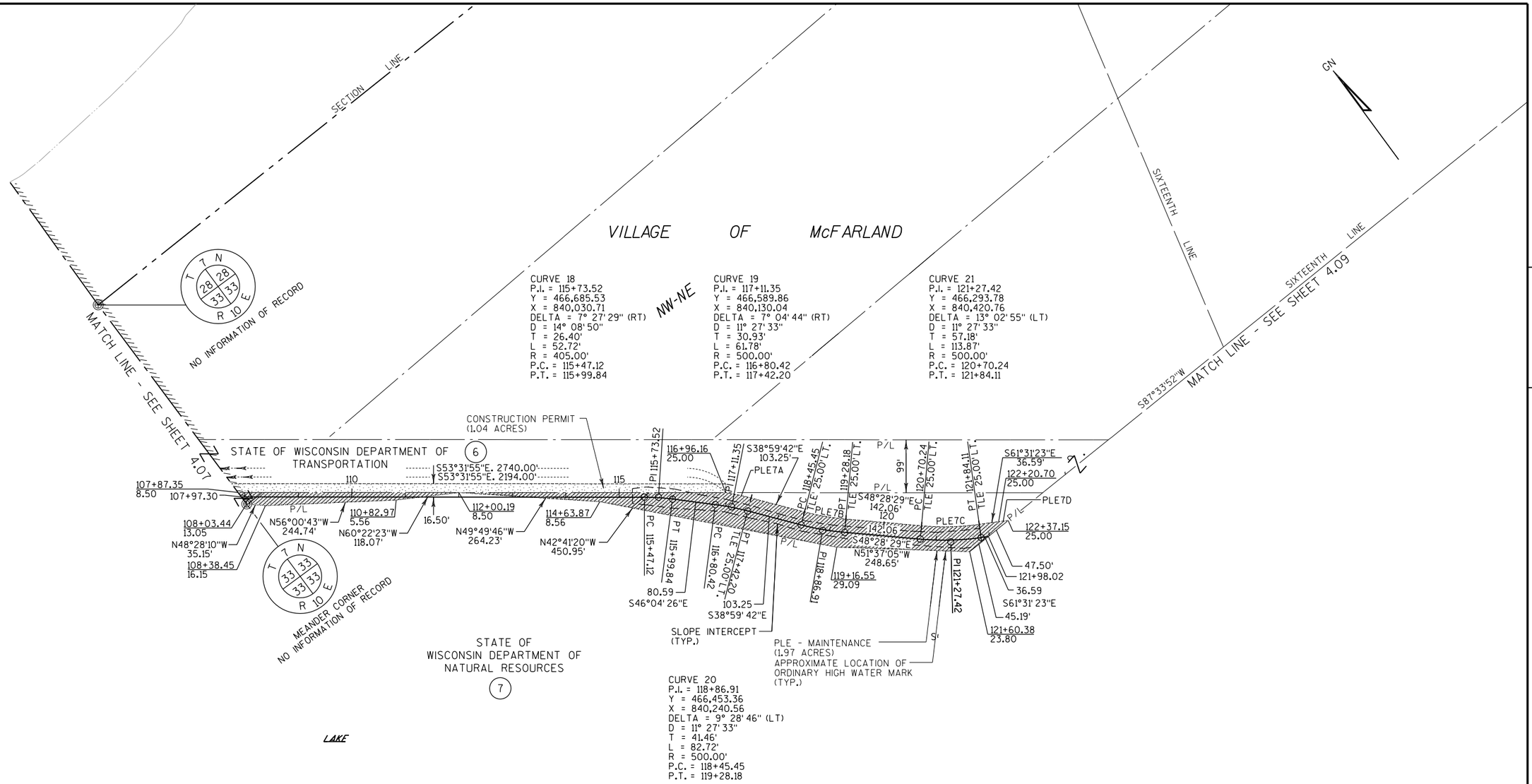
4

4

REVISION DATE 10/17/2014 NO CHANGE	DATE 8/21/2014	0 100 200 SCALE, FEET	HWY: YAHARA RIVER TRAIL	STATE R/W PROJECT NUMBER 5992-08-84	PLAT SHEET 4.07
			COUNTY: DANE	CONSTRUCTION PROJECT NUMBER 5992-08-85	PS&E SHEET 47 E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00\040407_rp.dgn PLOT DATE : 10/20/2014 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 200.0000 sf / in.

WISDOT/CADDS SHEET 70



CURVE 18
P.I. = 115+73.52
Y = 466,685.53
X = 840,030.71
DELTA = 7° 27' 29" (RT)
D = 14° 08' 50"
T = 26.40'
L = 52.72'
R = 405.00'
P.C. = 115+47.12
P.T. = 115+99.84

CURVE 19
P.I. = 117+11.35
Y = 466,589.86
X = 840,130.04
DELTA = 7° 04' 44" (RT)
D = 11° 27' 33"
T = 30.93'
L = 61.78'
R = 500.00'
P.C. = 116+80.42
P.T. = 117+42.20

CURVE 21
P.I. = 121+27.42
Y = 466,293.78
X = 840,420.76
DELTA = 13° 02' 55" (LT)
D = 11° 27' 33"
T = 57.18'
L = 113.87'
R = 500.00'
P.C. = 120+70.24
P.T. = 121+84.11

CURVE 20
P.I. = 118+86.91
Y = 466,453.36
X = 840,240.56
DELTA = 9° 28' 46" (LT)
D = 11° 27' 33"
T = 41.46'
L = 82.72'
R = 500.00'
P.C. = 118+45.45
P.T. = 119+28.18

PLE/TLE CURVE DATA TABLE

NAME	RADIUS	LENGTH	DELTA	C.B.	C.L.
PLE7A	525.00'	48.34'	5°16'32"RT	S41°37'58"E	48.32'
PLE7B	475.00'	78.59'	9°28'46"LT	S43°44'05"E	78.50'
PLE7C	475.00'	108.18'	13°02'55"LT	S54°59'56"E	107.94'
PLE7D	275.00'	18.10'	3°46'13"RT	S59°38'17"E	18.09'

REFERENCE LINE CURVE DATA PLACED IN GENERAL LOCATION OF EACH CURVE

REVISION DATE 10/17/2014 NO CHANGE

DATE 8/21/2014

0 100 200
SCALE, FEET

HWY: YAHARA RIVER TRAIL
COUNTY: DANE

STATE R/W PROJECT NUMBER 5992-08-84
CONSTRUCTION PROJECT NUMBER 5992-08-85

PLAT SHEET 4.08
PS&E SHEET 48

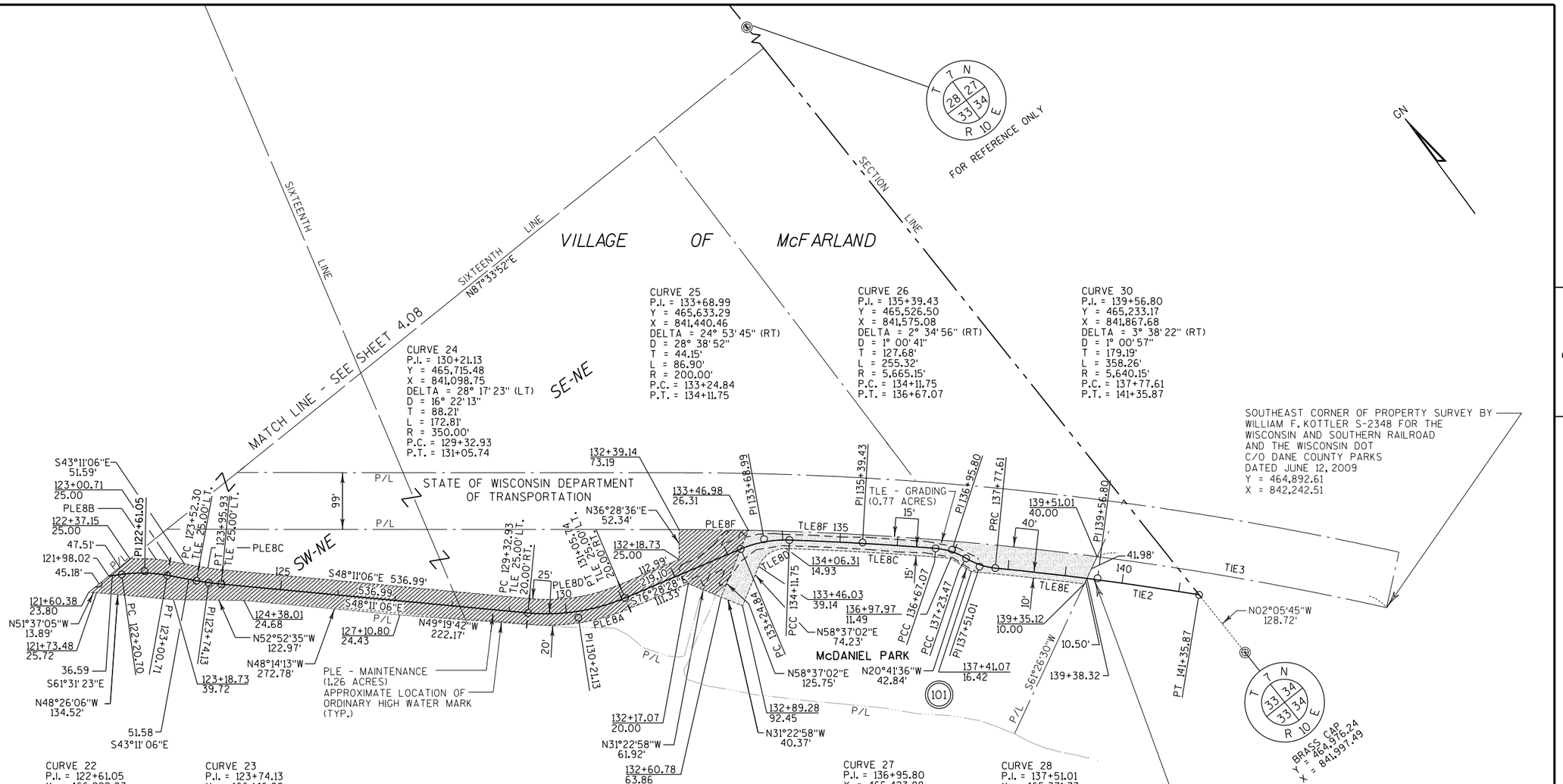
E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00\040408_rp.dgn PLOT DATE : 10/20/2014 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 200.0000 sf / in.

WISDOT/CADDS SHEET 7O

4

4



CURVE 22
P.I. = 122+61.05
Y = 466,229.83
X = 840,538.66
DELTA = 18° 20' 18" (RT)
D = 22° 55' 06"
T = 40.35'
L = 80.02'
R = 250.00'
P.C. = 122+20.70
P.T. = 123+00.71

CURVE 23
P.I. = 123+74.13
Y = 466,146.88
X = 840,616.51
DELTA = 5° 00' 00" (LT)
D = 11° 27' 33"
T = 21.83'
L = 43.63'
R = 500.00'
P.C. = 123+52.30
P.T. = 123+95.93

CURVE 27
P.I. = 136+95.80
Y = 465,423.88
X = 841,693.12
DELTA = 26° 55' 48" (RT)
D = 47° 44' 47"
T = 28.73'
L = 56.40'
R = 120.00'
P.C. = 136+67.07
P.T. = 137+23.47

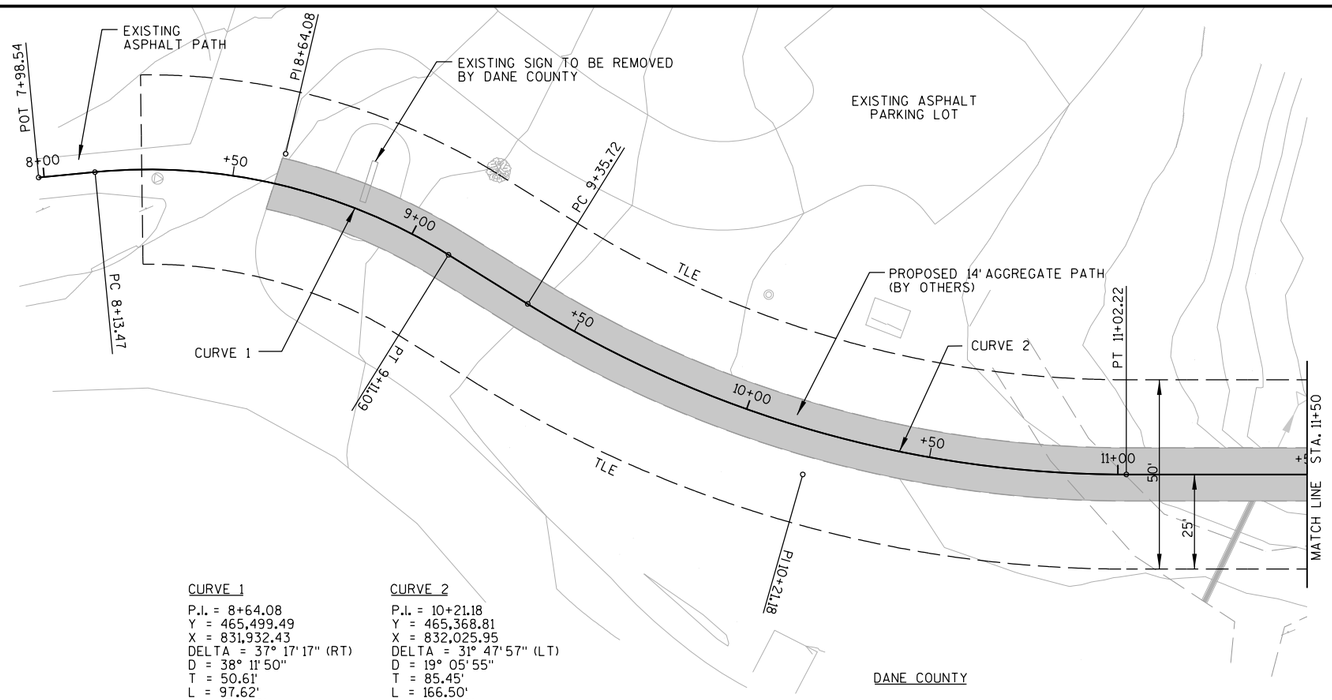
CURVE 28
P.I. = 137+51.01
Y = 465,371.73
X = 841,714.26
DELTA = 25° 50' 56" (LT)
D = 47° 44' 47"
T = 27.54'
L = 54.14'
R = 120.00'
P.C. = 137+23.47
P.T. = 137+77.61

PLE/TLE CURVE DATA TABLE					
NAME	RADIUS	LENGTH	DELTA	C.B.	C.L.
TIE2	5,640.15'	197.55'	2°00'25"LT	N45°16'45"W	197.54'
TIE3	5,680.15'	512.67'	5°10'17"RT	S43°34'05"E	512.50'
TLE8E	5,630.15'	198.12'	2°00'58"LT	N47°19'23"W	198.11'
TLE8C	5,650.15'	287.31'	2°54'48"LT	N50°10'22"W	287.28'
TLE8D	50.00'	60.87'	69°45'12"LT	N86°30'22"W	57.18'
TLE8F	5,680.15'	609.83'	6°09'05"RT	S49°13'46"E	609.54'
TLE8A	REMOVED	REMOVED	REMOVED	REMOVED	REMOVED
TLE8B	REMOVED	REMOVED	REMOVED	REMOVED	REMOVED
PLE8A	370.00'	182.69'	28°17'23"RT	N62°19'47"W	180.84'
PLE8B	275.00'	69.92'	14°34'04"RT	S50°28'08"E	69.73'
PLE8C	475.00'	41.45'	5°00'00"LT	S45°41'06"E	41.44'
PLE8D	325.00'	160.47'	28°17'23"LT	S62°19'47"E	158.84'
PLE8F	5,680.15'	120.77'	1°13'06"RT	S52°54'51"E	120.77'

REFERENCE LINE CURVE DATA PLACED IN GENERAL LOCATION OF EACH CURVE

(101) WISCONSIN POWER AND LIGHT COMPANY, A WISCONSIN CORPORATION
10' GAS MAIN EASEMENT
NON-PLATTABLE
DOC. # 1060960
VOL. 383 PG'S. 372-373

REVISION DATE 10/17/2014	DATE 8/21/2014	0 100 200 SCALE, FEET	HWY: YAHARA RIVER TRAIL	STATE R/W PROJECT NUMBER 5992-08-84	PLAT SHEET 4.09
			COUNTY: DANE	CONSTRUCTION PROJECT NUMBER 5992-08-85	PS&E SHEET 49 E



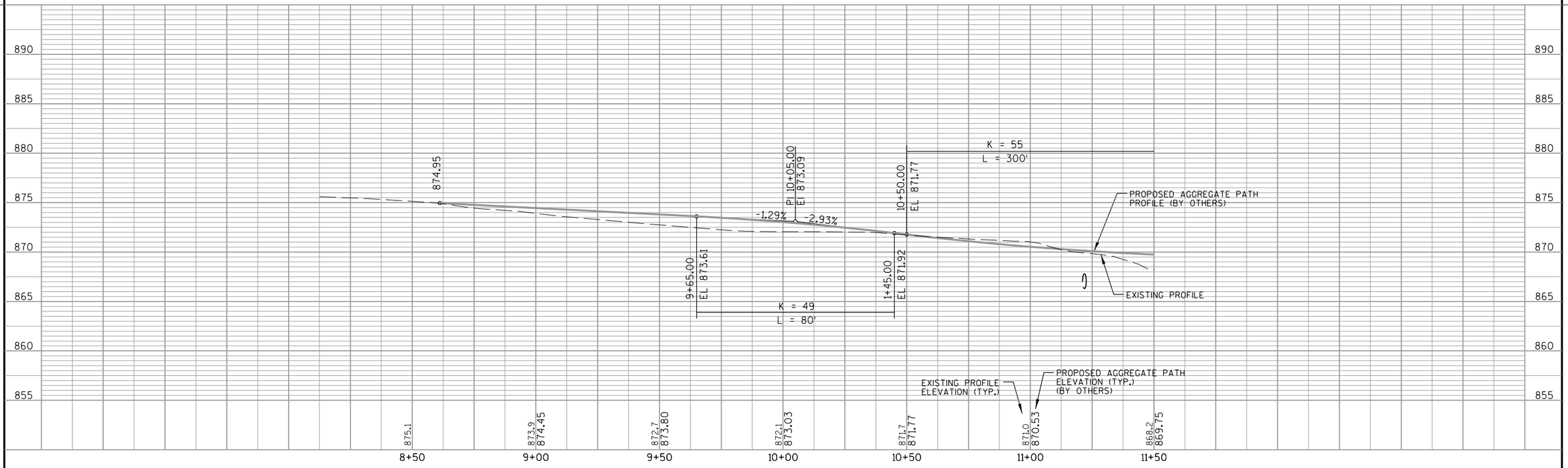
CURVE 1

P.I. = 8+64.08
Y = 465,499.49
X = 831,932.43
DELTA = 37° 17' 17" (RT)
D = 38° 11' 50"
T = 50.61'
L = 97.62'
R = 150.00'
P.C. = 8+13.47
P.T. = 9+11.09

CURVE 2

P.I. = 10+21.18
Y = 465,368.81
X = 832,025.95
DELTA = 31° 47' 57" (LT)
D = 19° 05' 55"
T = 85.45'
L = 166.50'
R = 300.00'
P.C. = 9+35.72
P.T. = 11+02.22

NOTE: AGGREGATE PATH SHOWN THROUGH LAKE FARM COUNTY PARK TO BE CONSTRUCTED BY DANE COUNTY PRIOR TO PROJECT IN THE SUMMER OF 2015.

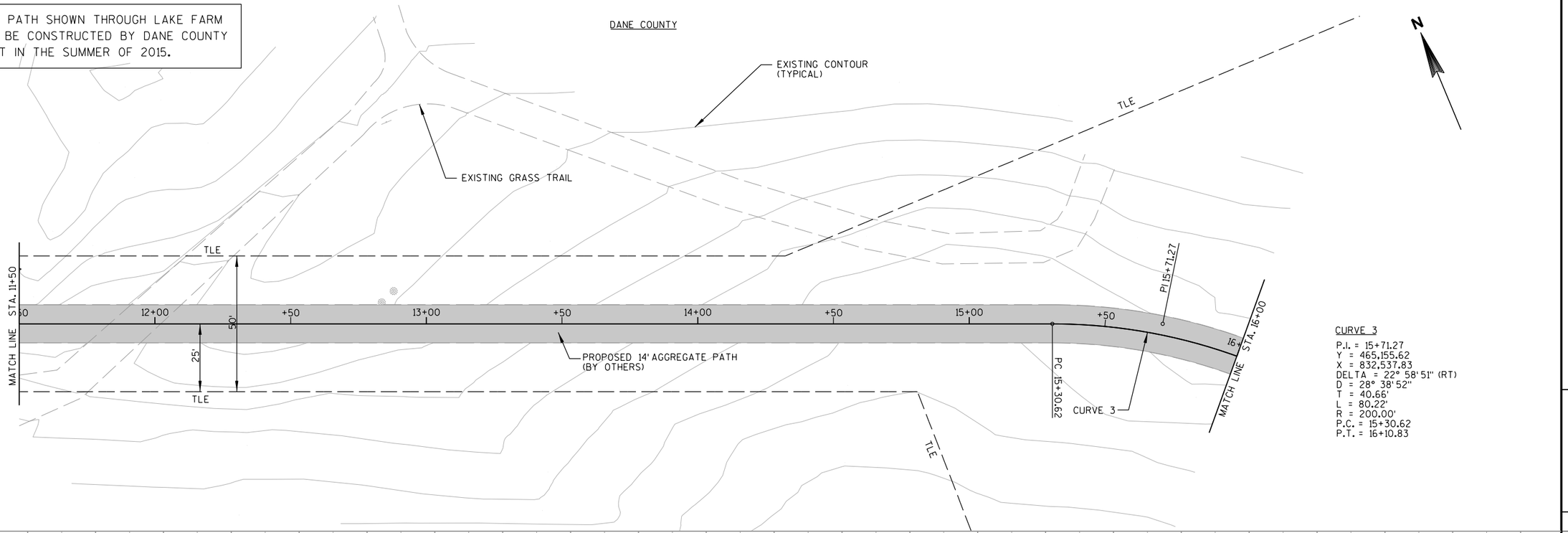


PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 50	E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\050101_pp.dgn PLOT DATE : 7/22/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

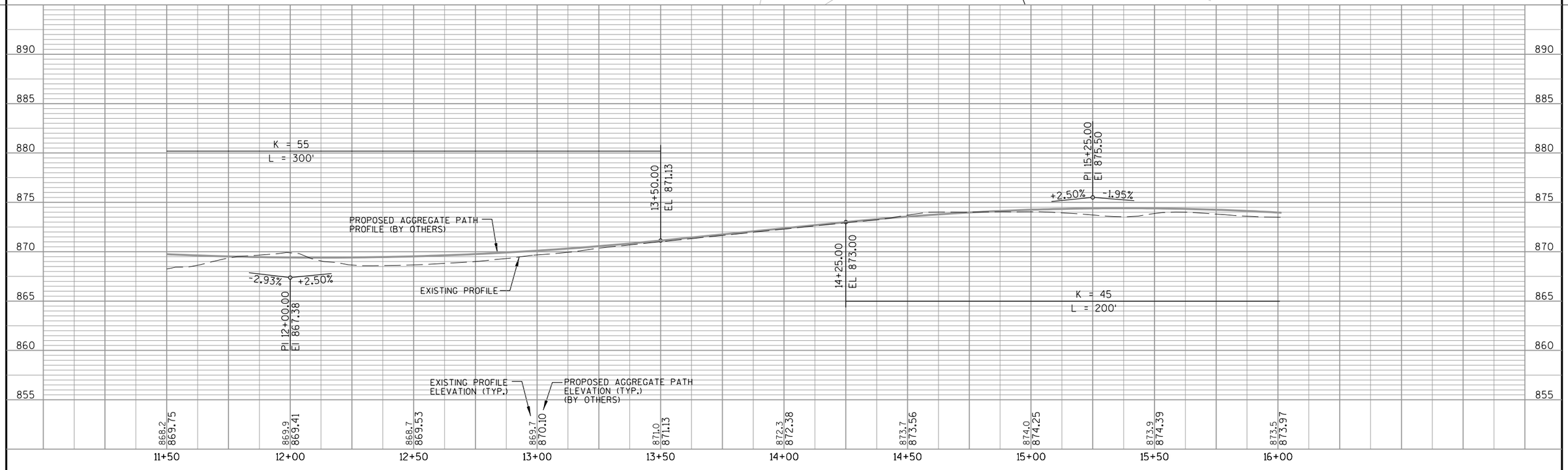
WISDOT/CADDS SHEET 30

NOTE: AGGREGATE PATH SHOWN THROUGH LAKE FARM COUNTY PARK TO BE CONSTRUCTED BY DANE COUNTY PRIOR TO PROJECT IN THE SUMMER OF 2015.



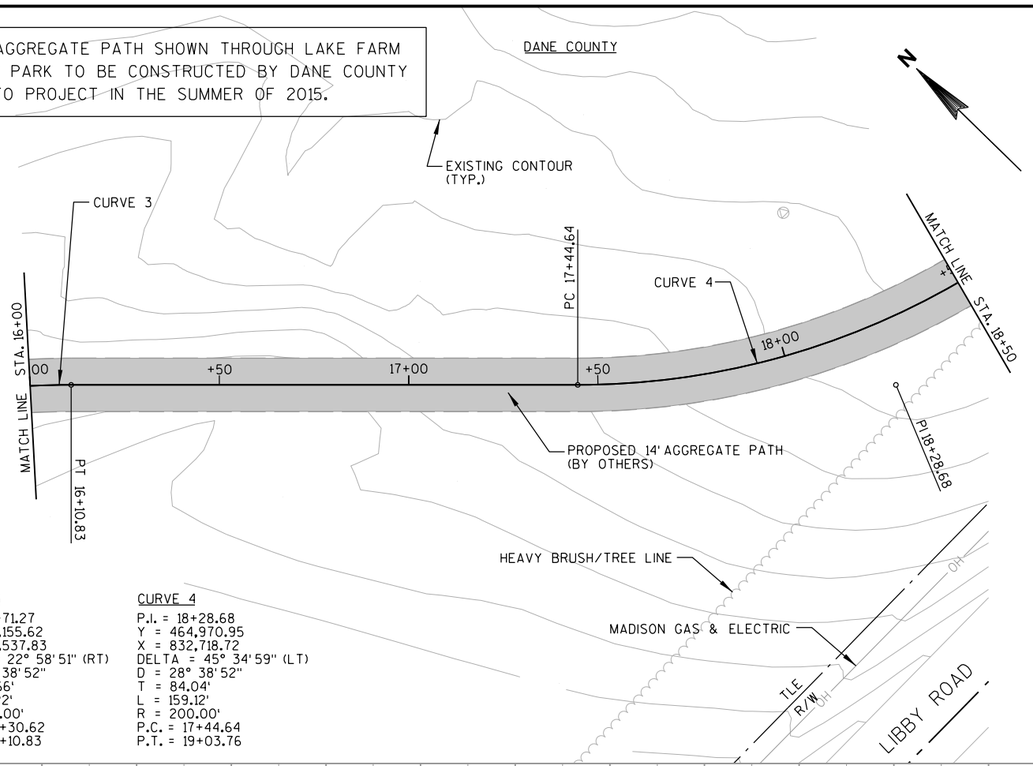
CURVE 3

P.I. = 15+71.27
Y = 465,155.62
X = 832,537.83
DELTA = 22° 58' 51" (RT)
D = 28° 38' 52"
T = 40.66'
L = 80.22'
R = 200.00'
P.C. = 15+30.62
P.T. = 16+10.83



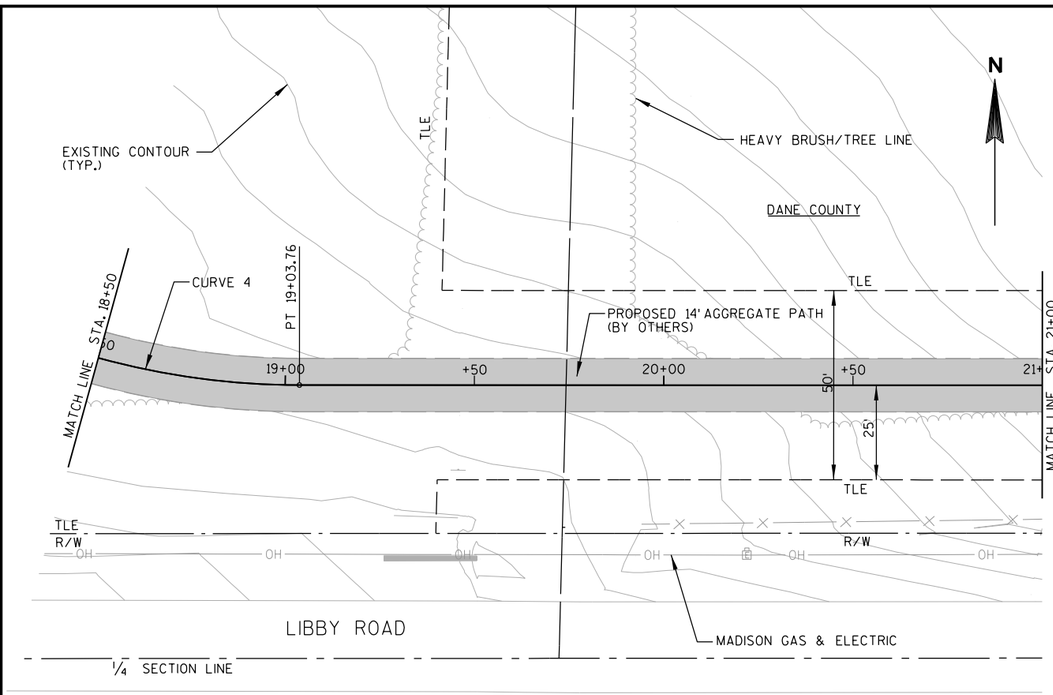
PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 51	E

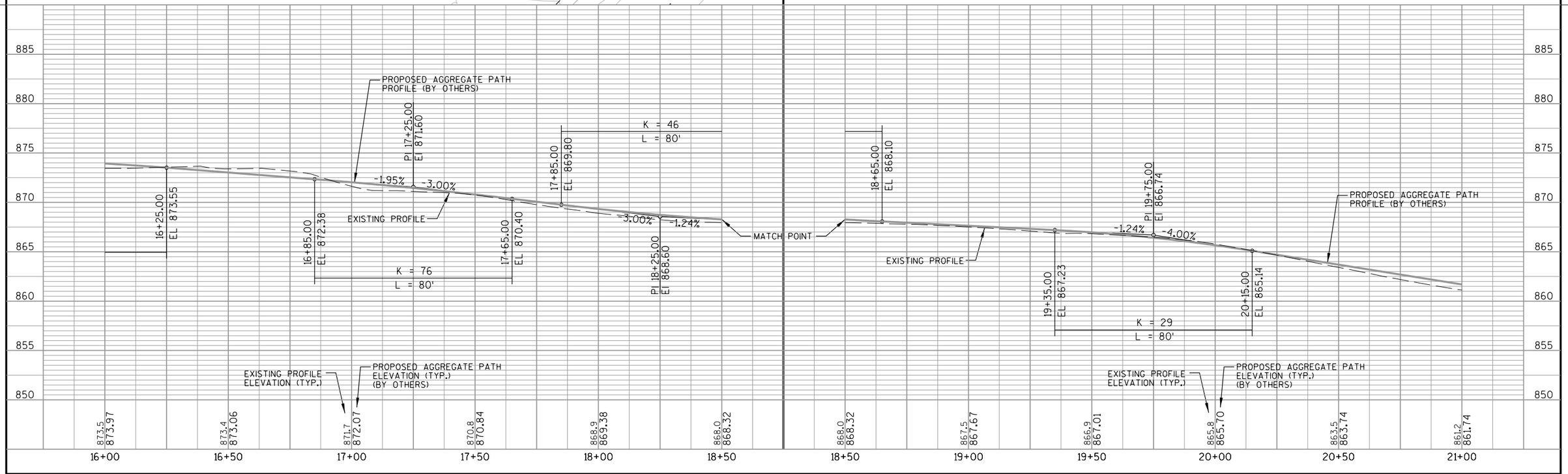
NOTE: AGGREGATE PATH SHOWN THROUGH LAKE FARM COUNTY PARK TO BE CONSTRUCTED BY DANE COUNTY PRIOR TO PROJECT IN THE SUMMER OF 2015.



CURVE 3
P.I. = 15+71.27
Y = 465,155.62
X = 832,537.83
DELTA = 22° 58' 51" (RT)
D = 28° 38' 52"
T = 40.66'
L = 80.22'
R = 200.00'
P.C. = 15+30.62
P.T. = 16+10.83

CURVE 4
P.I. = 18+28.68
Y = 464,970.95
X = 832,718.72
DELTA = 45° 34' 59" (LT)
D = 28° 38' 52"
T = 84.04'
L = 159.12'
R = 200.00'
P.C. = 17+44.64
P.T. = 19+03.76





PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 52	E

NOTE: AGGREGATE PATH SHOWN THROUGH LAKE FARM COUNTY PARK TO BE CONSTRUCTED BY DANE COUNTY PRIOR TO PROJECT IN THE SUMMER OF 2015.

DANE COUNTY

CURVE 5
P.I. = 26+72.31
Y = 464,970.82
X = 833,571.31
DELTA = 83° 21' 34" (LT)
D = 57° 17' 45"
T = 89.03'
L = 145.49'
R = 100.00'
P.C. = 25+83.28
P.T. = 27+28.77

N

WETLAND BOUNDARY (TYP)

CURVE 5

Pc 25+83.28

MATCH LINE STA. 21+00

MATCH LINE STA. 26+50

TLE

TLE

TLE

TLE

21+00 +50 22+00 +50 23+00 +50 24+00 +50 25+00 +50 26+00

50'

25'

PROPOSED 14' AGGREGATE PATH (BY OTHERS)

R/W

HEAVY BRUSH/TREE LINE (TYP)

OH

MADISON GAS & ELECTRIC

LIBBY ROAD

1/4 SECTION LINE

5

5

875 870 865 860 855 850 845 840

K = 29
L = 100'

21+50.00
EL 859.74

22+50.00
EL 857.49

-4.00%

-0.50%

PI 22+00.00
El 857.74

PROPOSED AGGREGATE PATH PROFILE (BY OTHERS)

EXISTING PROFILE

-0.50%

+0.50%

PI 24+50.00
El 856.49

PI 25+75.00
El 857.11

+0.50%

-0.90%

25+50.00
EL 856.99

26+00.00
EL 856.89

K = 36
L = 50'

EXISTING PROFILE ELEVATION (TYP.)

PROPOSED AGGREGATE PATH ELEVATION (TYP.) (BY OTHERS)

861.2 861.74 | 859.4 859.74 | 858.1 858.17 | 857.6 857.49 | 857.0 857.24 | 856.7 856.99 | 856.5 856.74 | 856.7 856.49 | 856.8 856.74 | 857.0 856.99 | 857.0 856.89 | 856.3 856.44

21+00 21+50 22+00 22+50 23+00 23+50 24+00 24+50 25+00 25+50 26+00 26+50

PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 53	E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\050104_pp.dgn PLOT DATE : 7/22/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

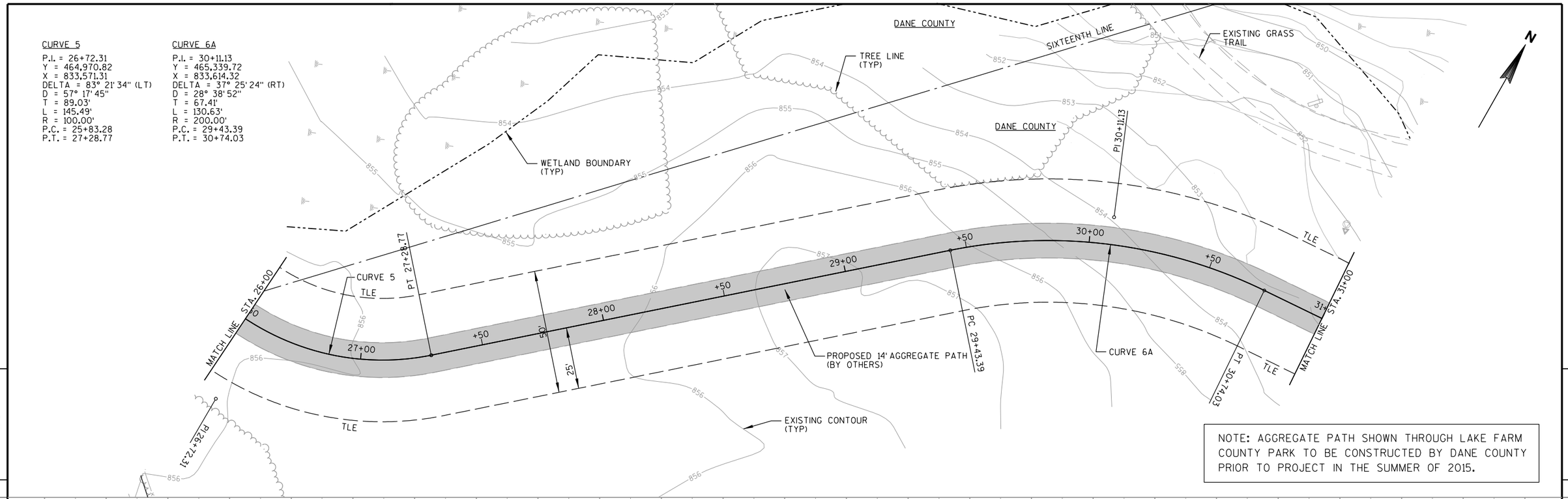
WISDOT/CADDS SHEET 30

CURVE 5

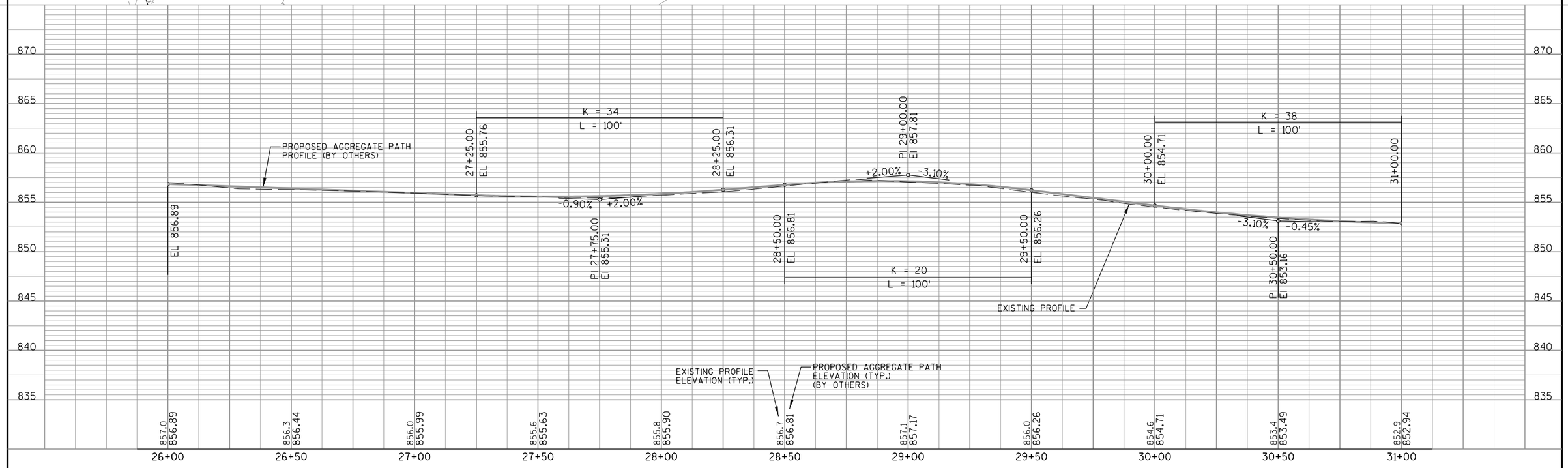
P.I. = 26+72.31
Y = 464,970.82
X = 833,571.31
DELTA = 83° 21' 34" (LT)
D = 57° 17' 45"
T = 89.03'
L = 145.49'
R = 100.00'
P.C. = 25+83.28
P.T. = 27+28.77

CURVE 6A

P.I. = 30+11.13
Y = 465,339.72
X = 833,614.32
DELTA = 37° 25' 24" (RT)
D = 28° 38' 52"
T = 67.41'
L = 130.63'
R = 200.00'
P.C. = 29+43.39
P.T. = 30+74.03



NOTE: AGGREGATE PATH SHOWN THROUGH LAKE FARM COUNTY PARK TO BE CONSTRUCTED BY DANE COUNTY PRIOR TO PROJECT IN THE SUMMER OF 2015.



PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 54	E

NOTE: AGGREGATE PATH SHOWN THROUGH LAKE FARM COUNTY PARK TO BE CONSTRUCTED BY DANE COUNTY PRIOR TO PROJECT IN THE SUMMER OF 2015.

DANE COUNTY

EXISTING GRASS TRAIL

WETLAND BOUNDARY (TYP.)

EXISTING CONTOUR (TYP.)

WOODED AREA

TLE

MATCH LINE STA. 31+00

CLEARING & GRUBBING
STA. 31+00 - STA. 39+00

PI 32+68.93

PC 32+32.35

CURVE 6B

PT 33+04.11

PC 33+78.70

PROPOSED 14' AGGREGATE PATH
(BY OTHERS)

CURVE 7

PT 35+82.54

MATCH LINE STA. 36+00

PI 34+83.60

CURVE 6B
P.I. = 32+68.93
Y = 465,528.42
X = 833,797.00
DELTA = 27° 24' 35" (RT)
D = 38° 11' 50"
T = 36.58'
L = 71.76'
R = 150.00'
P.C. = 32+32.35
P.T. = 33+04.11

CURVE 7
P.I. = 34+83.60
Y = 465,597.04
X = 834,001.90
DELTA = 33° 22' 07" (LT)
D = 16° 22' 13"
T = 104.90'
L = 203.84'
R = 350.00'
P.C. = 33+78.70
P.T. = 35+82.54

N

EL 852.94

-0.45%

+0.50%

PI 32+50.00
EL 852.26

PROPOSED AGGREGATE PATH
PROFILE (BY OTHERS)

EXISTING PROFILE

+0.50%

-1.05%

PI 35+00.00
EL 853.51

34+50.00
EL 853.26

35+50.00
EL 852.99

K = 65
L = 100'

EXISTING PROFILE
ELEVATION (TYP.)

PROPOSED AGGREGATE PATH
ELEVATION (TYP.)
(BY OTHERS)

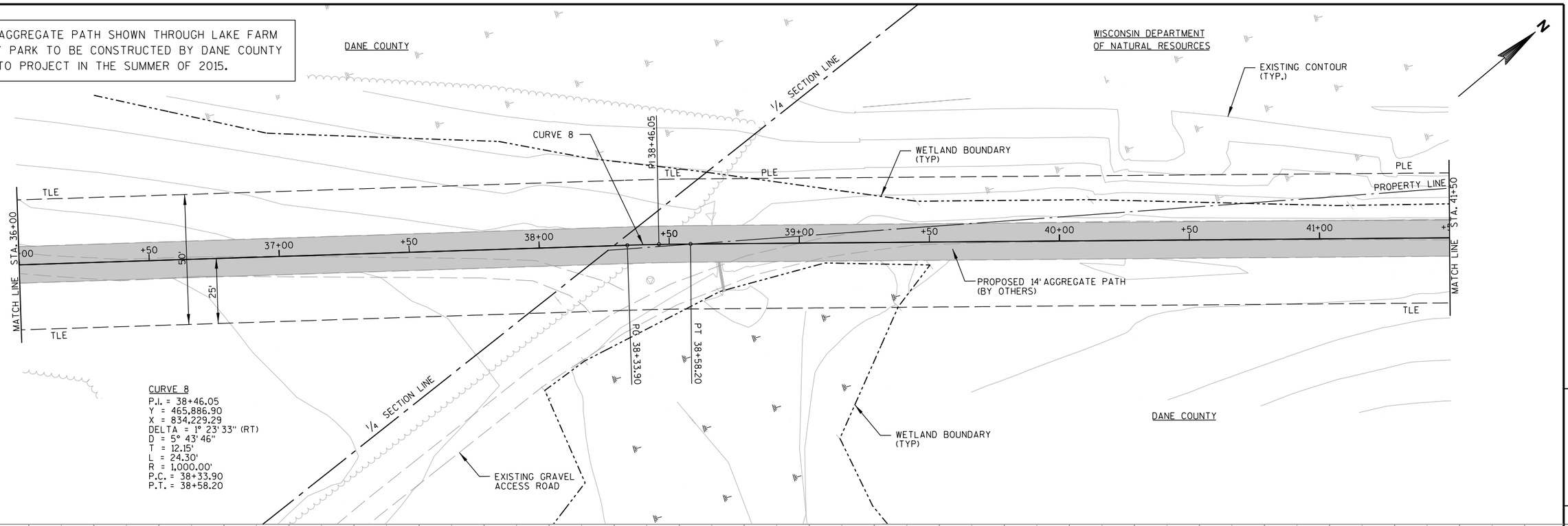
853.4	852.9	852.1	851.5	851.3	851.3	851.9	852.2	851.6	849.6	852.1	852.2
853.49	852.94	852.71	852.49	852.26	852.51	852.76	853.01	853.26	853.32	852.99	852.47
30+50	31+00	31+50	32+00	32+50	33+00	33+50	34+00	34+50	35+00	35+50	36+00

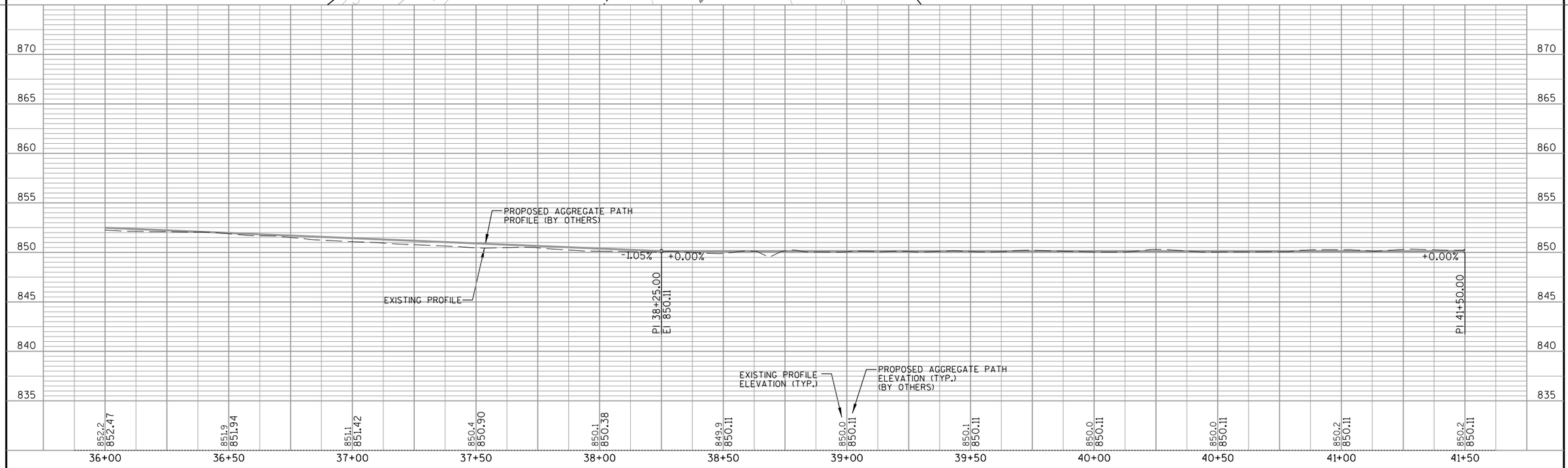
PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 55	E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\050106_pp.dgn PLOT DATE : 7/22/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 30

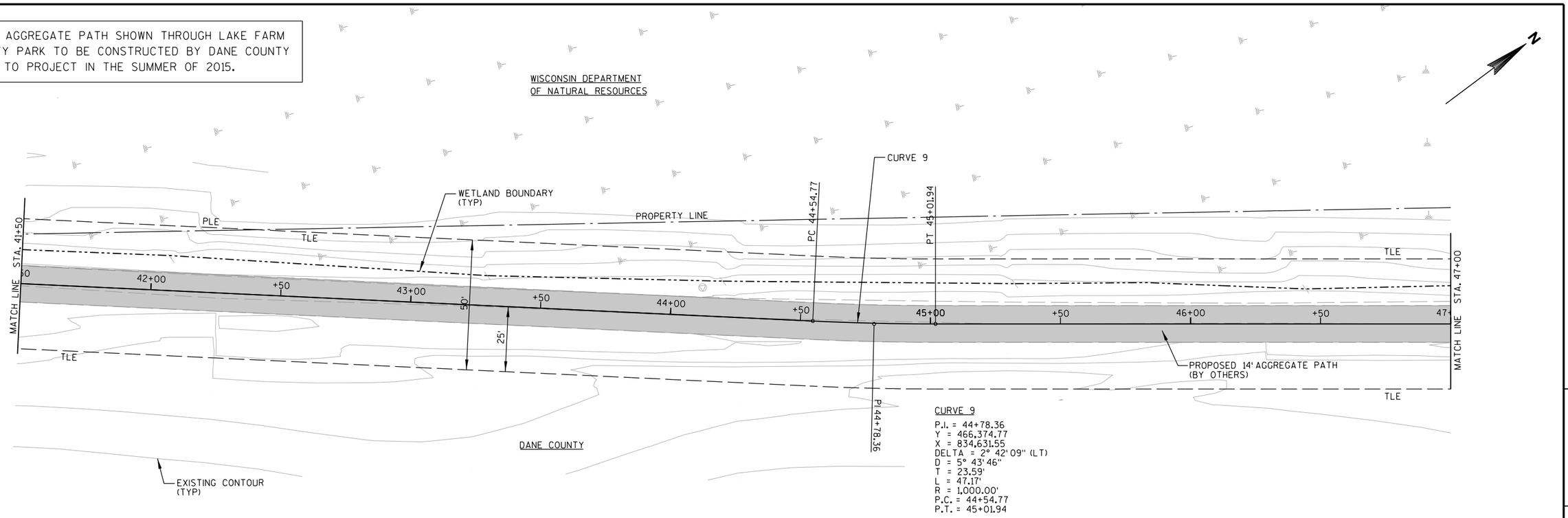
NOTE: AGGREGATE PATH SHOWN THROUGH LAKE FARM COUNTY PARK TO BE CONSTRUCTED BY DANE COUNTY PRIOR TO PROJECT IN THE SUMMER OF 2015.

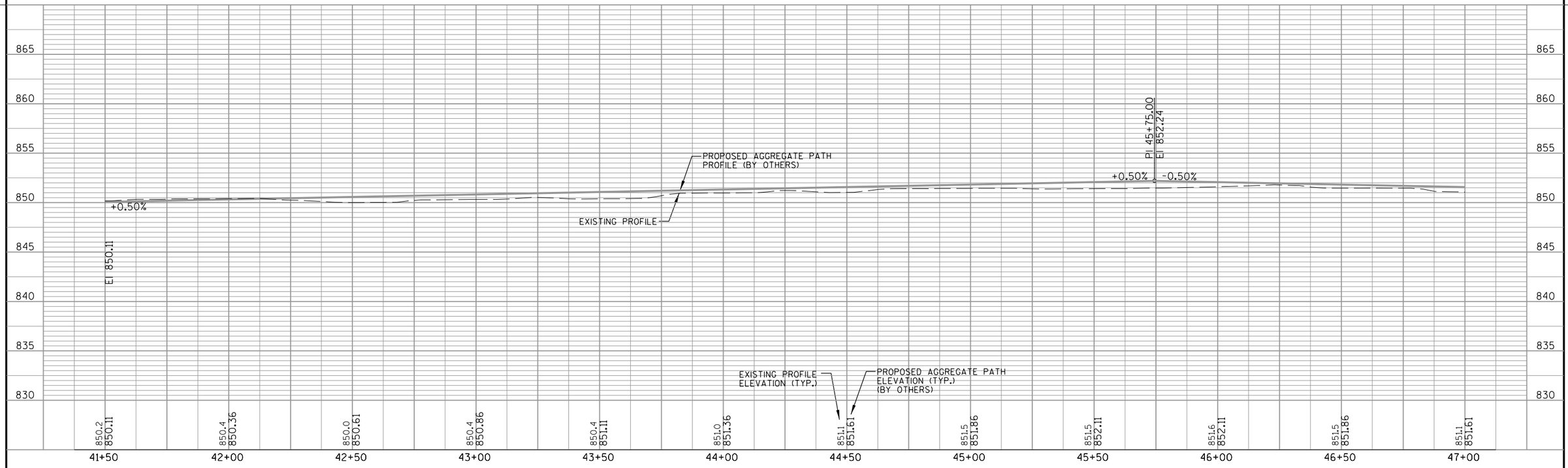




PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 56	E

NOTE: AGGREGATE PATH SHOWN THROUGH LAKE FARM COUNTY PARK TO BE CONSTRUCTED BY DANE COUNTY PRIOR TO PROJECT IN THE SUMMER OF 2015.

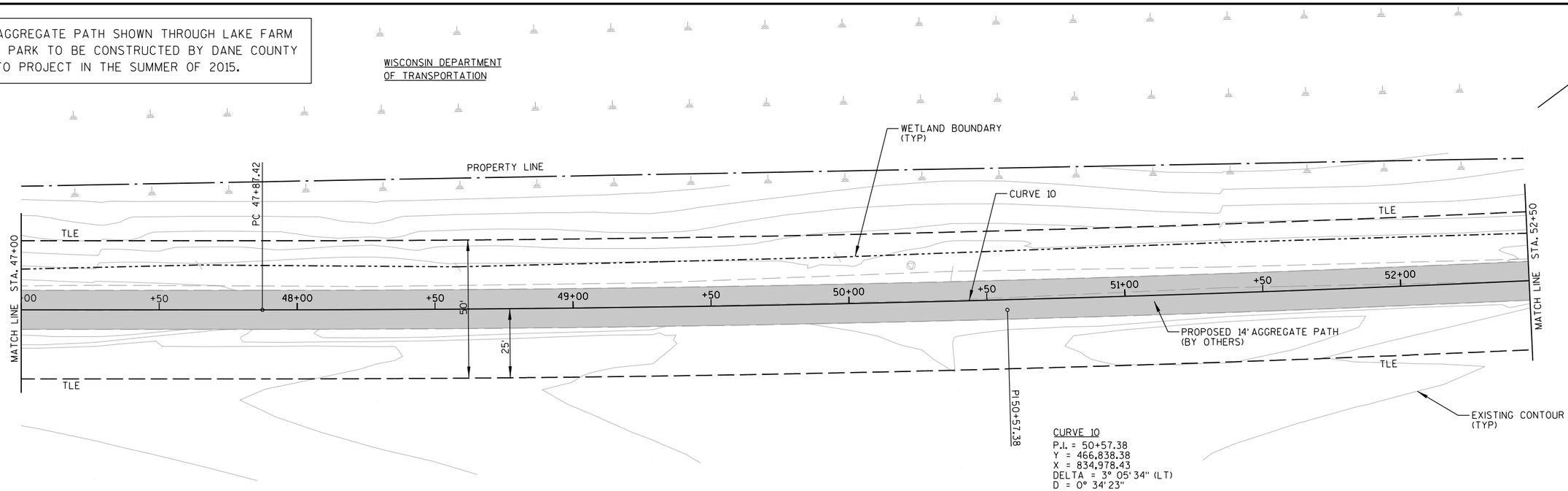




PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 57	E

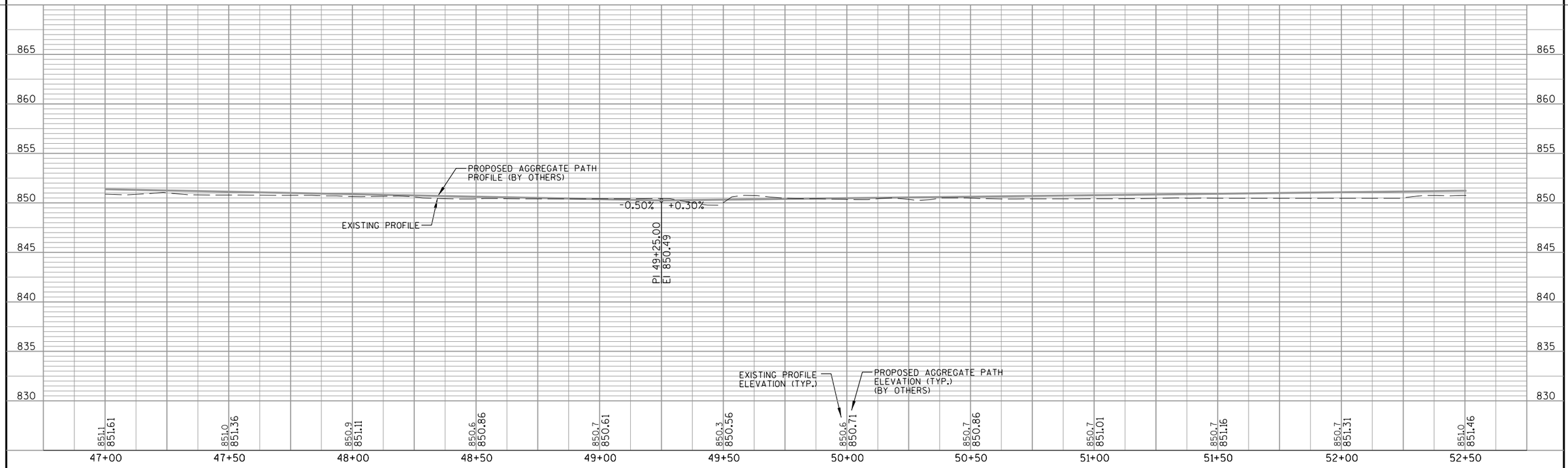
NOTE: AGGREGATE PATH SHOWN THROUGH LAKE FARM COUNTY PARK TO BE CONSTRUCTED BY DANE COUNTY PRIOR TO PROJECT IN THE SUMMER OF 2015.

WISCONSIN DEPARTMENT
OF TRANSPORTATION



DANE COUNTY

CURVE 10
P.I. = 50+57.38
Y = 466,838.38
X = 834,978.43
DELTA = 3° 05' 34" (LT)
D = 0° 34' 23"
T = 269.96'
L = 539.78'
R = 10,000.00'
P.C. = 47+87.42
P.T. = 53+27.20

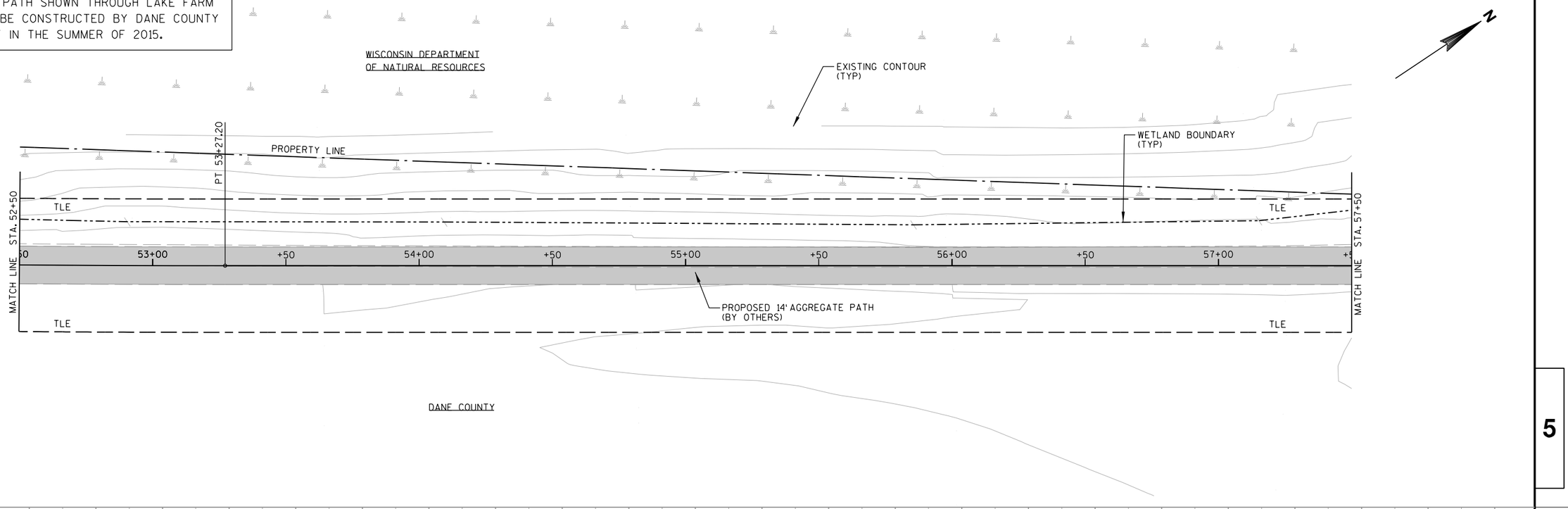


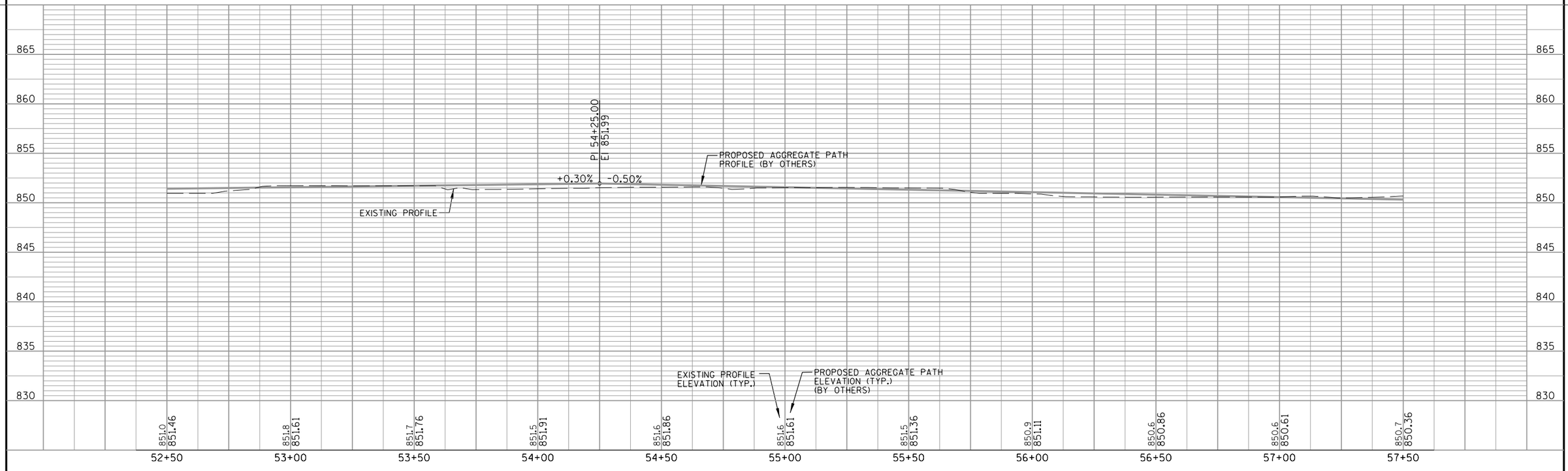
PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 58	E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\050109_pp.dgn PLOT DATE : 7/22/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 30

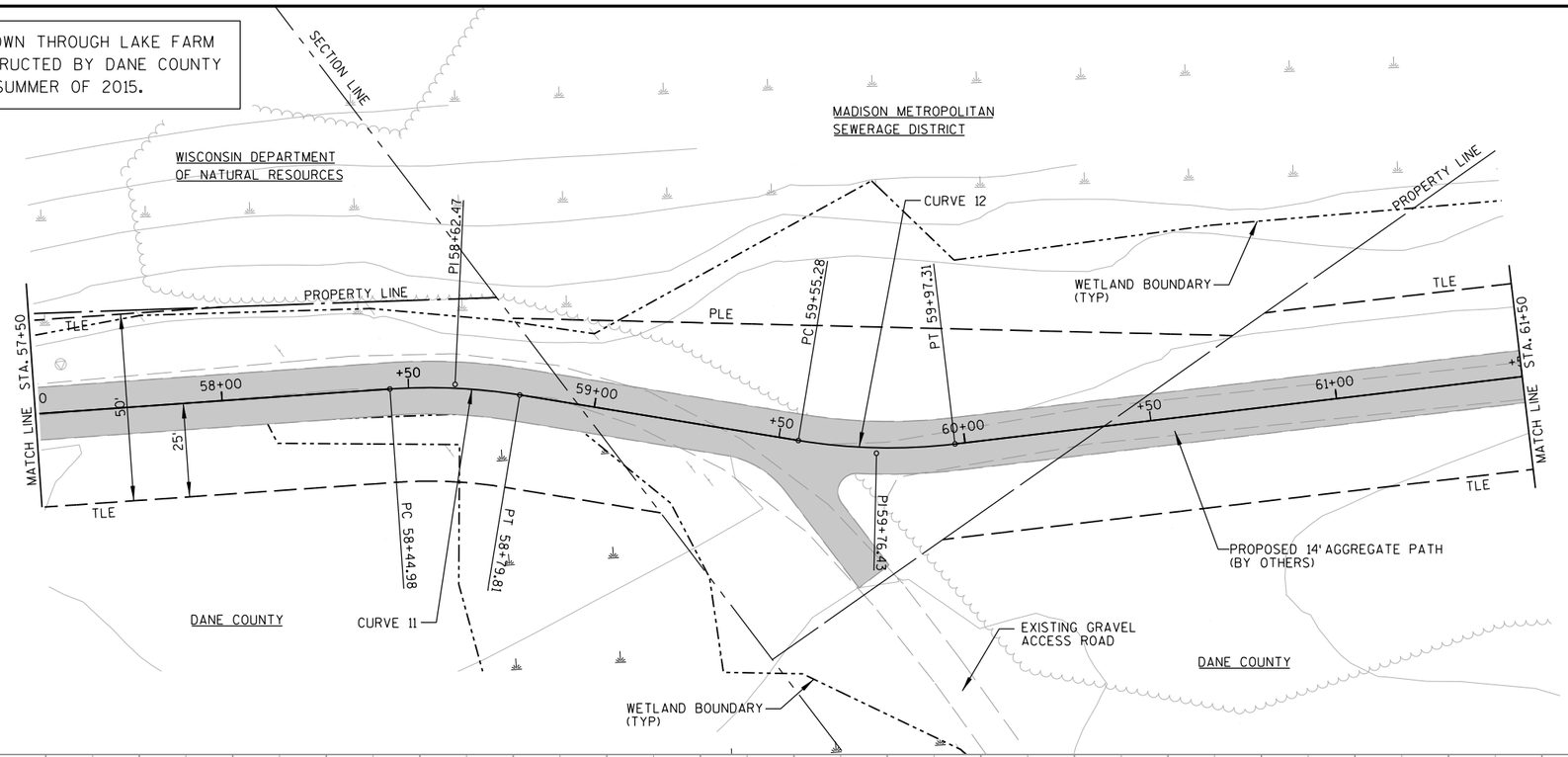
NOTE: AGGREGATE PATH SHOWN THROUGH LAKE FARM COUNTY PARK TO BE CONSTRUCTED BY DANE COUNTY PRIOR TO PROJECT IN THE SUMMER OF 2015.





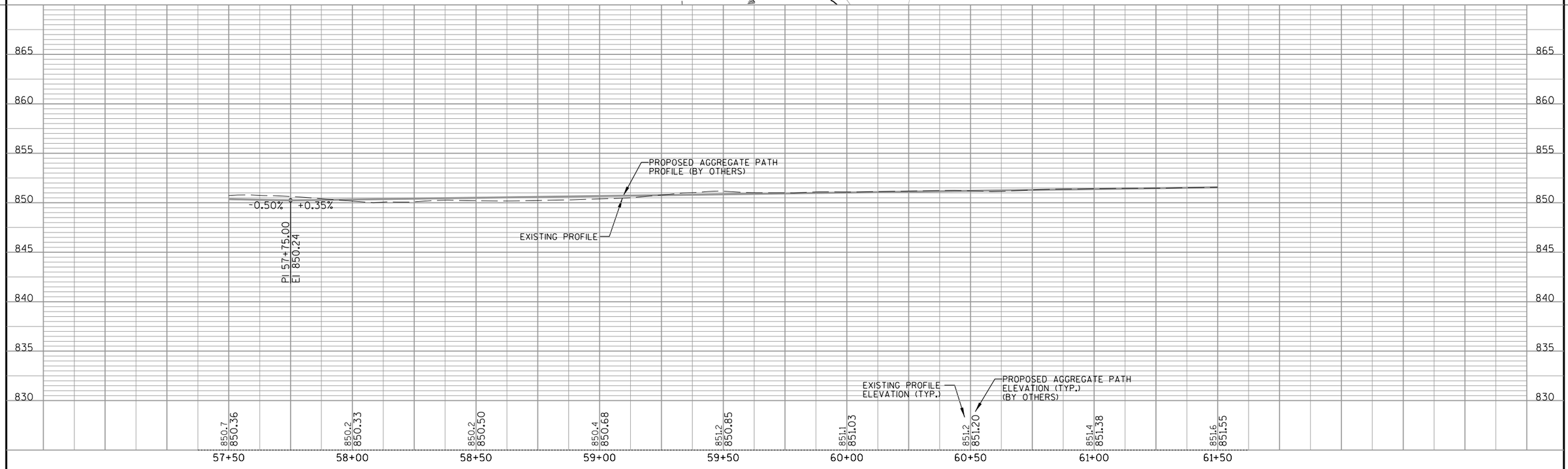
PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY:DANE	PLAN & PROFILE	SHEET 59	E

NOTE: AGGREGATE PATH SHOWN THROUGH LAKE FARM COUNTY PARK TO BE CONSTRUCTED BY DANE COUNTY PRIOR TO PROJECT IN THE SUMMER OF 2015.



CURVE 11
P.I. = 58+62.47
Y = 467,508.21
X = 835,425.33
DELTA = 13° 18' 14" (RT)
D = 38° 11' 50"
T = 17.49'
L = 34.83'
R = 150.00'
P.C. = 58+44.98
P.T. = 58+79.81

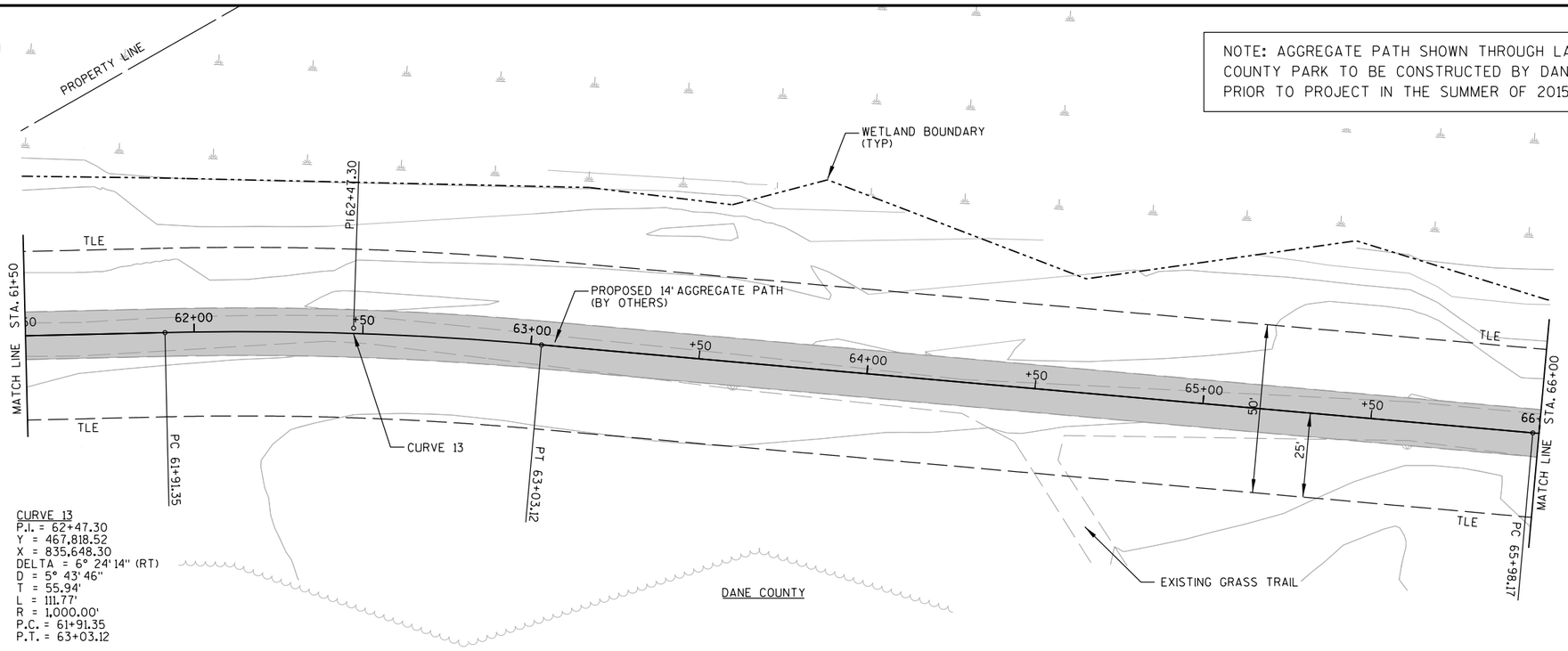
CURVE 12
P.I. = 59+76.43
Y = 467,586.01
X = 835,508.81
DELTA = 16° 03' 15" (LT)
D = 38° 11' 50"
T = 21.15'
L = 42.03'
R = 150.00'
P.C. = 59+55.28
P.T. = 59+97.31



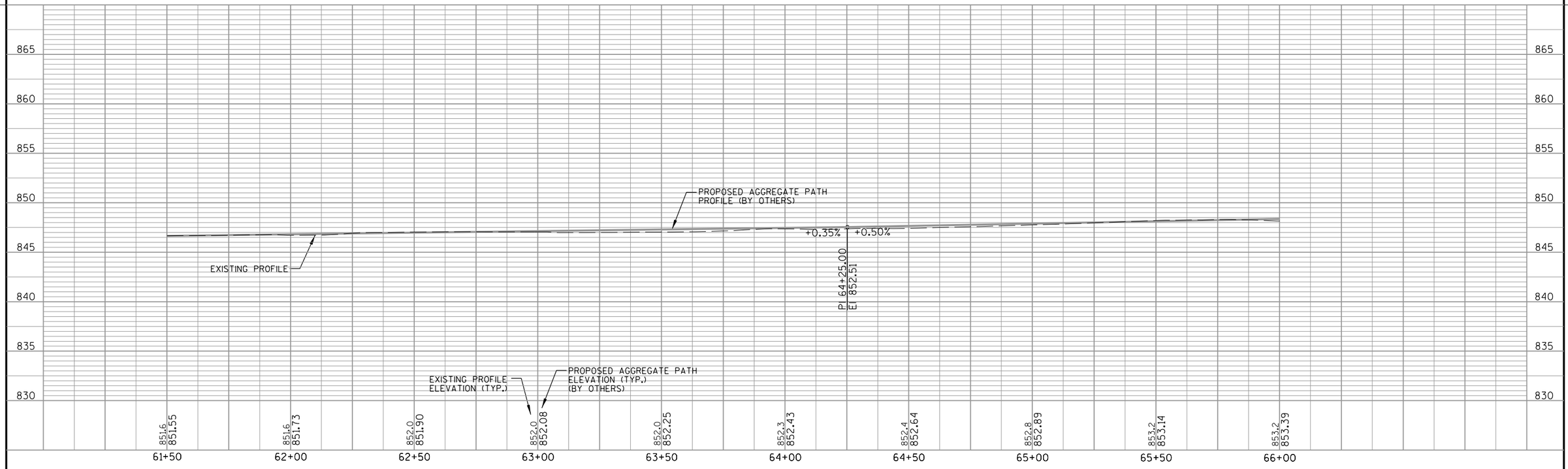
PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 60	E

MADISON METROPOLITAN
SEWERAGE DISTRICT

NOTE: AGGREGATE PATH SHOWN THROUGH LAKE FARM COUNTY PARK TO BE CONSTRUCTED BY DANE COUNTY PRIOR TO PROJECT IN THE SUMMER OF 2015.

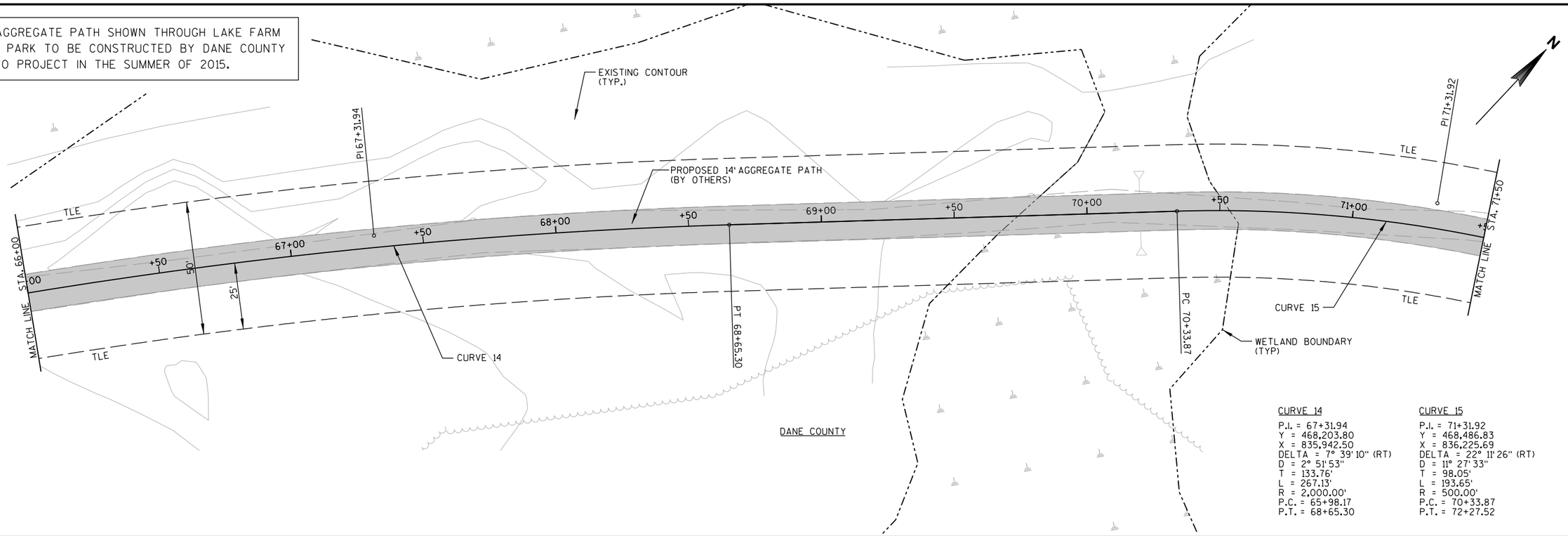


CURVE 13
P.I. = 62+47.30
Y = 467,818.52
X = 835,648.30
DELTA = 6° 24' 14" (RT)
D = 5° 43' 46"
T = 55.94'
L = 111.77'
R = 1,000.00'
P.C. = 61+91.35
P.T. = 63+03.12



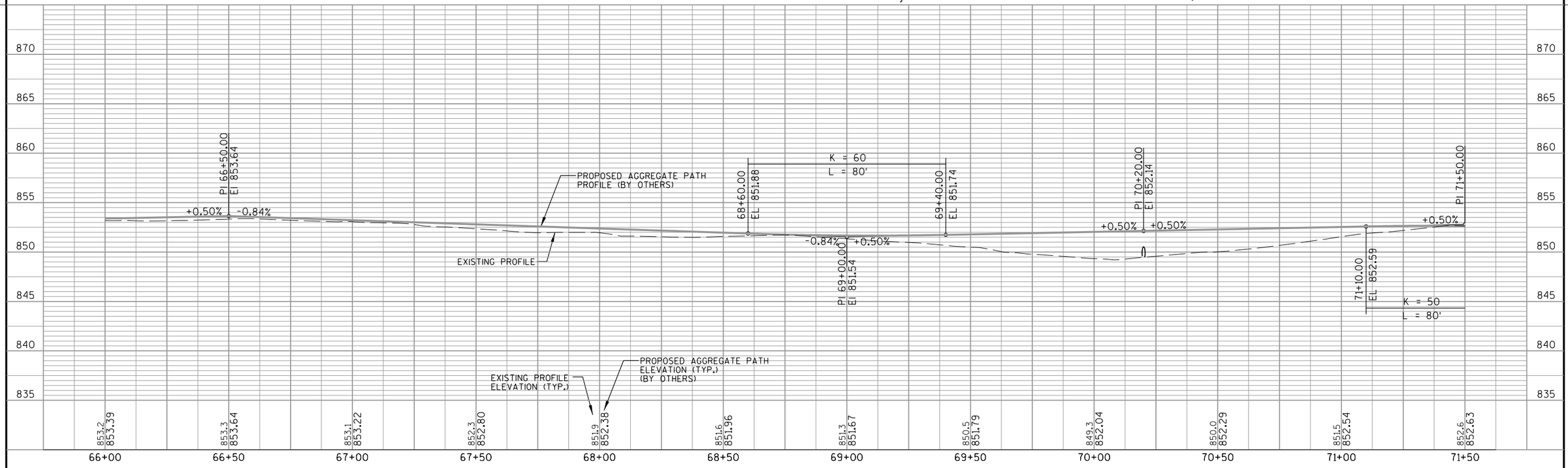
PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 61	E

NOTE: AGGREGATE PATH SHOWN THROUGH LAKE FARM COUNTY PARK TO BE CONSTRUCTED BY DANE COUNTY PRIOR TO PROJECT IN THE SUMMER OF 2015.



CURVE 14
P.I. = 67+31.94
Y = 468,203.80
X = 835,942.50
DELTA = 7° 39' 10" (RT)
D = 2° 51' 53"
T = 133.76'
L = 267.13'
R = 2,000.00'
P.C. = 65+98.17
P.T. = 68+65.30

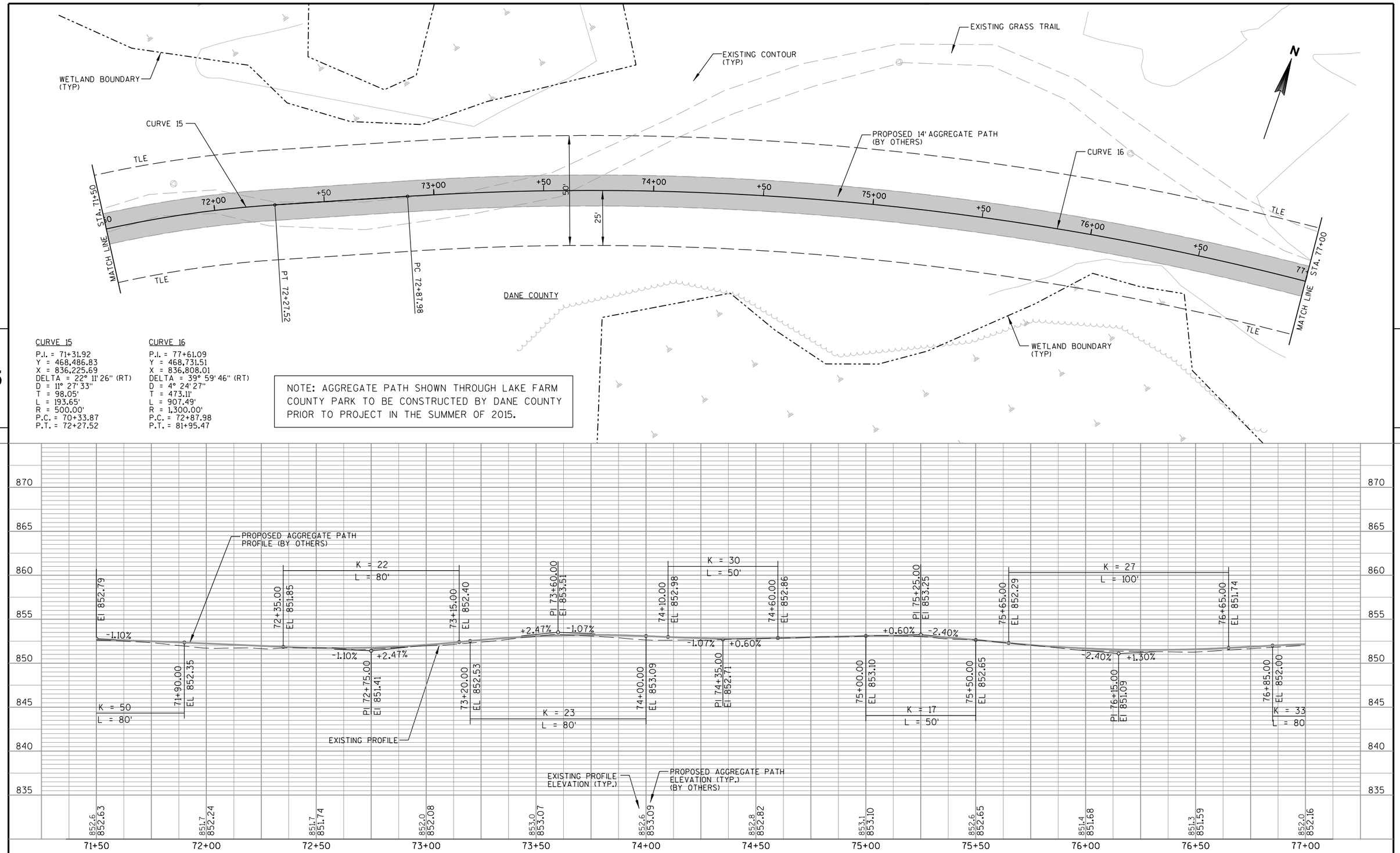
CURVE 15
P.I. = 71+31.92
Y = 468,486.83
X = 836,225.69
DELTA = 22° 11' 26" (RT)
D = 11° 27' 33"
T = 98.05'
L = 193.65'
R = 500.00'
P.C. = 70+33.87
P.T. = 72+27.52



PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 62	E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\050113_pp.dgn PLOT DATE : 7/22/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 30



CURVE 15

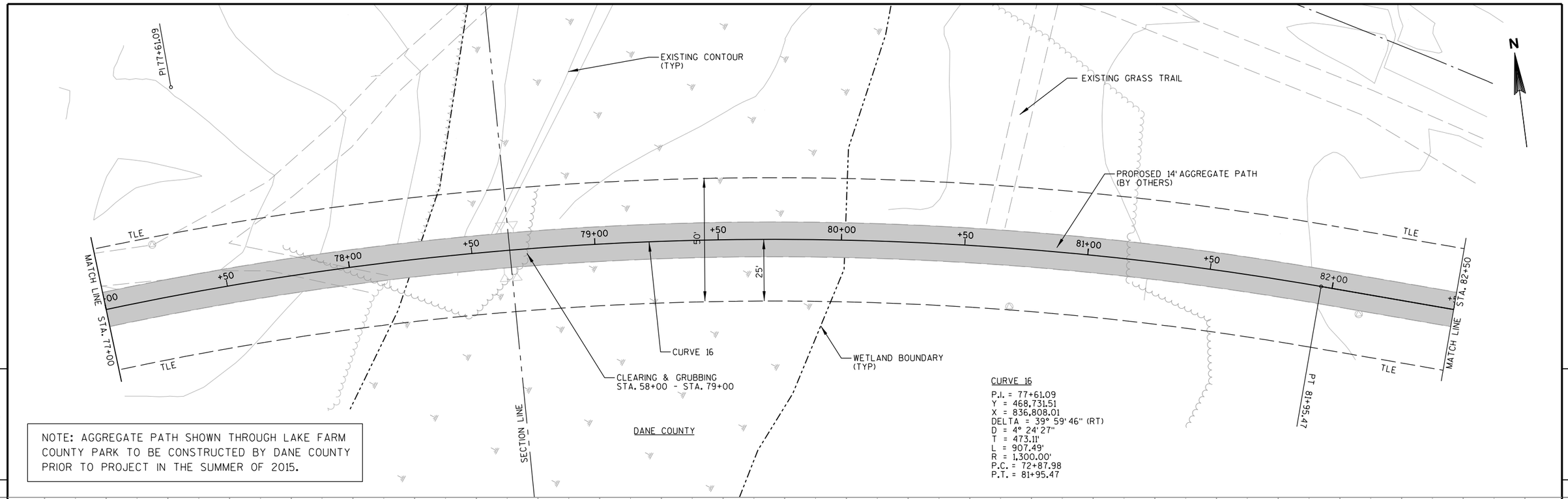
P.I. = 71+31.92
Y = 468,486.83
X = 836,225.69
DELTA = 22° 11' 26" (RT)
D = 11° 27' 33"
T = 98.05'
L = 193.65'
R = 500.00'
P.C. = 70+33.87
P.T. = 72+27.52

CURVE 16

P.I. = 77+61.09
Y = 468,731.51
X = 836,808.01
DELTA = 39° 59' 46" (RT)
D = 4° 24' 27"
T = 473.11'
L = 907.49'
R = 1,300.00'
P.C. = 72+87.98
P.T. = 81+95.47

NOTE: AGGREGATE PATH SHOWN THROUGH LAKE FARM COUNTY PARK TO BE CONSTRUCTED BY DANE COUNTY PRIOR TO PROJECT IN THE SUMMER OF 2015.

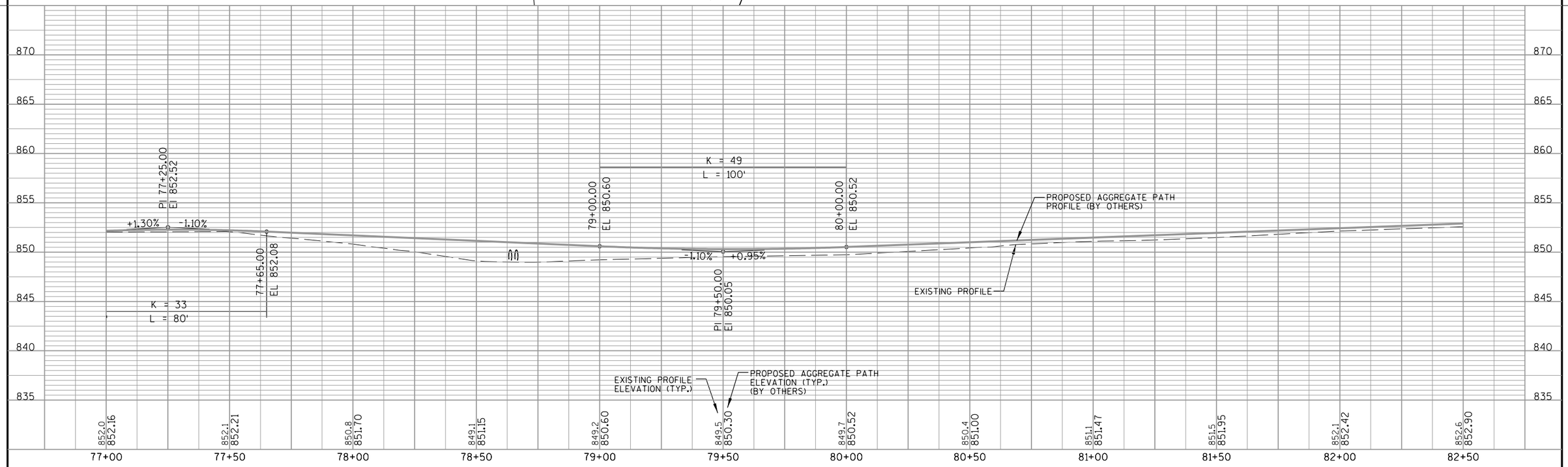
PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 63	E



NOTE: AGGREGATE PATH SHOWN THROUGH LAKE FARM COUNTY PARK TO BE CONSTRUCTED BY DANE COUNTY PRIOR TO PROJECT IN THE SUMMER OF 2015.

CURVE 16

P.I. = 77+61.09
Y = 468,731.51
X = 836,808.01
DELTA = 39° 59' 46" (RT)
D = 4° 24' 27"
T = 473.11'
L = 907.49'
R = 1,300.00'
P.C. = 72+87.98
P.T. = 81+95.47



PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 64 E

WISCONSIN DEPARTMENT OF TRANSPORTATION

DANE COUNTY

WISCONSIN & SOUTHERN RAILROAD

R/W

EXISTING GRASS TRAIL

PROPOSED 14' AGGREGATE PATH (BY OTHERS)

CONSTRUCTION PERMIT BOUNDARY

CONCRETE PILES WITH CONCRETE PIER CAP (TYP)

TLE

MATCH LINE STA. 82+50

MATCH LINE STA. 88+00

PI 85+41.16

25'

50'

12'

CURVE 17

PC 84+12.86

PT 86+67.04

STRUCTURE B-13-811

STA. 83+70.00

WETLAND BOUNDARY (TYP)

STRUCTURE B-13-811 PREFABRICATED STEEL TRUSS

PEDESTRIAN VIEWING PLATFORM (10' X 50')

BEGIN PROJECT STA. 83+25.00

CURVE 17
P.I. = 85+41.16
Y = 468,489.33
X = 837,590.17
DELTA = 19° 15' 49" (RT)
D = 7° 34' 44"
T = 128.30'
L = 254.18'
R = 756.00'
P.C. = 84+12.86
P.T. = 86+67.04

LAKE WAUBESA
NWL = 845.0

PROPOSED AGGREGATE PATH PROFILE (BY OTHERS)

PI 83+00.00
EL 853.38

+0.95%

+0.50%

82+75.00
EL 853.14

83+25.00
EL 853.50

K = 111
L = 50'

PROPOSED PROFILE

EXISTING PROFILE

87+70.00
EL 855.73

PROPOSED AGGREGATE PATH ELEVATION (TYP.) (BY OTHERS)

EXISTING PROFILE ELEVATION (TYP.)

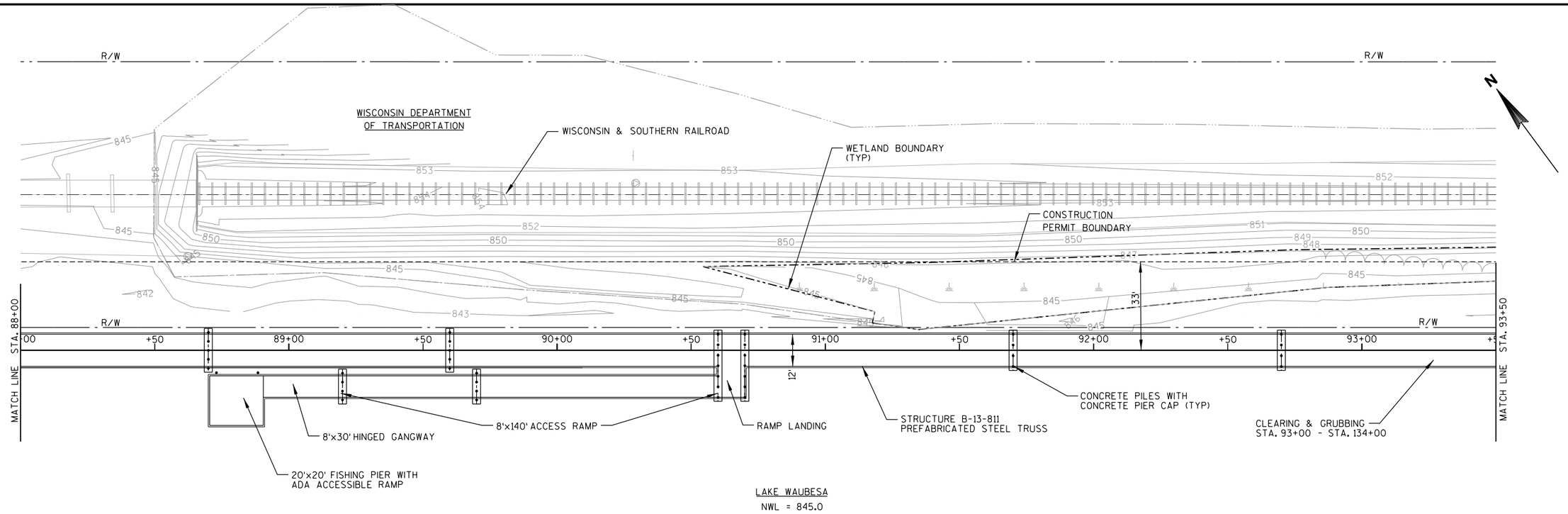
PROPOSED PROFILE ELEVATION (TYP.)

852.6 / 852.90	852.7 / 853.35	851.9 / 853.63	849.4 / 853.88	845.9 / 854.13	847.2 / 854.38	844.4 / 854.63	845.0 / 854.88	844.9 / 855.13	843.2 / 855.38	843.2 / 855.63	843.3 / 855.83	
82+50	83+00	83+50	84+00	84+50	85+00	85+50	86+00	86+50	87+00	87+50	88+00	

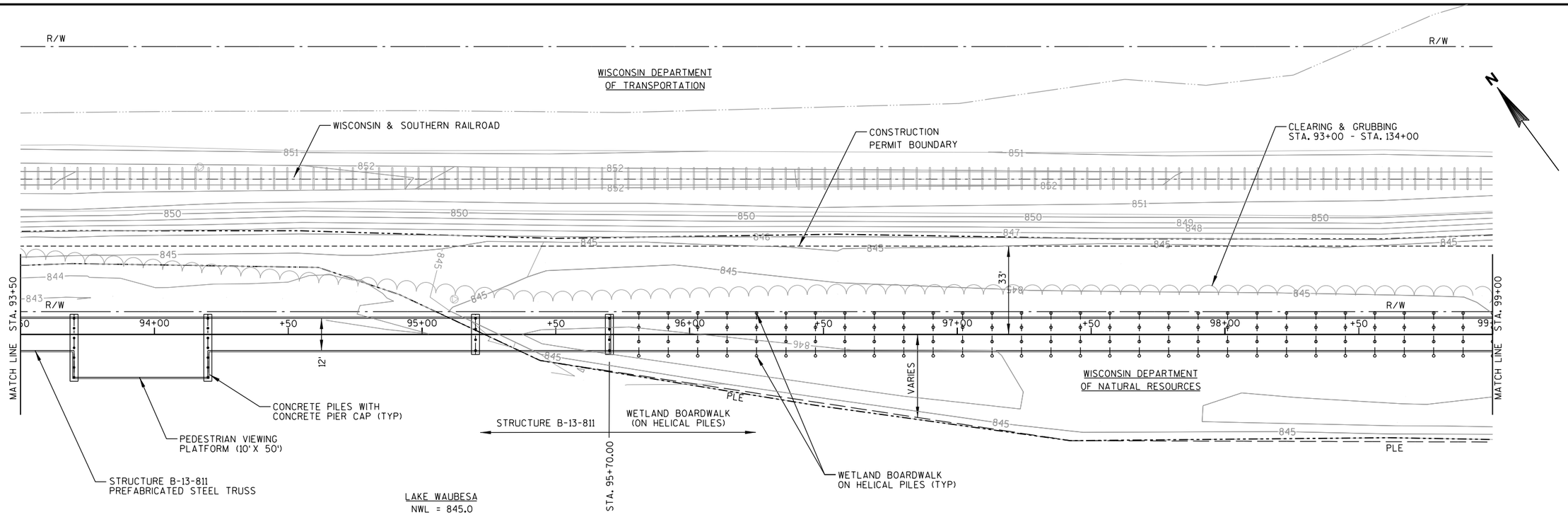
PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 65	E

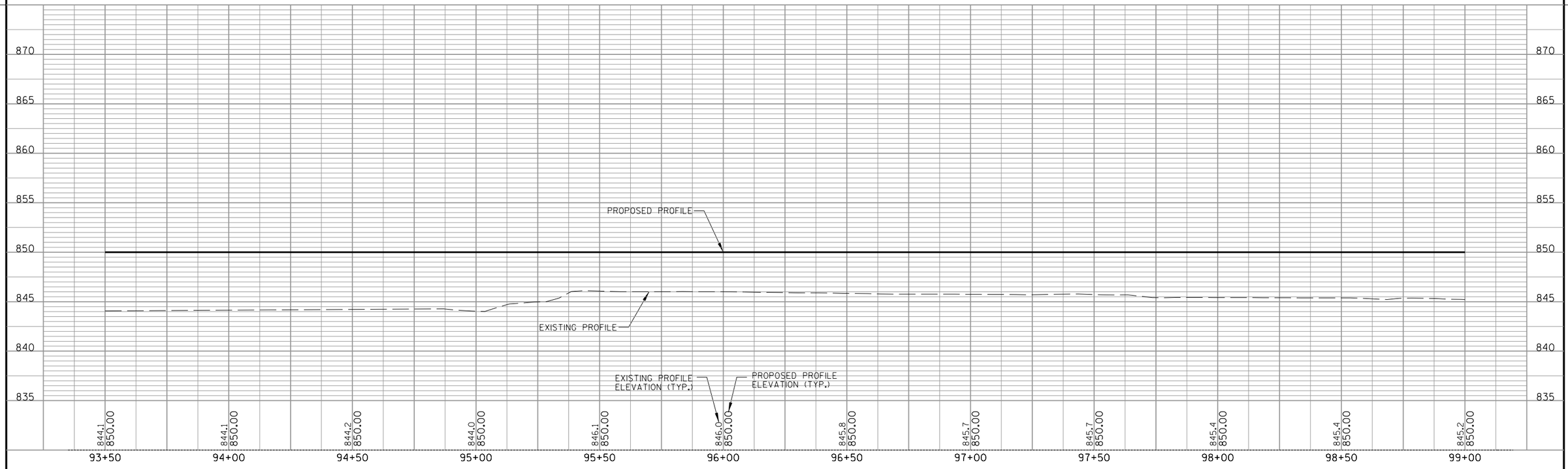
FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\050116_pp.dgn PLOT DATE : 7/22/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 30



PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 66	E

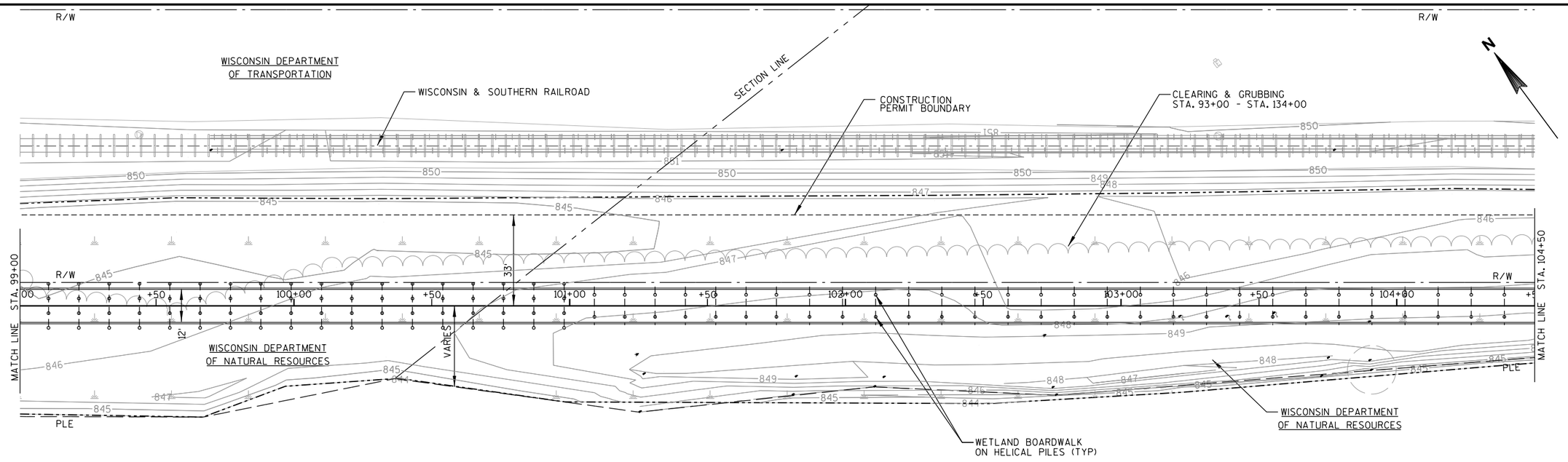


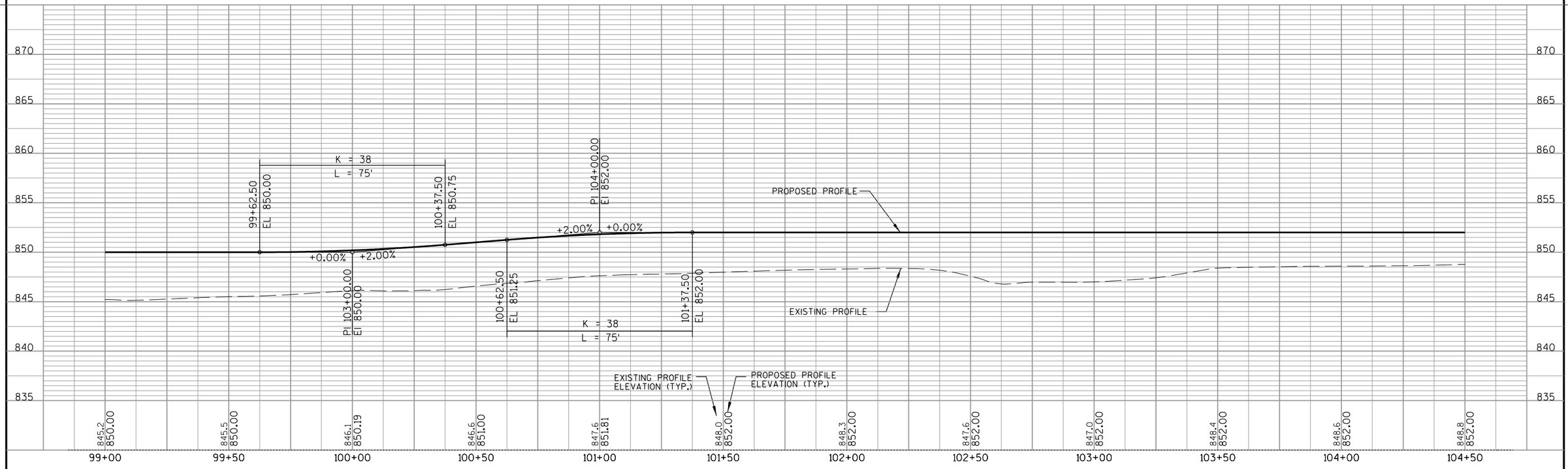


PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY:DANE	PLAN & PROFILE	SHEET 67	E

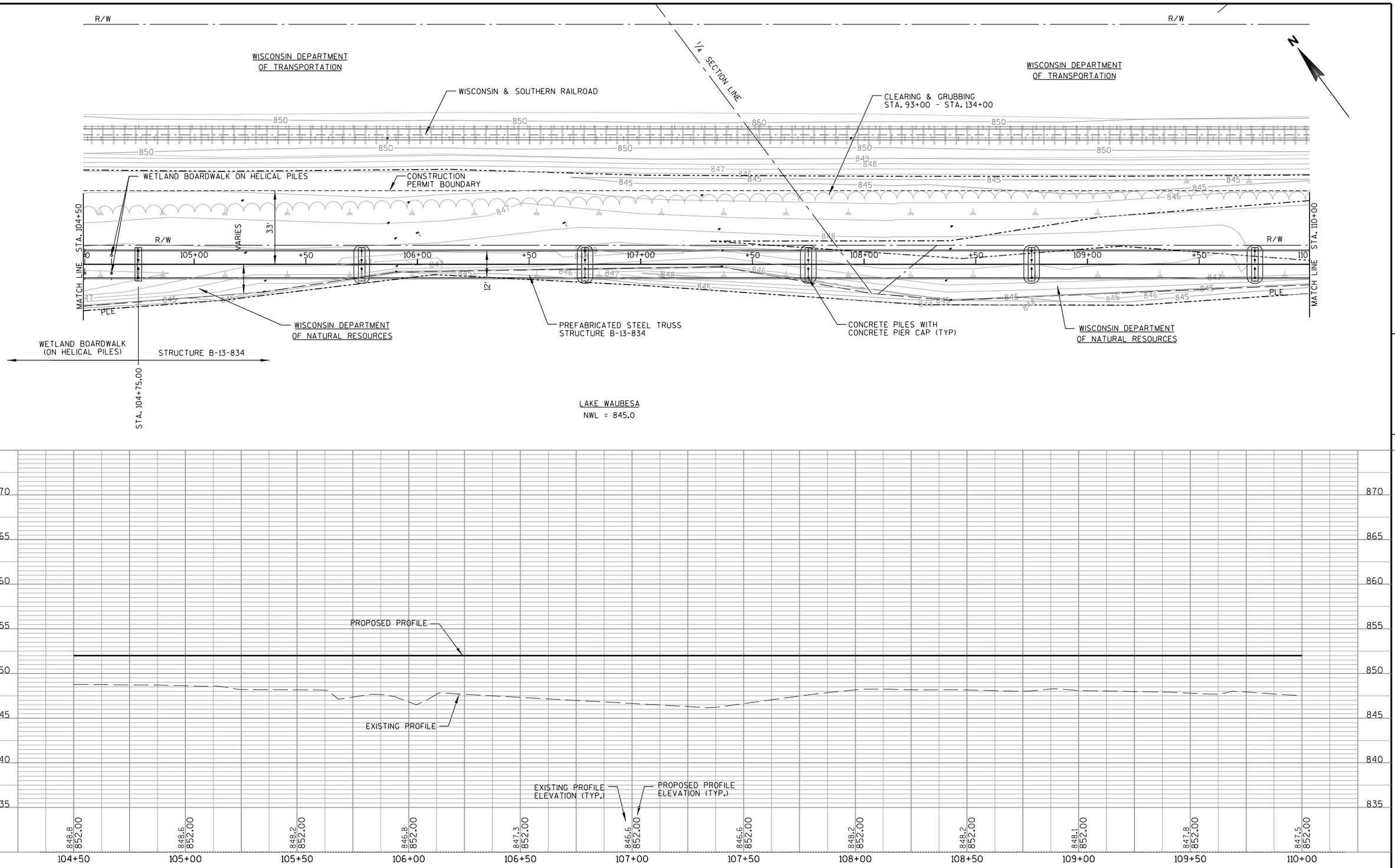
FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\050118_pp.dgn PLOT DATE : 7/22/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 30





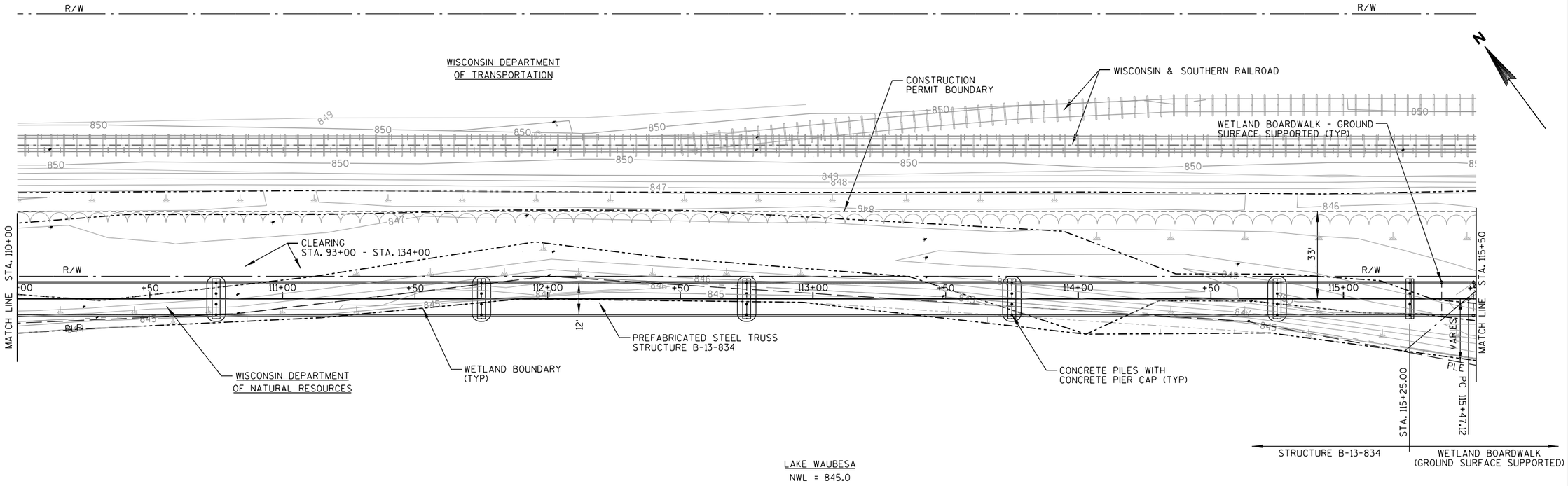
PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 68	E

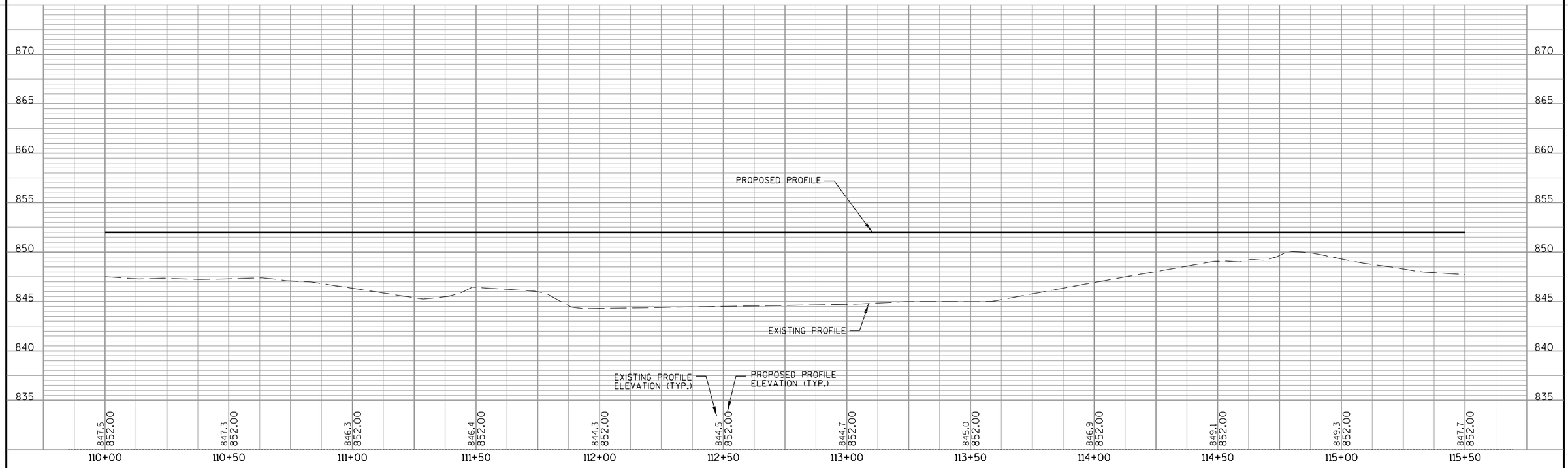


PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 69	E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\050120_pp.dgn PLOT DATE : 7/22/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 30

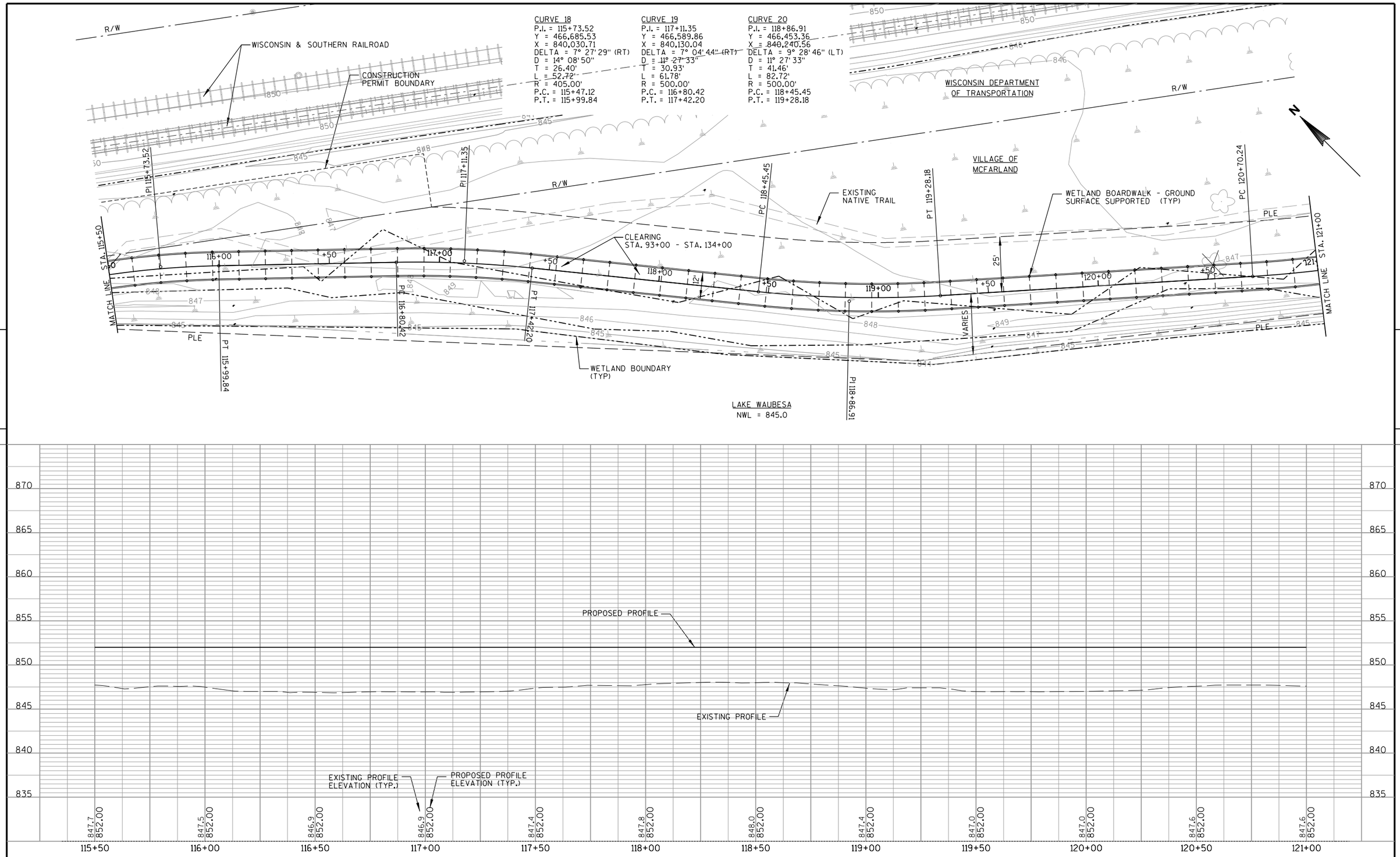




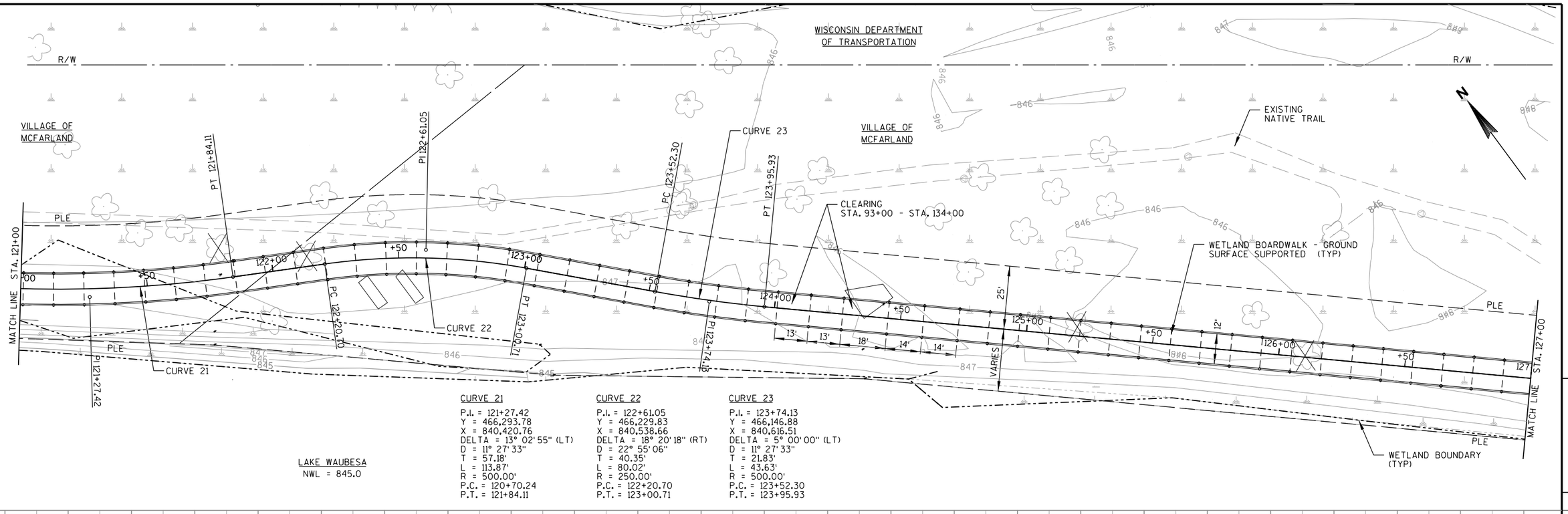
PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 70	E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\050121_pp.dgn PLOT DATE : 7/22/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 30



PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 71	E



PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY:DANE	PLAN & PROFILE	SHEET 72	E

WISCONSIN DEPARTMENT OF TRANSPORTATION

R/W

R/W

CURVE 24
P.I. = 130+21.13
Y = 465,715.48
X = 841,098.75
DELTA = 28° 17' 23" (LT)
D = 16° 22' 13"
T = 88.21'
L = 172.81'
R = 350.00'
P.C. = 129+32.93
P.T. = 131+05.74

VILLAGE OF MCFARLAND

EXISTING NATIVE TRAIL

WETLAND BOARDWALK - GROUND SURFACE SUPPORTED (TYP)

PC 129+32.93

CURVE 24

PT 131+05.74

MATCH LINE STA. 132+00

PLE

MATCH LINE STA. 127+00

127+00

+50

128+00

+50

129+00

+50

130+00

+50

131+00

+50

132

25'

12'

VARIES

CLEARING
STA. 93+00 - STA. 134+00

WETLAND BOUNDRY (TYP)

PT 130+21.13

LAKE WAUBESA
NWL = 845.0

N

PROPOSED PROFILE

EXISTING PROFILE

P.I. 130+57.00
EL 852.00

130+07.00
EL 852.00

131+07.00
EL 851.00

P.I. 131+57.00
EL 850.00

+0.00%

-2.00%

-2.00%

-0.50%

K = 67
L = 100'

K = 50
L = 100'

EXISTING PROFILE ELEVATION (TYP.)

PROPOSED PROFILE ELEVATION (TYP.)

127+00	127+50	128+00	128+50	129+00	129+50	130+00	130+50	131+00	131+50	132+00
846.8 / 852.00	846.0 / 852.00	846.6 / 852.00	845.8 / 852.00	846.1 / 852.00	845.6 / 852.00	845.9 / 852.00	846.0 / 851.82	846.1 / 851.14	846.2 / 850.28	846.5 / 849.79

870 865 860 855 850 845 840 835

PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 73	E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\050124_pp.dgn PLOT DATE : 7/22/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

WISDOT/CADDS SHEET 30

WISCONSIN DEPARTMENT OF TRANSPORTATION

DATA TABLE

	STA.	OFFSET	COMMENT
Ⓐ	132+32.9	8'LT	END RAILING
Ⓑ	132+32.9	8'RT	END RAILING
Ⓒ	134+06	13'RT	BEGIN FENCE SAFETY
Ⓓ	136+97	9.5'RT	END FENCE SAFETY

CLEARING
STA. 93+00 - STA. 134+00

TWIN BOX CULVERTS (12'x3')
STATION 132+92.48, 0.0'LT
N. INV. ELEV = 844.2
S. INV. ELEV = 844.1

END WETLAND BOARDWALK
BEGIN AT-GRADE TRAIL
STA. 132+17.00

MATCH LINE STA. 132+00

INSTALL METAL RAILING
AT WETLAND BOARDWALK
APPROACH

STA. 132+66
REMOVE OLD STRUCTURE
SINGLE SPAN STEEL BEAM (PEDESTRIAN)
30' OVERALL LENGTH
8' OVERALL WIDTH

STA. 132+62
62.5'RT

STA. 132+89
89.5'RT

PC 133+24.84

CURVE 25

PCC 134+11.75

FENCE SAFETY

10' ASPHALT PATH WITH
2' AGGREGATE SHOULDERS

STA. 132+44
38.0'RT

VILLAGE OF MCFARLAND

MCDANIEL PARK

CURVE 26

EXISTING GRAVEL PATH

PCC 136+67.07

CURVE 27

PRC 137+23.47

PI 135+39.43

PI 136+95.80

PI 137+51.01

CURVE 28

PRC 137+77.61

EXISTING PARKING LOT

ALLIANT ENERGY

END PROJECT
STA. 137+44.51

R/W

PROPERTY LINE

TLE

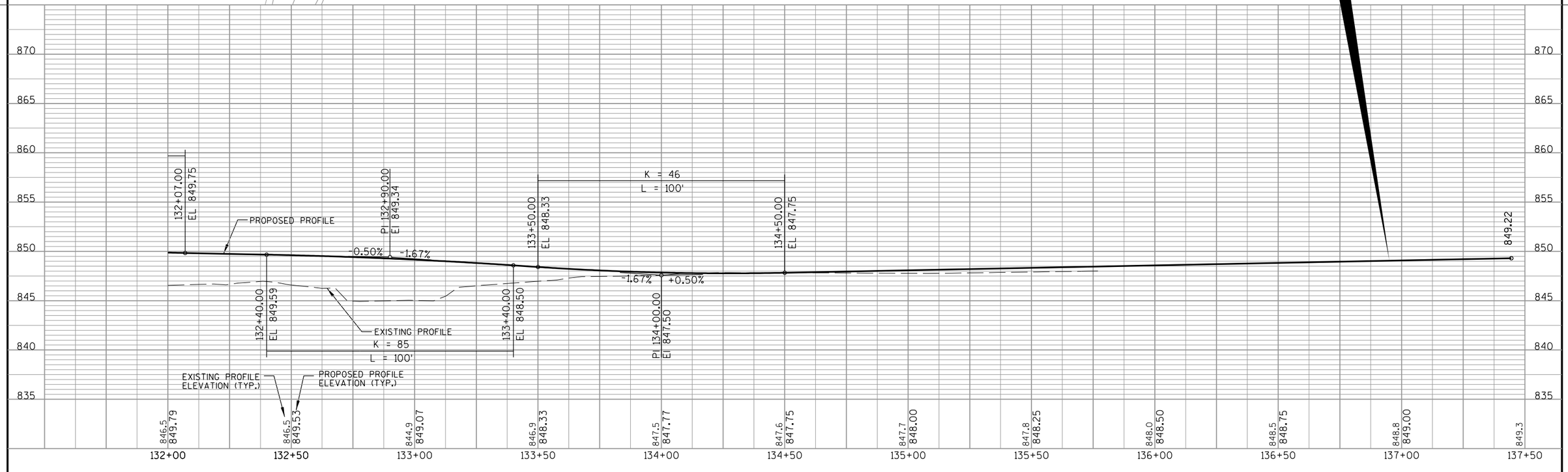
PLE

CURVE 25
P.I. = 133+68.99
Y = 465,633.29
X = 841,440.46'
DELTA = 24° 53' 45" (RT)
D = 28° 38' 52"
T = 44.15'
L = 86.90'
R = 200.00'
P.C. = 133+24.84
P.C.C. = 134+11.75

CURVE 26
P.I. = 135+39.43
Y = 465,526.50
X = 841,575.08
DELTA = 2° 34' 56" (RT)
D = 1° 00' 41"
T = 127.68'
L = 255.32'
R = 5,665.15'
P.C.C. = 134+11.75
P.C.C. = 136+67.07

CURVE 27
P.I. = 136+95.80
Y = 465,423.88
X = 841,693.12
DELTA = 26° 55' 48" (RT)
D = 47° 44' 47"
T = 28.73'
L = 56.40'
R = 120.00'
P.C.C. = 136+67.07
P.R.C. = 137+23.47

CURVE 28
P.I. = 137+51.01
Y = 465,371.73
X = 841,714.26
DELTA = 25° 50' 56" (LT)
D = 47° 44' 47"
T = 27.54'
L = 54.14'
R = 120.00'
P.R.C. = 137+23.47
P.R.C. = 137+77.61



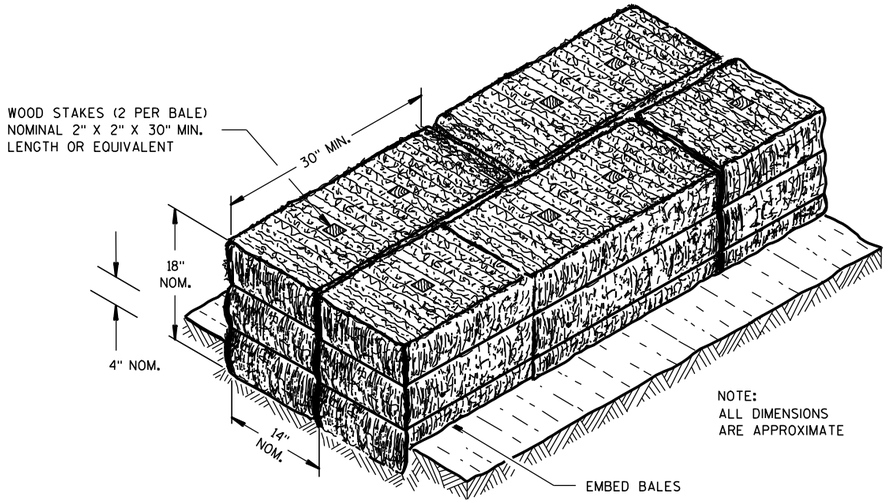
PROJECT NO: 5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	PLAN & PROFILE	SHEET 74	E

FILE NAME : L:\Jobs2008\20085024-10\CAD\Site\dgn\00_WisDOT LET\050125_pp.dgn PLOT DATE : 9/25/2015 PLOT BY : GRAEF PLOT NAME : PLOT SCALE : 40.0000 sf / in.

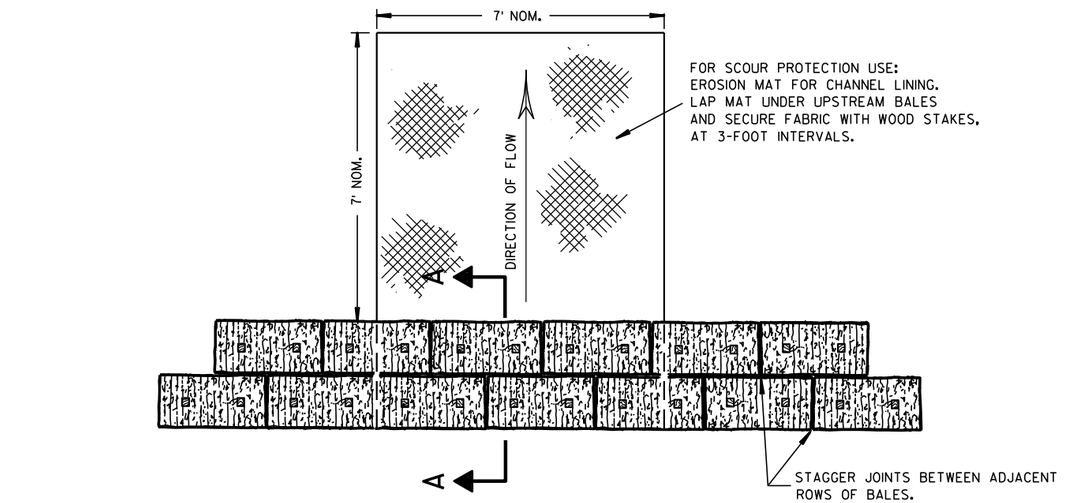
WISDOT/CADDS SHEET 30

Standard Detail Drawing List

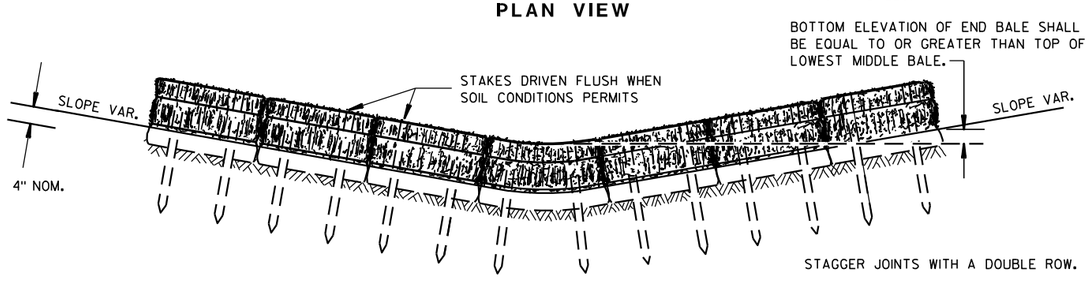
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08E14-01	TRACKING PAD
12A03-10	NAME PLATE (STRUCTURES)
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"



SECTION A-A



PLAN VIEW



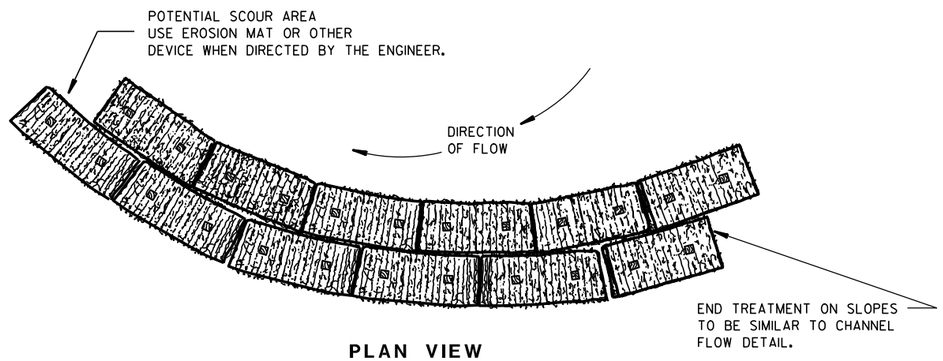
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

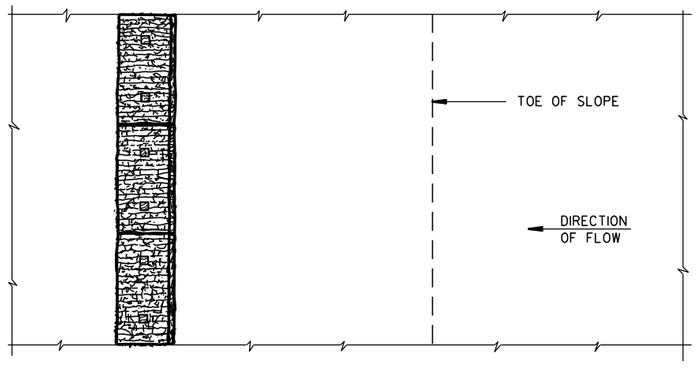
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

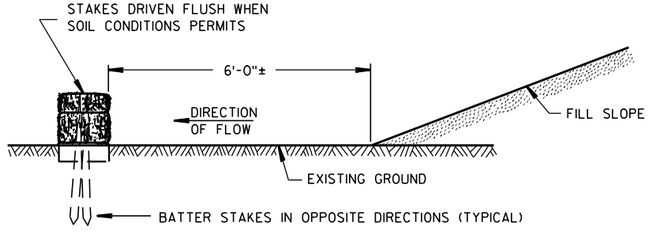


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

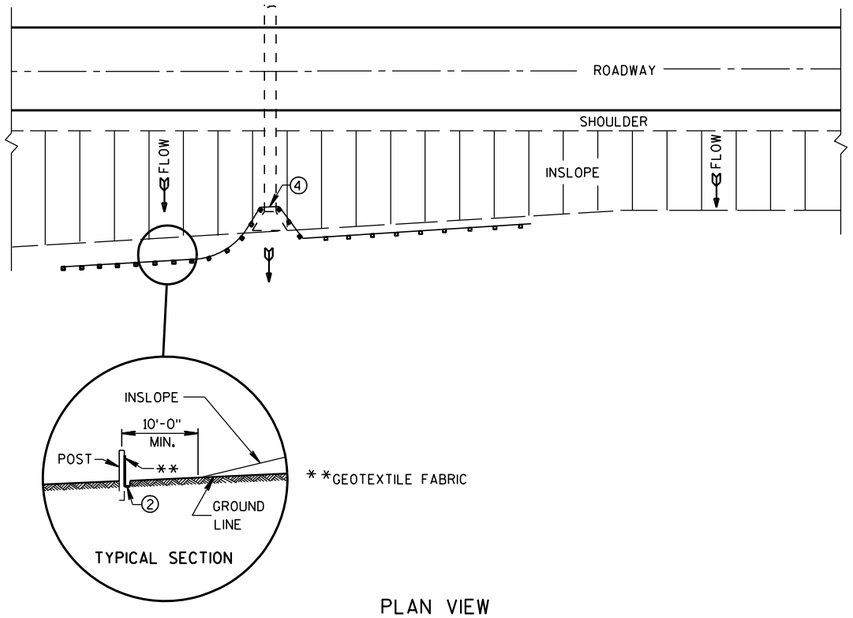
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

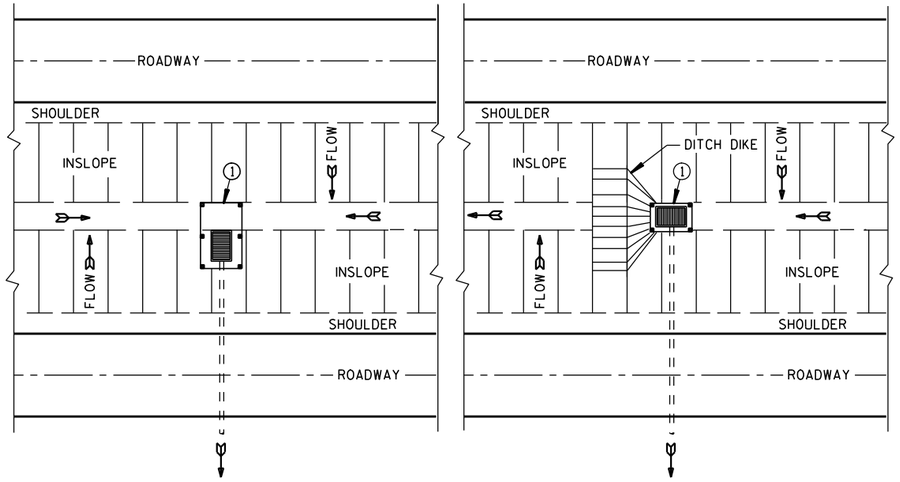
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

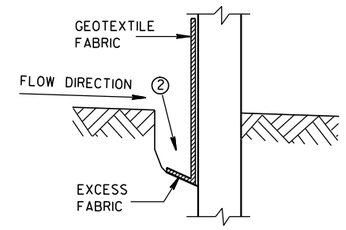
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

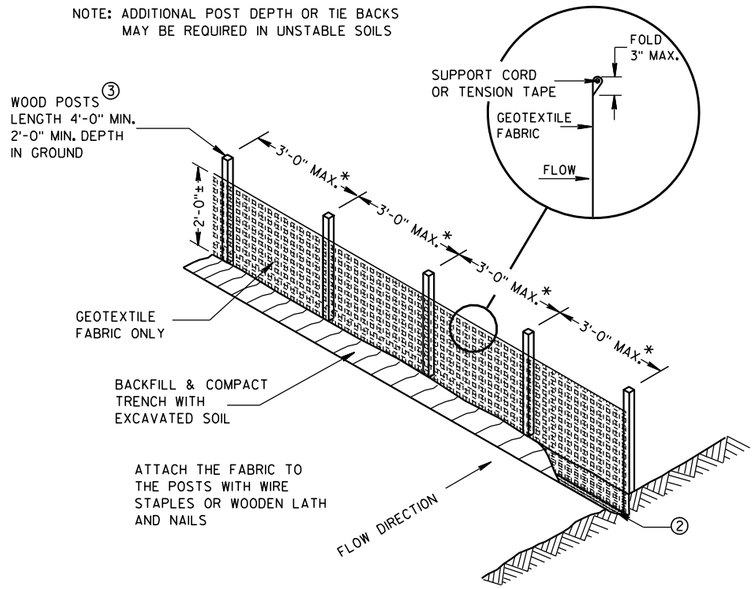
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

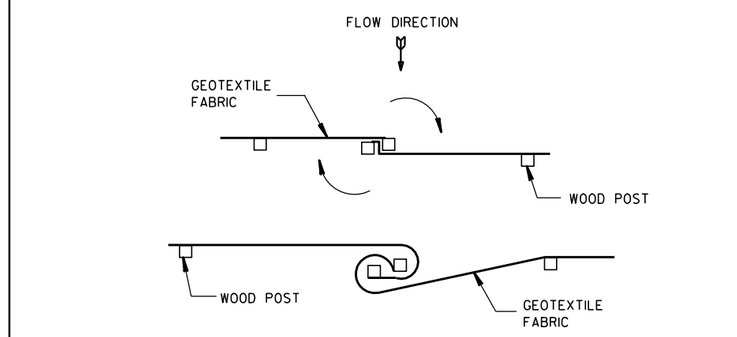


TRENCH DETAIL

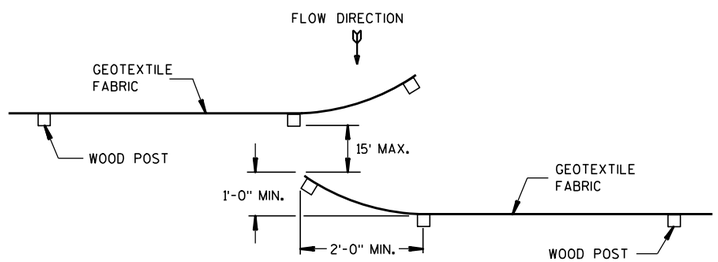


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

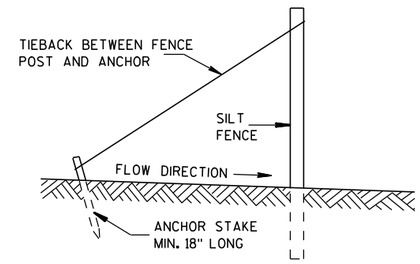


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

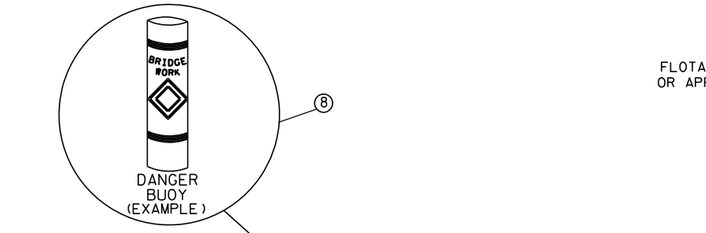
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

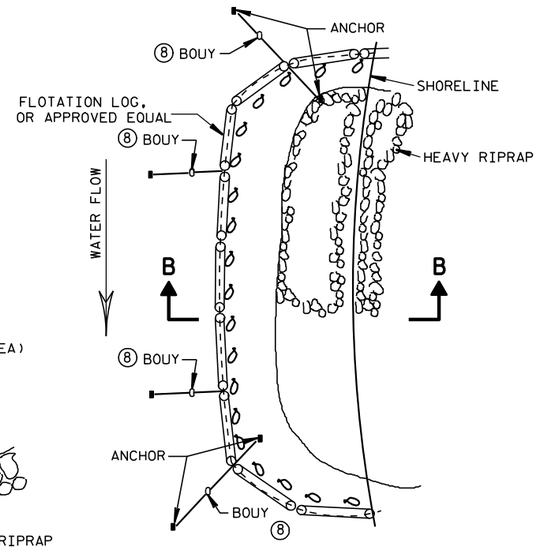
S.D.D. 8 E 9-6

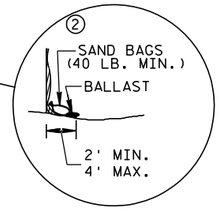
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S.D.D. 8 E 9-6

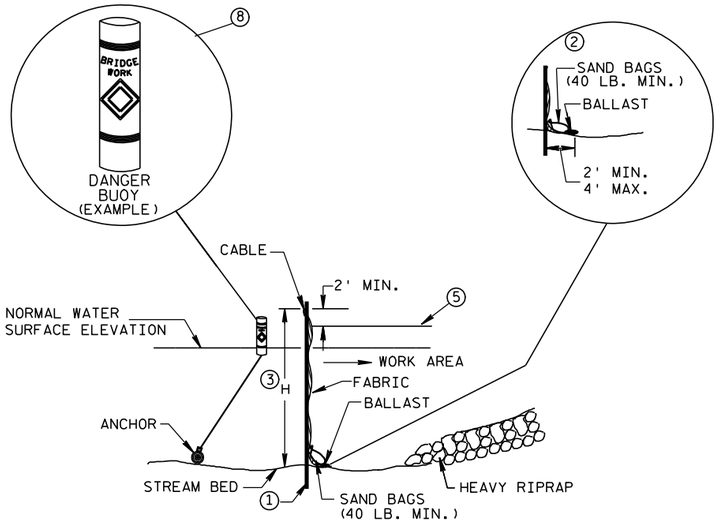


SECTION B-B

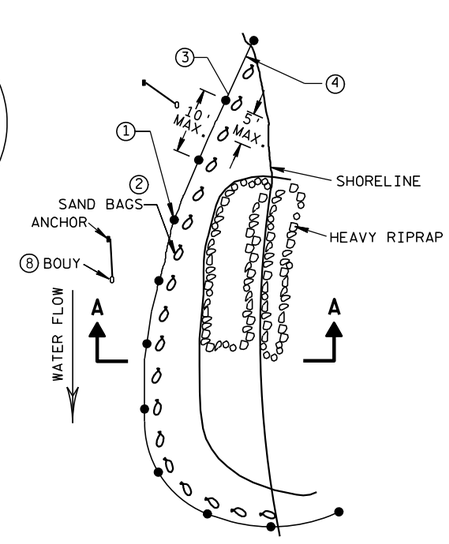




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.

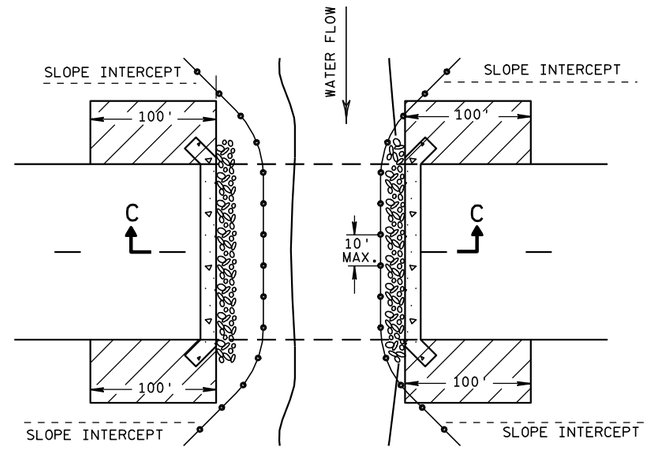
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

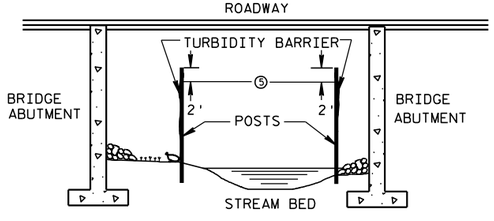
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

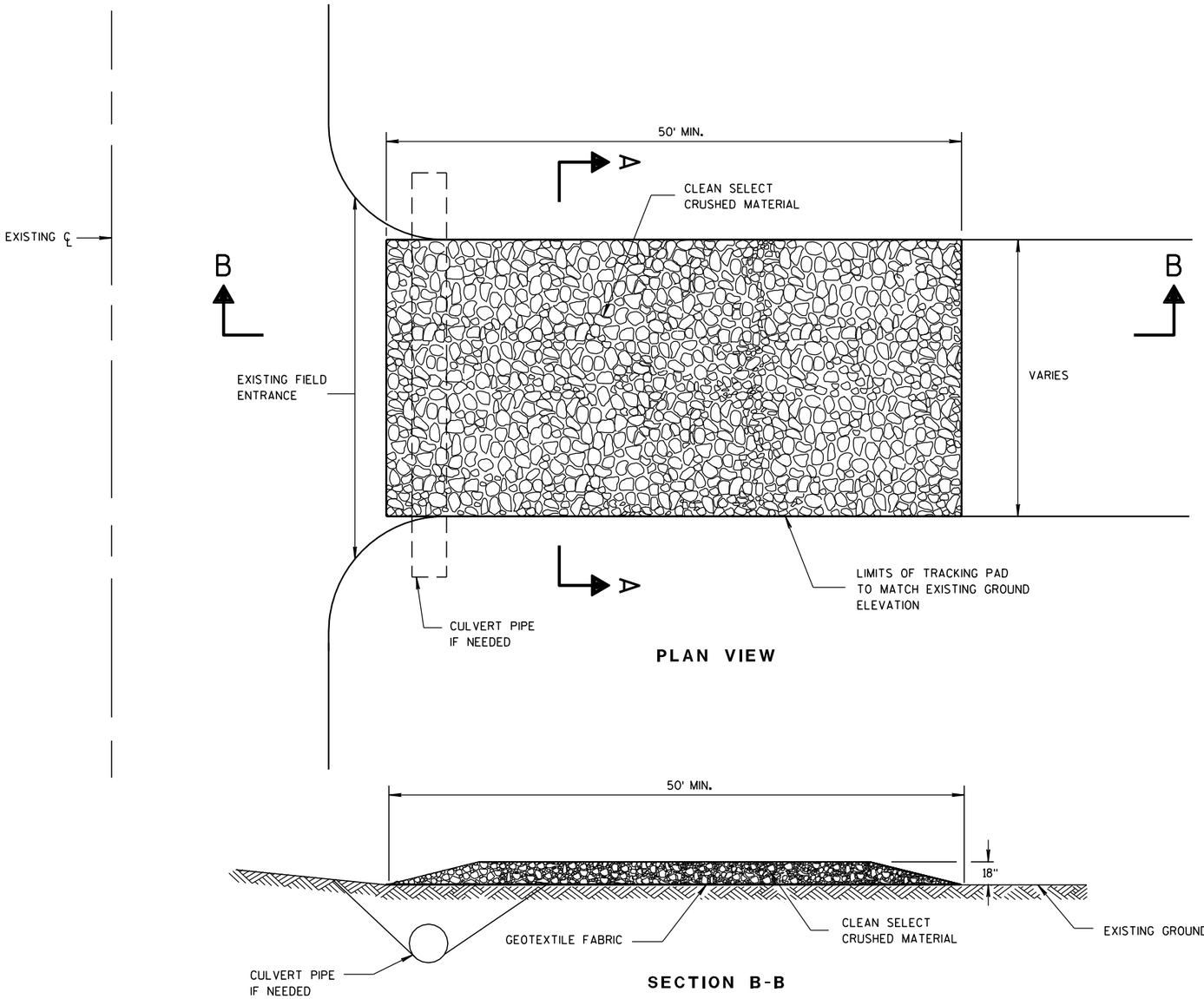
APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 11-2

6

S.D.D. 8 E 11-2



PLAN VIEW

SECTION B-B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

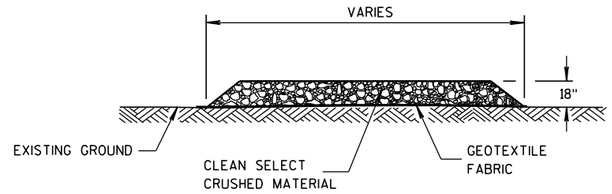
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A-A

TRACKING PAD

6

S.D.D. 8 E 14-1

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

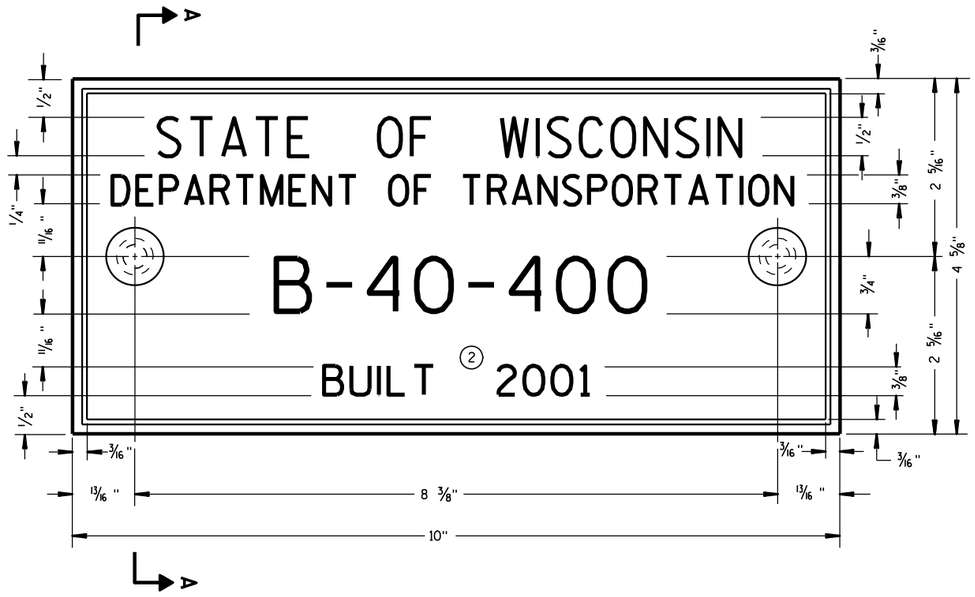
APPROVED

3/24/2011	/S/ Jerry H. Zoda	
DATE	ROADWAY STANDARDS ENGINEER	ENT

FHWA

6

S.D.D. 8 E 14-1



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION MULTI-UNIT STRUCTURES

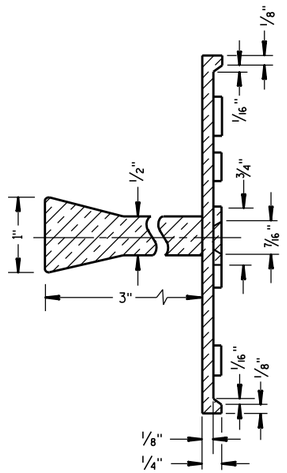
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

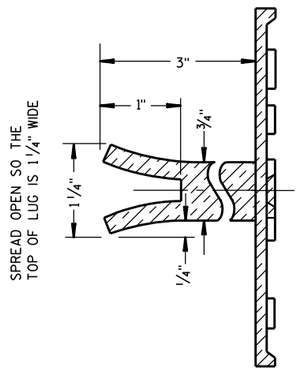
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

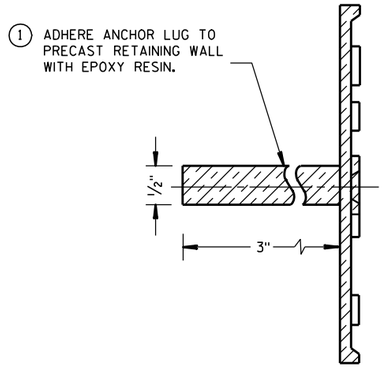
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

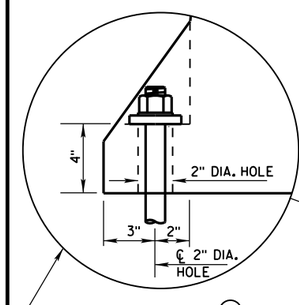
FHWA

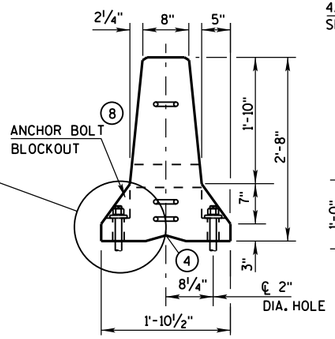
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S.D.D. 12 A 3-10

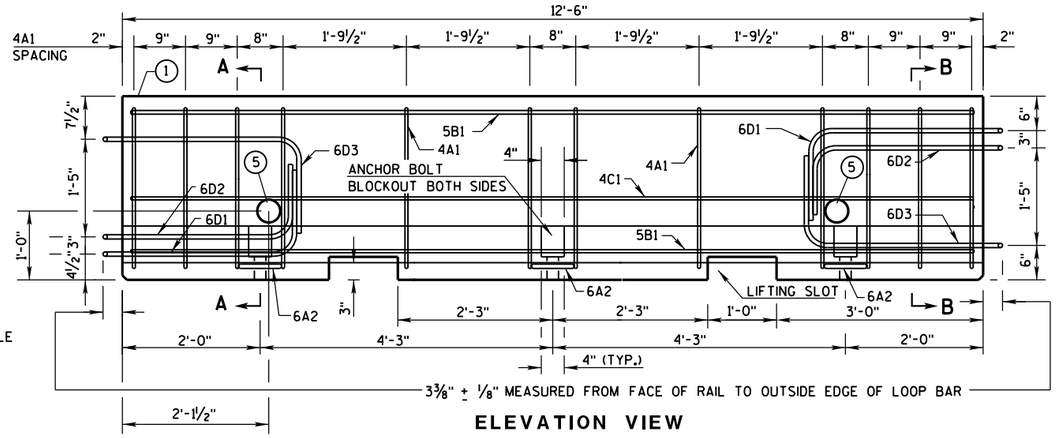
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S.D.D. 12 A 3-10

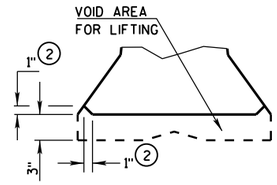




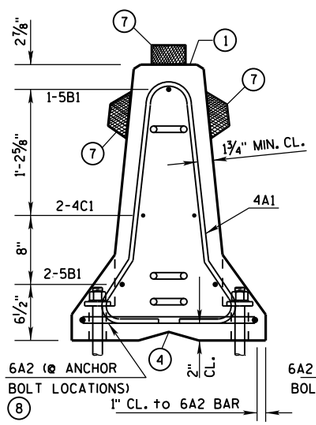
END VIEW



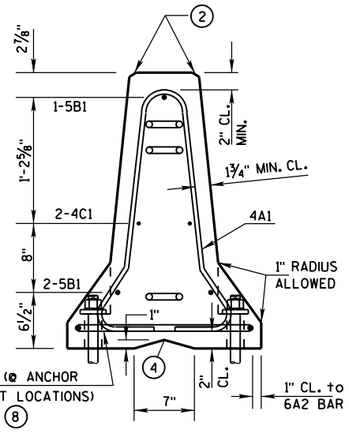
ELEVATION VIEW



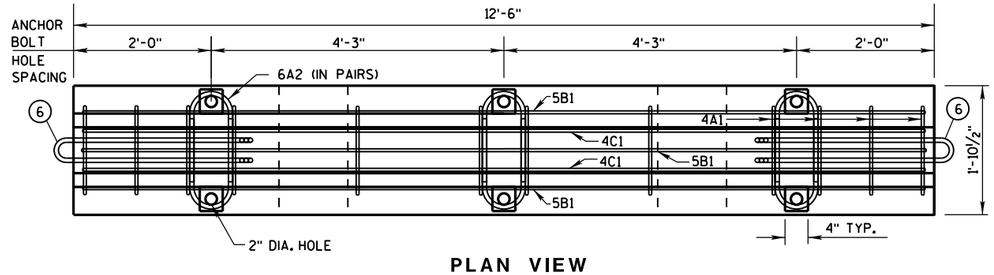
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

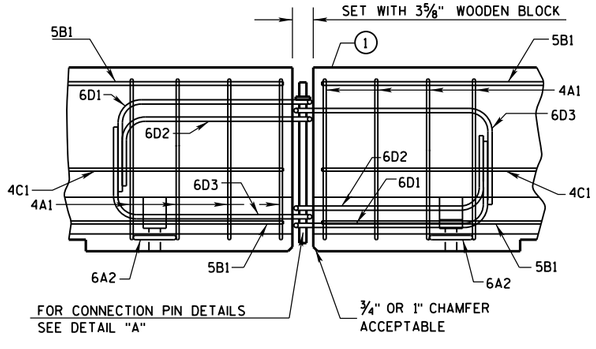


SECTION B-B
(STIRRUP PLACEMENT)

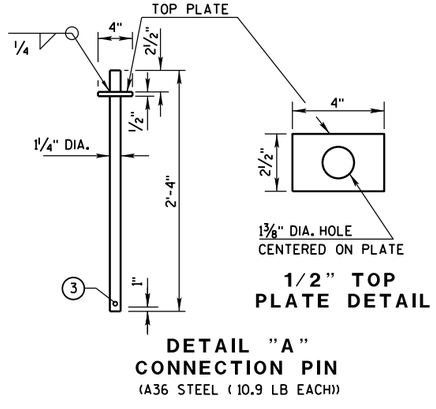


PLAN VIEW

DETAILS OF BARRIER SECTION

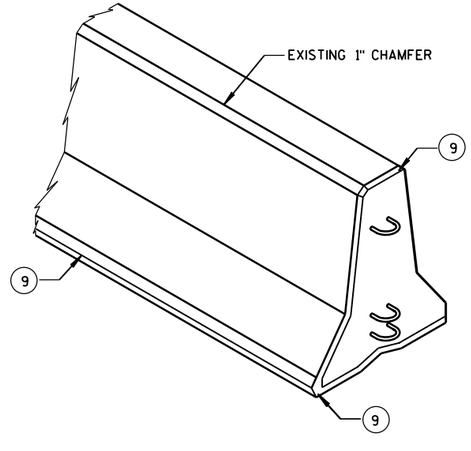


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(a) THRU 14B7-14(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

(8) SEE SHEET D FOR ANCHORING CRITERIA.

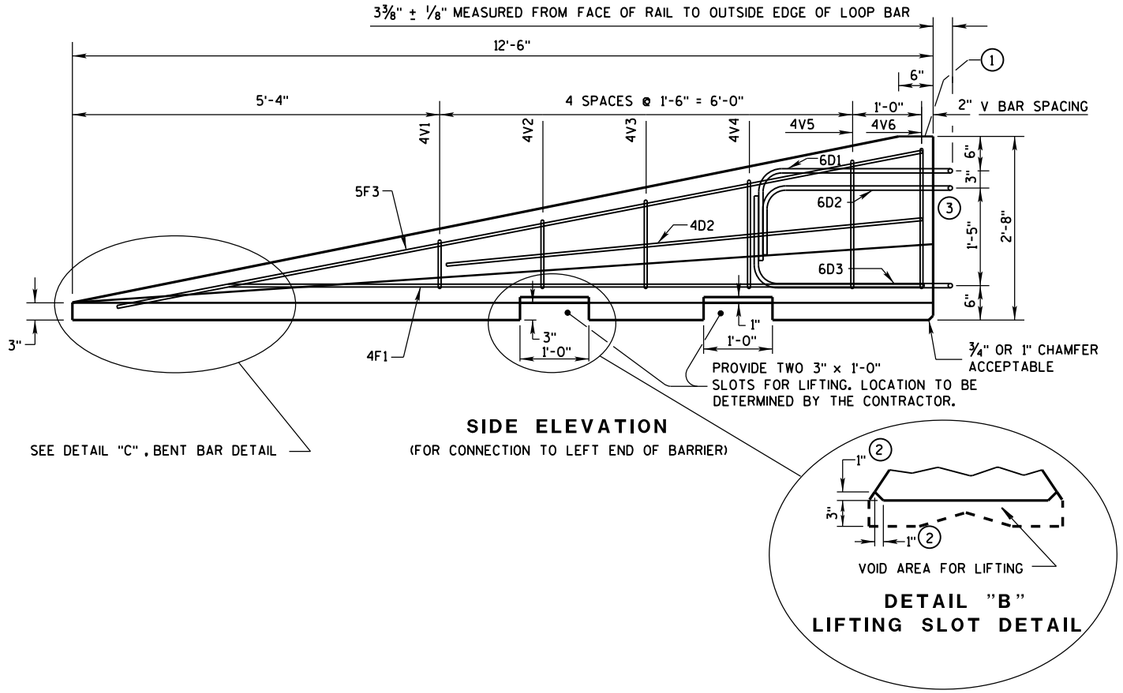
(9) 1" CHAMFER OPTIONAL.

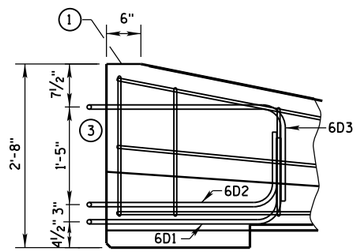
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

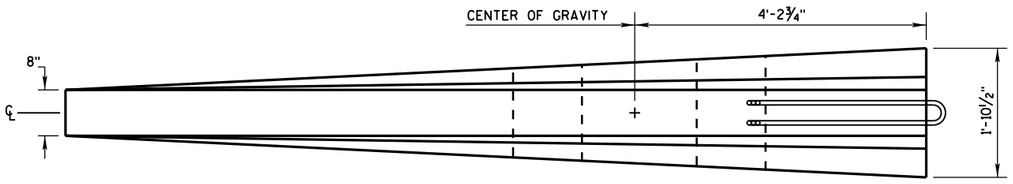
S.D.D. 14 B 7-14a

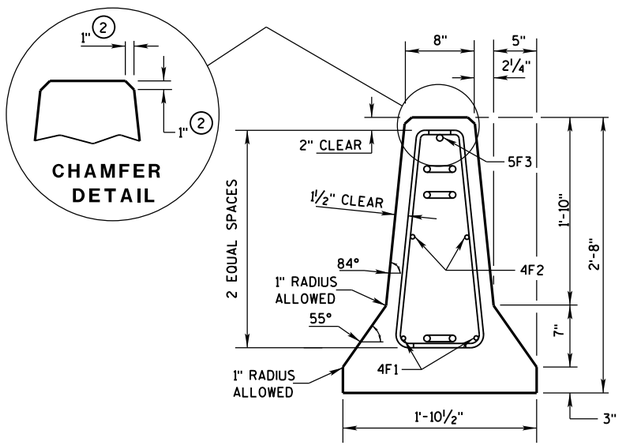


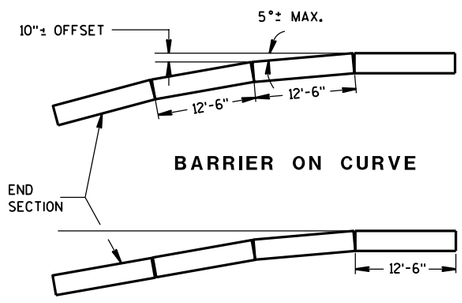


GENERAL NOTES

1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.







POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

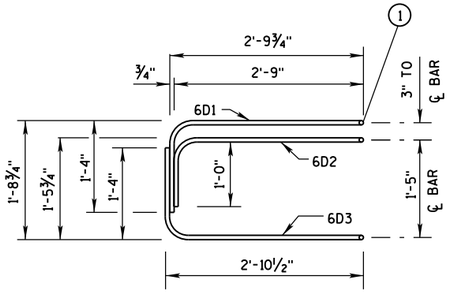
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-14b

BARRIER TAPER SECTION BILL OF MATERIALS

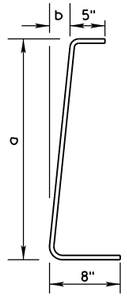
(PER 12'-6" BARRIER TAPER SECTION)

BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY

DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

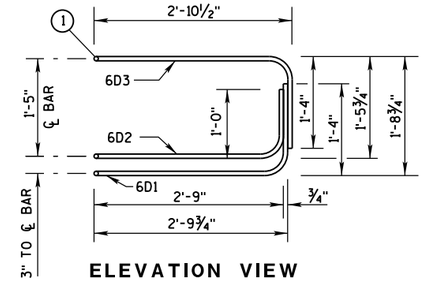
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

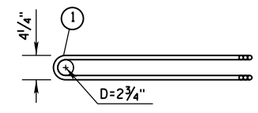
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

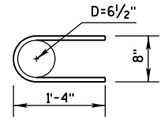
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



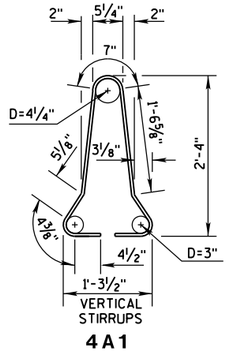
ELEVATION VIEW



PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



4A1

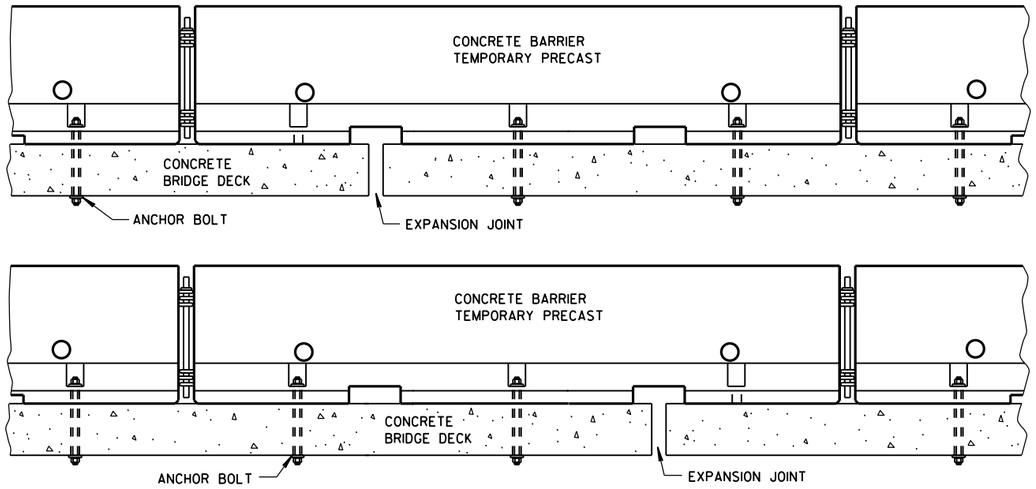
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

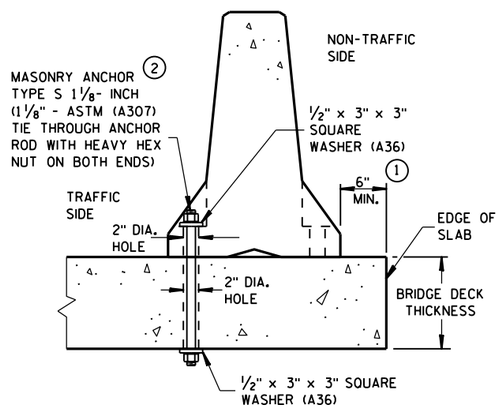
6

S.D.D. 14 B 7-14c



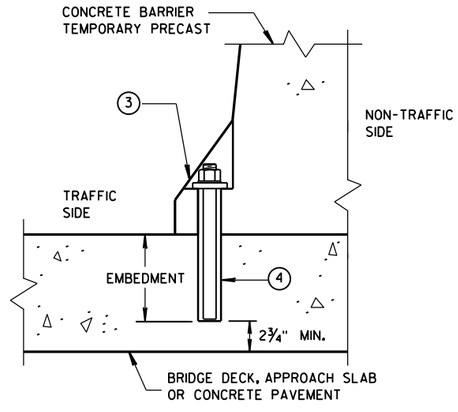
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR ② INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

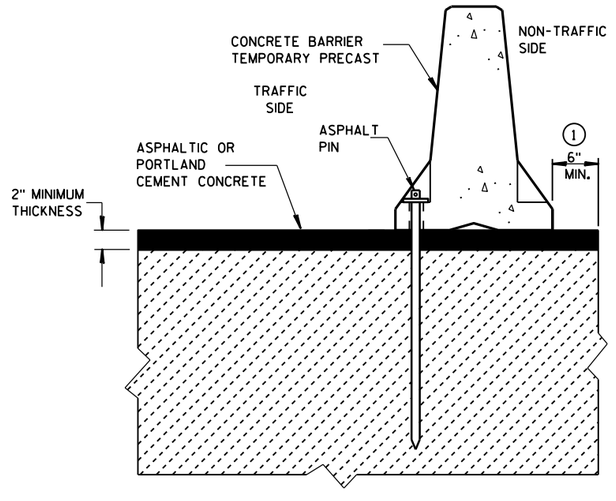
② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

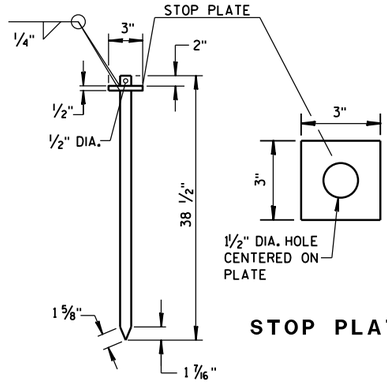
③ 1⅛" DIAMENTER A307 THREADED ROD, ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.

④ ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)

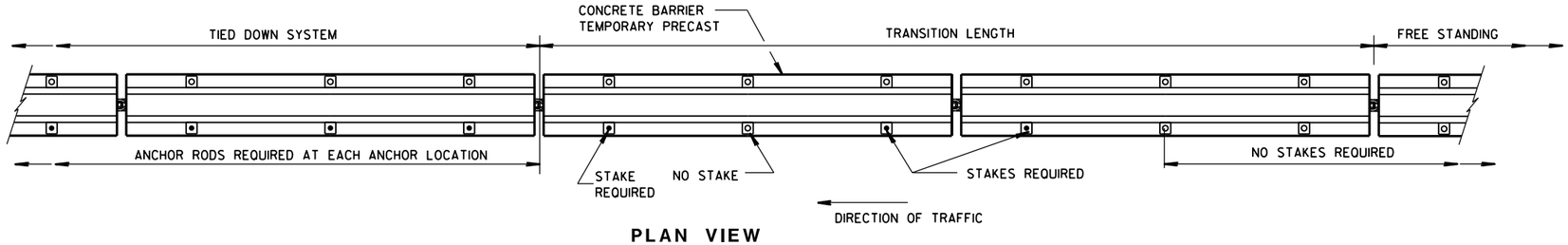


STOP PLATE



ASPHALT PIN

(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

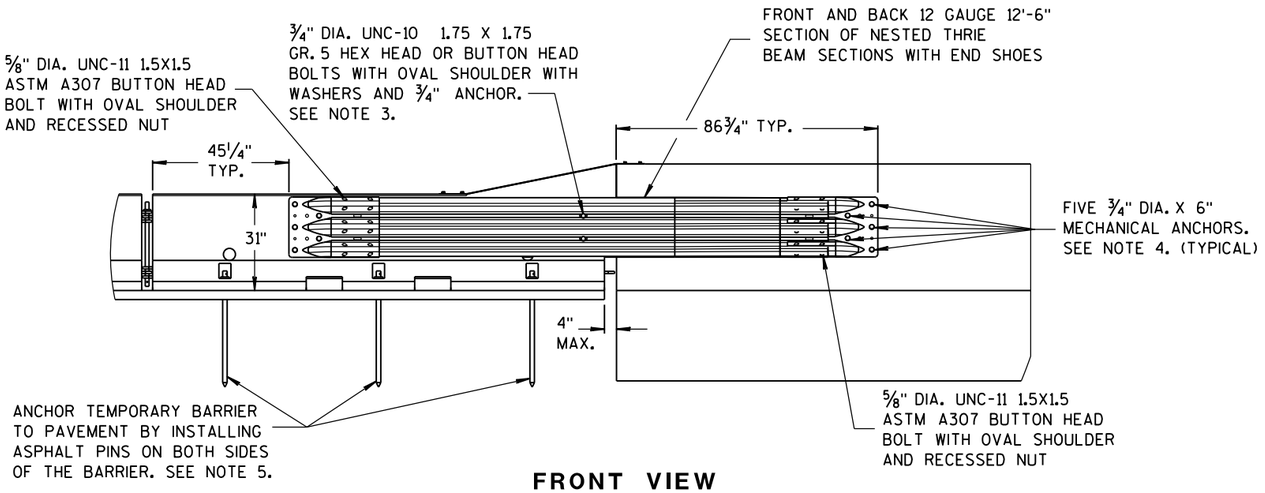
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

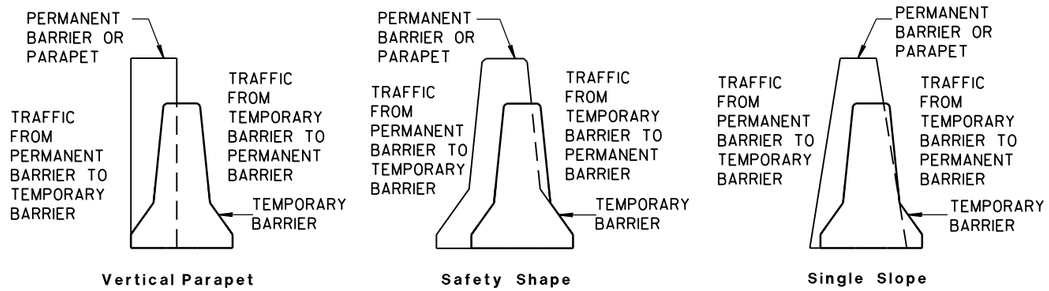
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-14d



FRONT VIEW

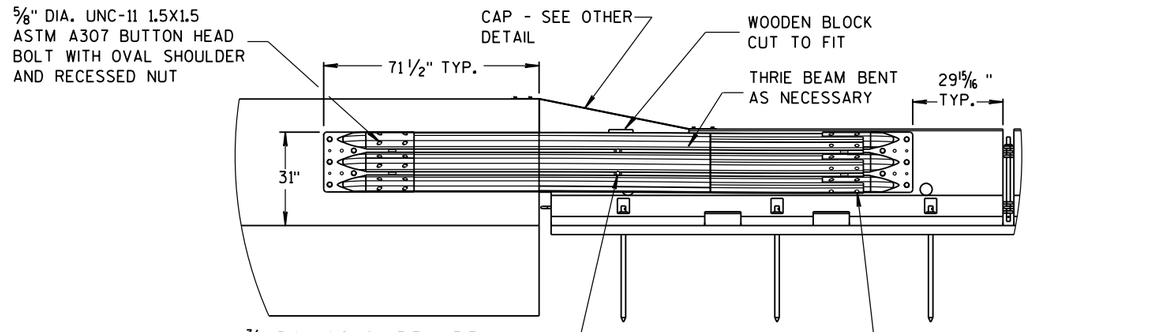


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

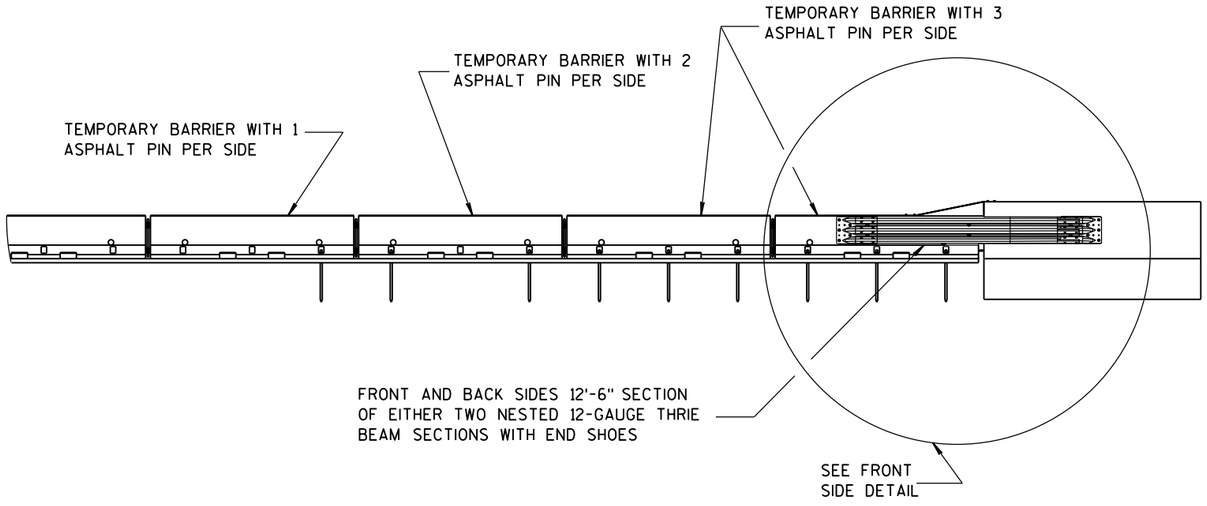
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

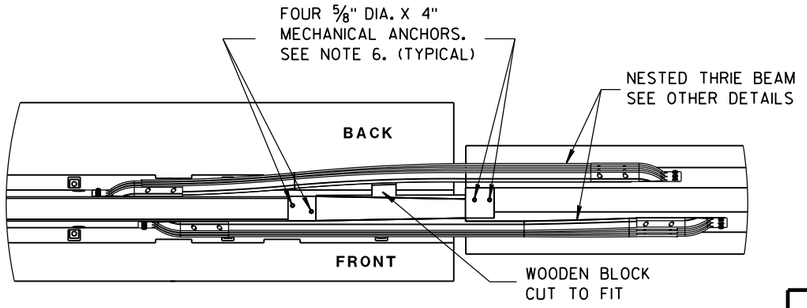
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



BACK VIEW



FRONT VIEW



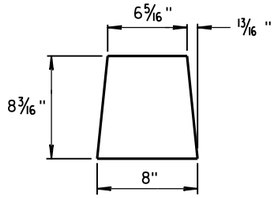
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

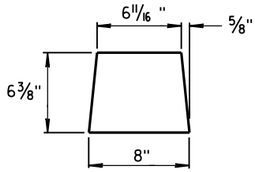
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

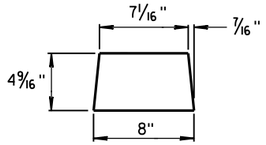
6
S.D.D. 14 B 7-14e



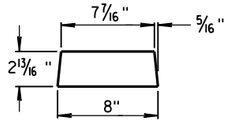
GUSSET 1



GUSSET 2

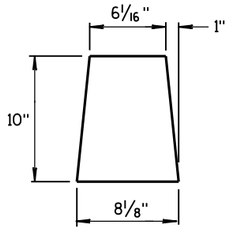


GUSSET 3

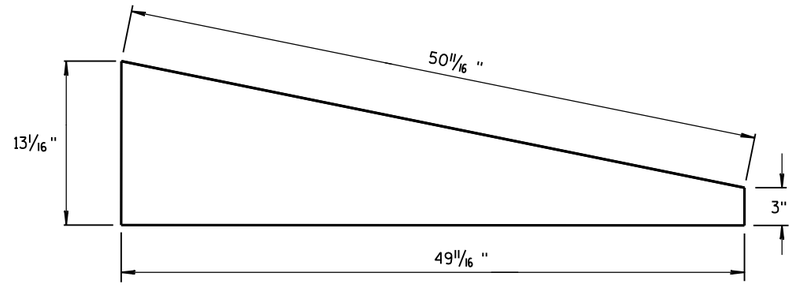


GUSSET 4

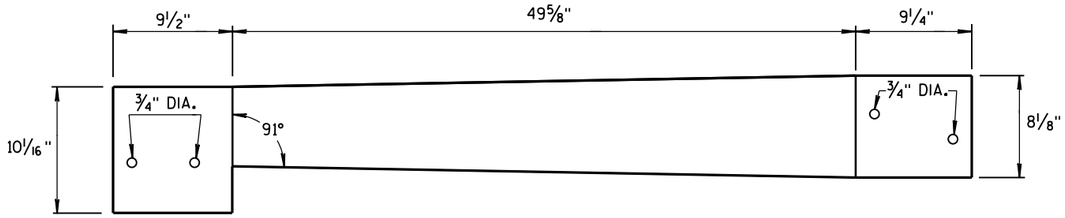
GUSSETS

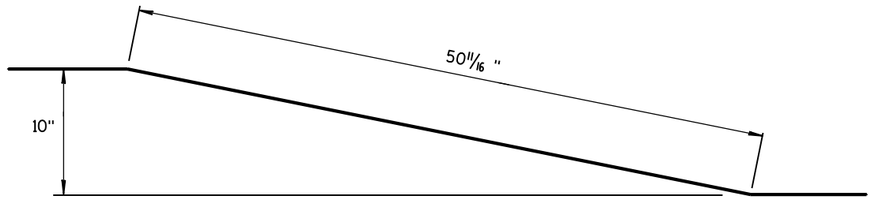


END PLATE



SIDE PLATE

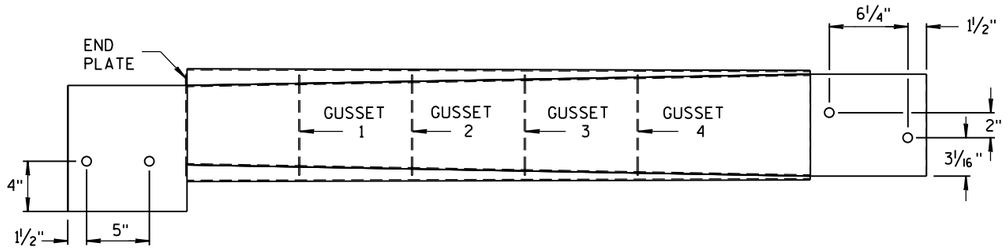


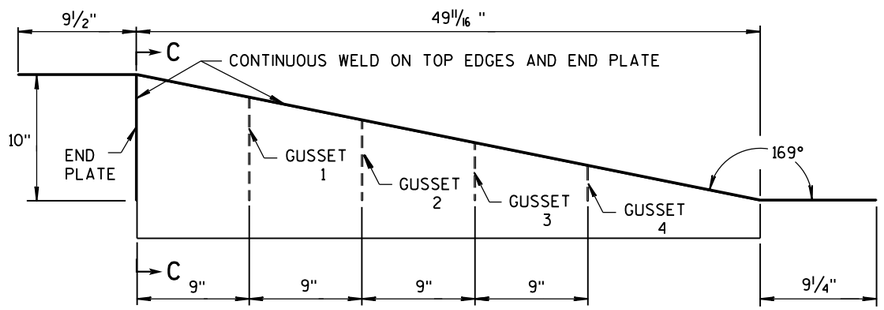


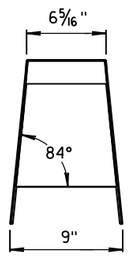
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.







SECTION C-C

NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

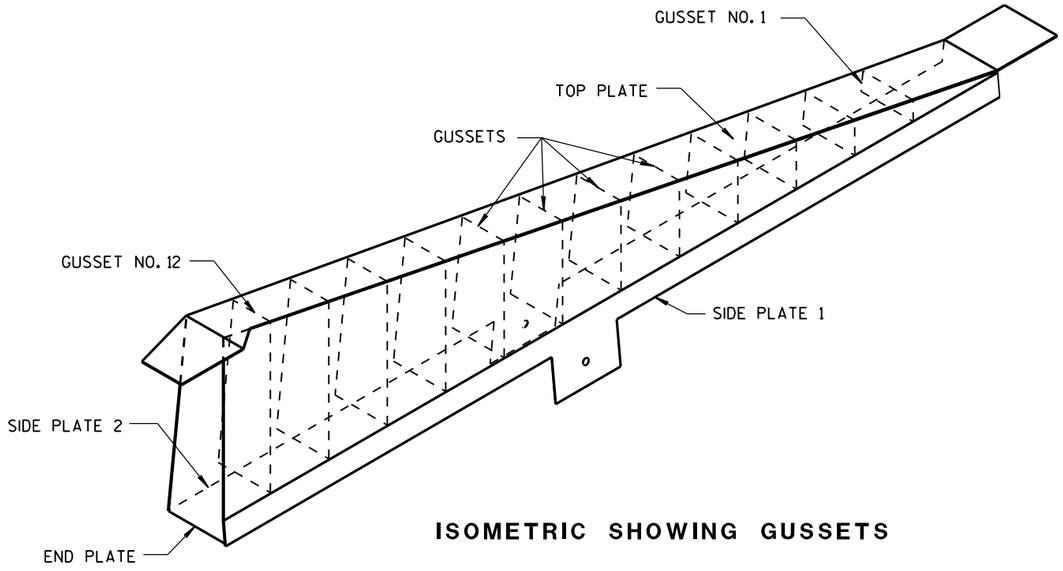
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

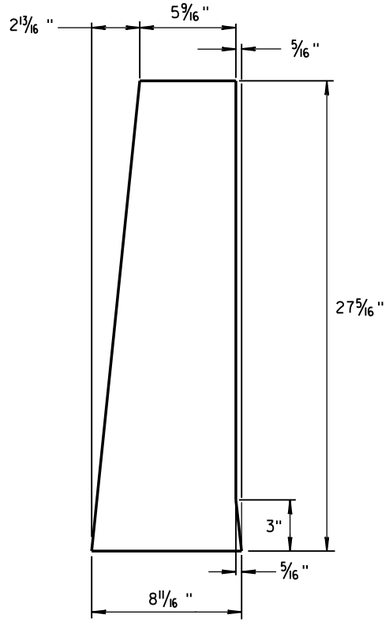
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-14f

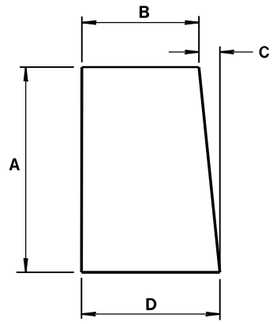


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



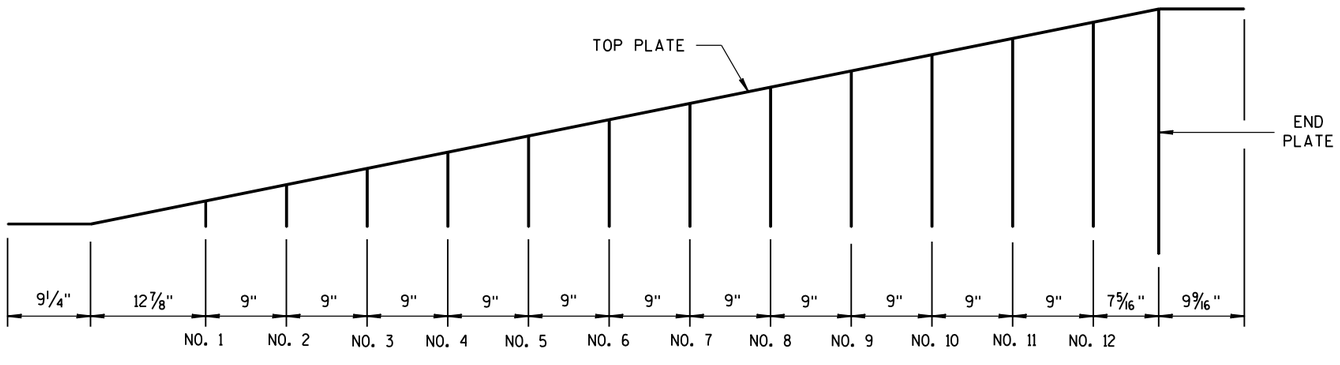
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

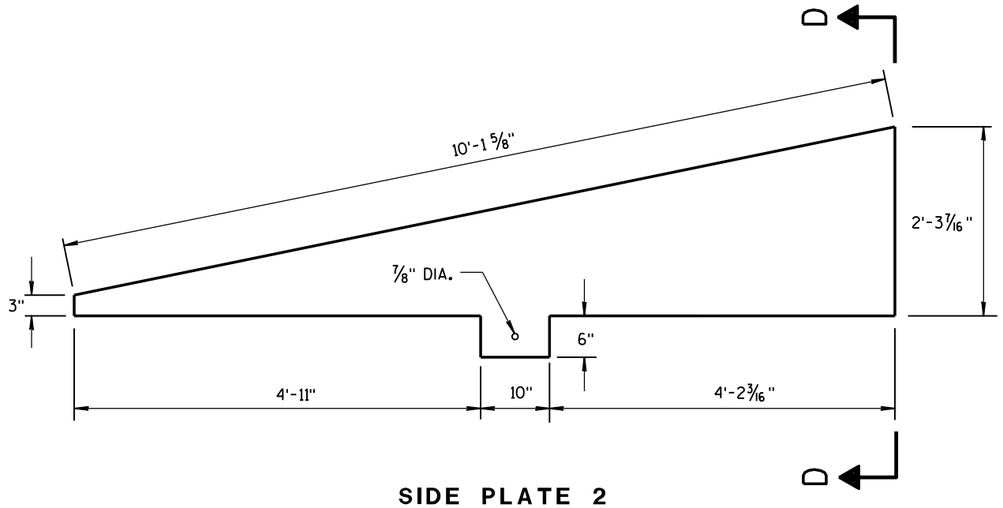
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

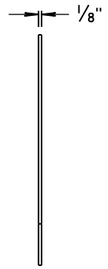
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

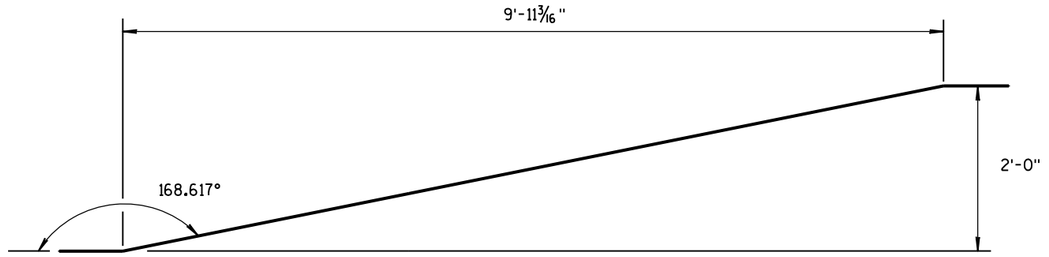
S.D.D. 14 B 7-14g



SIDE PLATE 2

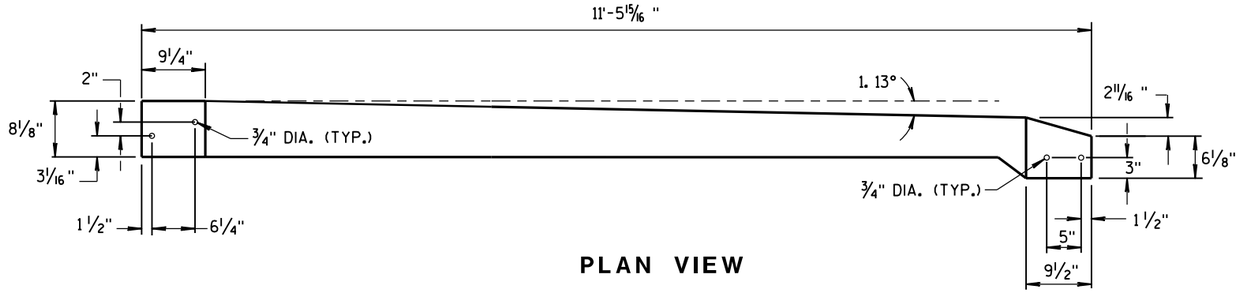


END VIEW



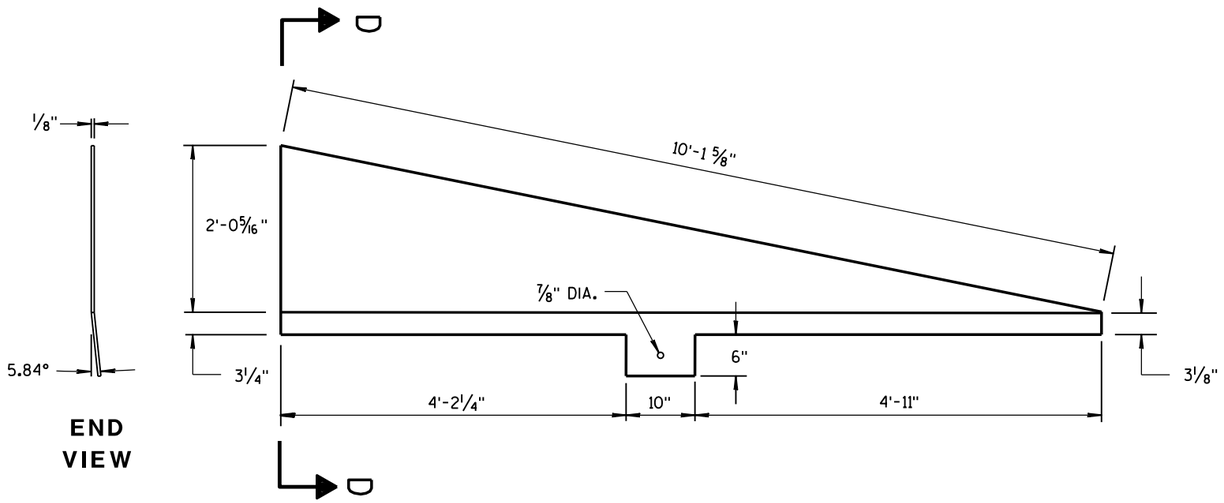
SIDE VIEW

TOP PLATE



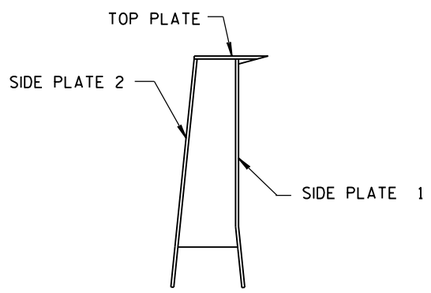
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zoaa — ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA

6

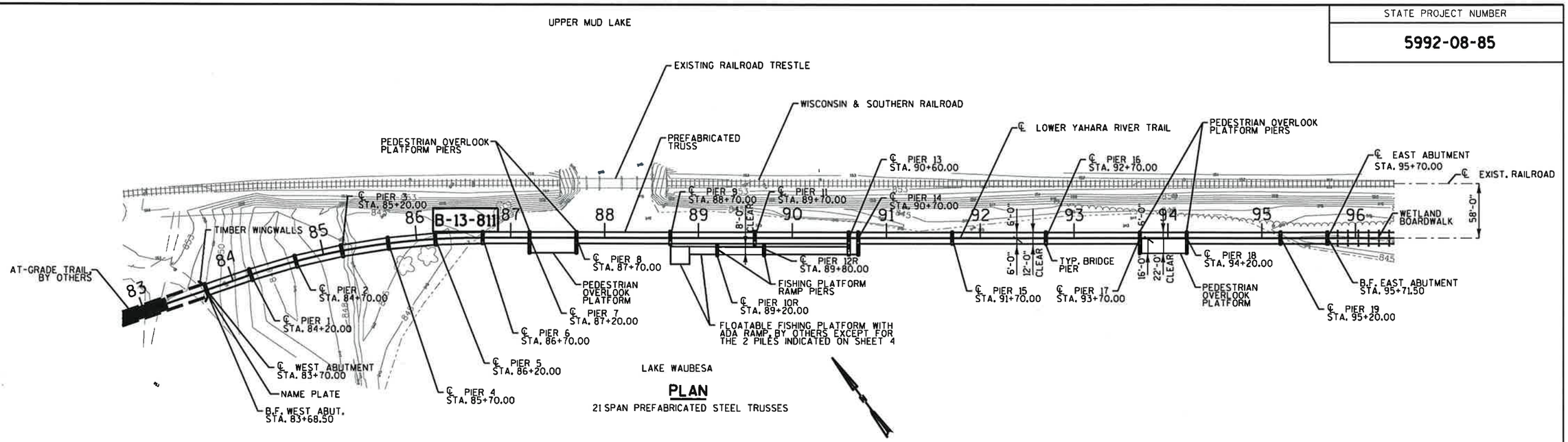
S.D.D. 14 B 7-14h

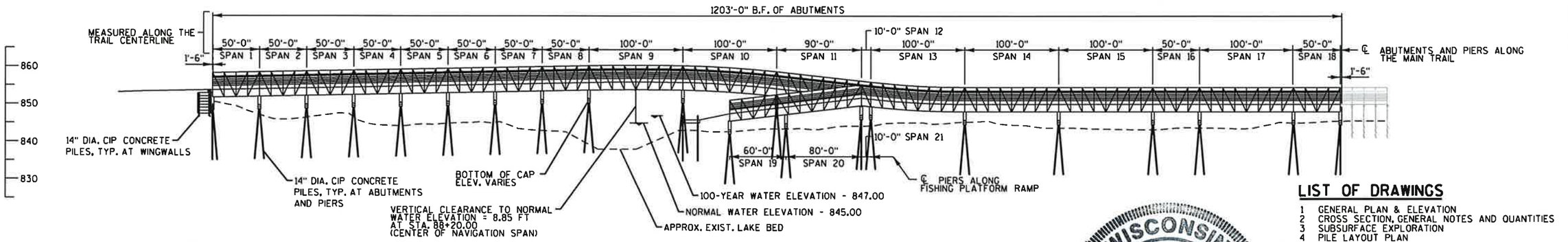
6

S.D.D. 14 B 7-14h

STATE PROJECT NUMBER

5992-08-85





DESIGN DATA

LIVE LOAD:

VEHICLE DESIGN LOAD: H-10 FOR TRAIL TRUSSES
VEHICLE DESIGN LOAD: H-5 FOR RAMP TRUSSES
PEDESTRIAN DESIGN LOAD: 90 PSF

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY
SUBSTRUCTURE ____ f'_c = 3500 PSI
STEEL REINFORCEMENT
GRADE 60 ____ f_y = 60,000 PSI
GRADE 40 ____ f_y = 40,000 PSI
PREFABRICATED STEEL TRUSS
HSS MEMBERS ASTM A847, GRADE 50 ____ f_y = 50,000 PSI
ROLLED SHAPES AND PLATES
ASTM A588, GRADE 50 ____ f_y = 50,000 PSI
TIMBER BACKING PLANKS ____ F_{bo} = 1250 PSI
(F = 1800 PSI ADJUSTED)
COMPOSITE DECK ____ 250 PSI ALLOWABLE (BENDING)
200 PSI ALLOWABLE (SHEAR)

HYDRAULIC DATA

100 YEAR FREQUENCY

DRAINAGE AREA	304.0 SQ. MI.
Q_{100}	3,595 C.F.S.
VELOCITY	4.15 F.P.S.
WATERWAY AREA	11,116 SQ. FT.
HIGH WATER$_{100}$ ELEVATION	848.00
REGULATORY HIGH WATER$_{100}$ ELEVATION	847.00
SCOUR CRITICAL CODE	5

FOUNDATION DATA

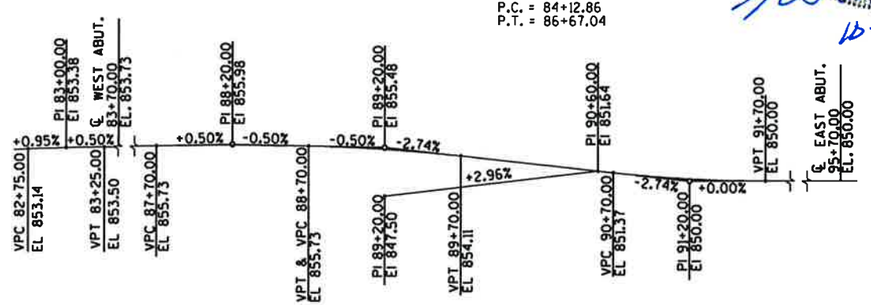
ABUTMENTS AND PIERS TO BE SUPPORTED ON 14" x 0.25" WALL THICKNESS CAST-IN-PLACE CONCRETE PILES DRIVEN TO A MINIMUM DRIVING RESISTANCE OF 25 TONS** PER PILE AT ABUTMENTS, 45 TONS** AT PIERS 1 TO 6, 12R, 65 TONS** AT PIERS 7 TO 9, 11, 13, 14, 17, 18, 25 TONS** AT PIER 10R AND 75 TONS** AT PIERS 15, 16 AND 19 AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED LENGTHS:

WEST ABUTMENT WINGWALLS = 15'
WEST ABUTMENT = 50'
PIER 1 TO PIER 7 = 50'
PIER 8 = 60'
PIER 9 = 90'
PIER 10R = 85'
PIER 11 TO PIER 14 = 90'
PIER 15 TO PIER 18 = 95'
PIER 19 = 90'
EAST ABUTMENT = 90'

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

ELEVATION

LOOKING NORTH



PROFILE GRADE LINE

LOWER YAHARA RIVER TRAIL

HORIZONTAL CURVE DATA

CURVE 17
P.I. = 85+41.16
Y = 468,489.33
X = 837,590.17
DELTA = 19°15'49" RT
D = 7°34'44"
T = 128.30'
L = 254.18'
R = 756.00'
P.C. = 84+12.86
P.T. = 86+67.04



LIST OF DRAWINGS

1 GENERAL PLAN & ELEVATION
2 CROSS SECTION, GENERAL NOTES AND QUANTITIES
3 SUBSURFACE EXPLORATION
4 PILE LAYOUT PLAN
5 ABUTMENT GENERAL
6 ABUTMENT DETAILS AND BILL OF BARS
7 PIER DETAILS 1
8 PIER DETAILS 2
9 PIER DETAILS 3
10 PIER BILL OF BARS
11 TRUSS DETAILS 1
12 TRUSS DETAILS 2

NO.	DATE	REVISION	BY

GRAEF
One Honey Creek Corporate Center
125 South 84th Street
Suite 401
Milwaukee, WI 53214-1470
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 10/15/15
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-13-811

LOWER YAHARA RIVER TRAIL OVER LAKE WAUBESA

COUNTY	DANE
~~TOWN/CITY~~/VILLAGE	MCFARLAND
DESIGN SPEC.	AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	KGW	DESIGN CK'D.	RB	DRAWN BY	RBH	PLANS CK'D.	AML

GENERAL PLAN & ELEVATION

SHEET 1 OF 12
89

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

CONSULTANT CONTACT:
KEVIN WOOD, P.E.
(414) 259-1500

8

8

STATE PROJECT NUMBER

5992-08-85

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	W. ABUT.	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10R	PIER 11	PIER 12R	PIER 13	PIER 14	PIER 15	PIER 16	PIER 17	PIER 18	PIER 19	E. ABUT.	SUPER	TOTAL
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-13-811	LS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
210.0100	BACKFILL STRUCTURE	CY	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33
502.0100	CONCRETE MASONRY BRIDGES	CY	8	6	6	6	6	6	6	10	10	7	5	7	5	10	10	6	6	10	10	6	8	-	154
502.6105	MASONRY ANCHORS TYPE S 5/8-INCH	EACH	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
505.0100	BAR STEEL REINFORCEMENT STRUCTURES	LB	70	50	50	50	60	60	70	110	110	90	70	80	50	90	90	50	50	80	80	50	40	-	1450
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1140	1240	1330	1370	1540	1500	1590	2990	2990	3530	1230	3190	1160	2400	2400	1240	1160	2020	2020	1070	740	-	37850
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	860	540	540	540	540	540	540	890	890	620	500	620	500	890	890	540	540	890	890	540	730	-	14030
507.0200	TREATED LUMBER AND TIMBER	MBM	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.40
550.2144	PILING CIP CONCRETE 14 X 0.25-INCH	LF	260	200	200	200	200	200	200	350	420	450	510	450	360	630	630	380	380	665	665	360	360	-	8070
506.8005.S	PREFABRICATED STEEL TRUSS PEDESTRIAN BRIDGE B-13-811 LRFD	LS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

THE FIRST DIGIT OF A THREE DIGIT AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

ALL DETAILS MATERIALS AND FABRICATION SHALL CONFORM TO THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE SPECIFICATIONS OF THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION.

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

AT THE BACKFACE OF THE ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

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

APPLY BRIDGE SEAT PROTECTION, AS SPECIFIED IN SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP SURFACE OF THE PIERS.

THE TRUSS SHALL BE ANCHORED TO THE PIERS IN A MANNER TO ALLOW THERMAL MOVEMENTS OF THE SUPERSTRUCTURE ALONG THE CENTERLINE OF THE PATH AND TO PREVENT MOVEMENT PERPENDICULAR TO THE CENTERLINE OF THE PATH.

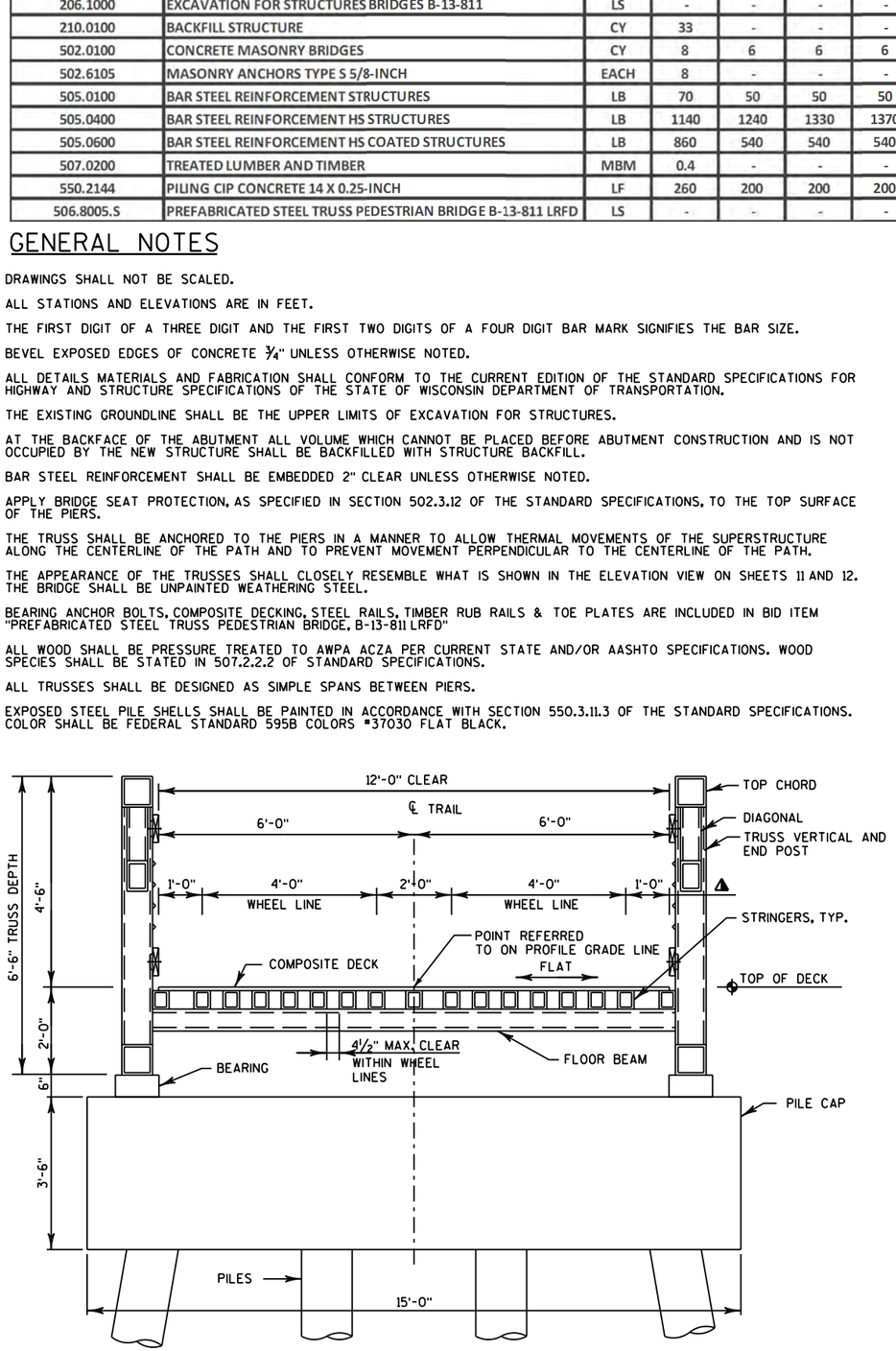
THE APPEARANCE OF THE TRUSSES SHALL CLOSELY RESEMBLE WHAT IS SHOWN IN THE ELEVATION VIEW ON SHEETS 11 AND 12. THE BRIDGE SHALL BE UNPAINTED WEATHERING STEEL.

BEARING ANCHOR BOLTS, COMPOSITE DECKING, STEEL RAILS, TIMBER RUB RAILS & TOE PLATES ARE INCLUDED IN BID ITEM "PREFABRICATED STEEL TRUSS PEDESTRIAN BRIDGE, B-13-811 LRFD"

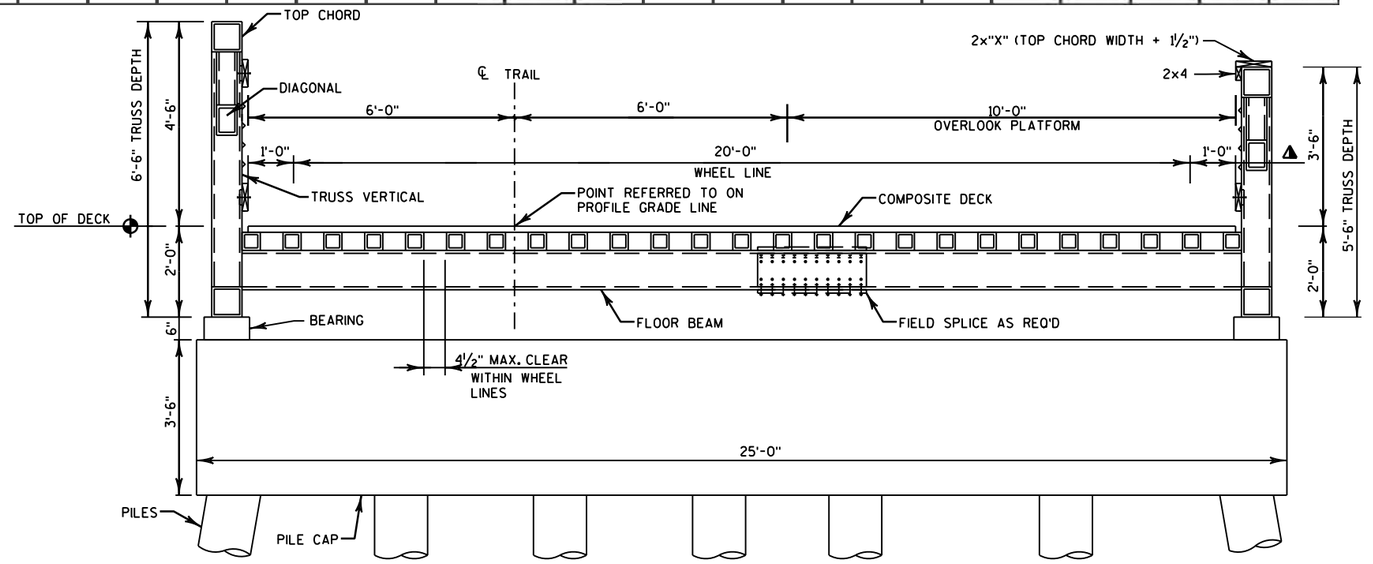
ALL WOOD SHALL BE PRESSURE TREATED TO AWPA ACZA PER CURRENT STATE AND/OR AASHTO SPECIFICATIONS. WOOD SPECIES SHALL BE STATED IN 507.2.2.2 OF STANDARD SPECIFICATIONS.

ALL TRUSSES SHALL BE DESIGNED AS SIMPLE SPANS BETWEEN PIERS.

EXPOSED STEEL PILE SHELLS SHALL BE PAINTED IN ACCORDANCE WITH SECTION 550.3.11.3 OF THE STANDARD SPECIFICATIONS. COLOR SHALL BE FEDERAL STANDARD 595B COLORS #37030 FLAT BLACK.

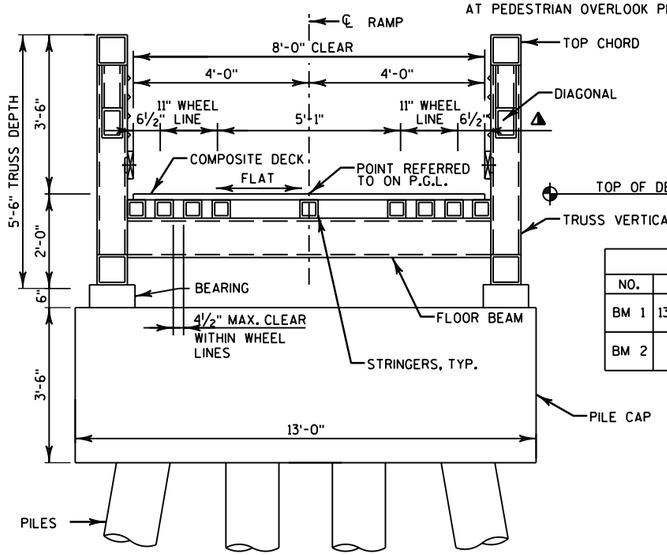


TYPICAL SECTION THROUGH PRE-FABRICATED STEEL TRUSS



SECTION THRU PREFABRICATED STEEL TRUSS

AT PEDESTRIAN OVERLOOK PLATFORM



SECTION THRU PREFABRICATED STEEL TRUSS

AT FISHING PLATFORM RAMP

LEGEND

▲ COMPOSITE DECK ACTS AS A WEAR SURFACE FOR THE H-10 AND H-5 DESIGN VEHICLE WHEEL LOADING WITHIN THE 11", 4'-0" AND 20'-0" WHEEL LINES. DECK SHALL BE DESIGNED FOR 90 PSF PEDESTRIAN LOADING IN REMAINING AREAS. CONTRACTOR IS NOT RESPONSIBLE FOR DESIGNING COMPOSITE DECK FOR VEHICLE LIVE LOADS.

BENCH MARKS

NO.	STATION	NORTHING	EASTERN	DESCRIPTION	ELEV.
BM 1	137+57.6, 32' RT	465,348.01	841,696.03	MAG NAIL ON WEST SIDE OF MCDANIEL PARK PARKING LOT	850.16
BM 2	N/A	465,114.30	842,030.78	MAG NAIL ON NORTH SIDE OF ERLING AVENUE	856.38

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-811

DRAWN BY RBH | PLANS CK'D. AML

CROSS SECTION, GENERAL NOTES AND QUANTITIES

SHEET 2 OF 12
90

I.D.

DATE:

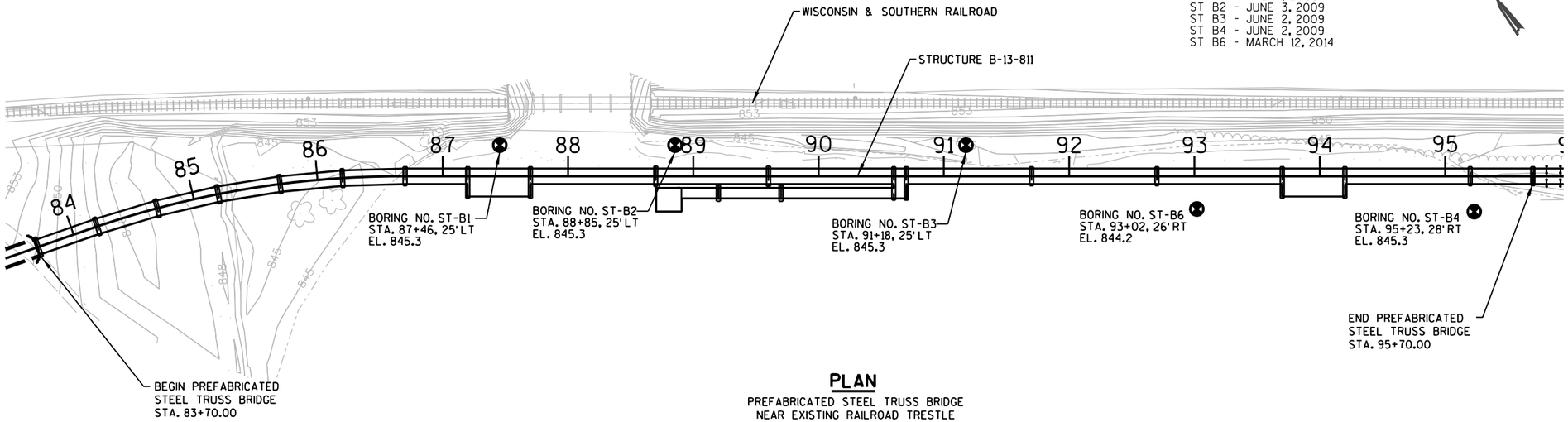
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L:±JOBS2008±20085024-10±CAD±STRUCTURAL±DGN±00±B-13-811_02.DGN 10/9/2015 7:12:27 AM

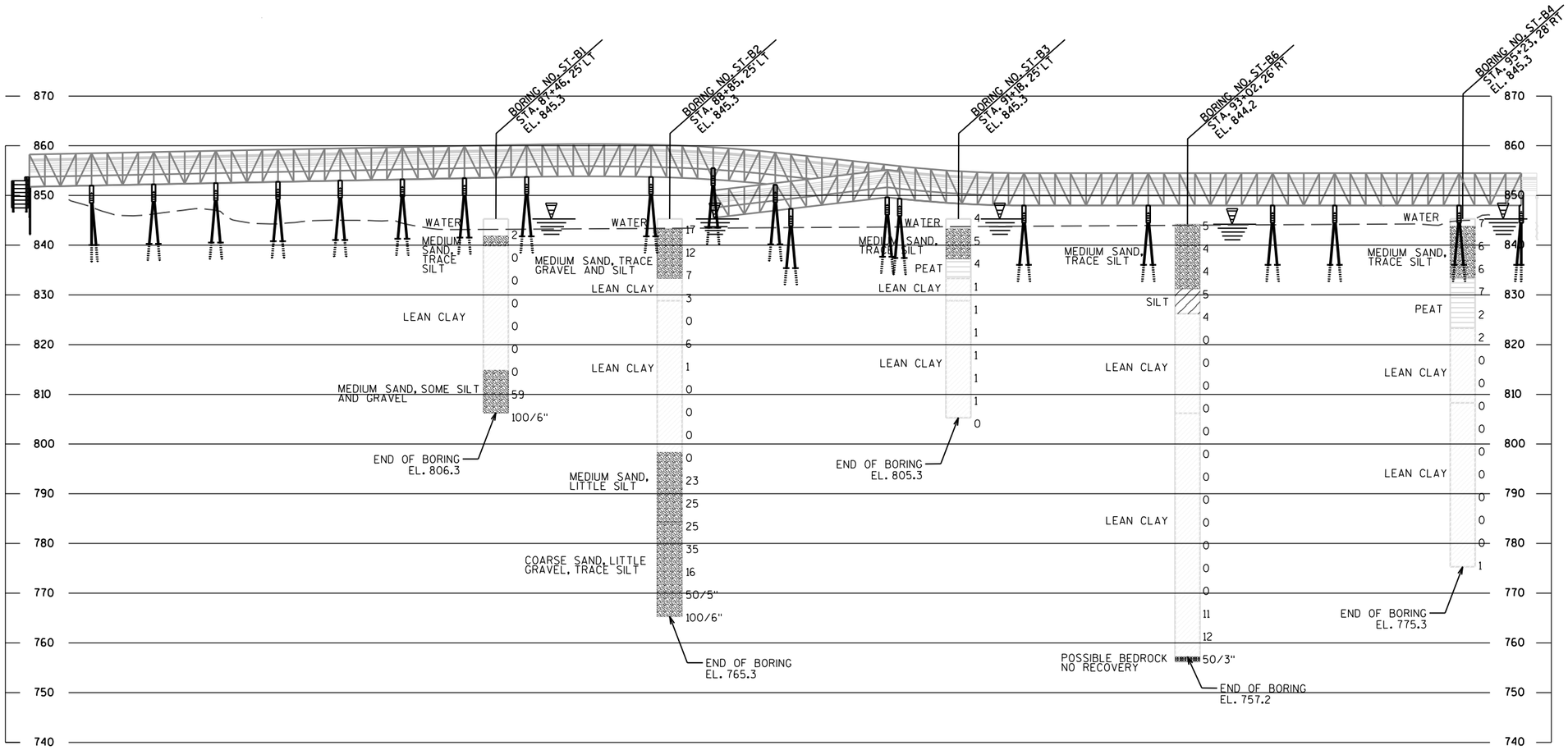
SOIL EXPLORATION PERFORMED BY:
CGC, INC.
2921 PERRY STREET
MADISON, WI 53713
(608) 288-4100

ST B1 - JUNE 4, 2009
ST B2 - JUNE 3, 2009
ST B3 - JUNE 2, 2009
ST B4 - JUNE 2, 2009
ST B6 - MARCH 12, 2014



PLAN

PREFABRICATED STEEL TRUSS BRIDGE
NEAR EXISTING RAILROAD TRESTLE



STATE PROJECT NUMBER

5992-08-85

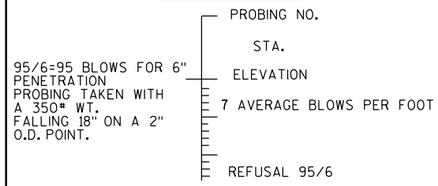
ABBREVIATIONS

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

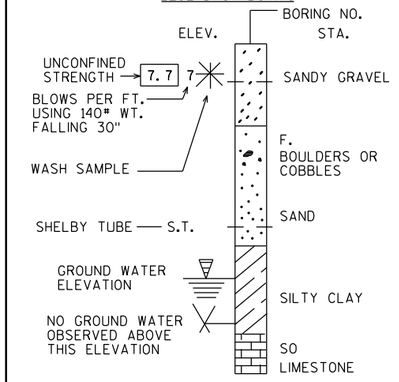
MATERIAL SYMBOLS

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 CASED 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-13-811

DRAWN BY RBH | PLANS CK'D. AML

SUBSURFACE EXPLORATION

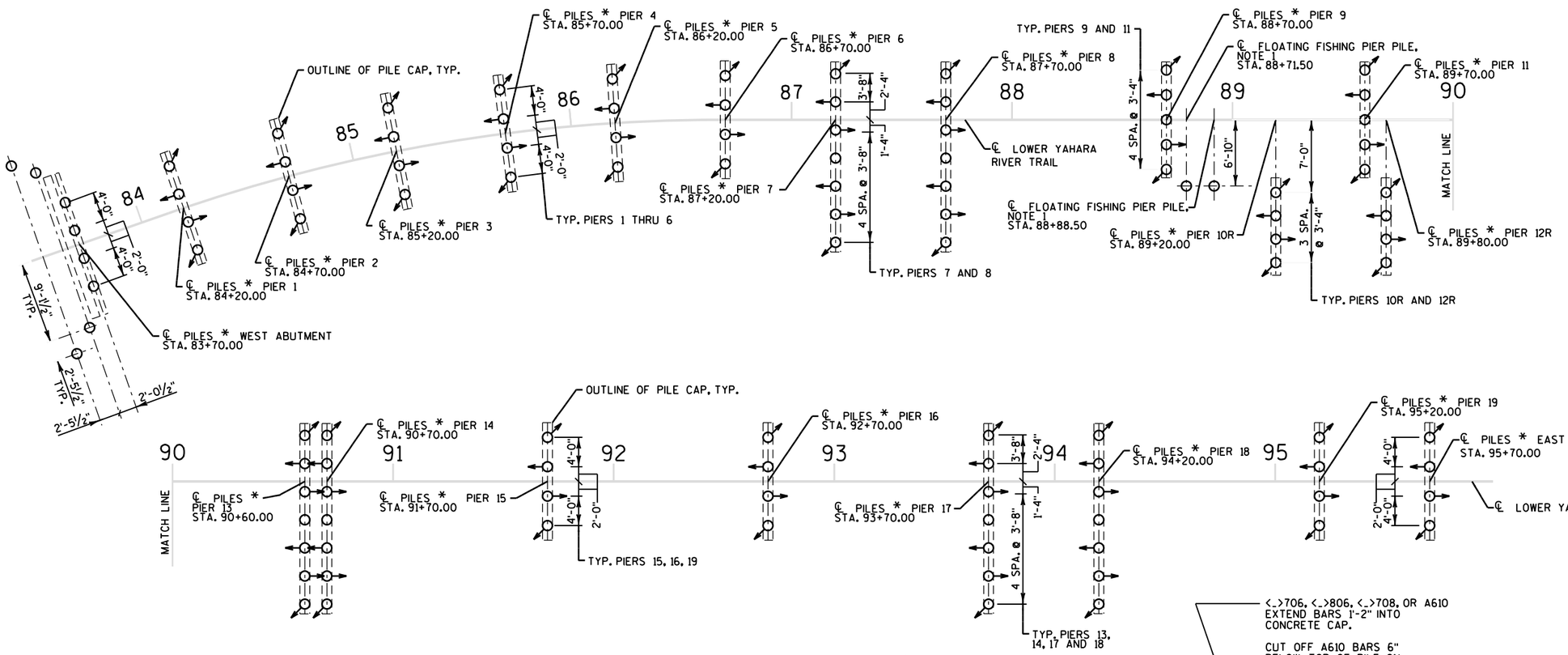
SHEET 3 OF 12
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8

STATE PROJECT NUMBER

5992-08-85



PILE LAYOUT PLAN

BARMARK DESIGNATIONS

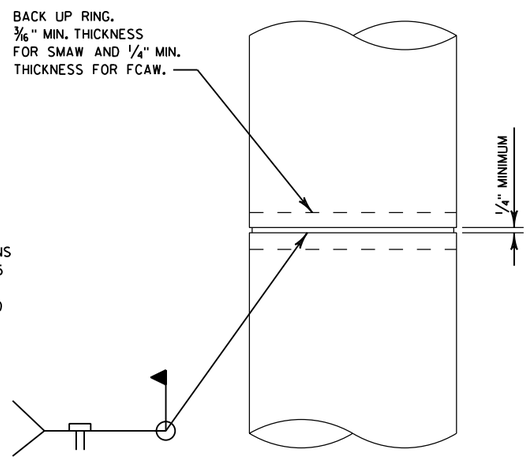
<_> DESIGNATES THE FIRST LETTER OF THE BAR MARK

A = W. ABUT.
B = E. ABUT.
C = PIER 1
D = PIER 2
E = PIER 3
F = PIER 4
G = PIER 5
H = PIER 6
J = PIER 7
K = PIER 8
L = PIER 9
M = PIER 10R
N = PIER 11
P = PIER 12R
Q = PIER 13
R = PIER 14
S = PIER 15
T = PIER 16
U = PIER 17
V = PIER 18
W = PIER 19

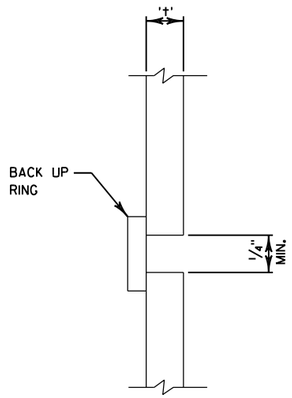
FOUNDATION DATA

ABUTMENTS AND PIERS TO BE SUPPORTED ON 14" x 0.25" WALL THICKNESS CAST-IN-PLACE CONCRETE PILES DRIVEN TO A MINIMUM DRIVING RESISTANCE OF 25 TONS PER PILE AT ABUTMENTS, 45 TONS AT PIERS 1 TO 6, 12R, 65 TONS AT PIERS 7 TO 9, 11, 13, 14, 17, 18, 25 TONS AT PIER 10R AND 75 TONS AT PIERS 15, 16 AND 19 AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTHS:

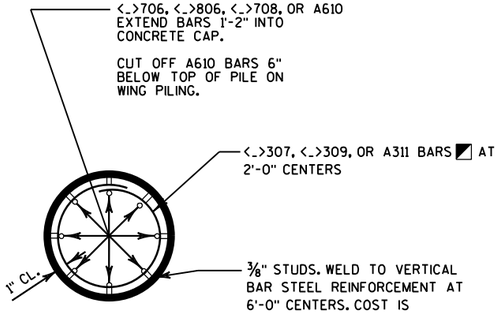
WEST ABUTMENT WINGWALLS = 15'
WEST ABUTMENT = 50'
PIER 1 TO PIER 7 = 50'
PIER 8 = 60'
PIER 9 = 90'
PIER 10R = 85'
PIER 11 TO PIER 14 = 90'
PIER 15 TO PIER 18 = 95'
PIER 19 = 90'
EAST ABUTMENT = 90'



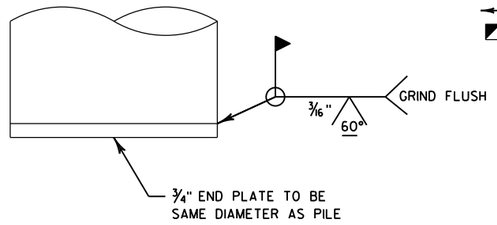
CAST-IN-PLACE PIPE PILE



CIP PILE WELD DETAIL



SECTION THRU CONCRETE CAST-IN-PLACE PILING



END PLATE DETAIL FOR CIP PILING IN ARTESIAN CONDITIONS
(ONLY USE FOR ARTESIAN CONDITIONS)

NOTES

- NOTE 1 - INSTALL FLOATING FISHING PIER PILES AS PART OF PIER 10R CONSTRUCTION. CUT OFF LONGITUDINAL STEEL 6" BELOW TOP OF PILE.
- SEE SHEETS 5, 7, 8 AND 9 FOR PILE NUMBERING AND BATTER RATES.
- CAST-IN-PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATION.
- ALL PIERS ON THE HORIZONTAL CURVE ARE RADIAL TO THE REFERENCE LINE.

LEGEND

* - PILE DIMENSIONS AT BOTTOM OF PILE CAP
⟵ - BATTERED PILE
◩ - GRADE 40 REINFORCEMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-811

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PILE LAYOUT PLAN

SHEET 4 OF 12
92

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STATE PROJECT NUMBER

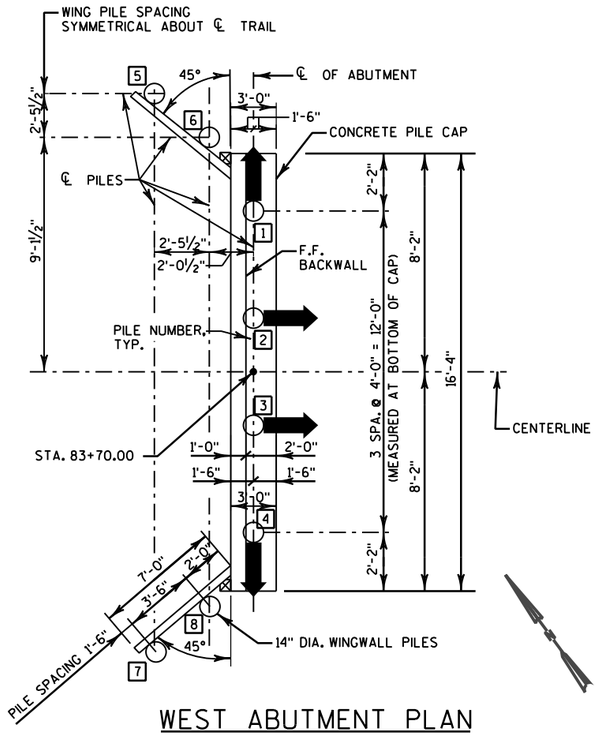
5992-08-85

NOTES

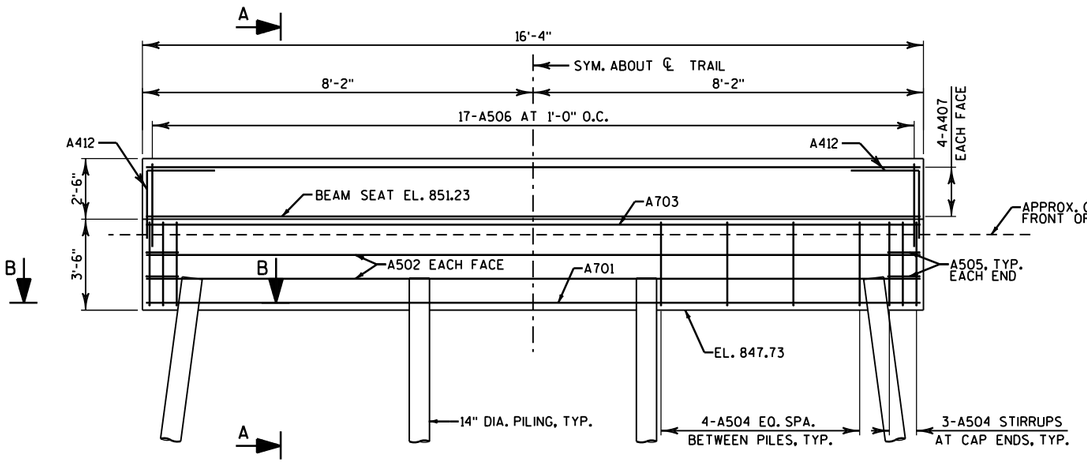
- TREAT ALL LUMBER AND TIMBER WITH ONE OF THE PRESERVATIVES RECOMMENDED IN THE STANDARD SPECIFICATIONS.
- SEE SHEET 6 FOR SECTIONS A-A, B-B, AND C-C.
- BACKFILL ABUTMENT PRIOR TO PLACING THE TRUSS.

LEGEND

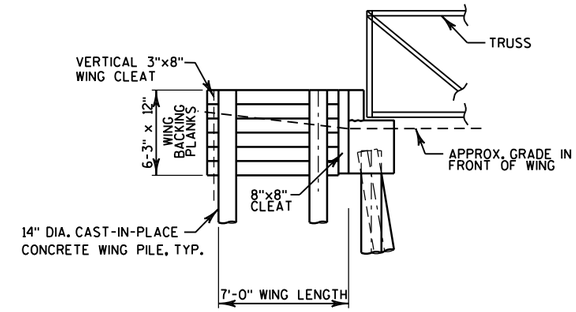
- BATTER PILES 2" PER FOOT



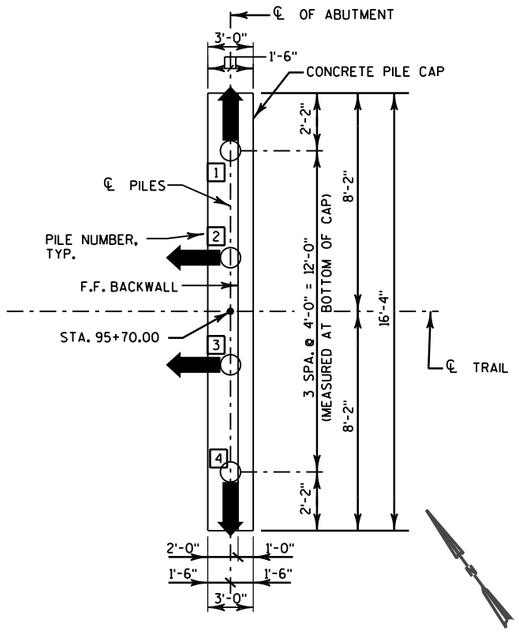
WEST ABUTMENT PLAN



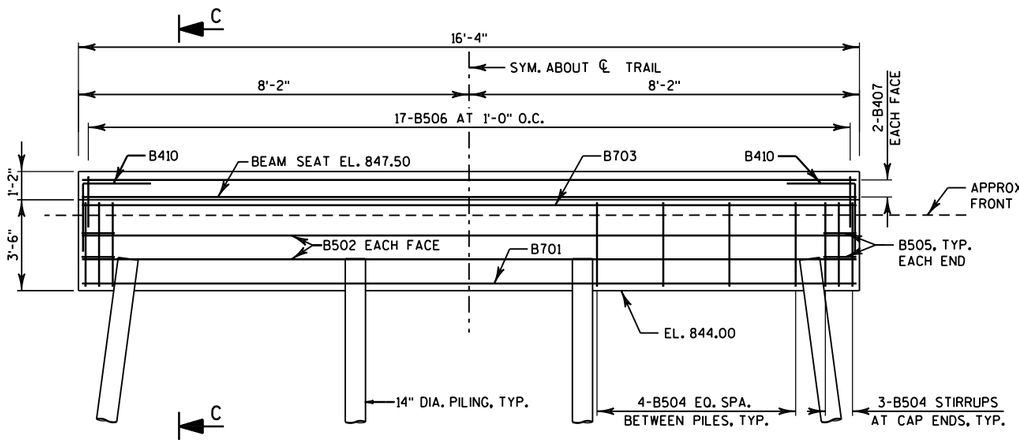
WEST ABUTMENT ELEVATION



TYPIAL WINGWALL ELEVATION



EAST ABUTMENT PLAN



EAST ABUTMENT ELEVATION

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-811

DRAWN BY RBH | PLANS CK'D. AML

ABUTMENT GENERAL

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93

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STATE PROJECT NUMBER

5992-08-85

NOTES

ALL TIMBER CONNECTORS AND HARDWARE EXCEPT THOSE OF MALLEABLE IRON SHALL BE GALVANIZED.

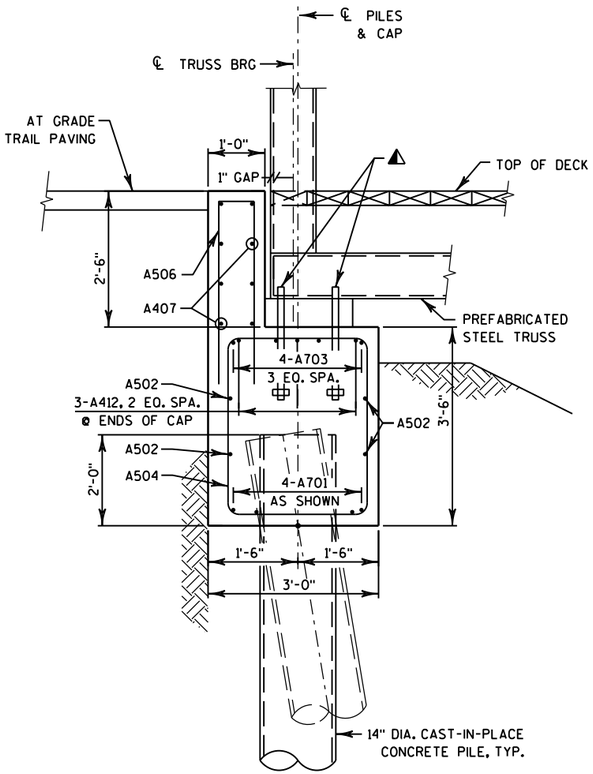
TREAT ALL LUMBER AND TIMBER WITH ONE OF THE PRESERVATIVES RECOMMENDED IN THE STANDARD SPECIFICATIONS.

ALL NUTS, WASHERS, TIMBER CONNECTORS AND HARDWARE SHALL BE INCLUDED IN THE COST FOR "TREATED LUMBER AND TIMBER".

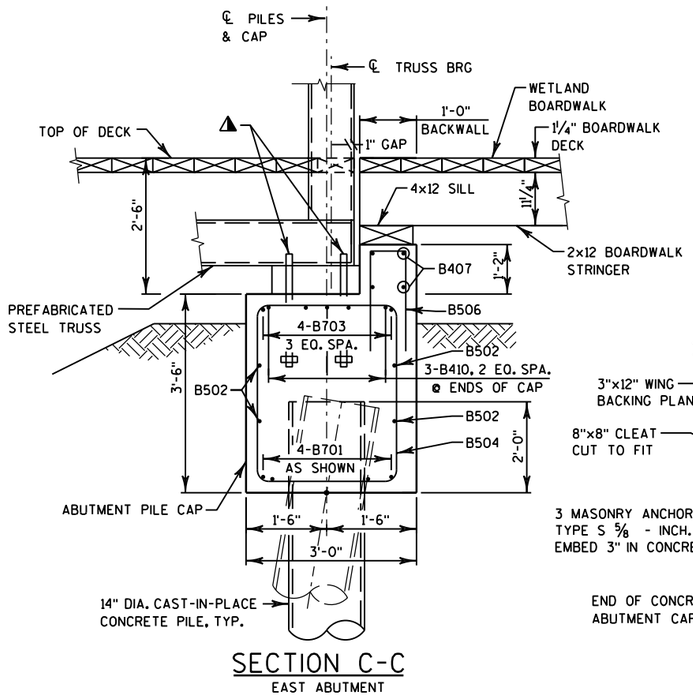
FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON 14" x 0.25" WALL THICKNESS CAST-IN-PLACE CONCRETE PILES DRIVEN TO A MINIMUM DRIVING RESISTANCE OF 25 TONS PER PILE AT ABUTMENTS AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTHS:

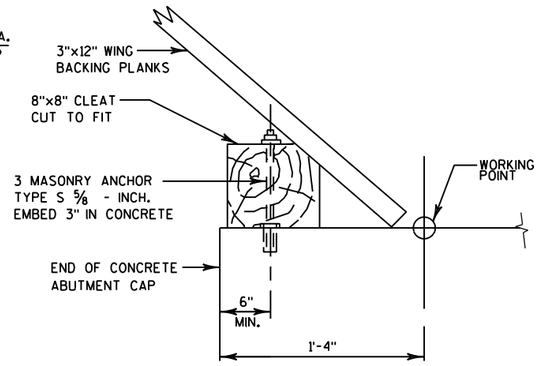
WEST ABUTMENT WINGWALLS = 15'
WEST ABUTMENT = 50'
EAST ABUTMENT = 90'



SECTION A-A
WEST ABUTMENT



SECTION C-C
EAST ABUTMENT



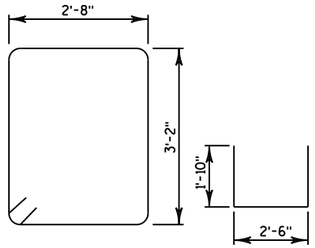
SECTION B-B
CORNER DETAIL AT CONCRETE CAP

WEST ABUTMENT - BILL OF BARS

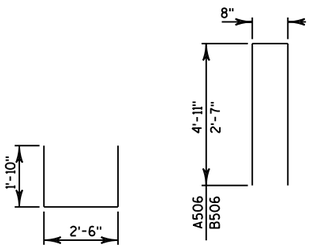
MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
A701	X	4	16'-0"			ABUTMENT CAP BOTTOM LONGITUDINAL
A502	X	4	16'-0"			ABUTMENT CAP MIDDLE LONGITUDINAL
A703	X	4	16'-0"			ABUTMENT CAP TOP LONGITUDINAL
A504	X	18	12'-0"		X	ABUTMENT CAP STIRRUPS
A505	X	4	5'-11"		X	ABUTMENT CAP ENDS HORIZONTAL
A506	X	17	10'-3"		X	BACKWALL VERTICAL - WEST ABUTMENT
A407	X	8	16'-0"			BACKWALL HORIZONTAL
A708		32	10'-5"			PILE LONGITUDINAL - ABUTMENT
A309		24	4'-2"		X	PILE TIE - ABUTMENT
A610		32	9'-6"			PILE LONGITUDINAL - ABUTMENT WINGWALLS
A311		20	4'-2"		X	PILE TIE - ABUTMENT WINGWALLS
A412	X	6	2'-11"		X	ABUTMENT CAP ENDS

EAST ABUTMENT - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
B701	X	4	16'-0"			ABUTMENT CAP BOTTOM LONGITUDINAL
B502	X	4	16'-0"			ABUTMENT CAP MIDDLE LONGITUDINAL
B703	X	4	16'-0"			ABUTMENT CAP TOP LONGITUDINAL
B504	X	18	12'-0"		X	ABUTMENT CAP STIRRUPS
B505	X	4	5'-11"		X	ABUTMENT CAP ENDS HORIZONTAL
B506	X	17	5'-7"		X	BACKWALL VERTICAL - ABUTMENT
B407	X	4	16'-0"			BACKWALL HORIZONTAL
B708		32	11'-3"			PILE LONGITUDINAL
B309		24	4'-2"		X	PILE TIE
B410	X	6	2'-11"		X	ABUTMENT CAP ENDS



A504, B504

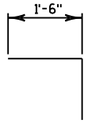


A505, B505

A506, B506



A309, A311, B309



A412, B410

LEGEND

⚠ ANCHOR RODS SUPPLIED BY PREFABRICATED STEEL TRUSS MANUFACTURER. CONTRACTOR TO COORDINATE DELIVERY, PLACEMENT LOCATIONS AND PROJECTION WITH TRUSS MANUFACTURER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-811

DRAWN BY RBH | PLANS CK'D. AML

ABUTMENT DETAILS AND BILL OF BARS

SHEET 6 OF 12
94

I.D.

DATE:

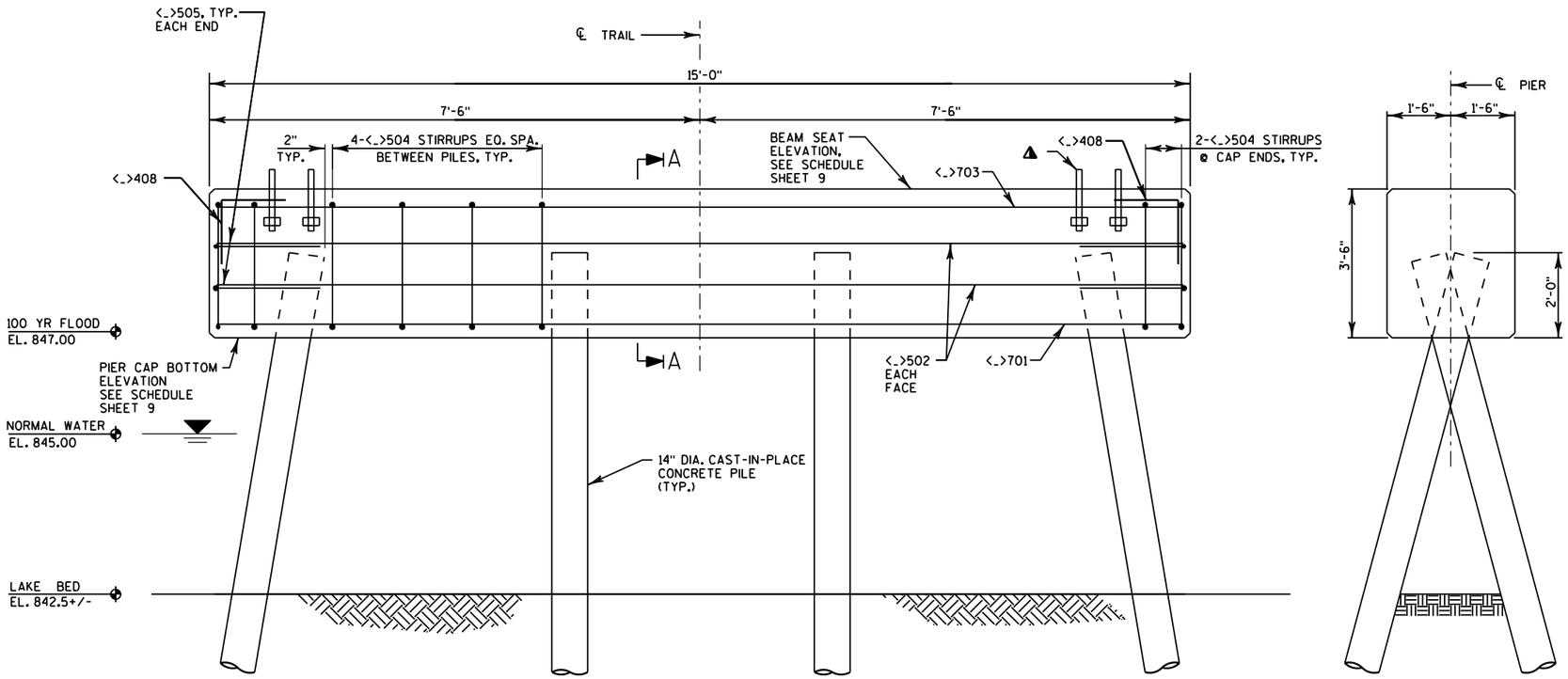
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STATE PROJECT NUMBER

5992-08-85



NOTES

- SEE SHEET 4 FOR PILE DETAILS.
- SEE SHEET 9 FOR PIER SCHEDULE AND FOUNDATION DATA.

LEGEND

- BATTER INTERIOR PILES 2" PER FOOT
- BATTER EXTERIOR PILES 3" PER FOOT
- ▲ - ANCHOR RODS SUPPLIED BY PREFABRICATED STEEL TRUSS MANUFACTURER. CONTRACTOR TO COORDINATE DELIVERY, PLACEMENT LOCATIONS, AND REQUIRED PROJECTION WITH TRUSS MANUFACTURER.

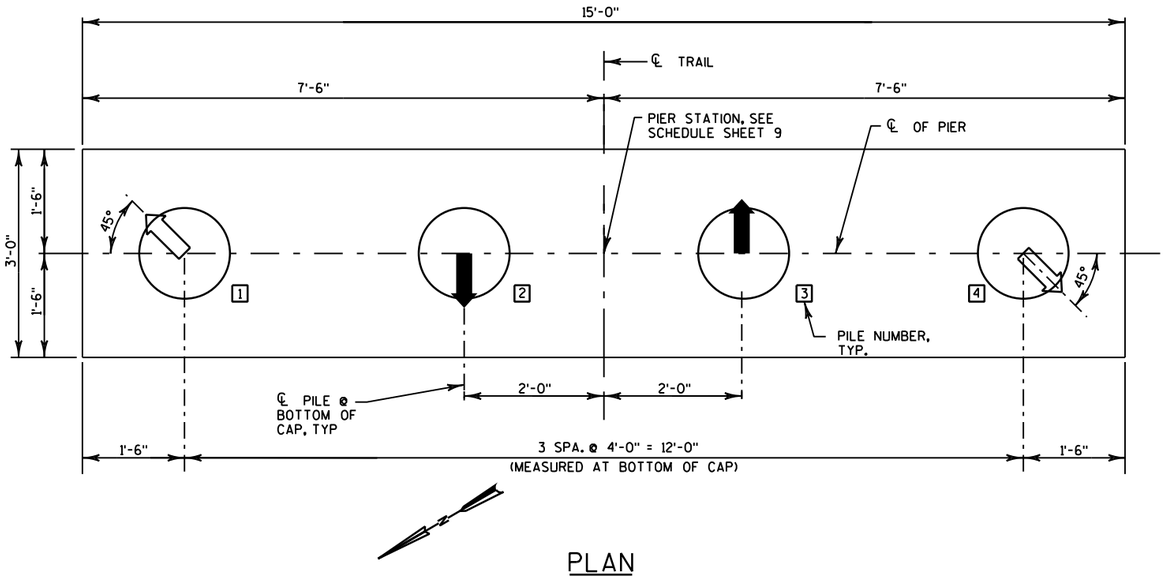
BARMARK DESIGNATIONS

<_> DESIGNATES THE FIRST LETTER OF THE BAR MARK

C = PIER 1
D = PIER 2
E = PIER 3
F = PIER 4
G = PIER 5
H = PIER 6
J = PIER 7
K = PIER 8
L = PIER 9
M = PIER 10R
N = PIER 11
P = PIER 12R
Q = PIER 13
R = PIER 14
S = PIER 15
T = PIER 16
U = PIER 17
V = PIER 18
W = PIER 19

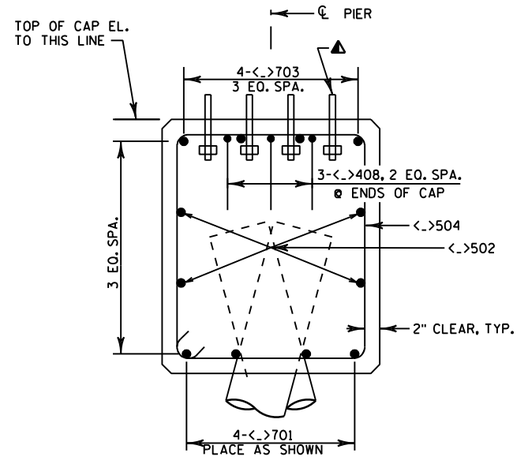
ELEVATION PIERS 1 TO 6, 15, 16, AND 19

LOOKING UP STATION



PLAN

END VIEW



SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-811

DRAWN BY RBH | PLANS CK'D. AML

PIER DETAILS 1

SHEET 7 OF 12

95

I.D.

DATE:

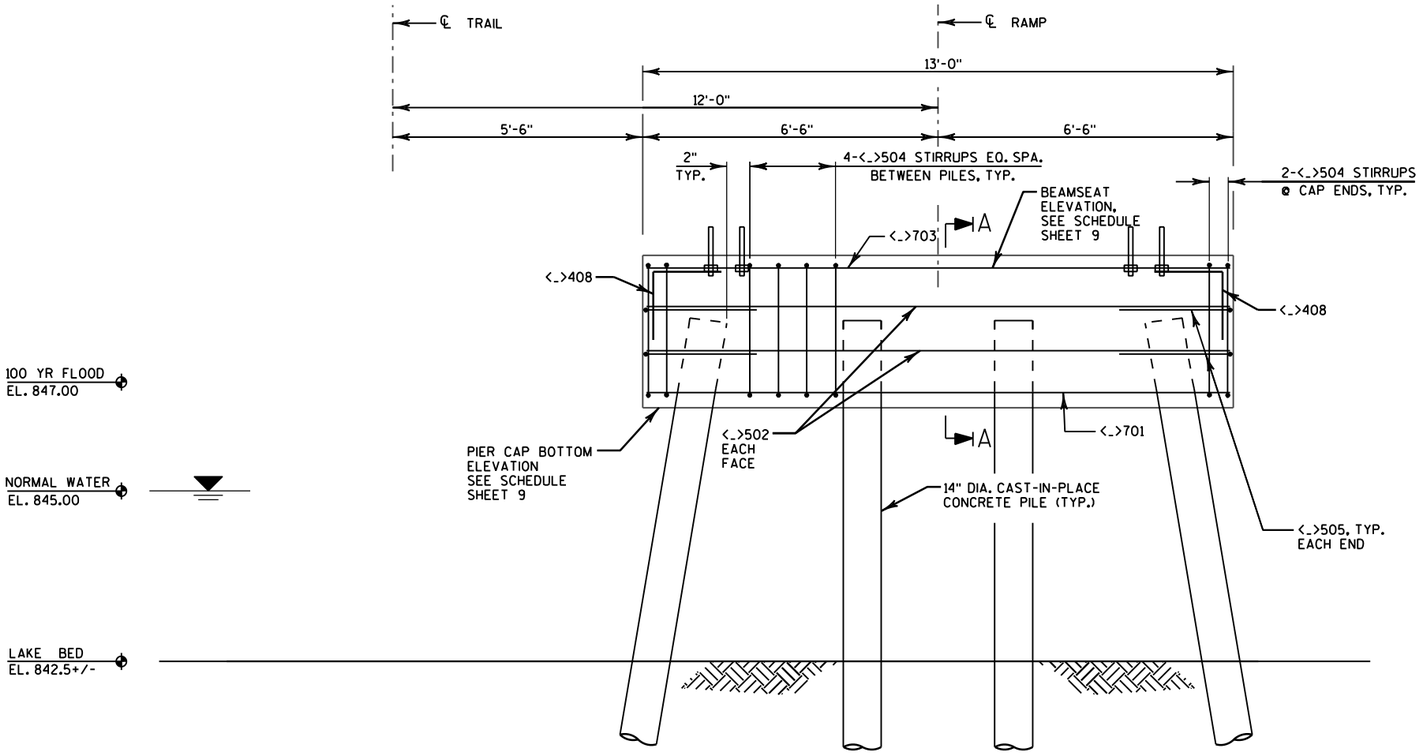
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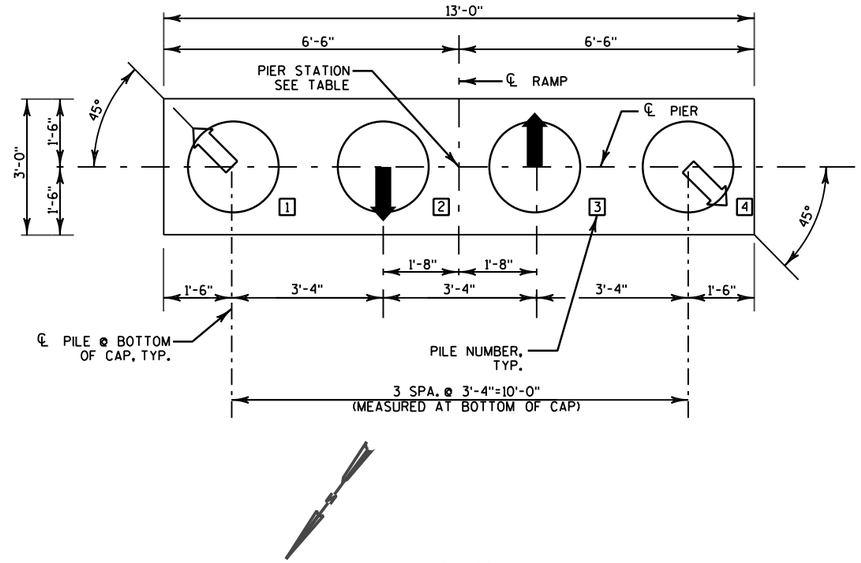
STATE PROJECT NUMBER

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ELEVATION PIERS 10R AND 12R

LOOKING UP STATION



PLAN

NOTE

- SEE SHEET 9 FOR PIER SCHEDULE AND FOUNDATION DATA.
- SEE SHEET 7 FOR SECTION A-A.

BARMARK DESIGNATIONS

<_> DESIGNATES THE FIRST LETTER OF THE BAR MARK

C = PIER 1
D = PIER 2
E = PIER 3
F = PIER 4
G = PIER 5
H = PIER 6
J = PIER 7
K = PIER 8
L = PIER 9
M = PIER 10R
N = PIER 11
P = PIER 12R
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R = PIER 14
S = PIER 15
T = PIER 16
U = PIER 17
V = PIER 18
W = PIER 19

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-811

DRAWN BY RBH | PLANS CK'D. AML

PIER DETAILS 2

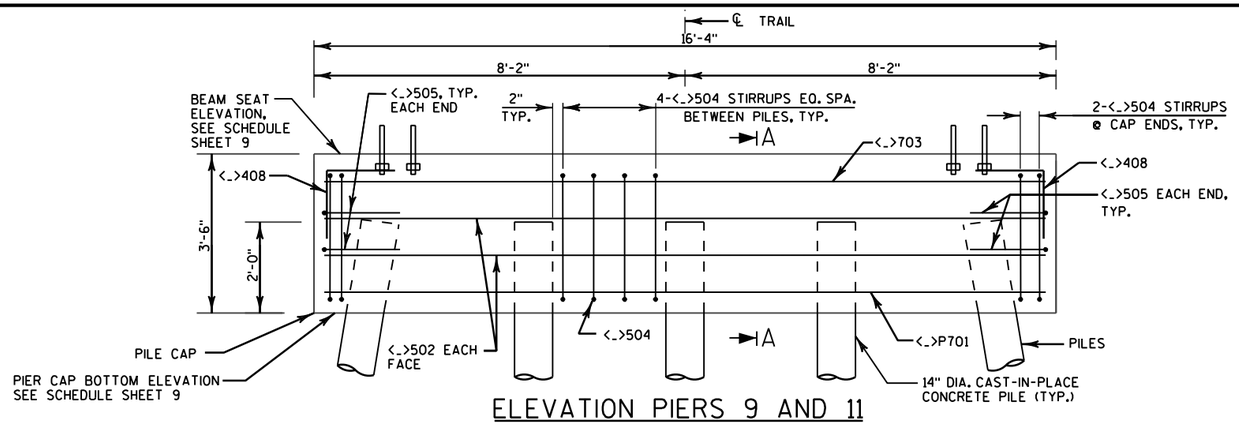
SHEET 8 OF 12
96

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I.D. DATE:

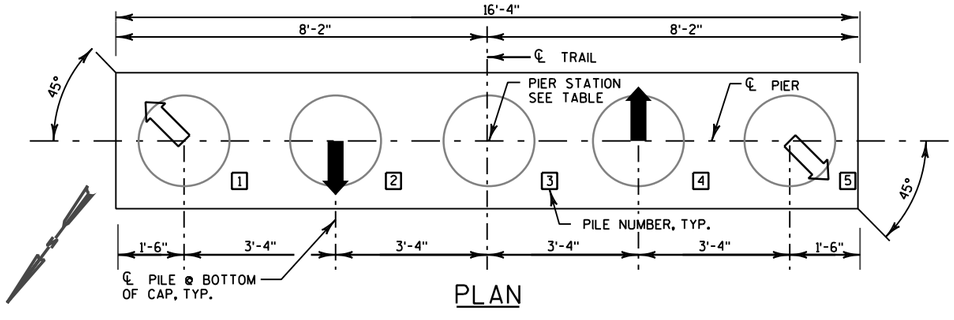
STATE PROJECT NUMBER

5992-08-85



ELEVATION PIERS 9 AND 11

LOOKING UP STATION



PLAN

PIER SCHEDULE

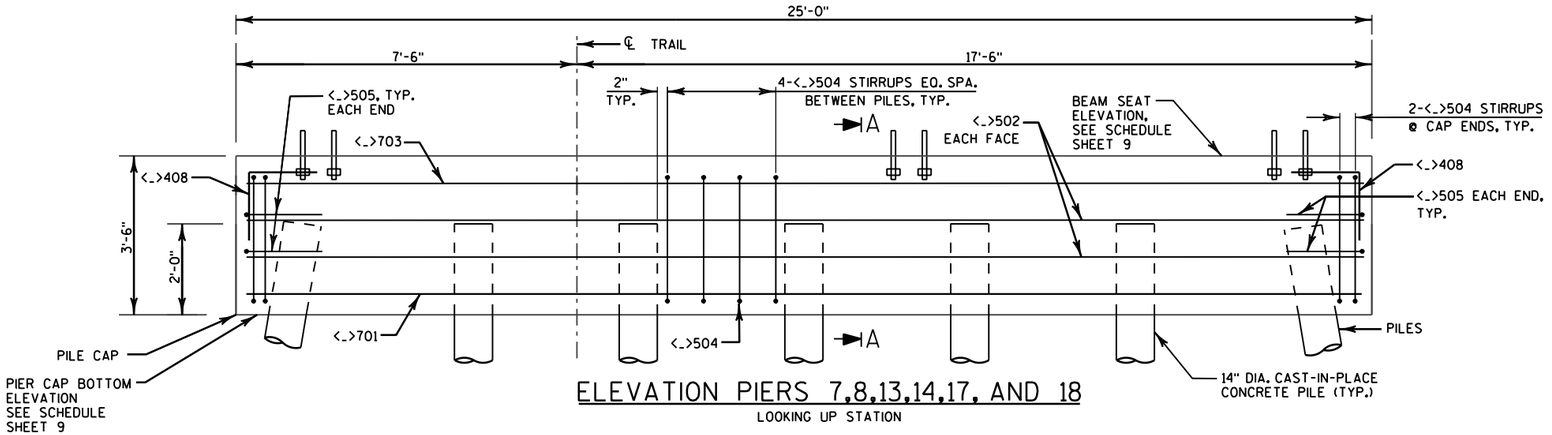
	CENTERLINE STATION	TOP OF PILE CAP ELEV.	BOTTOM OF PILE CAP ELEV.	NUMBER OF PILES	ESTIMATED PILE LENGTH (FT)	Total Pile Length (FT)	REQUIRED DRIVING RESISTANCE (TONS)**
W. ABUT. WINGS	-	-	-	4	15	60	-
W. ABUT.	83+70.00	851.23	847.73	4	50	200	25
Pier 1	84+20.00	851.48	847.98	4	50	200	45
Pier 2	84+70.00	851.73	848.23	4	50	200	45
Pier 3	85+20.00	851.98	848.48	4	50	200	45
Pier 4	85+70.00	852.23	848.73	4	50	200	45
Pier 5	86+20.00	852.48	848.98	4	50	200	45
Pier 6	86+70.00	852.73	849.23	4	50	200	45
Pier 7	87+20.00	852.98	849.48	7	50	350	65
Pier 8	87+70.00	853.23	849.73	7	60	420	65
Pier 9	88+70.00	853.22	849.72	5	90	450	65
Pier 10R	89+20.00	845.00	841.50	6 ◓	85	510	25
Pier 11	89+70.00	851.60	848.10	5	90	450	65
Pier 12R	89+80.00	846.78	843.28	4	90	360	45
Pier 13	90+60.00	849.14	845.64	7	90	630	65
Pier 14	90+70.00	848.87	845.37	7	90	630	65
Pier 15	91+70.00	847.50	844.00	4	95	380	75
Pier 16	92+70.00	847.50	844.00	4	95	380	75
Pier 17	93+70.00	847.50	844.00	7	95	665	65
Pier 18	94+20.00	847.50	844.00	7	95	665	65
Pier 19	95+20.00	847.50	844.00	4	90	360	75

◓ - INCLUDES FLOATING FISHING PIER PILES. SEE TRAIL PLANS.

BARMARK DESIGNATIONS

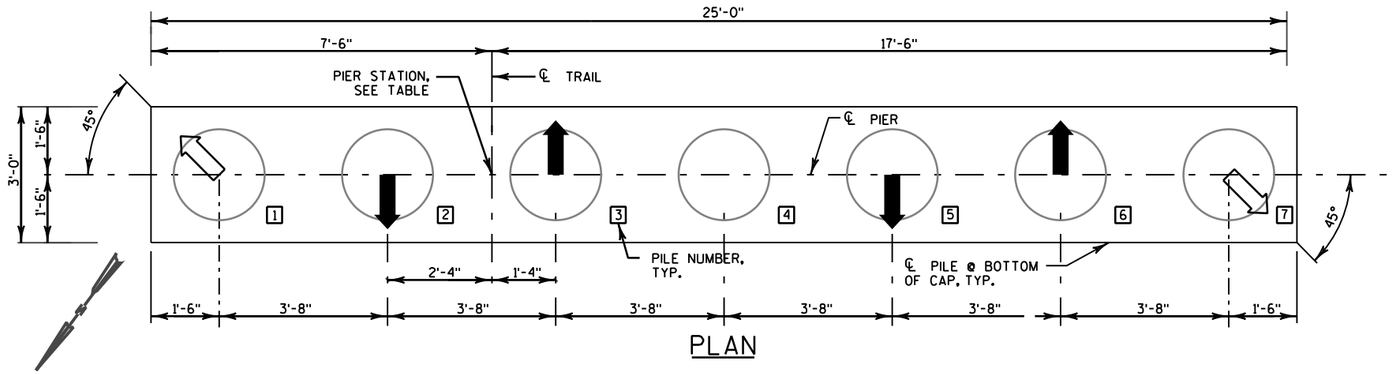
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U = PIER 17
V = PIER 18



ELEVATION PIERS 7,8,13,14,17, AND 18

LOOKING UP STATION



PLAN

NOTE

SEE SHEET 7 FOR SECTION A-A.

FOUNDATION DATA

PIERS TO BE SUPPORTED ON 14" x 0.25" WALL THICKNESS CAST-IN-PLACE CONCRETE PILES DRIVEN TO A MINIMUM DRIVING RESISTANCE OF 45 TONS AT PIERS 1 TO 6, 12R, 65 TONS AT PIERS 7 TO 9, 11, 13, 14, 17, 18, 25 TONS AT PIER 10R AND 75 TONS AT PIERS 15, 16 AND 19 AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTHS:

PIER 1 TO PIER 7 = 50'
PIER 8 = 60'
PIER 9 = 90'
PIER 10R = 85'
PIER 11 TO PIER 14 = 90'
PIER 15 TO PIER 18 = 95'
PIER 19 = 90'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-811

DRAWN BY RBH | PLANS CK'D. AML

PIER DETAILS 3

SHEET 9 OF 12
97

I.D.

DATE:

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STATE PROJECT NUMBER

5992-08-85

PIER 1 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
C701	X	4	14'-8"			PIER CAP BOTTOM LONGITUDINAL
C502	X	4	14'-8"			PIER CAP MIDDLE LONGITUDINAL
C703	X	4	14'-8"			PIER CAP TOP LONGITUDINAL
C504	X	16	12'-0"		X	PIER CAP STIRRUPS
C505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
C806		32	14'-6"			PILE LONGITUDINAL
C307		32	4'-2"		X	PILE TIES
C408	X	6	2'-11"		X	PIER CAP ENDS

PIER 2 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
D701	X	4	14'-8"			PIER CAP BOTTOM LONGITUDINAL
D502	X	4	14'-8"			PIER CAP MIDDLE LONGITUDINAL
D703	X	4	14'-8"			PIER CAP TOP LONGITUDINAL
D504	X	16	12'-0"		X	PIER CAP STIRRUPS
D505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
D806		32	15'-6"			PILE LONGITUDINAL
D307		32	4'-2"		X	PILE TIES
D408	X	6	2'-11"		X	PIER CAP ENDS

PIER 3 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
E701	X	4	14'-8"			PIER CAP BOTTOM LONGITUDINAL
E502	X	4	14'-8"			PIER CAP MIDDLE LONGITUDINAL
E703	X	4	14'-8"			PIER CAP TOP LONGITUDINAL
E504	X	16	12'-0"		X	PIER CAP STIRRUPS
E505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
E806		32	16'-0"			PILE LONGITUDINAL
E307		32	4'-2"		X	PILE TIES
E408	X	6	2'-11"		X	PIER CAP ENDS

PIER 4 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
F701	X	4	14'-8"			PIER CAP BOTTOM LONGITUDINAL
F502	X	4	14'-8"			PIER CAP MIDDLE LONGITUDINAL
F703	X	4	14'-8"			PIER CAP TOP LONGITUDINAL
F504	X	16	12'-0"		X	PIER CAP STIRRUPS
F505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
F806		32	18'-0"			PILE LONGITUDINAL
F307		36	4'-2"		X	PILE TIES
F408	X	6	2'-11"		X	PIER CAP ENDS

PIER 5 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
G701	X	4	14'-8"			PIER CAP BOTTOM LONGITUDINAL
G502	X	4	14'-8"			PIER CAP MIDDLE LONGITUDINAL
G703	X	4	14'-8"			PIER CAP TOP LONGITUDINAL
G504	X	16	12'-0"		X	PIER CAP STIRRUPS
G505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
G806		32	17'-6"			PILE LONGITUDINAL
G307		36	4'-2"		X	PILE TIES
G408	X	6	2'-11"		X	PIER CAP ENDS

PIER 6 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
H701	X	4	14'-8"			PIER CAP BOTTOM LONGITUDINAL
H502	X	4	14'-8"			PIER CAP MIDDLE LONGITUDINAL
H703	X	4	14'-8"			PIER CAP TOP LONGITUDINAL
H504	X	16	12'-0"		X	PIER CAP STIRRUPS
H505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
H806		32	18'-6"			PILE LONGITUDINAL
H307		40	4'-2"		X	PILE TIES
H408	X	6	2'-11"		X	PIER CAP ENDS

PIER 7 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
J701	X	4	24'-8"			PIER CAP BOTTOM LONGITUDINAL
J502	X	4	24'-8"			PIER CAP MIDDLE LONGITUDINAL
J703	X	4	24'-8"			PIER CAP TOP LONGITUDINAL
J504	X	28	12'-0"		X	PIER CAP STIRRUPS
J505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
J806		56	20'-0"			PILE LONGITUDINAL
J307		70	4'-2"		X	PILE TIES
J408	X	6	2'-11"		X	PIER CAP ENDS

PIER 8 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
K701	X	4	24'-8"			PIER CAP BOTTOM LONGITUDINAL
K502	X	4	24'-8"			PIER CAP MIDDLE LONGITUDINAL
K703	X	4	24'-8"			PIER CAP TOP LONGITUDINAL
K504	X	28	12'-0"		X	PIER CAP STIRRUPS
K505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
K806		56	20'-0"			PILE LONGITUDINAL
K307		70	4'-2"		X	PILE TIES
K408	X	6	2'-11"		X	PIER CAP ENDS

PIER 9 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
L701	X	4	16'-0"			PIER CAP BOTTOM LONGITUDINAL
L502	X	4	16'-0"			PIER CAP MIDDLE LONGITUDINAL
L703	X	4	16'-0"			PIER CAP TOP LONGITUDINAL
L504	X	20	12'-0"		X	PIER CAP STIRRUPS
L505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
L1006		40	20'-6"			PILE LONGITUDINAL
L307		55	4'-2"		X	PILE TIES
L408	X	6	2'-11"		X	PIER CAP ENDS

PIER 10R - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
M701	X	4	12'-8"			PIER CAP BOTTOM LONGITUDINAL
M502	X	4	12'-8"			PIER CAP MIDDLE LONGITUDINAL
M703	X	4	12'-8"			PIER CAP TOP LONGITUDINAL
M504	X	16	12'-0"		X	PIER CAP STIRRUPS
M505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
M706		48	12'-6"			PILE LONGITUDINAL
M307		42	4'-2"		X	PILE TIES
M408	X	6	2'-11"		X	PIER CAP ENDS

PIER 11 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
N701	X	4	16'-0"			PIER CAP BOTTOM LONGITUDINAL
N502	X	4	16'-0"			PIER CAP MIDDLE LONGITUDINAL
N703	X	4	16'-0"			PIER CAP TOP LONGITUDINAL
N504	X	20	12'-0"		X	PIER CAP STIRRUPS
N505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
N1006		40	19'-6"			PILE LONGITUDINAL
N307		50	4'-2"		X	PILE TIES
N408	X	6	2'-11"		X	PIER CAP ENDS

PIER 12R - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
P701	X	4	12'-8"			PIER CAP BOTTOM LONGITUDINAL
P502	X	4	12'-8"			PIER CAP MIDDLE LONGITUDINAL
P703	X	4	12'-8"			PIER CAP TOP LONGITUDINAL
P504	X	16	12'-0"		X	PIER CAP STIRRUPS
P505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
P806		32	13'-6"			PILE LONGITUDINAL
P307		28	4'-2"		X	PILE TIES
P408	X	6	2'-11"		X	PIER CAP ENDS

PIER 13 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
Q701	X	4	24'-8"			PIER CAP BOTTOM LONGITUDINAL
Q502	X	4	24'-8"			PIER CAP MIDDLE LONGITUDINAL
Q703	X	4	24'-8"			PIER CAP TOP LONGITUDINAL
Q504	X	28	12'-0"		X	PIER CAP STIRRUPS
Q505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
Q806		56	16'-0"			PILE LONGITUDINAL
Q307		56	4'-2"		X	PILE TIES
Q408	X	6	2'-11"		X	PIER CAP ENDS

PIER 14 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
R701	X	4	24'-8"			PIER CAP BOTTOM LONGITUDINAL
R502	X	4	24'-8"			PIER CAP MIDDLE LONGITUDINAL
R703	X	4	24'-8"			PIER CAP TOP LONGITUDINAL
R504	X	28	12'-0"		X	PIER CAP STIRRUPS
R505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
R806		56	16'-0"			PILE LONGITUDINAL
R307		56	4'-2"		X	PILE TIES
R408	X	6	2'-11"		X	PIER CAP ENDS

PIER 15 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
S701	X	4	14'-8"			PIER CAP BOTTOM LONGITUDINAL
S502	X	4	14'-8"			PIER CAP MIDDLE LONGITUDINAL
S703	X	4	14'-8"			PIER CAP TOP LONGITUDINAL
S504	X	16	12'-0"		X	PIER CAP STIRRUPS
S505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
S806		32	14'-6"			PILE LONGITUDINAL
S307		32	4'-2"		X	PILE TIES
S408	X	6	2'-11"		X	PIER CAP ENDS

PIER 16 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
T701	X	4	14'-8"			PIER CAP BOTTOM LONGITUDINAL
T502	X	4	14'-8"			PIER CAP MIDDLE LONGITUDINAL
T703	X	4	14'-8"			PIER CAP TOP LONGITUDINAL
T504	X	16	12'-0"		X	PIER CAP STIRRUPS
T505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
T806		32	13'-6"			PILE LONGITUDINAL
T307		28	4'-2"		X	PILE TIES
T408	X	6	2'-11"		X	PIER CAP ENDS

PIER 17 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
U701	X	4	24'-8"			PIER CAP BOTTOM LONGITUDINAL
U502	X	4	24'-8"			PIER CAP MIDDLE LONGITUDINAL
U703	X	4	24'-8"			PIER CAP TOP LONGITUDINAL
U504	X	28	12'-0"		X	PIER CAP STIRRUPS
U505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
U806		56	13'-6"			PILE LONGITUDINAL
U307		49	4'-2"		X	PILE TIES
U408	X	6	2'-11"		X	PIER CAP ENDS

PIER 18 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
V701	X	4	24'-8"			PIER CAP BOTTOM LONGITUDINAL
V502	X	4	24'-8"			PIER CAP MIDDLE LONGITUDINAL
V703	X	4	24'-8"			PIER CAP TOP LONGITUDINAL
V504	X	28	12'-0"		X	PIER CAP STIRRUPS
V505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
V806		56	13'-6"			PILE LONGITUDINAL
V307		49	4'-2"		X	PILE TIES
V408	X	6	2'-11"		X	PIER CAP ENDS

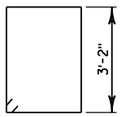
PIER 19 - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
W701	X	4	14'-8"			PIER CAP BOTTOM LONGITUDINAL
W502	X	4	14'-8"			PIER CAP MIDDLE LONGITUDINAL
W703	X	4	14'-8"			PIER CAP TOP LONGITUDINAL
W504	X	16	12'-0"		X	PIER CAP STIRRUPS
W505	X	4	5'-11"		X	PIER CAP ENDS HORIZONTAL
W806		32	12'-6"			PILE LONGITUDINAL
W307		28	4'-2"		X	PILE TIES
W408	X	6	2'-11"		X	PIER CAP ENDS

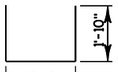
BARMARK DESIGNATIONS

<_> DESIGNATES THE FIRST LETTER OF THE BAR MARK

C = PIER 1
D = PIER 2
E = PIER 3
F = PIER 4
G = PIER 5
H = PIER 6
J = PIER 7
K = PIER 8
L = PIER 9
M = PIER 10R
N = PIER 11
P = PIER 12R
Q = PIER 13
R = PIER 14
S = PIER 15
T = PIER 16
U = PIER 17
V = PIER 18
W = PIER 19



<_>504



<_>505



<_>307



<_>408

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-811

DRAWN BY RBH | PLANS CK'D. AML

PIER
BILL OF BARS

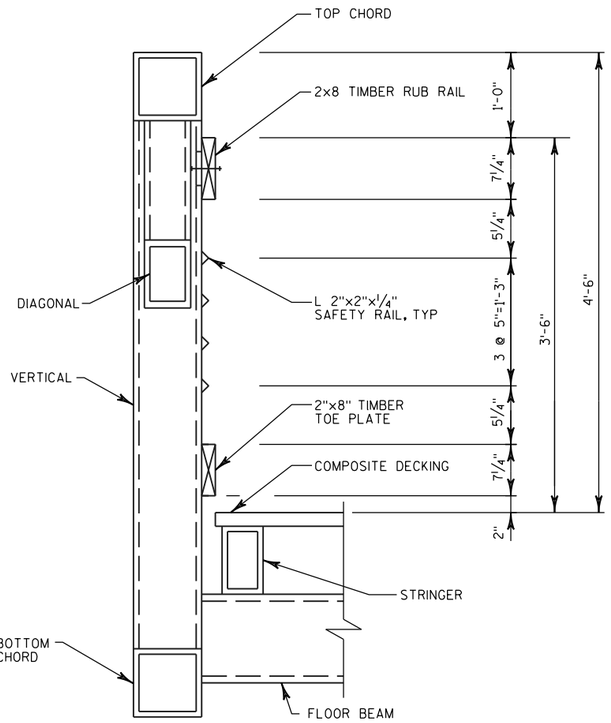
SHEET 10 OF 12
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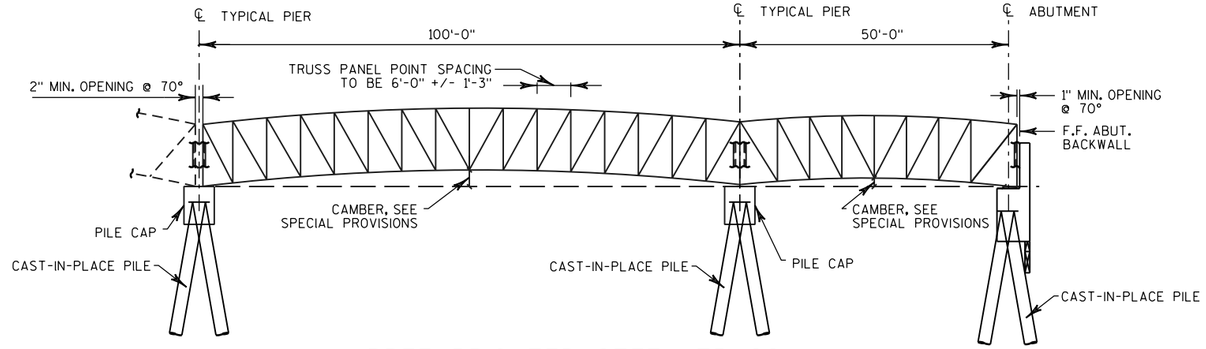
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DATE:

STATE PROJECT NUMBER
5992-08-85

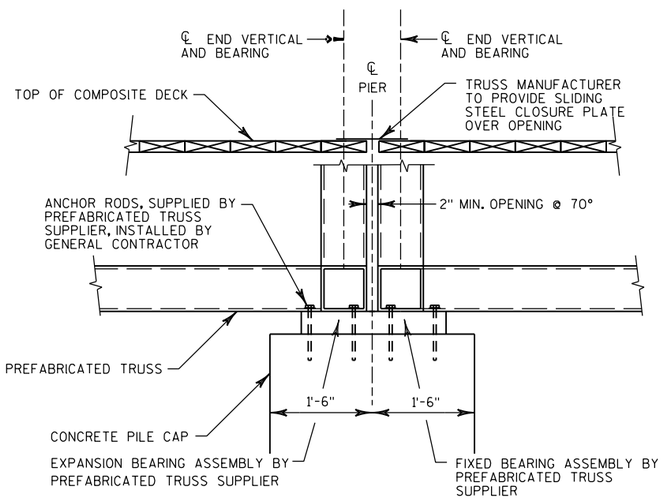


TYPICAL RAILING DETAIL

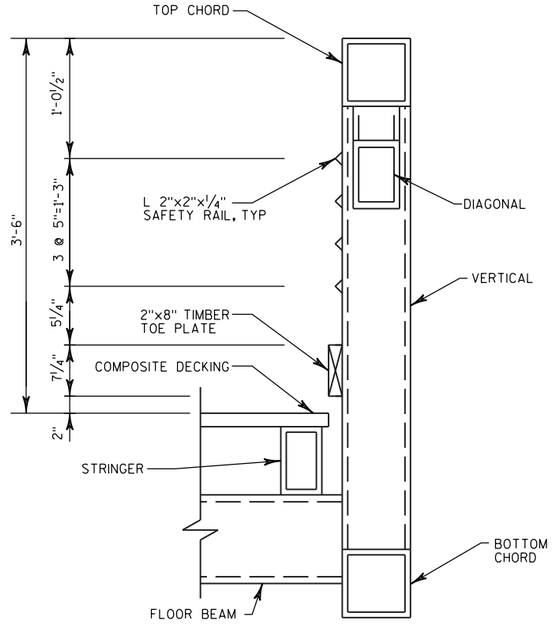


PREFABRICATED STEEL TRUSS

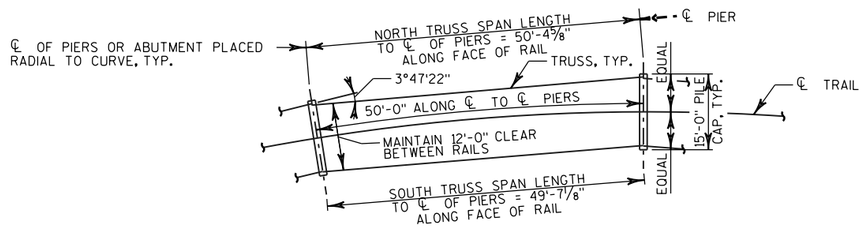
TYPICAL ELEVATION



TRUSS BEARING AT PIER



PEDESTRIAN OVERLOOK PLATFORM AND FISHING PLATFORM RAMP RAILING DETAIL



TRUSS LAYOUT ON CURVED ALIGNMENT

STATION 83+70.00 TO 86+70.00

8

8

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STRUCTURE B-13-811

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TRUSS DETAILS 1

SHEET 11 OF 12
99

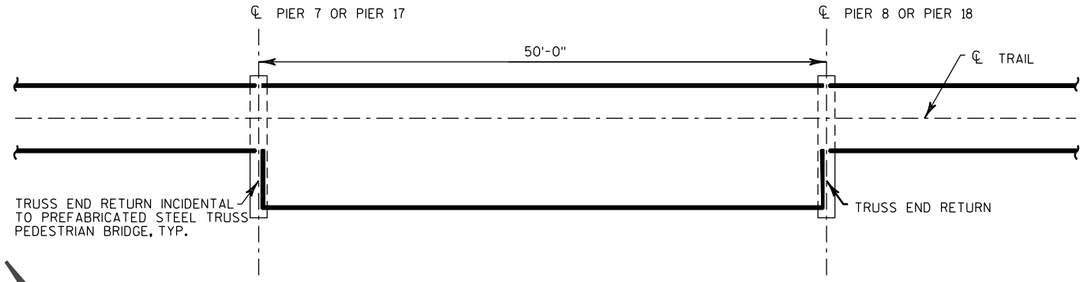
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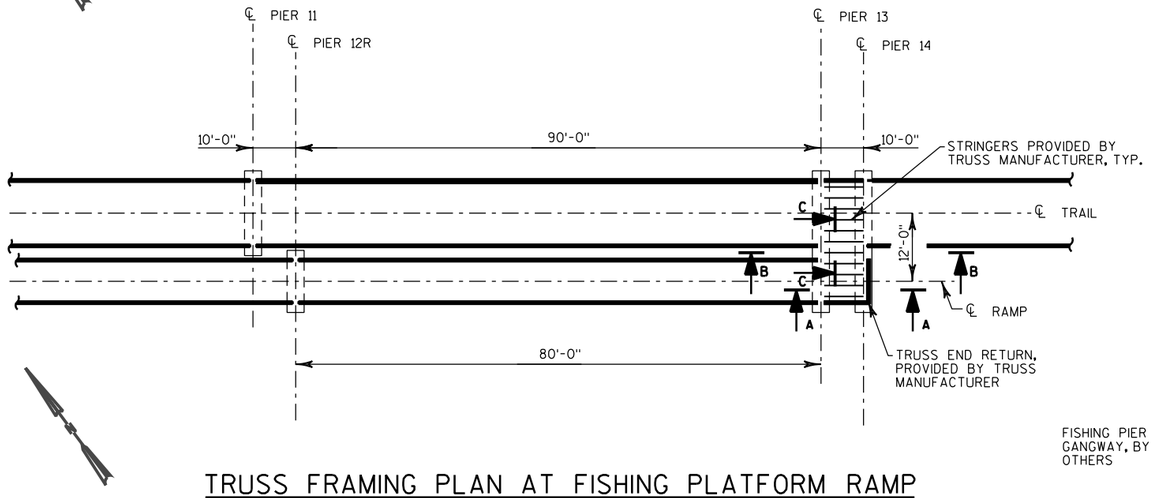
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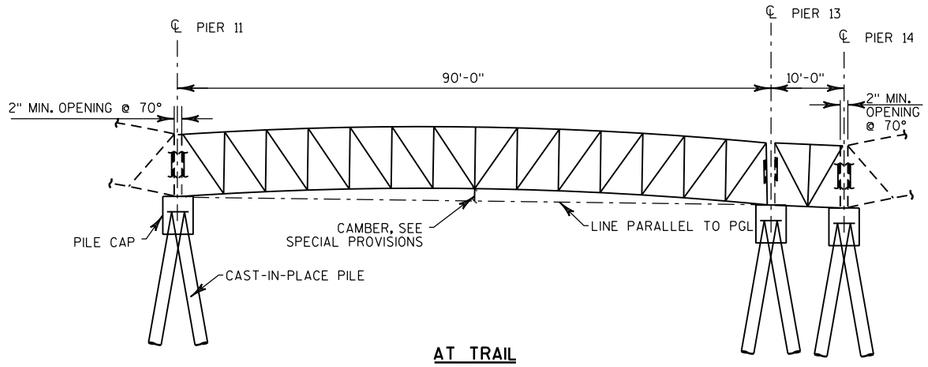
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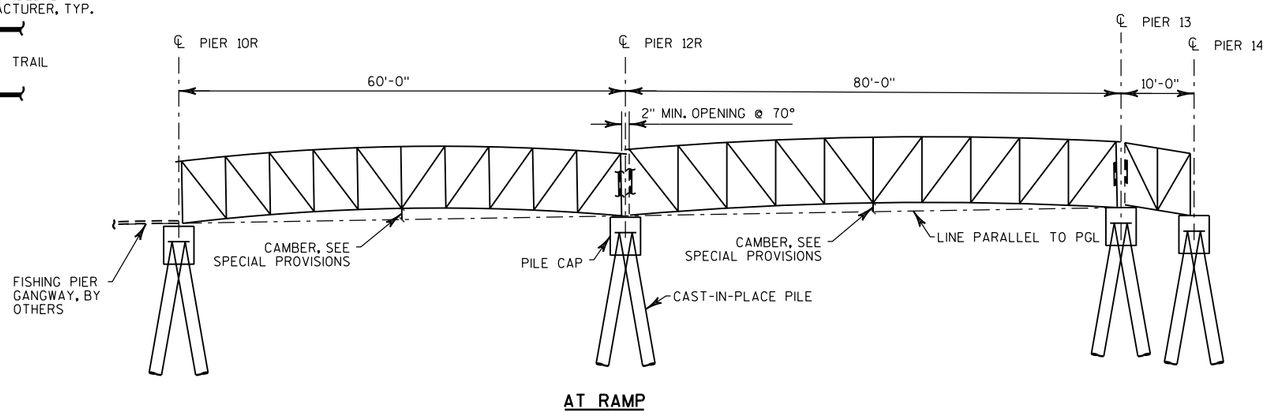
TRUSS FRAMING PLAN AT PEDESTRIAN OVERLOOK PLATFORM



TRUSS FRAMING PLAN AT FISHING PLATFORM RAMP



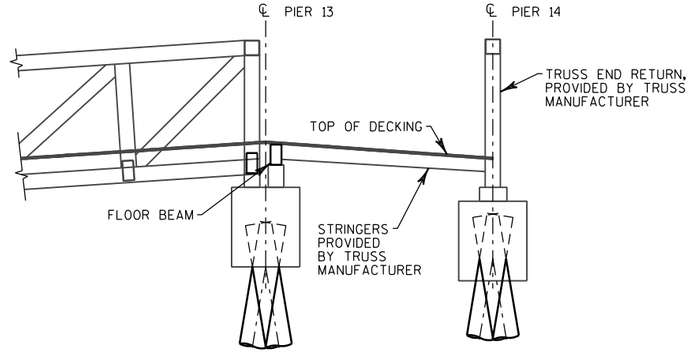
AT TRAIL



AT RAMP

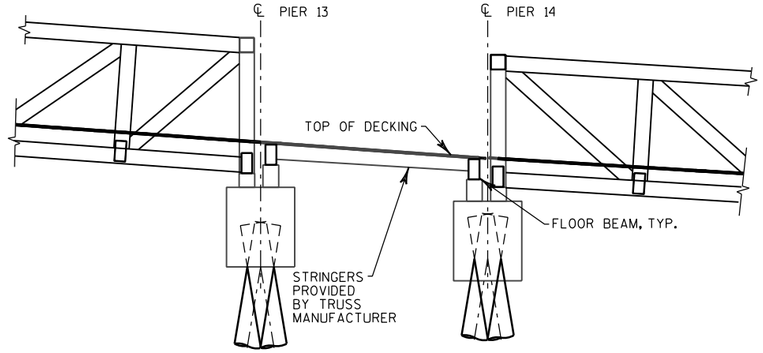
PREFABRICATED STEEL TRUSS

ELEVATIONS NEAR FISHING PLATFORM



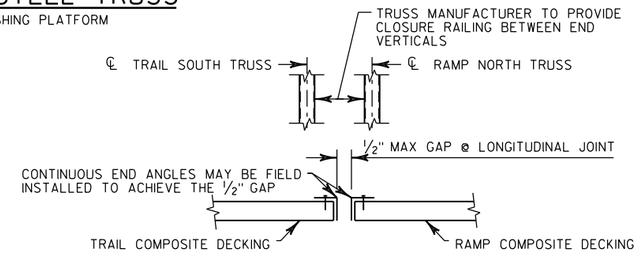
SECTION A-A

AT RAMP



SECTION B-B

AT TRAIL



SECTION C-C

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-811

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TRUSS DETAILS 2

SHEET 12 OF 12
100

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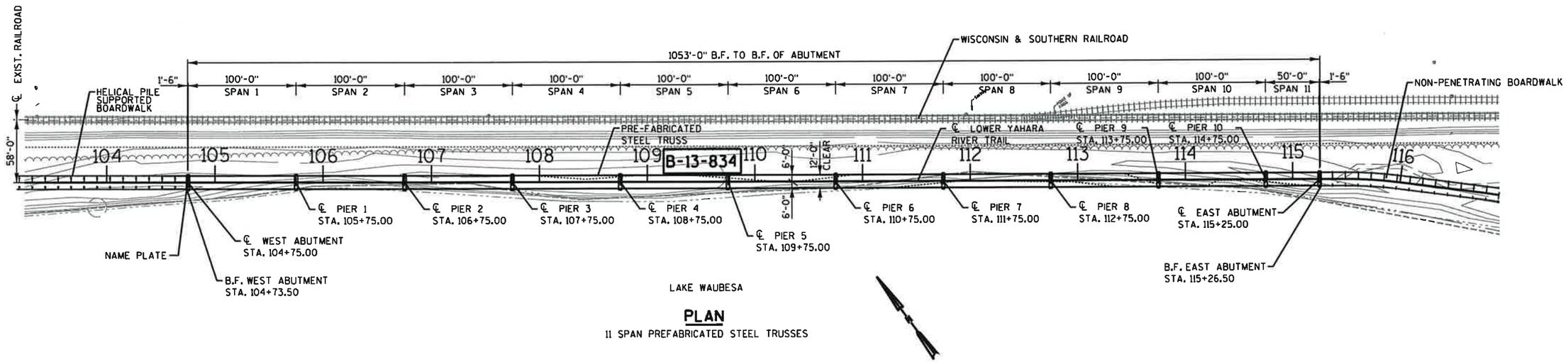
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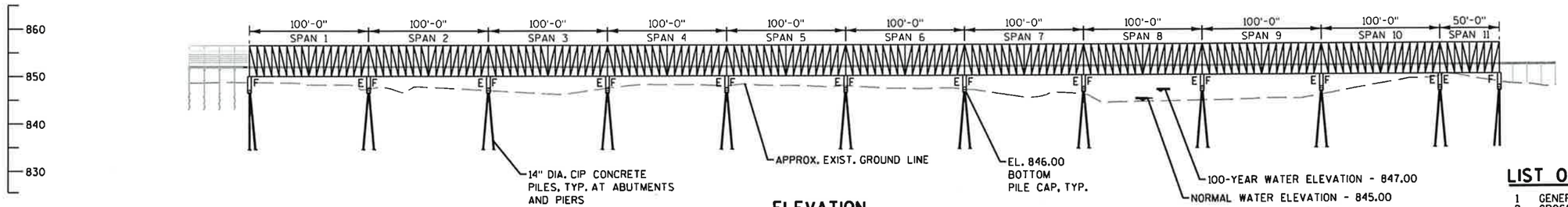
STATE PROJECT NUMBER

5992-08-85



PLAN

11 SPAN PREFABRICATED STEEL TRUSSES



ELEVATION

LOOKING NORTH

DESIGN DATA

LIVE LOAD:

VEHICLE DESIGN LOAD: H-10
PEDESTRIAN DESIGN LOAD: 90 PSF

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY	
SUBSTRUCTURE	fc' = 3500 PSI
STEEL REINFORCEMENT	
GRADE 60	fy = 60,000 PSI
GRADE 40	fy = 40,000 PSI
PREFABRICATED STEEL TRUSS	
HSS MEMBERS ASTM A847, GRADE 50	fy = 50,000 PSI
ROLLED SHAPES AND PLATES	
ASTM A588, GRADE 50	fy = 50,000 PSI
COMPOSITE DECK	250 PSI ALLOWABLE (BENDING)
	200 PSI ALOOWABLE (SHEAR)

HORIZONTAL CURVE DATA

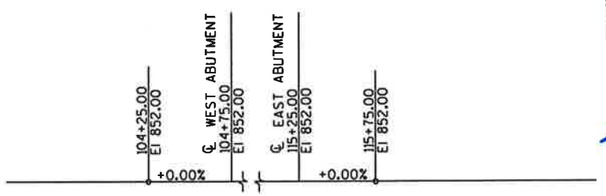
CURVE 18
P.I. = 115+73.52
Y = 466,685.53
X = 840,030.71
DELTA = 7°27'29" RT
T = 26.40'
L = 52.72'
R = 405.00'
P.C. = 115+47.12
P.T. = 115+99.84

FOUNDATION DATA

ABUTMENTS AND PIERS TO BE SUPPORTED ON 14" x 0.25" WALL THICKNESS CAST-IN-PLACE CONCRETE PILES DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 50 TONS** PER PILE AT ABUTMENTS AND 75 TONS** PER PILE AT PIERS AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTHS:

WEST ABUTMENT = 40'
PIER 1 = 80'
PIER 2 = 70'
PIER 3 = 60'
PIER 4 = 50'
PIER 5 = 45'
PIER 6 = 40'
PIER 7 = 40'
PIER 8 = 40'
PIER 9 = 40'
PIER 10 = 40'
EAST ABUTMENT = 40'

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



PROFILE GRADE LINE

LOWER YAHARA RIVER TRAIL

LIST OF DRAWINGS

1 GENERAL PLAN & ELEVATION
2 CROSS SECTION,GENERAL NOTES, AND QUANTITIES
3 SUBSURFACE EXPLORATION
4 PILE LAYOUT PLAN
5 ABUTMENT GENERAL
6 PIERS
7 TRUSS DETAILS

WISCONSIN
KEVIN G. WOOD
E-32070
MILWAUKEE, WI
PROFESSIONAL ENGINEER

10-14-2015

NO.	DATE	REVISION	BY

GRÄEF
One Honey Creek Corporate Center
125 South 84th Street
Suite 401
Milwaukee, WI 53214-1470
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 10/15/15
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-13-834

LOWER YAHARA RIVER TRAIL OVER LAKE WAUBESA

COUNTY DANE
~~TOWN/CITY~~/VILLAGE MCFARLAND

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KGW	RB	RBH	AML

GENERAL PLAN & ELEVATION

SHEET 1 OF 7
101

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

CONSULTANT CONTACT:
KEVIN WOOD P.E.
(414) 259-1500

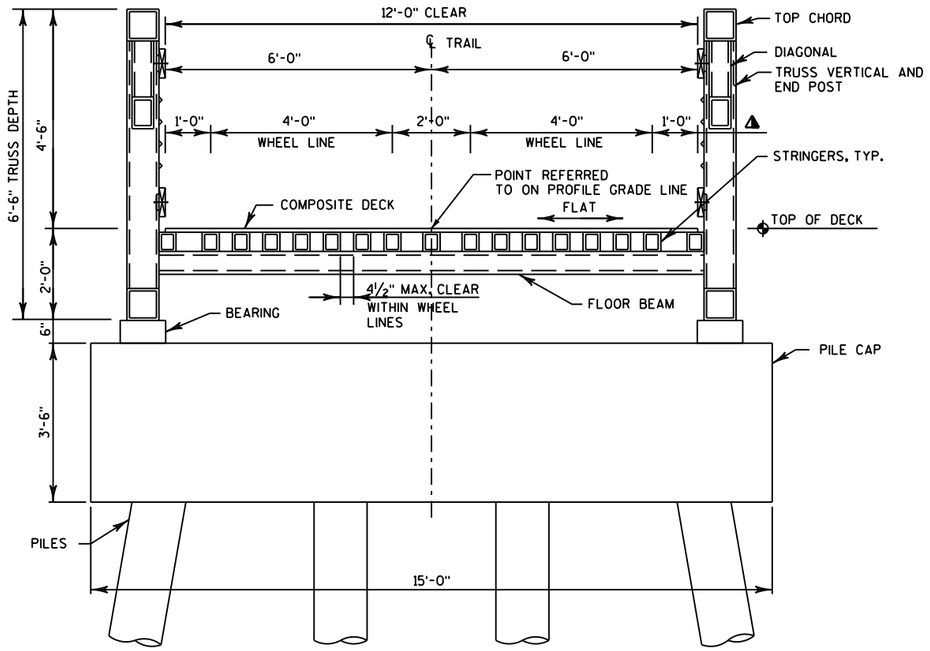
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STATE PROJECT NUMBER
5992-08-85

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	W. ABUT.	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	E. ABUT.	SUPER	TOTAL
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-13-834	LS	-	-	-	-	-	-	-	-	-	-	-	-	-	1
502.0100	CONCRETE MASONRY BRIDGES	CY	8	6	6	6	6	6	6	6	6	6	6	8	-	76
505.0100	BAR STEEL REINFORCEMENT STRUCTURES	LB	40	60	60	60	60	60	60	60	60	60	60	40	-	680
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1130	1360	1360	1360	1360	1360	1360	1360	1360	1360	1360	1130	-	15,860
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	730	540	540	540	540	540	540	540	540	540	540	730	-	6,860
550.2144	PILING CIP CONCRETE 14 X 0.25-INCH	LF	160	320	280	240	200	180	160	160	160	160	160	160	-	2,340
506.8005.S	PREFABRICATED STEEL TRUSS PEDESTRIAN BRIDGE B-13-834 LRFD	LS	-	-	-	-	-	-	-	-	-	-	-	-	1	1



TYPICAL SECTION THROUGH PREFABRICATED STEEL TRUSS

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

THE FIRST DIGIT OF A THREE DIGIT AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

ALL DETAILS MATERIALS AND FABRICATION SHALL CONFORM TO THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE SPECIFICATIONS OF THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION.

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

AT THE BACKFACE OF THE ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

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

APPLY BRIDGE SEAT PROTECTION, AS SPECIFIED IN SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP SURFACE OF THE PIERS AND ABUTMENTS.

THE TRUSS SHALL BE ANCHORED TO THE PIERS IN A MANNER TO ALLOW THERMAL MOVEMENTS OF THE SUPERSTRUCTURE ALONG THE CENTERLINE OF THE PATH AND TO PREVENT MOVEMENT PERPENDICULAR TO THE CENTERLINE OF THE PATH.

THE APPEARANCE OF THE TRUSSES SHALL CLOSELY RESEMBLE WHAT IS SHOWN IN THE ELEVATION VIEW ON SHEET 7. THE BRIDGE SHALL BE UNPAINTED WEATHERING STEEL.

BEARING ANCHOR BOLTS, COMPOSITE DECKING, STEEL RAILS, TIMBER RUB RAILS & TIMBER TOE PLATES ARE INCLUDED IN BID ITEM "PREFABRICATED STEEL TRUSS PEDESTRIAN BRIDGE, B-13-834 LRFD"

ALL WOOD SHALL BE PRESSURE TREATED TO AWPA ACZA PER CURRENT STATE AND/OR AASHTO SPECIFICATIONS. WOOD SPECIES SHALL BE STATED IN 507.2.2.2 OF STANDARD SPECIFICATIONS.

ALL TRUSSES SHALL BE DESIGNED AS SIMPLE SPANS BETWEEN PIERS.

EXPOSED STEEL PILE SHELLS SHALL BE PAINTED IN ACCORDANCE WITH SECTION 550.3.11.3 OF THE STANDARD SPEFICIATIONS. COLOR SHALL BE FEDERAL STANDARD 595B COLORS #37030 FLAT BLACK.

LEGEND

⚠ COMPOSITE DECK ACTS AS A WEAR SURFACE FOR THE H-10 DESIGN VEHICLE WHEEL LOADING WITHIN THE 4'-0" WHEEL LINES. DECK SHALL BE DESIGNED FOR 90 PSF PEDESTRIAN LOADING IN REMAINING AREAS. CONTRACTOR IS NOT RESPONSIBLE FOR DESIGNING COMPOSITE DECK FOR VEHICLE LIVE LOADS.

BENCH MARKS

NO.	STATION	NORTHING	EASTERN	DESCRIPTION	ELEV.
BM 1	137+57.6, 32' RT	465,348.01	841,696.03	MAG NAIL ON WEST SIDE OF MCDANIEL PARK PARKING LOT	850.16
BM 2	N/A	465,114.30	842,030.78	MAG NAIL ON NORTH SIDE OF ERLING AVENUE	856.38

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-834

DRAWN BY RBH | PLANS CK'D. AML

CROSS SECTION, GENERAL NOTES AND QUANTITIES

SHEET 2 OF 7
102

I.D.

DATE:

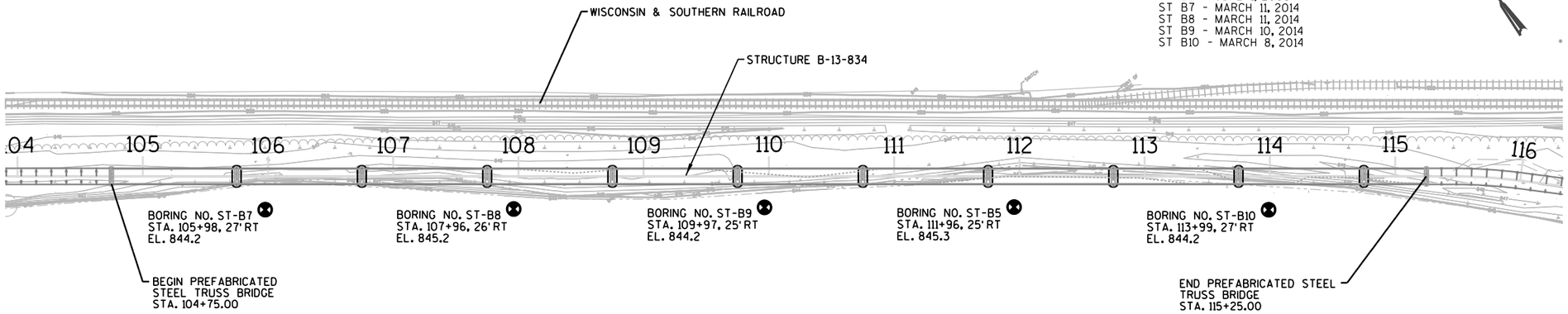
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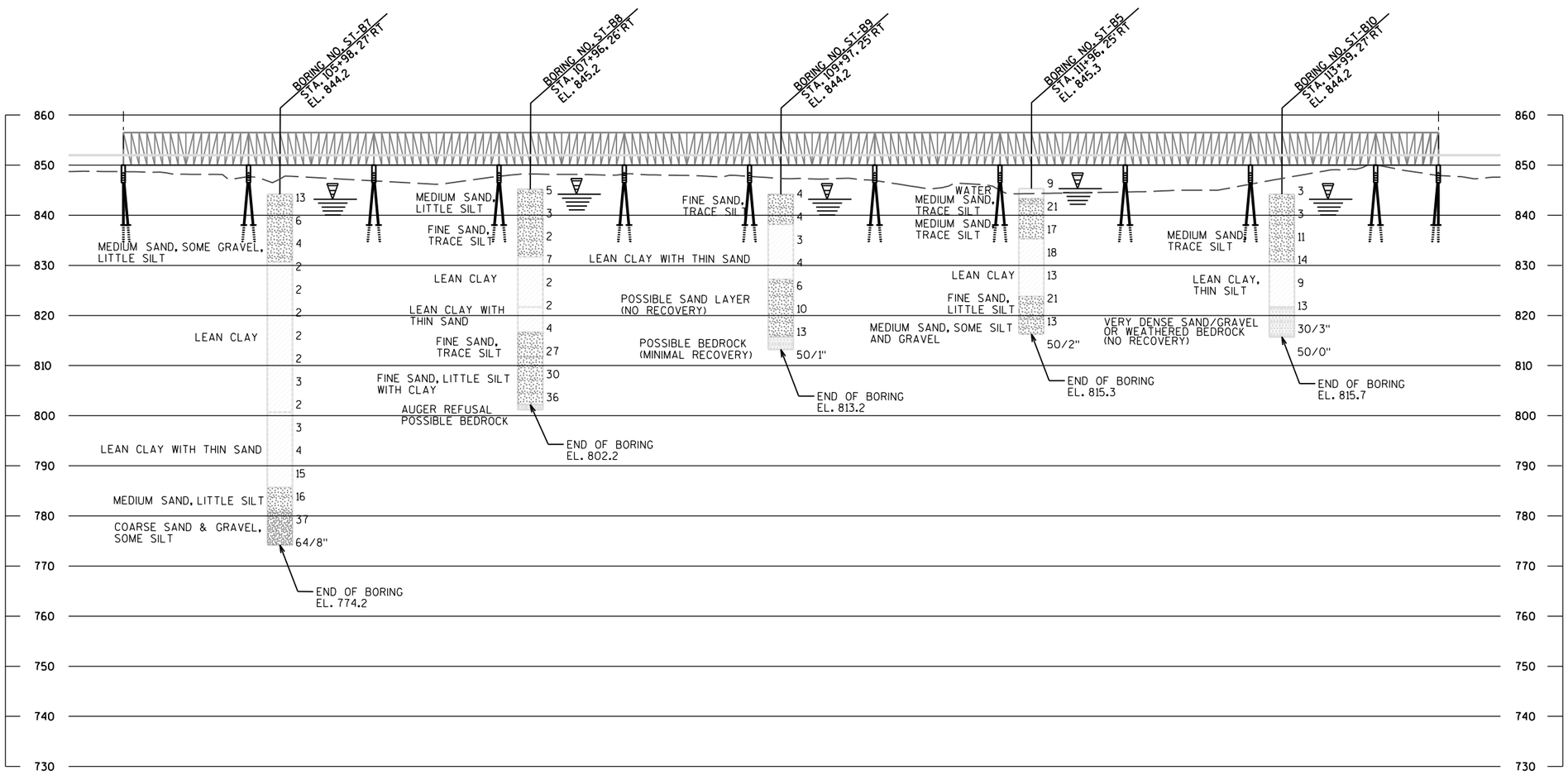
SOIL EXPLORATION PERFORMED BY:
CGC, INC.
2921 PERRY STREET
MADISON, WI 53713
(608) 288-4100

ST B5 - JUNE 1, 2009
ST B7 - MARCH 11, 2014
ST B8 - MARCH 11, 2014
ST B9 - MARCH 10, 2014
ST B10 - MARCH 8, 2014



PLAN

PREFABRICATED STEEL TRUSS BRIDGE



STATE PROJECT NUMBER

5992-08-85

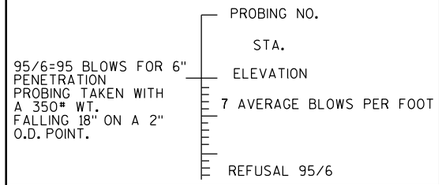
ABBREVIATIONS

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

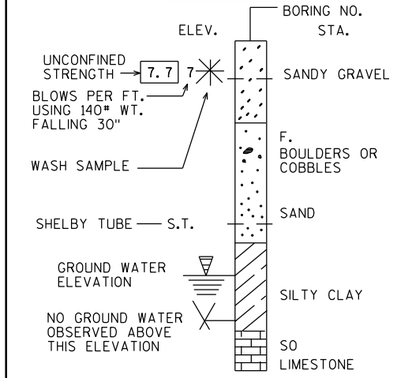
MATERIAL SYMBOLS

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 CASED 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-13-834

DRAWN BY RBH | PLANS CK'D. AML

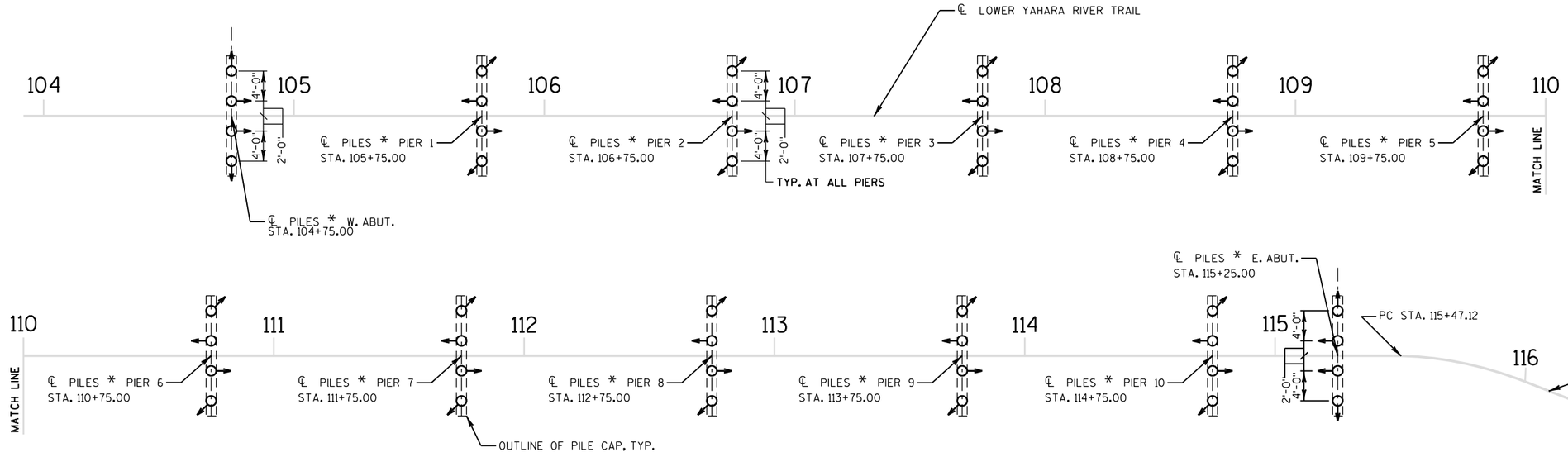
SUBSURFACE EXPLORATION

SHEET 3 OF 7
103

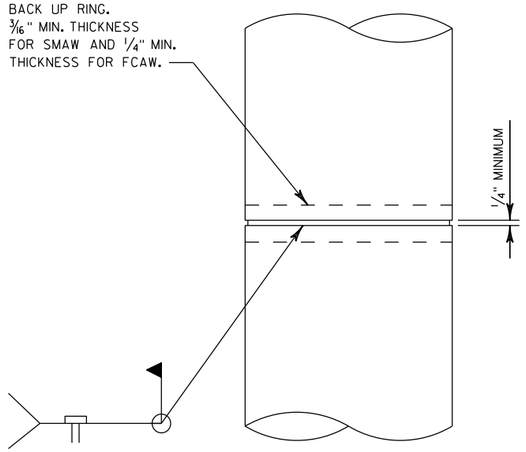
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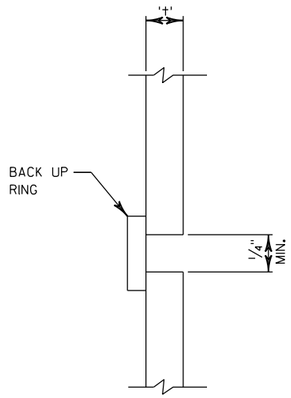
STATE PROJECT NUMBER
5992-08-85



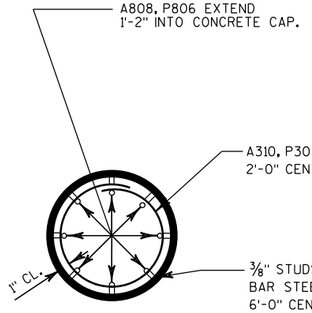
PILE LAYOUT PLAN



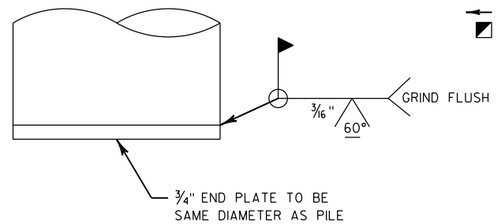
CAST-IN-PLACE PIPE PILE



CIP PILE WELD DETAIL



SECTION THRU CONCRETE CAST-IN-PLACE PILING



END PLATE DETAIL FOR CIP PILING IN ARTESIAN CONDITIONS

(ONLY USE FOR ARTESIAN CONDITIONS)

NOTES

- SEE SHEET 5 AND 6 FOR PILE NUMBERING AND BATTER RATES.
- CAST-IN-PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATION.

LEGEND

* - PILE DIMENSIONS AT BOTTOM OF PILE CAP
← - BATTERED PILE
◩ - GRADE 40 REINFORCEMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-834

DRAWN BY RBH | PLANS CK'D. AML

PILE LAYOUT PLAN

SHEET 4 OF 7
104

I.D.

DATE:

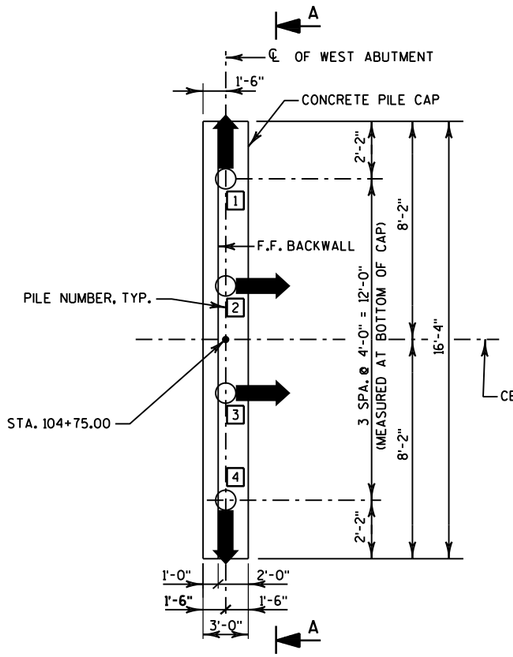
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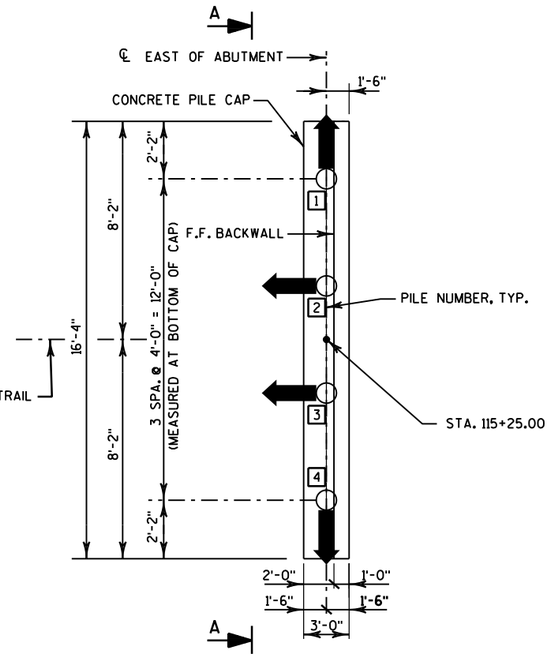
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STATE PROJECT NUMBER

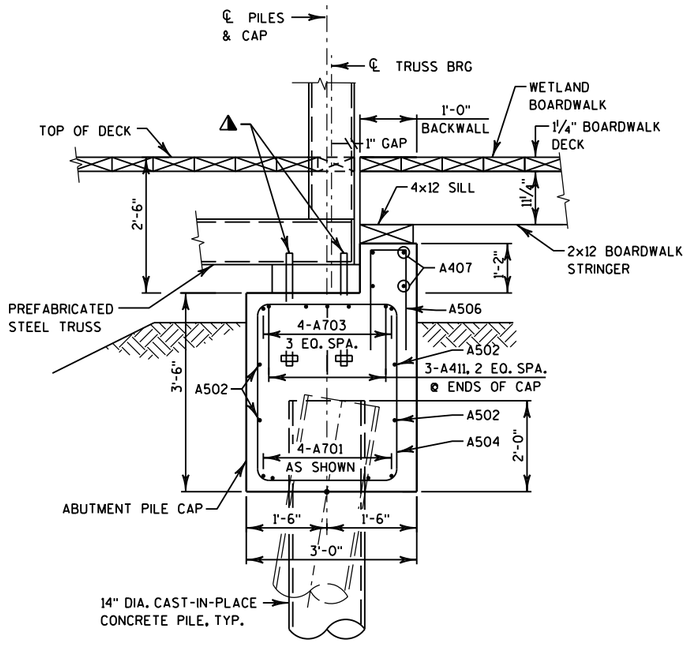
5992-08-85



WEST ABUTMENT PLAN



EAST ABUTMENT PLAN



SECTION C-C

NOTES

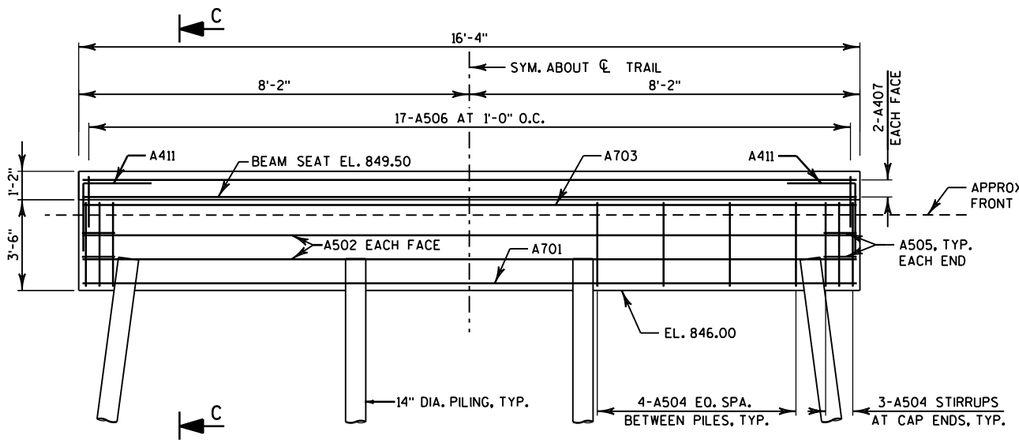
SEE SHEET 4 FOR PILE DETAILS.

ABUTMENTS TO BE SUPPORTED ON 14" x 0.25" WALL THICKNESS CAST-IN-PLACE CONCRETE PILES DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 50 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES FORMULA. ESTIMATED LENGTHS:

WEST ABUTMENT = 40'
EAST ABUTMENT = 40'

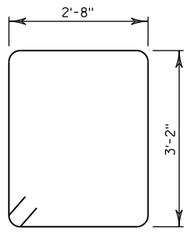
LEGEND

- BATTER PILES 2" PER FOOT
- GRADE 40 REINFORCEMENT
- ANCHOR RODS SUPPLIED BY PREFABRICATED STEEL TRUSS MANUFACTURER. CONTRACTOR TO COORDINATE DELIVERY, PLACEMENT LOCATIONS, AND REQUIRED PROJECTION WITH TRUSS MANUFACTURER.

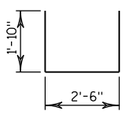


A-A ABUTMENT ELEVATION

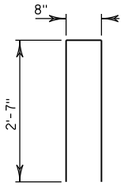
ABUTMENT - BILL OF BARS						
MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
A701	X	8	16'-0"			ABUTMENT CAP BOTTOM LONGITUDINAL
A502	X	8	16'-0"			ABUTMENT CAP MIDDLE LONGITUDINAL
A703	X	8	16'-0"			ABUTMENT CAP TOP LONGITUDINAL
A504	X	36	12'-0"		X	ABUTMENT CAP STIRRUPS
A505	X	8	5'-11"		X	ABUTMENT CAP ENDS HORIZONTAL
A506	X	34	5'-7"		X	BACKWALL VERTICAL
A407	X	8	16'-0"			BACKWALL HORIZONTAL
A808		64	13'-2"			PILE LONGITUDINAL
A310		48	4'-2"		X	PILE TIE
A411	X	12	2'-11"		X	ABUTMENT CAP ENDS



A504



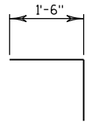
A505



A506



A310



A411

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-834

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ABUTMENT GENERAL

SHEET 5 OF 7
105

I.D.

DATE:

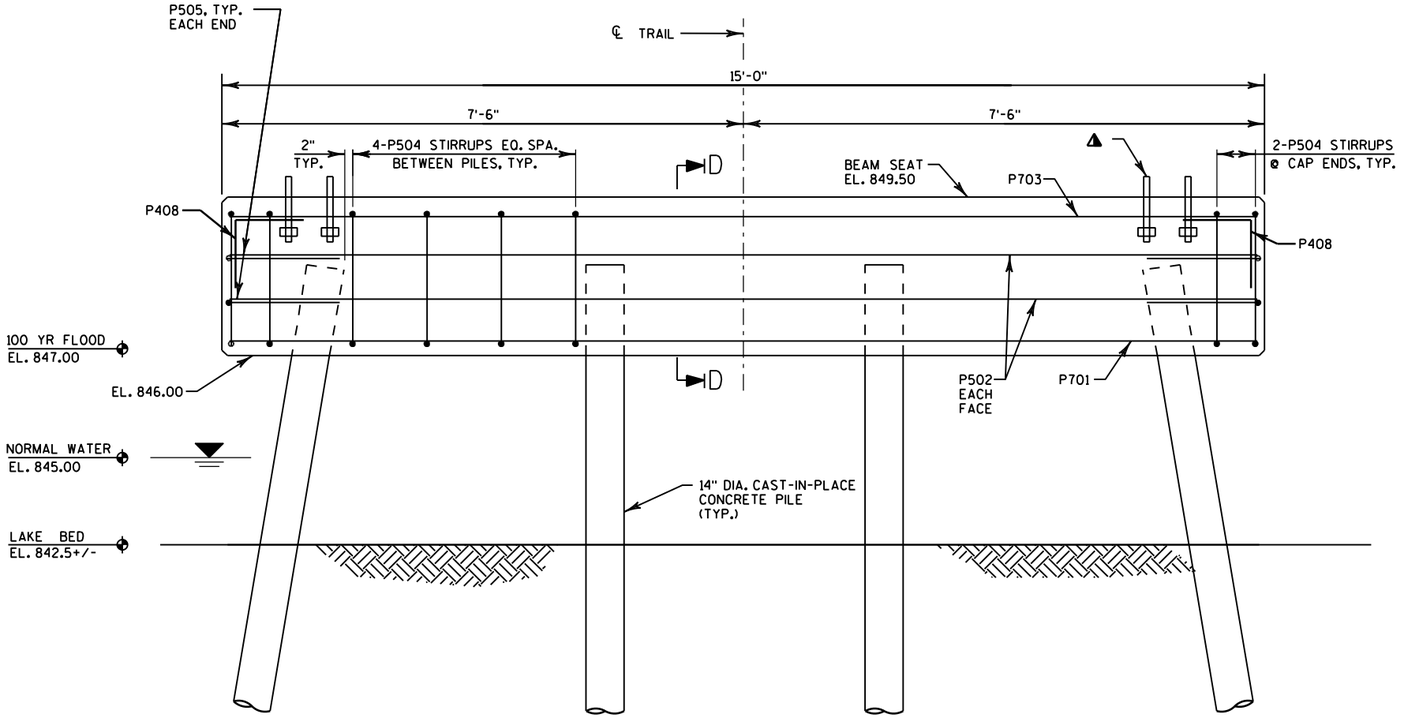
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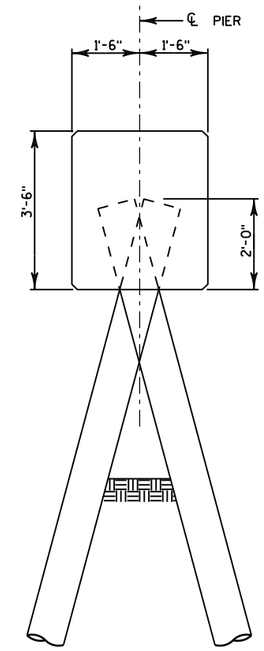
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STATE PROJECT NUMBER

5992-08-85



ELEVATION
LOOKING UP STATION

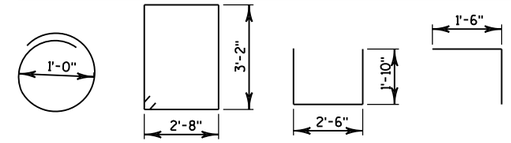


END VIEW

BILL OF BARS

PIER - BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
P701	X	40	14'-8"			PIER CAP BOTTOM LONGITUDINAL
P502	X	40	14'-8"			PIER CAP MIDDLE LONGITUDINAL
P703	X	40	14'-8"			PIER CAP TOP LONGITUDINAL
P504	X	160	12'-0"		X	PIER CAP STIRRUPS
P505	X	40	5'-11"		X	PIER CAP ENDS HORIZONTAL
P806		320	15'-11"			PILE LONGITUDINAL
P307		320	4'-2"		X	PILE TIES
P408	X	60	2'-11"		X	PIER CAP ENDS

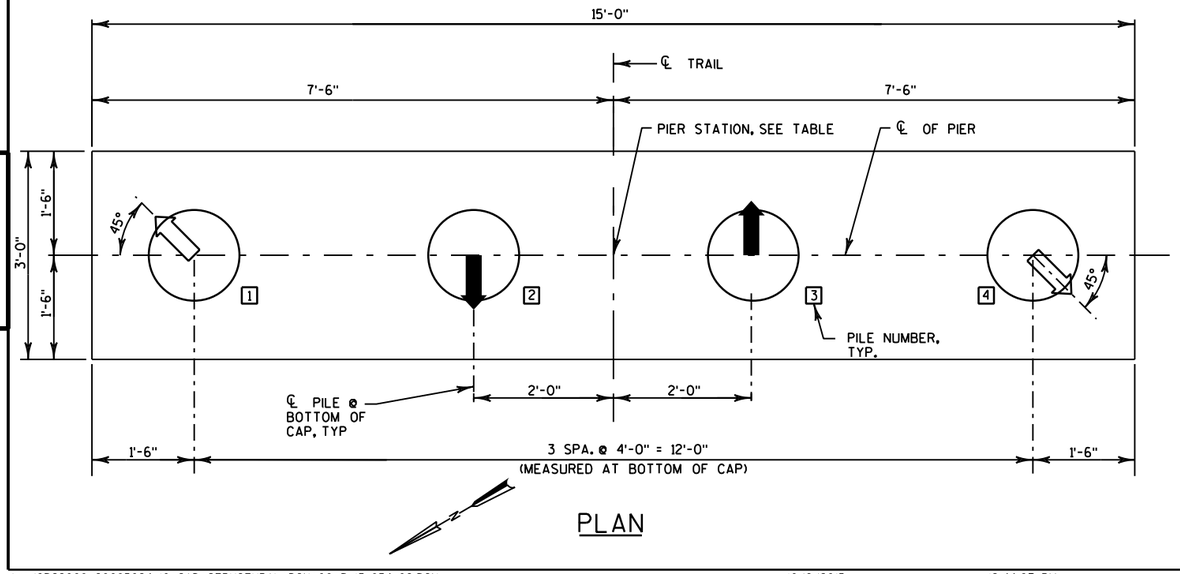


P307 P504 P505 P408

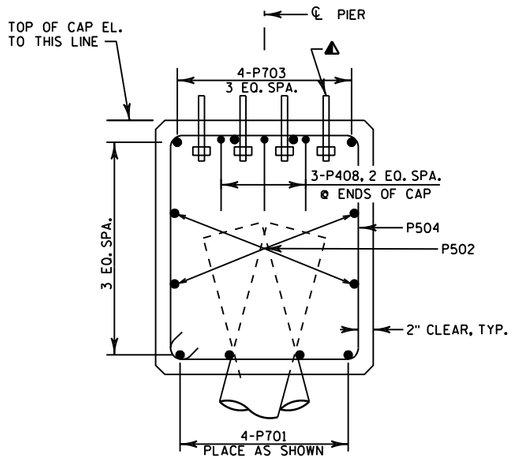
NOTES

- SEE SHEET 4 FOR PILE DETAILS.
- PIERS TO BE SUPPORTED ON 14" x 0.25" WALL THICKNESS CAST-IN-PLACE CONCRETE PILES DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 75 TONS PER PILE AT PIERS AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTHS:

  PIER 1 = 80'
  PIER 2 = 70'
  PIER 3 = 60'
  PIER 4 = 50'
  PIER 5 = 45'
  PIER 6= 40'
  PIER 7 = 40'
  PIER 8 = 40'
  PIER 9 = 40'
  PIER 10 = 40'



PLAN



SECTION D-D

PIER NUMBER	STATION
PIER 1	105+75.00
PIER 2	106+75.00
PIER 3	107+75.00
PIER 4	108+75.00
PIER 5	109+75.00
PIER 6	110+75.00
PIER 7	111+75.00
PIER 8	112+75.00
PIER 9	113+75.00
PIER 10	114+75.00

LEGEND

- BATTER INTERIOR PILES 2" PER FOOT
- BATTER EXTERIOR PILES 3" PER FOOT
- ANCHOR RODS SUPPLIED BY PREFABRICATED STEEL TRUSS MANUFACTURER. CONTRACTOR TO COORDINATE DELIVERY, PLACEMENT LOCATIONS, AND REQUIRED PROJECTION WITH TRUSS MANUFACTURER.
- GRADE 40 REINFORCEMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-834

DRAWN BY RBH | PLANS CK'D. AML

PIERS

SHEET 6 OF 7
106

I.D.

DATE:

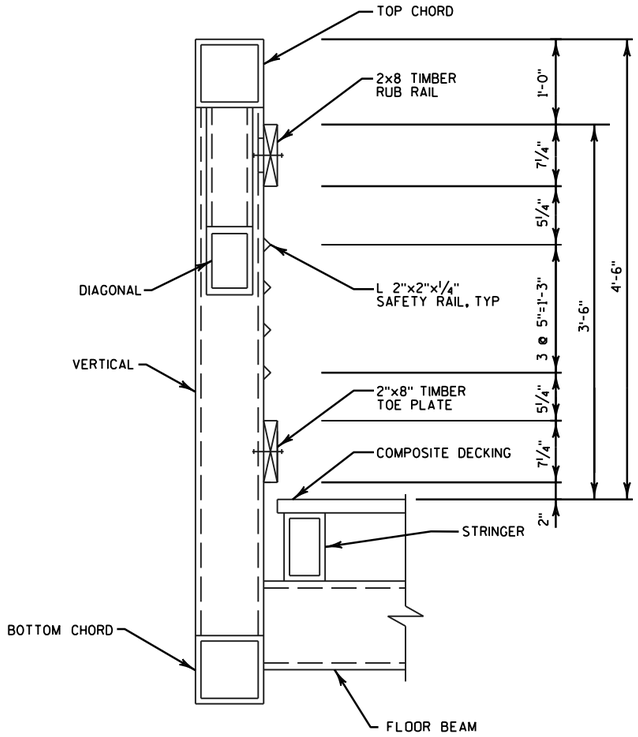
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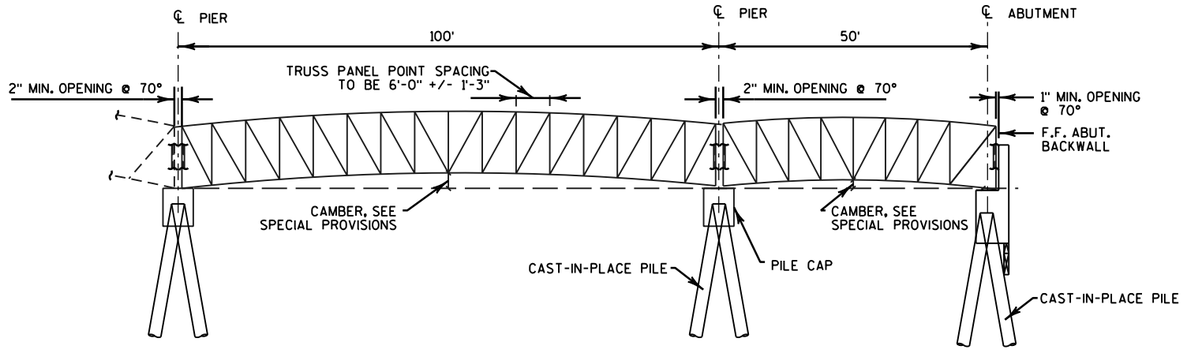
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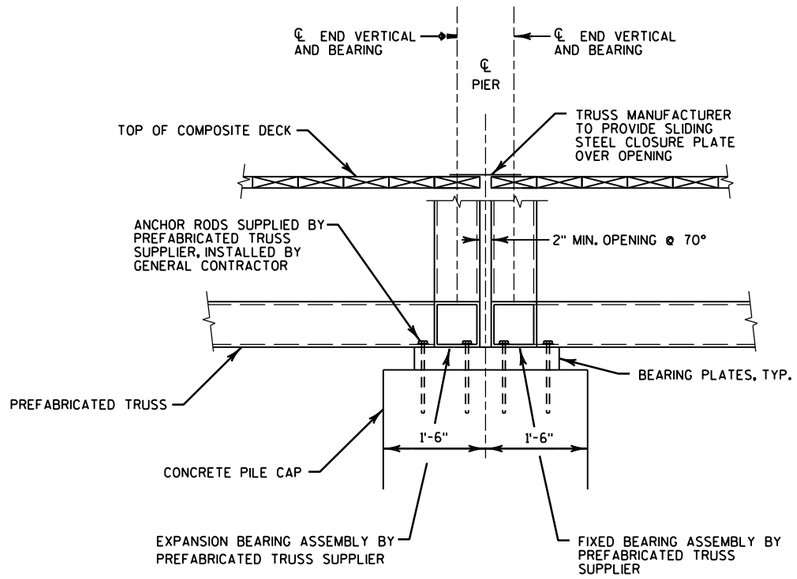


RAILING DETAIL



PREFABRICATED STEEL TRUSS

TYPICAL ELEVATION



TRUSS BEARING AT PIER

NOTE

COMPOSITE DECKING TO BE ¾" MINIMUM THICKNESS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-834

DRAWN BY RBH | PLANS CK'D. AML

TRUSS DETAILS

SHEET 7 OF 7
107

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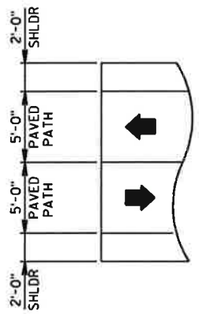
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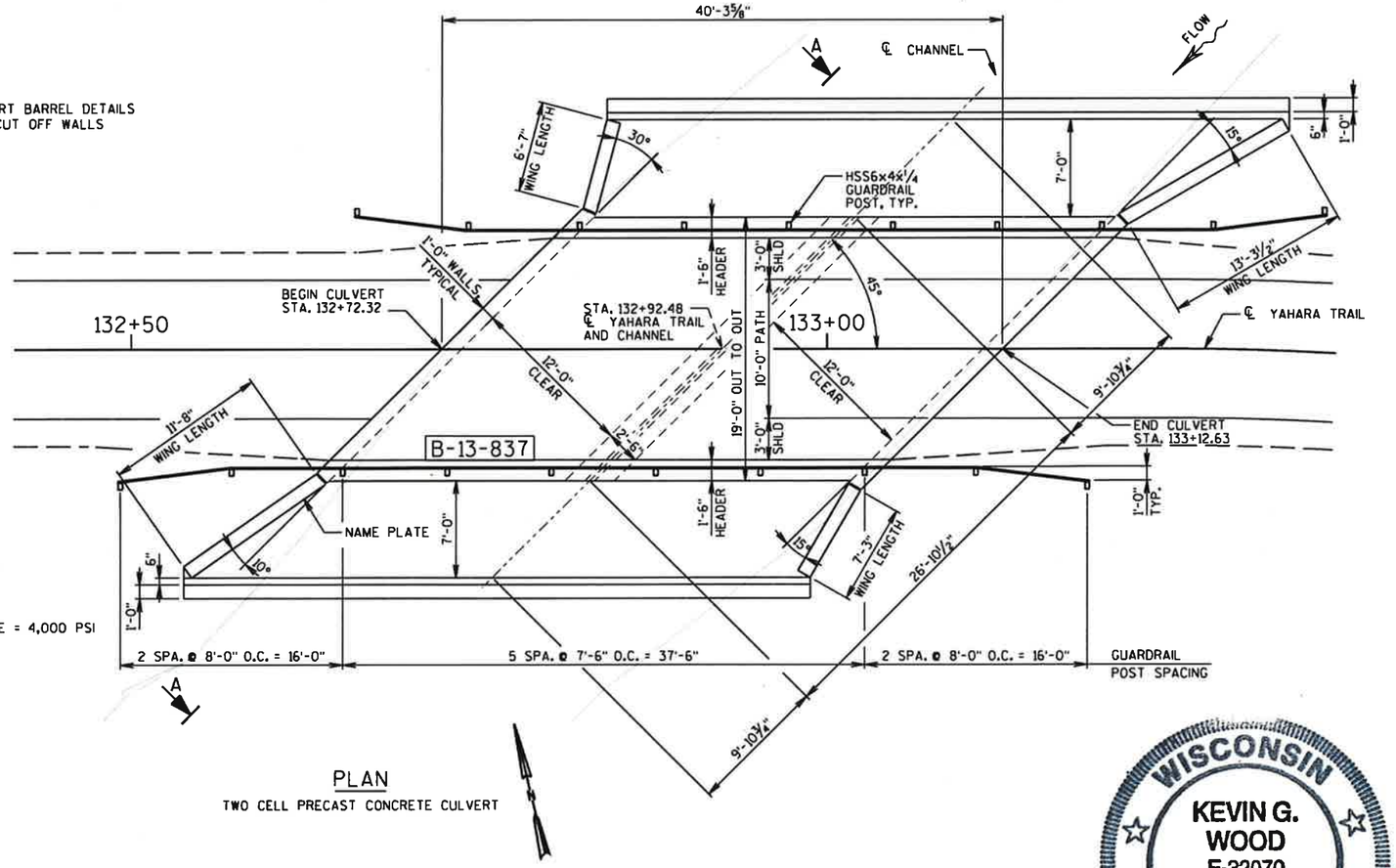
STATE PROJECT NUMBER

5992-08-85

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. SUBSURFACE EXPLORATION
3. PRECAST CONCRETE BOX CULVERT BARREL DETAILS
4. PRECAST WINGS, HEADERS, AND CUT OFF WALLS
5. APRON REINFORCING PLAN
6. GUARDRAIL





PLAN

TWO CELL PRECAST CONCRETE CULVERT

FOUNDATION DATA

MAXIMUM FACTORED BEARING RESISTANCE = 4,000 PSI

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.05
OPERATING RATING FACTOR: RF = 1.35

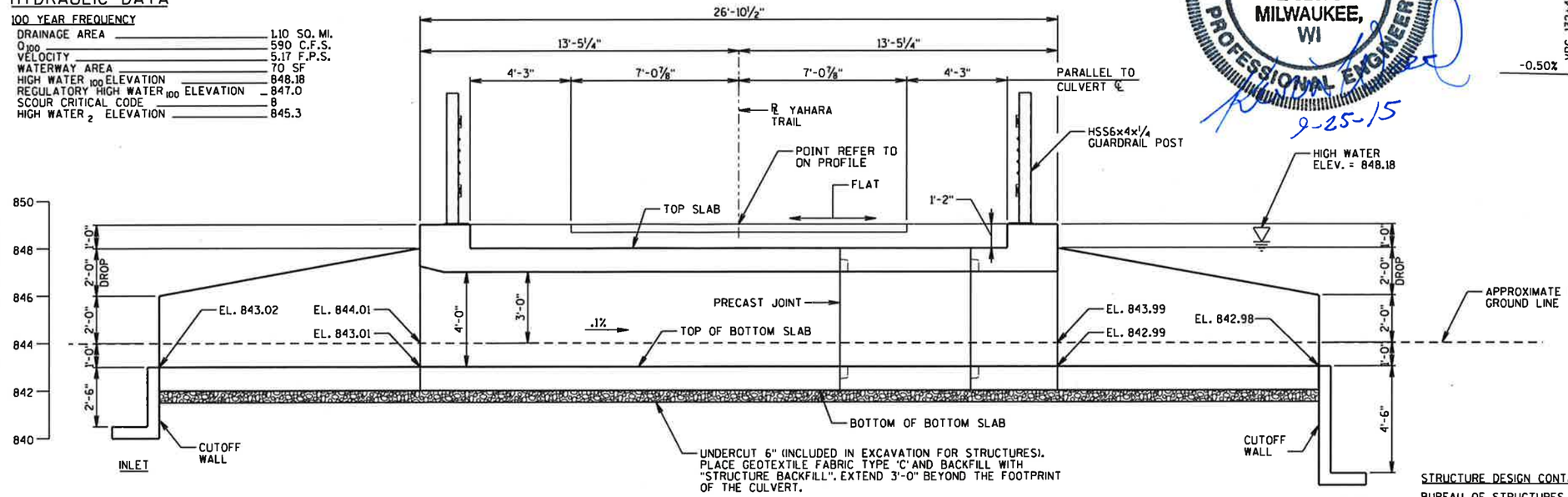
EARTH LOAD:

1 TO 1.5 FEET

HYDRAULIC DATA

100 YEAR FREQUENCY

DRAINAGE AREA	1.10 SQ. MI.
Q_{100}	590 C.F.S.
VELOCITY	5.17 F.P.S.
WATERWAY AREA	70 SF
HIGH WATER $_{100}$ ELEVATION	848.18
REGULATORY HIGH WATER $_{100}$ ELEVATION	847.0
SCOUR CRITICAL CODE	8
HIGH WATER $_2$ ELEVATION	845.3



SECTION A-A THROUGH TRAIL

(LOOKING SOUTHEAST)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS B-13-837" SHALL BE THE EXISTING GROUND LINE.

CONCRETE COVER ON ALL REINFORCEMENT IN THE PRECAST ELEMENTS SHALL BE 2" UNLESS SHOWN OR NOTED OTHERWISE.

STEEL REINFORCEMENT MAY BE EITHER GRADE 60 DEFORMED BARS (FY = 60,000 P.S.I.) OR WELDED DEFORMED - WIRE FABRIC OF EQUIVALENT AREA, (FY = 65,000 P.S.I.)

THE ULTIMATE COMPRESSIVE STRENGTH OF THE FIELD POURED CONCRETE SHALL BE 3,500 P.S.I.

ALTERNATE DETAILS OF EQUAL STRENGTH AND HYDRAULIC CAPACITY TO THE DETAILS SHOWN ON THIS SHEET MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

THE ULTIMATE COMPRESSIVE STRENGTH OF THE CONCRETE IN THE PRECAST ELEMENTS SHALL BE 4,000 P.S.I.

THE PRECAST ELEMENTS SHALL BE PROVIDED WITH SUITABLE LIFTING DEVICES FOR HANDLING AND PLACEMENT OF THE ELEMENTS.

VERTICAL CONSTRUCTION JOINTS THRU THE WALLS AND FOOTING WILL BE ALLOWED ONLY WITH THE APPROVAL OF THE ENGINEER. DETAILS MUST BE SHOWN ON THE SHOP DRAWINGS FOR APPROVAL.

THE AREA OF REINFORCING STEEL NOT IDENTIFIED IN SECTIONS SHALL CONFORM TO THE FOLLOWING TEMPERATURE AND SHRINKAGE REQUIREMENTS.

THICKNESS	T&S REINF.
_ < 12"	#4@18"
> 12"-18"	#4@12"

THE MAXIMUM BAR SIZE OF GRADE 60 DEFORMED BARS, OTHER THAN THE A_s10 BARS, SHALL BE #5.

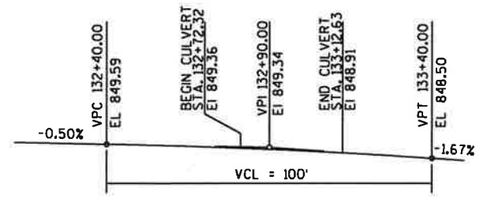
THE ⅞" ϕ ANCHOR BOLTS SHALL BE GALVANIZED AND CONFORM TO THE REQUIREMENTS OF A.S.T.M. A575.

ALL EXPOSED CORNERS SHALL BE BEVELED ¾" ON THE SIDES OR TOOL EDGED WITH A ½" MINIMUM RADIUS EDGER.

PRECAST CUT OFF WALLS MAY BE FIELD SPLICED BY EXTENDING THE REINFORCING STEEL FROM BOTH SEGMENTS TO BE SPLICED 1'-6" INTO THE SPLICE ZONE, LAPPING THE STEEL ± 1'-6" AND FIELD POURING A SECTION OF CUT OFF WALL 1'-6" LONG.

PRECAST ELEMENTS MAY BE POURED IN PLACE AT THE OPTION OF THE CONTRACTOR.

APRON SHALL BE POURED AND CURED PRIOR TO BACKFILLING WINGWALLS.



PROFILE

WISCONSIN PROFESSIONAL ENGINEER
KEVIN G. WOOD
E-32070
MILWAUKEE, WI

9-25-15

NO.	DATE	REVISION	BY

GRÄEF
One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1470
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 09/28/15
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-13-837

YAHARA RIVER TRAIL

COUNTY	~~TOWN/CITY~~/VILLAGE
DANE	MCFARLAND

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

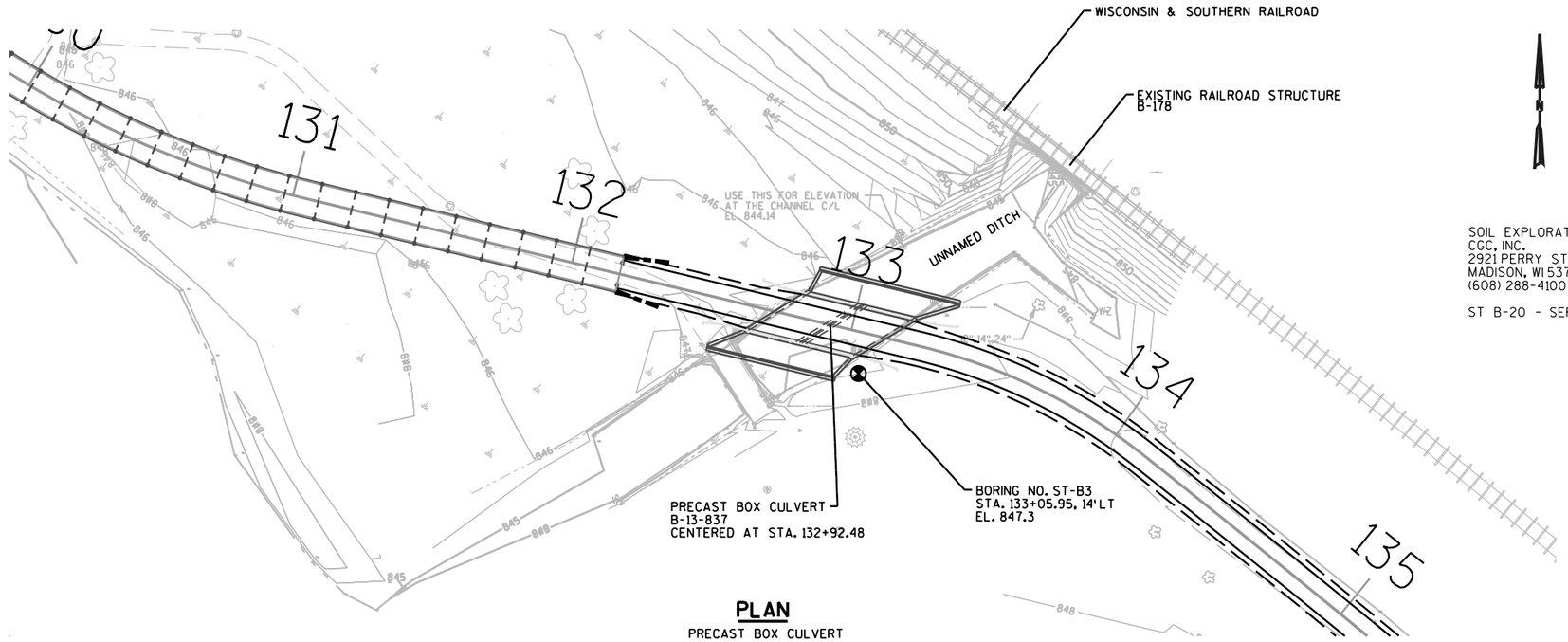
DESIGNED BY	KGW	DESIGN CK'D.	RB	DRAWN BY	AMZ	PLANS CK'D.	KGW

GENERAL PLAN & ELEVATION

SHEET 1 OF 6
108

STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES
WILLIAM DREHER, P.E. (608) 266-8489

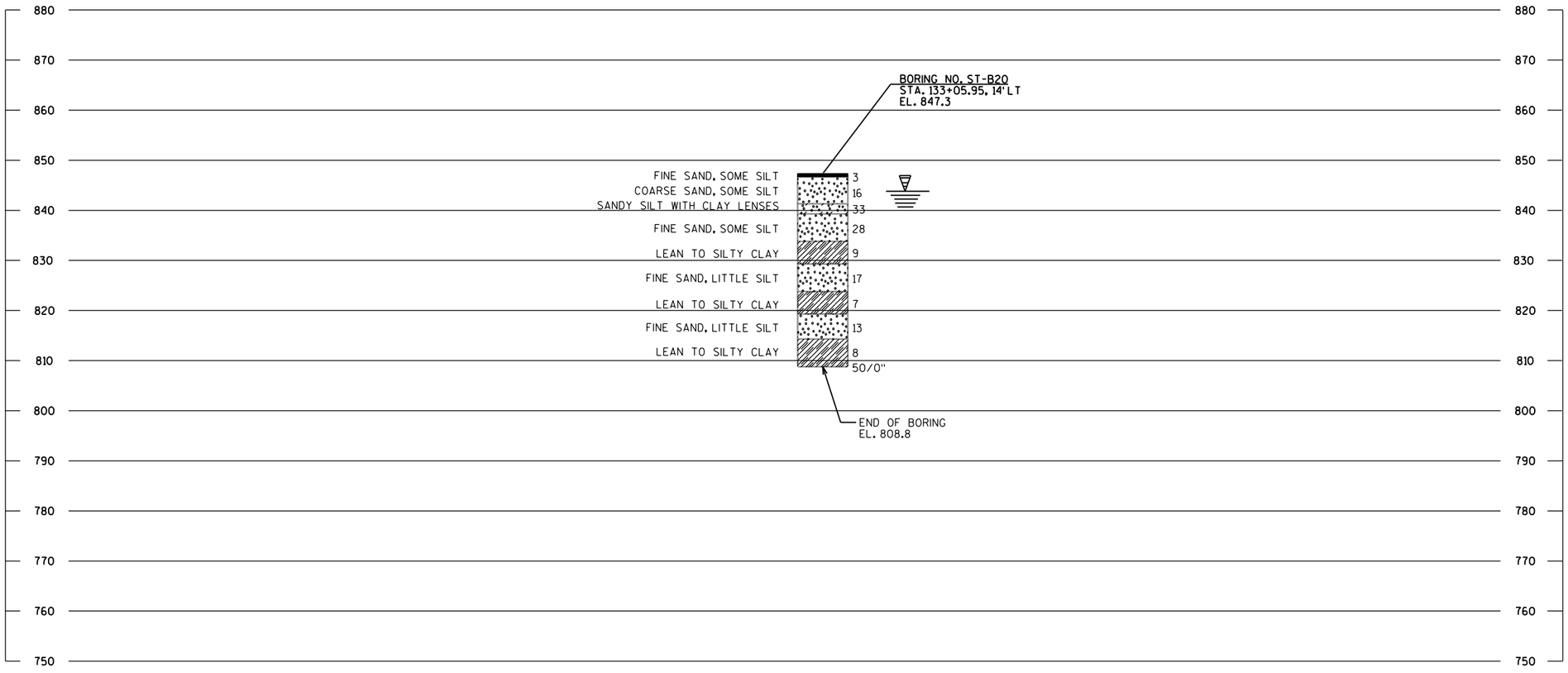
CONSULTANT
KEVIN WOOD, P.E. (414) 259-1500



PLAN
PRECAST BOX CULVERT

SOIL EXPLORATION PERFORMED BY:
CGC, INC.
2921 PERRY STREET
MADISON, WI 53713
(608) 288-4100

ST B-20 - SEPTEMBER 24, 2014



STATE PROJECT NUMBER

5992-08-85

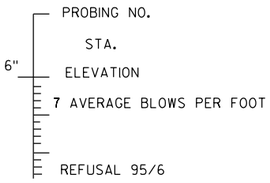
ABBREVIATIONS

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

MATERIAL SYMBOLS

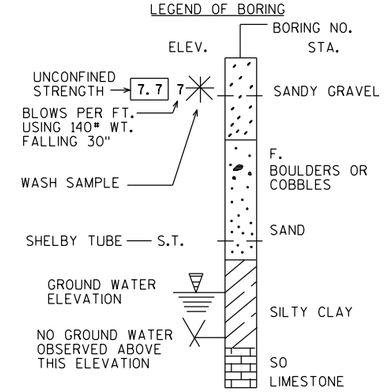
TOPSOIL, SAND, GRAVEL, SILT, PEAT, CLAY, SANDSTONE, LIMESTONE, IGNEOUS ROCK

LEGEND OF PROBING



95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

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 CASED 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-13-837

DRAWN BY | PLANS CK'D.

SUBSURFACE EXPLORATION

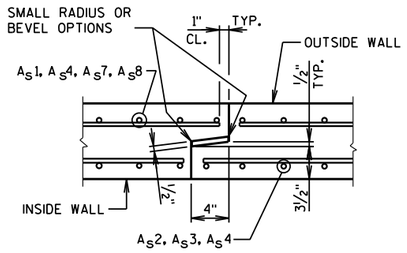
SHEET 2 OF 6
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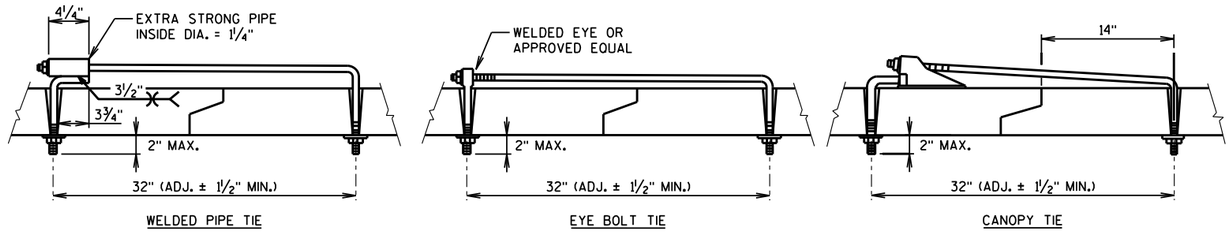
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STATE PROJECT NUMBER

5992-08-85

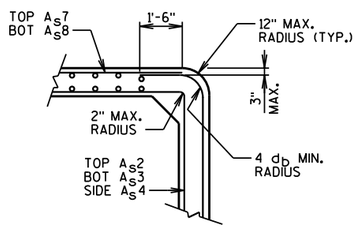


JOINT DETAIL

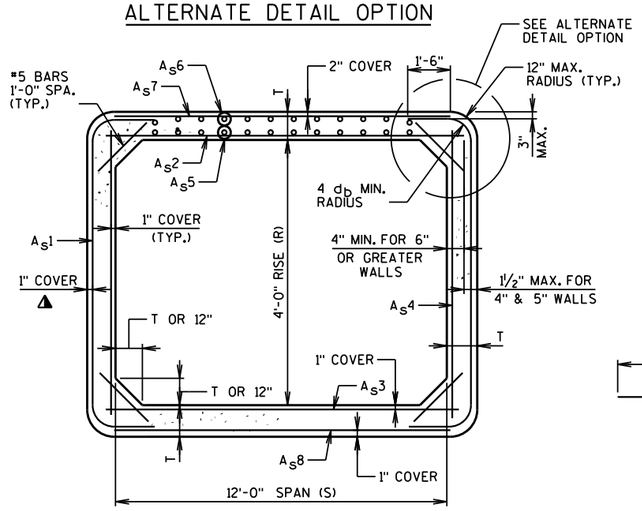


JOINT TIES

NOTES:
EITHER EYE BOLT TIES, WELDED PIPE TIES, OR CANOPY TIES MAY BE USED.
THREADS MAY BE CUT OR ROLLED. TIE NUTS SHALL BE TIGHTENED AS DIRECTED BY THE ENGINEER. (2 TIES REQ'D. PER JOINT.) (TIES TO BE GALVANIZED.)

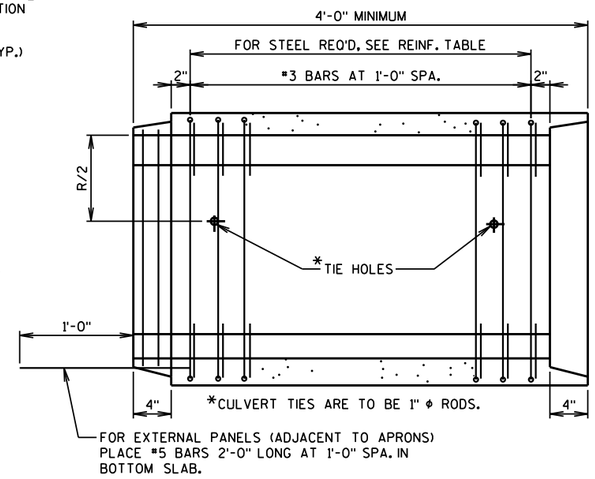


ALTERNATE DETAIL OPTION

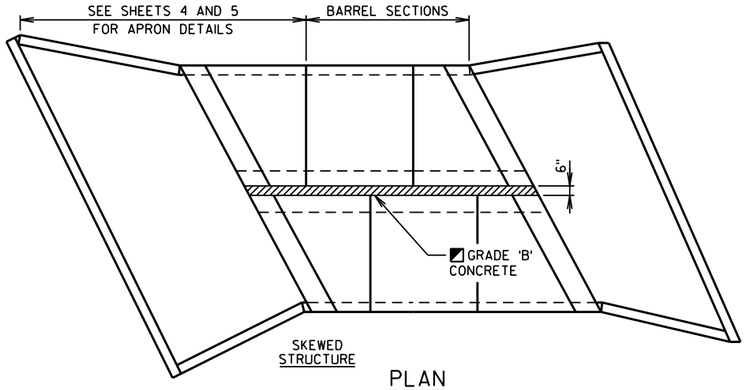


SECTION THRU BARREL
FOR LESS THAN 2 FEET OF COVER

▲ 1" OR 3 x WIRE DIAMETER, WHICHEVER IS GREATER



LONGITUDINAL SECTION



PLAN
MULTICELL INSTALLATION

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	TOTAL
206.2000	EXCAVATION FOR STRUCTURES CULVERTS B-13-837	LS	1
210.0100	BACKFILL STRUCTURE	CY	50
502.6120	CONCRETE MASONRY ANCHORS TYPE S 1-INCH	EACH	48
504.0100	CONCRETE MASONRY CULVERTS	CY	46
504.2005.S	PRECAST CONCRETE BOX CULVERT, 12-FT X 4-FT	LF	54
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,210
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	4
645.0105	GEOTEXTILE FABRIC TYPE C	SY	153
645.0111	GEOTEXTILE FABRIC TYPE DF SCHEDULE A	SY	18
SPV.0090.02	RAILING SYSTEM FOR STRUCTURE B-13-837	LF	140

BOX CULVERT DATA

DIMENSIONS			EARTH COVER 1.0 TO 1.5(FT.)	
S=12.0 (FT.)	R=4.0 (FT.)	T OR T_S, T_b, T_t=12.0 (IN.)		
REINFORCEMENT			AREA/FT.	LENGTH
A_S1			0.50	
A_S2			0.42	
A_S3			0.32	
A_S4			0.29	
A_S5			0.29	
A_S6			0.29	
A_S7			0.29	
A_S8			0.29	
TOTAL BARREL OR PANEL LENGTH			26 = 10½"	

BENCH MARKS

NO.	STATION	NORTHING	EASTERN	DESCRIPTION	ELEV.
BM 1	137+57.6, 32' RT	465,348.01	841,696.03	MAG NAIL ON WEST SIDE OF MCDANIEL PARK PARKING LOT	850.16
BM 2	N/A	465,114.30	842,030.78	MAG NAIL ON NORTH SIDE OF ERLING AVENUE	856.38

NOTES

DETAILS FOR MATERIALS, FABRICATION, CONSTRUCTION AND DESIGN OF PRECAST BOX CULVERTS NOT SHOWN OR STATED ON THIS DRAWING SHALL BE IN ACCORDANCE WITH THE CURRENT ASTM SPECIFICATION, C1577; AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS; WISCONSIN DOT STANDARD SPECIFICATIONS & APPLICABLE SPECIAL PROVISIONS, EXCEPT THAT THE CONCRETE MIXTURE SHALL CONTAIN NOT LESS THAN 565 LBS. OF CEMENTITIOUS MATERIALS PER CUBIC YARD.

THE DESIGN OF PRECAST BOX CULVERTS WITH ALL FILL HEIGHTS SHALL BE AS STATED IN ASTM C1577.

ALL PRECAST BOX SECTIONS SHALL BE PLACED ON A BEDDING OF "STRUCTURE BACKFILL" OF 6" MINIMUM DEPTH.

THE COVER OF CONCRETE OVER THE REINFORCEMENT SHALL BE 1 INCH OR 2 INCHES AS SHOWN WITH AN ALLOWABLE VARIATION OF -⅜ TO +½ INCH.

THE SPACING CTR. TO CTR. OF THE CIRCUMFERENTIAL WIRES SHALL NOT BE LESS THAN 2 INCHES NOR MORE THAN 4 INCHES. THE SPACING CTR. TO CTR. OF THE LONGIT. WIRES SHALL NOT BE MORE THAN 8 INCHES.

NOT MORE THAN FOUR (4) HOLES MAY BE CAST, DRILLED OR OTHERWISE NEATLY MADE IN THE SHELL OF EACH PIECE OF BOX SECTION FOR HANDLING. THE HOLES SHALL BE TAPERED UNLESS DRILLED. HOLES SHALL BE FILLED WITH PORTLAND CEMENT MORTAR EXCEPT TAPERED HOLES MAY BE FILLED WITH CONCRETE PLUGS SECURED WITH PORTLAND CEMENT MORTAR OR OTHER APPROVED ADHESIVE.

THE JOINT ON THE BOTTOM OF THE CULVERT & THE SIDES OF THE CULVERT FROM THE BOTTOM TO A POINT 1'-0" FROM THE CEILING SHALL BE SEALED WITH A PREFORMED MASTIC. PREFORMED MASTIC MUST CONFORM TO AASHTO MATERIALS SPEC. M198, TYPE B. A 2'-0" STRIP OF GEOTEXTILE FABRIC SHALL BE PLACED OVER THE JOINTS ON THE TOP AND ON THE SIDES OF THE CULVERT. THE GEOTEXTILE FABRIC SHALL COMPLY WITH REQUIREMENTS OF STANDARD SPECIFICATION 645.2.4, SCHEDULE A. (FABRIC NOT REQUIRED OVER INSIDE WALL JOINTS OF MULTICELL INSTALLATION.)

THE CLEAR SPACING BETWEEN BARRELS SHALL BE 6 INCHES AND THE SPACE BETWEEN ADJACENT BARRELS FROM TOP OF BEDDING TO TOP OF TOP SLAB SHALL BE FILLED WITH GRADE "B" CONCRETE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-837

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PRECAST CONCRETE BOX CULVERT BARREL DETAILS

SHEET 3 OF 6
110

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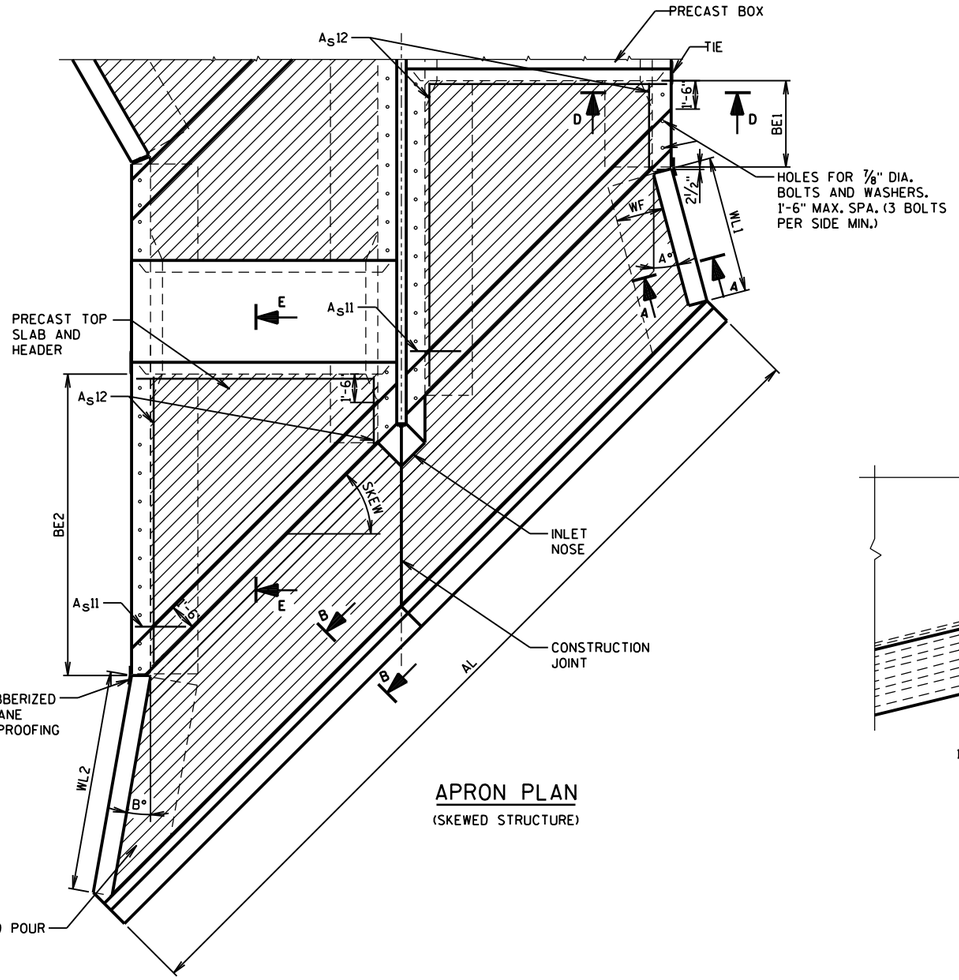
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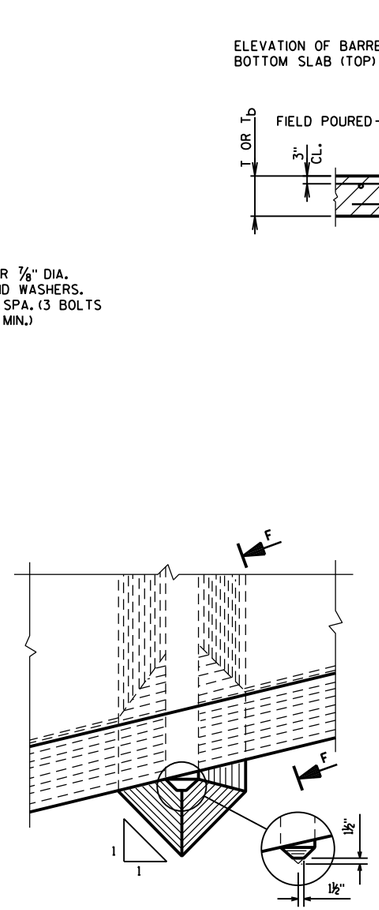
STATE PROJECT NUMBER

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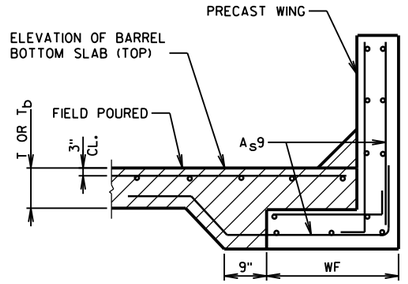


APRON PLAN

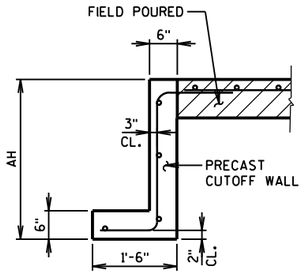
(SKEWED STRUCTURE)



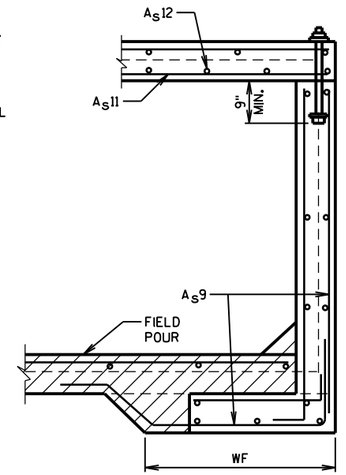
PLAN



SECTION A-A



SECTION B-B

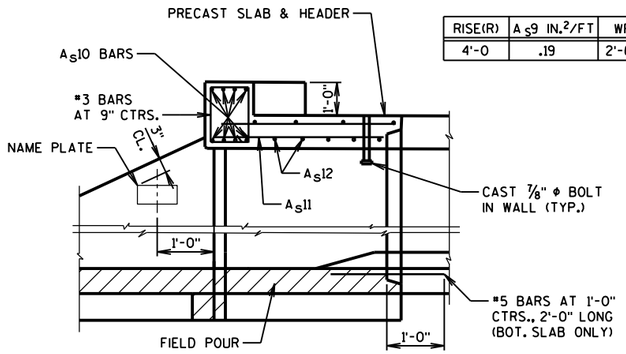


SECTION D-D

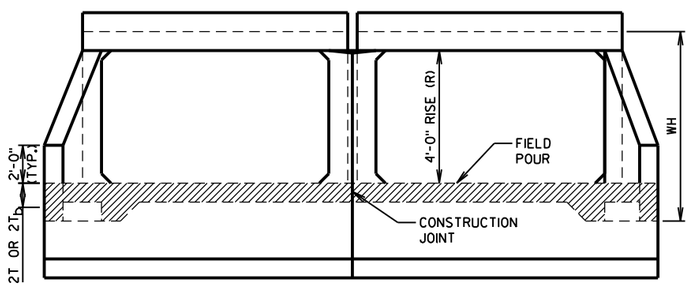
	S(FT.)	R.(FT.)	T OR T_S(IN)	SKEW	ANGLE A	ANGLE B	WL 1	WL 2	AL	AH	WH	BE1	BE2
INLET	12.0	4.0	12	45	30°	15°	6'-8"	13'-6"	48'-11½"	3'-0"	7'-0"	5'-2"	16'-5½"
OUTLET	12.0	4.0	12	45	15°	10°	7'-3"	11'-8"	45'-0½"	3'-0"	7'-0"	5'-3"	16'-5½"

SPAN (S)	A_S10 BARS SKEW 45°	A_S11 IN.²/FT.	A_S12 BARS IN.²/FT. SKEW 45°
12'-0"	8-#7	0.53	0.74

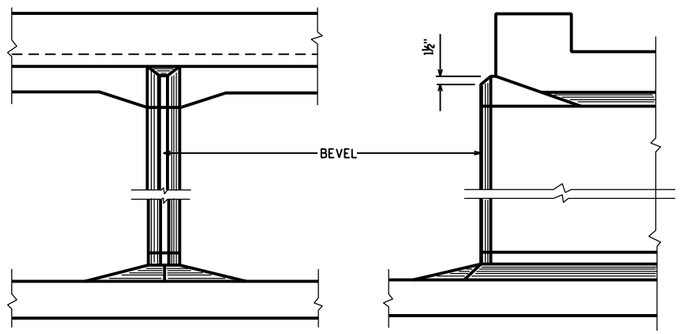
RISE(R)	A_S9 IN.²/FT	WF
4'-0	.19	2'-6



SECTION E-E



END VIEW



ELEVATION

SECTION F-F

INLET NOSE CENTERWALL DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-837

DRAWN BY AMZ | PLANS CK'D. KGW

PRECAST WINGS, HEADERS AND CUTOFF WALLS

SHEET 4 OF 6

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I.D.

DATE:

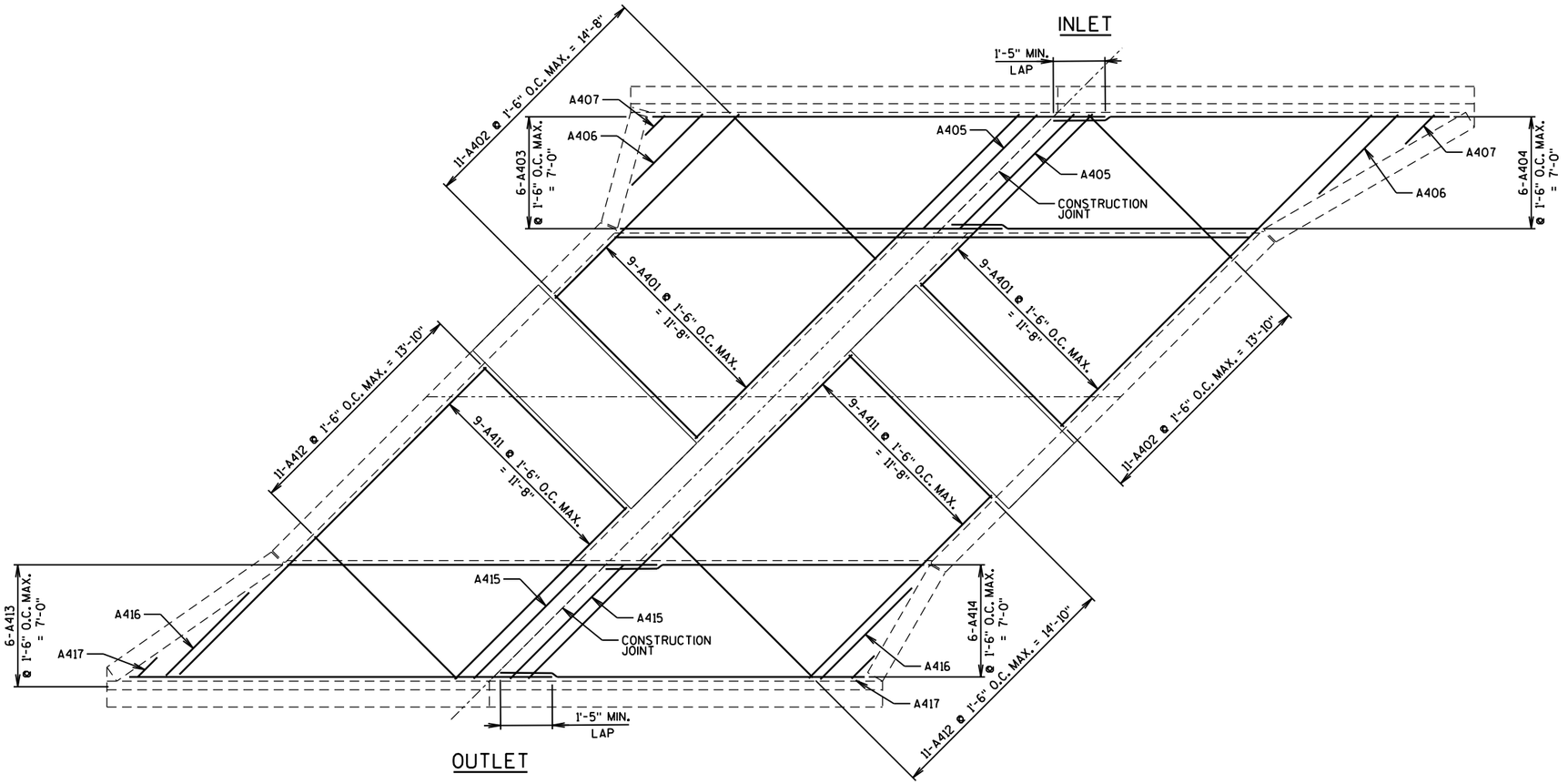
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STATE PROJECT NUMBER

5992-08-85



APRON REINFORCING PLAN

APRONS - BILL OF BARS						
MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
A401		18	19'-10"	X		CELL INLET LONGITUDINAL
A402		22	11'-8"			CELL INLET TRANSVERSE
A403		6	23'-0"	X		APRON INLET STAGE 1
A404		6	20'-9"	X		APRON INLET STAGE 2
A405		2	9'-7"			APRON INLET MIDDLE
A406		2	6'-5"			APRON INLET ENDS
A407		2	3'-3"			APRON INLET ENDS
A411		18	19'-10"	X		CELL OUTLET LONGITUDINAL
A412		22	11'-8"			CELL OUTLET TRANSVERSE
A413		6	21'-10"	X		APRON INLET STAGE 1
A414		6	19'-11"	X		APRON INLET STAGE 2
A415		2	9'-7"			APRON OUTLET MIDDLE
A416		2	6'-5"			APRON OUTLET ENDS
A417		2	3'-3"			APRON OUTLET ENDS

X = LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR LENGTH CALCULATIONS. SEE BAR SERIES FOR ACTUAL LENGTHS.

BAR SERIES TABLE		
MARK	NO REQ'D	LENGTH
A401	2 SERIES OF 9	13'-10" TO 25'-10"
A403	1 SERIES OF 6	20'-6" TO 25'-6"
A404	1 SERIES OF 6	18'-2" TO 23'-4"
A411	2 SERIES OF 9	13'-10" TO 25'-10"
A413	1 SERIES OF 6	20'-4" TO 23'-4"
A414	1 SERIES OF 6	18'-6" TO 21'-4"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-837

DRAWN BY AMZ | PLANS CK'D. KGW

APRON REINFORCING PLAN

SHEET 5 OF 6
112

I.D.

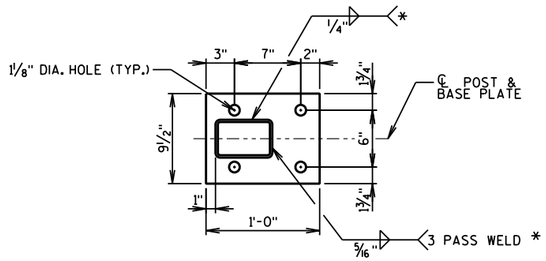
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L:±JOBS2008±20085024-10±CAD±STRUCTURAL±DGN±00±B-13-837_05.DGN 7/17/2015 11:36:53 AM

STATE PROJECT NUMBER

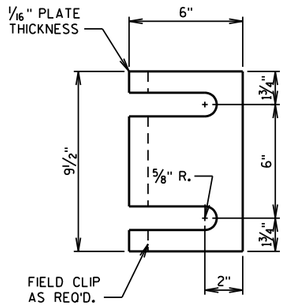
5992-08-85

* WELDING IS TO BE COMPLETED USING THE GAS-METAL ARC WELDING (CMAW) PROCESS WITH ER705-3 WELDING WIRE AND ARGON-OXYGEN OR CO_2 COVER GAS.



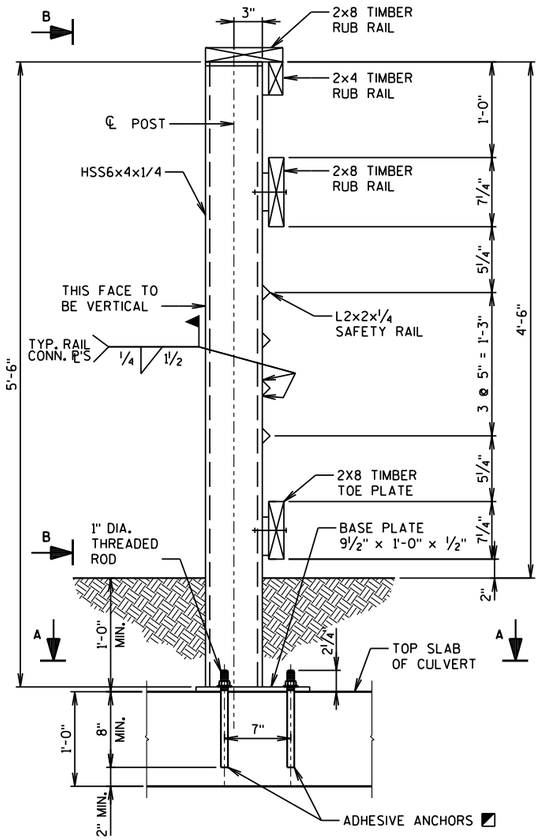
SECTION A-A

POST & BASE PLATE

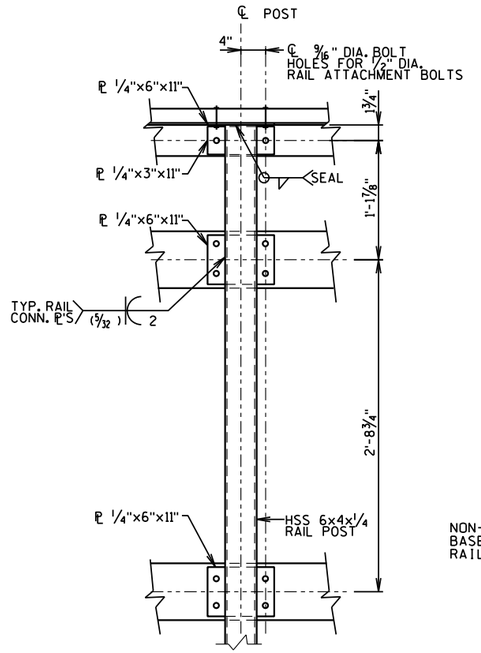


STEEL SHIM DETAIL

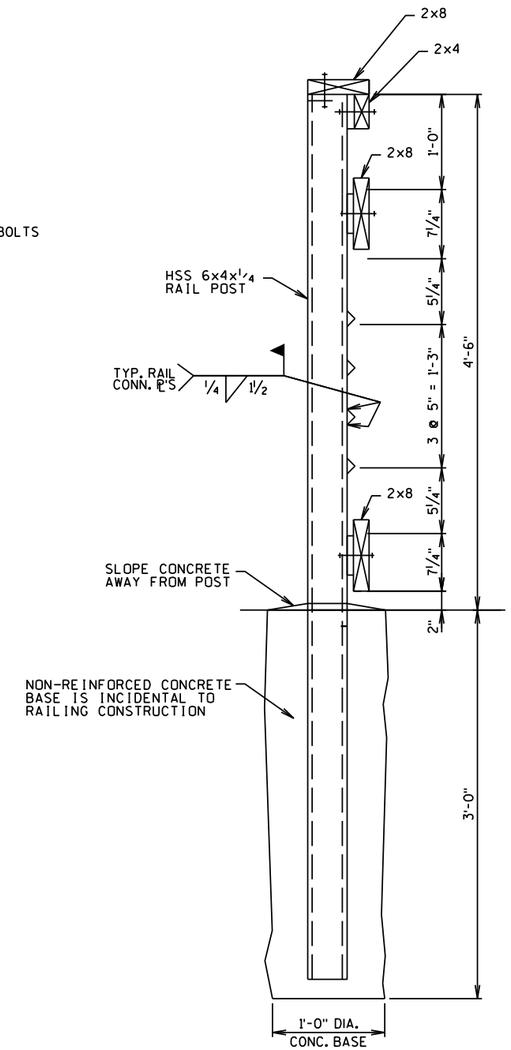
4 PER POST



ELEVATION



SECTION B-B



SECTION AT RAIL POST AT APPROACH

NOTES

DETAILS SHOWN FOR POSTS, PLATES, ANCHORAGE SYSTEM AND INSTALLATION, BLOCKS, AND GUARD RAIL ARE PART OF THE STRUCTURE CONTRACT.

POST BASE PLATES (AND BOTTOM PLATES IF USED) SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

CUT BOTTOM OF POST SO THAT POST WILL BE VERTICAL WHEN POST ASSEMBLY IS PLACED ON TOP OF THE CULVERT. ALONG THE ROADWAY THE POST WILL BE NORMAL TO GRADE LINE, PERPENDICULAR TO THE BASE PLATE.

POST, BASE PLATE (AND BOTTOM PLATE IF USED) AND SHIMS SHALL BE GALVANIZED AFTER FABRICATION.

PRIOR TO GALVANIZING, ALL STEEL POSTS AND PLATES SHALL BE GIVEN A NO. 6 COMMERCIAL BLAST CLEANING BY SSPC SPECS.

ALL MATERIAL USED IN POSTS SHALL BE MADE FROM MATERIAL CONFORMING TO ASTM DESIGNATION A500 GRADE B.

ALL MATERIALS USED IN RAILS SHALL BE MADE FROM MATERIAL CONFORMING TO ASTM DESIGNATION A36.

ALL MATERIAL USED IN PLATES SHALL BE MADE FROM MATERIAL CONFORMING TO ASTM DESIGNATION A709 GRADE 50 OR 505.

HEX BOLTS, THREADED RODS, HEX NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F1554 GRADE 36, AND SHALL BE GALVANIZED. RODS ARE TO BE FULLY THREADED AND BOLTS TO BE THREADED 3". CHAMFER TOP OF BOLTS AND RODS BEFORE THREADING.

◩ CONCRETE MASONRY ANCHORS TYPE S 1-INCH SHALL BE USED FOR POST ANCHORAGE TYPE I. EMBED INTO CONCRETE AS DETAILED. THE ADHESIVE USED FOR THE TYPE S ANCHORS SHALL HAVE A MINIMUM BOND STRENGTH OF 1305 PSI. FOLLOW THE MANUFACTURER'S SPECIFICATIONS FOR INSTALLATION.

STEEL SHIMS MAY BE USED BETWEEN PLATES AND SLAB WHERE REQUIRED FOR ALIGNMENT.

CONCRETE BASES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF SECTION 654 OF THE STANDARD SPECIFICATIONS. FURNISHING AND PLACING CONCRETE BASES IS INCIDENTAL TO THE RAILING SYSTEM.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-837

DRAWN BY AMZ | PLANS CK'D.

GUARDRAIL

SHEET 6 OF 6
113

L:±JOBS2008±20085024-10±CAD±STRUCTURAL±DGN±00±B-13-837_06.DGN 9/25/2015 2:50:54 PM

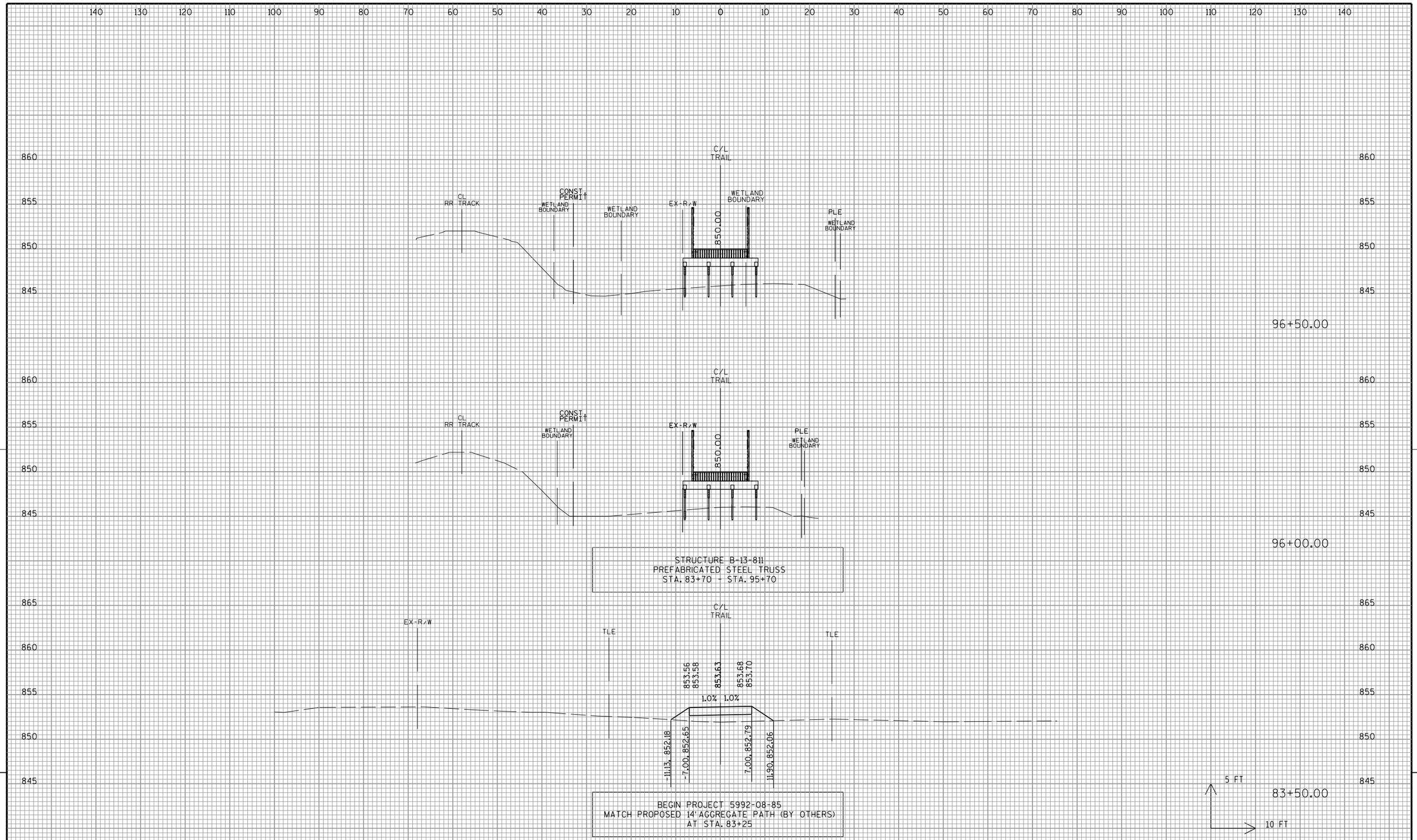
I.D. DATE:

LAKE FARM PARK SEGMENT

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.2	Mass Ordinate
83+25.00	8325		2	2	0	0	0	0	0
83+50.00	8350	25	0	15	1	8	1	9	-9
83+70.00	8370	20	0	15	0	11	1	23	-22
			Column totals		1	19			

MCDANIEL PARK SEGMENT

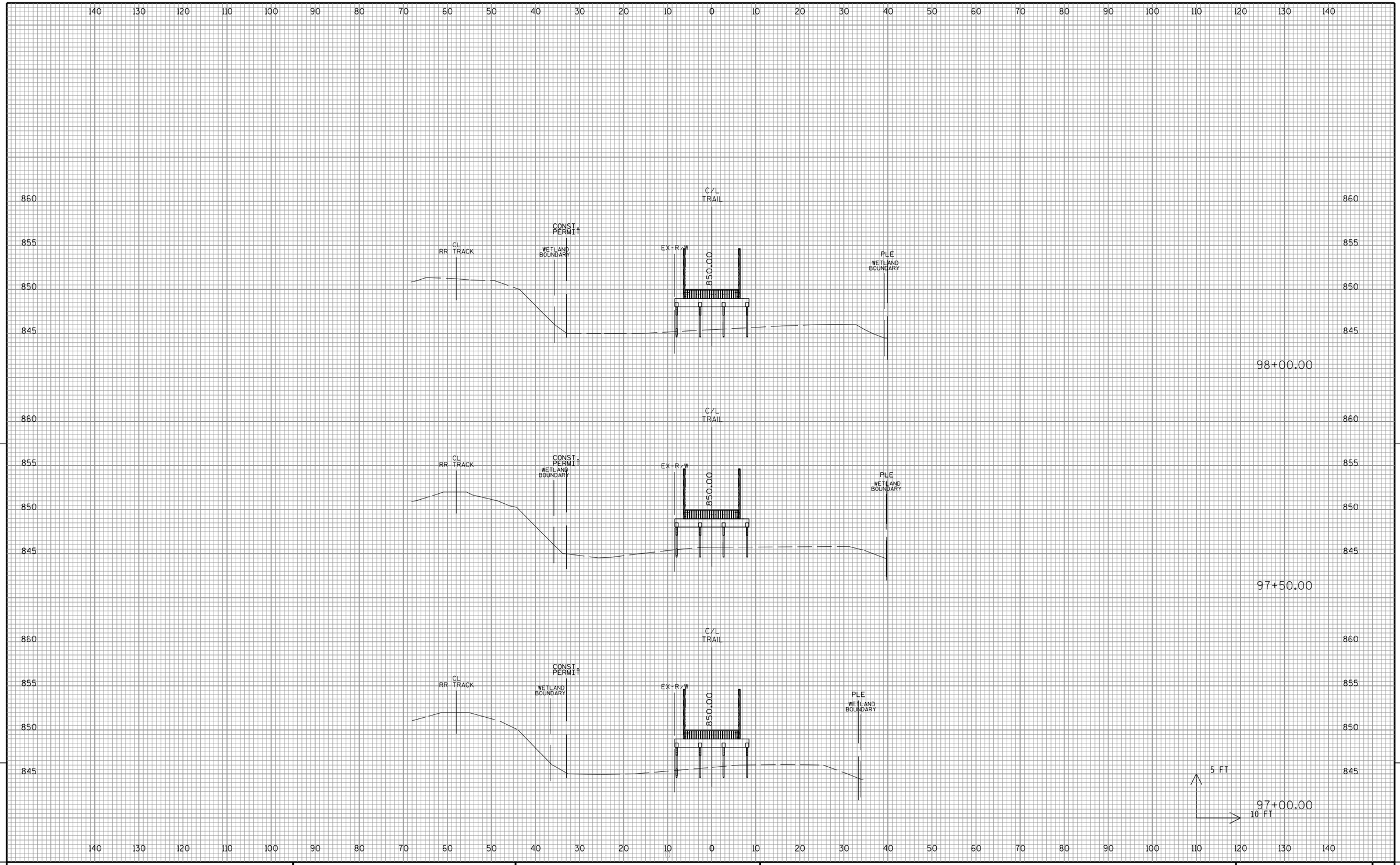
STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.2	Mass Ordinate Note 8
132+19.00	13219		0	53	0	0	0	0	0
132+50.00	13250	31	0	53	0	61	0	73	-73
133+00.00	13300	50	4	12	4	60	4	145	-142
133+50.00	13350	50	1	11	5	21	8	171	-162
134+00.00	13400	50	9	0	9	10	18	183	-165
134+50.00	13450	50	12	0	19	0	37	183	-146
135+00.00	13500	50	8	1	19	1	56	184	-129
135+50.00	13550	50	6	3	13	4	69	189	-120
136+00.00	13600	50	5	2	10	5	79	194	-115
136+50.00	13650	50	9	1	13	3	92	197	-106
137+00.00	13700	50	10	1	18	2	109	200	-90
137+44.00	13744	44	17	0	22	1	131	201	-69
				Column totals	131	167			



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PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	CROSS SECTIONS	SHEET 115	E

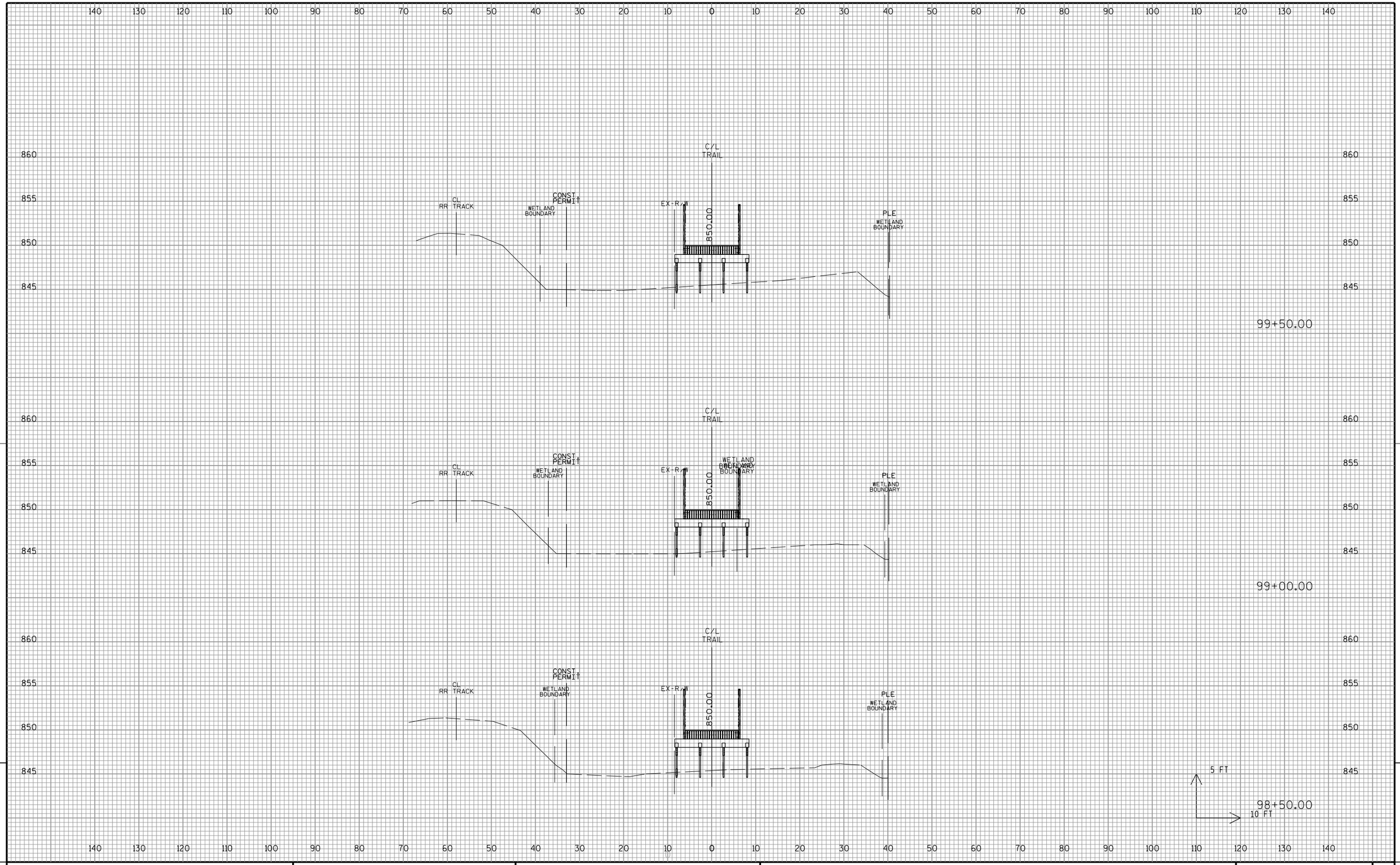


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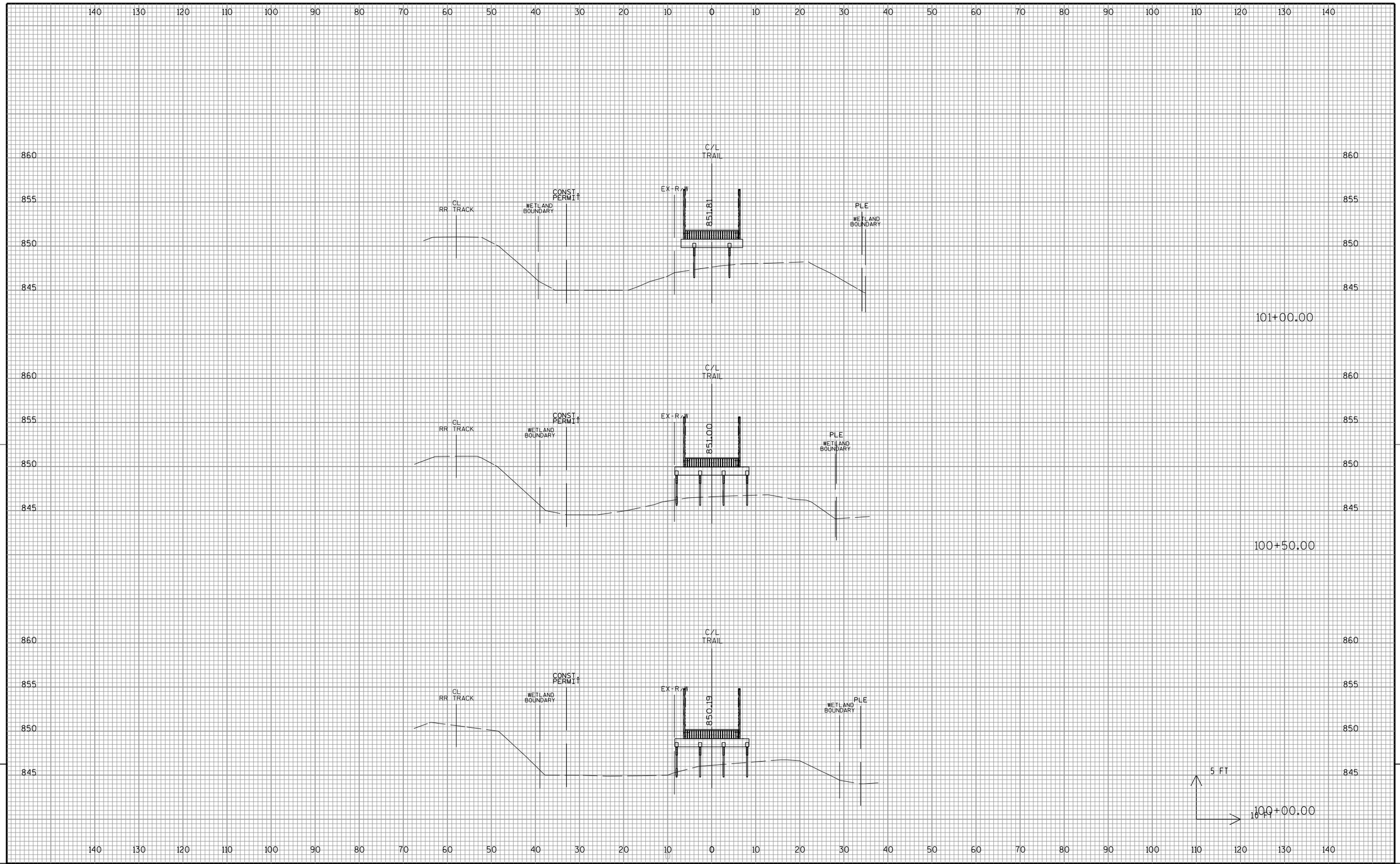
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PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	CROSS SECTIONS	SHEET 117	E

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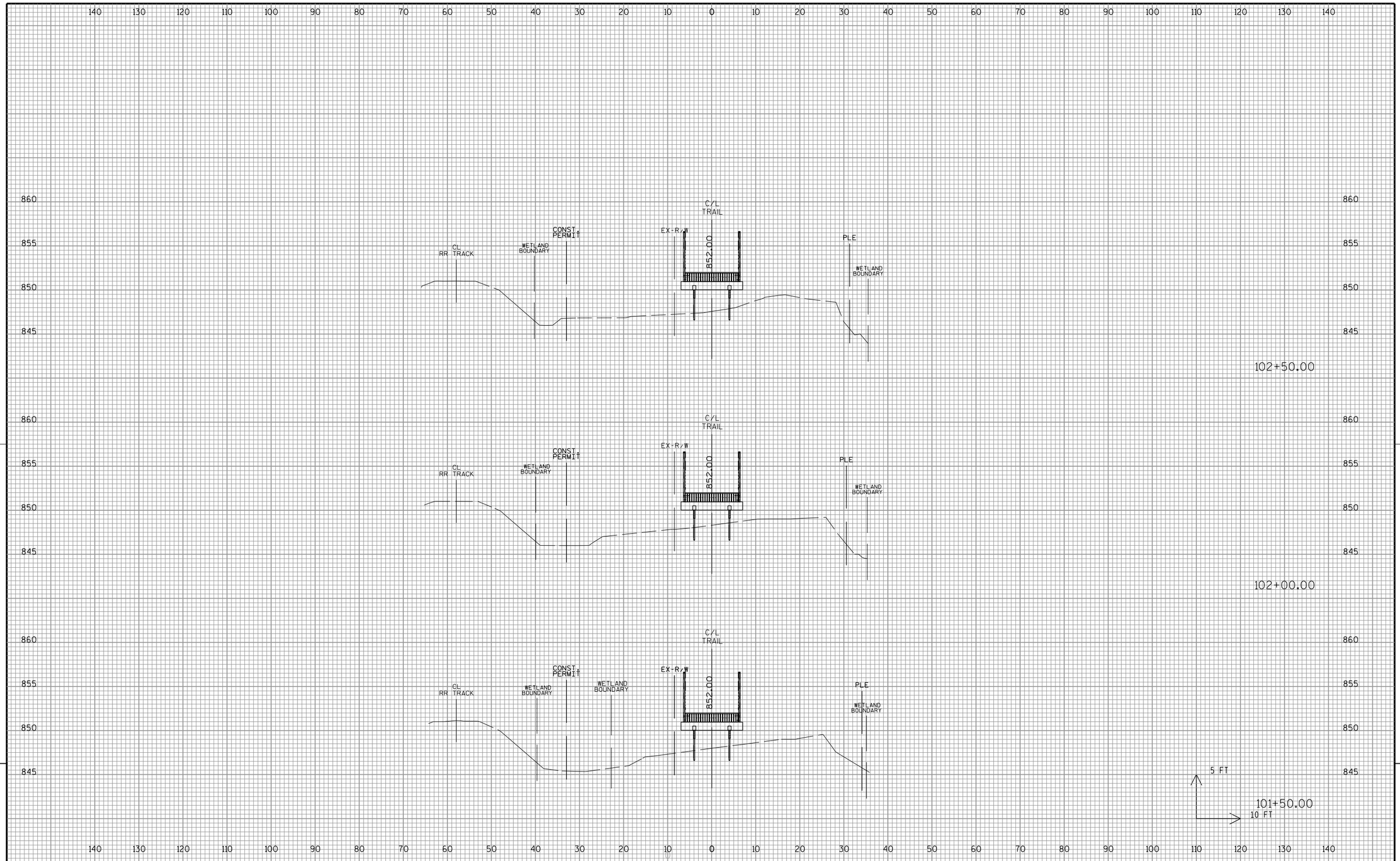
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PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	CROSS SECTIONS	SHEET 118	E

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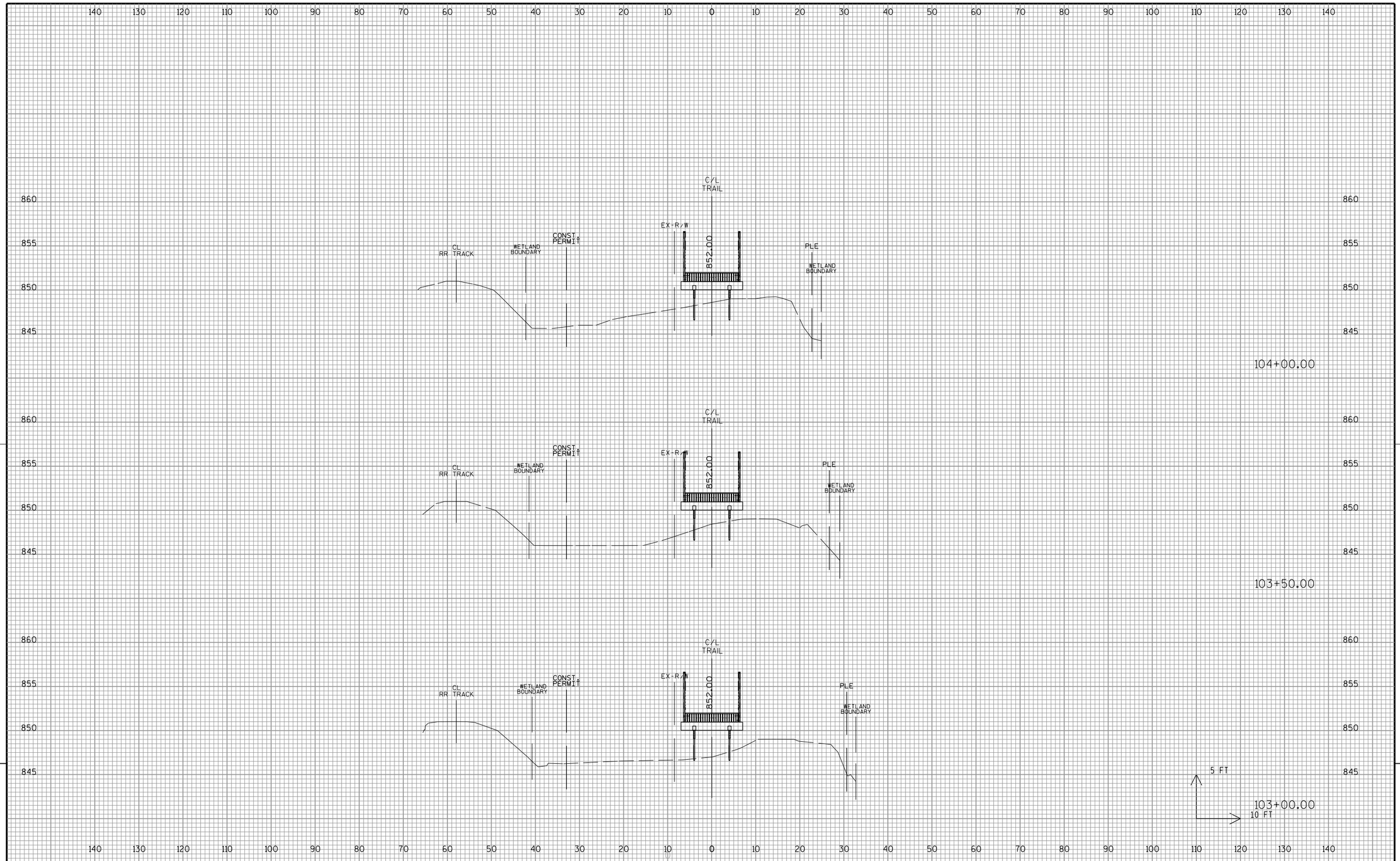
WISDOT/CADDS SHEET 21



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PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	CROSS SECTIONS	SHEET 119	E

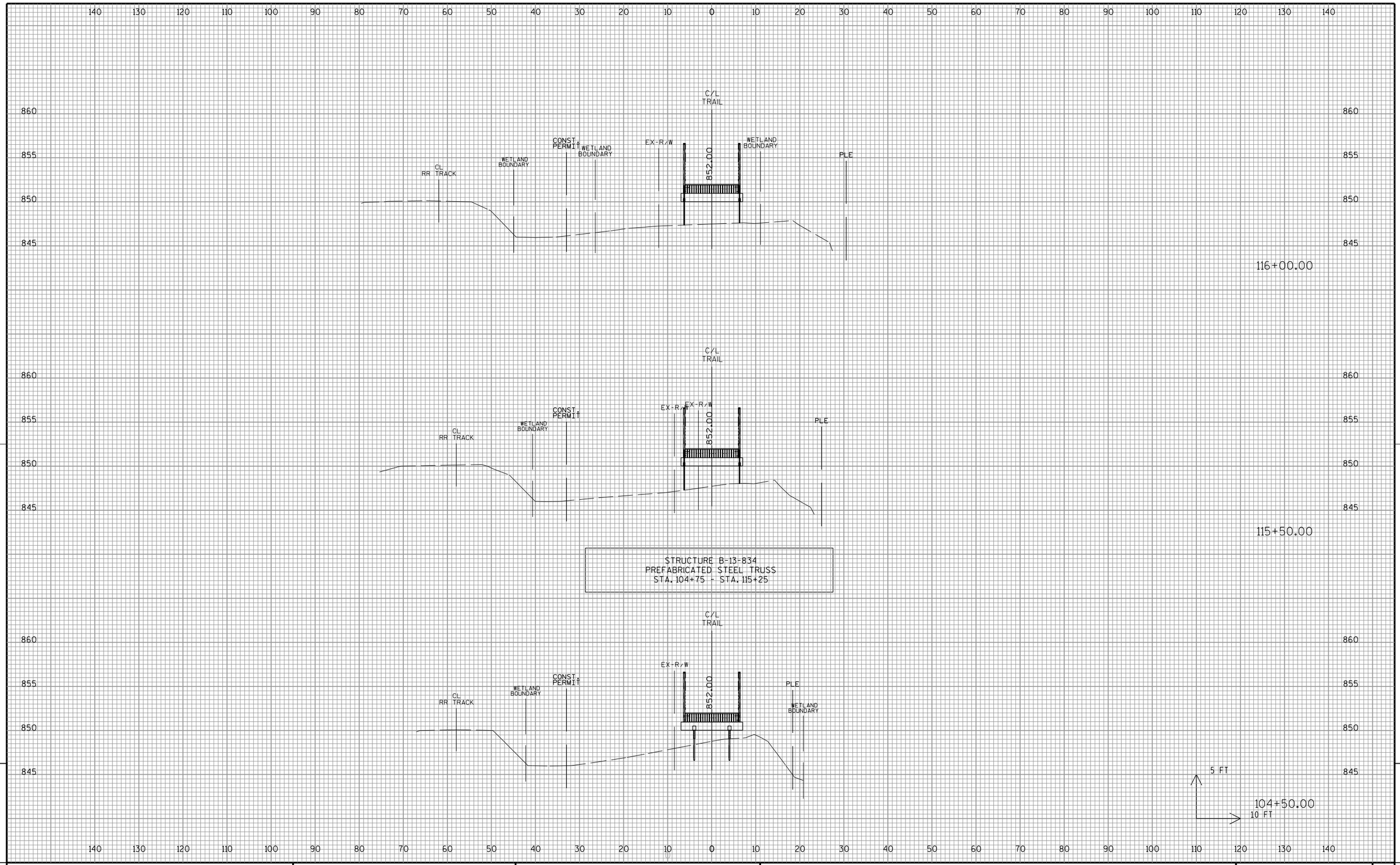


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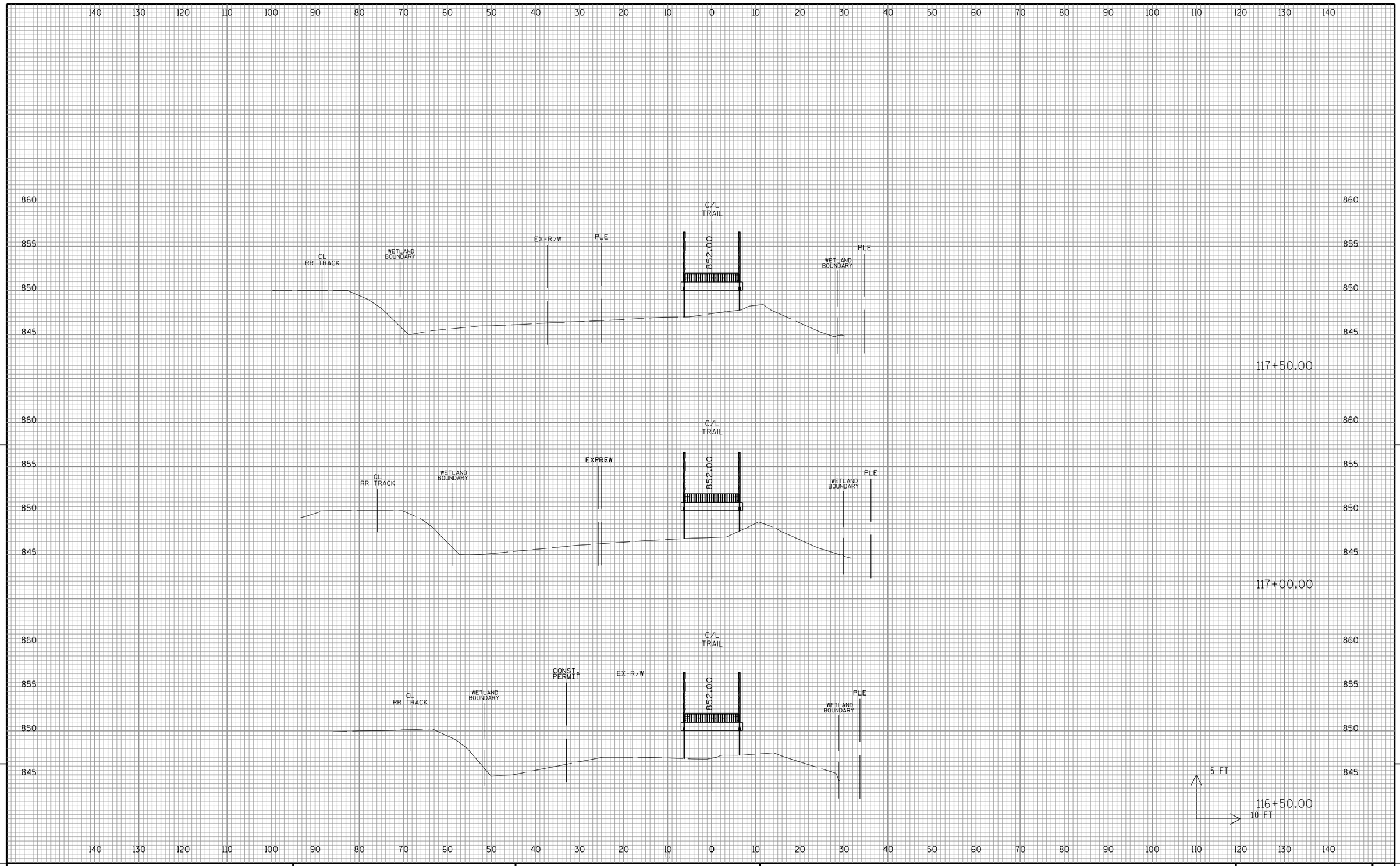
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PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	CROSS SECTIONS	SHEET 121	E



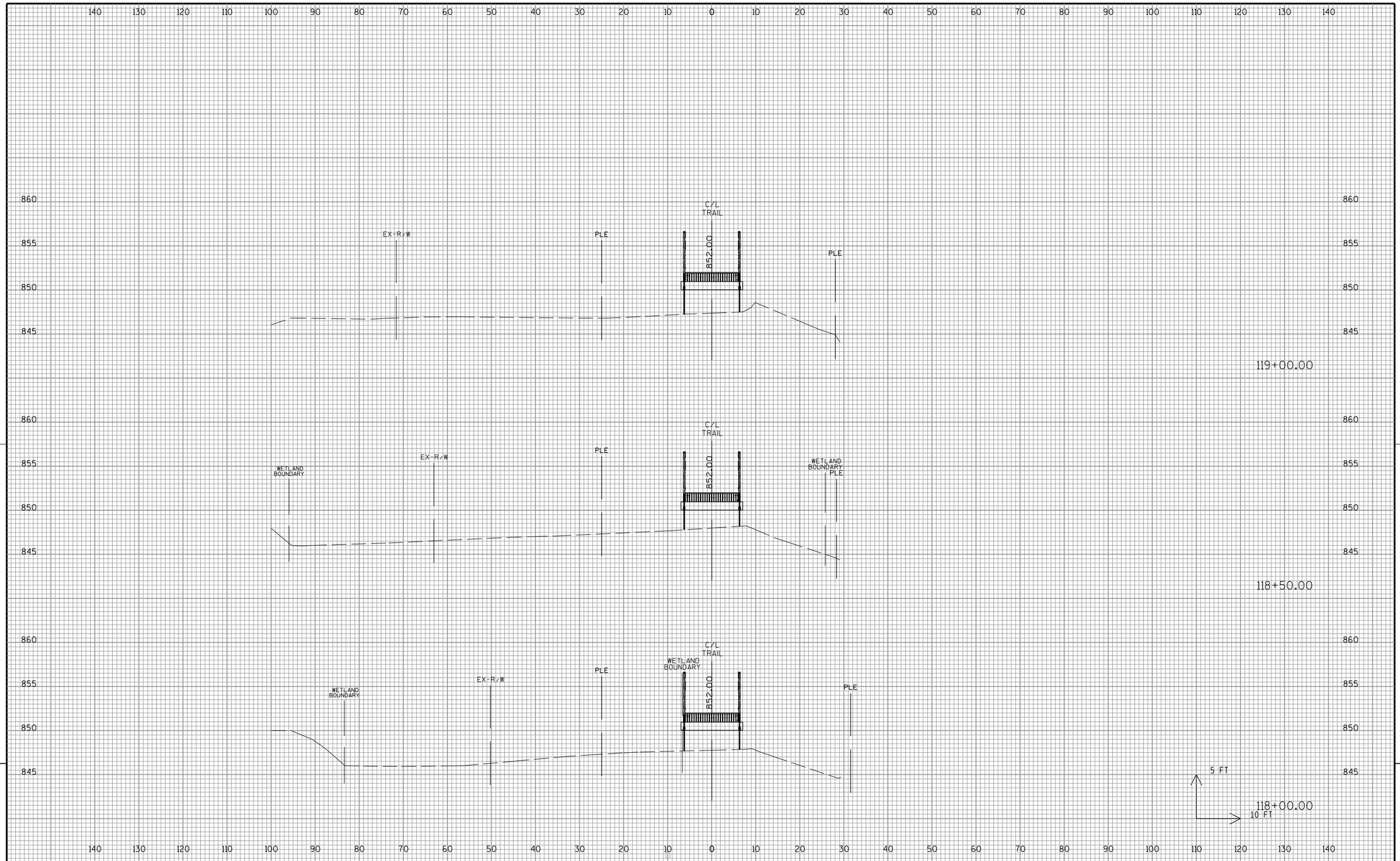
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WISDOT/CADDS SHEET 21



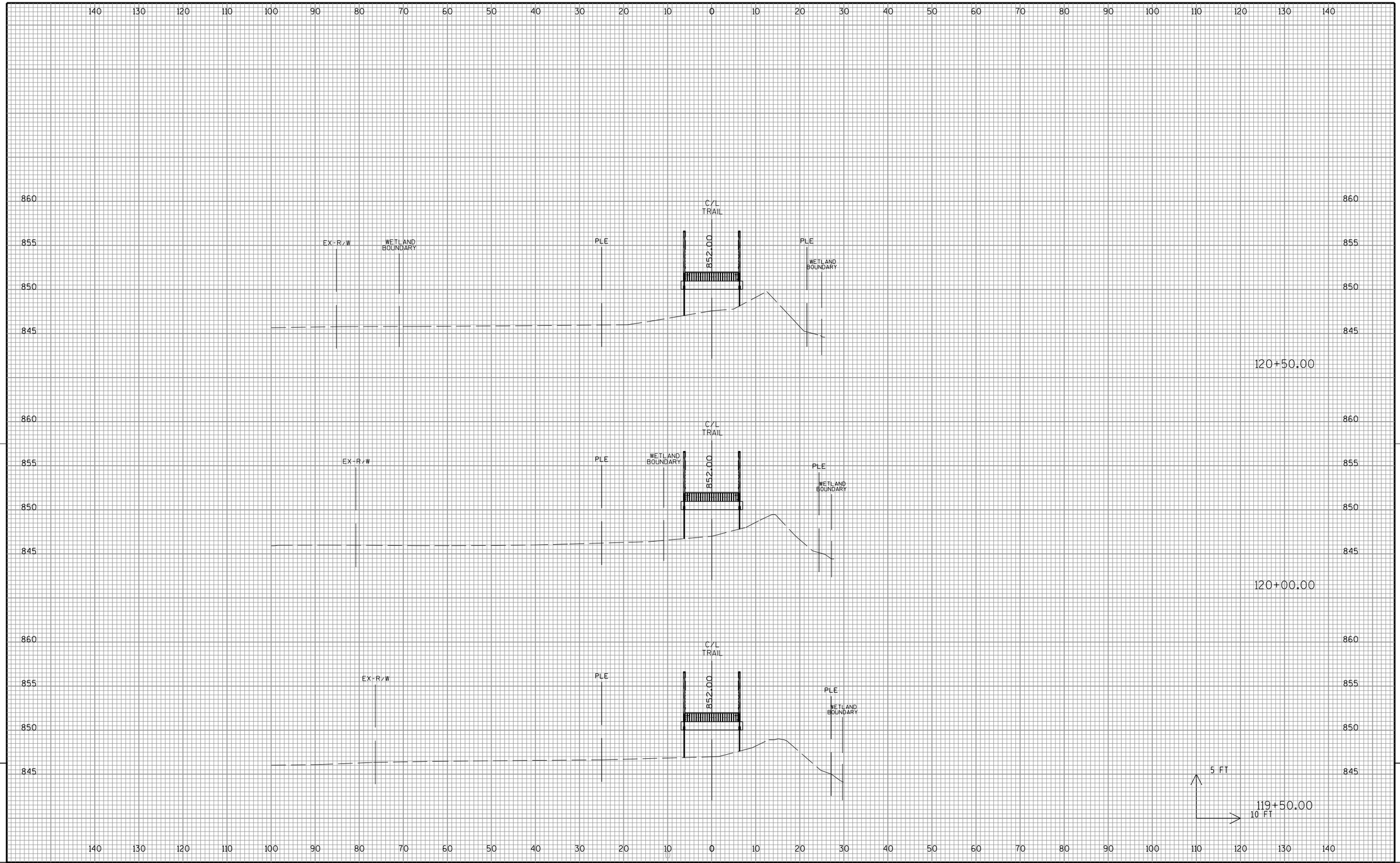
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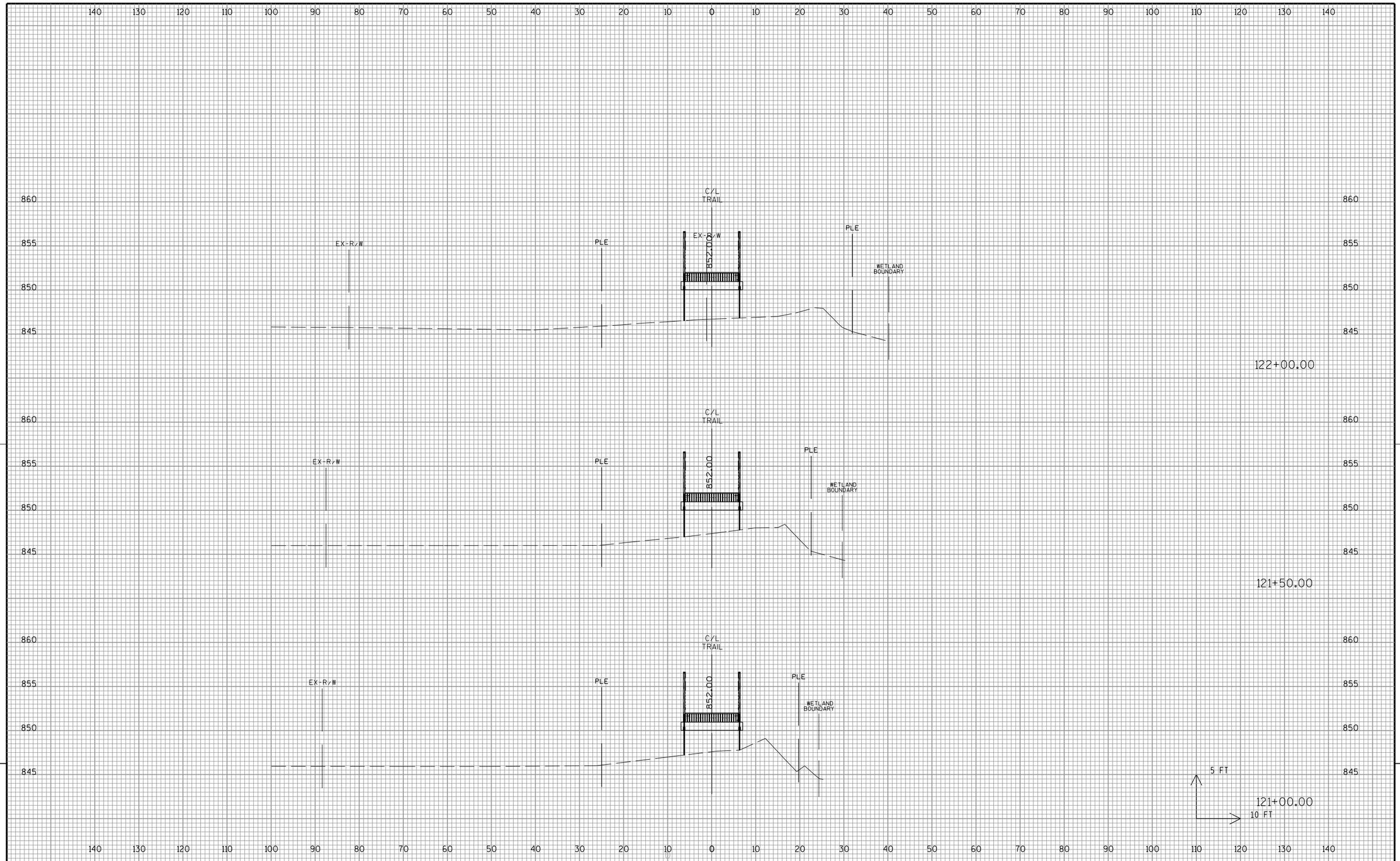
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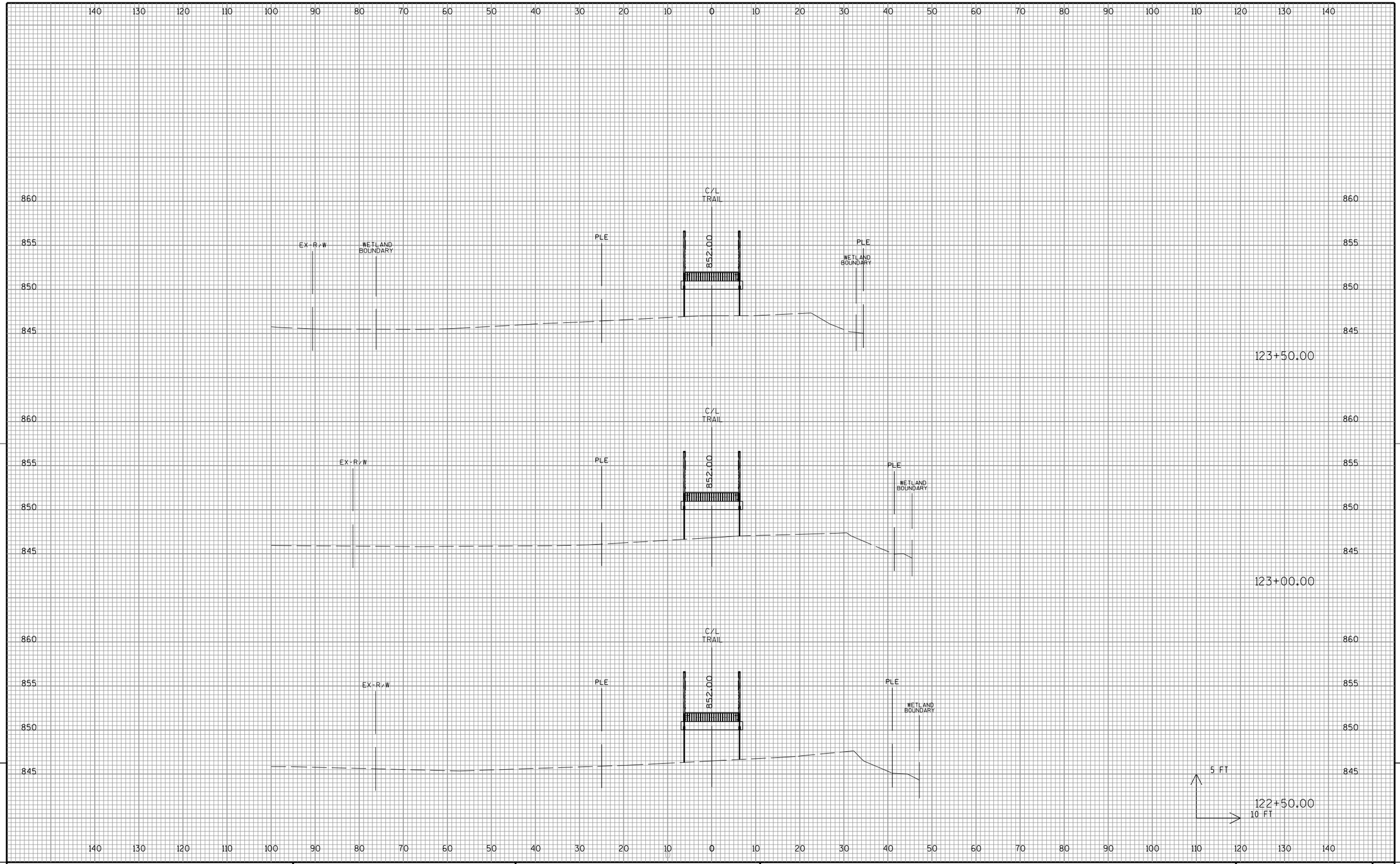
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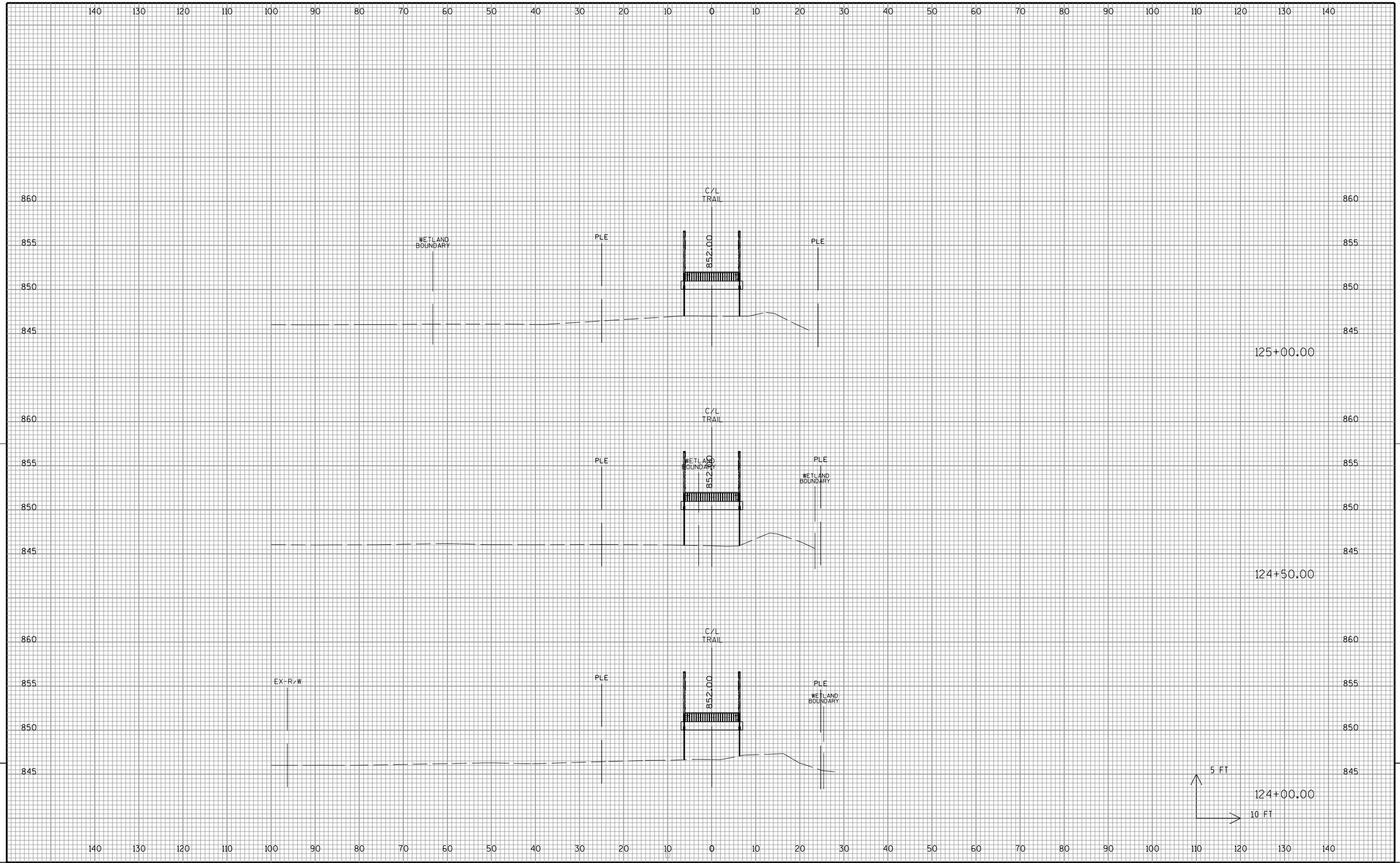
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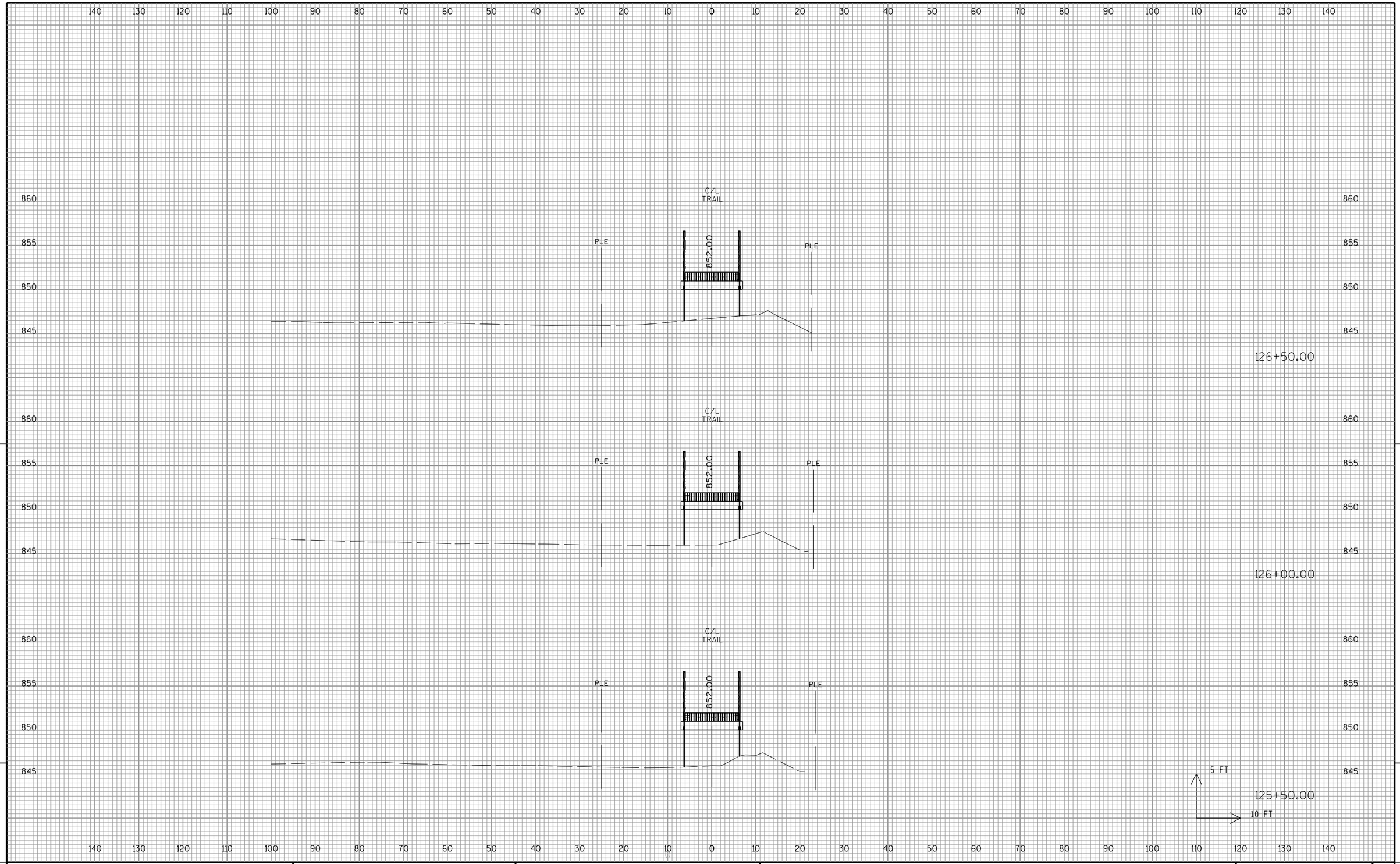


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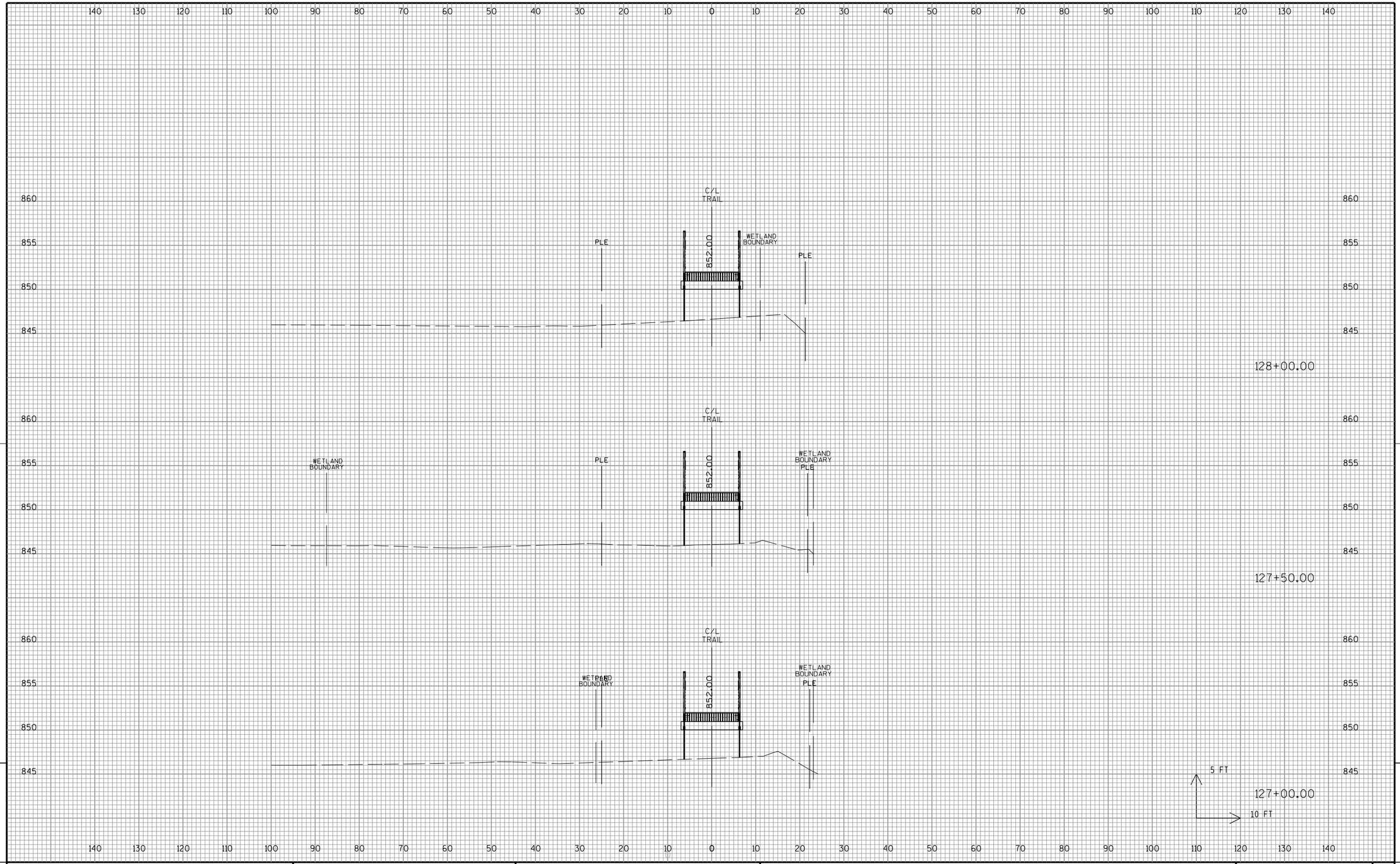
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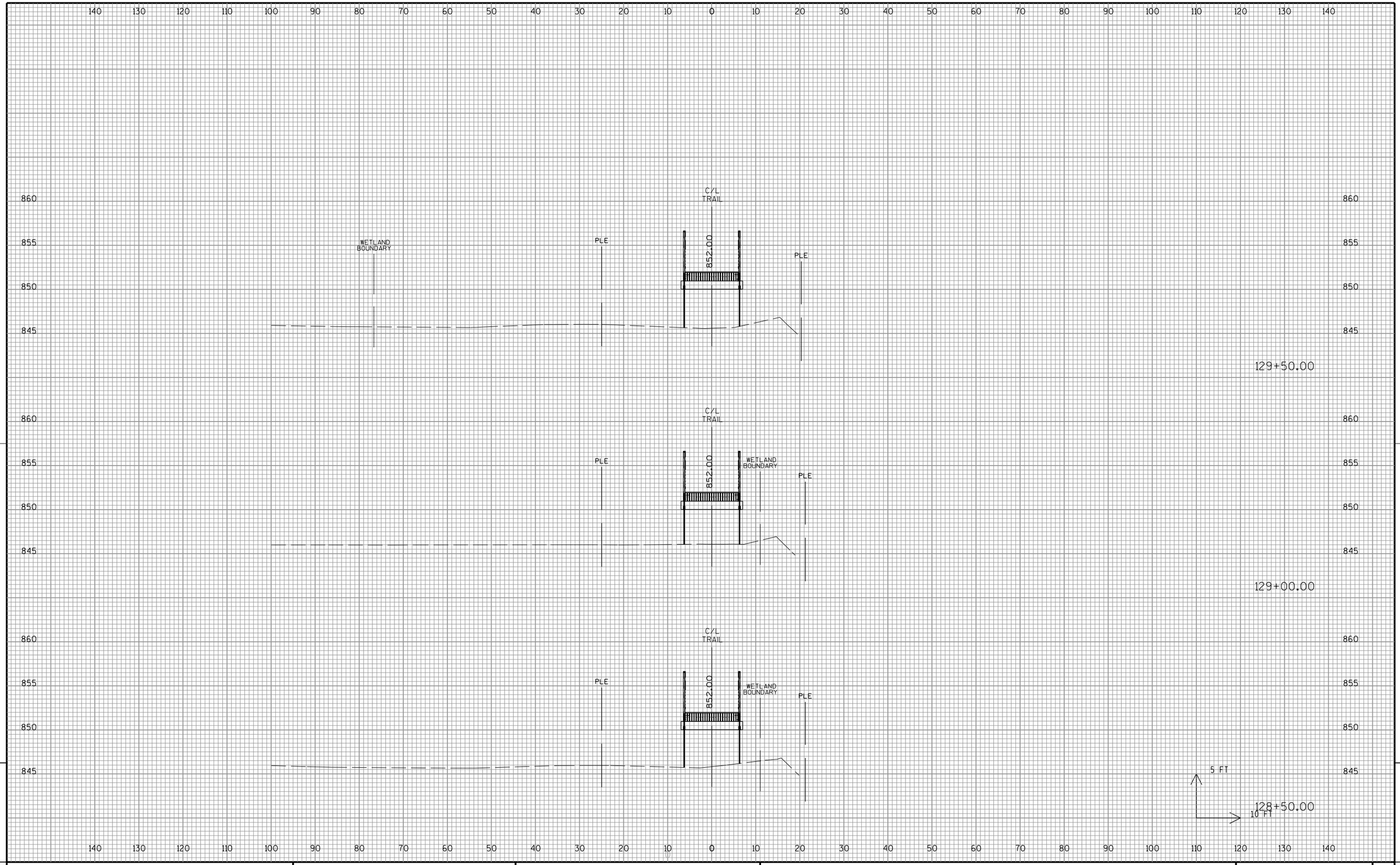


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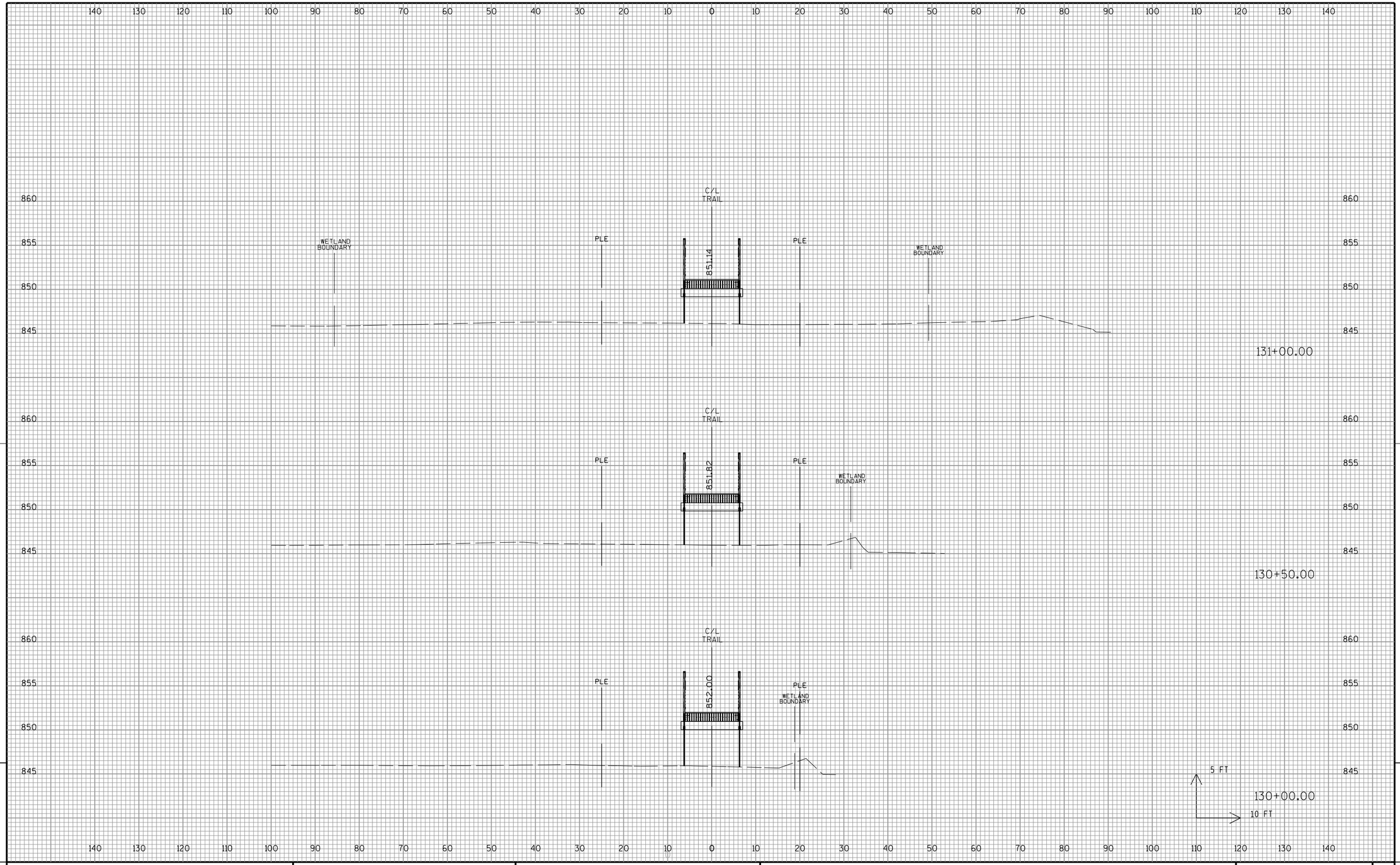
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PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	CROSS SECTIONS	SHEET 130	E

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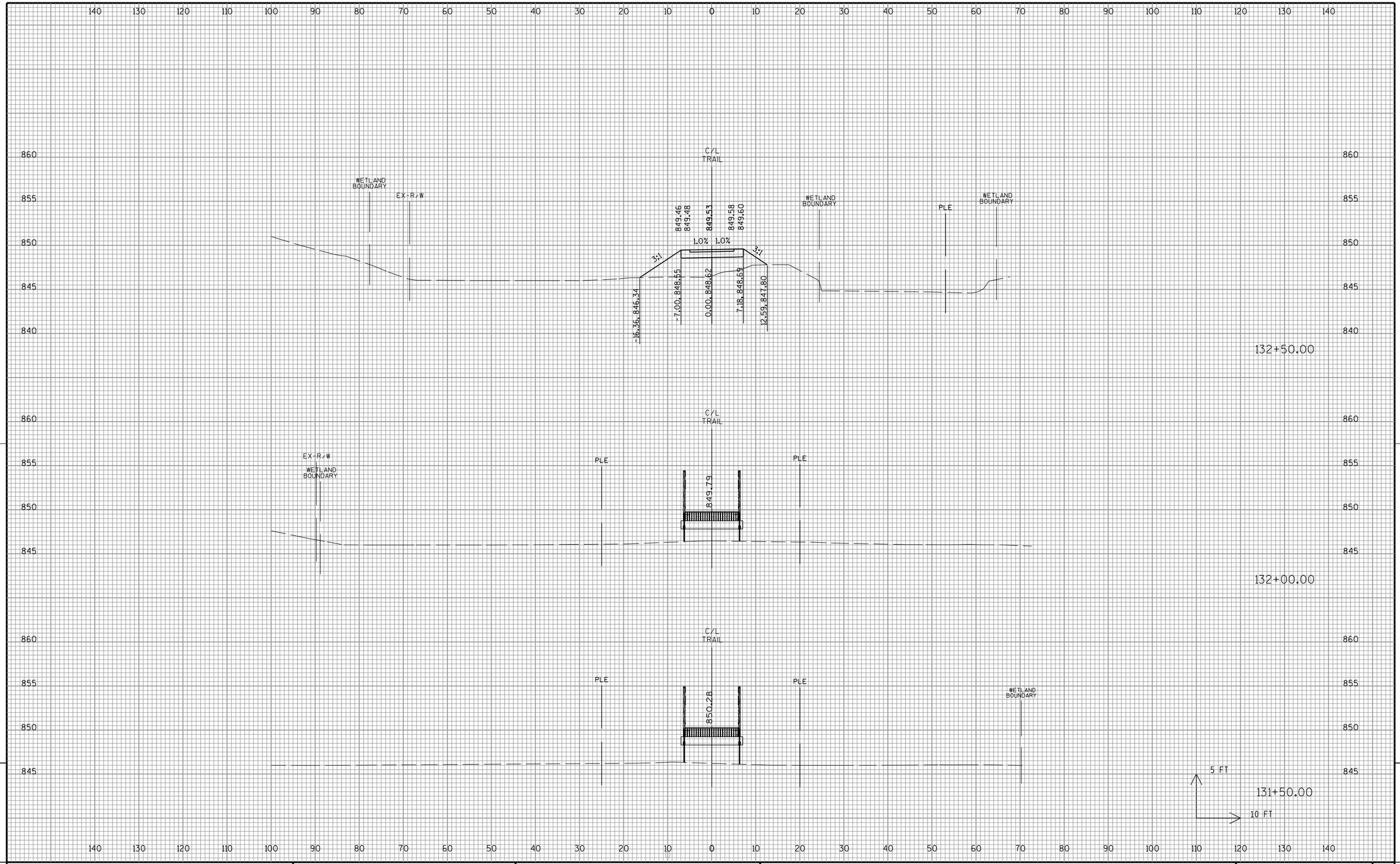
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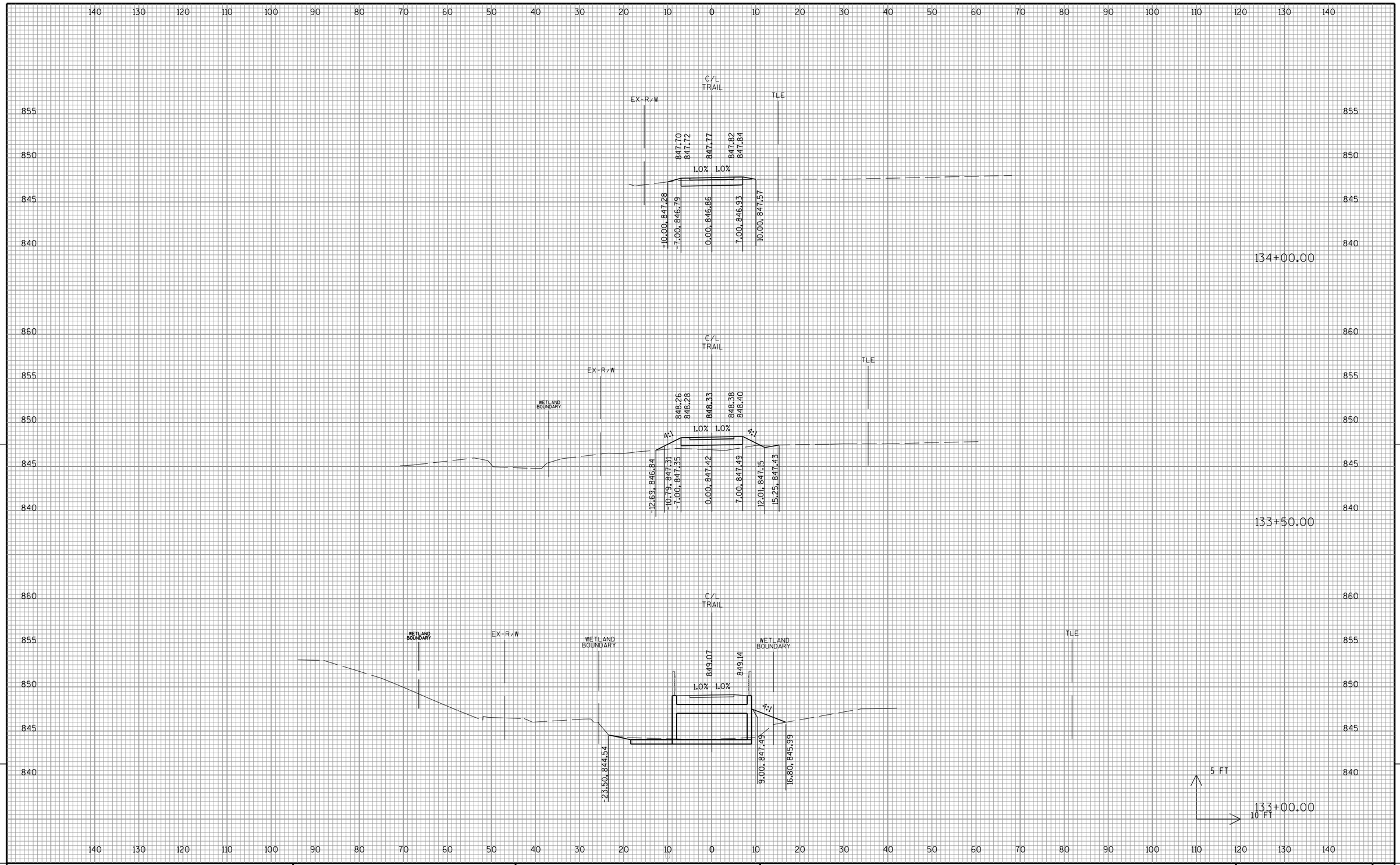
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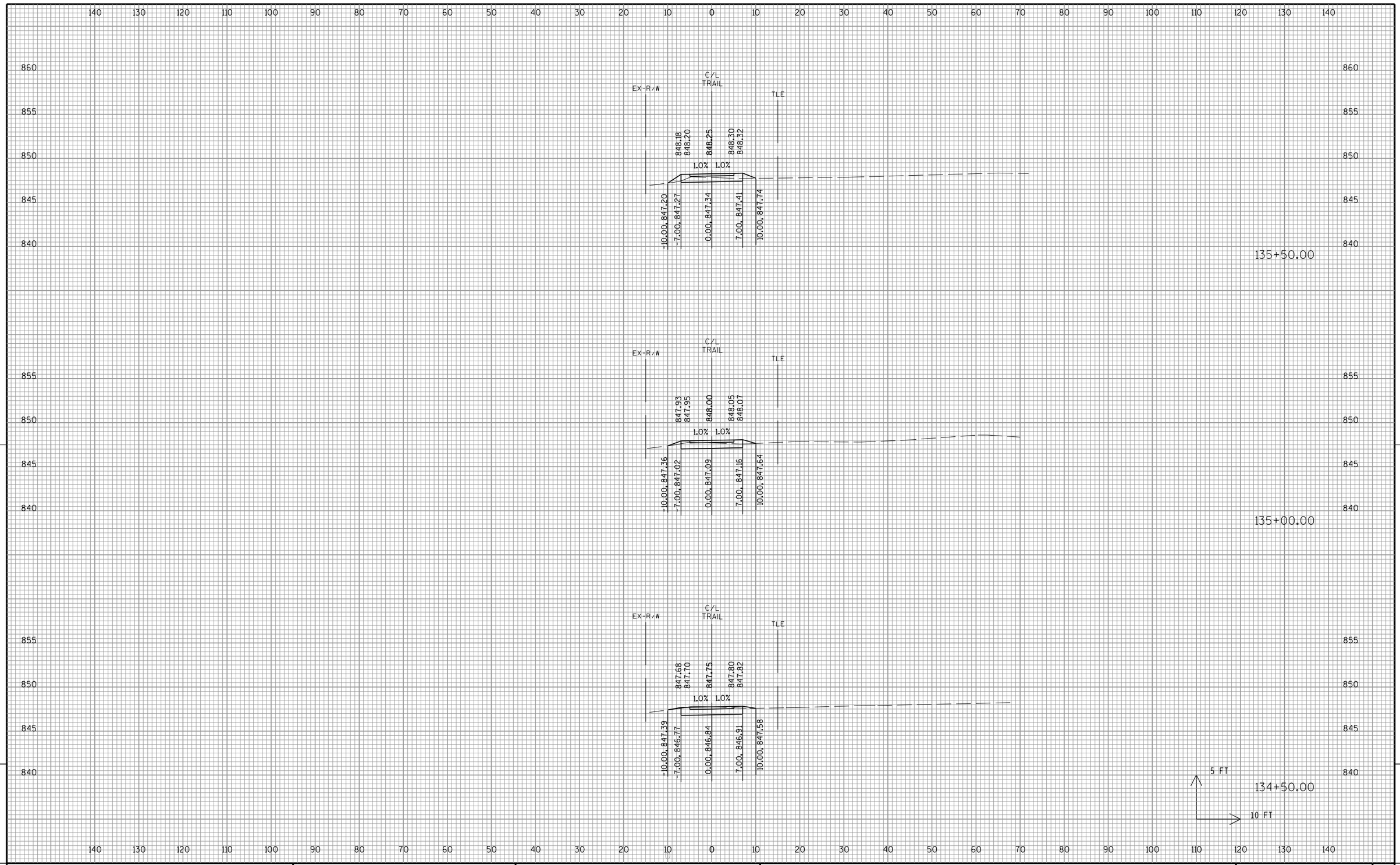
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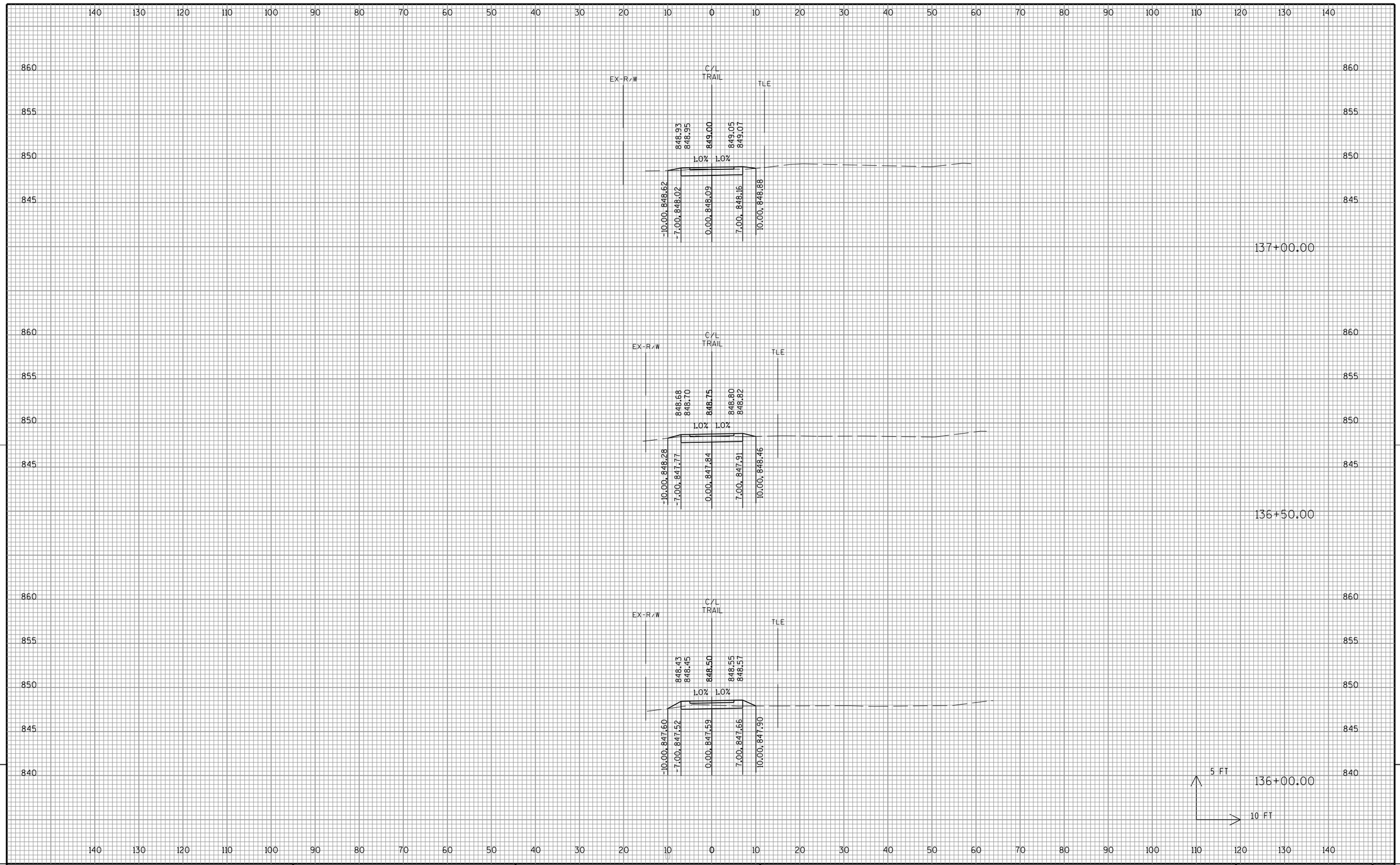
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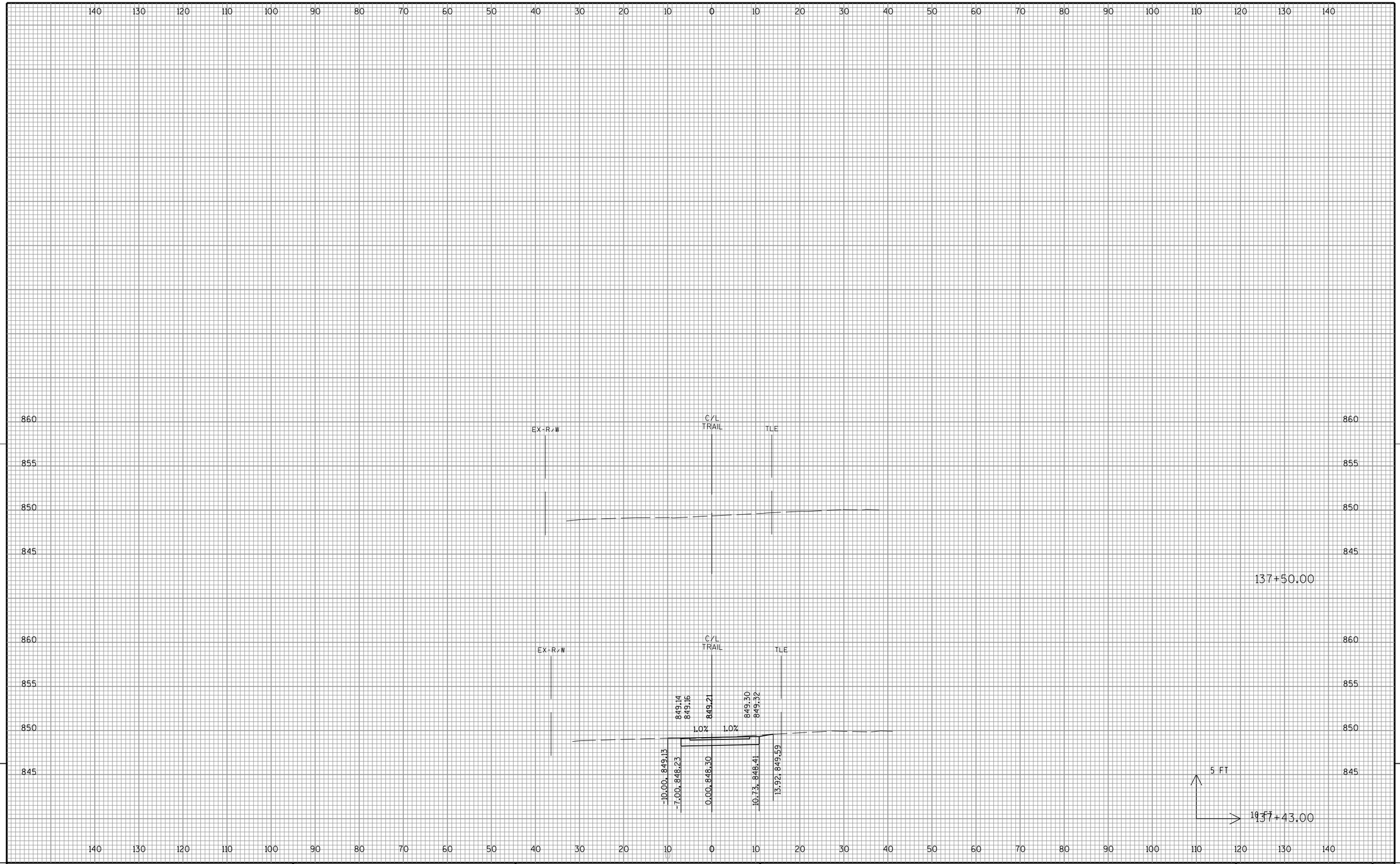
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PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	CROSS SECTIONS	SHEET 135	E



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PROJECT NO:5992-08-85	HWY: YAHARA RIVER TRAIL	COUNTY: DANE	CROSS SECTIONS	SHEET 136	E

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov