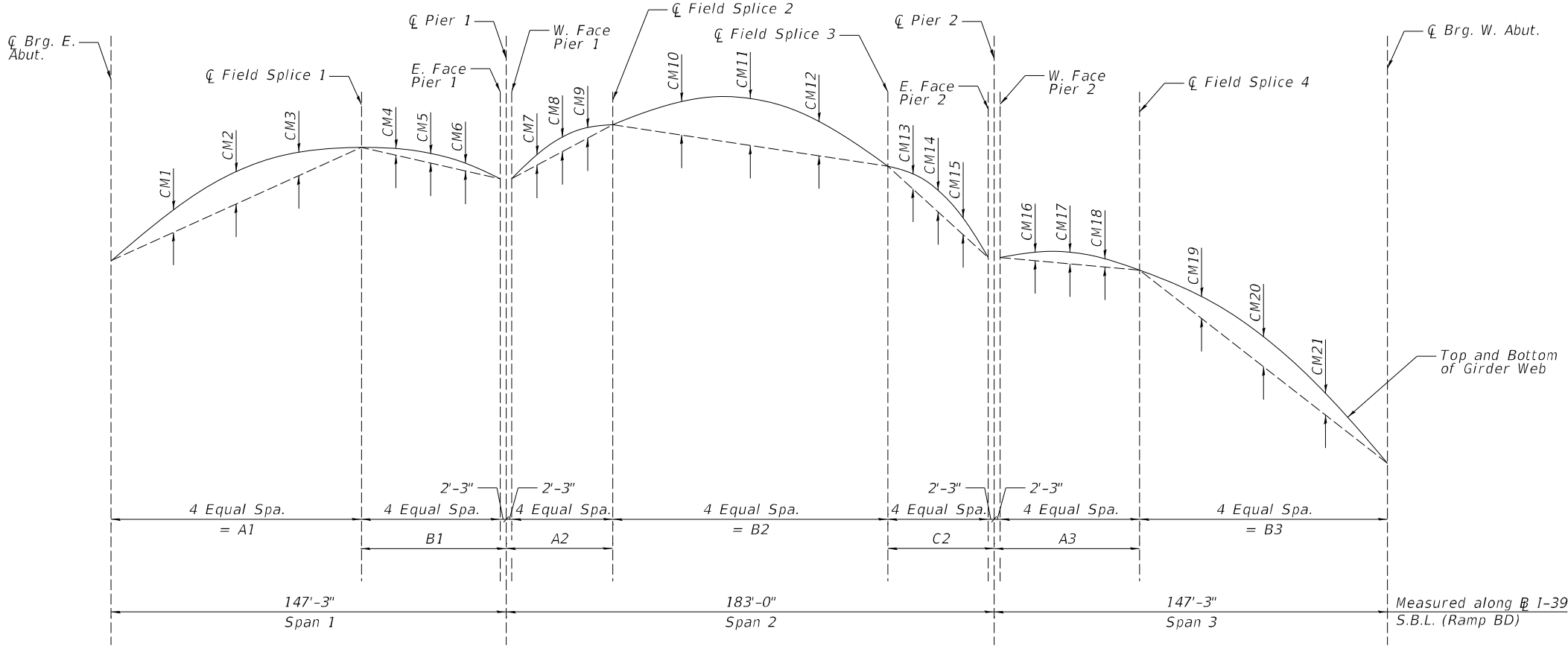




CAMBER DIAGRAM

GIRDER DIMENSIONS

Girder	CM1	CM2	CM3	CM4	CM5	CM6	CM7	CM8	CM9	CM10	CM11	CM12	CM13	CM14	CM15	CM16	CM17	CM18	CM19	CM20	CM21
1	1 1/2"	2"	1 1/2"	0"	0"	0"	5/8"	3/4"	5/8"	2 1/4"	3"	2 1/4"	5/8"	3/4"	5/8"	0"	0"	0"	1 1/2"	2"	1 1/2"
2	1 1/2"	2"	1 1/2"	0"	0"	0"	3/4"	1"	3/4"	2 1/4"	3"	2 1/4"	3/4"	1"	3/4"	0"	0"	0"	1 1/2"	2"	1 1/2"
3	1 1/2"	2"	1 1/2"	3/4"	1"	3/4"	1 1/4"	1 5/8"	1 1/4"	1 5/8"	2 1/2"	1 5/8"	1 1/4"	1 5/8"	1 1/4"	3/4"	1"	3/4"	1 1/2"	2"	1 1/2"
4	1 1/2"	2"	1 1/2"	3/4"	1"	3/4"	1 1/4"	1 5/8"	1 1/4"	1 5/8"	2 1/2"	1 5/8"	1 1/4"	1 5/8"	1 1/4"	3/4"	1"	3/4"	1 1/2"	2"	1 1/2"
5	1 1/2"	2"	1 1/2"	3/4"	1"	3/4"	1 1/4"	1 5/8"	1 1/4"	1 5/8"	2 1/2"	1 5/8"	1 1/4"	1 5/8"	1 1/4"	3/4"	1"	3/4"	1 1/2"	2"	1 1/2"
6	1 3/4"	2 3/8"	1 3/4"	0"	0"	0"	3/4"	1"	3/4"	2 1/2"	3 1/4"	2 1/2"	3/4"	1"	3/4"	0"	0"	0"	1 3/4"	2 3/8"	1 3/4"
7	1 3/4"	2 3/8"	1 3/4"	0"	0"	0"	5/8"	3/4"	5/8"	2 1/2"	3 1/4"	2 1/2"	5/8"	3/4"	5/8"	0"	0"	0"	1 3/4"	2 3/8"	1 3/4"

TOP OF WEB ELEVATIONS

Location	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6	Girder 7
Cl Brg. E. Abut.	847.80	848.26	848.72	849.18	849.64	850.10	850.56
Cl Field Splice 1	848.34	848.80	849.28	849.74	850.19	850.61	851.06
East Face Pier 1	848.16	848.61	849.06	849.50	849.95	850.40	850.84
West Face Pier 1	848.16	848.61	849.06	849.50	849.95	850.40	850.84
Cl Field Splice 2	848.45	848.91	849.39	849.84	850.28	850.70	851.14
Cl Field Splice 3	848.25	848.71	849.19	849.64	850.09	850.51	850.95
East Face Pier 2	847.78	848.23	848.68	849.12	849.57	850.02	850.46
West Face Pier 2	847.78	848.23	848.68	849.12	849.57	850.02	850.46
Cl Field Splice 4	847.75	848.21	848.70	849.15	849.61	850.03	850.49
Cl Brg. W. Abut.	846.82	847.28	847.74	848.20	848.66	849.12	849.58

For fabrication only. Elevations based on a "No-Load" condition (fully supported with the web horizontal).

NOTES:

- See sheet 31 of 69 for girder segment lengths.

MODEL: sMODELNAME5
FILE NAME: c:\pwworking\benesch_projects\projects\dms65241\0264C62-1010215-sh-camber.dgn



Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312.465.4150 Job No. 10800

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PLOT DATE =	CHECKED - MFH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL PLATE GIRDER CAMBER
STRUCTURE NO. 101-0215

SHEET 34 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	801
CONTRACT NO. 64B13				
ILLINOIS		FED. AID PROJECT		

MODEL: sMODELNAME\$
FILE NAME: c:\pwwork\benesch_projects\projects\dms6524\1D264C62-1010215-shr-girdrmmxn.dgn

EXTERIOR GIRDER MOMENT TABLE (GIRDER 7 CONTROLS)					
	0.4 Sp. 1	* Pier 1	0.5 Sp. 2	* Pier 2	0.6 Sp. 3
I _s	(in ⁴) 65,911	203,913	65,911	203,913	65,911
I _c (n)	(in ⁴) 136,957	-----	136,957	-----	136,957
I _c (3n)	(in ⁴) 102,369	-----	102,369	-----	102,369
I _c (cr)	(in ⁴) -----	218,279	-----	218,279	-----
S _s	(in ³) 1,787	5,262	1,787	5,262	1,787
S _c (n)	(in ³) 2,343	-----	2,343	-----	2,343
S _c (3n)	(in ³) 2,134	-----	2,134	-----	2,134
S _c (cr)	(in ³) -----	5,395	-----	5,395	-----
S _x	(in ³) 2,128	5,343	2,156	5,342	2,131
DC1	(k/')	1,200	1,583	1,200	1,583
M _{DC1}	('k)	1,625	4,848	1,140	5,146
DC2	(k/')	0.190	0.190	0.190	0.190
M _{DC2}	('k)	266	819	216	820
DW	(k/')	0.371	0.371	0.371	0.371
M _{DW}	('k)	524	1,516	444	1,509
M _{ℓ + IM}	('k)	2,394	3,635	2,178	3,719
f _i (Strength I)	(ksi)	0.0	6.6	0.0	7.8
M _u + ¹ / ₃ f _i S _x	('k)	7,341	16,695	6,175	17,385
Ø. M _n	('k)	-----	-----	-----	-----
f _s DC1	(ksi)	10.9	11.1	7.7	11.7
f _s DC2	(ksi)	1.5	1.8	1.2	1.8
f _s DW	(ksi)	2.9	3.4	2.5	3.4
f _s (ℓ+IM)	(ksi)	12.3	8.1	11.2	8.3
f _i (Service II)	(ksi)	0.0	4.9	0.0	5.8
f _s + ¹ / ₂ (Service II)	(ksi)	31.3	29.2	25.9	30.6
Service II Resistance	(ksi)	47.5	47.5	47.5	47.5
f _s + ¹ / ₃ (Strength I)	(ksi)	41.4	37.5	34.4	39.1
Ø. F _v	(ksi)	50.0	50.0	50.0	50.0
V _r	(k)	64.6	84.6	61.3	85.7

EXTERIOR GIRDER REACTION TABLE (GIRDER 7 CONTROLS)				
	E. Abut.	** Pier 1	** Pier 2	W. Abut.
R _{DC1}	(k) 61.6	330.8	361.7	64.2
R _{DC2}	(k) 15.5	73.5	76.7	15.8
R _{DW}	(k) 20.1	125.4	137.5	20.9
R _ℓ	(k) 72.2	232.0	244.6	72.1
R _{IM}	(k) 15.2	39.0	39.4	15.3
R _{TOTAL} (Strength I)(Impact)	(k) 279.5	1,167.7	1,251.3	284.3
R _{TOTAL} (Strength I)(No Impact)	(k) 252.9	1,099.5	1,182.3	257.5

* Moment table values for piers taken at the face of the box beam.
Connection material not included in section properties, stresses, etc.

** Reaction table values at piers represent the total for both sides of the box beam.

NOTES:

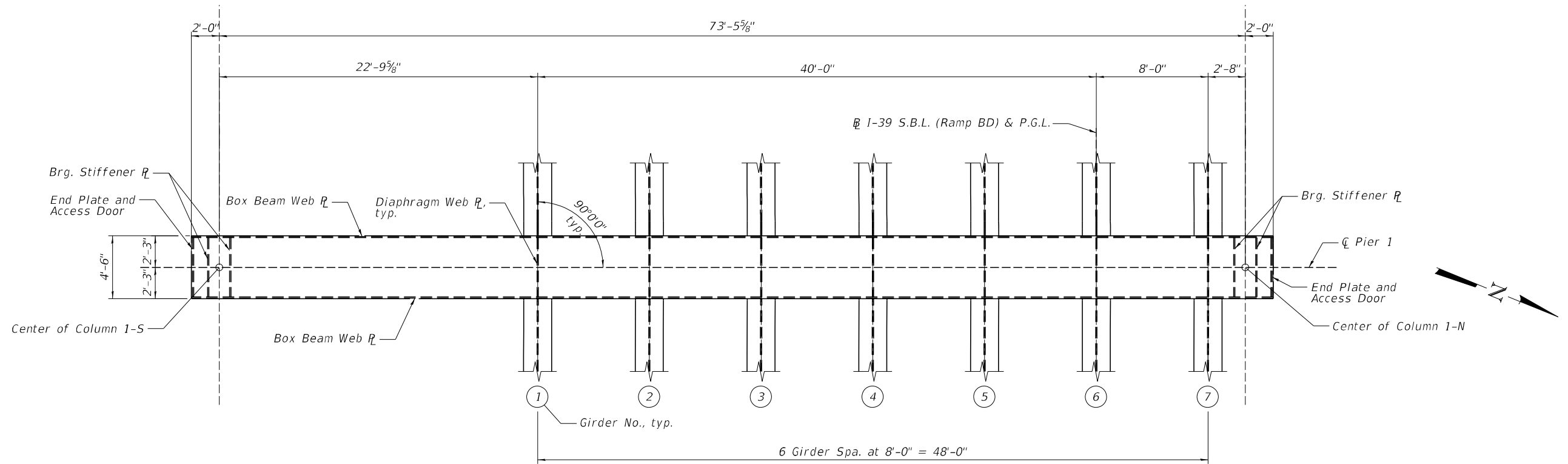
1. DC1 loads shown represent the weight of the girder plus the tributary width of deck and an allowance for cross frames and connection material. DC2 loads shown represent the weight of a single barrier divided by three girders. DW loads shown represent the total weight of the wearing surface divided by the total number of girders.
2. Deflection of the box beams results in a significant redistribution of load to the outer girders near the piers such that DC1, DC2, and DW loads described in Note 1 shall not be construed as the magnitude of loading resisted by the specified girder.

INTERIOR GIRDER MOMENT TABLE (GIRDER 5 CONTROLS)					
	0.4 Sp. 1	* Pier 1	0.5 Sp. 2	* Pier 2	0.6 Sp. 3
I _s	(in ⁴) 65,911	150,896	65,911	150,896	65,911
I _c (n)	(in ⁴) 139,508	-----	139,508	-----	139,508
I _c (3n)	(in ⁴) 104,416	-----	104,416	-----	104,416
I _c (cr)	(in ⁴) -----	164,544	-----	164,544	-----
S _s	(in ³) 1,787	3,971	1,787	3,971	1,787
S _c (n)	(in ³) 2,355	-----	2,356	-----	2,355
S _c (3n)	(in ³) 2,149	-----	2,149	-----	2,149
S _c (cr)	(in ³) -----	4,082	-----	4,082	-----
S _x	(in ³) 2,114	4,035	2,163	4,034	2,119
DC1	(k/')	1.180	1.427	1.180	1.427
M _{DC1}	('k)	1,490	2,688	893	2,699
DC2	(k/')	0.190	0.190	0.190	0.190
M _{DC2}	('k)	196	284	159	257
DW	(k/')	0.371	0.371	0.371	0.371
M _{DW}	('k)	492	818	396	756
M _{ℓ + IM}	('k)	1,814	1,831	1,671	1,757
f _i (Strength I)	(ksi)	0.2	6.6	0.1	8.4
M _u + ¹ / ₃ f _i S _x	('k)	6,030	8,882	4,841	8,844
Ø. M _n	('k)	-----	-----	-----	-----
f _s DC1	(ksi)	10.0	8.1	6.0	8.2
f _s DC2	(ksi)	1.1	0.8	0.9	0.8
f _s DW	(ksi)	2.7	2.4	2.2	2.2
f _s (ℓ+IM)	(ksi)	9.2	5.4	8.5	5.2
f _i (Service II)	(ksi)	0.1	4.9	0.1	6.2
f _s + ¹ / ₂ (Service II)	(ksi)	25.9	20.8	20.2	20.9
Service II Resistance	(ksi)	47.5	47.5	47.5	47.5
f _s + ¹ / ₃ (Strength I)	(ksi)	34.2	26.4	26.9	26.3
Ø. F _v	(ksi)	50.0	50.0	50.0	50.0
V _r	(k)	47.8	51.5	48.8	51.1

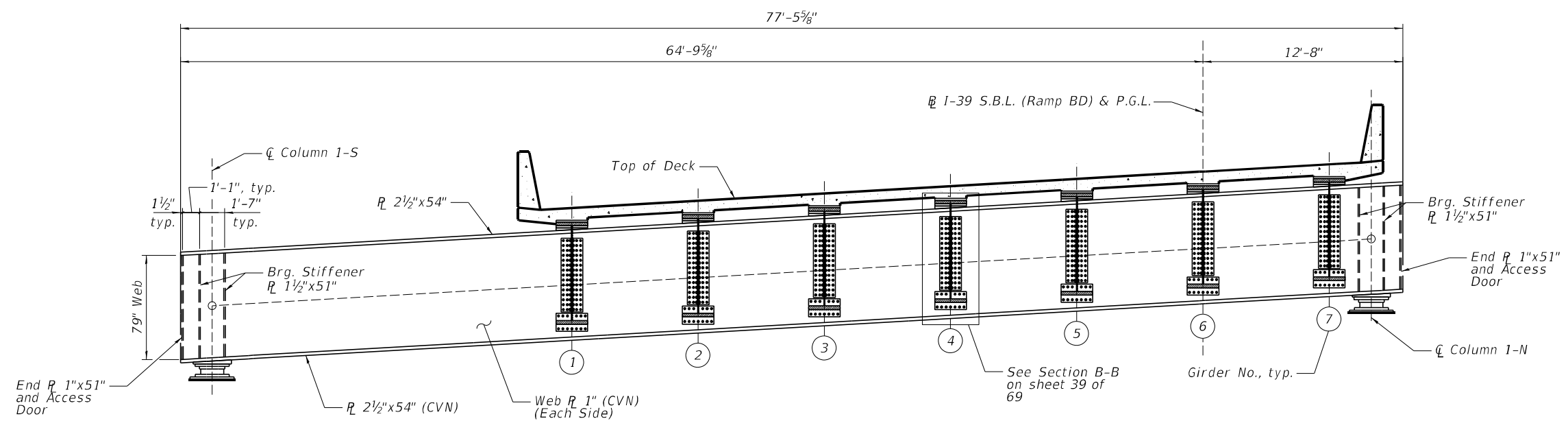
INTERIOR GIRDER REACTION TABLE (GIRDER 5 CONTROLS)				
	E. Abut.	** Pier 1	** Pier 2	W. Abut.
R _{DC1}	(k) 61.0	169.1	156.3	62.2
R _{DC2}	(k) 5.6	9.1	5.4	5.8
R _{DW}	(k) 19.6	41.1	33.2	19.9
R _ℓ	(k) 67.4	120.9	108.8	67.6
R _{IM}	(k) 14.9	25.7	23.5	14.8
R _{TOTAL} (Strength I)(Impact)	(k) 256.7	541.0	483.5	259.1
R _{TOTAL} (Strength I)(No Impact)	(k) 230.6	496.0	442.3	233.2

- R_{DC1}: Un-factored reaction due to non-composite dead load (kip).
- R_{DC2}: Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).
- R_{DW}: Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).
- R_ℓ: Un-factored live load reaction (kip).
- R_{IM}: Un-factored dynamic load allowance (impact)(kip).
- R_{TOTAL} (Strength I)(Impact): Strength I load combination of factored design reactions (kip).
1.25 (R_{DC1} + R_{DC2}) + 1.5R_{DW} + 1.75 (R_ℓ + R_{IM})
- R_{TOTAL} (Strength I)(No Impact): Strength I load combination of factored design reactions, not including dynamic load allowance (Impact) (kip).
1.25 (R_{DC1} + R_{DC2}) + 1.5R_{DW} + 1.75 (R_ℓ)

- I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing fs(Total-Strength I, and Service II) due to non-composite dead loads (in.⁴ and in.³).
- I_c (n), S_c (n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs(Total-Strength I, and Service II) in uncracked sections due to short term composite live loads (in.⁴ and in.³).
- I_c (3n), S_c (3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs(Total-Strength I, and Service II) in uncracked sections due to long-term composite (superimposed) dead loads (in.⁴ and in.³).
- I_c (cr), S_c (cr): Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing fs(Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.⁴ and in.³).
- S_x: Section modulus about the major axis of section to the controlling flange, tension or compression, taken as yield moment with respect to the controlling flange over the yield strength of the controlling flange (in.³).
- DC1: Un-factored non-composite dead load (kips/ft.).
- M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
- DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- M_{ℓ + IM}: Un-factored live load moment plus dynamic load allowance (impact)(kip-ft.).
- M_u: Strength I load combination of factored design moments (kip-ft.).
1.25 (MDC1+ MDC2) + 1.5 MDW + 1.75 M_{ℓ + IM}
- f_i: Factored calculated flange lateral bending stress as calculated using Article 6.10.1.6 and as further simplified by IDOT provisions (ksi)
- Ø. M_n: Factored nominal flexural resistance of the section determined as specified in Article 6.10.7.1 or A6 as applicable (kip-ft.).
- f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
MDC1 / S_s
- f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
MDC2 / S_c(3n) or MDC2 / S_c(cr) as applicable.
- f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
MDW / S_c(3n) or MDW / S_c(cr) as applicable.
- f_s (ℓ+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
M_{ℓ + IM} / S_c(n) or M_{ℓ + IM} / S_c(cr) as applicable.
- f_s + ¹/₂ (Service II): Sum of stresses as computed below (ksi).
fsDC1 + fsDC2 + fsDW + 1.3 fs(ℓ+ IM) + ¹/₂
- Service II Resistance: Composite (0.95RhFyf) or noncomposite (0.80RhFyf) stress capacity according to Article 6.10.4.2 (ksi).
- f_s + ¹/₃ (Strength I): Sum of stresses as computed below on non-compact sections (ksi).
1.25 (fsDC1 + fsDC2) + 1.5 fsDW + 1.75 fs(ℓ + IM) + ¹/₃
- Ø. F_v: Factored nominal flexural resistance of the section as specified in Article 6.10.7.2 or 6.10.8 as applicable (ksi).
- V_r: Maximum factored shear range in span computed according to Article 6.10.10.
- Note:
M_ℓ and R_ℓ include the effects of centrifugal force and superelevation.



BOX BEAM PLAN - PIER 1



BOX BEAM ELEVATION - PIER 1
(Looking Upstation)

NOTES:

1. See sheets 38 - 40 of 69 for box beam details.
2. All structural steel shall be AASHTO M270 Grade 50.
3. Box beam is not cambered.
4. "CVN" denotes Charpy-V-Notch impact energy requirements, Zone 2.

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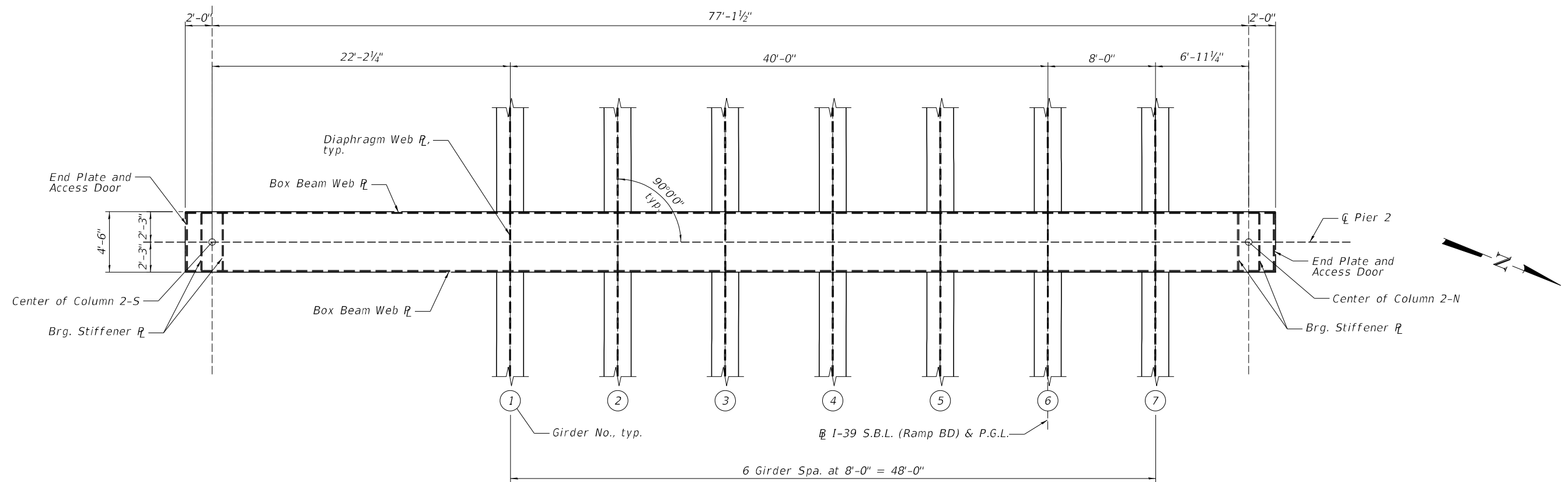
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

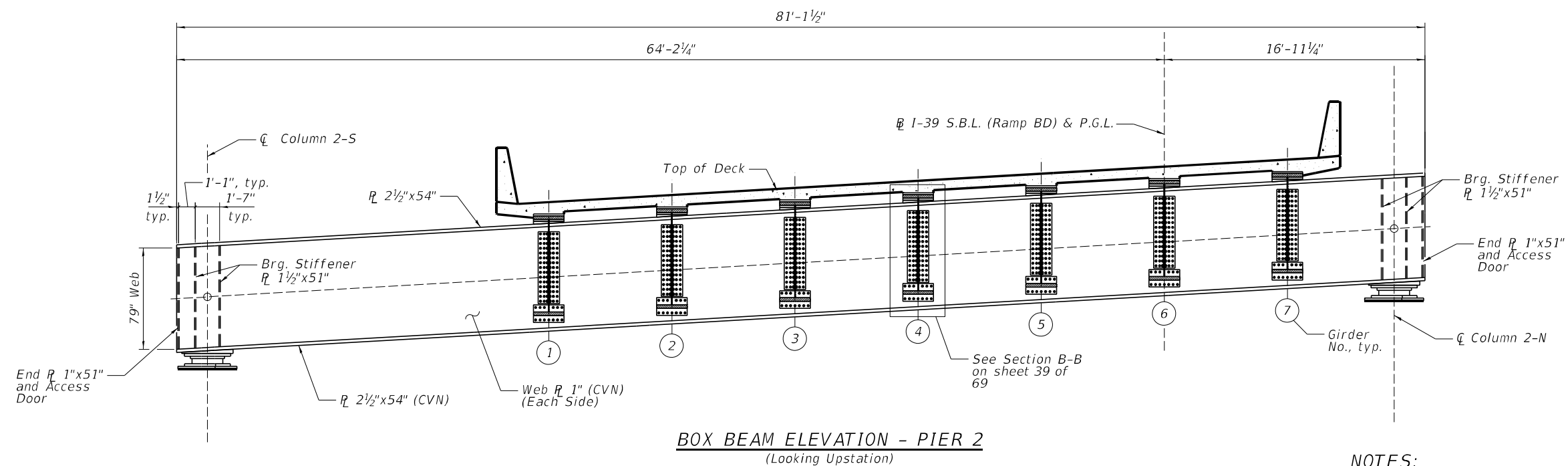
**BOX BEAM PLAN AND ELEVATION - PIER 1
STRUCTURE NO. 101-0215**

SHEET 36 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	803
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				



BOX BEAM PLAN - PIER 2



BOX BEAM ELEVATION - PIER 2
(Looking Upstation)

NOTES:

1. See sheets 38-40 of 69 for box beam details.
2. All structural steel shall be AASHTO M270 Grade 50.
3. Box beam is not cambered.
4. "CVN" denotes Charpy-V-Notch impact energy requirements, Zone 2.

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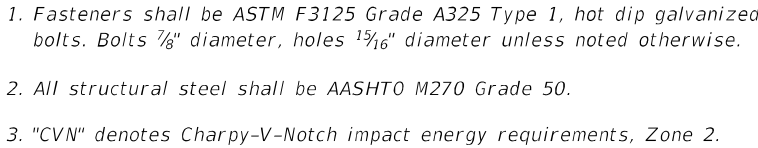
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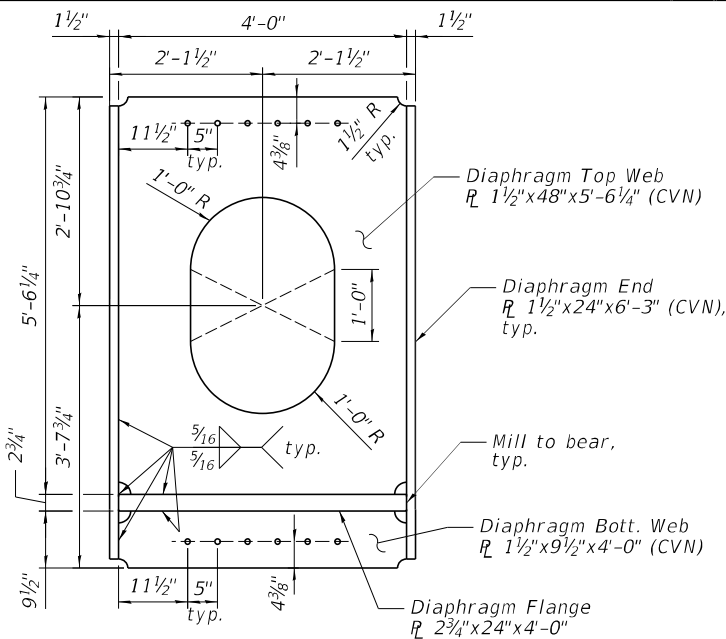
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BOX BEAM PLAN AND ELEVATION - PIER 2
STRUCTURE NO. 101-0215

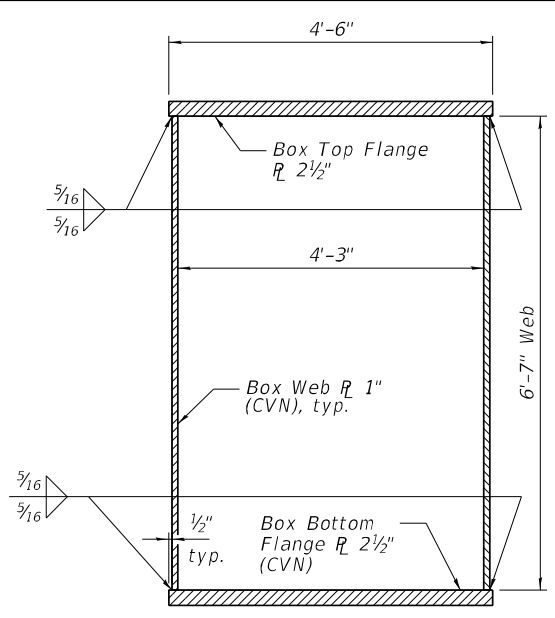
SHEET 37 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

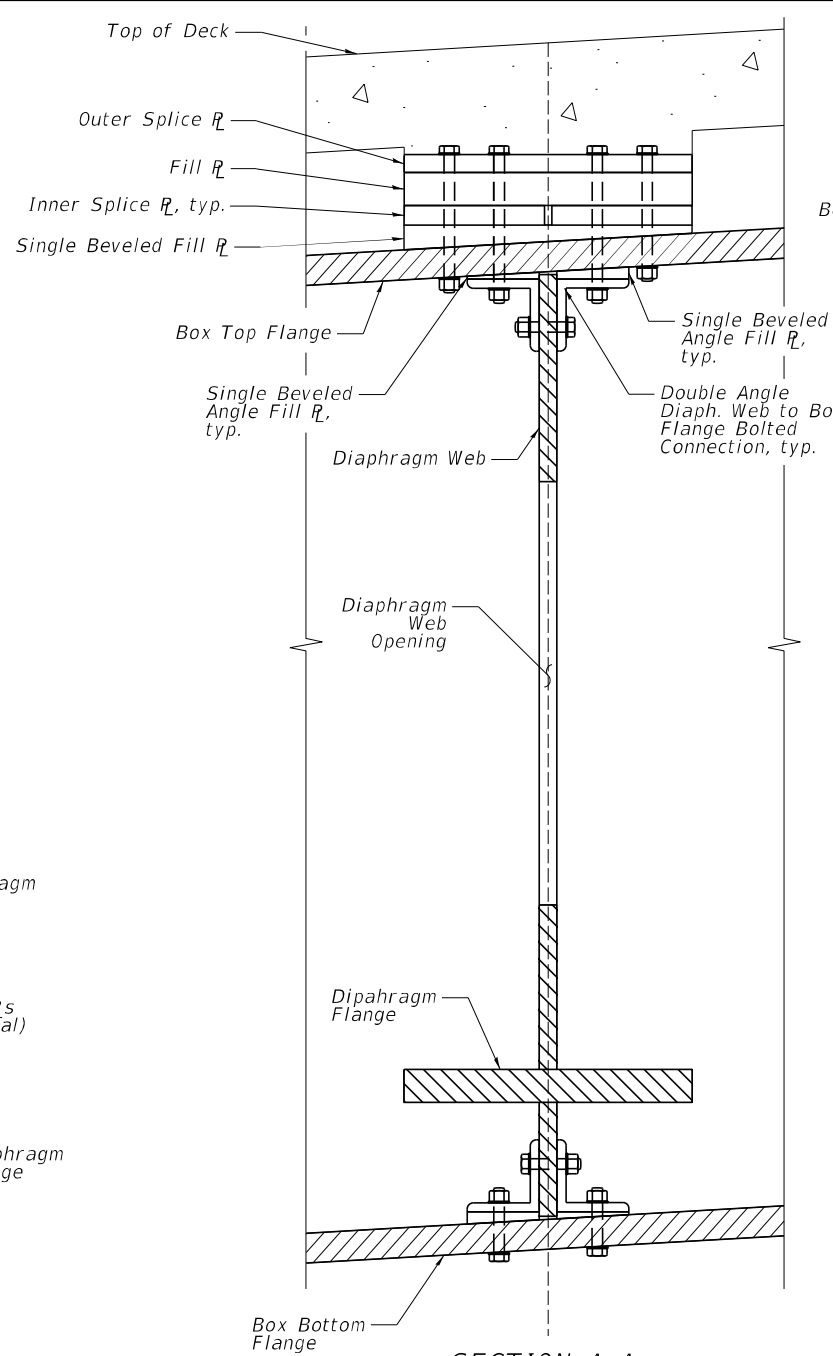




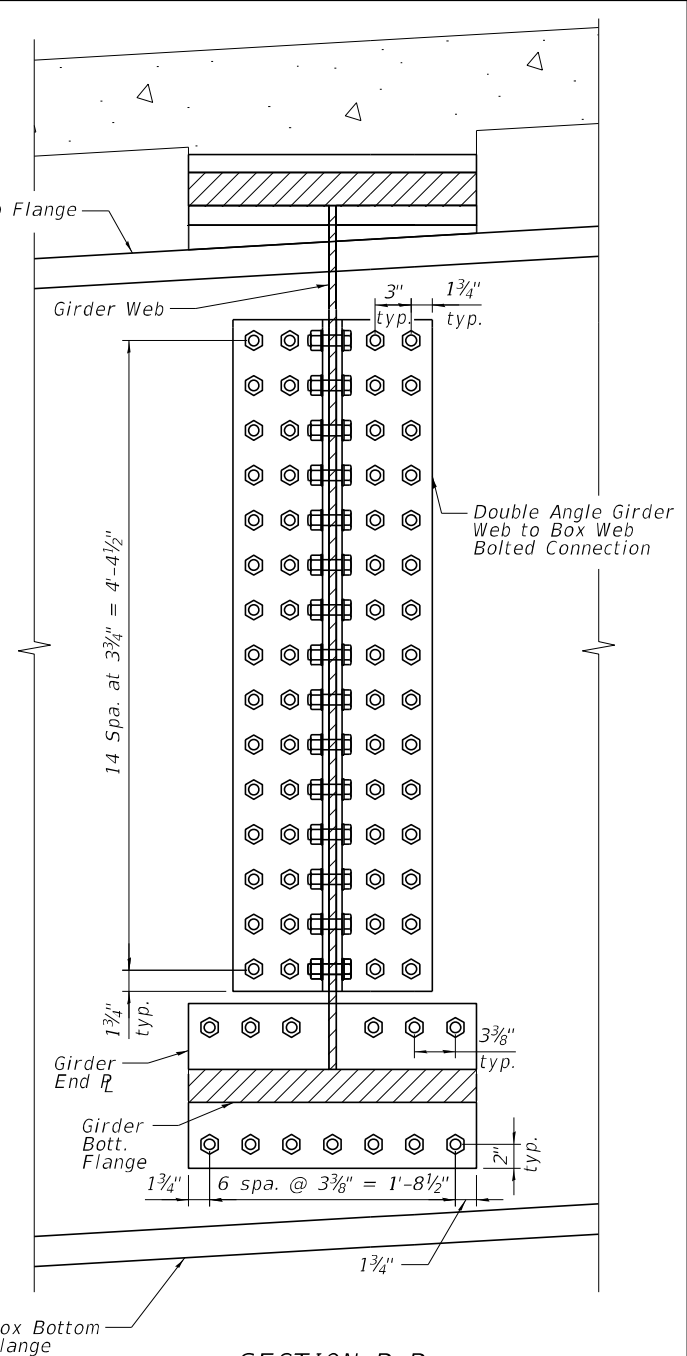
DIAPHRAGM DETAIL



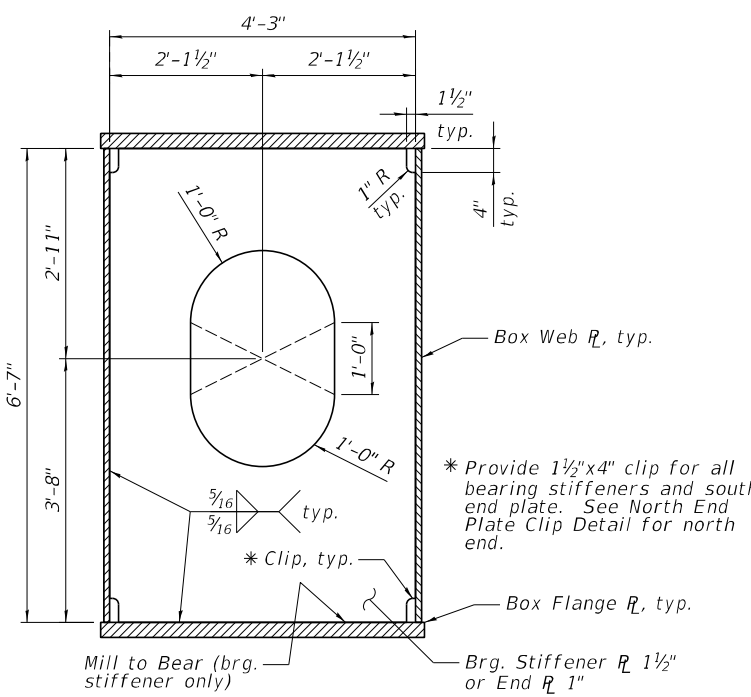
TYPICAL SECTION



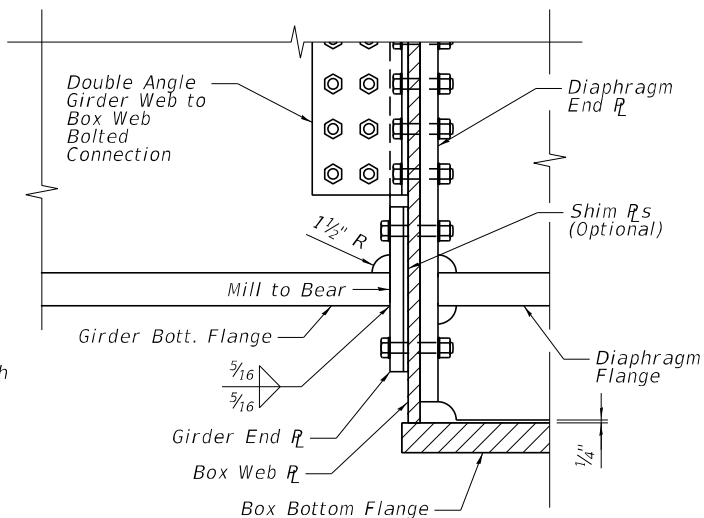
SECTION A-A
(Looking West)



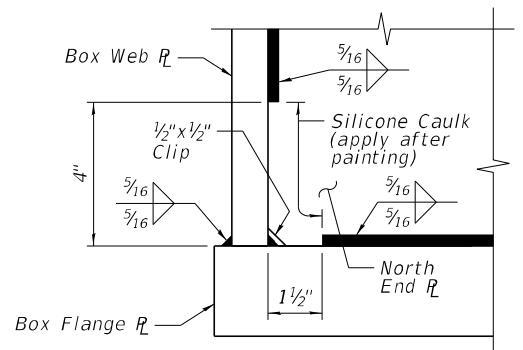
SECTION B-B
(Looking West)



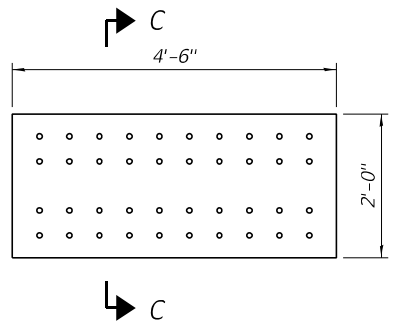
BEARING STIFFENER & END
PLATE DETAIL



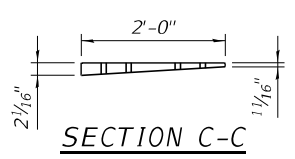
BOTTOM FLANGE CONNECTION DETAIL



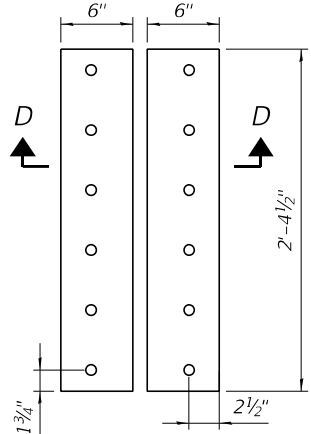
NORTH END PLATE CLIP DETAIL
(Typ. 4 corners of north end plate each beam)



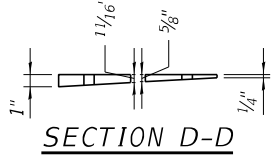
SINGLE BEVELED FILL PLATE PLAN



SECTION C-C



SINGLE BEVELED ANGLE FILL PLATE PLAN



SECTION D-D

- NOTES:**
- See sheet 38 of 69 for additional notes.
 - Terminate welds 1/4" (±1/8") from plate edges unless noted otherwise.
 - The Contractor shall submit a full sequence of fabrication with the Shop Drawings, including the order of all welding and bolting associated with the fabrication and assembly of the box section, diaphragms, stiffeners, and end plates. The proposed sequence shall minimize the potential for undue stresses on adjacent welded and bolted connections by achieving a tight fit condition between the diaphragms and box girder webs.

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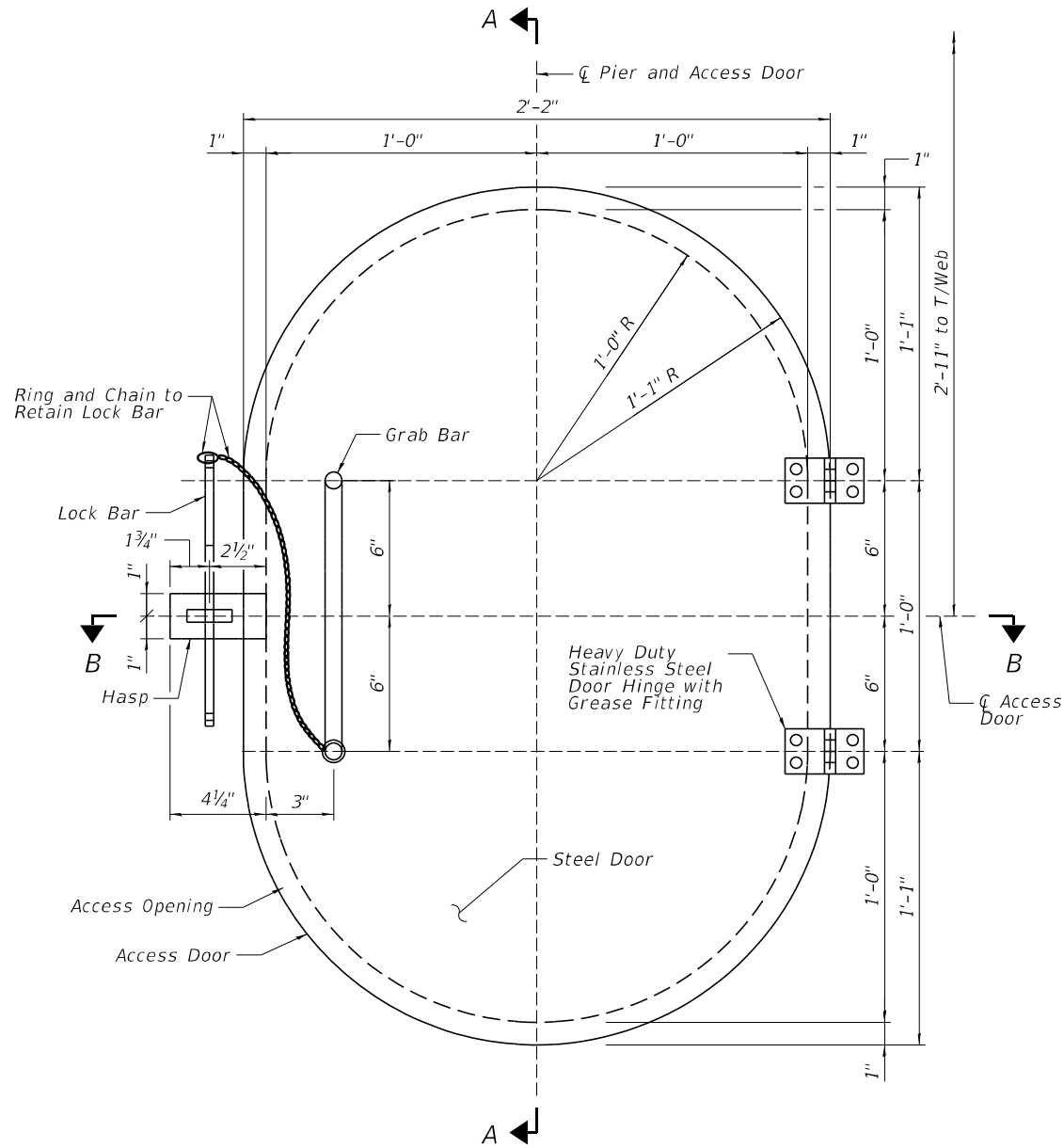
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DEPARTMENT OF TRANSPORTATION

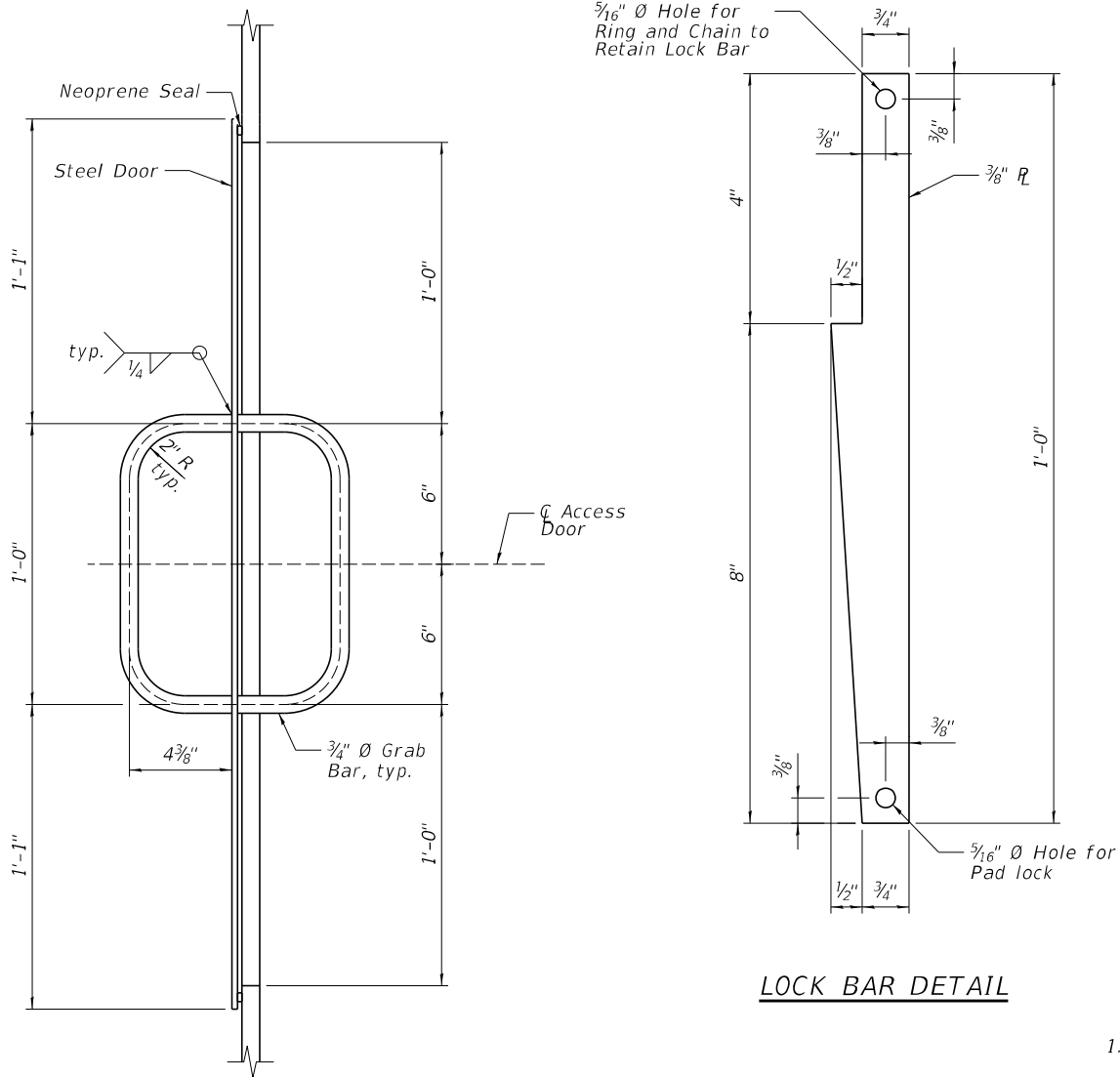
BOX BEAM DETAILS (2 OF 3)
STRUCTURE NO. 101-0215

SHEET 39 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	806
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				



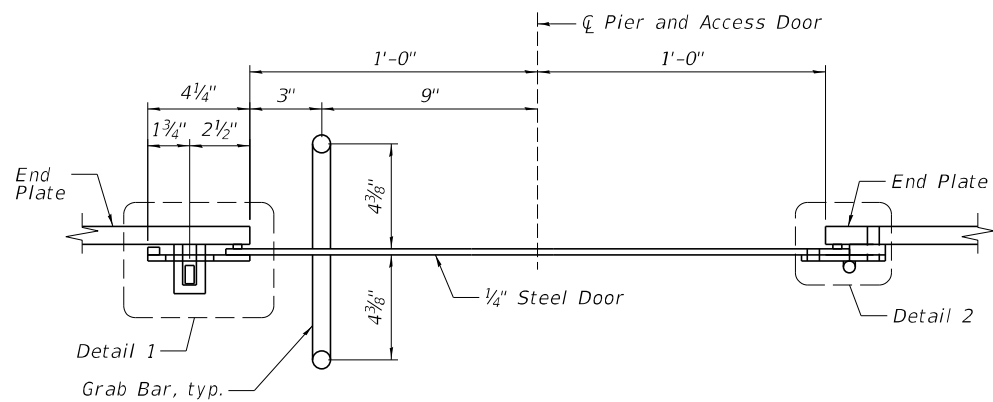
ACCESS DOOR
(Each end of each pier; 4 locations)



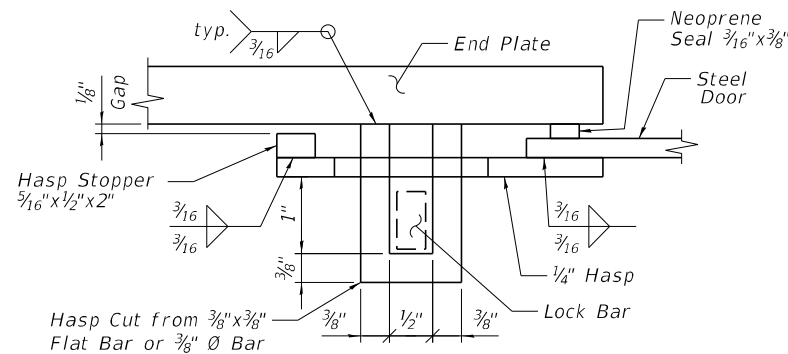
LOCK BAR DETAIL

NOTES:

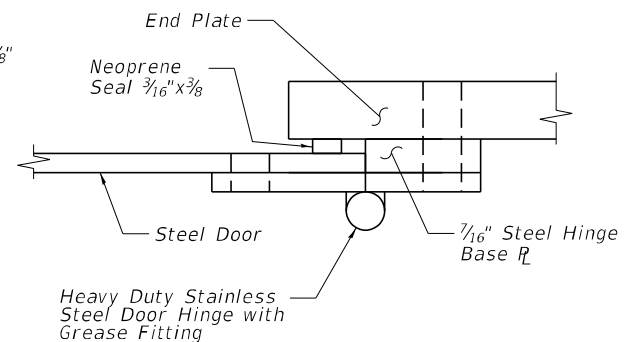
1. Neoprene seal attached around perimeter of steel door to attain a watertight fit.
2. The cost of furnishing and installing the Steel Door Assemblies including Stainless Steel Hardware and Neoprene Seal shall be included in the cost of Furnishing and Erecting Structural Steel.
3. All steel shall be AASHTO M270 Grade 50 unless noted otherwise.



SECTION B-B



DETAIL 1



DETAIL 2

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BOX BEAM DETAILS (3 OF 3)
STRUCTURE NO. 101-0215**

SHEET 40 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	807
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

USER NAME =	DESIGNED - MFH	REVISED -
PLOT SCALE =	CHECKED - JHG	REVISED -
PLOT DATE =	DRAWN - KMS	REVISED -
	CHECKED - JHG	REVISED -

MODEL: sMODELNAME\$
FILE NAME: c:\pwworkin\benesch projects\projects\dms6524\1D264C62-1010215-sh-bbmomrxn.dgn

BOX BEAM AT PIER 1 MOMENT TABLE		
		0.3 L
I_{sx}	(in ⁴)	530,666
I_{sy}	(in ⁴)	176,579
S_{sx}	(in ³)	12,635
S_{sy}	(in ³)	6,540
M_{DC1x}	('k)	14,329
M_{DC2x}	('k)	1,737
M_{DWx}	('k)	3,980
$M_{\ell} + IMx$	('k)	6,157
M_{FRy}	('k)	882
M_{BRy}	('k)	559
M_{ux}	('k)	36,829
M_{uy}	('k)	1,860
$\emptyset_f M_{rx}$	('k)	51,496
$\emptyset_f M_{ry}$	('k)	15,695
$f_s DC1$	(ksi)	13.6
$f_s DC2$	(ksi)	1.6
$f_s DW$	(ksi)	3.8
$f_s (\ell+IM)$	(ksi)	5.8
$f_i FR$	(ksi)	1.6
$f_i BR$	(ksi)	1.0
$f_s + f_{r/2}$ (Service II)	(ksi)	28.1
Service II Resistance	(ksi)	40.0

BOX BEAM AT PIER 2 MOMENT TABLE		
		0.3 L
I_{sx}	(in ⁴)	530,666
I_{sy}	(in ⁴)	176,579
S_{sx}	(in ³)	12,635
S_{sy}	(in ³)	6,540
M_{DC1x}	('k)	14,949
M_{DC2x}	('k)	1,808
M_{DWx}	('k)	4,134
$M_{\ell} + IMx$	('k)	6,205
M_{FRy}	('k)	1,046
M_{BRy}	('k)	0
M_{ux}	('k)	38,005
M_{uy}	('k)	1,046
$\emptyset_f M_{rx}$	('k)	51,496
$\emptyset_f M_{ry}$	('k)	15,695
$f_s DC1$	(ksi)	14.2
$f_s DC2$	(ksi)	1.7
$f_s DW$	(ksi)	3.9
$f_s (\ell+IM)$	(ksi)	5.9
$f_i FR$	(ksi)	1.9
$f_i BR$	(ksi)	0.0
$f_s + f_{r/2}$ (Service II)	(ksi)	28.5
Service II Resistance	(ksi)	40.0

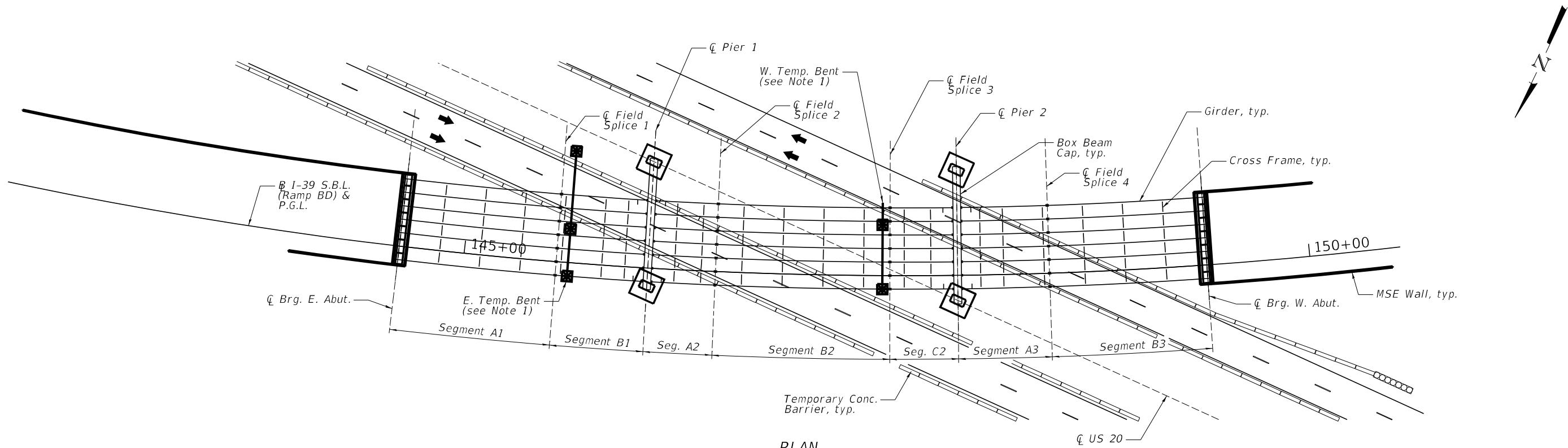
BOX BEAM AT PIER 1 REACTION TABLE			
		Col. 1 S.	Col. 1 N.
R_{DC1}	(k)	636.2	1,079.7
R_{DC2}	(k)	76.2	135.7
R_{DW}	(k)	174.5	307.7
R_{ℓ}	(k)	241.4	384.1
R_{IM}	(k)	28.5	45.2
R_{TOTAL} (Strength I)(Impact)	(k)	1,624.6	2,732.1
R_{TOTAL} (Strength I)(No Impact)	(k)	1,574.7	2,653.0

BOX BEAM AT PIER 2 REACTION TABLE			
		Col. 2 S.	Col. 2 N.
R_{DC1}	(k)	701.4	1,004.2
R_{DC2}	(k)	84.7	125.7
R_{DW}	(k)	193.6	284.6
R_{ℓ}	(k)	259.8	358.4
R_{IM}	(k)	30.7	42.3
R_{TOTAL} (Strength I)(Impact)	(k)	1,781.4	2,540.5
R_{TOTAL} (Strength I)(No Impact)	(k)	1,727.7	2,466.5

- I_{sx} , S_{sx} : Non-composite moment of inertia and section modulus of the steel section about major axis used for computing f_s due to vertical loads (in.⁴ and in.³).
- I_{sy} , S_{sy} : Non-composite moment of inertia and section modulus of the steel section about minor axis used for computing f_l due to lateral loads (in.⁴ and in.³).
- M_{DC1x} : Un-factored major axis moment due to non-composite dead load (kip-ft.).
- M_{DC2x} : Un-factored major axis moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- M_{DWx} : Un-factored major axis moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- $M_{\ell} + IMx$: Un-factored major axis live load moment plus dynamic load allowance (impact)(kip-ft.).
- M_{FRy} : Un-factored minor axis moment due to friction load(kip-ft.).
- M_{BRy} : Un-factored minor axis moment due to braking load(kip-ft.).
- M_{sx} (Strength I): Strength I load combination of factored design moments about major axis (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\ell} + IM$
- M_{sy} (Strength I): Strength I load combination of factored design moments about minor axis (kip-ft.).
 $1.00 M_{FR} + 1.75 M_{BR}$
- $\emptyset_f M_{rx}$: Factored nominal flexural resistance about major axis of the section determined as specified in Article 6.12.2.2.2 (kip-ft.).
- $\emptyset_f M_{ry}$: Factored nominal flexural resistance about minor axis of the section determined as specified in Article 6.12.2.2.2 (kip-ft.).
- $f_s DC1$: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
 M_{DC1} / S_{sx}
- $f_s DC2$: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
 M_{DC2} / S_{sx}
- $f_s DW$: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
 M_{DW} / S_{sx}
- $f_s (\ell+IM)$: Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
 $M_{\ell} + IM / S_{sx}$
- $f_i FR$: Un-factored stress at edge of flange for controlling steel flange due to lateral friction loads as calculated below (ksi).
 M_{FR} / S_{sy}
- $f_i BR$: Un-factored stress at edge of flange for controlling steel flange due to lateral braking loads as calculated below (ksi).
 M_{BR} / S_{sy}
- $f_s + f_{r/2}$ (Service II): Sum of stresses as computed below (ksi).
 $f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s (\ell+ IM) + (f_i FR + 1.3 f_i BR)/2$
- Service II Resistance: Noncomposite (0.80RhFyf) stress capacity according to Article 6.12.2.2.2f (ksi).
- R_{DC1} : Un-factored reaction due to non-composite dead load (kip).
- R_{DC2} : Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).
- R_{DW} : Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).
- R_{ℓ} : Un-factored live load reaction (kip).
- R_{IM} : Un-factored dynamic load allowance (impact)(kip).
- R_{TOTAL} (Strength I)(Impact): Strength I load combination of factored design reactions (kip).
 $1.25 (R_{DC1} + R_{DC2}) + 1.5 R_{DW} + 1.75 (R_{\ell} + R_{IM})$
- R_{TOTAL} (Strength I)(No Impact): Strength I load combination of factored design reactions, not including dynamic load allowance (Impact) (kip).
 $1.25 (R_{DC1} + R_{DC2}) + 1.5 R_{DW} + 1.75 (R_{\ell})$

Note:
 M_{ℓ} and R_{ℓ} include the effects of centrifugal force and superelevation.

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PLAN

(Stage 2 MOT shown, erection in other stages expected to require different temp. bent locations and configurations; see Note 1)

CONCEPTUAL ERECTION SEQUENCE:

1. Erect the box beam cap on the columns at Pier 1.
2. Construct the E. Temp. Bent at the location shown.
3. Erect Segment B1.
4. Erect Segment A1.
5. Erect Segment A2.
6. Construct the W. Temp. Bent at the location shown.
7. Erect Segment B2.
8. Erect Segment C2.
9. Erect the box beam cap on the columns at Pier 2.
10. Erect Segment A3.
11. Erect Segment B3.
12. Remove temporary bents.

NOTES:

1. Shoring tower locations and header beam vertical clearances to be coordinated with MOT at time of erection. Header beams over the roadway shall provide a minimum vertical clearance of 16'-0".
2. The Contractor shall retain the services of an Illinois Licensed Structural Engineer, experienced in the analysis and preparation of complex bridge erection plans, as defined by IDOT Prequalification Guidelines, for the completion of a project-specific erection plan. The Structural Engineer, herein referred to as the Erection Engineer, shall sign and seal the erection plan, drawings, and calculations for the proposed erection of the structural steel.
3. The erection plan shall be complete in detail for all phases, stages, and conditions anticipated during erection. The erection plan shall include structural calculations and supporting documentation necessary to completely describe and document the means, methods, temporary support positions, and loads necessary to safely erect the structural steel in conformance with the Contract Documents and outlined herein. The erection plans shall address and account for all items pertinent to the steel erection including such items as sequencing, falsework, geometric control, temporary shoring and/or bracing, girder stability, uplift, crane positioning and movement, means of access, pick points, girder shape, permissible deformations and roll, interim/final plumbness, cross frame placement and connections, bolting and anchor bolt installation, sequences and procedures, and blocking and anchoring of bearings. The Contractor shall be responsible for the stability of the partially erected steel structure during all phases of steel erection.
4. The erection plans and procedures shall be submitted to the Engineer for review and acceptance prior to starting the work. Review, acceptance, and/or comments by the Engineer shall not be construed to guarantee the safety or final acceptability of the work or compliance with all applicable specifications, codes, or contract requirements, and shall neither relieve the contractor of the responsibility and liability to comply with these requirements, nor create liability for IDOT. Significant changes to the erection plan in the field must be approved by the Erection Engineer and accepted by the Engineer.
5. Girder erection shall start from the fixed pier (Pier 1).

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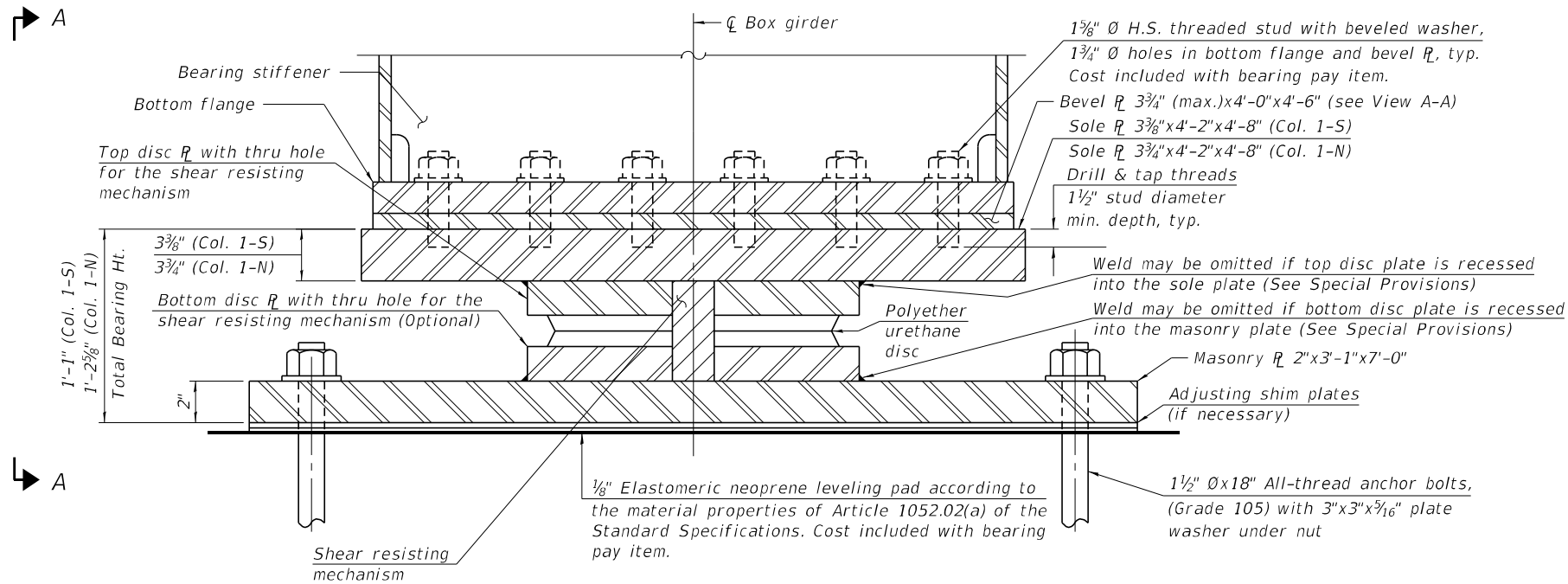
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	CHECKED - JHG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

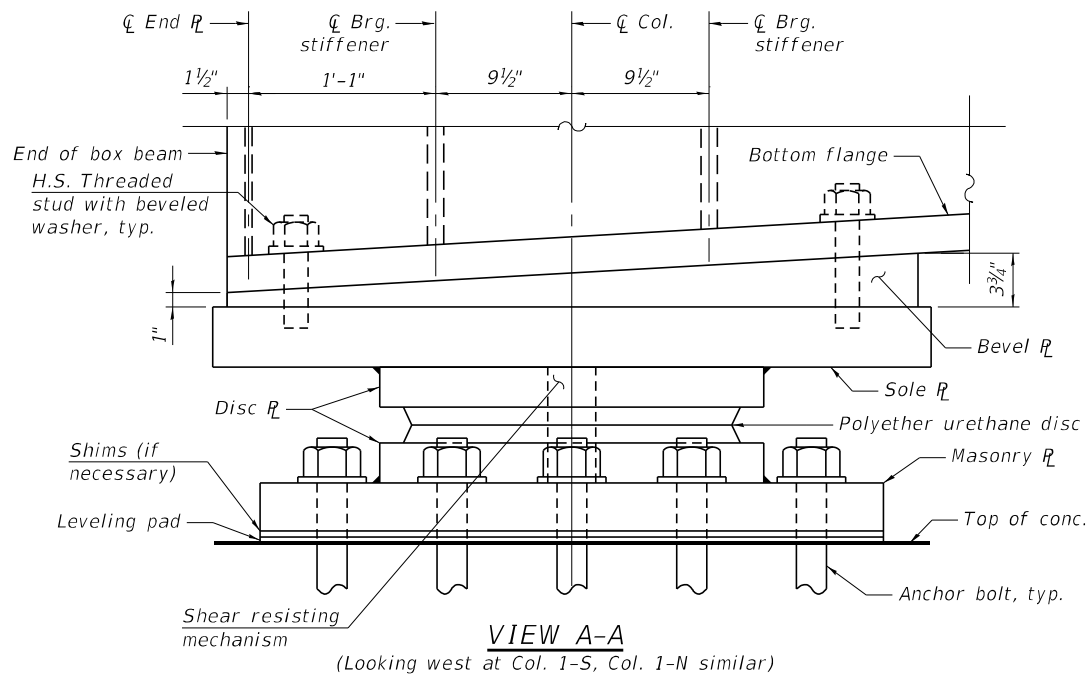
CONCEPTUAL ERECTION SEQUENCE
STRUCTURE NO. 101-0215

SHEET 42 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	809
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				



SECTION THRU BEARING



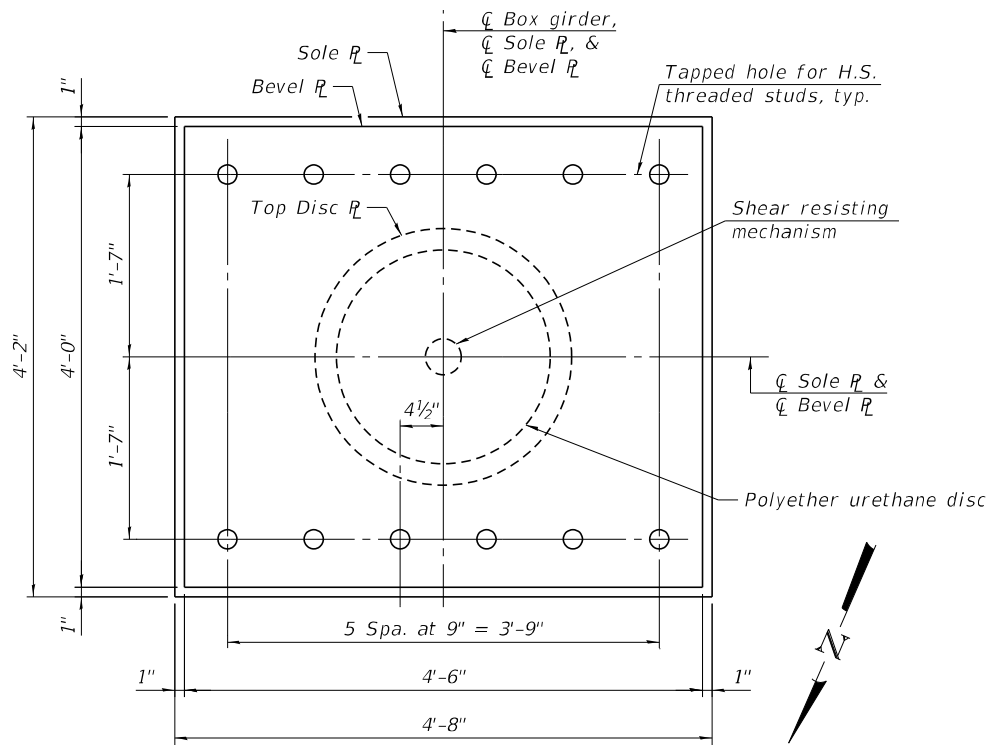
VIEW A-A

(Looking west at Col. 1-S, Col. 1-N similar)

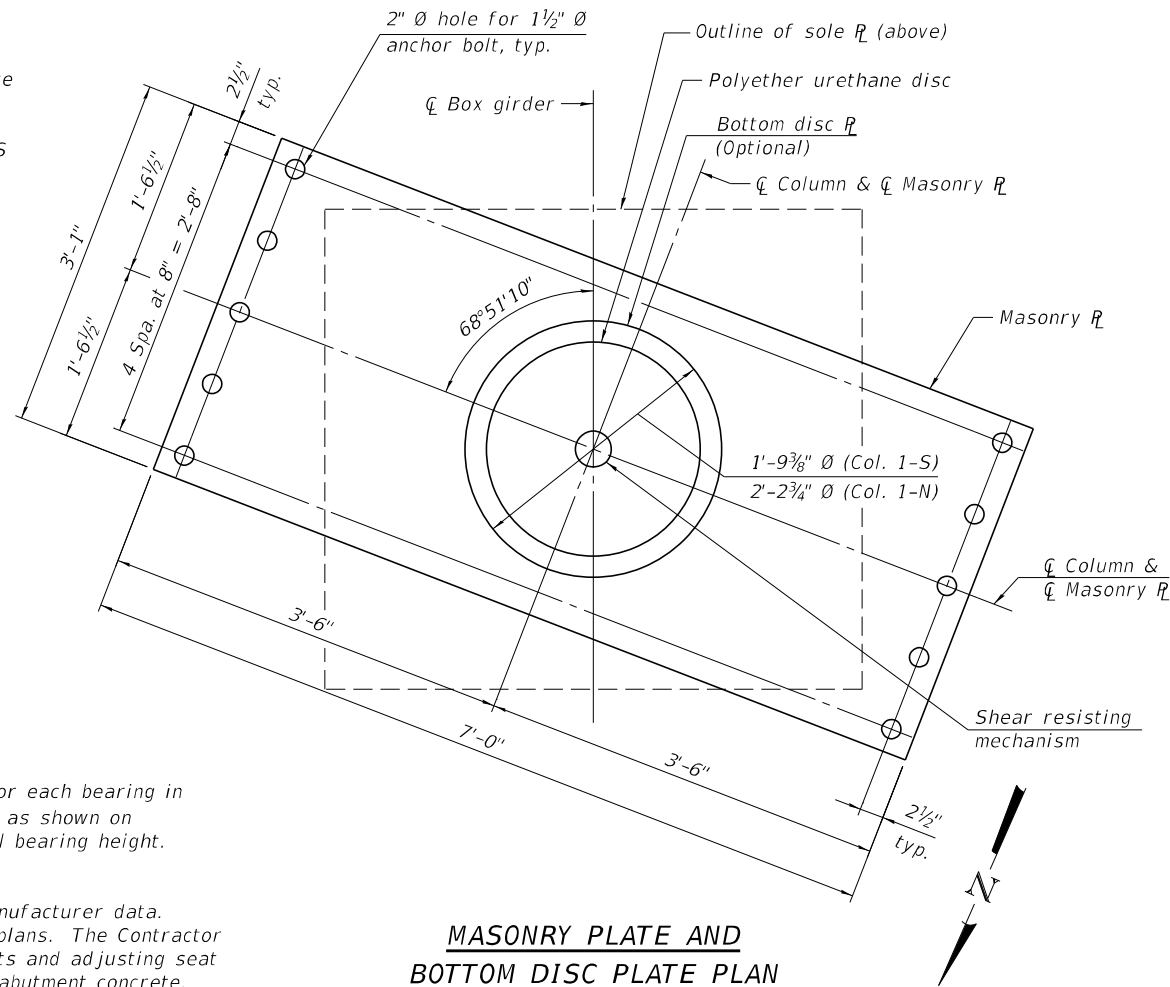
BILL OF MATERIAL

Item	Unit	Total
* High Load Multi-Rotational Bearing, Disc, Fixed-1250K	Each	1
* High Load Multi-Rotational Bearing, Disc, Fixed-2000K	Each	1
Anchor Bolts, 1 1/2"	Each	20

* The value specified in the pay item name is an approximate vertical load capacity that is used for letting and bidding purposes only. Exact bearing capacity will vary subject to final design. The "1250K" pay item shall be used at Col. 1-S and the "2000K" pay item shall be used at Col. 1-N.



BEVEL PLATE, SOLE PLATE, AND TOP DISC PLATE PLAN



MASONRY PLATE AND
BOTTOM DISC PLATE PLAN

Location	Col. 1-S	Col. 1-N
Unfactored Vertical Dead Load Reaction (R_{DC})	713 kips	1,216 kips
Unfactored Vertical Wearing Surface Reaction (R_{DW})	175 kips	308 kips
Unfactored Vertical Live Load without Impact Reaction (R_{LL})	242 kips	384 kips
Maximum Strength or Extreme Event Lateral Reaction (H_u)	604 kips	604 kips
Maximum Strength Limit State Rotation (Θ_u according to Article 14.4.2.2)	0.0098 rad	0.0104 rad
Service I Factored Lateral Reaction	262 kips	268 kips
Service I Rotation	0.0034 rad	0.0039 rad
Service I Factored Vertical Reaction	1,129 kips	1,908 kips
Strength I Factored Vertical Reaction	1,625 kips	2,733 kips

Service I Load Factors = 1.0DC + 1.0DW + 1.00LL
Strength I Load Factors = 1.25DC + 1.5DW + 1.75LL + 1.2TU
Extreme Event Load Factors = 1.0EQ

NOTES:

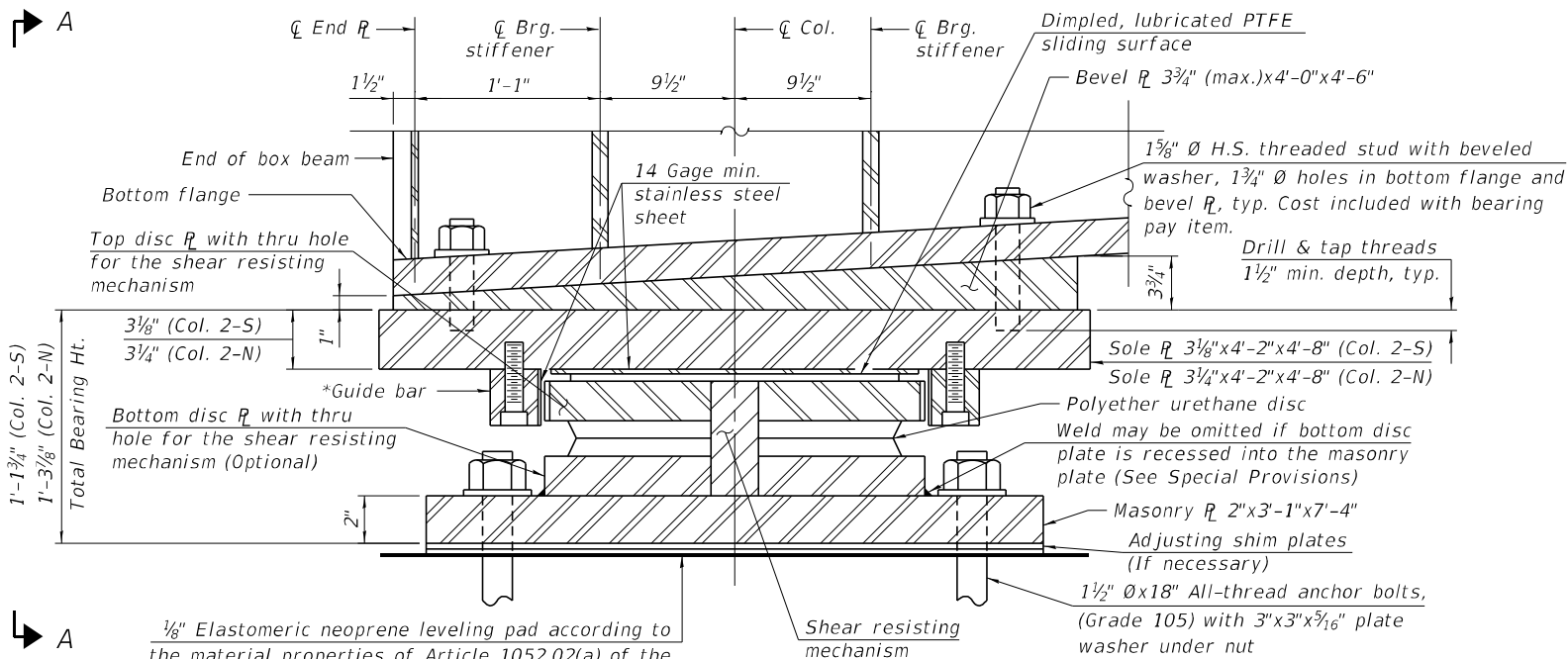
- Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details. Shim plates not included in total bearing height. Cost included with bearing pay item.
- Total bearing height is estimated based on manufacturer data. Actual bearing height may differ from contract plans. The Contractor shall be responsible for verifying bearing heights and adjusting seat elevations, if required, prior to placing pier or abutment concrete.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

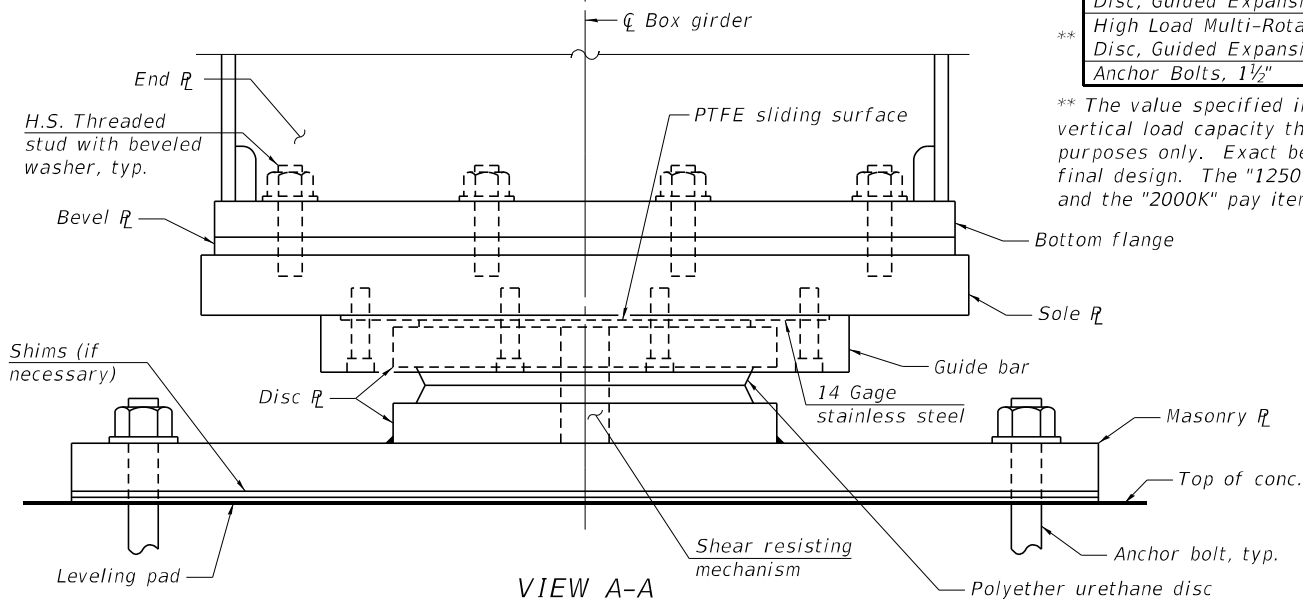
FIXED HLMR DISC BEARING DETAILS
STRUCTURE NO. 101-0215

SHEET 43 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	810
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				



*As alternates to the bolted connection shown, the guide bars may be connected to the sole plate by groove welds or the guide bars and sole plate may be fabricated as a single piece.



DESIGN DATA - PIER 2

Location	Col. 2-S	Col. 2-N
Unfactored Vertical Dead Load Reaction (R_{DC})	787 kips	1,130 kips
Unfactored Vertical Wearing Surface Reaction (R_{DW})	194 kips	285 kips
Unfactored Vertical Live Load without Impact Reaction (R_{LL})	260 kips	359 kips
Maximum Strength or Extreme Event Lateral Reaction (H_u)	252 kips	283 kips
Maximum Strength Limit State Rotation (Θ_u according to Article 14.4.2.2)	0.0112 rad	0.0104 rad
Unfactored Design Thermal Movement from 50° F (ΔT)	1.08 in.	1.10 in.
Service I Factored Lateral Reaction	278 kips	285 kips
Service I Rotation	0.0044 rad	0.0039 rad
Strength I Factored Longitudinal Movement	1.30 in.	1.31 in.
Service I Factored Vertical Reaction	1,240 kips	1,773 kips
Strength I Factored Vertical Reaction	1,782 kips	2,541 kips

Service I Load Factors = 1.0DC + 1.0DW + 1.00LL
Strength I Load Factors = 1.25DC + 1.5DW + 1.75LL + 1.2TU
Extreme Event Load Factors = 1.0EQ

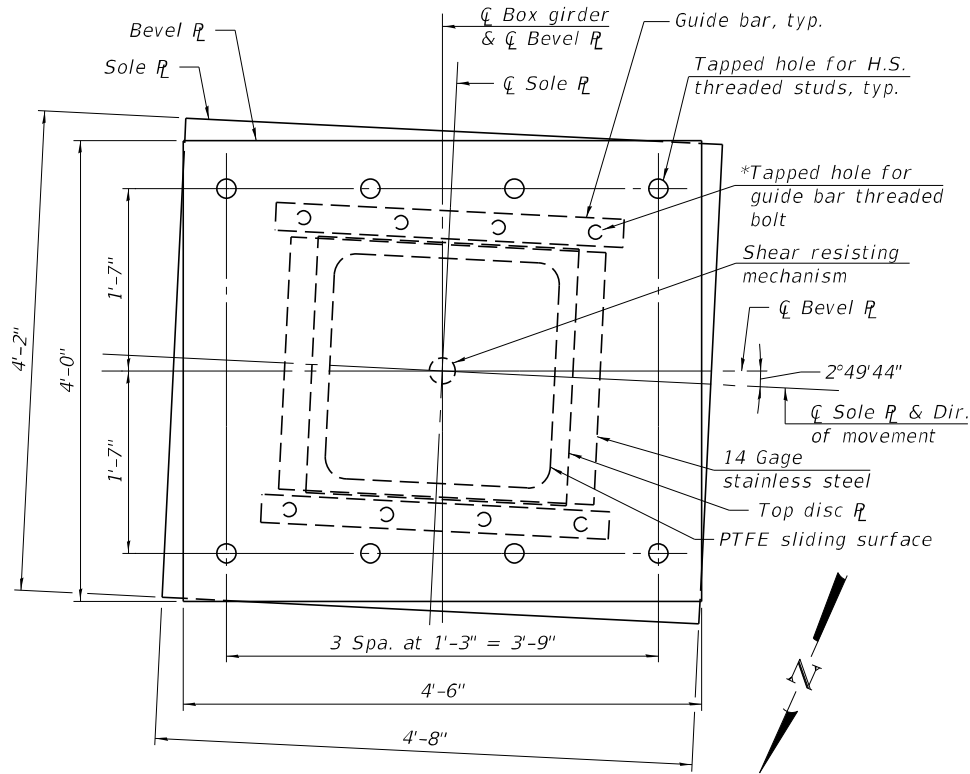
BILL OF MATERIAL

Item	Unit	Total
** High Load Multi-Rotational Bearings, Disc, Guided Expansion-1250K	Each	1
** High Load Multi-Rotational Bearings, Disc, Guided Expansion-2000K	Each	1
Anchor Bolts, 1 1/2"	Each	8

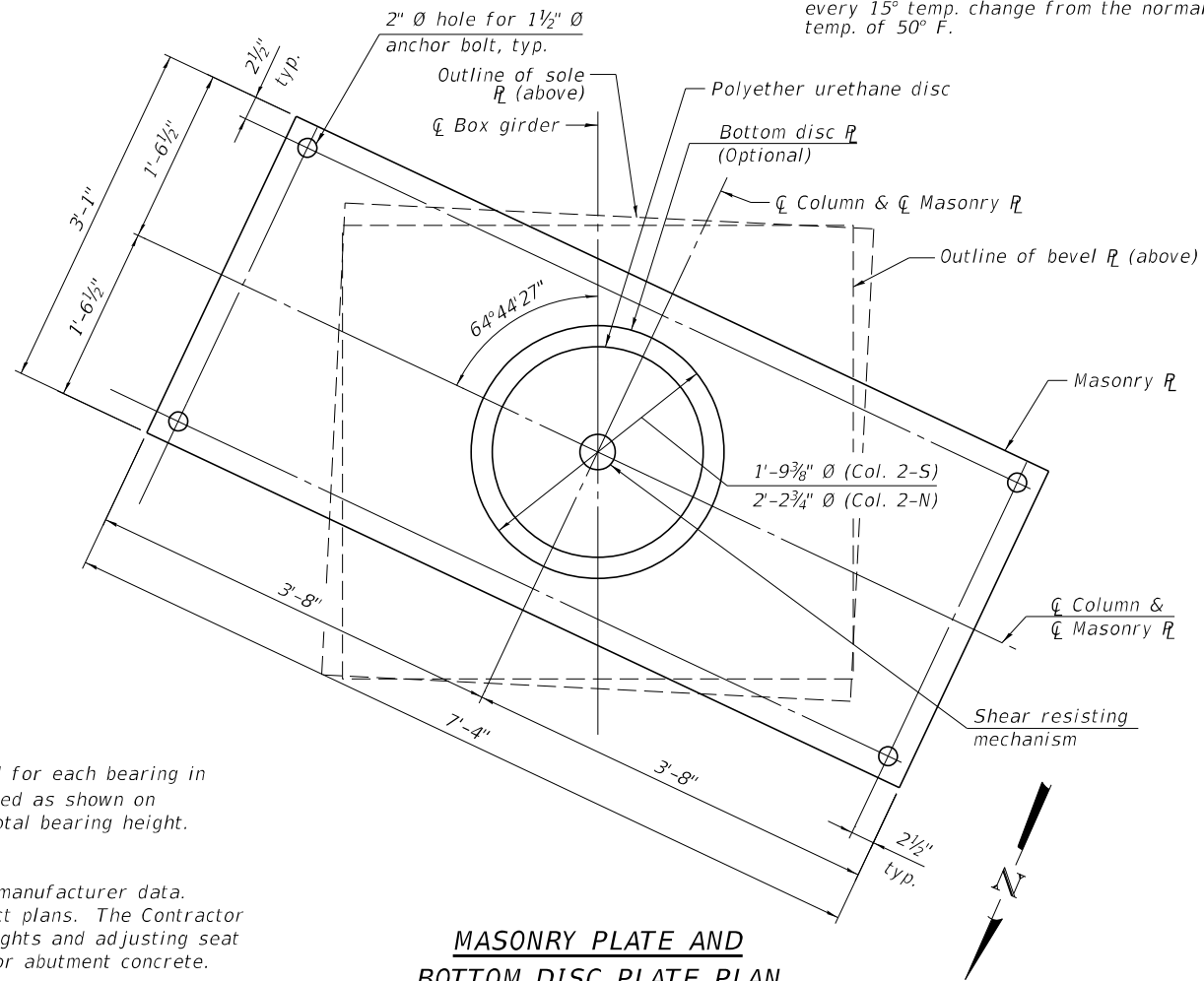
** The value specified in the pay item name is an approximate vertical load capacity that is used for letting and bidding purposes only. Exact bearing capacity will vary subject to final design. The "1250K" pay item shall be used at Col. 2-S and the "2000K" pay item shall be used at Col. 2-N.

NOTES:

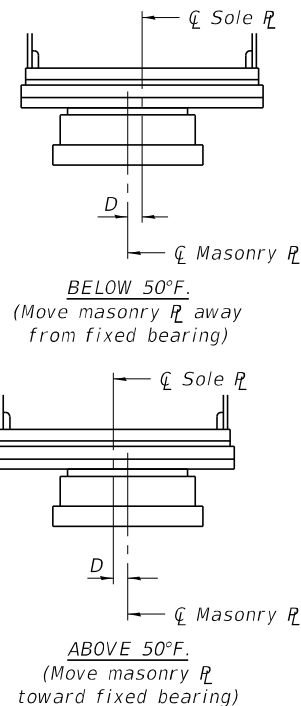
- Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details. Shim plates not included in total bearing height. Cost included with bearing pay item.
- Total bearing height is estimated based on manufacturer data. Actual bearing height may differ from contract plans. The Contractor shall be responsible for verifying bearing heights and adjusting seat elevations, if required, prior to placing pier or abutment concrete.



SOLE PLATE AND TOP DISC PLATE PLAN

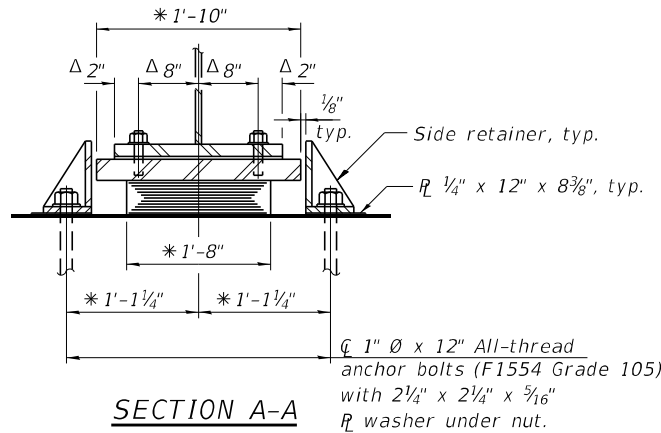
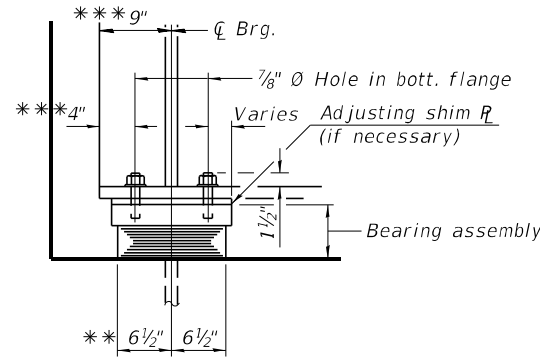


MASONRY PLATE AND BOTTOM DISC PLATE PLAN

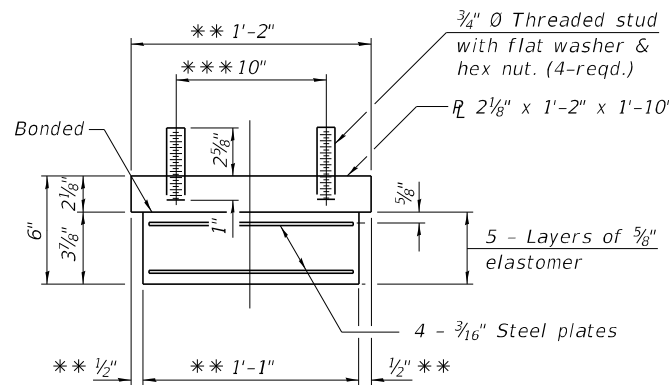


SETTING ANCHOR BOLTS AT EXPANSION BEARING

$D = \frac{1}{8}$ " per each 100' of expansion for every 15° temp. change from the normal temp. of 50° F.

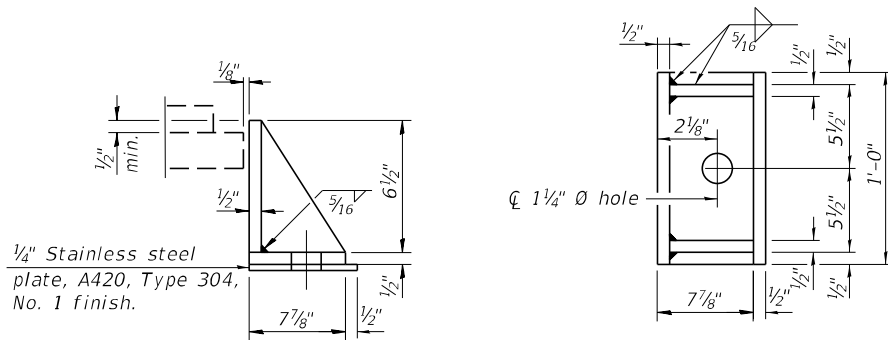


TYPE I ELASTOMERIC EXP. BRG. AT EAST ABUTMENT

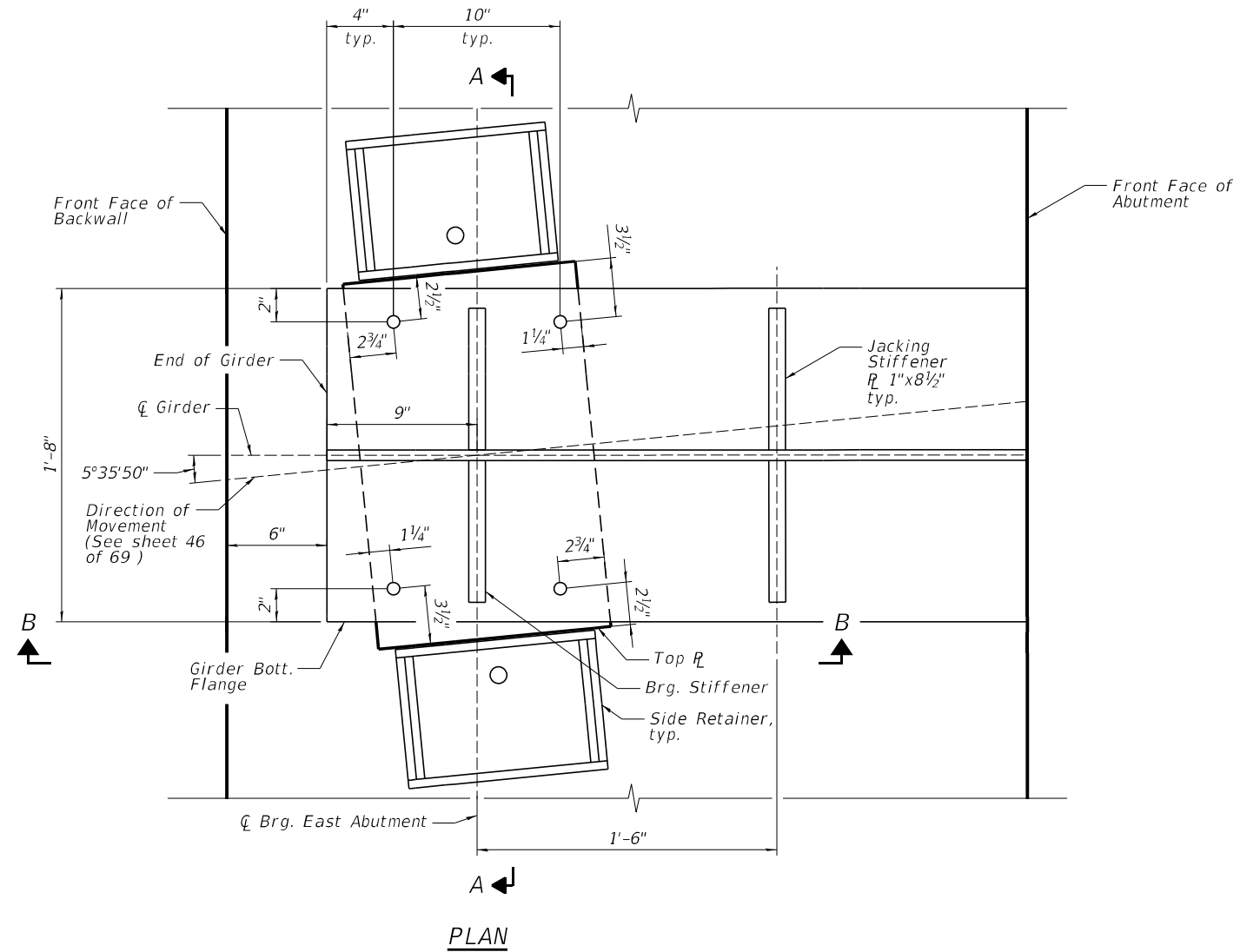


- * Measured along ϕ bearing
- ** Measured along direction of movement
- *** Measured along ϕ girders
- Δ Measured perpendicular to ϕ girders

Note:
Shim plates shall not be placed under bearing assembly.



Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



NOTES:

- Side retainers and stainless steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.
- Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
- Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.
- All (embedded and separate) bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	7
Anchor Bolts, 1"	Each	14

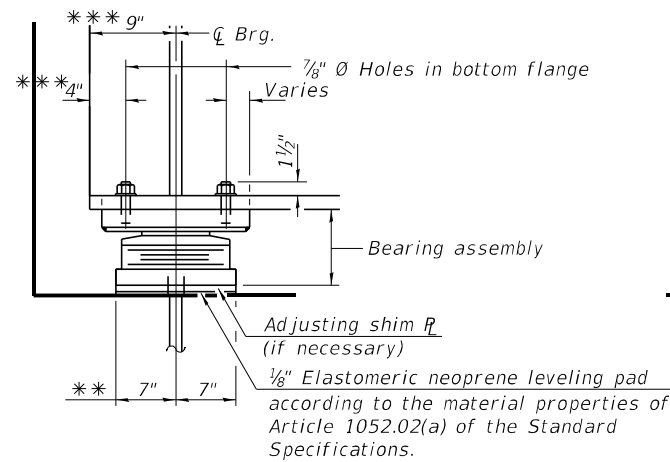
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ELASTOMERIC EXPANSION BEARING DETAILS - TYPE I
STRUCTURE NO. 101-0215

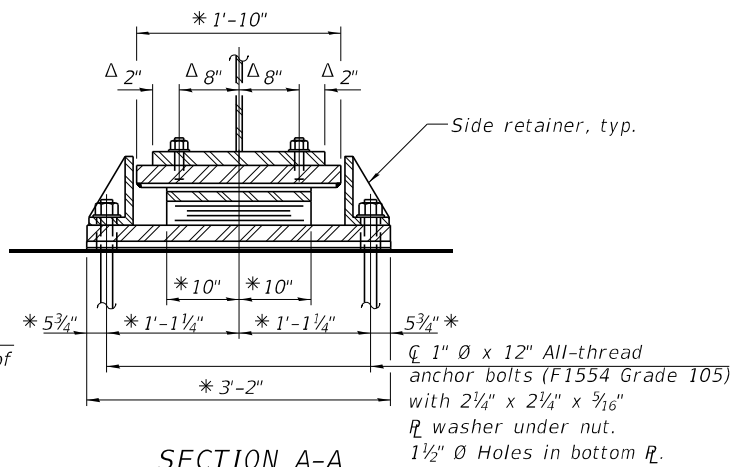
SHEET 45 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	812
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

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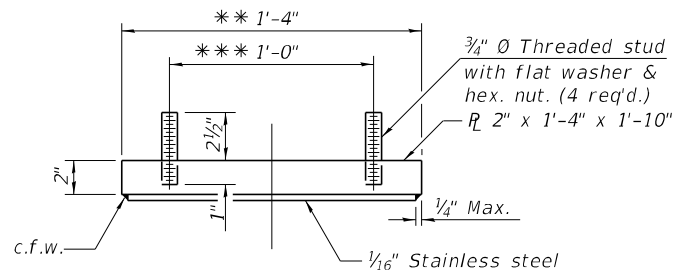


SECTION B-B

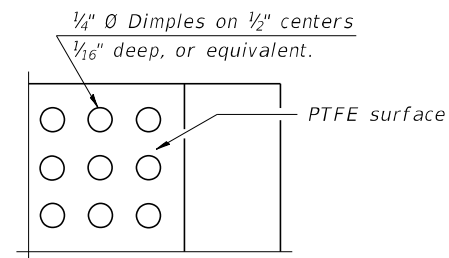


SECTION A-A

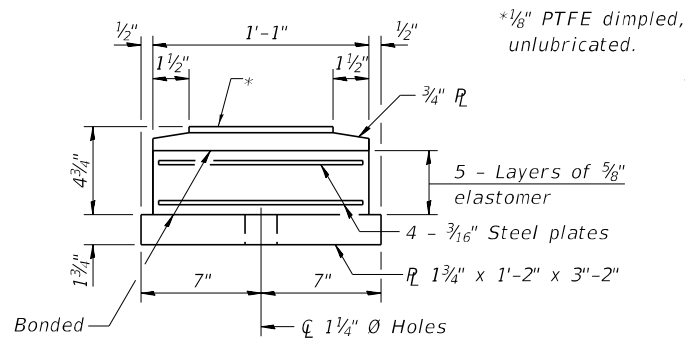
TYPE II ELASTOMERIC EXP. BRG. AT WEST ABUTMENT



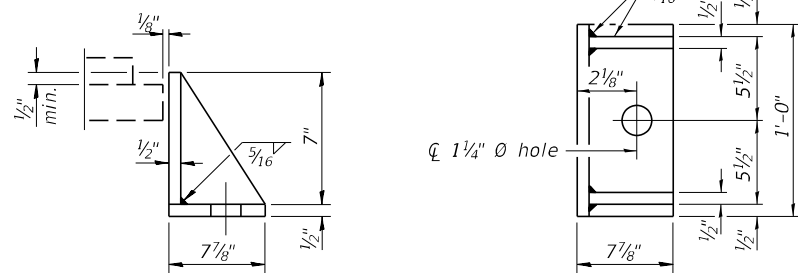
TOP BEARING ASSEMBLY



PLAN-PTFE SURFACE



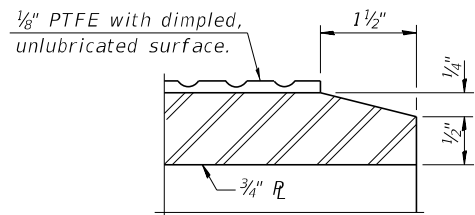
BOTTOM BEARING ASSEMBLY



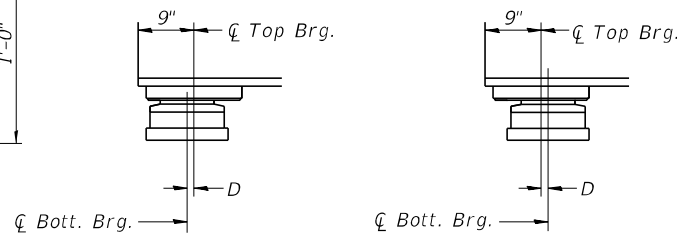
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

- * Measured along $\bar{C}$ bearing
- ** Measured along direction of movement
- *** Measured along $\bar{C}$ girders
- Δ Measured Perpendicular to $\bar{C}$ girders



SECTION THRU PTFE



BELOW 50°F.

ABOVE 50°F.

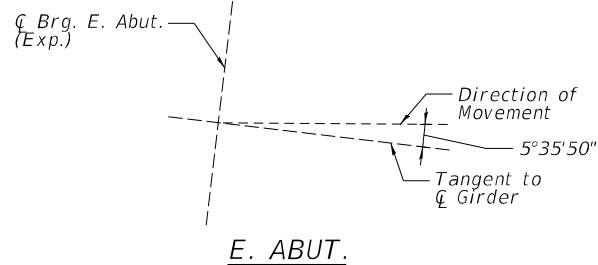
D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

EXPANSION BEARING ORIENTATION

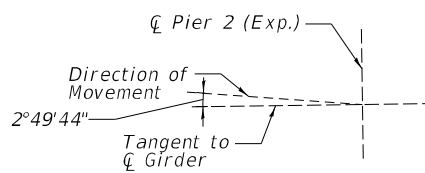
The above diagrams are for informational purposes only to show the amount of expected offset "D" for the current temperature in the field.

NOTES:

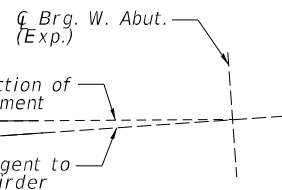
- Side retainers and leveling pad required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.
- The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
- Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
- Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.
- All (embedded and separate) bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.
- Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.



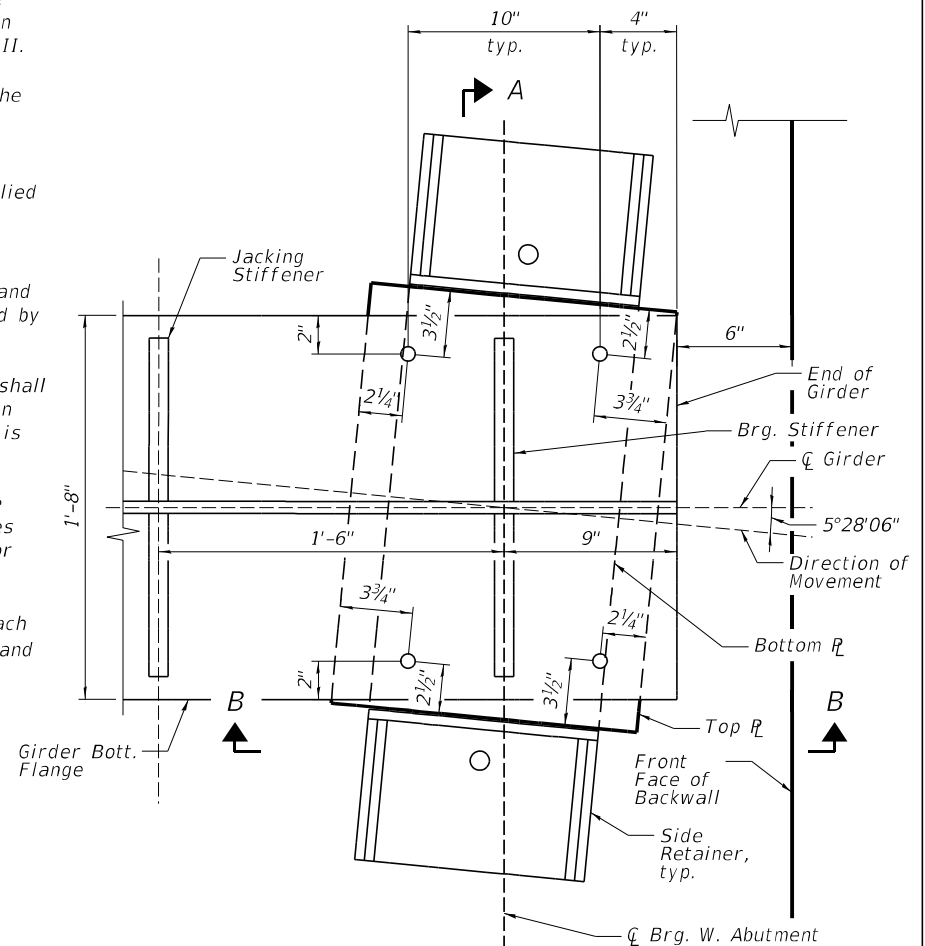
PIER 2



W. ABUT.



PLAN



BEARING LAYOUT PLAN

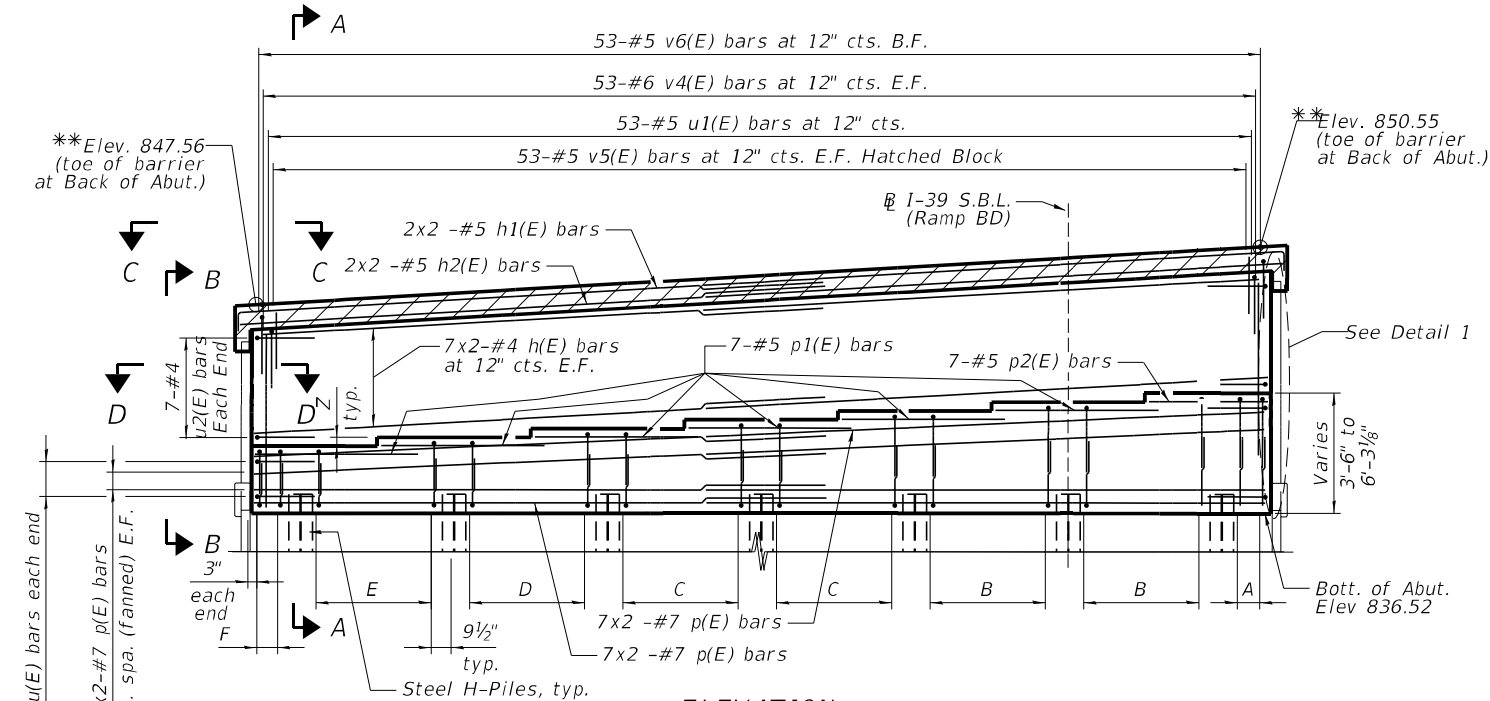
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	7
Anchor Bolts, 1"	Each	14

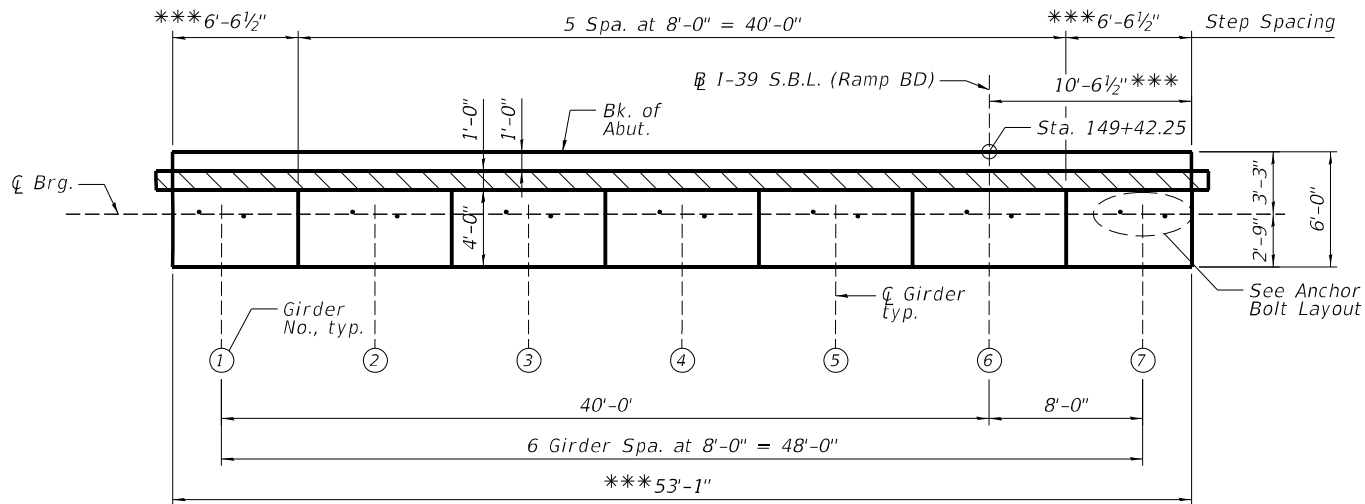
MODEL: sMODELNAME5
FILE NAME: c:\pwworking\benesch projects\projects\dms6524\10215-sh-abutplan.dgn
3/30/2023 11:21:44 AM

MINIMUM BAR LAP

#4 bar = 2'-7" (Stirrups)
#4 bar = 2'-11" (Longitudinal)
#5 bar = 3'-9"
#7 bar = 6'-3"

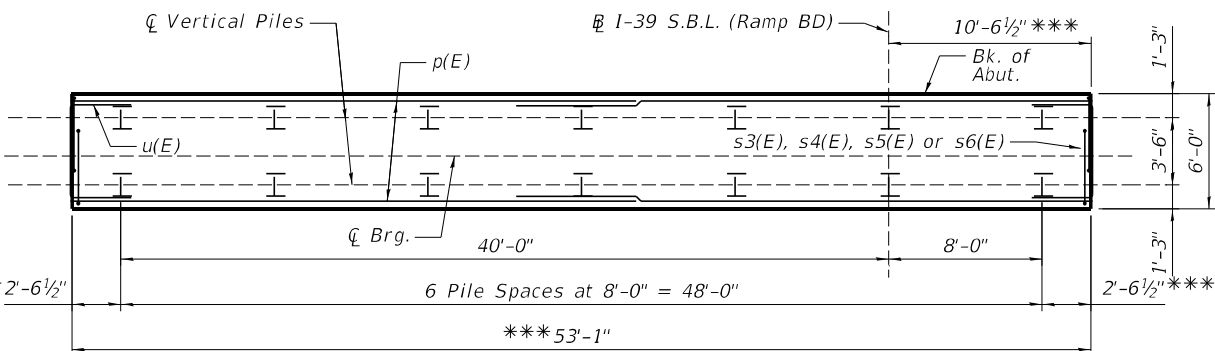


ELEVATION
(Looking West)



TOP VIEW

(MSE wall and reinforcement not shown for clarity)



PLAN - PILE CAP

(MSE wall not shown for clarity)

SEAT ELEVATIONS & STEP HEIGHTS

Girder	Elev.	Z
1	840.02	-
2	840.48	5 1/2"
3	840.94	5 1/2"
4	841.40	5 1/2"
5	841.86	5 1/2"
6	842.32	5 1/2"
7	842.78	5 1/2"

A = 3 Sets of 4-#4 s6(E) bars at 9" cts.

B = 8 Sets of 4-#4 s6(E) bars at 11" cts.

C = 8 Sets of 4-#4 s5(E) bars at 11" cts.

D = 8 Sets of 4-#4 s4(E) bars at 11" cts.

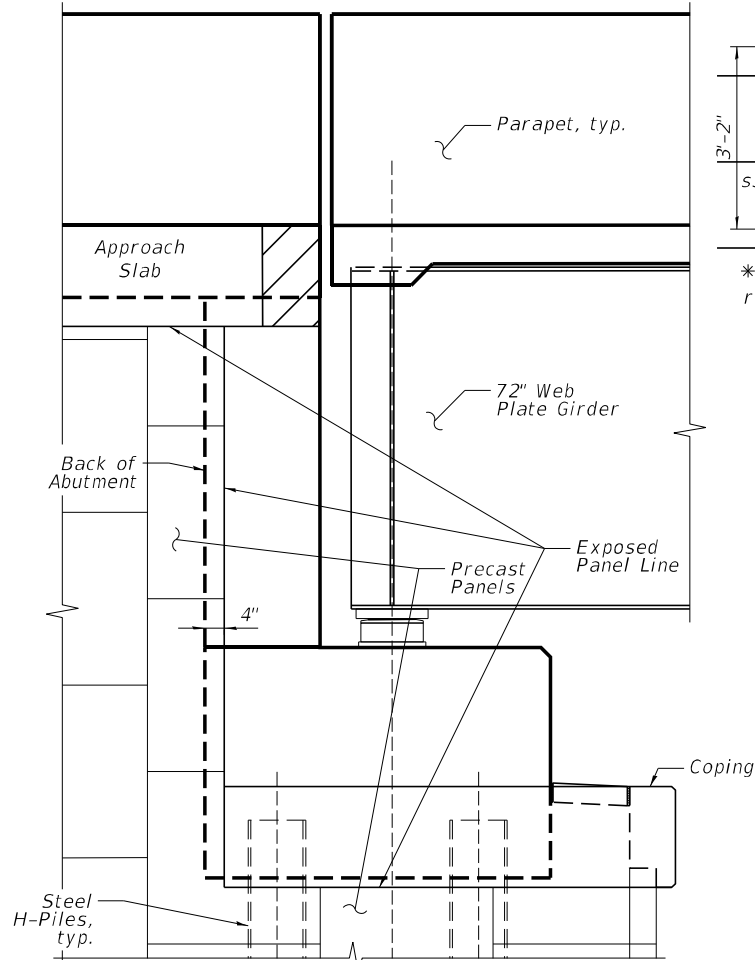
E = 8 Sets of 4-#4 s3(E) bars at 11" cts.

F = 3 Sets of 4-#4 s3(E) bars at 9" cts.

* The MSE wall supplier shall design the abutment soil reinforcement to resist a factored horizontal force of 5.7 kips/ft. of abutment.

** Prior to grinding

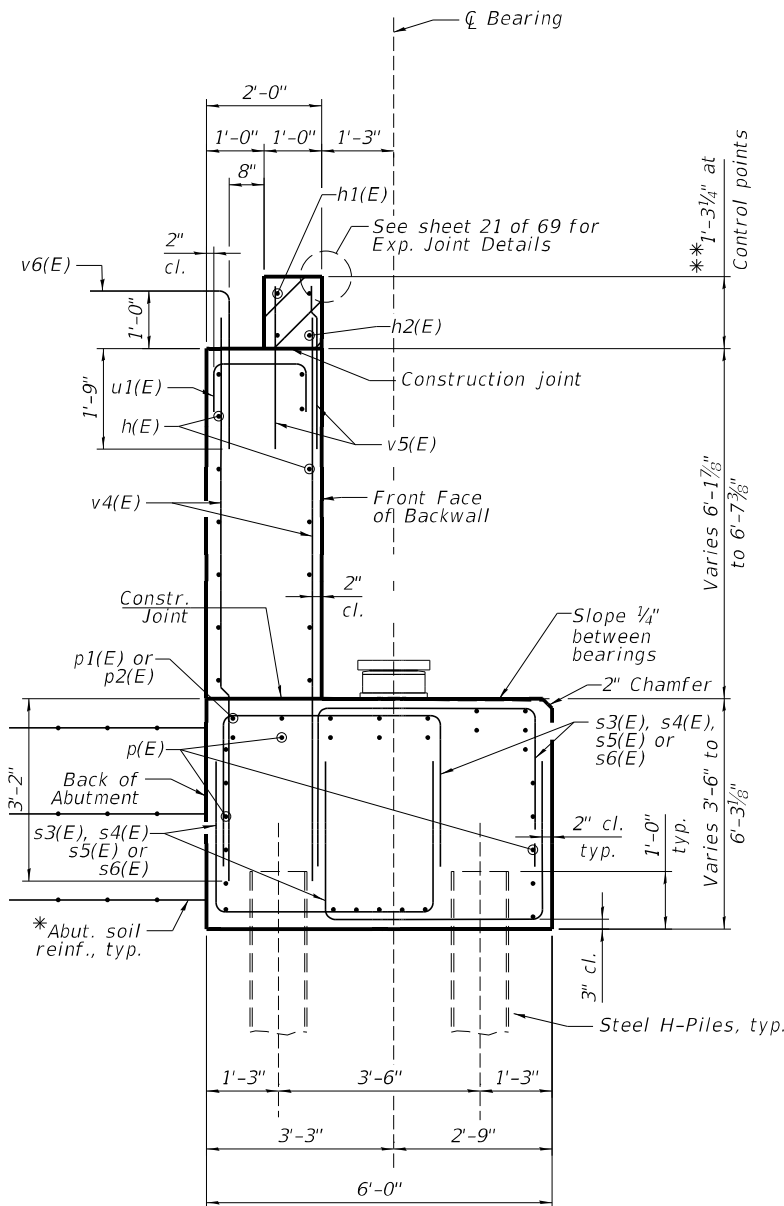
*** Coordinate final dimensions with MSE panel thickness



VIEW B-B

PILE DATA

Type: HP12x63 with pile shoes
Nominal Required Bearing: 497 kips
Factored Resistance Available: 273 kips
Est. Length: 57 feet
No. Production Piles: 13
No. Test Piles: 1



SECTION A-A

NOTES:

- Hatched area to be poured separately after superstructure falsework has been removed. Quantity of concrete included with Concrete Superstructure (Approach Slab) on sheet 20 of 69.
- Space reinforcement in cap to miss anchor bolts.
- Pour steps monolithically with cap.
- Piles shall be coated or sleeved using bitumen coatings, silicone epoxy coatings, or friction reducing extruded sleeves from bottom of excavation to bottom of abutment to reduce downdrag. Face of sleeves, if used, shall not be less than 2'-6" from front face of MSE wall. The selected system shall be submitted for approval prior to ordering materials.
- The top of backwall and approach slab seat shall have a constant slope determined from the control points shown.
- See sheet 57 of 69 for details of piles.
- Concrete sealer shall be applied to the bearing seats and front faces of the hatched block, backwall, and abutment cap.
- Bars indicated thus 7x2-#5 etc. indicates 7 lines of bars with 2 lengths per line.



Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312.465.4050 Job No. 10800

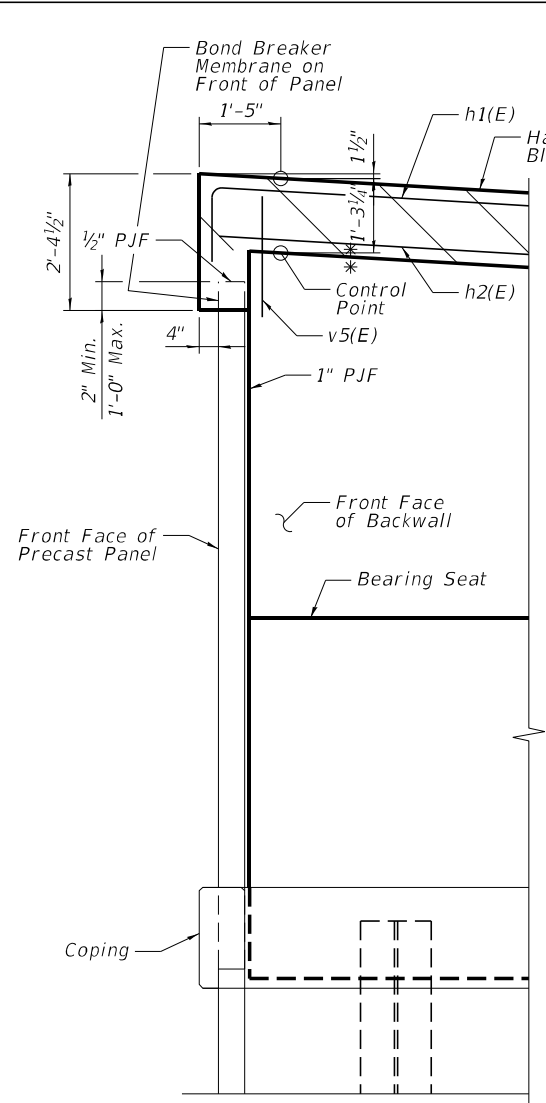
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PLOT SCALE =	CHECKED - MFH	REVISED -
PLOT DATE =	DRAWN - AJB	REVISED -
	CHECKED - MFH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

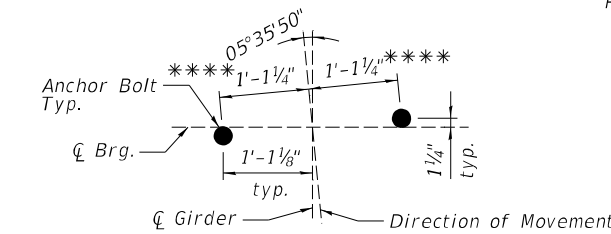
WEST ABUTMENT PLAN AND ELEVATION
STRUCTURE NO. 101-0215

SHEET 48 OF 69 SHEETS

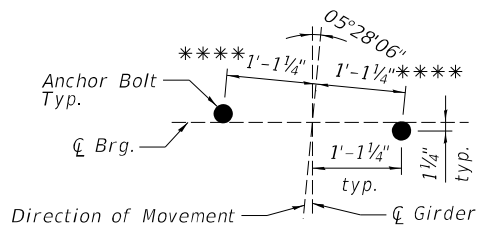
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	815
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				



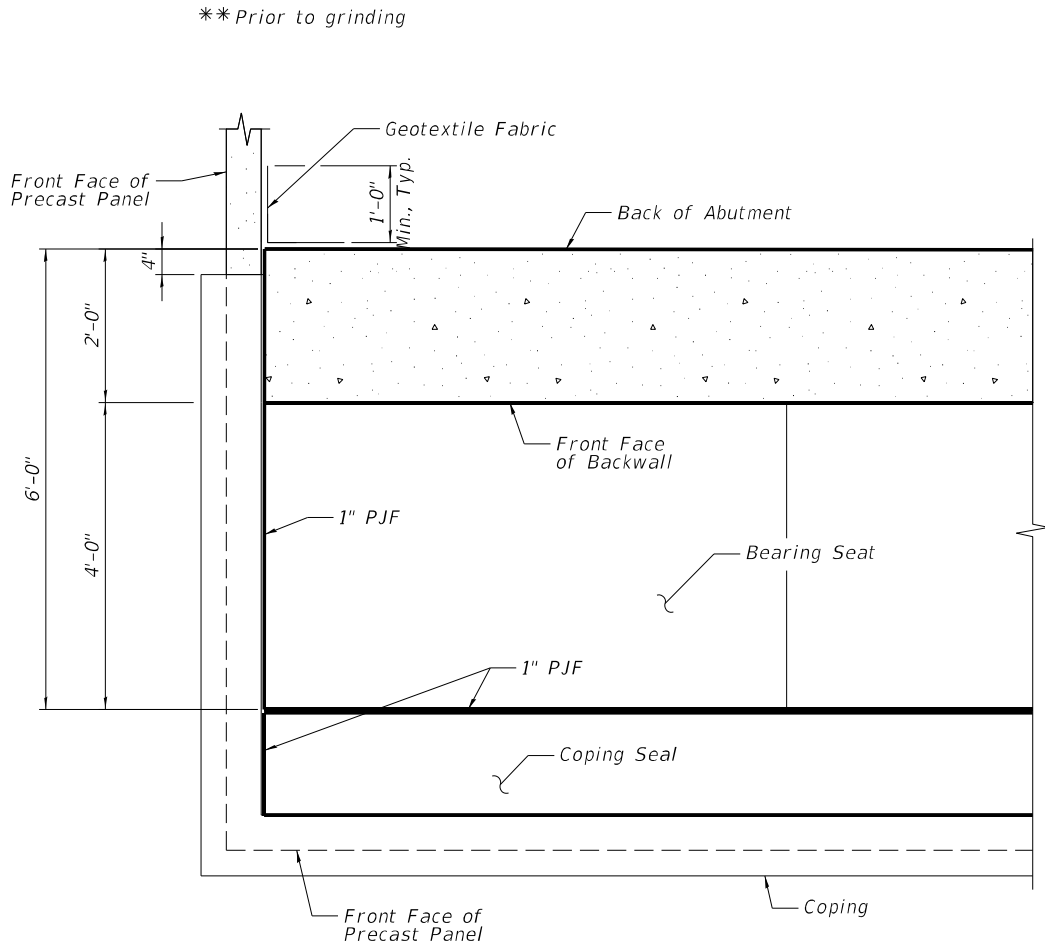
DETAIL 1
(Showing hatched block reinforcement only;
East Abutment shown, West Abutment opposite hand)



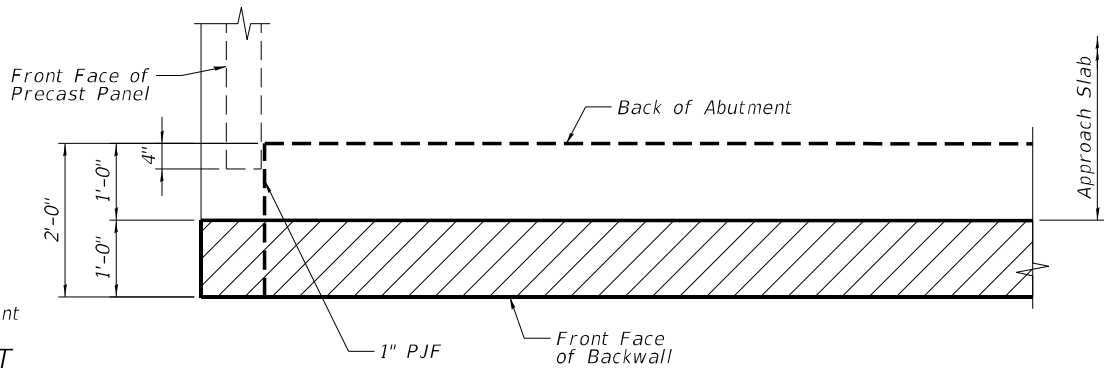
ANCHOR BOLT LAYOUT - EAST ABUTMENT



ANCHOR BOLT LAYOUT - WEST ABUTMENT



SECTION D-D
(Reinforcement not shown for clarity)



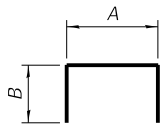
VIEW C-C
(Reinforcement not shown for clarity)

**EAST ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	28	#4	27'-10"	
h1(E)	4	#5	31'-1"	
h2(E)	4	#5	29'-2"	
p(E)	48	#7	29'-6"	
p1(E)	42	#5	8'-6"	
p2(E)	7	#5	6'-2"	
s3(E)	44	#4	10'-1"	
s4(E)	32	#4	10'-7"	
s5(E)	32	#4	11'-7"	
s6(E)	44	#4	12'-5"	
u(E)	14	#6	14'-3"	
u1(E)	53	#5	3'-4"	
u2(E)	14	#4	7'-5"	
v4(E)	106	#6	9'-7"	
v5(E)	106	#5	3'-0"	
v6(E)	53	#5	3'-7"	
Concrete Structures			Cu. Yd.	81.9
Reinforcement Bars, Epoxy Coated			Pound	7,830
Furnishing Steel Piles HP12X63			Foot	897
Driving Piles			Foot	897
Test Pile Steel HP12X63			Each	1
Pile Shoes			Each	14
Concrete Sealer			Sq. Ft.	882

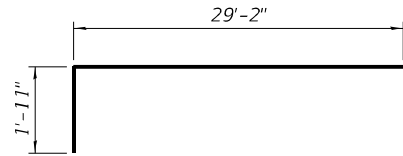
**WEST ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	28	#4	27'-10"	
h1(E)	4	#5	31'-1"	
h2(E)	4	#5	29'-2"	
p(E)	48	#7	29'-6"	
p1(E)	42	#5	8'-6"	
p2(E)	7	#5	6'-2"	
s3(E)	44	#4	10'-1"	
s4(E)	32	#4	10'-7"	
s5(E)	32	#4	11'-7"	
s6(E)	44	#4	12'-5"	
u(E)	14	#6	14'-3"	
u1(E)	53	#5	3'-4"	
u2(E)	14	#4	7'-5"	
v4(E)	106	#6	9'-7"	
v5(E)	106	#5	3'-0"	
v6(E)	53	#5	3'-7"	
Concrete Structures			Cu. Yd.	82.7
Reinforcement Bars, Epoxy Coated			Pound	7,830
Furnishing Steel Piles HP12X63			Foot	741
Driving Piles			Foot	741
Test Pile Steel HP12X63			Each	1
Pile Shoes			Each	14
Concrete Sealer			Sq. Ft.	893

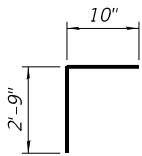


BARS s3(E), s4(E), s5(E), s6(E), u(E), u1(E) & u2(E)

Bar	A	B
s3(E)	3'-11"	3'-1"
s4(E)	3'-11"	3'-4"
s5(E)	3'-11"	3'-10"
s6(E)	3'-11"	4'-3"
u(E)	5'-7"	4'-4"
u1(E)	1'-8"	10"
u2(E)	1'-6 1/2"	2'-11"

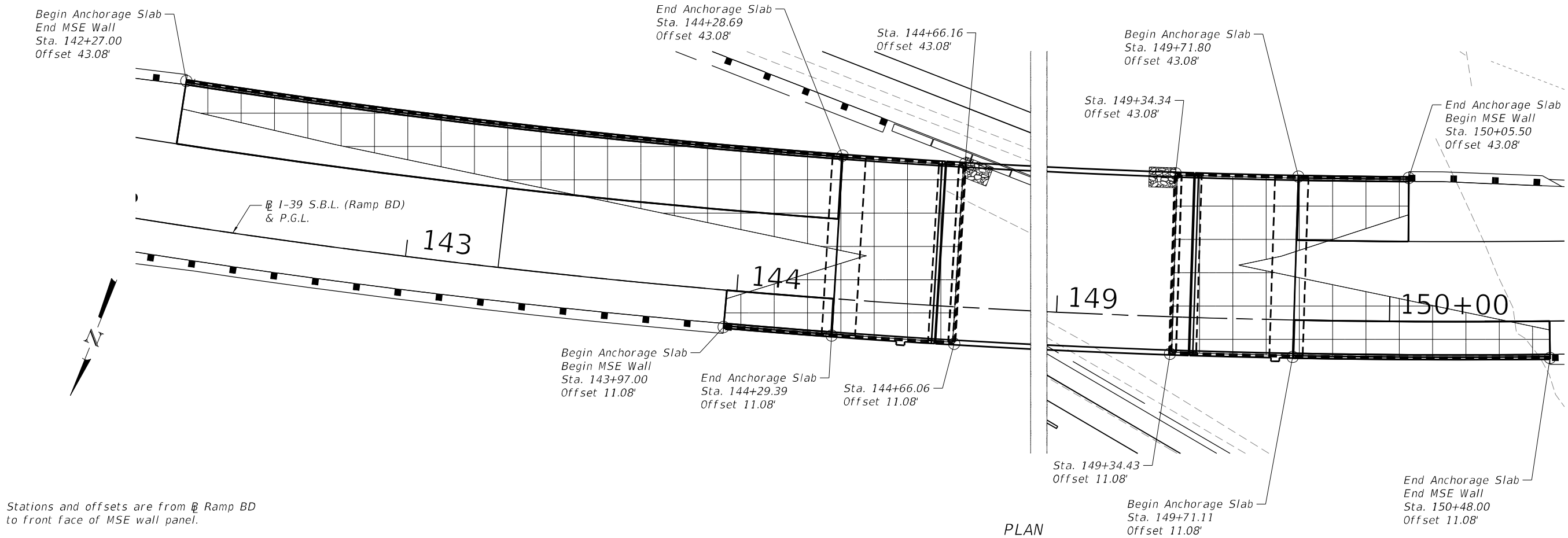


BAR h1(E)



BAR v6(E)

MODEL: Default
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USER NAME	=	kortega	DESIGNED	-	KWB	REVISED	-
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PLOT DATE	=	03/31/2023	CHECKED	-	KFO	REVISED	-

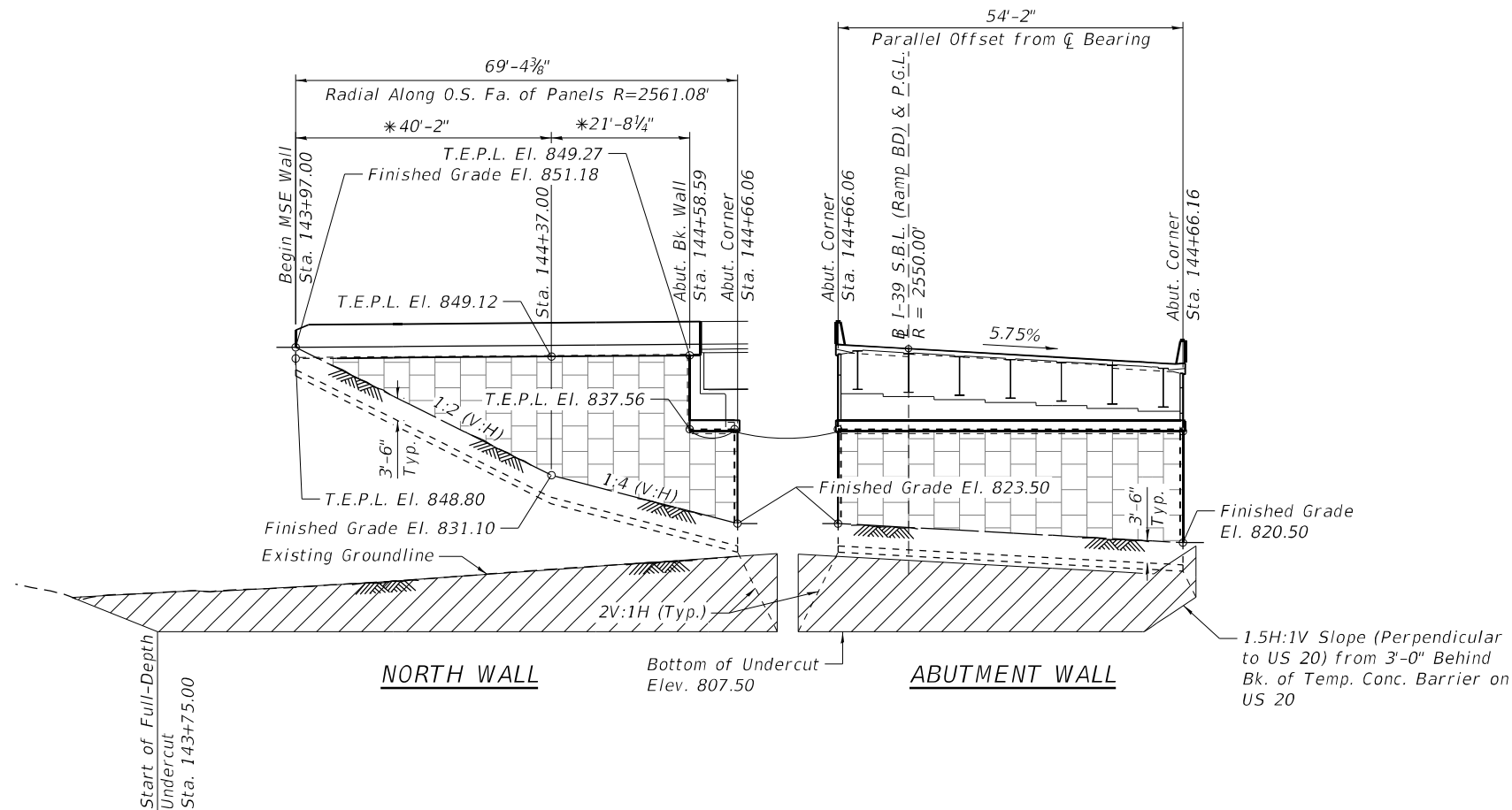
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MSE WALL - GENERAL PLAN
STRUCTURE NO. 101-0215

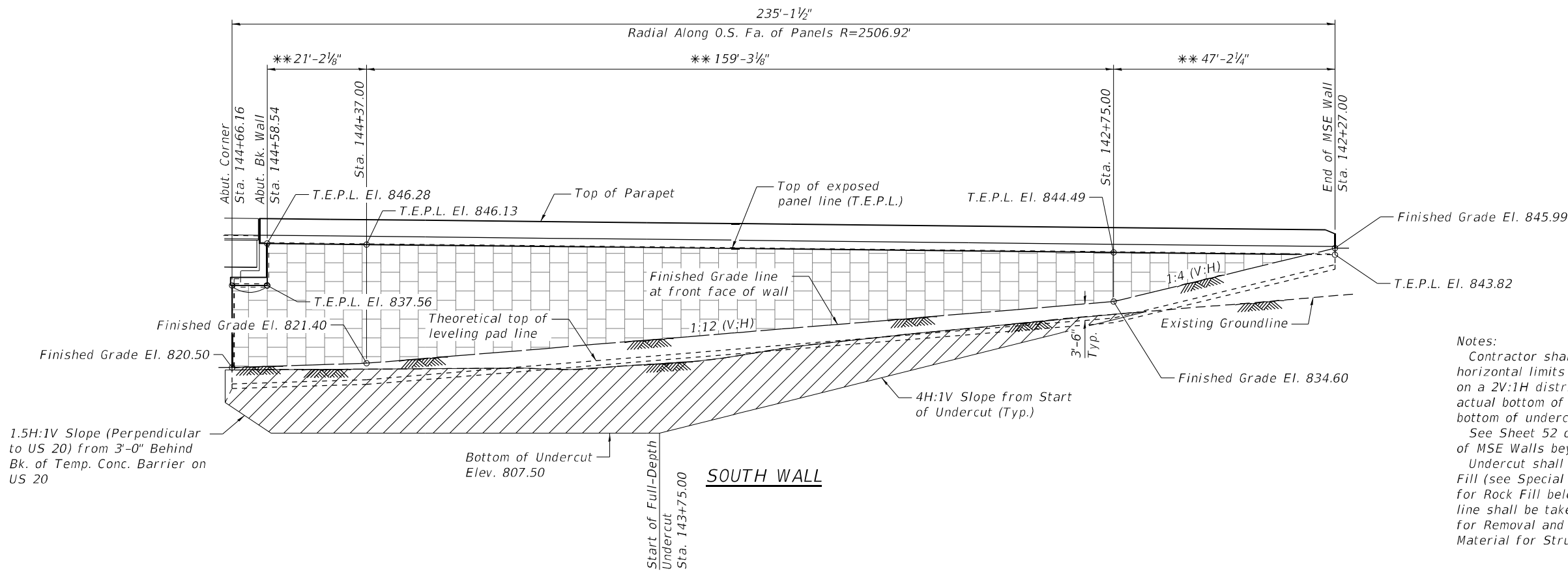
SHEET 50 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	817
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

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FILE NAME: pw:\benesch-pw-bentley.com\benesch-pw-q\Documents\10800\01\Eng_Docs\Structures\SN 0215 Ramp BD\MSE (Quigg)\Sheets\264C62-1010215-050-General Elevation



 Pay Limits of Removal and Disposal of Unsuitable Material for Structures



Notes:
Contractor shall determine horizontal limits of undercut based on a 2V:1H distribution from the actual bottom of leveling pad to the bottom of undercut elevations shown.
See Sheet 52 of 69 for Cross Section of MSE Walls beyond Approach Slab.
Undercut shall be backfilled with Rock Fill (see Special Provision). Pay limits for Rock Fill below the existing ground line shall be taken equal to those shown for Removal and Disposal of Unsuitable Material for Structures.

*Radial along O.S. Face - R=2561.08'
**Radial along O.S. Face - R=2506.92'

EAST ABUTMENT WALL ELEVATIONS
Developed along front face of wall panels



QUIGG ENGINEERING INC

USER NAME	=	kortega
DESIGNED	-	KWB
D264C62-1010215-050-General Elevation	CHECKED	- ZLD
PLOT SCALE	=	DRAWN - ZLD
PLOT DATE	=	03/31/2023
CHECKED	-	KFO

REVISED	-
REVISED	-
REVISED	-
REVISED	-

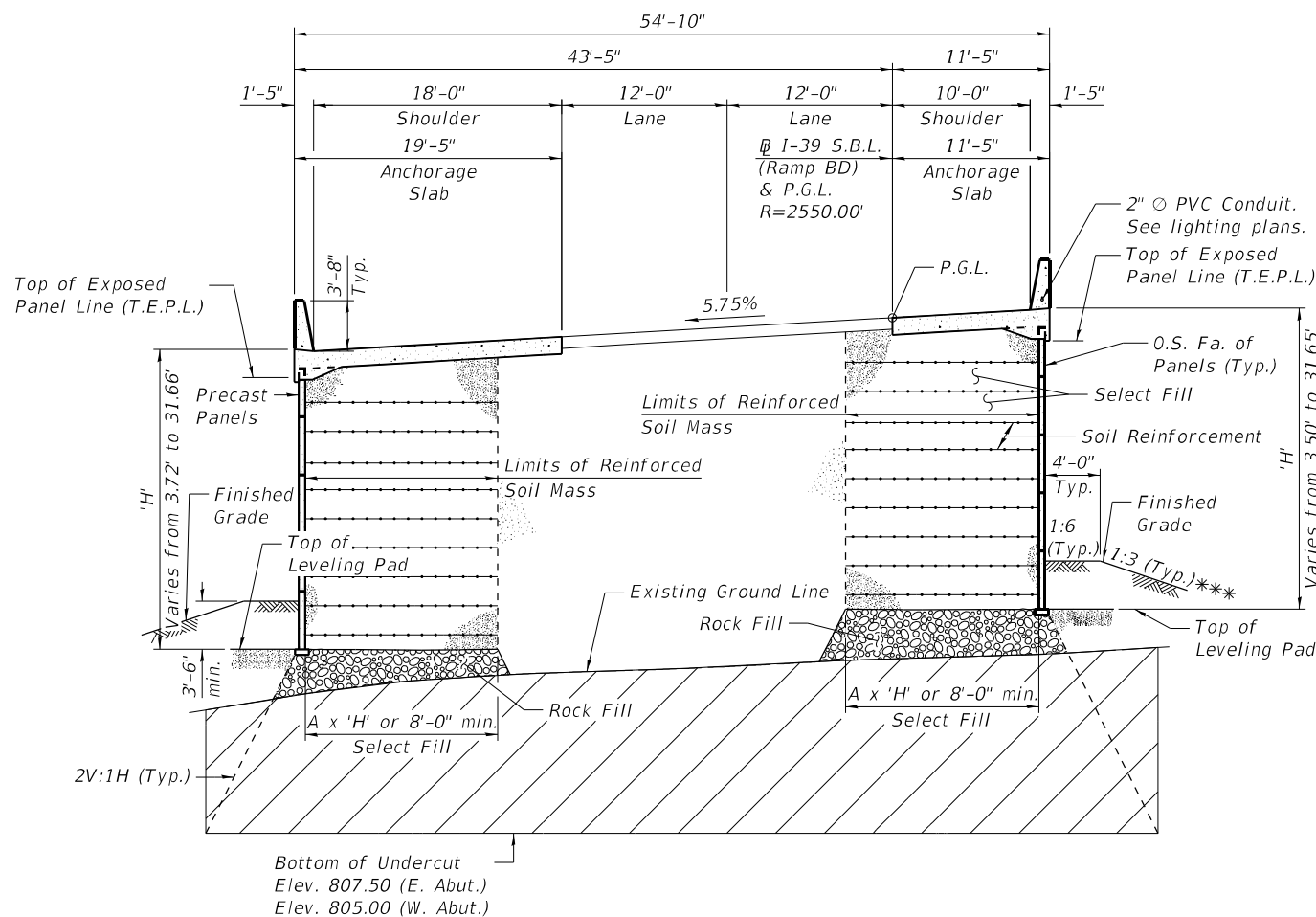
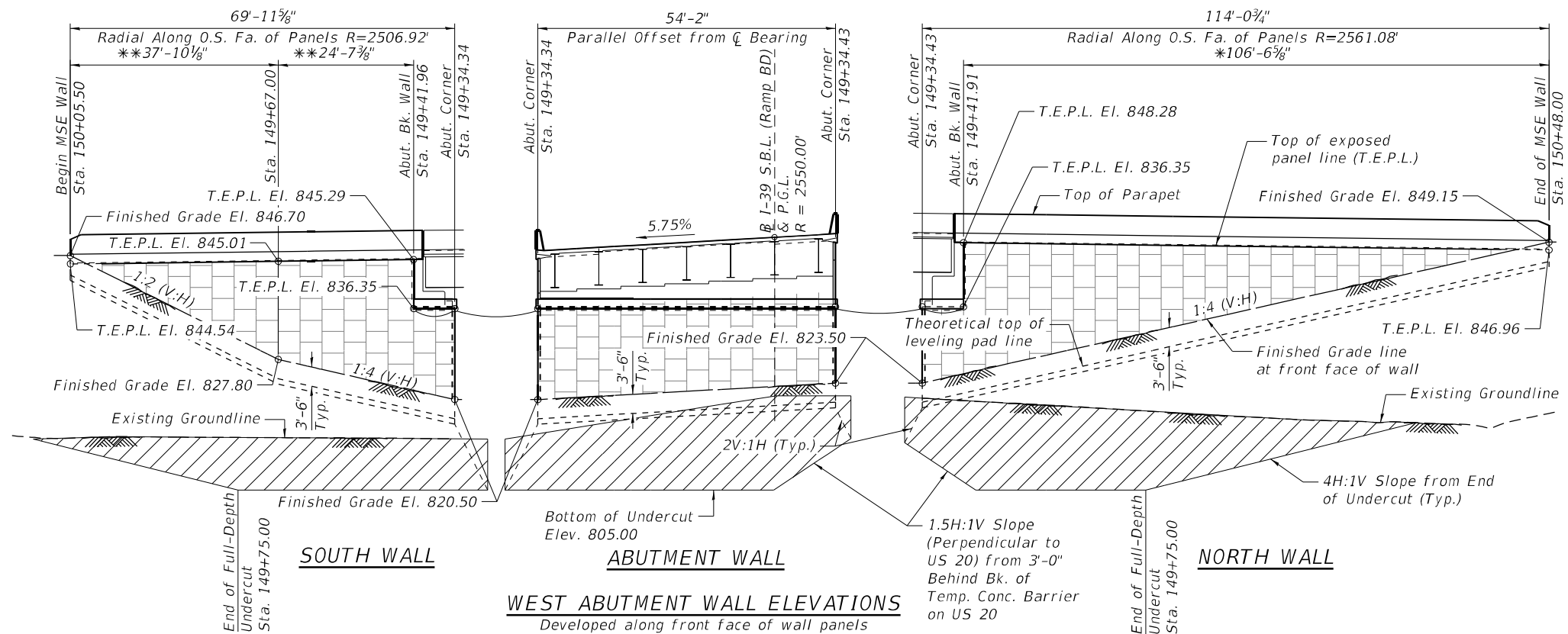
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MSE WALL ELEVATIONS - EAST ABUTMENT
STRUCTURE NO. 101-0215**

SHEET 51 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	818
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

MODEL: Default
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Pay Limits of Removal and Disposal of Unsuitable Material for Structures

*Radial along O.S. Face - R=2561.08'
**Radial along O.S. Face - R=2506.92'
***1:2 max. Near End of Wall

Notes:
Contractor shall determine horizontal limits of undercut based on a 2V:1H distribution from the actual bottom of leveling pad to the bottom of undercut elevations as shown.
Undercut shall be backfilled with Rock Fill (see Special Provision). Pay limits for Rock Fill below the existing ground line shall be taken equal to those shown for Removal and Disposal of Unsuitable Material for Structures.

BILL OF MATERIAL - MSE WALLS

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	202
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	6,700
Mechanically Stabilized Earth Retaining Wall	Sq. Ft.	10,271
Rock Fill	Cu. Yd.	10,846

CROSS SECTION AT MSE WALLS BEYOND EAST AND WEST APPROACH SLAB
Looking West - Upstation
(Horizontal Dimensions Measured Radially)

A = 0.8 from Sta. 142+27 to 143+50
1.0 from Sta. 143+50 to 149+67
0.8 from Sta. 149+67 to 150+48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MSE WALL ELEVATIONS - WEST ABUTMENT & SECTION
STRUCTURE NO. 101-0215

SHEET 52 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	819
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

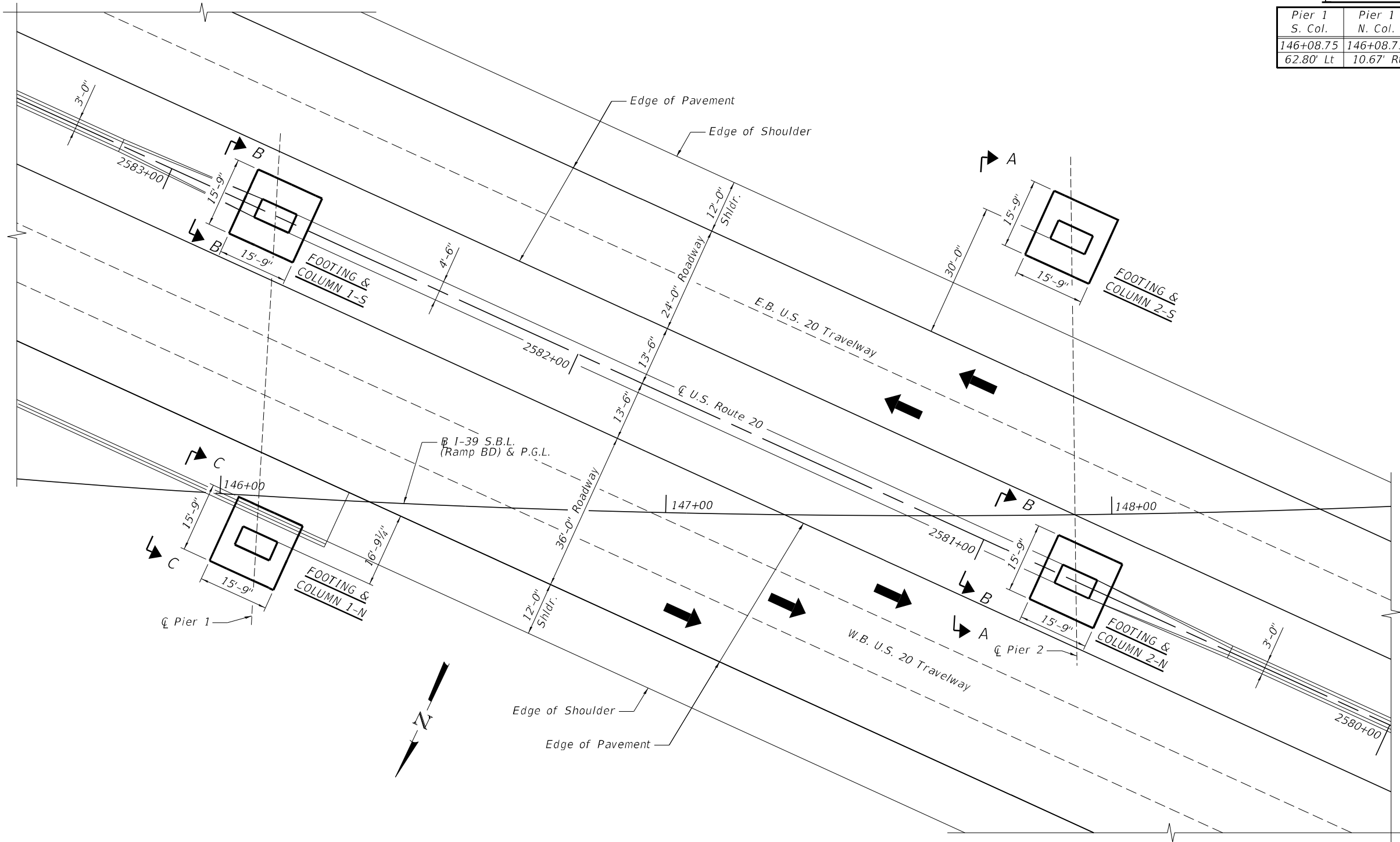


QUIGG ENGINEERING INC.

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D264C62-1010215-051-General Elevation2	CHECKED - ZLD	REVISED -
PLOT SCALE =	DRAWN - ZLD	REVISED -
PLOT DATE = 03/31/2023	CHECKED - KFO	REVISED -

Column Locations

Pier 1 S. Col.	Pier 1 N. Col.	Pier 2 S. Col.	Pier 2 N. Col.
146+08.75	146+08.75	147+91.75	147+91.75
62.80' Lt	10.67' Rt	62.18' Lt	14.94' Rt



PIER CONFIGURATION PLAN

NOTES:

1. See sheet 54 of 69 for View A-A, B-B and C-C.

MODEL: smodelnames
FILE NAME: c:\pwwork\benesch\projects\projects\dms6524\1D264C62-1010215-sh+pier.plt.dgn



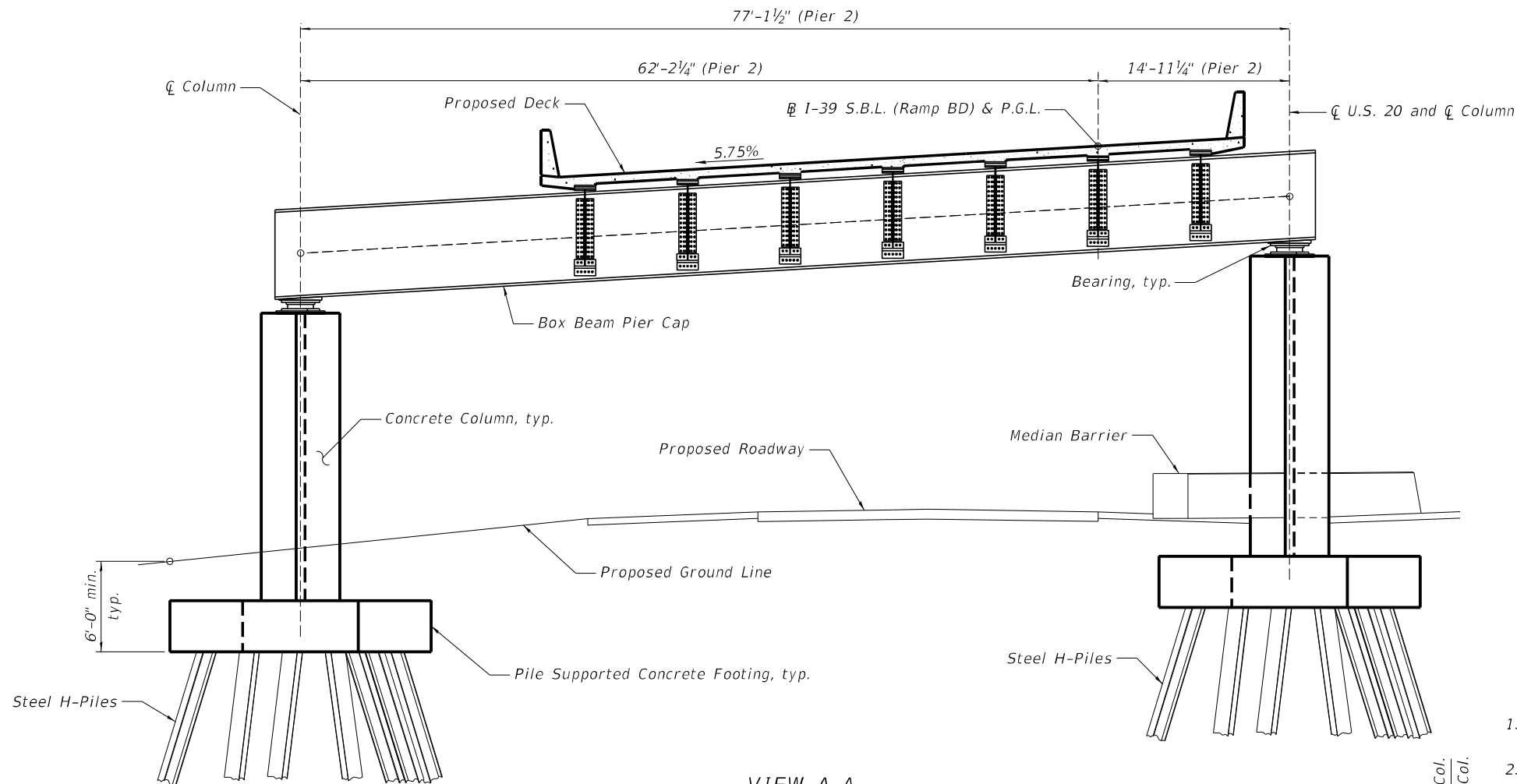
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	CHECKED - RW	REVISED -
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PLOT DATE =	CHECKED - RW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

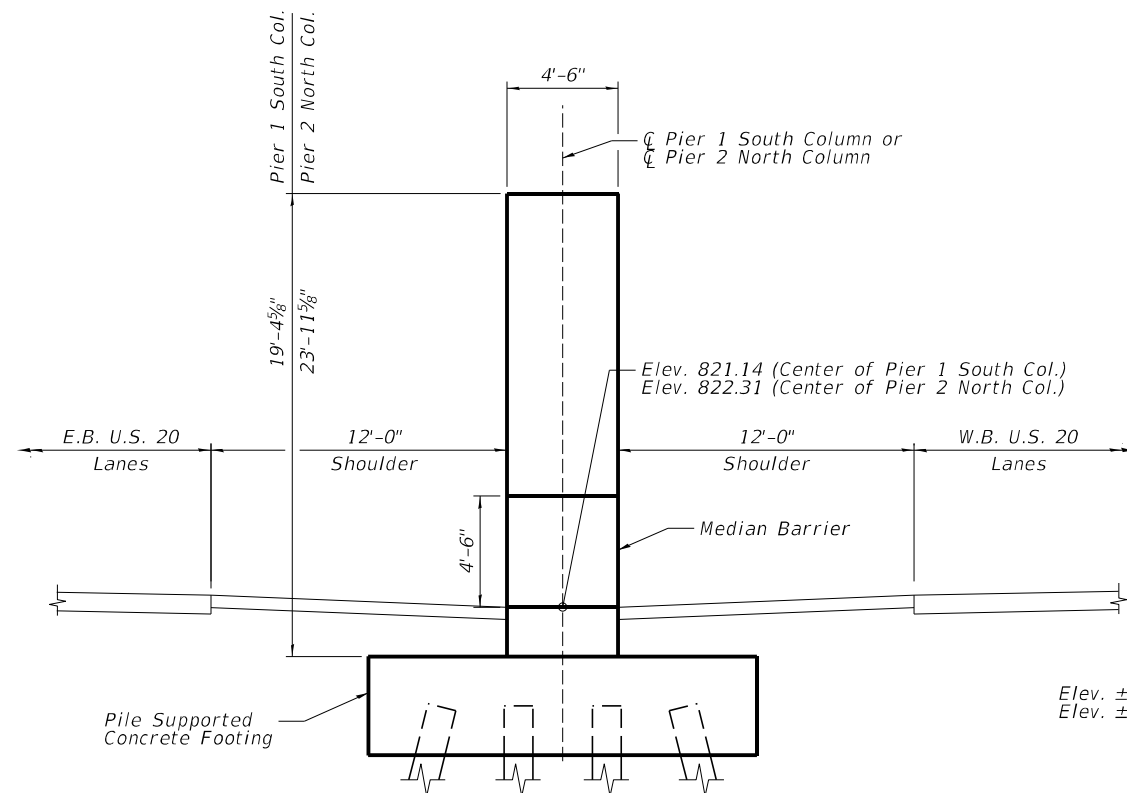
PIER PLAN
STRUCTURE NO. 101-0215

SHEET 53 OF 69 SHEETS

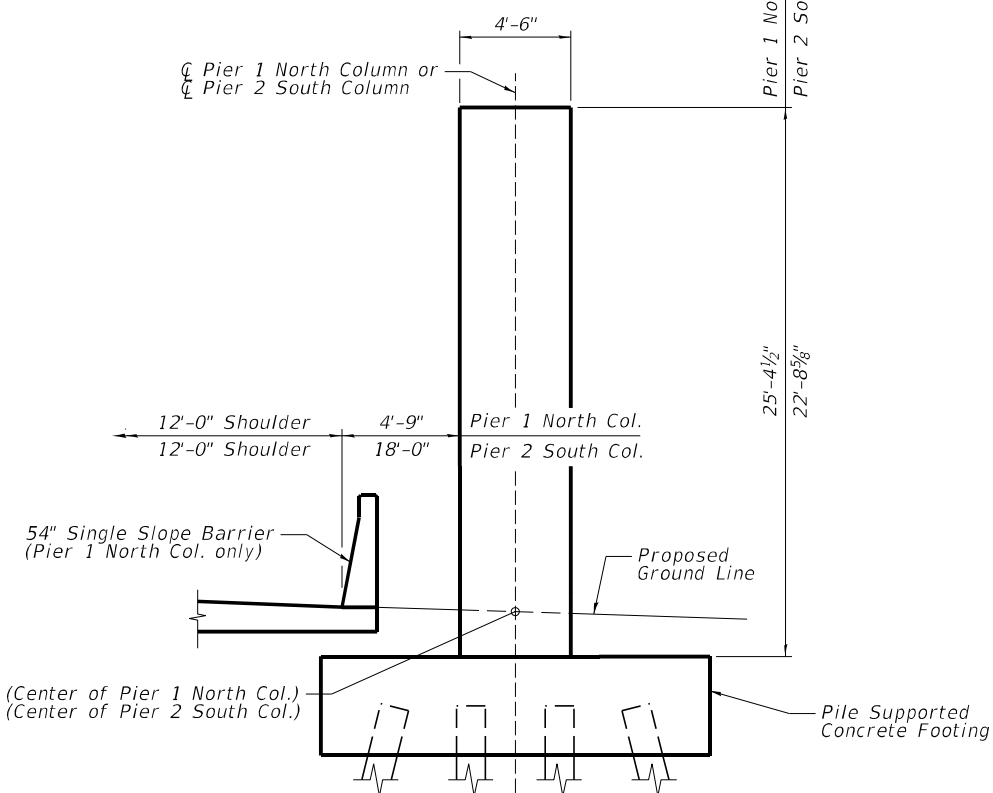
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	820
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				



VIEW A-A
(Pier 2 shown, Pier 1 similar)



VIEW B-B



VIEW C-C

NOTES:

1. See sheet 55 of 69 for column and footing elevations.
2. See sheet 53 of 69 for location of View A-A, B-B, and C-C.

MODEL: smodelnames
FILE NAME: c:\pwwork\benesch_projects\projects\dms6524\10215-sh-pierelev.dgn



USER NAME =	DESIGNED - EAO	REVISED -
	CHECKED - RW	REVISED -
PLOT SCALE =	DRAWN - KMS	REVISED -
PLOT DATE =	CHECKED - RW	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

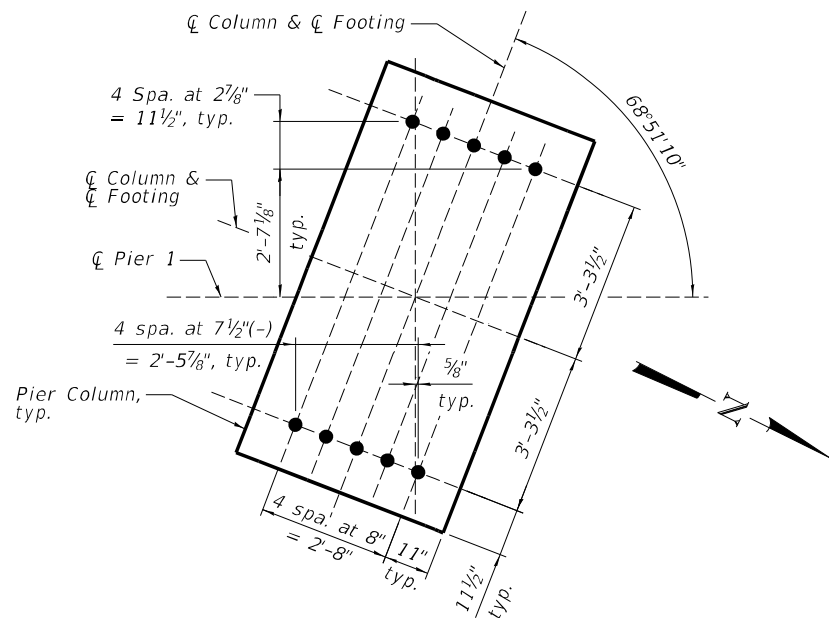
**PIER ELEVATION
STRUCTURE NO. 101-0215**

SHEET 54 OF 69 SHEETS

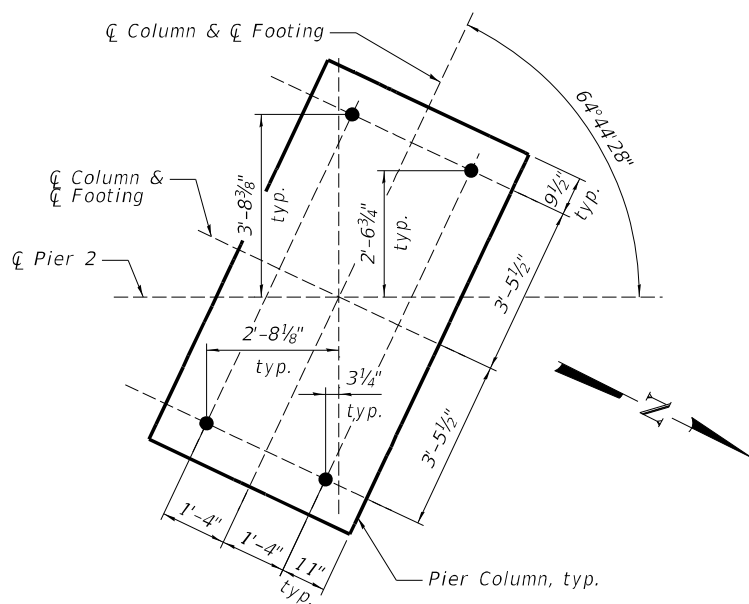
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39	(201-3)K	WINNEBAGO	2192	821
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

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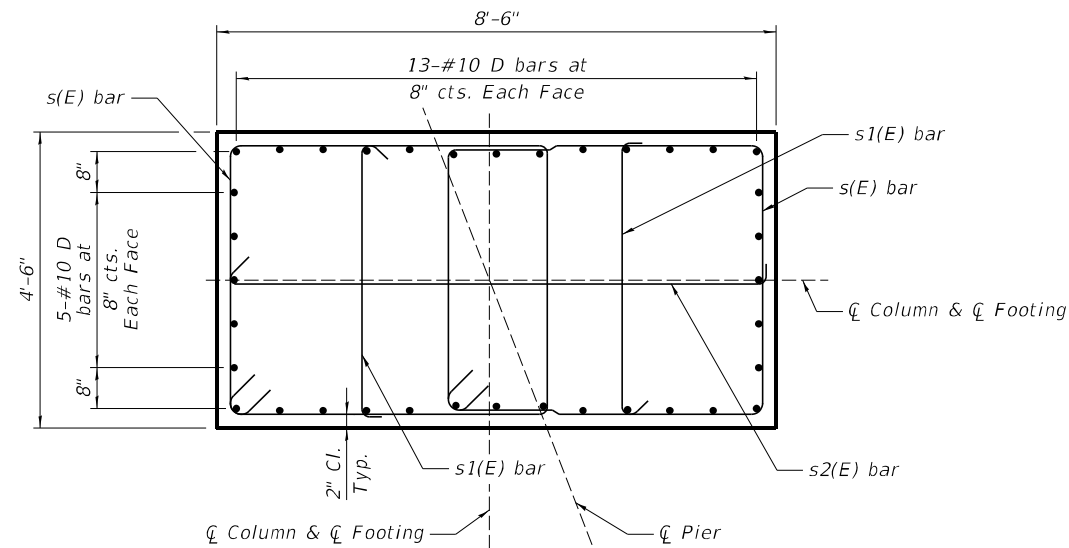
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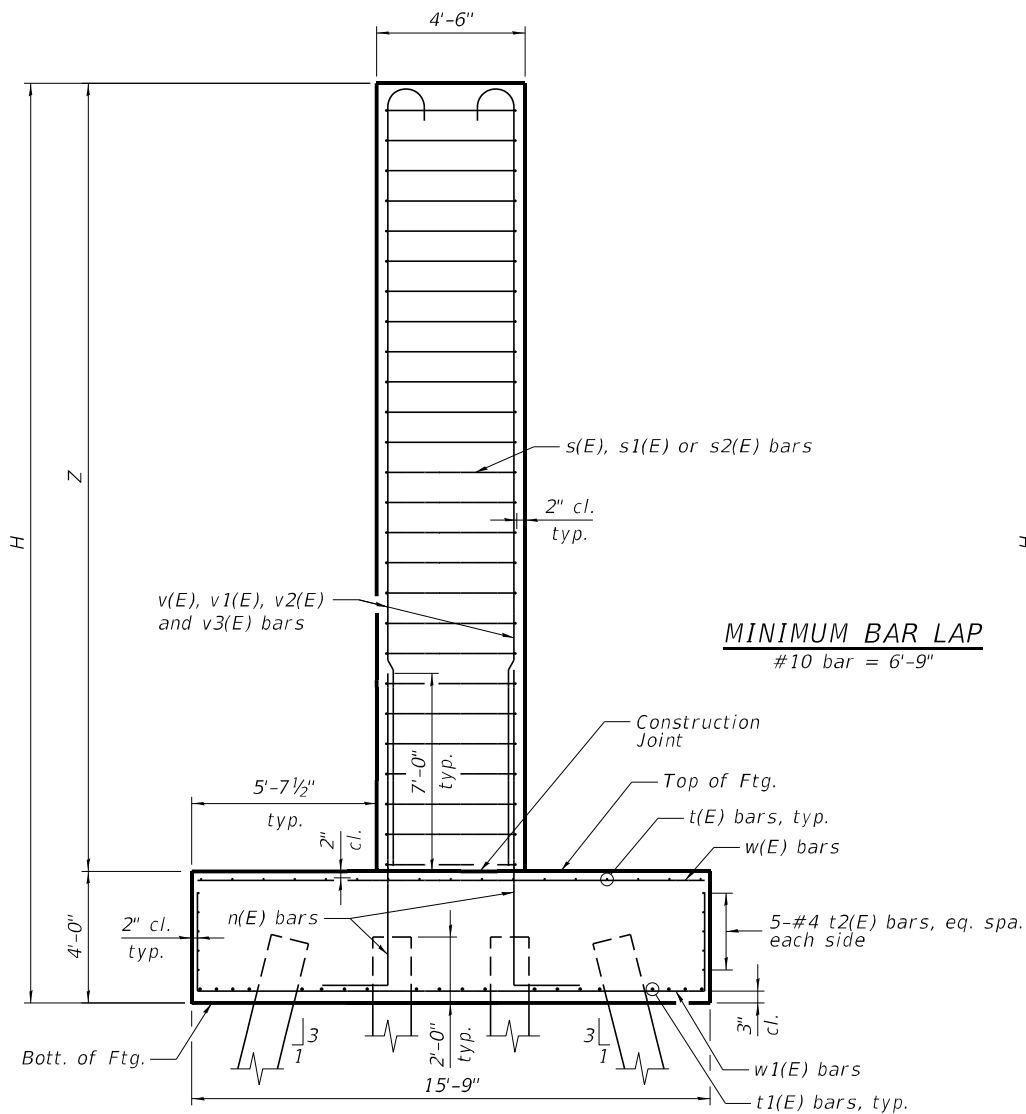
ANCHOR BOLT LAYOUT
(Pier 1 - Fixed HLMR Bearings)



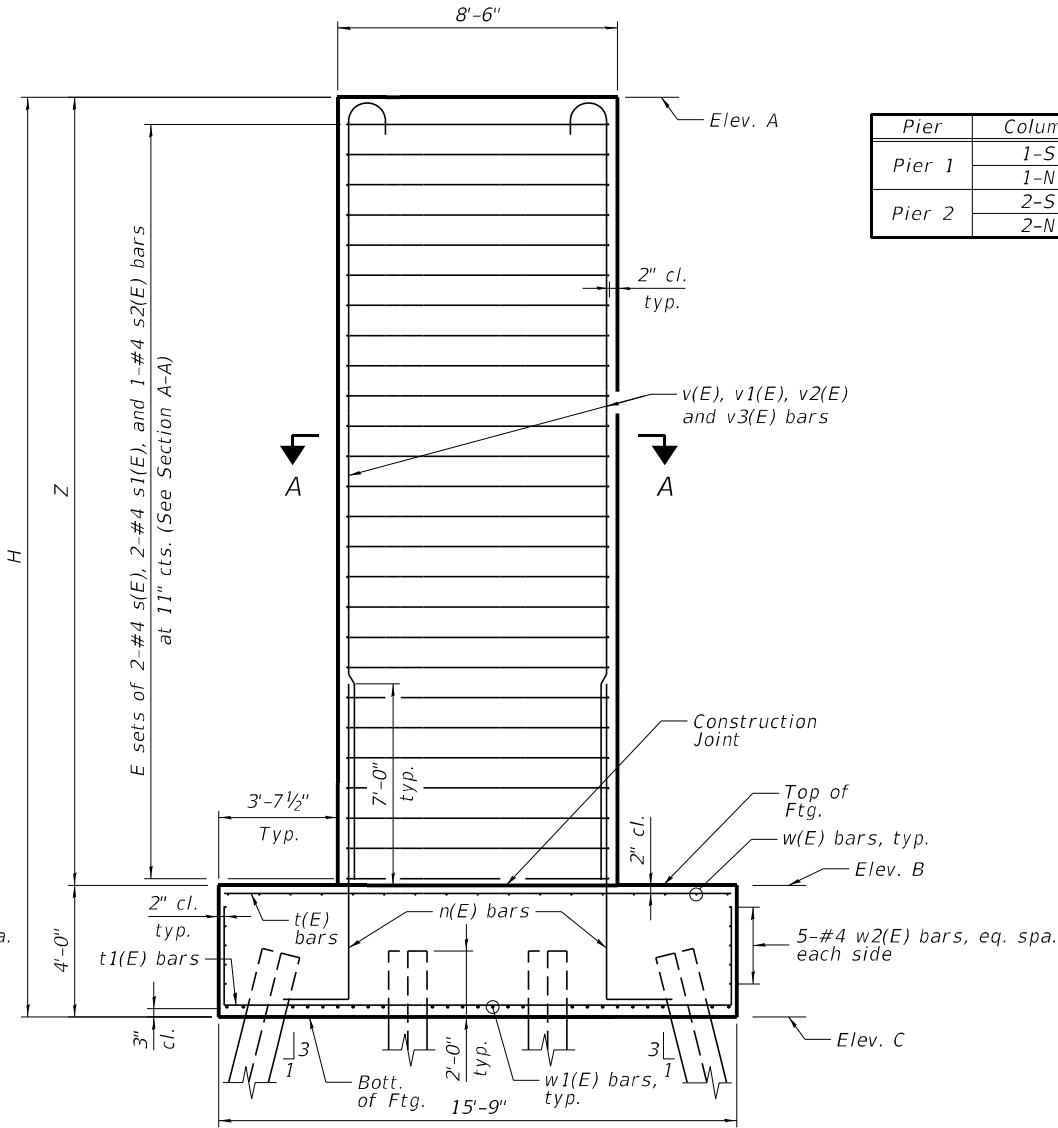
ANCHOR BOLT LAYOUT
(Pier 2 - Expansion HLMR Bearings)



SECTION A-A



PIER COLUMN SIDE VIEW



PIER COLUMN ELEVATION

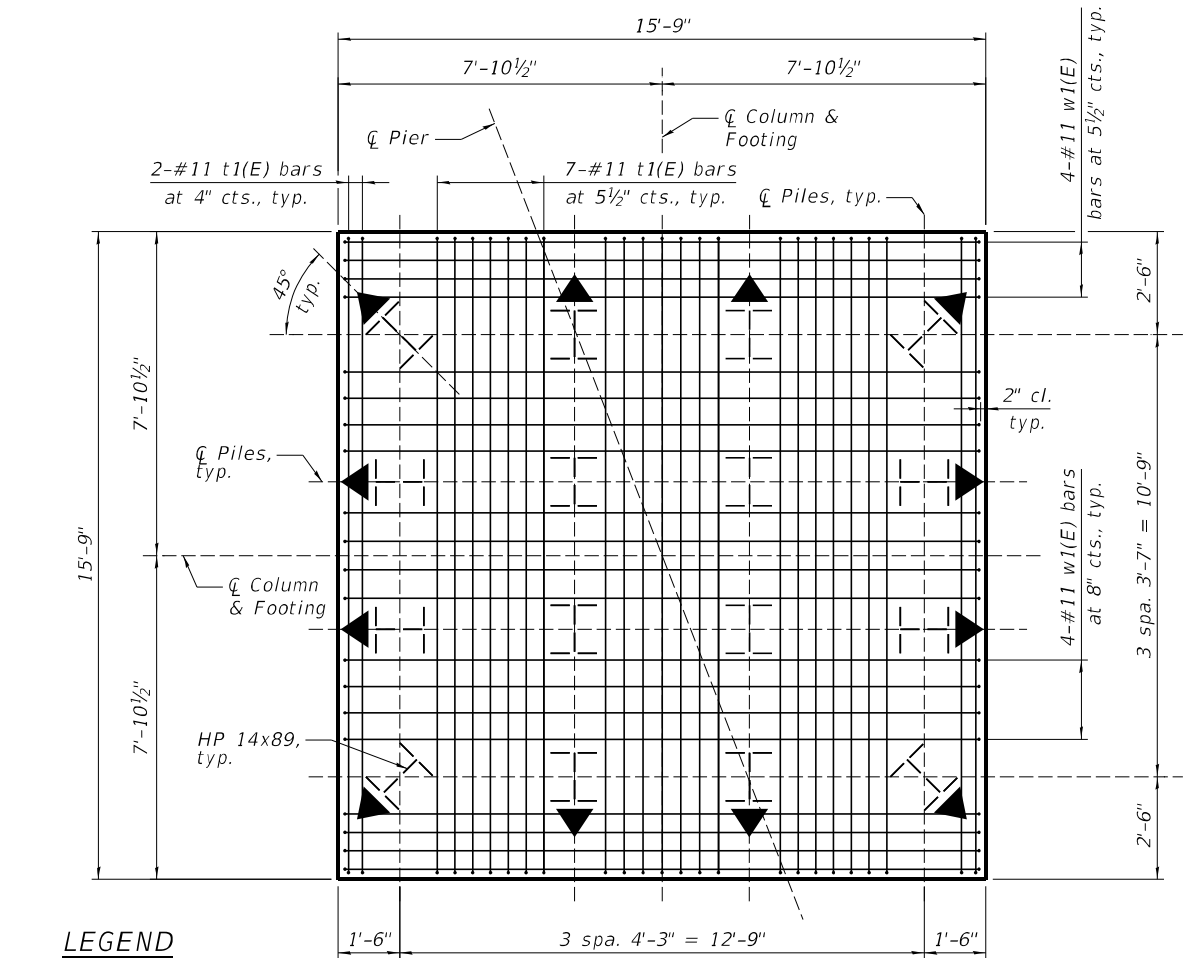
PIER DATA TABLE

Pier	Column	H	Z	Elev. A	Elev. B	Elev. C	D	E
Pier 1	1-S	23'-4 5/8"	19'-4 5/8"	838.35	818.97	814.97	v(E)	22
	1-N	29'-4 1/2"	25'-4 1/2"	842.31	816.94	812.94	v1(E)	29
Pier 2	2-S	26'-8 5/8"	22'-8 5/8"	837.94	815.23	811.23	v2(E)	26
	2-N	27'-11 3/8"	23'-11 3/8"	842.08	818.11	814.11	v3(E)	28

NOTES:

1. Stirrup reinforcement in cap shall be adjusted to maintain 2" clear spacing to anchor bolts.
2. For details of piles, see sheet 57 of 69 .
3. Turn hooks of vertical bars to miss piles and anchor bolts.
4. Concrete sealer shall be applied to the top and all four sides of each column.

MODEL: sMODELNAME\$
FILE NAME: c:\pwworking\benesch_projects\projects\dms65241\0264C62-1010215-shr-pier1\gdtds.dgn



LEGEND

- ┌ Proposed Vertical Pile
└ Proposed Battered Pile 3:1 (V:H)

FOOTING PLAN

(Bottom Reinforcement Layer)

PIER 1 - SOUTH COLUMN BILL OF MATERIAL

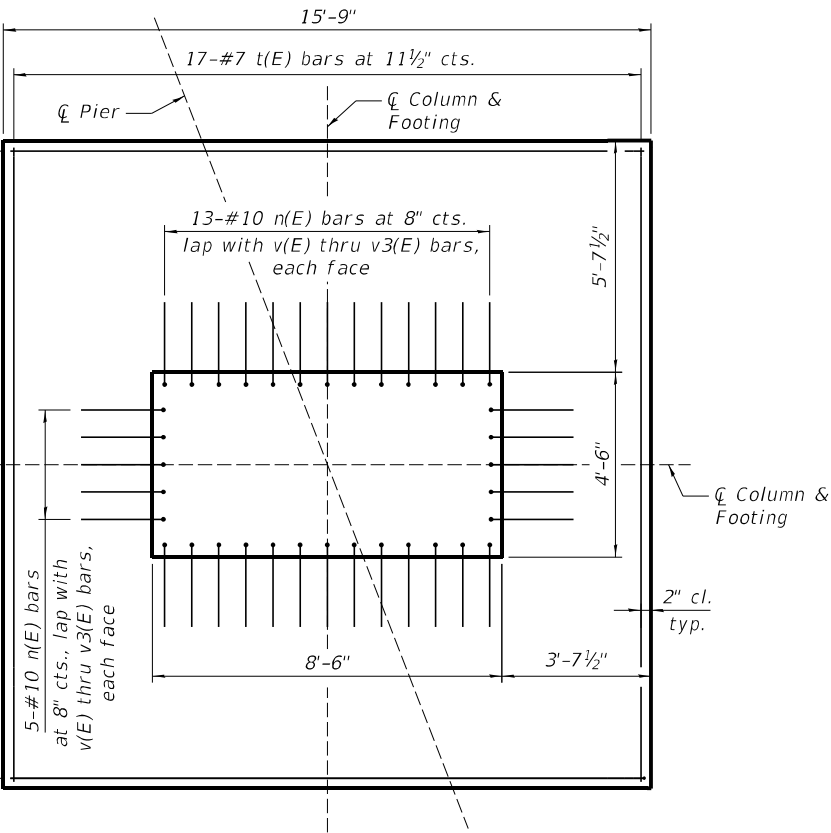
Bar	No.	Size	Length	Shape
n(E)	36	#10	12'-4"	J
s(E)	42	#4	18'-9"	□
s1(E)	42	#4	4'-10"	└
s2(E)	21	#4	8'-10"	└
t(E)	17	#7	15'-5"	—
t1(E)	25	#11	21'-5"	└
t2(E)	10	#4	15'-5"	—
v(E)	36	#10	20'-6"	C
w(E)	17	#7	15'-5"	—
w1(E)	20	#11	21'-5"	└
w2(E)	10	#4	15'-5"	—
Concrete Sealer			Sq. Ft.	537
Structure Excavation			Cu. Yd.	73
Concrete Structures			Cu. Yd.	64.3
Reinforcement Bars, Epoxy Coated			Pound	12,270
Furnishing Steel Piles HP14X89			Foot	600
Driving Piles			Foot	600
Test Pile Steel HP14X89			Each	1
Pile Shoes			Each	16

PIER 1 - NORTH COLUMN BILL OF MATERIAL

Bar	No.	Size	Length	Shape
n(E)	36	#10	12'-4"	J
s(E)	50	#4	18'-9"	□
s1(E)	50	#4	4'-10"	└
s2(E)	25	#4	8'-10"	└
t(E)	17	#7	15'-5"	—
t1(E)	25	#11	21'-5"	└
t2(E)	10	#4	15'-5"	—
v1(E)	36	#10	26'-6"	C
w(E)	17	#7	15'-5"	—
w1(E)	20	#11	21'-5"	└
w2(E)	10	#4	15'-5"	—
Concrete Sealer			Sq. Ft.	696
Structure Excavation			Cu. Yd.	87
Concrete Structures			Cu. Yd.	72.7
Reinforcement Bars, Epoxy Coated			Pound	13,350
Furnishing Steel Piles HP14X89			Foot	600
Driving Piles			Foot	600
Test Pile Steel HP14X89			Each	1
Pile Shoes			Each	16

PIER 2 - SOUTH COLUMN BILL OF MATERIAL

Bar	No.	Size	Length	Shape
n(E)	36	#10	12'-4"	J
s(E)	44	#4	18'-9"	□
s1(E)	44	#4	4'-10"	└
s2(E)	22	#4	8'-10"	└
t(E)	17	#7	15'-5"	—
t1(E)	25	#11	21'-5"	└
t2(E)	10	#4	15'-5"	—
v2(E)	36	#10	23'-10"	C
w(E)	17	#7	15'-5"	—
w1(E)	20	#11	21'-5"	└
w2(E)	10	#4	15'-5"	—
Concrete Sealer			Sq. Ft.	630
Structure Excavation			Cu. Yd.	131
Concrete Structures			Cu. Yd.	69.0
Reinforcement Bars, Epoxy Coated			Pound	12,830
Furnishing Steel Piles HP14X89			Foot	600
Driving Piles			Foot	600
Test Pile Steel HP14X89			Each	1
Pile Shoes			Each	16



FOOTING PLAN

(Top Reinforcement Layer)

PIER 2 - NORTH COLUMN BILL OF MATERIAL

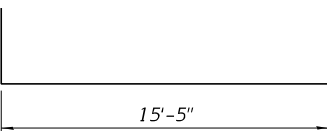
Bar	No.	Size	Length	Shape
n(E)	36	#10	12'-4"	J
s(E)	48	#4	18'-9"	□
s1(E)	48	#4	4'-10"	└
s2(E)	24	#4	8'-10"	└
t(E)	17	#7	15'-5"	—
t1(E)	25	#11	21'-5"	└
t2(E)	10	#4	15'-5"	—
v3(E)	36	#10	25'-1"	C
w(E)	17	#7	15'-5"	—
w1(E)	20	#11	21'-5"	└
w2(E)	10	#4	15'-5"	—
Concrete Sealer			Sq. Ft.	662
Structure Excavation			Cu. Yd.	102
Concrete Structures			Cu. Yd.	70.8
Reinforcement Bars, Epoxy Coated			Pound	13,100
Furnishing Steel Piles HP14X89			Foot	675
Driving Piles			Foot	675
Test Pile Steel HP14X89			Each	1
Pile Shoes			Each	16

PILE DATA - PIER 1 S. COLUMN

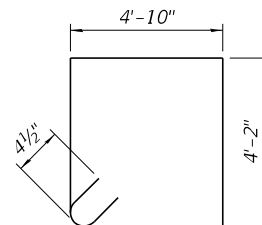
Type: HP 14x89 with pile shoes
Nominal Required Bearing: 705 kips
Factored Resistance Available: 388 kips
Est. Length: 40 feet
No. Production Piles: 15
No. Test Piles: 1

PILE DATA - PIER 2 S. COLUMN

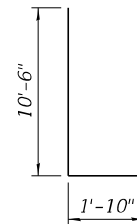
Type: HP 14x89 with pile shoes
Nominal Required Bearing: 705 kips
Factored Resistance Available: 388 kips
Est. Length: 40 feet
No. Production Piles: 15
No. Test Piles: 1



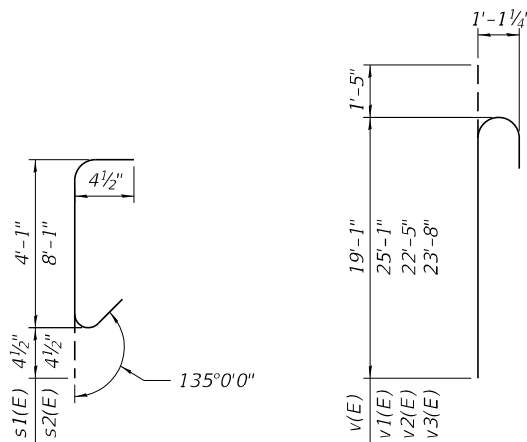
BARS t1(E) & w1(E)



BAR s(E)



BAR n(E)



BAR s1(E) & s2(E)

BARS v(E), v1(E),
v2(E) & v3(E)

PILE DATA - PIER 1 N. COLUMN

Type: HP 14x89 with pile shoes
Nominal Required Bearing: 705 kips
Factored Resistance Available: 388 kips
Est. Length: 40 feet
No. Production Piles: 15
No. Test Piles: 1

PILE DATA - PIER 2 N. COLUMN

Type: HP 14x89 with pile shoes
Nominal Required Bearing: 705 kips
Factored Resistance Available: 388 kips
Est. Length: 40 feet
No. Production Piles: 15
No. Test Piles: 1

NOTES:

1. For details of piles, see sheet 57 of 69.



Alfred Benesch & Company
35 W Wacker Drive, Suite 2300
Chicago, Illinois 60601
312.465.4050 Job No. 10800

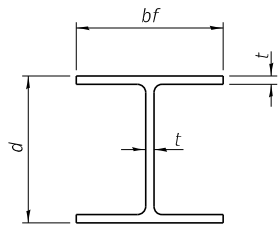
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PLOT SCALE =	CHECKED - RW	REVISED -
PLOT DATE =	DRAWN - KMS	REVISED -
	CHECKED - RW	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER DETAILS (2 OF 2)
STRUCTURE NO. 101-0215

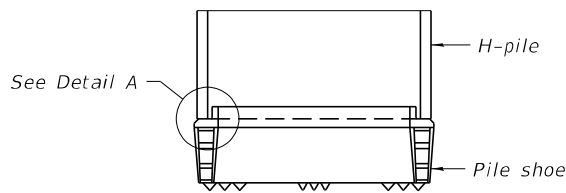
SHEET 56 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	823
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

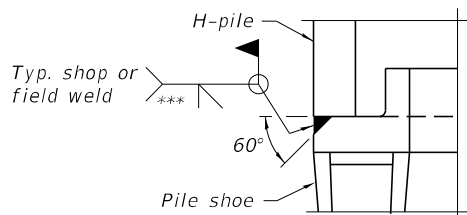


STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



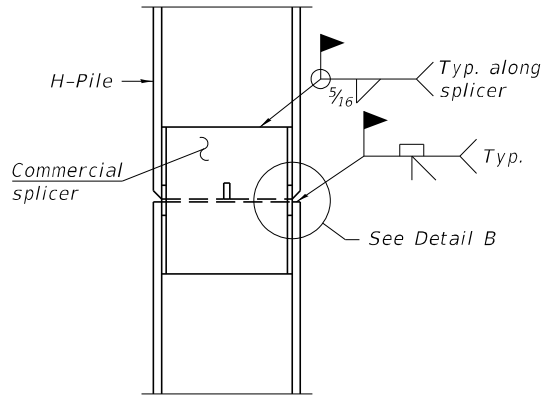
ELEVATION



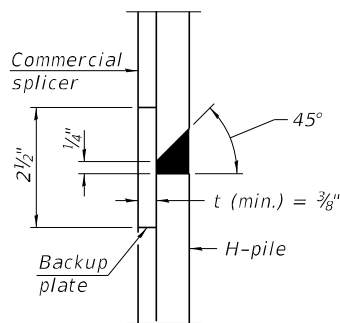
DETAIL A

SHOE ATTACHMENT

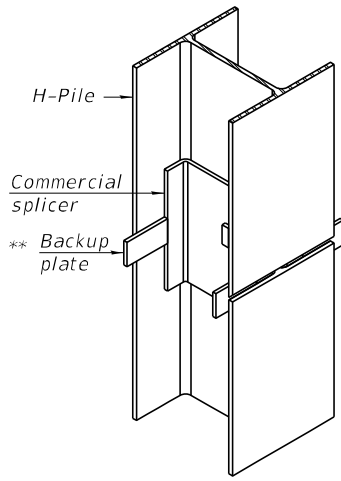
Note:
The steel H-piles shall be according to
AASHTO M270 Grade 50.



ELEVATION

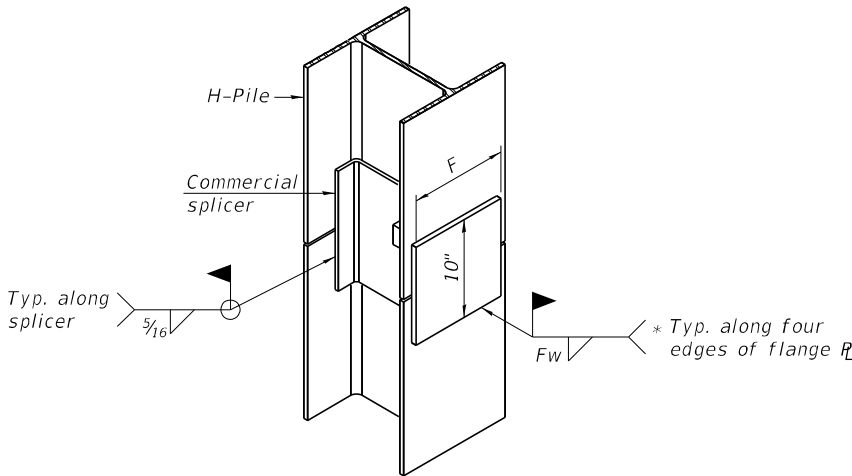


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



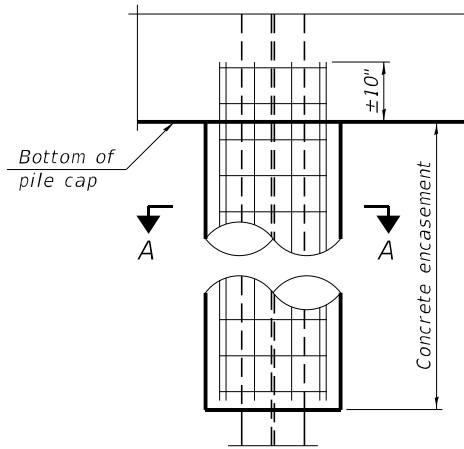
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

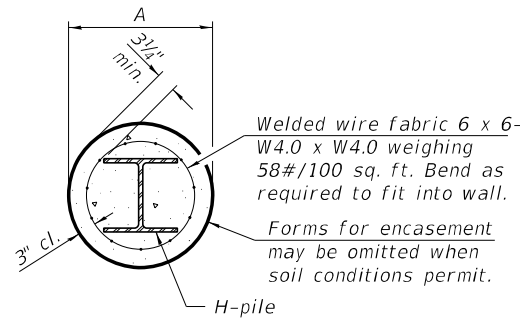
* Interrupt welds 1/4" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).

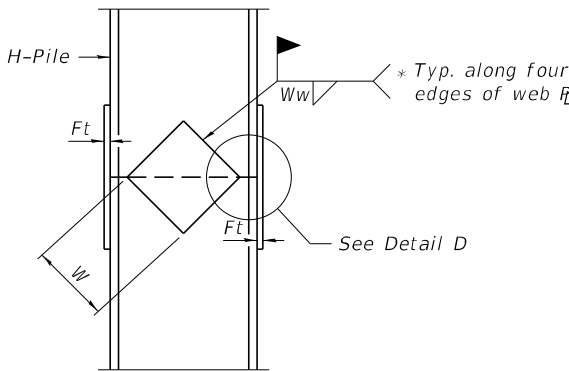


ELEVATION

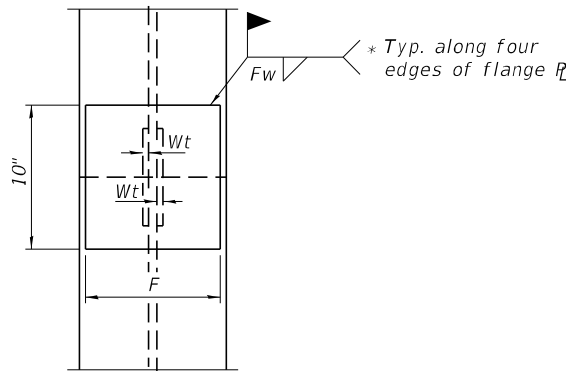


SECTION A-A

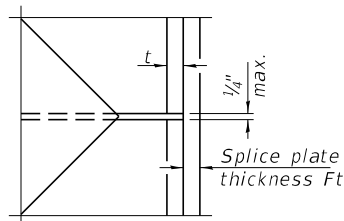
INDIVIDUAL PILE
CONCRETE ENCASEMENT
(when specified)



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

F-HP

1-1-2020



Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312.465.4150 Job No. 10800

DESIGNED - EAO

CHECKED - JHG

PLOT SCALE -

PLOT DATE -

DESIGNED - EAO

CHECKED - JHG

DRAWN - KMS

CHECKED - JHG

REVISED -

REVISED -

REVISED -

REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 101-0215

SHEET 57 OF 69 SHEETS

F.A.I.
RTE.

SECTION

COUNTY

TOTAL
SHEETS

SHEET
NO.

39

(201-3)K

WINNEBAGO

2192

824

CONTRACT NO. 64B13

ILLINOIS FED. AID PROJECT

MODEL: sMODELNAME5
FILE NAME: c:\pword\in\benesch projects\projects\dms65241\0264C62-1010215-sh-hpdlis.dgn
3/30/2023 11:22:17 AM

Page 1 of 2

Date 8/19/20

ROUTE	DESCRIPTION	LOGGED BY
I-39/Bypass 20	P92-111-06 - Proposed retaining wall north and south of US Byp 20, 1.1 mi E of Alpine Rd.	W. Garza

SECTION (201-3)K & (4-1,5)R **LOCATION** Cherry Valley, NE9, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Proposed Ramp BD Latitude 35° 24' 39.76" Northing 42.2206
 Station _____ Longitude -97° 57' 52.73" Easting -89.0064
 _____ _____ Surface Water Flow _____

BORING NO.	B-1i
Station	143+50
Offset	11.00ft Rt
Ground Surface Elev.	820.98

DEPTH (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST (%)	Surface Water Elev.		DEPTH (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST (%)
				Stream Bed Elev.					
				Groundwater Elev.:					
				First Encounter	794.0	ft			
				Upon Completion	Dry	ft			
				After	Hrs.	ft			
				MEDIUM light gray SILTY LOAM (continued)	799.98		2 5	0.8 B	21.0
				STIFF light gray SILTY LOAM			1 4 6	1.1 B	21.0
					796.48				
-5	6 8 10	4.3 P	17.0	MEDIUM tan FINE SAND		-25	3 10		
				5' Run	794.98		14		
	4 4 7	1.4 P	20.0						
-10	2 3 6	0.8 B	23.0	DENSE tan WELL-CEMENTED SAND		-30	4 11 30		
				5' Run					
	2 4 6	2.5 B	23.0						
-15	2 4 6	1.7 B	23.0	HARD tan SANDY LOAM TILL		-35	13 18 17	4.2 S	9.0
				5' Run	784.98				
	0 2 3	0.9 B	24.0						
-20	0			No Recovery		-40	4		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Page 2 of 2

Date 8/19/20

ROUTE	I-39/Bypass 20	DESCRIPTION	P92-111-06 - Proposed retaining wall north and south of US Byp 20, 1.1 mi E of Alpine Rd.	LOGGED BY	W. Garza
-------	----------------	-------------	---	-----------	----------

SECTION (201-3)K & (4-1,5)R **LOCATION** Cherry Valley, NE9, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

		Latitude	<u>36° 24' 39.76"</u>	Northing	<u>42.2206</u>
STRUCT. NO.	<u>Proposed Ramp BD</u>	Longitude	<u>-97° 57' 52.73"</u>	Easting	<u>-89.0064</u>
Station	<u></u>				

BORING NO.	B-1i
Station	143+50
Offset	11.00ft Rt
Ground Surface Elev.	820.98

D E P T H	B L O W S	U C S	M O I S T	
(ft)	(/6")	Qu	(tsf)	(%)
	4			
	5			
-45				
-50				
-55				
-60				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Page 1 of 1

Date 8/18/20

ROUTE	I-39/Bypass 20	DESCRIPTION	P92-111-06 - Proposed retaining wall north and south of US Byp 20, 1.1 mi E of Alpine Rd.	LOGGED BY	W. Garza
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SECTION (201-3)K & (4-1,5)R **LOCATION** Cherry Valley, NE9, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO.	Proposed Ramp BD	Latitude	36° 24' 39.76"	Northing	42.2206
		Longitude	-97° 57' 52.73"	Easting	-89.0066
Station		Surface Water Elev.			

BORING NO.	B-2i
Station	144+00
Offset	11.00ft Rt
Ground Surface Elev.	818.65

DEPTH (ft)	BLOW S (/ft)	UCS Qu (tsf)	MOIST (%)	Surface Water Elev.		DEPTH (ft)	BLOW S (/ft)	UCS Qu (tsf)	MOIST (%)
				Stream Bed Elev.					
				Groundwater Elev.:					
				First Encounter	796.7 ft ▼				
				Upon Completion	Dry ft				
				After Hrs.	ft				
5		Dry	15.0	MEDIUM/LOOSE tan DIRTY SAND with MEDIUM GRAVEL (continued)			2.5	0.5 P	13.0
					796.65 ▼		6		
5	4		23.0	VERY STIFF tan SANDY LOAM TILL			12	3.3 B	10.0
	5	2.0 P			795.15		14		
5	2		22.0	VERY STIFF tan SANDY LOAM TILL			5		
	3	1.0 B					8	3.1 B	11.0
	4			5' Run	792.65		13		
5	3	1.4 B	22.0						
	5								
5	3	2.7 B	25.0	STIFF gray SANDY LOAM TILL			2		
	6			5' Run	787.65		3	1.1 B	13.0
	5						5		
5	2		22.0						
	4	1.3 B							
	6								
5	1	0.6 B	24.0	MEDIUM gray SANDY LOAM TILL			1		
	2						3	0.5 P	10.0
	3						6		
5			11.0	VERY DENSE tan WEATHERED LIMESTONE			100 for 1"		
	1				781.65				
	2								
	3								
5	1			End of Boring					
					779.15				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



USER NAME =	DESIGNED - MFH
	CHECKED - EAO
PLOT SCALE =	DRAWN - AJB
PLOT DATE =	CHECKED - EAO

REVISED	-
REVISED	-
REVISED	-
REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SOIL BORING LOGS (1 OF 12)
STRUCTURE NO. 101-0215

SHEET 58 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	825
		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		

ILLINOIS	FED. AID PROJECT
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3/30/2023 11:22:22 AM

Page 1 of 1

Date 2/25/16

ROUTE	FAI 39 & FAP 301	DESCRIPTION	LOGGED BY
		P92-111-06 Proposed I-39 SB Ramp Bridge W. 600'	W. Garza

SECTION (201-3)K & 4-1.5K LOCATION SEC. TWP. RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45

STRUCT. NO. _____ Station _____

Latitude 42° 13' 13.97" Northing 2,025,028.9376
 Longitude -89° 00' 24.47" Easting 2,610,751.2024

BORING NO. B-3i
Station 144+50
Offset 11.00ft Rt
Ground Surface Elev. 818.40

D E P T H	B L O W S	U C S QU	M O I S T
(ft)	(/6")	(tsf)	(%)

Surface Water Elev. _____	ft	D E P T H	B L O W S	U C S	M O I S T	
Stream Bed Elev. _____	ft					
Groundwater Elev.:						
First Encounter _____	798.9 ft 					
Upon Completion _____	795.4 ft 					
After _____	Hrs. _____	ft	(ft)	(/6")	(tsf)	(%)

STIFF brown SILTY CLAY LOAM						STIFF tan SANDY LOAM TILL <i>(continued)</i>					
				1.0 P	20.0					9 S	12.0
						797.40				19	
STIFF light brown SILTY CLAY LOAM	818.40	4				No Recovery				1	
		4		1.4 B	24.0					7	
	814.90	6								12	
						794.90					
MEDIUM light brown SILTY LOAM		-5	1			STIFF tan SANDY LOAM TILL with CLAY lens				8	
		3		0.6 P	24.0					17	1.0 S 11.0
	812.40	3								18	
						791.90					
STIFF light gray SILTY CLAY			2			VERY DENSE tan well-cemented SANDY GRAVEL				17	
			3	1.3 B	30.0					100/9"	
	809.90		4								
						789.90					
STIFF dark brown SILTY CLAY LOAM		-10	3			VERY DENSE tan well-cemented SANDY GRAVEL				100/10"	
			3	1.3 B	27.0						
	807.40		6								
						786.90					
MEDIUM gray SILTY CLAY			1			HARD gray SANDY LOAM TILL				14	
			2	0.8 B	24.0					21	4.5 P 8.0
			4							24	
	804.40					784.90					
VERY SOFT tan SANDY LOAM TILL with GRAVEL		-15	1			VERY STIFF gray SANDY LOAM TILL with SAND lens				6	
			2	0.2 P	13.0					17	2.3 P 8.0
	802.40		4							20	
						781.90					
SOFT tan SANDY LOAM TILL with GRAVEL			1			VERY DENSE light gray LIMESTONE Auger Refusal @ 37.5'				100/1"	
			1	0.3 P	19.0						
	799.90		10			End of Boring					
STIFF tan SANDY LOAM TILL											
			4								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Page 1 of 1Date 5/3/16

ROUTE	FAI 39 & FAP 301	DESCRIPTION	P92-111-06 Proposed I-39 SB Ramp Bridge W. 600'	LOGGED BY	W. Garza
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SECTION (201-3)K & 4-1.5)K LOCATION , SEC. , TWP. , RNG.

COUNTY Winnebago DRILLING METHOD Shelby HAMMER TYPE Shelby

STRUCT. NO. _____ Latitude _____ Northing _____
 Station _____ Longitude _____ Easting _____

BORING NO. B3i Shelby
Station 144+50
Offset 11.00ft Rt
Ground Surface Elev. 818.40

D	B	U	M
E	L	C	C
P	O	S	I
T	W		S
H	S	Qu	T
ft	(/6")	(tsf)	(%)

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

30" Recovery			
17" Recovery	815.90		
23" Recovery	813.40	-5	
30" Recovery	810.90		
24" Recovery	808.40	-10	
26" Recovery, moist	805.90		
26" Recovery	803.40	-15	
Pushed 9", Rec. 9" hit big gravel End of Boring	800.90		
	798.40	-20	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



Page 1 of 1

Date 8/27/20

ROUTE	L39/Bunass 20	DESCRIPTION	P92-111-06 - Proposed retaining wall north and south of US Rtn 20, 1.1 mi E of Alpine Rd	LOGGED BY	W. Garza
-------	---------------	-------------	--	-----------	----------

SECTION (201-3)K & (4-1.5)R LOCATION Cherry Valley NE9 SEC. TWP. 43N RNG. 2E

COUNTY	Winnebago	DRILLING METHOD	Hollow Stem Auger	HAMMER TYPE	CME-45 Automatic
--------	-----------	-----------------	-------------------	-------------	------------------

STRUCT. NO.	Proposed Ramp BD	Latitude	36° 24' 39.76"	Northing	42.2204
		Longitude	-97° 57' 52.73"	Easting	-89.0068

BORING NO.	B-4i
Station	144+65
Offset	24.00ft Lt
Ground Surface Elev.	817.30

D	B	U
E	L	C
P	O	S
T	W	
H	S	Qu
(ft)	(/5")	(tsf)

M O I S T (%)	Surface Water Elev. _____ ft	D	B	U	M
	Stream Bed Elev. _____ ft	E	L	C	O
	Groundwater Elev.:	P	O	S	I
	First Encounter _____ None ft	T	W		S
	Upon Completion _____ Dry ft	H	S	Qu	T
	After Hrs. _____ ft	(ft)	(/6")	(tsf)	(%)

Soil Description	Depth (ft)	Moisture (%)	Specific Gravity (G)	Unit Weight (pcf)	Soil Description	Depth (ft)	Moisture (%)	Specific Gravity (G)	Unit Weight (pcf)
VERY STIFF brown SILTY CLAY LOAM	2.0	23.0			VERY STIFF tan SANDY LOAM TILL	796.30	6.9	3.0	11.0
STIFF brown SILTY CLAY LOAM	815.30				5' Run (continued)				
	813.80	1.3	13.0						
MEDIUM tan SILTY LOAM	811.30	0.6	23.0		HARD tan WELL-CEMENTED SANDY LOAM TILL	791.30	10.17	4.5	8.0
STIFF tan SILTY LOAM	808.80	1.9	22.0		5' Run				
VERY STIFF brown SILTY CLAY	806.30	2.3	25.0		STIFF gray SANDY LOAM TILL		8.10	1.7	9.0
MEDIUM gray SILTY CLAY LOAM	802.80	0.8	24.0		5' Run				
LOOSE tan DIRTY SAND AND GRAVEL			19.0		VERY DENSE gray WEATHERED LIMESTONE	782.80	100		
5' Run	797.80				End of Boring				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



USER NAME	=	DESIGNED	-	MFH	REVISED	-
		CHECKED	-	EOA	REVISED	-
PLOT SCALE	=	DRAWN	-	AJB	REVISED	-
PLOT DATE	=	CHECKED	-	EOA	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SOIL BORING LOGS (2 OF 12)
STRUCTURE NO. 101-0215

SHEET 59 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	826
		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		

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MODEL: $MODELNAME$
FILE NAME: c:\pwwordir\benesch_projects\projects\dms65241\D264C62-1010215-shl-boring2.dgn
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3/30/2023 11:22:29 AM

Page 1 of 1Date 8/27/20

SECTION (201-3)K & (4-1,5)R **LOCATION** Cherry Valley, NE9, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

BORING NO.	B-5iST
Station	144+25
Offset	43.00ft Lt
Ground Surface Elev.	817.65

Northing and Easting were calculated using the ILHP-WF coordinate system

BBS, from 137 (Rev. 8-99)

Page 1 of 1Date 9/16/20

SECTION (201-3)K & (4-1,5)R **LOCATION** Cherry Valley, NE9, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Shelby Tubes HAMMER TYPE CME-45 Automatic

BORING NO. B-5iSta
Station 144+25
Offset 43.00ft Lt
Ground Surface Elev. 817.65

Northing and Easting were calculated using the ILHP-WF coordinate system

BBS, from 137 (Rev. 8-99)

Page 1 of 2Date 3/9/16

SECTION (201-3)K & 4-1.5)K LOCATION SEC. TWP. RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45

BORING NO. B-6i
Station 143+75
Offset 43.00ft Lt
Ground Surface Elev. 820.40

Dorthing and Easting were calculated using the II HP-WF coordinate system.

BS, from 137 (Rev. 8-99)



**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SHEET 60 OF 69 SHEETS

WINNEBAGO	2192
CONTRACT NO.	

ILLINOIS	FED. AID PROJECT
----------	------------------

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MODEL: $MODELNAME$
FILE NAME: c:\pwwordin\benesch_projects\projects\dms65241\D264C62-1010215-sht-boring3.dgn
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Illinois Department
of Transportation
Division of Highways
DOT

ROCK CORE LOG

Page 1 of 1

Date 2/28/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Proposed I-39 SB Ramp Bridge W. 600' LOGGED BY W. Garza

SECTION (201-3)K & 4-1.5)K LOCATION SEC. TWP. RNG.

COUNTY Winnebago CORING METHOD

CORING BARREL TYPE & SIZE

STRUCT. NO. Core Diameter 2 in
Station Top of Rock Elev. 786.30 ft
Begin Core Elev. 781.80 ft

BORING NO. B-9i Latitude 42° 13' 13.90"
Station 146+05 Longitude -89° 00' 26.45"
Offset 60.00 ft RL Northing 2,025,019.6265
Ground Surface Elev. 817.30 ft Easting 2,610,602.5946

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
781.80	1	100	0	1.4	
Dolomite: buff-white, fractured in 1/2" to 3" segments, chalky, crumbly, pitted and pocked, iron stains on fracture faces. No testable segments.					
776.80	-2	100	11	1.2	159.0
Dolomite: as above, laminated and slightly less fractured.					
771.80	3	100	49	1	184.0
Dolomite: as above, though thick bedded, dense and tenacious.					
766.80	4	100	19	1.2	335.0
Dolomite: as above, with a well detectable fracture zone visible from 765.0 to 764.3.					
761.80					

Core pictures of the cores

Cores will be stored for examination until

The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
DOT

SOIL BORING LOG

Page 1 of 2

Date 3/18/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Proposed I-39 SB Ramp Bridge W. 600' LOGGED BY W. Garza

SECTION (201-3)K & 4-1.5)K LOCATION SEC. TWP. RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45

DEPTH (ft)	BLOW COUNT (blows/ft)	UCS Qu (tsf)	MOISTURE (%)	Surface Water Elev. Stream Bed Elev. ft	Groundwater Elev.: First Encounter ft Upon Completion ft After Hrs. ft
820.30	6	1.3	14.0		
818.80	5	3.6	13.0		
816.30	8	1.6	15.0		
813.80	5	2.6	8.0		
811.30	6	1.6	16.0		
808.80	3	2.1	23.0		
804.80	8				
801.80					
799.80					
794.80					
788.80					
786.30					
781.80					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
DOT

SOIL BORING LOG

Page 2 of 2

Date 3/18/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Proposed I-39 SB Ramp Bridge W. 600' LOGGED BY W. Garza

SECTION (201-3)K & 4-1.5)K LOCATION SEC. TWP. RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45

DEPTH (ft)	BLOW COUNT (blows/ft)	UCS Qu (tsf)	MOISTURE (%)	Surface Water Elev. Stream Bed Elev. ft	Groundwater Elev.: First Encounter ft Upon Completion ft After Hrs. ft
780.30	9	1.5	12.0		
772.30	13				
766.30	16				
761.80					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (6 OF 12)
STRUCTURE NO. 101-0215

SHEET 63 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	830
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				



Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312.465.4150 Job No. 10800

USER NAME =	DESIGNED - MFH	REVISED -
CHECKED - EAO	REVIS	
PLOT SCALE =	DRAWN - AJB	REVISED -
PLOT DATE =	CHECKED - EAO	REVISED -

MODEL: sMODELNAME5
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3/30/2023 11:23:01 AM



Illinois Department
of Transportation
Division of Highways
DOT

ROCK CORE LOG

Page 1 of 1

Date 3/18/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Proposed I-39 SB Ramp Bridge W. 600' LOGGED BY W. Garza

SECTION (201-3)K & 4-1.5)K LOCATION SEC. TWP. RNG.

COUNTY Winnebago CORING METHOD

CORING BARREL TYPE & SIZE

STRUCT. NO. Core Diameter 2 in
Station Top of Rock Elev. 772.80 ft
Begin Core Elev. 772.30 ft

BORING NO. B-10i Latitude
Station 148+08 Longitude
Offset 0.00 ft BL Northing
Ground Surface Elev. 822.80 ft Easting

DEPTH (ft)	DEPTH (ft)	RECOVERY (%)	RECOVERY (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Dolomite: buff-white, micritic, fractured, pitted and pocked with minor laminations. No testable segments.	772.30	1	100	0	1.6
Dolomite: as above, though less fractured and more tenacious throughout.	767.30	2	100	35	1.8
Dolomite: as above.	762.30	3	100	40	2
Dolomite: as above, though less pocked.	757.30	4	100	61	1.6
	752.30				

Notes: 1. The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

2. Cores will be stored for examination until

BBS, form 138 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
DOT

SOIL BORING LOG

Page 1 of 1

Date 4/25/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Proposed I-39 SB Bridge, S. 200' of US 20 Bypass LOGGED BY W. Garza

SECTION (201-3)K & 4-1.5)K LOCATION SEC. TWP. RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45

DEPTH (ft)	DEPTH (ft)	RECOVERY (%)	RECOVERY (%)	CORE TIME (min/ft)	STRENGTH (tsf)
MEDIUM brown SILTY CLAY LOAM	809.70	2	100	0.5	23.0
MEDIUM light brown SILTY CLAY LOAM	808.20	3	100	0.7	24.0
VERY SOFT tan SILTY LOAM	805.20	0	100	0.2	21.0
MEDIUM tan clean moist medium SAND	802.70	5	100	7	
VERY SOFT tan SANDY LOAM	800.20	0	100	0.2	12.0
MEDIUM tan clean medium SAND	798.20	1	100	3	
MEDIUM tan SANDY GRAVEL	795.70	10	100	12	
MEDIUM tan clean medium coarse SAND	793.20	5	100	9	
	790.20	12	100		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
DOT

SOIL BORING LOG

Page 1 of 1

Date 4/26/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Proposed I-39 SB Bridge, S. 200' of US 20 Bypass LOGGED BY W. Garza

SECTION (201-3)K & 4-1.5)K LOCATION SEC. TWP. RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45

DEPTH (ft)	DEPTH (ft)	RECOVERY (%)	RECOVERY (%)	CORE TIME (min/ft)	STRENGTH (tsf)
VERY STIFF light brown SILTY LOAM	810.30	3	100	2.3	18.0
VERY STIFF gray SANDY LOAM with GRAVEL	806.30	4	100	3.1	18.0
VERY SOFT gray SILTY LOAM	803.80	2	100	0.2	30.0
SOFT gray SILTY LOAM	800.80	1	100	0.3	29.0
LOOSE gray fine SAND	798.80	1	100	3	
VERY LOOSE tan very fine SAND	796.30	0	100	1	
LOOSE tan dirty SANDY GRAVEL with LIMESTONE fragments	793.80	6	100	2	
VERY SOFT tan SANDY LOAM	791.30	0	100		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (7 OF 12)
STRUCTURE NO. 101-0215

SHEET 64 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	831
CONTRACT NO. 64B13				

ILLINOIS FED. AID PROJECT



Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312.465.4150 Job No. 10800

USER NAME =	DESIGNED - MFH	REVISED -
CHECKED - EAO	REVISED -	
PLOT SCALE =	DRAWN - AJB	REVISED -
PLOT DATE =	CHECKED - EAO	REVISED -

MODEL: sMODELNAME5
FILE NAME: c:\pwwork\benesch_projects\projects\dms65241\010215-sh-boring7.dgn

3/30/2023 11:23:09 AM



Illinois Department
of Transportation
Division of Highways
DOT

SOIL BORING LOG

Page 1 of 1

Date 5/5/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Proposed I-39 SB Bridge, S. 200' of US 20 Bypass LOGGED BY W. Garza
SECTION (201-3)K & 4-1.5K LOCATION SEC. TWP. RNG.
COUNTY Winnebago DRILLING METHOD Shelby HAMMER TYPE Shelby

STRUCT. NO. Latitude Northing
Station Longitude Easting

BORING NO. B-12i Shelby
Station 149+50
Offset 42.00ft Lt
Ground Surface Elev. 812.30 ft

DEPTHS	UCS	MOIST	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After Hrs.
(ft)	(/6")	(tsf)	(%)	ft	ft	ft	ft	ft

22" Recovery								
609.80								
21" Recovery								
807.30	-5							
20" Recovery								
804.80								
27" Recovery								
802.30	-10							
30" Recovery								
799.80								
22" Recovery								
797.30	-15							
15" Wash								
End of Boring								
794.80								
End of Boring								
-20								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208)
BBS, from 137 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
DOT

SOIL BORING LOG

Page 1 of 1

Date 8/13/20

ROUTE I-39/Bypass 20 DESCRIPTION P92-111-06 - Proposed retaining wall north and south of US Byp 20, 1.1 mi E of Alpine Rd. LOGGED BY N. White
SECTION (201-3)K & (4-1.5)R LOCATION Cherry Valley, NE9, SEC. TWP. 43N, RNG. 2E
COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Latitude Northing
Station Longitude Easting

BORING NO. B-13i
Station 149+39
Offset 0.00ft CL
Ground Surface Elev. 819.18 ft

DEPTHS	UCS	MOIST	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After Hrs.
(ft)	(/6")	(tsf)	(%)	ft	ft	ft	ft	ft

MEDIUM brown SILTY CLAY LOAM								
817.18								
21" Recovery								
815.68								
20" Recovery								
813.18								
27" Recovery								
810.68								
30" Recovery								
808.18								
22" Recovery								
805.68								
15" Wash								
End of Boring								
803.18								
End of Boring								
800.68								
End of Boring								
-20								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208)
BBS, from 137 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
DOT

SOIL BORING LOG

Page 1 of 1

Date 8/13/20

ROUTE I-39/Bypass 20 DESCRIPTION P92-111-06 - Proposed retaining wall north and south of US Byp 20, 1.1 mi E of Alpine Rd. LOGGED BY W. Garza
SECTION (201-3)K & (4-1.5)R LOCATION Cherry Valley, NE9, SEC. TWP. 43N, RNG. 2E
COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Latitude Northing
Station Longitude Easting

BORING NO. B-14IST
Station 149+75
Offset 11.00ft Rt
Ground Surface Elev. 818.12 ft

DEPTHS	UCS	MOIST	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After Hrs.
(ft)	(/6")	(tsf)	(%)	ft	ft	ft	ft	ft

MEDIUM brown SILTY CLAY LOAM								
816.12								
21" Recovery								
814.62								
20" Recovery								
812.12								
27" Recovery								
809.62								
30" Recovery								
807.12								
22" Recovery								
804.62								
15" Wash								
End of Boring								
801.12								
End of Boring								
798.62								
End of Boring								
-20								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208)
BBS, from 137 (Rev. 8-99)

MODEL: sMODELNAME5
FILE NAME: c:\pwwork\benesch_projects\projects\dms65241\0215-sh-boring8.dgn



USER NAME =	DESIGNED - MFH	REVISED -
CHECKED - EAO	REVISED -	
PLOT SCALE =	DRAWN - AJB	REVISED -
PLOT DATE =	CHECKED - EAO	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (8 OF 12)
STRUCTURE NO. 101-0215

SHEET 65 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	832
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

Page 1 of 1Date 9/16/20

ROUTE	DESCRIPTION	LOGGED BY
I-39/Bypass 20	P92-111-06 - Proposed retaining wall north and south of US Byp 20, 1.1 mi E of Alpine Rd.	W. Garza

SECTION (201-3)K & (4-1,5)R **LOCATION** Cherry Valley, NE9, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Shelby Tubes HAMMER TYPE CME-45 Automatic

STRUCT. NO.	Proposed Ramp BD	Latitude	35° 24' 39.76"	Northing	42.2199
		Longitude	-97° 57' 52.73"	Easting	-89.0086
Station					

BORING NO. B-14iSTb
Station 149+75
Offset 11.00ft Rt
Ground Surface Elev. 818.12

D E P T H	B L O W S	U C S Qu	M O I S T
(ft)	((6"))	(tsf)	(%)

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

30" Push 27.5" Rec			
30" Push 30" Rec	815.62		
36" Push 24.0" Rec	813.12	-5	
Auger to 11.0'	810.12		
36" Push 29.0" Rec	807.12		
26" Push 26.0" Rec	804.12	-15	
End of Boring	801.12		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Page 1 of 1Date 4/27/16

ROUTE	FAI 39 & FAP 301	DESCRIPTION	LOGGED BY
		P92-111-06 Proposed I-39 SB Bridge, S. 200' of US 20 Bypass	W. Garza

SECTION (201-3)K & 4-1,5)K LOCATION , SEC. , TWP. , RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45'

STRUCT. NO. _____ Latitude _____ Northing _____
 Station _____ Longitude _____ Easting _____

BORING NO. B-15i
Station 150+24
Offset 7.00ft Rt
Ground Surface Elev. 811.70

D	B	U	M
E	L	C	C
P	O	S	I
T	W		S
H	S	Qu	T
(ft)	(/6")	(tsf)	(%)

Surface Water Elev.	_____ ft	D E P T H	B L O W S	U C S	M O I S T
Stream Bed Elev.	_____ ft				
Groundwater Elev.:					
First Encounter	<u>802.2</u> ft 				
Upon Completion	<u>792.2</u> ft 	(ft)	(6")	(tsf)	(%)
After _____ Hrs.	_____ ft				

No Recovery (SANDY LOAM TILL) (continued)				17	27
				799.20	
STIFF brown LOAM	809.70	3 4 4	1.8 P	14.0	
	808.20				
VERY SOFT light brown SANDY LOAM	-5	2 2 2	0.2 P	20.0	-25
	805.70				
STIFF light gray SILT		0 3 6	1.0 B	22.0	
	802.70				
MEDIUM gray medium SAND	-10	3 6 6			-30
	800.20				
MEDIUM tan SANDY LOAM		3 5 4	0.8 B	10.0	
	798.20				
VERY SOFT tan SANDY LOAM with SAND lens	-15	0 2 2	0.2 P	13.0	-35
	795.20				
HARD tan SANDY LOAM TILL		5 12 17	4.0 P	9.0	
	793.20				
No Recovery (SANDY LOAM TILL)	-20	17			-40

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Page 1 of 1Date 3/10/16

ROUTE	FAI 39 & FAP 301	DESCRIPTION	P92-111-06 Proposed I-39 SB Bridge, S. 200' of US 20 Bypass	LOGGED BY	W. Garza
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SECTION (201-3)K & 4-1,5)K LOCATION SEC. , TWP. , RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45

STRUCT. NO. _____ Latitude 42° 13' 11.24" Northing 2,024,744.8095
 Station _____ Longitude -89° 00' 31.49" Easting 2,610,227.3124

BORING NO. B-16i
Station 151+00
Offset 12.00ft Lt
Ground Surface Elev. 822.00

D	B	U
E	L	C
P	O	S
T	W	
H	S	Qu
ft	(ft)	(tsf)

MONIST (%)	Surface Water Elev.	_____ ft	DEPTH (ft) (/ft) (tsf) (%)	BLOS	UCS	MOIST
	Stream Bed Elev.	_____ ft				
	Groundwater Elev.:					
	First Encounter _____ 805.0 ft	▼				
	Upon Completion _____ 803.0 ft	▽				
After _____ Hrs.	_____ ft					

VERY SOFT brown LOAM				DENSE light gray SAND with medium GRAVEL (continued)		16
		0.2 P	19.0	801.00	24	
End of Boring						
VERY STIFF light brown LOAM with SAND lens	820.00	3 7 3	2.3 B	17.0		
	818.50					
STIFF tan SILTY LOAM/LOAM with medium GRAVEL	-5	3 3	1.8 B	16.0	-25	
	816.00					
VERY STIFF gray LOAM		3 10 15	3.9 S	15.0		
	813.50					
VERY STIFF tan/gray SILTY CLAY	-10	3 7 10	2.2 S	25.0	-30	
	811.00					
VERY STIFF tan SILTY CLAY		3 5 3	2.1 B	23.0		
	808.50					
MEDIUM tan SANDY LOAM with SAND lens	-15	2 5 3	0.8 B	16.0	-35	
	806.00					
SOFT tan SANDY LOAM	▼	3 1 4	0.4 P	14.0		
	803.00					
	-20	5			-40	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



Alfred Benesch & Company
35 W Wecker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME	=	DESIGNED	-	MFH	REVISED	-
		CHECKED	-	EOA	REVISED	-
PLOT SCALE	=	DRAWN	-	AJB	REVISED	-
PLOT DATE	=	CHECKED	-	EOA	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SOIL BORING LOGS (9 OF 12)
STRUCTURE NO. 101-0215

SHEET 66 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	833
		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		

ILLINOIS	FED. AID PROJEC
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Page 1 of 2

Date 3/14/06

ROUTE	FAI 39	DESCRIPTION	P42-075-05 I-39 @ Bypass 20 Soil Survey, south edge of Rockford, I-39 SB at US 20	LOGGED BY	W. Garza
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SECTION (201-3) K LOCATION , SEC. , TWP. , RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) **FIGURE 2**
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

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Page 2 of 2

Date 3/14/06

ROUTE	FAI 39	DESCRIPTION	LOGGED BY
		P92-075-05 I-39 @ Bypass 20 Soil Survey, south edge of Rockford, I-39 SB at US 20	W. Garza

SECTION (201-3) K LOCATION SEC. TWP. RNG.

COUNTY	Winnebago	DRILLING METHOD	Hollow Stem Auger	HAMMER TYPE	B-53 Diedrich Automatic
--------	-----------	-----------------	-------------------	-------------	-------------------------

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) **FIGURE 2**
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



Illinois Department of Transportation
Division of Highways

Page 1 of 2

Date 3/14/06

ROUTE	FAI 39	DESCRIPTION	LOGGED BY M. Jacoby
		P92-075-05 I-39 @ Bypass 20, Soil Survey, I-39 SB at US 20	

SECTION (201-3) K LOCATION , SEC. , TWP. , RNG.

COUNTY	Winnebago	DRILLING METHOD	Hollow Stem Auger	HAMMER TYPE	CME-45 Automatic
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The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) **FIGURE 2**
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



benesch
 Alfred Benesch & Company
 35 W Wecker Drive, Suite 3300
 Chicago, Illinois 60601
 312-565-0450 Job No. 10800

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SOIL BORING LOGS (10 OF 12)
STRUCTURE NO. 101-0215

SHEET 67 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	834
		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		

ILLINOIS	FED. AID PROJECT
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Page 2 of 2

Date 3/14/06

ROUTE FAI 39 DESCRIPTION SB at US 20 LOGGED BY M. Jacoby

SECTION (201-3) K LOCATION , SEC. , TWP. , RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) **FIGURE 2**
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

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MODEL: sMODELNAME$
FILE NAME: c:\pwwordir\benesch_projects\projects\dms6524\1D264C62-1010215-shl-boring11.dgn
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Page 1 of 2

Date 4/17/06

ROUTE	FAI 39	DESCRIPTION	LOGGED BY
		SB at US 20	W. Garza

SECTION _____ (201-3) K LOCATION , SEC. , TWP. , RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) **FIGURE 2**
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



Illinois Department of Transportation
Division of Highways
IDOT

Page 2 of 2

Date 4/17/06

ROUTE	FAI 39	DESCRIPTION	LOGGED BY
		SB at US 20	W. Garza

SECTION (201-3) K LOCATION . SEC. . TWP. . RNG.

COUNTY	Winnebago	DRILLING METHOD	Hollow Stem Auger	HAMMER TYPE B-53 Diedrich Automatic
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The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) **FIGURE 2**
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

 **benesch**
Alfred Benesch & Company
35 W Wecker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME	=	DESIGNED	-	MFH	REVISED	-
		CHECKED	-	EAO	REVISED	-
PLOT SCALE	=	DRAWN	-	AJB	REVISED	-
PLOT DATE	=	CHECKED	-	EAO	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SOIL BORING LOGS (11 OF 12)
STRUCTURE NO. 101-0215

SHEET 68 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	835
		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		



Page 1 of 2

Date 4/18/06

ROUTE	FAI 39	DESCRIPTION	SB at US 20 EB	LOGGED BY	W. Garza
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SECTION (201-3) K LOCATION SEC. TWP. RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) **FIGURE 2**
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

MODEL: sMODELNAME\$
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Page 2 of 2

Date 4/18/06

ROUTE	FAI 39	DESCRIPTION	SB at US 20 EB	LOGGED BY	W. Garza
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SECTION (201-3) K LOCATION , SEC. , TWP. , RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Peritrometer) **FIGURE 2**
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

 **benesch**
Alfred Benesch & Company
35 W Wecker Drive, Suite 3300
Chicago, Illinois 60601
312-565-0450 Job No. 10800

USER NAME =	DESIGNED - MFH	REVISED -
	CHECKED - EAO	REVISED -
PLOT SCALE =	DRAWN - AJB	REVISED -
PLOT DATE =	CHECKED - EAO	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

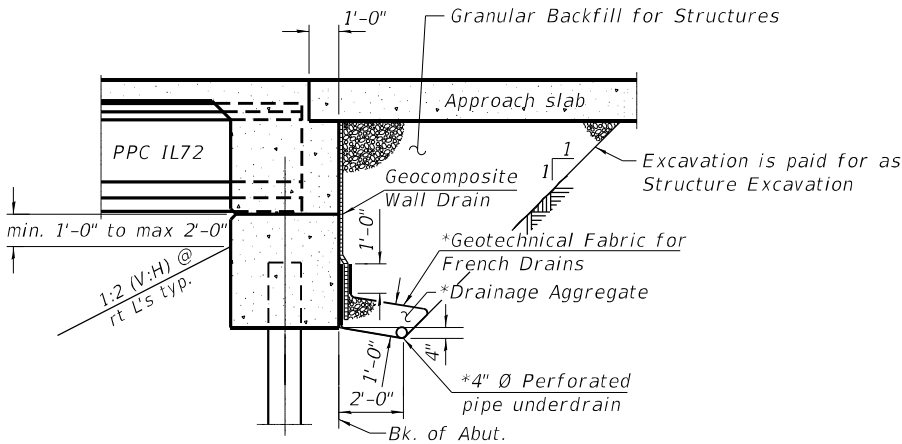
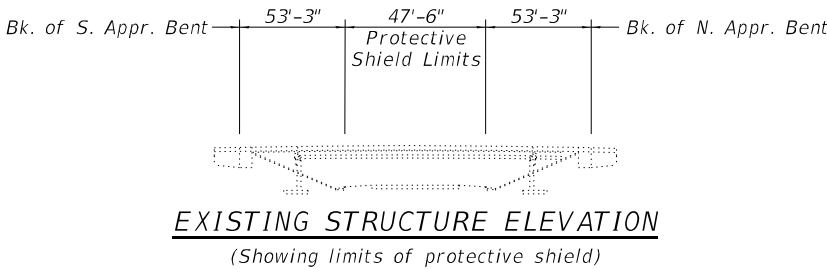
SOIL BORING LOGS (12 OF 12)
STRUCTURE NO. 101-0215

SHEET 69 OF 69 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	836
		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. It shall be the contractor's responsibility to verify the location of all utilities prior to starting construction.
3. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
4. The existing structure (SN 101-0140) carrying I-39 N.B.L. (Ramp DB) over Linden Road is located east of the proposed structure and shall be removed per Article 501.04 of the Standard Specifications. See Staging Plans in the Rdwy Plans for timing of removal and related staging information. Please reference the "Additional Information" provided to bidders for existing structure plans.



* Include in the cost of Pipe Underdrains for Structures.
(See Standard Specification)

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

INDEX OF SHEETS

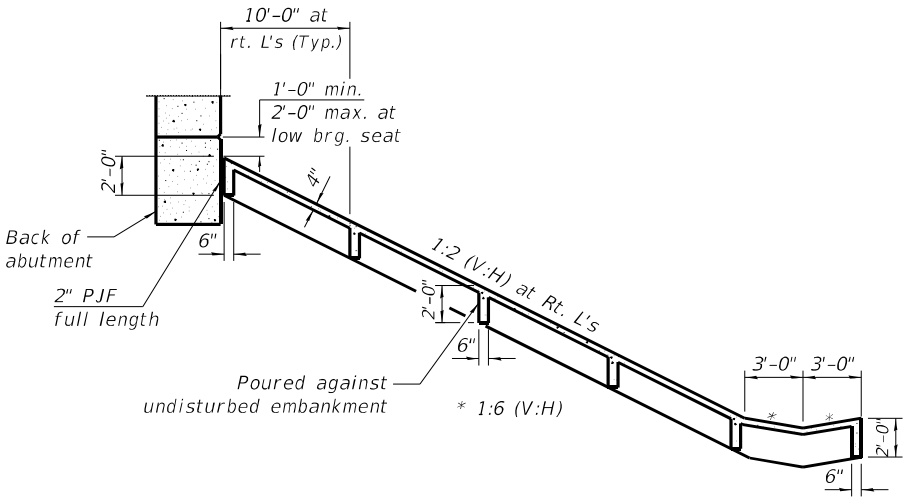
- 1 General Plan & Elevation
- 2 General Notes & Bill of Material
- 3 Substructure Layout Plan
- 4 Deck Elevation 1
- 5 Deck Elevation 2
- 6 Top Of South Approach Slab Elevations
- 7 Top Of North Approach Slab Elevations
- 8 Superstructure - Deck
- 9 Superstructure Details
- 10 Diaphragm Integral Abutment
- 11 South Approach Slab
- 12 North Approach Slab
- 13 Approach Slab Details
- 14 Framing Plan
- 15 IL 72 Beam
- 16 Beam Details
- 17 South Abutment Plan & Elevation
- 18 North Abutment Plan & Elevation
- 19 Abutment Details
- 20 HP Pile Details
- 21 Concrete Parapet Slipforming Option
- 22 Soil Boring and Rock Core 1
- 23 Soil Boring and Rock Core 2
- 24 Soil Boring and Rock Core 3
- 25 Soil Boring and Rock Core 4
- 26 Soil Boring and Rock Core 5

TOTAL BILL OF MATERIAL

DESCRIPTION	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures No. 2	Each	0.5	0.5	1
Protective Shield	Sq. Yd.	148	—	148
Structure Excavation	Cu. Yd.	—	700	700
Concrete Structures	Cu. Yd.	—	143.4	143.4
Concrete Superstructure	Cu. Yd.	345.3	—	345.3
Protective Coat	Sq. Yd.	1,551	—	1,551
Concrete Superstructure (Approach Slab)	Cu. Yd.	158.2	—	158.2
Furnishing And Erecting Precast Prestressed Concrete Beams, IL72	Foot	1,265	—	1,265
Reinforcement Bars, Epoxy Coated	Pound	136,590	22,600	159,190
Slope Wall 4 Inch	Sq. Yd.	—	787	787
Furnishing Steel Piles HP14x102	Foot	—	403	403
Driving Piles	Foot	—	403	403
Test Pile Steel HP14x102	Each	—	2	2
Pile Shoes	Each	—	16	16
Name Plates	Each	—	1	1
Granular Backfill For Structures	Cu. Yd.	—	457	457
Geocomposite Wall Drain	Sq. Yd.	—	156	156
Pipe Underdrains For Structures 4"	Foot	—	169	169
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	652	—	652
Diamond Grinding (Bridge Section)	Sq. Yd.	1,219	—	1,219

LIST OF ABBREVIATIONS

abut.	abutment	min.	minimum
appr.	approach	no.	number
B.F.	back face	N.	north
B	baseline	O.F.	outside face
Brg.	bearing	Pvmt.	pavement
bms	beams	PG	profile grade
btwn.	between	PJF	Preformed joint filler
cts	centers	Rd.	Road
CL	centerline	req'd.	required
cl.	clearance	rte.	route
const.	construction	S.	south
Ø	diameter	sect.	section
E.F.	each face	shldr.	shoulder
Elev.	elevation	spa.	spaces
exist.	existing	spec.	specification
F.F.	front face	sta.	station
I.F.	inside face	std.	standard
jt.	joint	struct.	structure
long.	longitudinal	typ.	typical
max.	maximum		



SECTION THRU CONCRETE SLOPEWALL

Note: Slope wall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

STATION 47+12.34
BUILT 202_ BY
STATE OF ILLINOIS
F.A.I RT. 39 SEC. (201-3)K & (4-1,5)K
LOADING HL-93
STRUCTURE NO. 101-0212

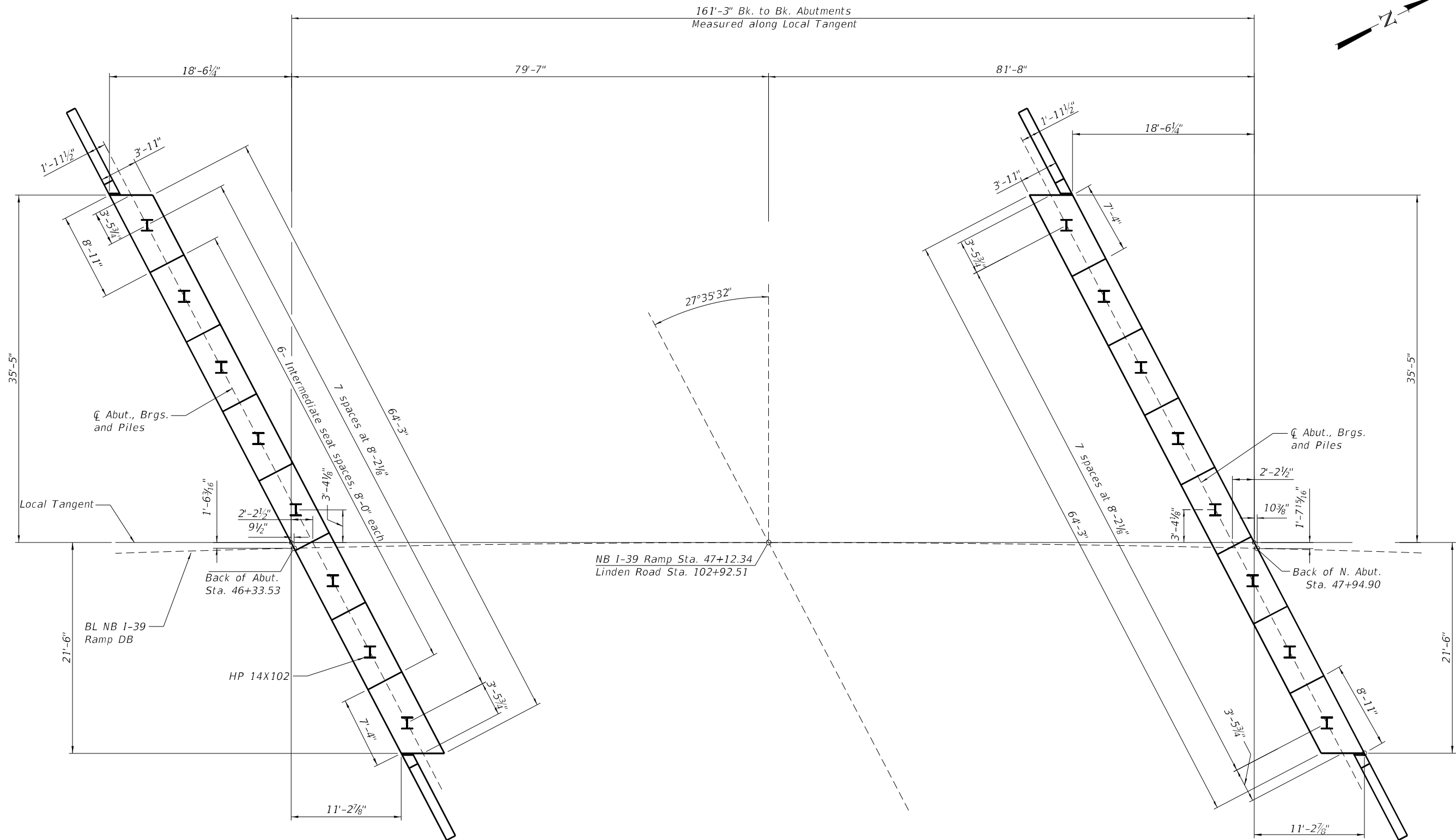
NAME PLATE

See Std. 515001 for placement location

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03/31/2023 2:56:36 PM

Bowman 10 S. LaSalle Street, Suite 2110 Chicago, Illinois 60603 312.471.4300 www.bowman.com	USER NAME =	DESIGNED - AS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES & BILL OF MATERIAL SN 101-0212	SHEET 2 OF 26 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AJN	CHECKED - AJN	REVISED -				39	(201-3)K & (4-1, 5)K	WINNEBAGO	2192	838
	PLOT SCALE =	DRAWN - JK	REVISED -				CONTRACT NO. 64B13				
	PLOT DATE =	CHECKED - AJN	REVISED -				ILLINOIS FED. AID PROJECT				

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10 S. LaSalle Street, Suite 2110
Chicago, IL 60603
312.474.4300
www.bowman.com



Note: See sheets 17 and 18 of 26 for seat elevations

Bowman

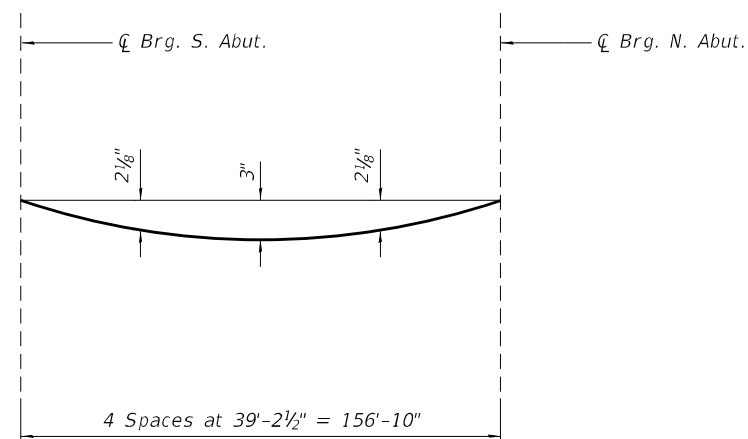
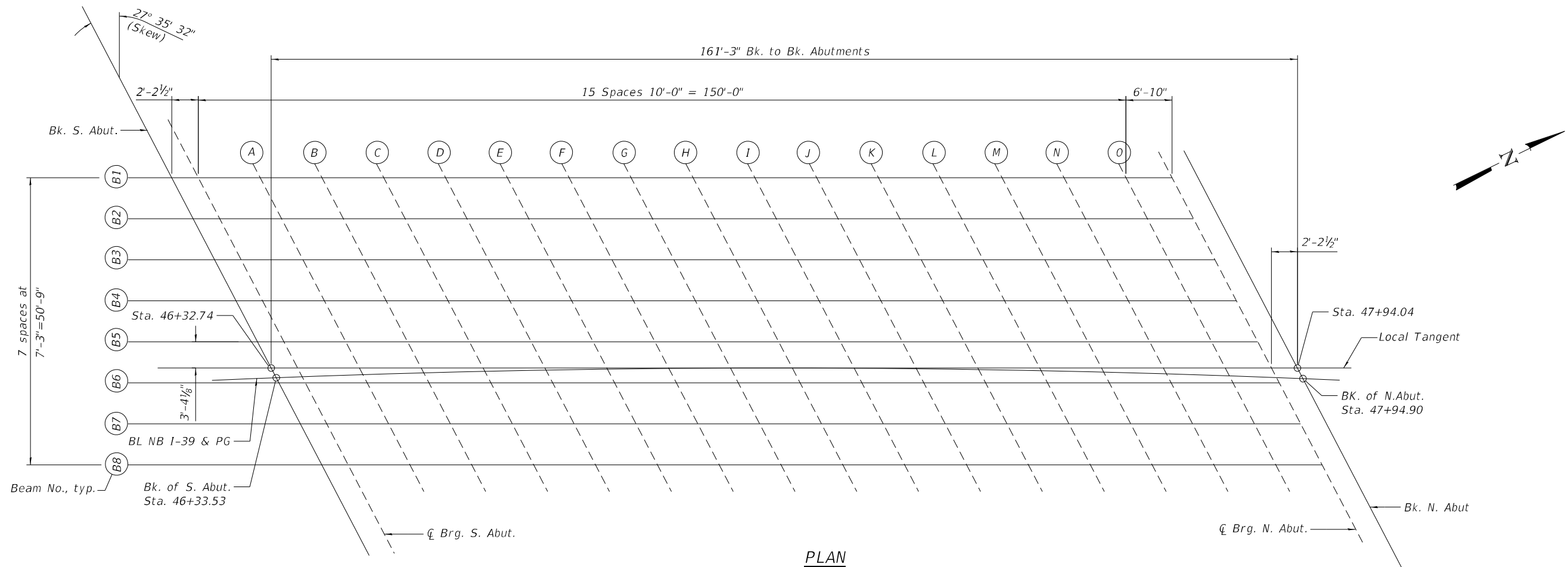
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PLOT DATE	=	CHECKED	-	AJN	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

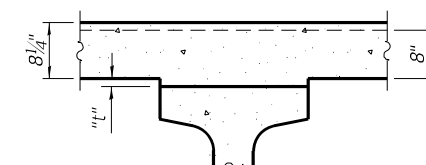
SUBSTRUCTURE LAYOUT PLAN
SN 101-0212

SHEET 3 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1, 5)K	WINNEBAGO	2192	839
CONTRACT NO. 64B13				
		ILLINOIS	FED. AID PROJECT	



(Includes weight of concrete, excluding beams).



To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 5 of 26. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections and Grinding" shown on sheet 5 of 26, minus the initial slab thickness prior to grinding, equals the fillet heights "t" above top flange of beams.

Bowman 10 S. LaSalle Street, Suite 2110 Chicago, Illinois 60603 312.461.4200 www.bowman.com	USER NAME =	DESIGNED - AS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK ELEVATION 1 SN 101-0212			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - AJN	REVISED -					39	(201-3)K & (4-1, 5)K	WINNEBAGO	2192	840
	PLOT SCALE =	DRAWN - JK	REVISED -		CONTRACT NO. 64B13							
	PLOT DATE =	CHECKED - AJN	REVISED -		SHEET 4 OF 26 SHEETS							
					ILLINOIS FED. AID PROJECT							

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03/31/2023 1:30:56 PM

BEAM 1				
Location	Station	Offset	Theoret. Grade Elevation	Theoretical Grade Elevations adjusted for Dead Load Deflection and Grinding
Back of S. Abut.	4617.43	-34.57	853.99	853.99
CL Brg. S. Abut.	4619.60	-34.47	853.97	853.97
A	4629.42	-34.04	853.88	853.93
B	4639.25	-33.66	853.79	853.88
C	4649.09	-33.33	853.69	853.84
D	4658.92	-33.04	853.60	853.78
E	4668.76	-32.80	853.51	853.72
F	4678.60	-32.62	853.42	853.66
G	4688.45	-32.48	853.33	853.58
H	4698.29	-32.38	853.24	853.49
I	4708.14	-32.34	853.15	853.39
J	4717.98	-32.34	853.06	853.28
K	4727.83	-32.39	852.96	853.17
L	4737.67	-32.49	852.87	853.04
M	4747.51	-32.64	852.78	852.91
N	4757.35	-32.83	852.69	852.77
O	4767.19	-33.08	852.60	852.63
CL Brg. N. Abut.	4773.91	-33.27	852.54	852.54
Back of N. Abut.	4776.08	-33.34	852.52	852.52

BEAM 2				
Location	Station	Offset	Theoret. Grade Elevation	Theoretical Grade Elevations adjusted for Dead Load Deflection and Grinding
Back of S. Abut.	4620.83	-27.15	853.52	853.52
CL Brg. S. Abut.	4623.01	-27.06	853.50	853.50
A	4632.87	-26.64	853.41	853.46
B	4642.74	-26.28	853.32	853.42
C	4652.61	-25.97	853.23	853.37
D	4662.48	-25.70	853.14	853.32
E	4672.35	-25.48	853.04	853.26
F	4682.23	-25.31	852.95	853.19
G	4692.11	-25.18	852.86	853.11
H	4701.99	-25.11	852.77	853.02
I	4711.86	-25.08	852.68	852.92
J	4721.74	-25.10	852.59	852.82
K	4731.62	-25.17	852.49	852.70
L	4741.50	-25.29	852.40	852.57
M	4751.38	-25.46	852.31	852.44
N	4761.25	-25.67	852.22	852.30
O	4771.12	-25.94	852.13	852.16
CL Brg. N. Abut.	4777.87	-26.14	852.07	852.07
Back of N. Abut.	4780.05	-26.21	852.05	852.05

BEAM 3				
Location	Station	Offset	Theoret. Grade Elevation	Theoretical Grade Elevations adjusted for Dead Load Deflection and Grinding
Back of S. Abut.	4624.26	-19.74	853.05	853.05
CL Brg. S. Abut.	4626.45	-19.65	853.03	853.03
A	4636.34	-19.26	852.94	852.99
B	4646.25	-18.91	852.85	852.95
C	4656.15	-18.61	852.76	852.90
D	4666.06	-18.36	852.67	852.85
E	4675.97	-18.16	852.58	852.79
F	4685.88	-18.01	852.48	852.72
G	4695.79	-17.90	852.39	852.64
H	4705.71	-17.84	852.30	852.55
I	4715.62	-17.84	852.21	852.45
J	4725.53	-17.88	852.12	852.34
K	4735.45	-17.96	852.02	852.23
L	4745.36	-18.10	851.93	852.10
M	4755.27	-18.29	851.84	851.97
N	4765.18	-18.52	851.75	851.83
O	4775.08	-18.80	851.66	851.69
CL Brg. N. Abut.	4781.85	-19.02	851.59	851.59
Back of N. Abut.	4784.04	-19.10	851.57	851.57

BEAM 4				
Location	Station	Offset	Theoret. Grade Elevation	Theoretical Grade Elevations adjusted for Dead Load Deflection and Grinding
Back of S. Abut.	4627.71	-12.34	852.59	852.59
CL Brg. S. Abut.	4629.91	-12.25	852.57	852.57
A	4639.84	-11.87	852.47	852.52
B	4649.78	-11.54	852.38	852.48
C	4659.72	-11.26	852.29	852.43
D	4669.66	-11.03	852.20	852.38
E	4679.61	-10.85	852.11	852.32
F	4689.55	-10.71	852.01	852.25
G	4699.50	-10.62	851.92	852.17
H	4709.45	-10.59	851.83	852.08
I	4719.40	-10.60	851.74	851.98
J	4729.35	-10.65	851.65	851.87
K	4739.30	-10.76	851.55	851.76
L	4749.24	-10.92	851.46	851.63
M	4759.19	-11.12	851.37	851.50
N	4769.13	-11.37	851.28	851.36
O	4779.07	-11.67	851.18	851.22
CL Brg. N. Abut.	4785.86	-11.91	851.12	851.12
Back of N. Abut.	4788.05	-11.99	851.10	851.10

C I-39				
Location	Station	Offset	Theoret. Grade Elevation	Theoretical Grade Elevations adjusted for Dead Load Deflection and Grinding
Back of S. Abut.	4627.87	-12.00	852.57	852.57
CL Brg. S. Abut.	4630.02	-12.00	852.55	852.55
A	4639.97	-12.00	852.48	852.53
B	4649.91	-12.00	852.41	852.51
C	4659.85	-12.00	852.33	852.48
D	4669.79	-12.00	852.26	852.44
E	4679.73	-12.00	852.17	852.39
F	4689.67	-12.00	852.09	852.33
G	4699.61	-12.00	852.00	852.25
H	4709.55	-12.00	851.91	852.17
I	4719.50	-12.00	851.82	852.07
J	4729.44	-12.00	851.73	851.95
K	4739.38	-12.00	851.63	851.83
L	4749.32	-12.00	851.53	851.69
M	4759.26	-12.00	851.42	851.55
N	4769.20	-12.00	851.31	851.40
O	4779.15	-12.00	851.20	851.24
CL Brg. N. Abut.	4785.80	-12.00	851.13	851.13
Back of N. Abut.	4788.05	-12.00	851.10	851.10

BEAM 5				
Location	Station	Offset	Theoret. Grade Elevation	Theoretical Grade Elevations adjusted for Dead Load Deflection and Grinding
Back of S. Abut.	4631.19	-4.94	852.12	852.12
CL Brg. S. Abut.	4633.39	-4.86	852.10	852.10
A	4643.36	-4.50	852.01	852.06
B	4653.34	-4.18	851.91	852.01
C	4663.31	-3.92	851.82	851.96
D	4673.29	-3.71	851.73	851.91
E	4683.27	-3.54	851.64	851.85
F	4693.26	-3.42	851.55	851.78
G	4703.24	-3.35	851.45	851.70
H	4713.22	-3.33	851.36	851.61
I	4723.21	-3.36	851.27	851.51
J	4733.19	-3.44	851.18	851.40
K	4743.17	-3.57	851.08	851.29
L	4753.15	-3.74	850.99	851.16
M	4763.13	-3.96	850.90	851.03
N	4773.11	-4.23	850.80	850.89
O	4783.08	-4.56	850.71	850.75
CL Brg. N. Abut.	4789.89	-4.80	850.65	850.65
Back of N. Abut.	4792.10	-4.89	850.63	850.63

BASELINE & PROFILE GRADE				
Location	Station	Offset	Theoret. Grade Elevation	Theoretical Grade Elevations adjusted for Dead Load Deflection and Grinding
Back of S. Abut.	4633.53	0.00	851.81	851.81
CL Brg. S. Abut.	4635.70	0.00	851.79	851.79
A	4645.70	0.00	851.72	851.77
B	4655.70	0.00	851.65	851.74
C	4665.70	0.00	851.57	851.71
D	4675.70	0.00	851.49	851.67
E	4685.69	0.00	851.40	851.62
F	4695.69	0.00	851.32	851.55
G	4705.69	0.00	851.23	851.48
H	4715.69	0.00	851.14	851.39
I	4725.69	0.00	851.04	851.29
J	4735.69	0.00	850.94	851.17
K	4745.69	0.00	850.84	851.05
L	4755.69	0.00	850.74	850.91
M	4765.69	0.00	850.63	850.76
N	4775.69	0.00	850.52	850.60
O	4785.69	0.00	850.41	850.44
CL Brg. N. Abut.	4792.64	0.00	850.33	850.33
Back of N. Abut.	4794.90	0.00	850.30	850.30

BEAM 6				
Location	Station	Offset	Theoret. Grade Elevation	Theoretical Grade Elevations adjusted for Dead Load Deflection and Grinding
Back of S. Abut.	4634.69	2.45	851.65	851.65
CL Brg. S. Abut.	4636.90	2.53	851.63	851.63
A	4646.91	2.87	851.54	851.59
B	4656.92	3.17	851.45	851.54
C	4666.93	3.41	851.35	851.50
D	4676.95	3.61	851.26	851.44
E	4686.97	3.76	851.17	851.38
F	4696.98	3.86	851.08	851.31
G	4707.00	3.91	850.98	851.23
H	4717.02	3.91	850.89	851.14
I	4727.04	3.86	850.80	851.04
J	4737.06	3.77	850.70	850.93
K	4747.08	3.62	850.61	850.81
L	4757.09	3.43	850.52	850.69
M	4767.11	3.19	850.43	850.55
N	4777.12	2.90	850.33	850.41
O	4787.12	2.56	850.24	850.27
CL Brg. N. Abut.	4793.96	2.30	850.18	850.18
Back of N. Abut.	4796.17	2.21	850.16	850.16

BEAM 7				
Location	Station	Offset	Theoret. Grade Elevation	Theoretical Grade Elevations adjusted for Dead Load Deflection and Grinding
Back of S. Abut.	4638.22	9.83	851.18	851.18
CL Brg. S. Abut.	4640.44	9.91	851.16	851.16
A	4650.48	10.24	851.07	851.12
B	4660.53	10.51	850.98	851.07
C	4670.58	10.74	850.88	851.03
D	4680.63	10.92	850.79	850.97
E	4690.69	11.05	850.70	850.91
F	4700.74	11.13	850.61	850.84
G	4710.79	11.17	850.51	850.76
H	4720.85	11.15	850.42	850.67
I	4730.90	11.08	850.33	850.57
J	4740.96	10.97	850.23	850.46
K	4751.01	10.80	850.14	850.34
L	4761.06	10.59	850.05	850.22
M	4771.11	10.33	849.95	850.08
N	4781.15	10.02	849.86	849.94
O	4791.19	9.66	849.77	849.80
CL Brg. N. Abut.	4798.05	9.38	849.70	849.70
Back of N. Abut.	4800.27	9.29	849.68	849.68

BEAM 8				
Location	Station	Offset	Theoret. Grade Elevation	Theoretical Grade Elevations adjusted for Dead Load Deflection and Grinding
Back of S. Abut.	4641.78	17.21	850.72	850.72
CL Brg. S. Abut.	4644.00	17.29	850.70	850.70
A	4654.08	17.60	850.60	850.65
B	4664.17	17.85	850.51	850.61
C	4674.25	18.07	850.42	850.56
D	4684.34	18.23	850.32	850.50
E	4694.43	18.34	850.23	850.44
F	4704.52	18.40	850.14	850.37
G	4714.61	18.42	850.04	850.29
H	4724.70	18.38	849.95	850.20
I	4734.79	18.30	849.86	850.10
J	4744.88	18.16	849.76	849.99
K	4754.97	17.98	849.67	849.87
L	4765.05	17.75	849.57	849.74
M	4775.14	17.46	849.48	849.61
N	4785.22	17.13	849.39	849.47
O	4795.29	16.75	849.29	849.33
CL Brg. N. Abut.	4802.17	16.47	849.23	849.23
Back of N. Abut.	4804.40	16.37	849.21	849.21

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	PLOT DATE =	CHECKED - AJN	REVISED -			ILLINOIS FED. AID PROJECT				
SHEET 5 OF 26 SHEETS										

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WEST EDGE OF SHOULDER

Location	Station	Offset to BL	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End South Appr. Slab	4590.01	-34.00	854.12	854.14
A1	4599.85	-34.00	854.06	854.08
A2	4609.69	-34.00	854.00	854.02
N. End South Appr. Slab	4618.77	-34.00	853.95	853.97

WEST EDGE OF PAVEMENT

Location	Station	Offset to BL	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End South Appr. Slab	4594.45	-24.00	853.50	853.52
A1	4604.33	-24.00	853.44	853.46
A2	4613.22	-24.00	853.38	853.40
N. End South Appr. Slab	4623.37	-24.00	853.32	853.34

CL I-39 RAMP

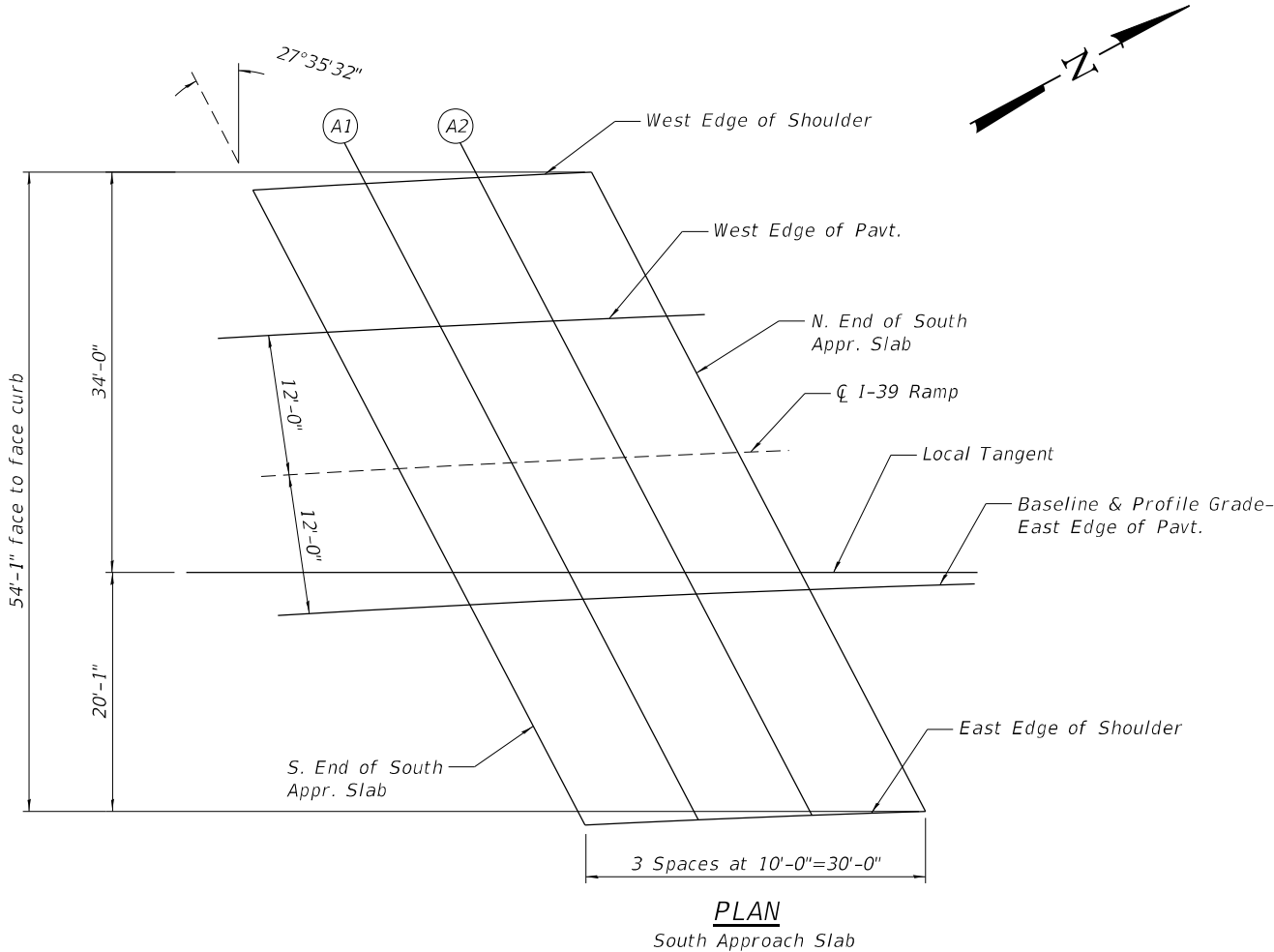
Location	Station	Offset to BL	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End South Appr. Slab	4599.84	-12.00	852.74	852.76
A1	4609.78	-12.00	852.68	852.70
A2	4619.72	-12.00	852.62	852.64
N. End South Appr. Slab	4628.97	-12.00	852.56	852.58

BASELINE & PROFILE GRADE - EAST EDGE OF PAVEMENT

Location	Station	Offset to BL	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End South Appr. Slab	4605.30	0.00	851.99	852.01
A1	4615.30	0.00	851.93	851.95
A2	4625.30	0.00	851.86	851.88
N. End South Appr. Slab	4634.64	0.00	851.80	851.82

EAST EDGE OF SHOULDER

Location	Station	Offset to BL	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End South Appr. Slab	4614.59	20.08	850.73	850.75
A1	4624.69	20.08	850.66	850.68
A2	4634.79	20.08	850.59	850.61
N. End South Appr. Slab	4644.29	20.08	850.53	850.55



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TOP OF SOUTH APPROACH SLAB ELEVATIONS
SN 101-0212

SHEET 6 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1, 5)K	WINNEBAGO	2192	842
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

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WEST EDGE OF SHOULDER

Location	Station	Offset to BL	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End North Appr. Slab	4774.59	-34.00	852.57	852.59
A3	4784.43	-34.00	852.46	852.48
A4	4794.26	-34.00	852.35	852.37
N. End North Appr. Slab	4804.72	-34.00	852.23	852.25

WEST EDGE OF PAVEMENT

Location	Station	Offset to BL	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End North Appr. Slab	4780.15	-24.00	851.91	851.93
A3	4790.03	-24.00	851.80	851.82
A4	4799.92	-24.00	851.68	851.70
N. End North Appr. Slab	4810.47	-24.00	851.56	851.58

CL I-39 RAMP

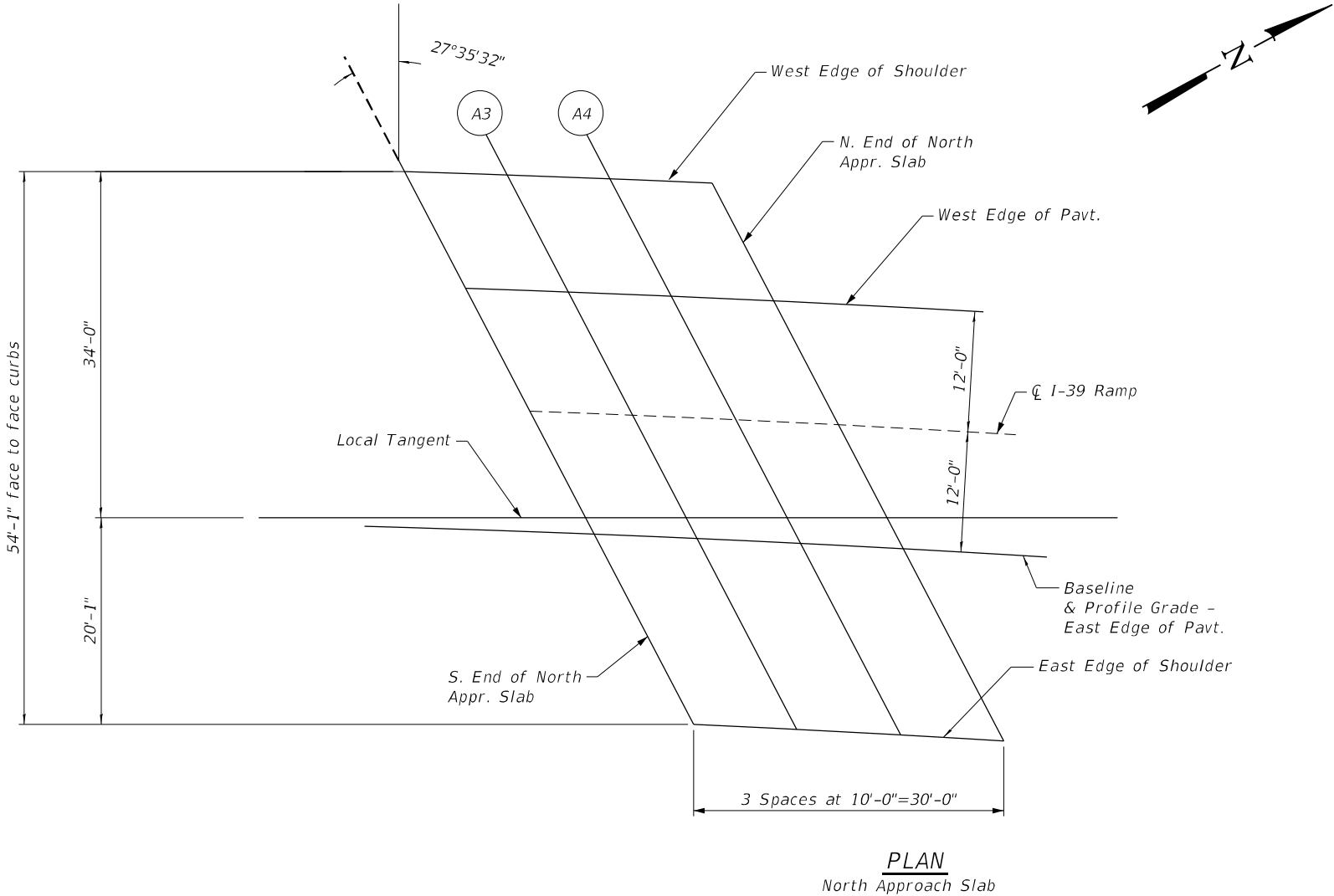
Location	Station	Offset to BL	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End North Appr. Slab	4786.90	-12.00	851.12	851.14
A3	4796.84	-12.00	851.00	851.02
A4	4806.78	-12.00	850.88	850.90
N. End North Appr. Slab	4817.46	-12.00	850.75	850.77

BASELINE AND PROFILE GRADE- EAST EDGE OF PAVEMENT

Location	Station	Offset to BL	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End North Appr. Slab	4793.75	0.00	850.32	850.34
A3	4803.75	0.00	850.20	850.22
A4	4813.75	0.00	850.08	850.10
N. End North Appr. Slab	4824.54	0.00	849.94	849.96

EAST EDGE OF SHOULDER

Location	Station	Offset to BL	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End North Appr. Slab	4805.41	20.08	848.97	848.99
A3	4815.51	20.08	848.85	848.87
A4	4825.61	20.08	848.72	848.74
N. End North Appr. Slab	4836.62	20.08	848.58	848.60



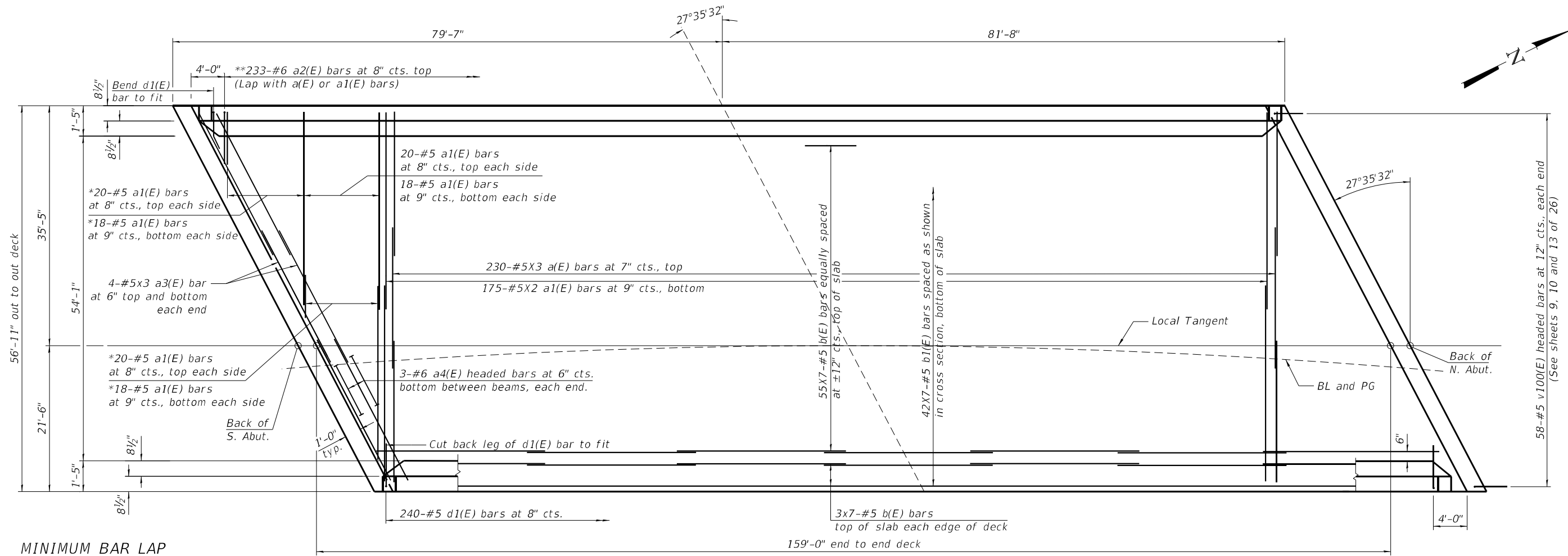
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	PLOT DATE =	CHECKED - AJN	REVISED -

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TOP OF NORTH APPROACH SLAB ELEVATIONS SN 101-0212	
SHEET 7	OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1, 5)K	WINNEBAGO	2192	843
CONTRACT NO. 64B13				
ILLINOIS		FED. AID PROJECT		

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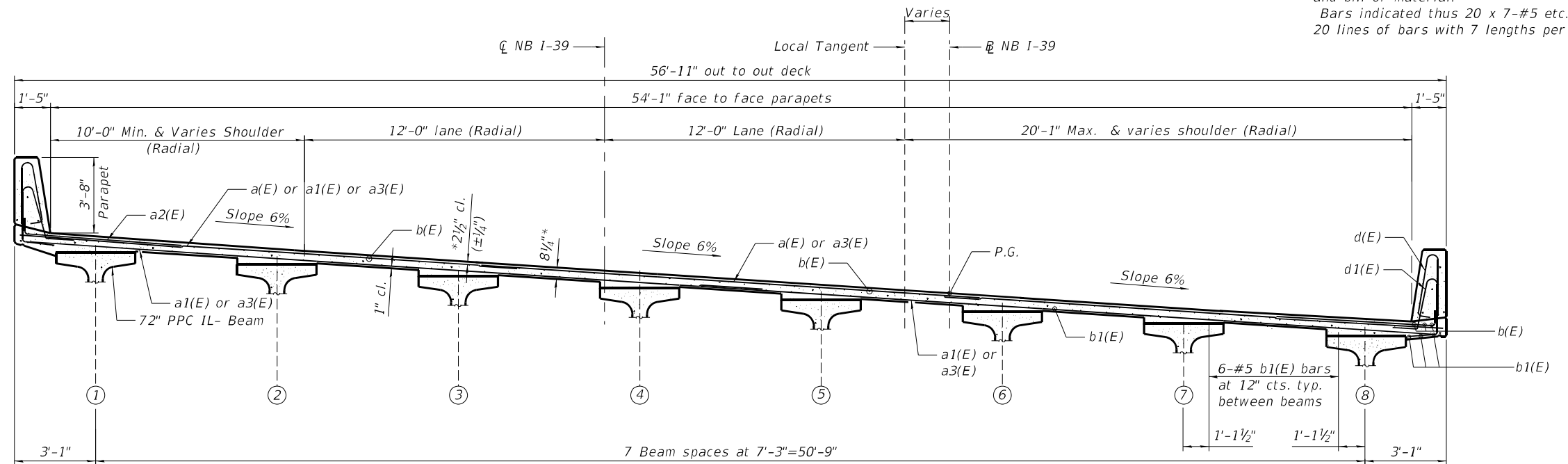
MINIMUM BAR LAP

#5 bar = 3'-6"

- * See Field Cutting Diagram to fit skew with a1(E) on sheet 9 of 26
- ** Cut to fit for the corners at site

PLAN

Notes:
See sheet 9 of 26 for superstructure details and bill of material.
Bars indicated thus 20 x 7-#5 etc. indicates 20 lines of bars with 7 lengths per line.



* Prior to Grinding

CROSS SECTION (Looking North)

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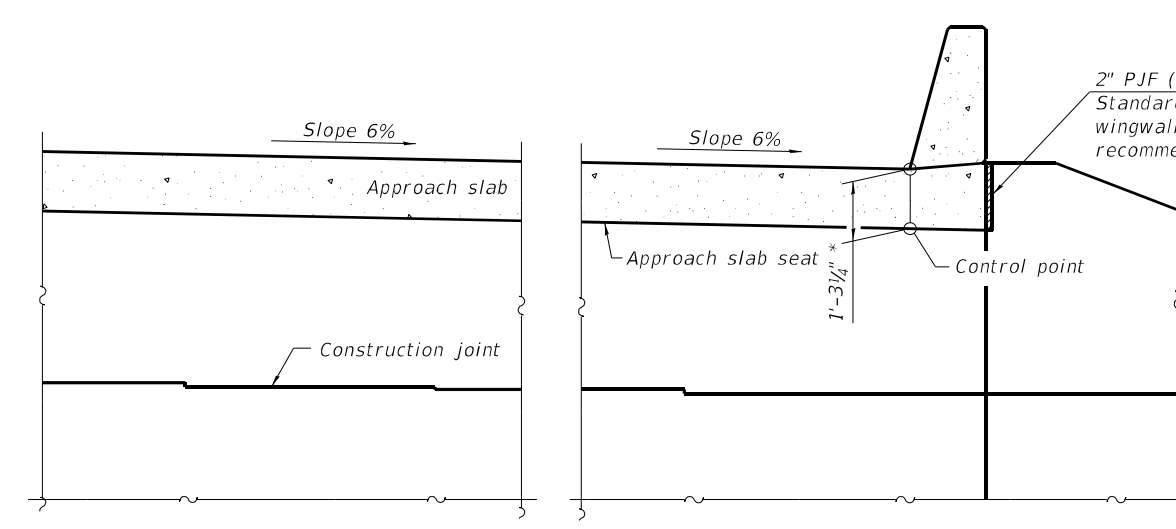
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SUPERSTRUCTURE - DECK
SN 101-0212

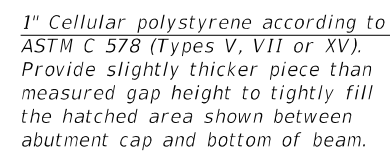
SHEET 8 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

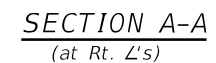


SECTION B-B

2" PJF (per Article 1051.09 of the Standard Specifications) bonded to wingwall with suitable adhesive as recommended by supplier.



PLAN AT ABUTMENT
(Showing bottom flange of beam)



** See sheet 17 & 18 of 26 (South and North Abutments) plan and elevation.

Notes:

See sheet 9 of 26 for superstructure details and bill of material.

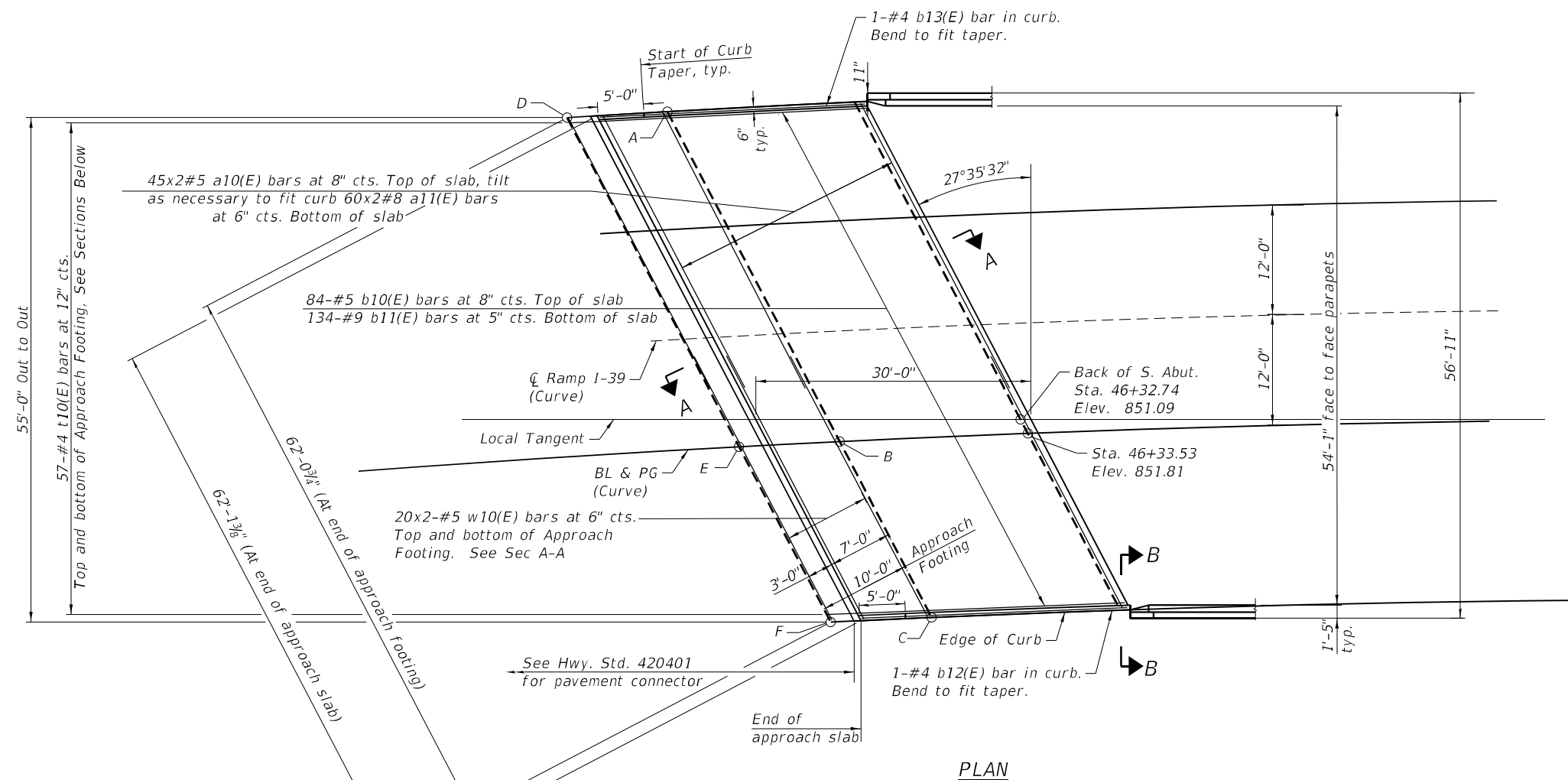
The s200(E), s210(E) and s220(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

The approach slab seat have a constant slope determined from the control points shown.

Cost of cellular polystyrene is included with Concrete Superstructure.

See sheets 11 and 12 of 26 for PJF details.

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	ILLINOIS FED. AID PROJECT										

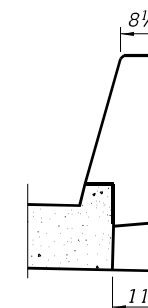


PLAN

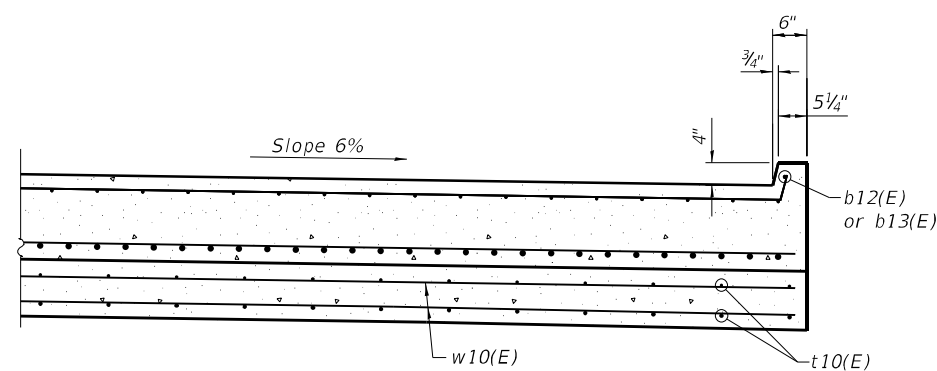


	Approach	
Point	Top	Bottom
A	853.01	852.18
B	850.69	849.86
C	849.47	848.64
D	853.01	852.18
E	850.76	849.93
F	849.54	848.71

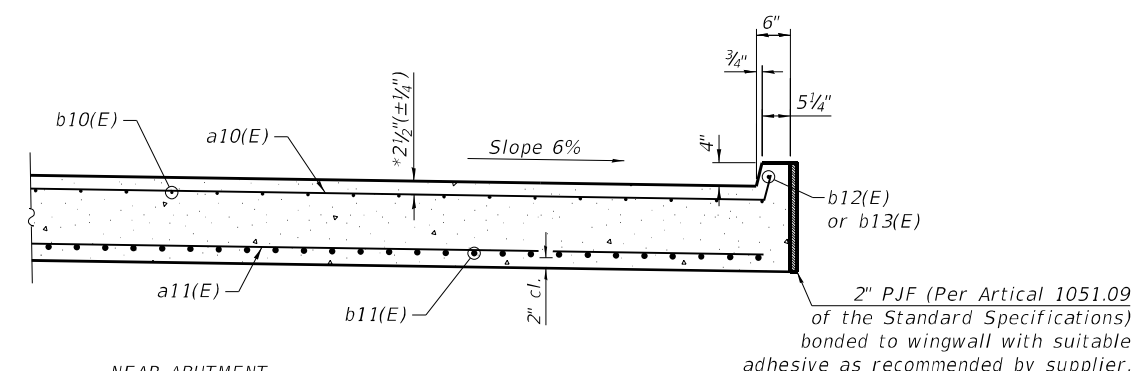
See Sheet 13 of 26 for bridge approach slab details and bill of material.



VIEW B-B



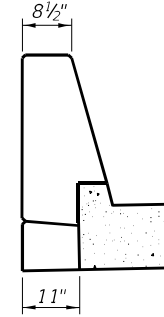
AT APPROACH FOOTING



NEAR ABUTMENT

CROSS SECTION
(Looking South)

* Prior to Grinding



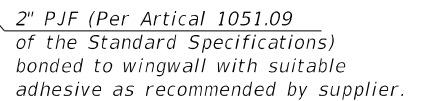
PLAN

Point	Approach	
	Top	Bottom
A	851.14	850.31
B	848.80	847.97
C	847.58	846.75
D	851.00	850.17
E	848.65	847.82
F	847.43	846.60

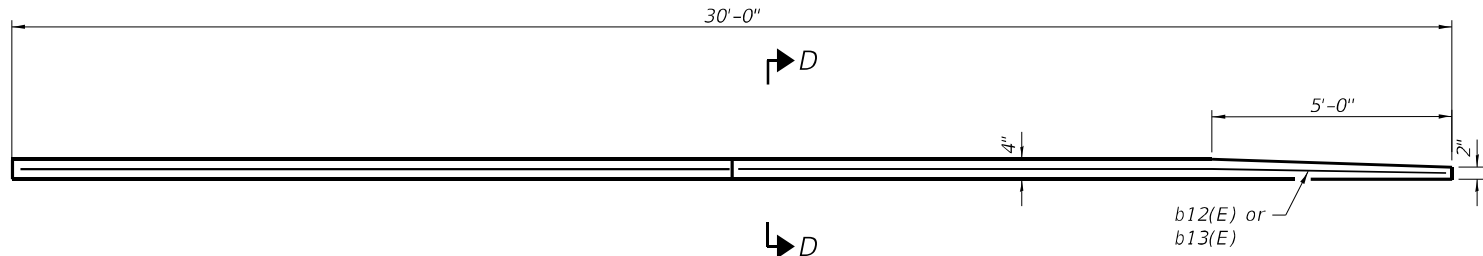
See Sheet 13 of 26 for bridge approach
slab details and bill of material.



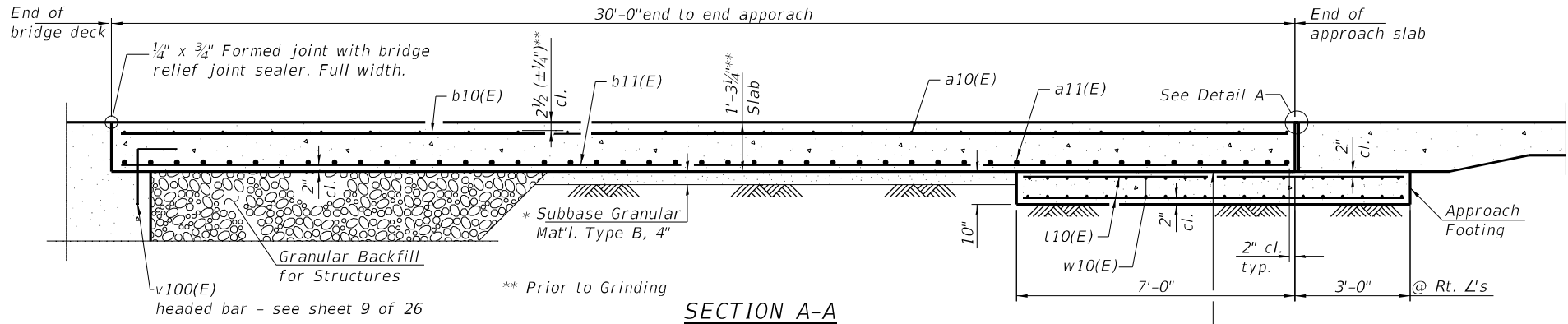
* Prior to Grinding



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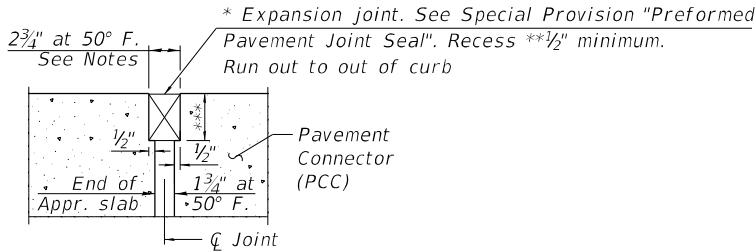


INSIDE ELEVATION OF CURB

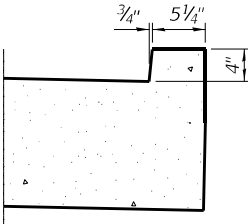


SECTION A-A

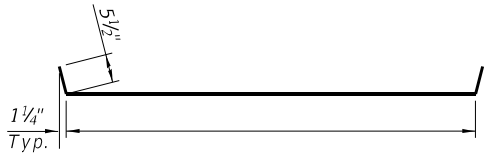
* 10 mil. Polyethylene bond breaker on steel trowel finish



DETAIL A



SECTION D-D



BAR a10(E)

SOUTH APPROACH SLAB
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	90	#5	29'-7"	
a11(E)	120	#8	29'-7"	
b10(E)	84	#5	29'-8"	
b11(E)	134	#9	29'-8"	
b12(E)	1	#4	29'-0"	
b13(E)	1	#4	29'-0"	
t10(E)	57	#4	9'-6"	
w10(E)	80	#5	29'-7"	
Concrete Superstructure (Approach Slab)			Cu. Yd.	79.1
Concrete Structures			Cu. Yd.	19.8
Reinforcement Bars, Epoxy Coated			Pound	31,240
Bridge Deck Grooving (Longitudinal)			Sq. Yd.	89
Protective Coat			Sq. Yd.	191

NORTH APPROACH SLAB
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	90	#5	29'-7"	
a11(E)	120	#8	29'-7"	
b10(E)	84	#5	29'-8"	
b11(E)	134	#9	29'-8"	
b12(E)	1	#4	29'-0"	
b13(E)	1	#4	29'-0"	
t10(E)	57	#4	9'-6"	
w10(E)	80	#5	29'-7"	
Concrete Superstructure (Approach Slab)			Cu. Yd.	79.1
Concrete Structures			Cu. Yd.	19.9
Reinforcement Bars, Epoxy Coated			Pound	31,240
Bridge Deck Grooving (Longitudinal)			Sq. Yd.	89
Protective Coat			Sq. Yd.	191

* Cost included with Concrete Superstructure (Approach Slab).

*** Per manufacturer recommendations

Notes:

- 1) Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
- 2) Approach footing concrete shall be paid for as Concrete Structures.
- 3) The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.
- 4) Parapet concrete shall be paid for as Concrete Superstructure.
- 5) The approach footing maximum applied service bearing pressure (0max) = 2.0 ksf.
- 6) Cost of excavation for approach footing included with Concrete Structures.
- 7) For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 26.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROACH SLAB DETAILS
SN 101-0212

SHEET 13 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1, 5)K	WINNEBAGO	2192	849
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				



INTERIOR BEAM REACTION TABLE		
	S. Abut.	N. Abut.
RDC1	149	149
RDC2	11.8	11.8
RDW	26.3	26.3
R _L + IM	106.9	106.9
RTotal	291	291

Technical drawing of a beam-to-column connection showing two views: a side elevation and an end view.

Side View Details:

- Vertical dimension: 1'-8"
- Horizontal dimension: 3", typ.
- Channel section: **MC18x42.7**
- Vertical slotted holes in angle or equivalent bent R_L , typ.
- Horizontal slotted holes in channel, typ.
- $\frac{3}{4}" \text{ } \varnothing \text{ HS bolt, typ.}$
- $\frac{1}{16}" \text{ } \times \text{ } \frac{1}{16}" \text{ Horizontal slotted holes in channel, typ.}$
- $1" \text{ } \varnothing \text{ Formed hole, typ.}$

End View Details:

- Vertical dimension: 1'-8"
- Horizontal dimension: 3", typ.
- Channel section: **MC18x42.7**
- Vertical slotted holes in angle or equivalent bent R_L , typ.
- Horizontal slotted holes in channel, typ.
- $\frac{3}{4}" \text{ } \varnothing \text{ HS bolt, typ.}$
- $\frac{1}{16}" \text{ } \times \text{ } \frac{1}{16}" \text{ Horizontal slotted holes in channel, typ.}$
- $1" \text{ } \varnothing \text{ Formed hole, typ.}$

Notes:

- Exterior beam
- $\frac{3}{4}" \text{ } \varnothing \text{ Threaded rods with lock nuts, typ. Tightened to snug tight only.}$

Notes:

All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted. Two hardened washers are required for each set of oversized holes.

All holes shall be $\frac{15}{16}$ " $\varnothing$ unless otherwise noted. $\frac{7}{16}$ " x 3" x 3" plate washers are required over all slotted holes.

All bolts, threaded rods, and hardware shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55.

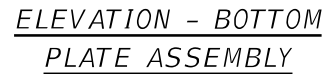
Bracing shall be installed as beams are erected and tightened as soon as possible during erection.

Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete Beams.

Beam	A	B
IL72	1'-8"	2'-8"

*** Alternate MC18x45.8 channels are permitted to facilitate material acquisition.*

PERMANENT BRACING DETAILS FOR IL72 BEAMS



*** 2 Spaces at 3" = 6'

[illegible]

M5 THRU M8 WWR DETAIL

M2 THRU M4 WWR DETAIL

(See Table of Dimensions)

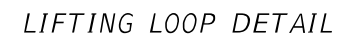
NOTES

Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating or ASTM A1060. Table 3 galvanized coating.

TABLE OF DIMENSIONS

SECTION THRU TOP FLANGE
(Showing limits of bond breaker)

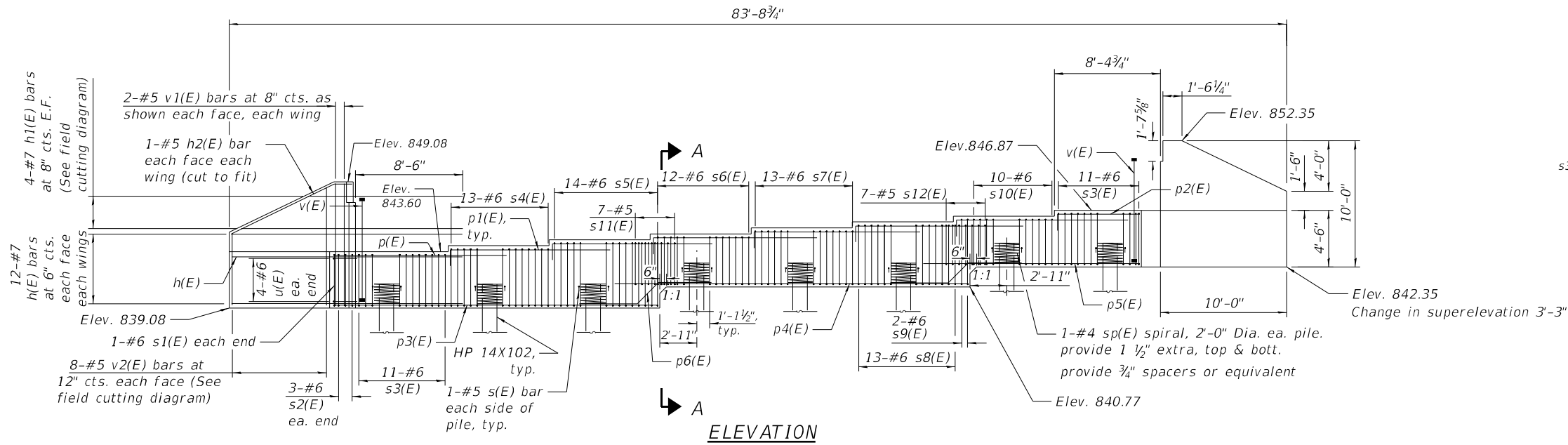
<i>WWR</i>	<i>A</i>	<i>B</i>
<i>M2</i>	9	3"
<i>M3</i>	18	6"
<i>M4</i>	44	1'-6"
<i>M5</i>	21	3"
<i>M6</i>	37	6"
<i>M7</i>	23	1'-0"
<i>M8</i>	16	2'-0"



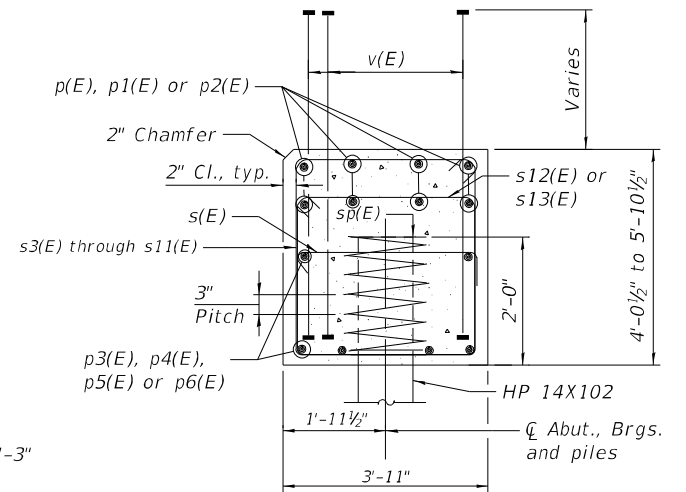
BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL72	Ft.	1265

MODEL: Default
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Note: p(E), p1(E), p2(E), p3(E), p4(E), p5(E) and p6(E) shown; are bar size #8.



SEC. A-A: THRU ABUT.

BRG. SEAT ELEV. AT S. ABUT.

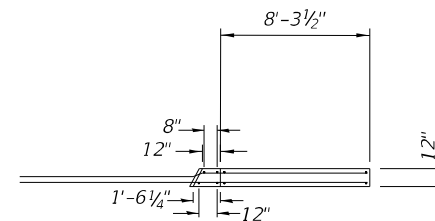
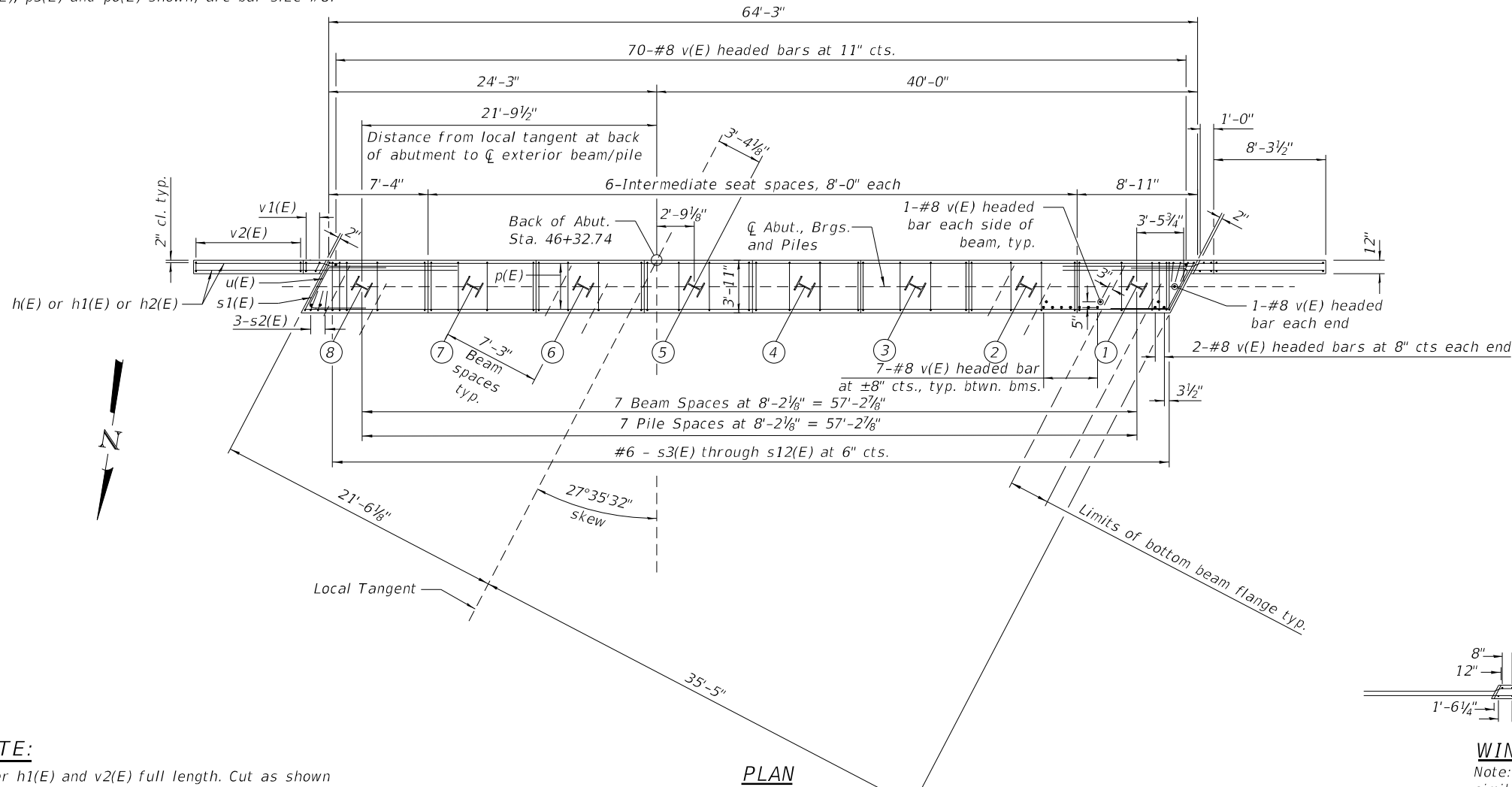
Beam	Seat Elev.	Step Height
1	846.87	5 $\frac{5}{8}$ "
2	846.40	5 $\frac{5}{8}$ "
3	845.93	5 $\frac{1}{2}$ "
4	845.47	5 $\frac{5}{8}$ "
5	845.00	5 $\frac{5}{8}$ "
6	844.53	5 $\frac{5}{8}$ "
7	844.06	5 $\frac{5}{8}$ "
8	843.60	5 $\frac{5}{8}$ "

ESTIMATED PILE LENGTH AT S. ABUT.

Pile	Length (ft.)
1	31
2	31
3	29
4	29
5	29
6	28
7	28
8	28
Total	233

PILE DATA

Type: Steel-HP 14X102 with pile shoes.
Nominal Required Bearing: 810 kips
Factored Resistance Available: 446 kips
Est. Length: See Table
No. Production Piles: 7
No. Test Piles: 1



NOTE:

Order h1(E) and v2(E) full length. Cut as shown in sheet 19 of 26 and use remainder of bars in opposite face.

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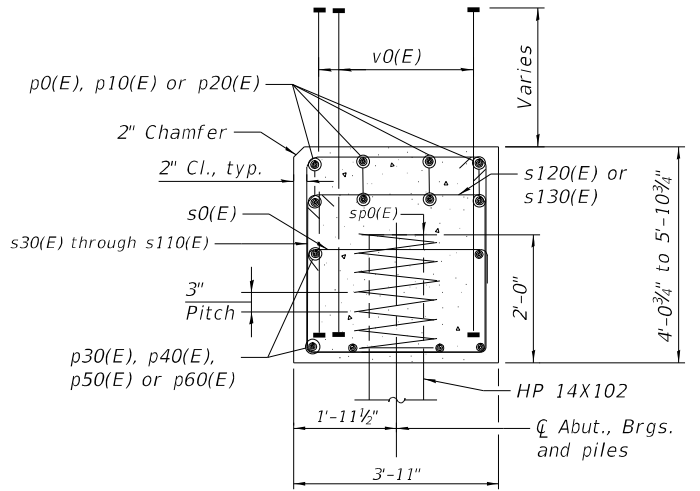
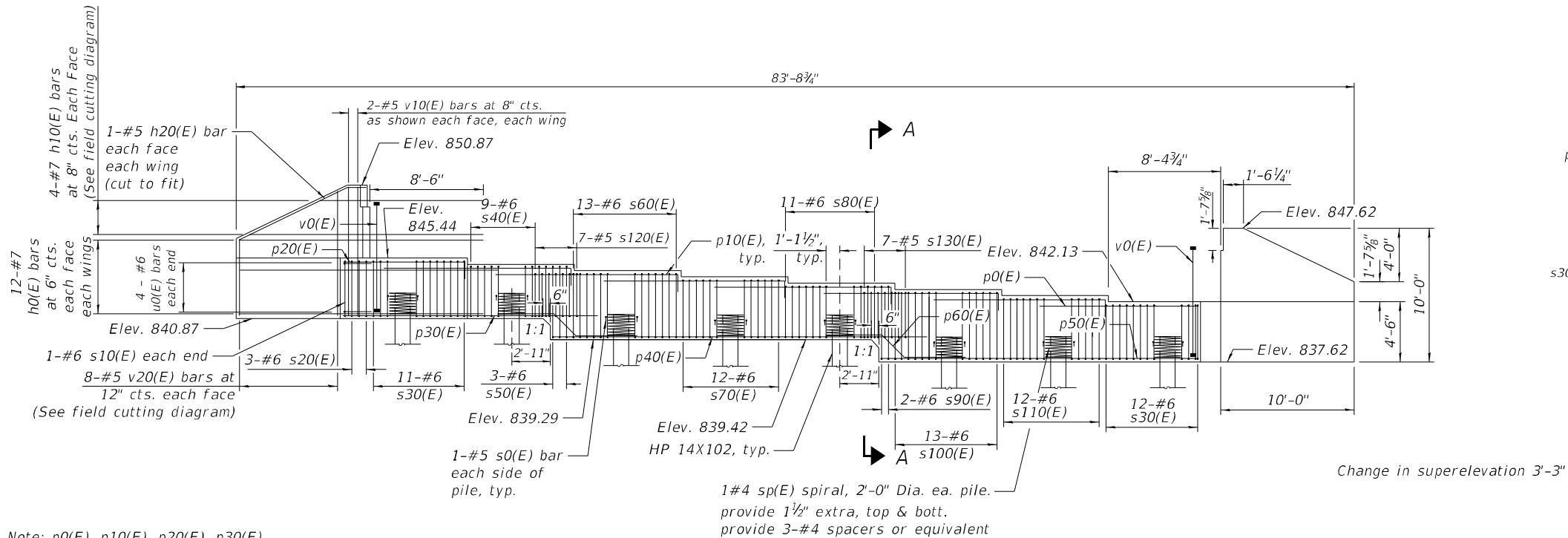
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT PLAN & ELEVATION
SN 101-0212

SHEET 17 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1, 5)K	WINNEBAGO	2192	853
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

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BRG. SEAT ELEV. AT N.ABUT.

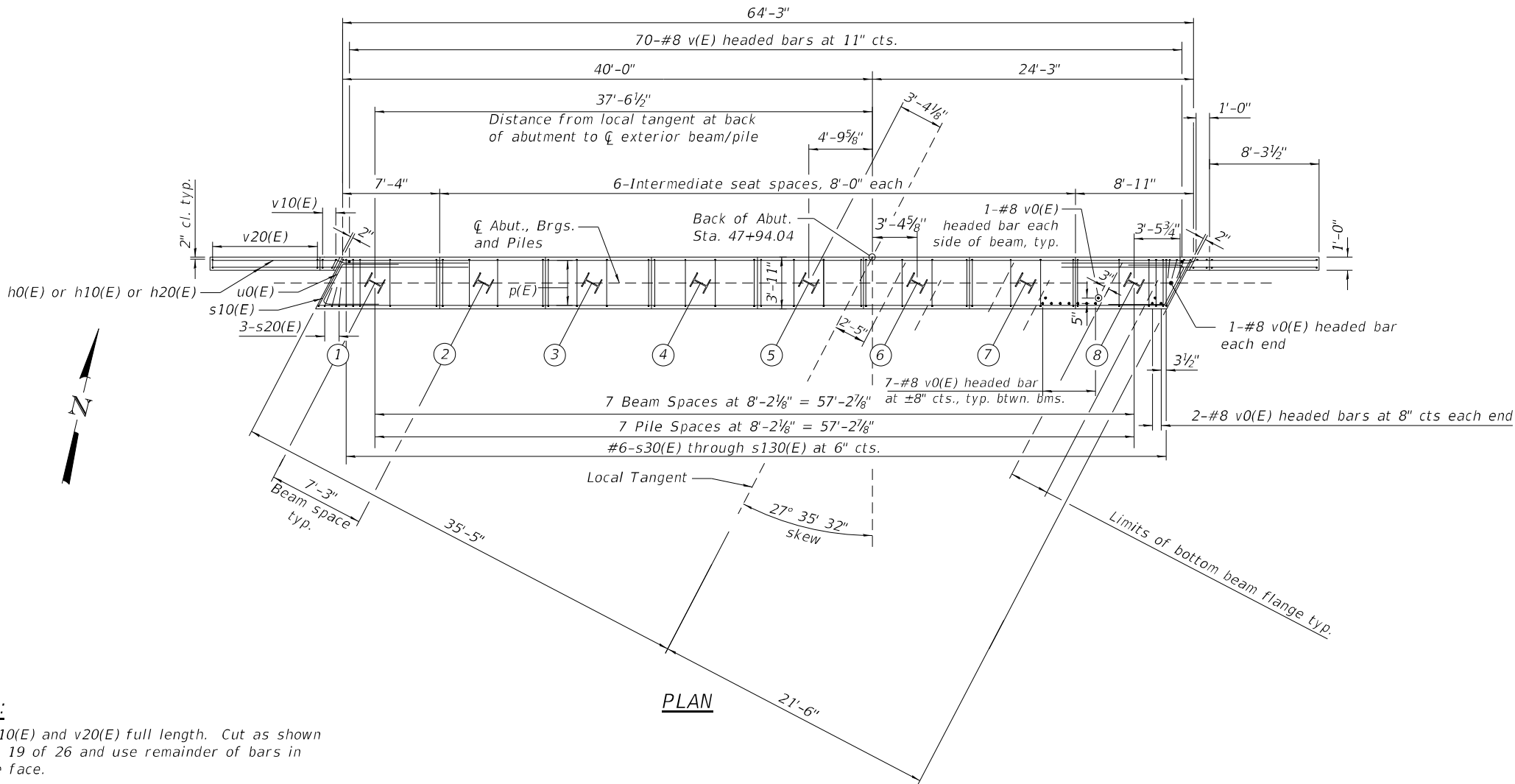
Beam	Seat Elev.	Step Height
1	845.44	5 3/4"
2	844.97	5 5/8"
3	844.49	5 5/8"
4	844.02	5 5/8"
5	843.55	5 5/8"
6	843.08	5 5/8"
7	842.60	5 3/4"
8	842.13	5 5/8"

ESTIMATED PILE LENGTH AT N. ABUT.

Pile	Length (ft.)
1	30
2	30
3	29
4	29
5	29
6	27
7	27
8	27
Total	228

PILE DATA

Type: Steel-HP 14X102 with pile shoes.
Nominal Required Bearing: 810 kips
Factored Resistance Available: 446 kips
Est. Length: See Table
No. Production Piles: 7
No. Test Piles: 1



NOTE:

Order h10(E) and v20(E) full length. Cut as shown in sheet 19 of 26 and use remainder of bars in opposite face.

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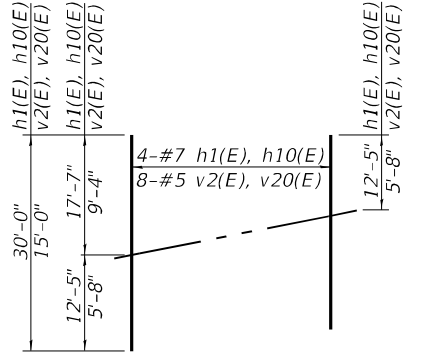
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT PLAN & ELEVATION
SN 101-0212

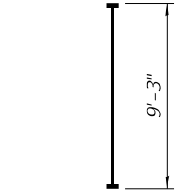
SHEET 18 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1, 5)K	WINNEBAGO	2192	854
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

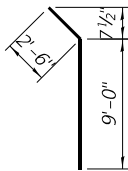
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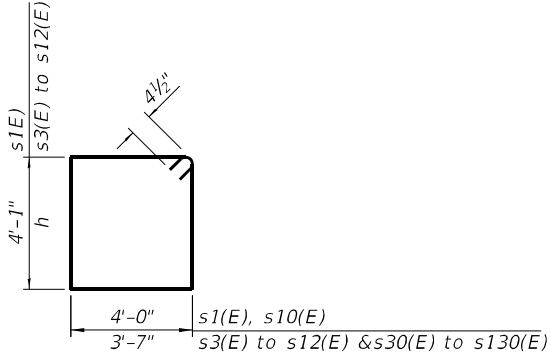
BAR h1(E) & h10(E)
BAR v2(E) & v20(E)



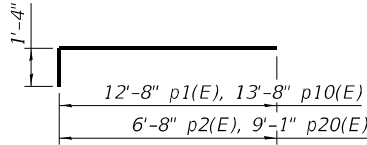
BAR v(E) & v0(E)
(Headed)



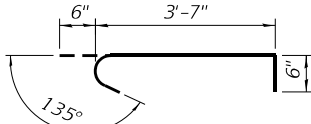
BAR h2(E) & h20(E)



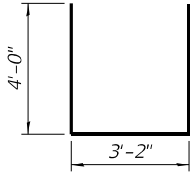
BAR s1(E) & s3(E) to s12(E)
BAR s10(E) & s30(E) to s130(E)



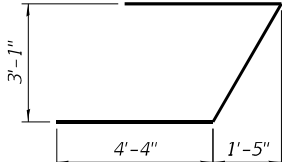
BAR p1(E) or p2(E)
BAR p10(E) or p20(E)



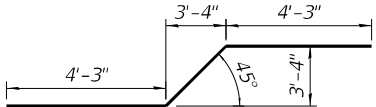
BAR s(E) & s0(E)



BAR s2(E) & s20(E)



BAR u(E) & u0(E)



BAR p6(E) or p60(E)

	s3(E)	s4(E)	s5(E)	s6(E)	s7(E)	s8(E)	s9(E)	s10(E)	s11(E)	s12(E)
h	4'-1"	4'-7"	5'-1"	3'-10"	4'-3"	4'-9"	5'-3"	3'-8"	3'-4"	3'-2"

	s30(E)	s40(E)	s50(E)	s60(E)	s70(E)	s80(E)	s90(E)	s100(E)	s110(E)	s120(E)	s130(E)
h	4'-2"	3'-9"	5'-4"	4'-10"	4'-5"	3'-11"	5'-6"	5'-1"	4'-7"	3'-3"	3'-6"

S. ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	48	#7	18'-4"	
h1(E)	8	#7	30'-0"	
h2(E)	4	#5	10'-5"	
p(E)	4	#8	14'-0"	
p1(E)	24	#8	13'-10"	
p2(E)	4	#8	7'-10"	
p3(E)	6	#8	26'-0"	
p4(E)	6	#8	28'-0"	
p5(E)	6	#8	17'-4"	
p6(E)	8	#8	13'-3"	
s(E)	16	#5	4'-7"	
s1(E)	2	#6	16'-11"	
s2(E)	6	#6	11'-2"	
s3(E)	22	#6	16'-2"	
s4(E)	13	#6	17'-2"	
s5(E)	14	#6	18'-2"	
s6(E)	12	#6	15'-8"	
s7(E)	13	#6	16'-6"	
s8(E)	13	#6	17'-6"	
s9(E)	2	#6	18'-6"	
s10(E)	10	#6	15'-4"	
s11(E)	7	#5	14'-8"	
s12(E)	7	#5	14'-4"	
sp(E)	8	#4	2'-0"	
u(E)	8	#6	11'-9"	
v(E)	137	#8	9'-3"	
v1(E)	8	#5	9'-8"	
v2(E)	16	#5	15'-0"	
DESCRIPTION			UNIT	QUANTITY
Concrete Structures			Cu. Yd.	51.9
Reinforcement Bars, Epoxy Coated			Pound	11,300
Furnishing Steel Piles HP14X102			Foot	204
Driving Piles			Foot	204
Test Pile Steel HP14X102			Each	1
Pile Shoes			Each	8
Geocomposite Wall Drain			Sq. Yd.	78
Structure Excavation			Cu. Yd.	350
Pipe Underdrain For Structures 4"			Foot	84.5

* Cut to fit
** Length is height of spiral
*** Headed bar

Notes:
Pour steps monolithically with cap.
Headed bars shall conform to ASTM A970 with threaded attached ; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with reinforcement Bars, Epoxy Coated.
For details of piles see sheet 20 of 26.

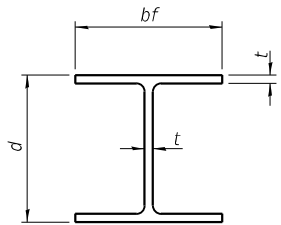
N. ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h0(E)	48	#7	18'-4"	
h10(E)	8	#7	30'-0"	
h20(E)	4	#5	10'-5"	
p0(E)	4	#8	13'-3"	
p10(E)	24	#8	14'-10"	
p20(E)	4	#8	10'-3"	
p30(E)	6	#8	19'-0"	
p40(E)	6	#8	28'-0"	
p50(E)	6	#8	24'-0"	
p60(E)	8	#8	13'-3"	
s0(E)	16	#5	4'-7"	
s10(E)	2	#6	16'-11"	
s20(E)	6	#6	11'-2"	
s30(E)	23	#6	16'-4"	
s40(E)	9	#6	15'-6"	
s50(E)	3	#6	18'-8"	
s60(E)	13	#6	17'-8"	
s70(E)	12	#6	16'-10"	
s80(E)	11	#6	15'-10"	
s90(E)	2	#6	19'-0"	
s100(E)	13	#6	18'-2"	
s110(E)	12	#5	17'-2"	
s120(E)	7	#5	14'-6"	
s130(E)	7	#5	15'-0"	
sp0(E)	8	#4	2'-0"	
u0(E)	8	#6	11'-9"	
v0(E)	137	#8	9'-3"	
v10(E)	8	#5	9'-8"	
v20(E)	16	#5	15'-0"	
DESCRIPTION			UNIT	QUANTITY
Concrete Structures			Cu. Yd.	51.8
Reinforcement Bars, Epoxy Coated			Pound	11,300
Furnishing Steel Piles HP14X102			Foot	199
Driving Piles			Foot	199
Test Pile Steel HP14X102			Each	1
Pile Shoes			Each	8
Geocomposite Wall Drain			Sq. Yd.	78
Structure Excavation			Cu. Yd.	350
Pipe Underdrain For Structures 4"			Foot	84.5

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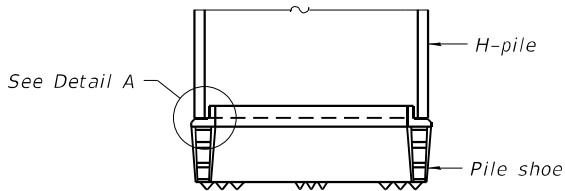
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1, 5)K	WINNEBAGO	2192	855
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

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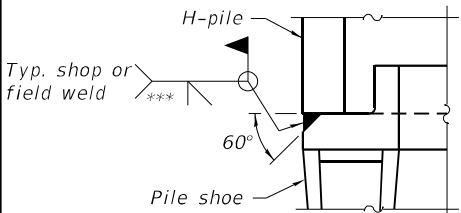


STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



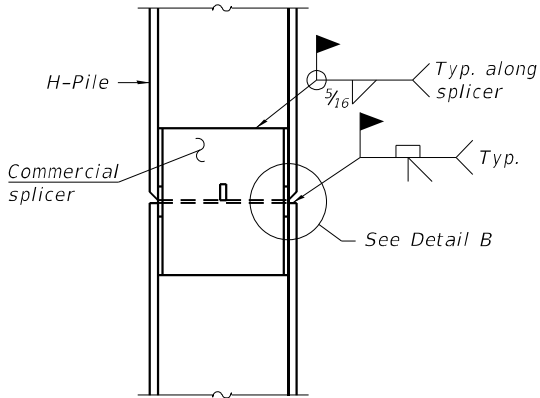
ELEVATION



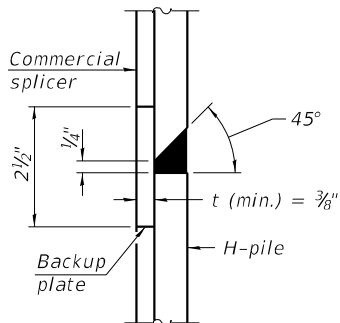
DETAIL A

SHOE ATTACHMENT

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

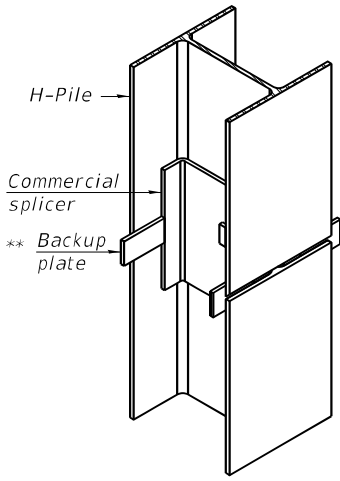


ELEVATION

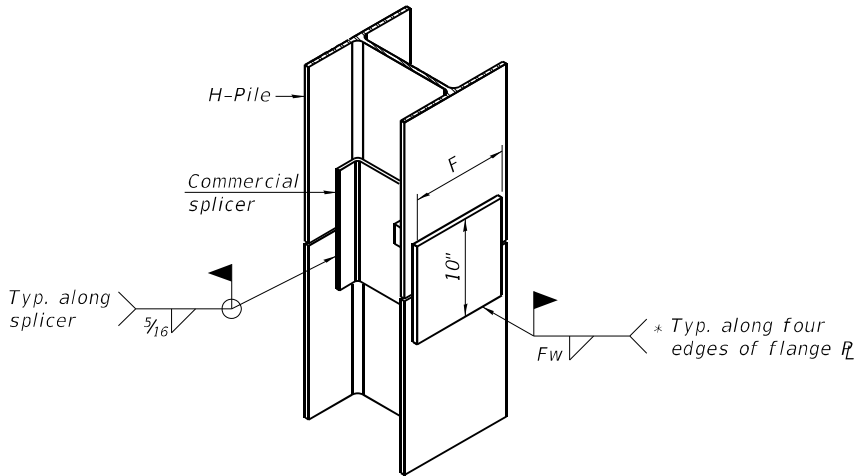


DETAIL "B"

WELDED COMMERCIAL SPLICE



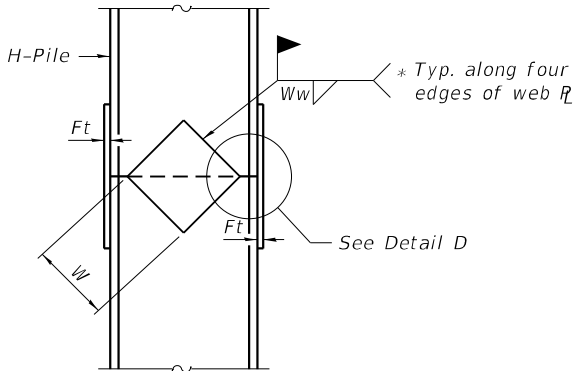
ISOMETRIC VIEW



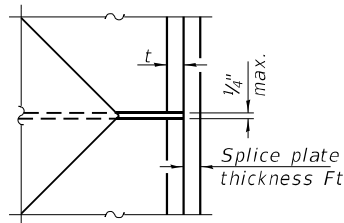
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (7/16" min.).

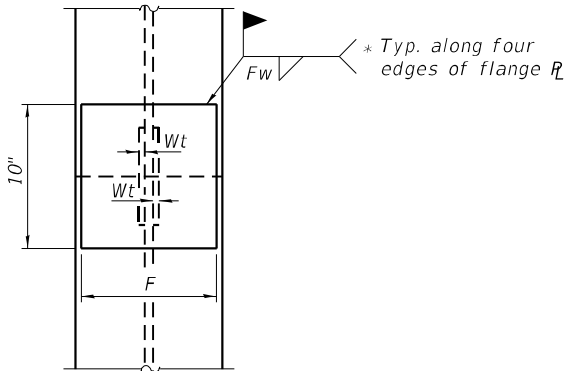


ELEVATION



DETAIL D

WELDED PLATE FIELD SPLICE



END VIEW

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
SN 101-0212

SHEET 20 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1, 5)K	WINNEBAGO	2192	856
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

Page 1 of 1

Date 3/15/06

ROUTE	FAI 39	DESCRIPTION	P92-075-05 I-39 @ Bypass 20, Soil Survey, I-39 NB at Linden Road	LOGGED BY	W. Garza
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SECTION (201-3) K LOCATION , SEC. , TWP. , RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO. _____	D	B	U	M	Surface Water Elev. _____ ft
Station _____ S. Abut. _____	E	L	C	O	Stream Bed Elev. _____ ft
	P	O	S	I	
BORING NO. _____ B-22	T	W		S	Groundwater Elev.: _____
Station _____ 22559+70	H	S	Qu	T	First Encounter _____ ft
Offset _____ ft CL					Upon Completion _____ ft
Ground Surface Elev. 820.4 ft	(ft)	(/6")	(tsf)	(%)	After _____ Hrs. _____ ft

SOFT brown LOAM 1st Encounter weathered LIMESTONE @ 1.5'	0.3 P	16
817.90		
VERY DENSE tan weathered LIMESTONE	100/1"	
816.90		
Time: 8 minutes FAIR/POOR tan LIMESTONE 100% Recovery		
-5		
811.90		
Time: 7 minutes FAIR tan LIMESTONE 100% Recovery		
-10		
806.90		
Time: 7 minutes FAIR tan LIMESTONE 100% Recovery		
-15		
801.90		
End of Boring		
-20		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) **FIGURE 2**
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Page 1 of 1

Date 3/16/06

ROUTE FAI 39 DESCRIPTION P92-075-05 I-39 @ Bypass 20, Soil Survey LOGGED BY M. Jacoby

SECTION (201-3) K LOCATION , SEC. , TWP. , RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. _____ Station _____	D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft
BORING NO. _____ B-23 Station _____ 22561+50 Offset _____ ft CL Ground Surface Elev. 818.6 ft	(ft)	(/6")	(tsf)	(%)	Groundwater Elev.: First Encounter _____ ft Upon Completion _____ ft After _____ Hrs. _____ ft

[illegible]

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) **FIGURE 2**
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



Page 1 of 1

Date 3/30/16

ROUTE	FAI 39 & FAP 301	DESCRIPTION	P92-111-06 Proposed NB I-39 over Linden Road	LOGGED BY	W. Garza
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SECTION (201-3)K & 4-1.5)K LOCATION , SEC. , TWP. , RNG. ,

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45

STRUCT. NO. _____ Station _____	Latitude	42° 12' 59.85"	Northing	2,023,585.4262
	Longitude	-89° 00' 38.44"	Easting	2,609,719.3428

BORING NO. B-1b.
Station 45+79
Offset 35.00ft Lt
Ground Surface Elev. 821.70 ft

Latitude	<u>42° 12' 59.85"</u>	Northing	<u>2,023,585.4262</u>
Longitude	<u>-89° 00' 38.44"</u>	Easting	<u>2,609,719.3428</u>

D E P T H	B L O W S	U C S	M O I S T	Surface Water Elev. _____ ft
				Stream Bed Elev. _____ ft
		Qu	S	Groundwater Elev.: _____ ft
				First Encounter _____ ft
				Upon Completion _____ ft
(ft)	(/6")	(tsf)	(%)	After _____ Hrs. _____ ft

weathered LIMESTONE

VERY DENSE tan weathered
LIMESTONE
Auger Refusal @ 3.5'

Borehole continued with rock coring.

Northing and Easting were calculated using the ILLP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Page 1 of 1Date 3/30/16

ROUTE	FAI 39 & FAP 301	DESCRIPTION	P92-111-06 Proposed NB I-39 over Linden Road	LOGGED BY	W. Garza
-------	------------------	-------------	--	-----------	----------

SECTION (201-3)K & 4-1,5)K LOCATION , SEC. , TWP. , RNG.

COUNTY	Winnebago	CORING METHOD		R	CORE	S
--------	-----------	---------------	--	---	------	---

CORING BARREL TYPE & SIZE		D	C	C	Q	T	R
STRUCT. NO.	Core Diameter						
Station	821.70						

BORING NO.	B-1b.	Latitude	42° 12' 59.85"
Station	45+79	Longitude	-89° 00' 38.44"
Offset	35.00ft Lt	Northing	2,023,585.4262
Ground Surface Elev.	821.70	Eastng	2,609,719.3428

CORING BARREL TYPE & SIZE

DEPTH	CORE	OVERY	Q.D.	TIME	LENGTH
(ft)	(#)	(%)	(%)	(min/ft)	(tsf)

Dolomite: buff-white, micritic, vuggy, oxidized on fractured surfaces, fractured in 1/2" to ---818.20 3" segments.

Dolomite: as above, though medium bedded.
t.s.f.: 810.7 to 810.0 and 809.2 to 808.8

End of Boring

Northing and Easting were calculated using the ILHP-WF coordinate system

Color pictures of the cores _____
Cores will be stored for examination until _____
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

MODEL: Default
FILE NAME: pw:\\benesch-pw-bentley.com\\benesch-pw-01\\Documents\\10800\\00\\Eng_Docs\\CAD_Sheets\\SN 0212 Ramp DB [Bowman]\\0264C62-1010212-5HT-STRUC-024-Soil Boring 3.dgn



**Illinois Department
of Transportation**
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 3/30/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Proposed NB I-39 over Linden Road LOGGED BY W. Garza

SECTION (201-3)K & 4-1,5)K LOCATION SEC., TWP., RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45

STRUCT. NO. _____
Station _____
Latitude 42° 13' 00.46"
Longitude -89° 00' 37.34"
Northing 2,023,648.1437
Easting 2,609,801.9401

BORING NO. B-2b.
Station 46+27
Offset 10.00ft Rt
Ground Surface Elev. 820.70 ft

D E P T H	B L O W S	U C S Qu	M O I S T	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft Groundwater Elev.: _____ ft First Encounter _____ ft Upon Completion _____ ft After _____ Hrs. _____ ft
(ft)	(/6")	(tsf)	(%)	

weathered LIMESTONE

VERY DENSE tan weathered
LIMESTONE

Auger Refusal @ 4.5'

Borehole continued with rock
coring.

Northing and Easting were calculated using the LHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



**Illinois Department
of Transportation**
Division of Highways
IDOT

ROCK CORE LOG

Page 1 of 1

Date 3/30/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Proposed NB I-39 over Linden Road LOGGED BY W. Garza

SECTION (201-3)K & 4-1,5)K LOCATION SEC., TWP., RNG.

COUNTY Winnebago CORING METHOD

STRUCT. NO. _____
Station _____
Coring Barrel Type & Size _____
Core Diameter 2 in
Top of Rock Elev. 820.70 ft
Begin Core Elev. 816.20 ft

BORING NO. B-2b.
Station 46+27
Offset 10.00ft Rt
Ground Surface Elev. 820.70 ft
Latitude 42° 13' 00.46"
Longitude -89° 00' 37.34"
Northing 2,023,648.1437
Easting 2,609,801.9401

D E P T H	C O R E	R E C O V E R Y	R Q D	C O R E T I M E	S T R E N G T H
(ft)	(#)	(%)	(%)	(min/ft)	(tsf)

Dolomite: buff-white, 50 to 60 percent disintegrated, micritic and vuggy where intact. 816.20 -5 1 100 0 1.2 0.0

Dolomite: as above, though laminated and thin bedded.
t.s.f.: 809.4 to 808.9 and 807.5 to 807.0 811.20 -10 2 100 33 1.4 230.0

Dolomite: as above, with improved integrity, medium to thickly bedded.
t.s.f.: 804.6 to 803.4 and 801.4 to 802.8 806.20 -15 3 100 63 1 652.0

End of Boring 801.20 -20

Northing and Easting were calculated using the LHP-WF coordinate system

Color pictures of the cores _____
Cores will be stored for examination until _____
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

Bowman

10 S. LaSalle Street, Suite 2110
Chicago, IL 60603
312.641.4300
www.bowman.com

USER NAME =	DESIGNED - AS	REVISED -
CHECKED - AJN	REVISED -	
PLOT SCALE =	DRAWN - JK	REVISED -
PLOT DATE =	CHECKED - AJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING AND ROCK CORE 3
SN 101-0212

SHEET 24 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1, 5)K	WINNEBAGO	2192	860
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

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03/31/2023 1:32:08 PM



Illinois Department
of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 3/29/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Proposed NB I-39 over Linden Road LOGGED BY W. Garza

SECTION (201-3)K & 4-1.5)K LOCATION SEC., TWP., RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45

STRUCT. NO. Latitude 42° 13' 01.38" Northing 2,023,741.9921
Station Longitude -89° 00' 36.79" Easting 2,609,841.8491

D E P T H (ft)	B L O W S (/6")	U C S (tsf)	M O I S T (%)	Surface Water Elev. ft Stream Bed Elev. ft Groundwater Elev.: First Encounter ft Upon Completion ft After Hrs. ft

weathered LIMESTONE

VERY DENSE tan weathered
LIMESTONE

Auger Refusal @ 3.5'

Borehole continued with rock
coring.

Northing and Easting were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
IDOT

ROCK CORE LOG

Page 1 of 1

Date 3/29/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Proposed NB I-39 over Linden Road LOGGED BY W. Garza

SECTION (201-3)K & 4-1.5)K LOCATION SEC., TWP., RNG.

COUNTY Winnebago CORING METHOD

STRUCT. NO.	Core Diameter	Core Diameter	Core Diameter	Core Diameter	Core Diameter
Station	Top of Rock Elev.	Top of Rock Elev.	Top of Rock Elev.	Top of Rock Elev.	Top of Rock Elev.
BORING NO.	Begin Core Elev.	Begin Core Elev.	Begin Core Elev.	Begin Core Elev.	Begin Core Elev.
Station	Latitude	Latitude	Latitude	Latitude	Latitude
Offset	Longitude	Longitude	Longitude	Longitude	Longitude
Ground Surface Elev.	Northing	Northing	Northing	Northing	Northing
	Easting	Easting	Easting	Easting	Easting

Dolomite: buff-white, micritic and vuggy, thin to medium bedded.
t.s.f.: 813.9 to 813.4

Dolomite: as above, not as vuggy, thickly bedded.
t.s.f.: 810.3 to 809.7 and 807.9 to 807.2

Dolomite: as above, though medium bedded.
t.s.f.: 805.5 to 805.0 and 803.5 to 802.9

End of Boring

Northing and Easting were calculated using the ILHP-WF coordinate system

Color pictures of the cores
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

Bowman

10 S. LaSalle Street, Suite 2110
Chicago, IL 60603
312.464.4300
www.bowman.com

USER NAME =	DESIGNED - AS	REVISED -
CHECKED - AJN	REVISED -	
PLOT SCALE =	DRAWN - JK	REVISED -
PLOT DATE =	CHECKED - AJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING AND ROCK CORE 4
SN 101-0212

SHEET 25 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1, 5)K	WINNEBAGO	2192	861
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

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Illinois Department
of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 3/29/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Proposed NB I-39 over Linden Road LOGGED BY W. Garza

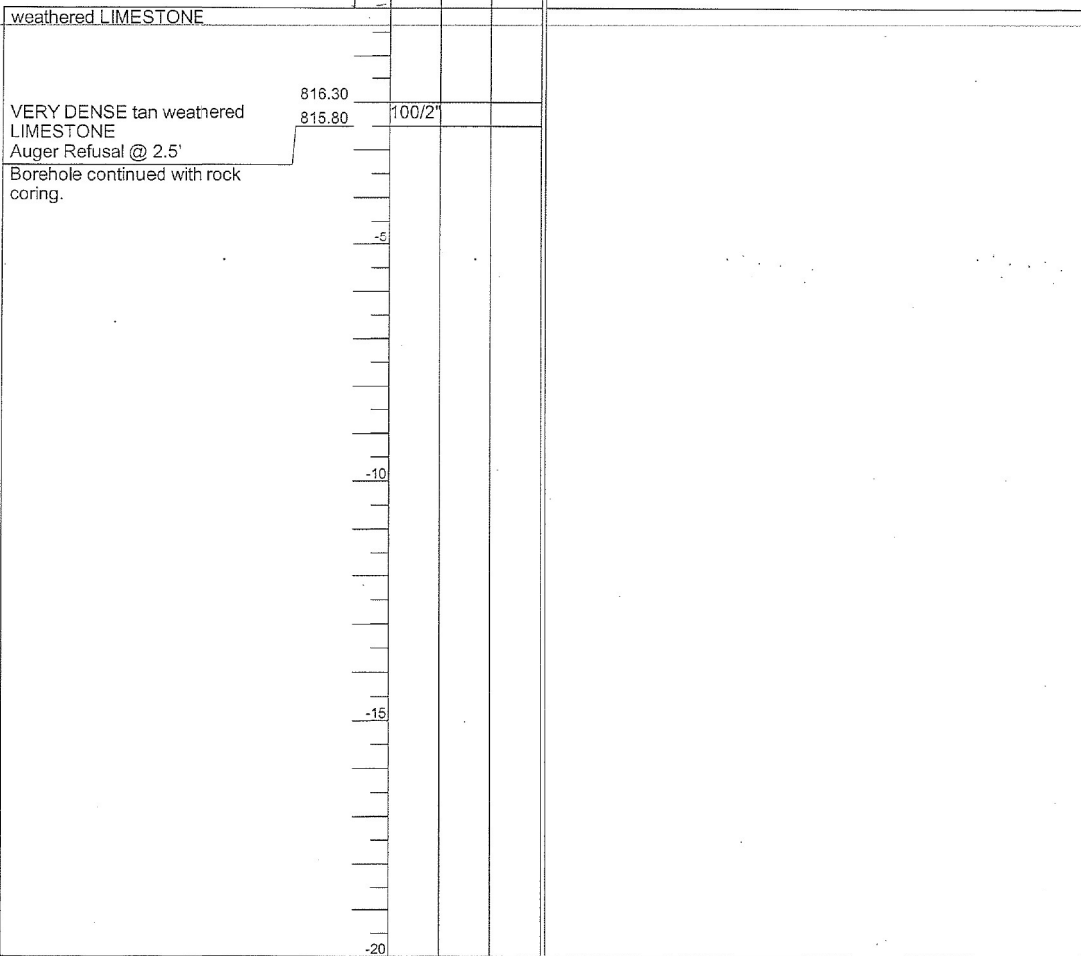
SECTION (201-3)K & 4-1,5)K LOCATION , SEC. , TWP. , RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45

STRUCT. NO. _____ Latitude 42° 13' 02.29" Northing 2,023,833.8177
Station _____ Longitude -89° 00' 37.15" Easting 2,609,813.2392

BORING NO. B 4b. _____
Station 48+13 _____
Offset 35.00ft Lt _____
Ground Surface Elev. 818.30 ft _____

D E P T H	B L O W S	U C S	M O I S T	Surface Water Elev. _____ ft	Stream Bed Elev. _____ ft	Groundwater Elev.: _____	First Encounter _____ ft	Upon Completion _____ ft	After _____ Hrs. _____ ft
(ft)	(/6")	(tsf)	(%)						



The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
IDOT

ROCK CORE LOG

Page 1 of 1

Date 3/29/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Proposed NB I-39 over Linden Road LOGGED BY W. Garza

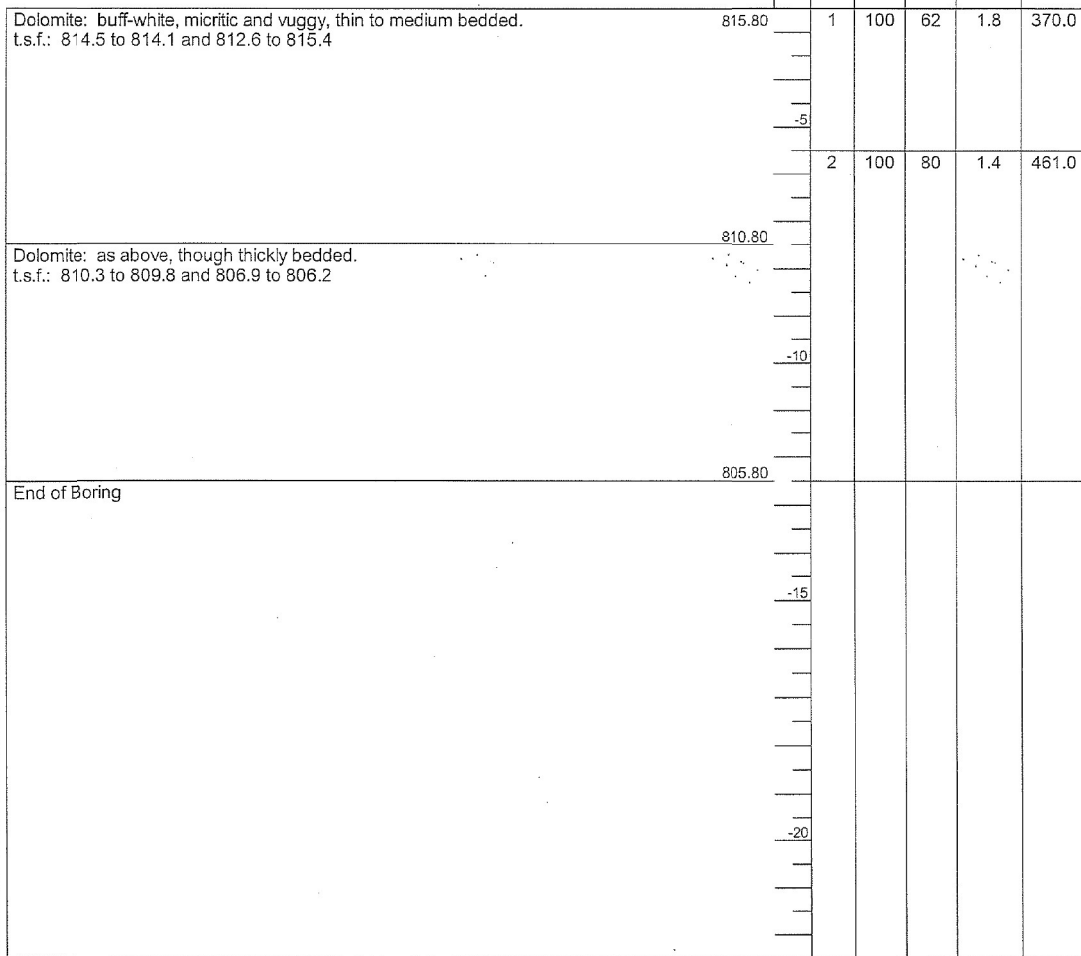
SECTION (201-3)K & 4-1,5)K LOCATION , SEC. , TWP. , RNG.

COUNTY Winnebago CORING METHOD _____

STRUCT. NO. _____ CORING BARREL TYPE & SIZE _____
Station _____ Core Diameter 2 in
Top of Rock Elev. 818.30 ft
Begin Core Elev. 815.80 ft

BORING NO. B-4b. _____ Latitude 42° 13' 02.29"
Station 48+13 _____ Longitude -89° 00' 37.15"
Offset 35.00ft Lt _____ Northing 2,023,833.8177
Ground Surface Elev. 818.30 ft Easting 2,609,813.2392

D E P T H	C O R E	R E C O V E R Y	R Q D	C O R E T I M E	S T R E N G T H
(ft)	(#)	(%)	(%)	(min/ft)	(tsf)



Color pictures of the cores _____
Cores will be stored for examination until _____
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

Bowman

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Chicago, IL 60603
312.641.4300
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USER NAME =	DESIGNED - AS	REVISED -
CHECKED - AJN	REVISED -	
PLOT SCALE =	DRAWN - JK	REVISED -
PLOT DATE =	CHECKED - AJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING AND ROCK CORE 5
SN 101-0212

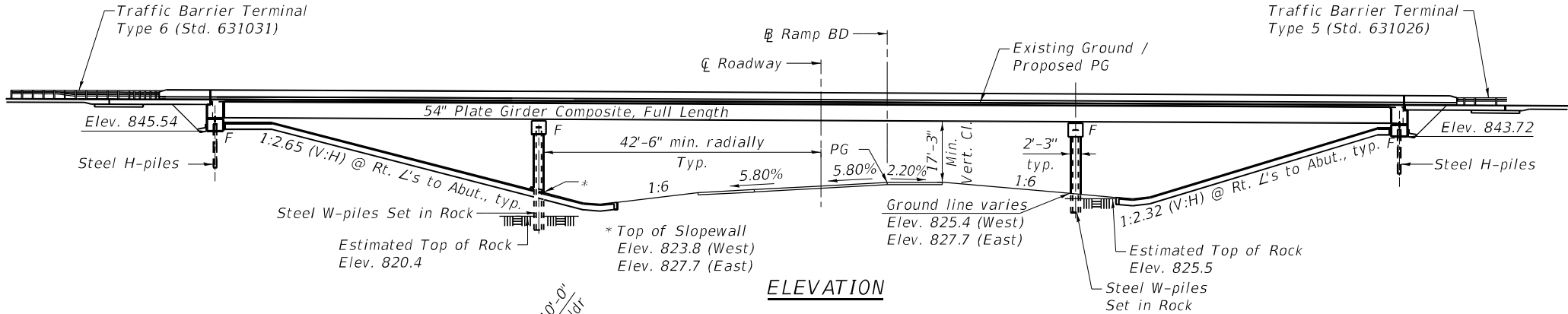
SHEET 26 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1, 5)K	WINNEBAGO	2192	862
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

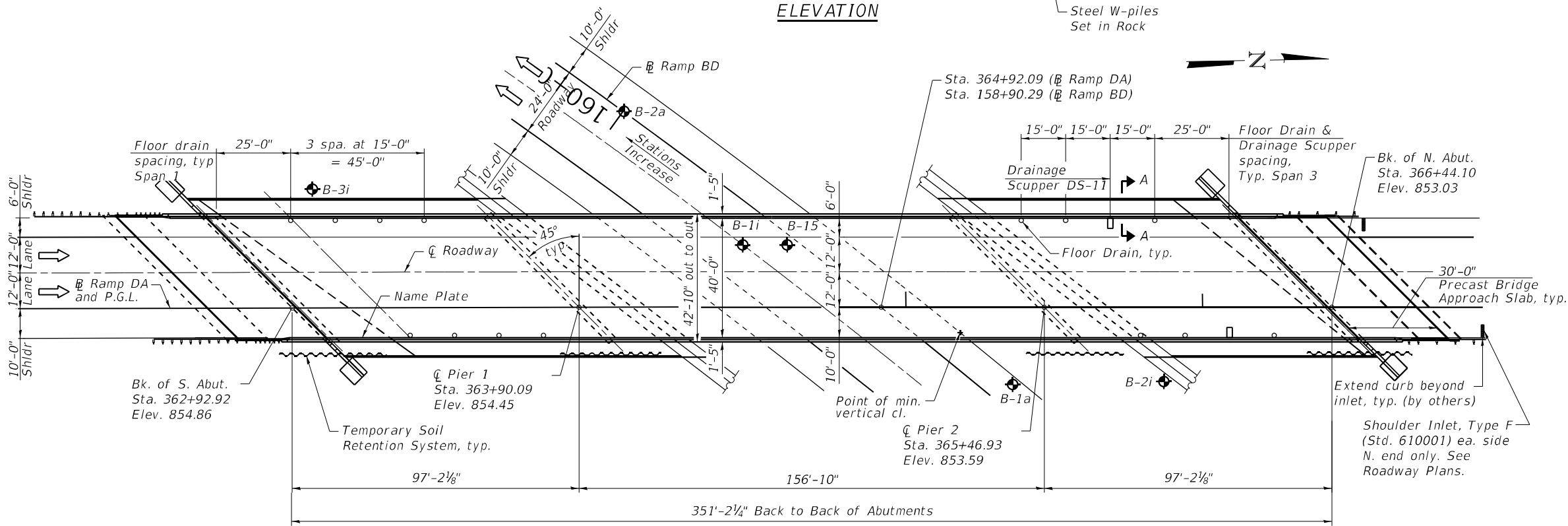
Benchmark: Cut "□" south side of eastern base of 30 mph ramp sign located east of the ramp connecting I-39 NB to US 20 West (Ramp DA) 0.1 mile north of the centerline of Linden Road. Elev. 851.37, 42°-13'-06.37" N. 89°-00'-39.64" W.

Existing Structure: None

A runaround will be utilized to maintain one lane of traffic at all times.



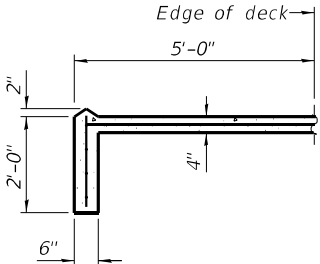
ELEVATION



PLAN

Notes:
Up to 1/4 inch may be ground off the bridge deck and the bridge approach slabs.
Final Elevations are shown on this sheet.
See sheets 3 & 4 of 37 for staging details.

**All Structural Steel shall be metalized



SECTION A-A

Range 2 E., 3 Rd. P.M.

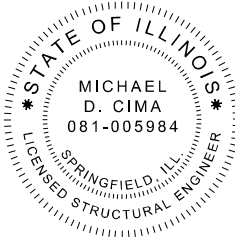


LOCATION SKETCH

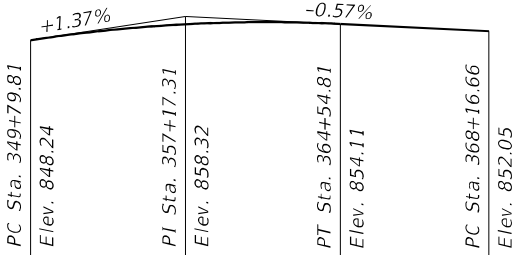
CURVE DATA

Ramp BD
P.I. Sta. = 169+10.06
 $\Delta = 107^\circ 00' 24''$ (Lt.)
 $D = 2^\circ 14' 49''$
 $R = 2,550.00'$
 $T = 3,446.54'$
 $L = 4,762.42'$
 $E = 1,737.32$
 $SE = 5.80\%$
P.C. Sta. = 134+63.52
P.T. Sta. = 182+25.95

APPROVED
For Structural Adequacy Only
Michael D. Cima
Engineer of Bridges & Structures

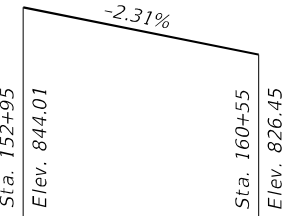


Michael D. Cima 01/23/2023
Michael D. Cima, Illinois S.E. 081-005984 Date
Expires 11/30/2024



VC = 1475'
PROFILE GRADE
(Along Ramp DA)

Note: The profile grade shows the final elevations after grinding



PROFILE GRADE
(Along Ramp BD)

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f'_c = 4,000$ psi (Superstructure Concrete)
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50)**
 $f_y = 36,000$ psi (M270 Grade 36)

PRECAST UNITS

$f'_c = 6,000$ psi
 $f_y = 60,000$ psi (Reinforcement)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.056 g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.10 g
Soil Site Class = C

GENERAL PLAN AND ELEVATION

I-39 NB (RAMP DA) OVER

I-39 SB (RAMP BD)

F.A.I. RTE. 39 SEC. (201-3)K

WINNEBAGO COUNTY

STATION 364+92.09

STRUCTURE NO. 101-0204



QUIGG ENGINEERING INC

USER NAME = rwhite
D264C62-1010204-SHT-001-GPE
PLOT SCALE = 42.6667' / in.
PLOT DATE = 03/31/2023

DESIGNED - RPW
CHECKED - KFO
DRAWN - LMC
CHECKED - MDC

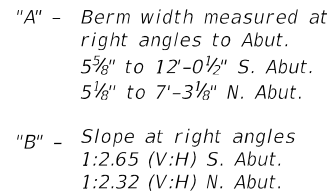
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	863
CONTRACT NO. 64B13				

ILLINOIS FED. AID PROJECT



SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

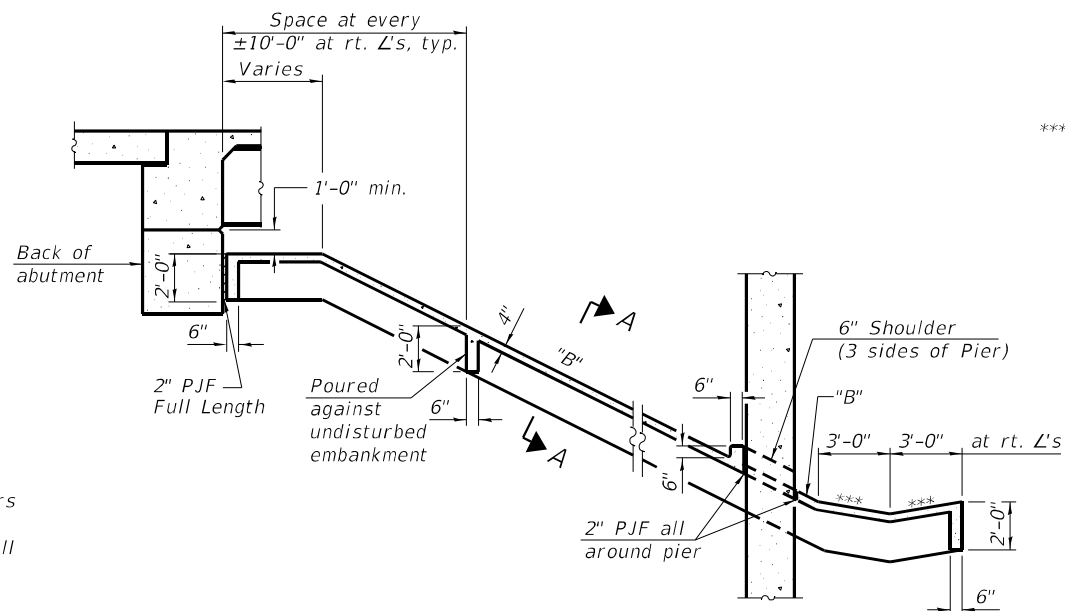
1. General Plan and Elevation
2. General Data
- 3-4. Stage Construction Details
- 5-8. Top Of Slab Elevations
 9. Top Of South Approach Slab Elevations
 10. Top Of North Approach Slab Elevations
 11. Superstructure
- 12-13. Superstructure Details
 14. Diaphragm Details
 15. Drainage Scupper, DS-11
- 16-18. Precast Bridge Approach Slab Details
 19. Preformed Joint Strip Seal
 20. Framing Plan
 21. Structural Steel Details
 22. Design Data Tables
 23. Bearing Details
 24. South Abutment
 25. North Abutment
- 26-27. Abutment Details
 28. Pier 1
 29. Pier 2
 30. Bar Splicer Details
 31. HP Pile Details
 32. Concrete Parapet Slipforming Option
- 33-37. Boring Logs

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yd.		5,572	5,572
Rock Excavation for Structures	Cu. Yd.		17	17
Floor Drains	Each	14		14
Concrete Structures	Cu. Yd.		371.5	371.5
Concrete Superstructure	Cu. Yd.	578.3		578.3
Protective Coat	Sq. Yd.	2,165		2,165
Furnishing & Erecting Structural Steel	L. Sum	0.2		0.2
Stud Shear Connectors	Each	9,342		9,342
Reinforcement Bars, Epoxy Coated	Pound	149,670	47,130	196,800
Bar Splicers	Each		300	300
Mechanical Splicers	Each		2	2
Slope Wall 4 Inch	Sq. Yd.		1,214	1,214
Furnishing Steel Piles HP14x89	Foot		300	300
Driving Piles	Foot		300	300
Test Pile Steel HP14x89	Each		2	2
Pile Shoes	Each		12	12
Furnishing Steel Piles W14x211	Foot		781	781
Drilling and Setting Piles (In Soil)	Cu. Ft.		87.7	87.7
Drilling and Setting Piles (In Rock)	Cu. Ft.		44.0	44.0
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	115.0		115.0
Anchor Bolts, 1"	Each	24		24
Anchor Bolts, 1¼"	Each	24		24
Temporary Soil Retention System	Sq. Ft.		716	716
Granular Backfill for Structures	Cu. Yd.		349	349
Geocomposite Wall Drain	Sq. Yd.		165	165
Pipe Underdrains for Structures 4"	Foot		239	239
Drainage Scuppers, DS-11	Each	2		2
Diamond Grinding (Bridge Section)	Sq. Yd.	1,914		1,914
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	1,089		1,089
Concrete Wearing Surface, 5"	Sq. Yd.	280		280
Precast Bridge Approach Slab	Sq. Ft.	2,380		2,380

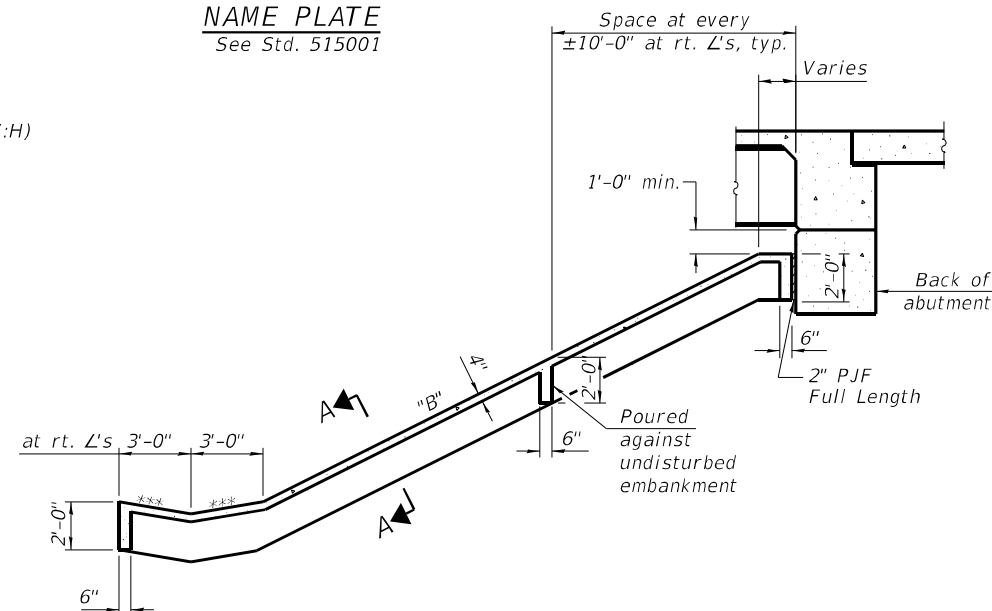
Notes:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).
 See Sheet 1 of 37 for Section A-A.

GENERAL NOTES

Calculated Weight of Structural Steel = 27,230 lbs (M270 Grade 36)
= 581,810 lbs (M270 Grade 50)
No field welding is permitted except as specified in the contract documents.
Reinforcement bars designated (E) shall be epoxy coated.
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
The concrete for bridge decks finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The machine used for finishing shall be set parallel to the skew for striking off and screeding the concrete.
Sloped wall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.
All new structural steel shall be metalized, unless noted otherwise. See Special Provision for "Metallizing of Structural Steel."
Fasteners shall be ASTM F 3125 Grade A325 Type 1, mechanically galvanized bolts in metalized areas.
Protective Coat shall be applied to the entire surface of the bridge deck, approach slabs and to the top and traffic face of all bridge deck and approach slab parapets.
Structure Excavation limits shall be to 1'-0" min. below the bottom of the girder except at the abutment and pier caps. For limits of Structure Excavation at the abutment and pier caps see Sheet 4 of 37. The excavation below these areas shall be paid for in the Roadway Plans.



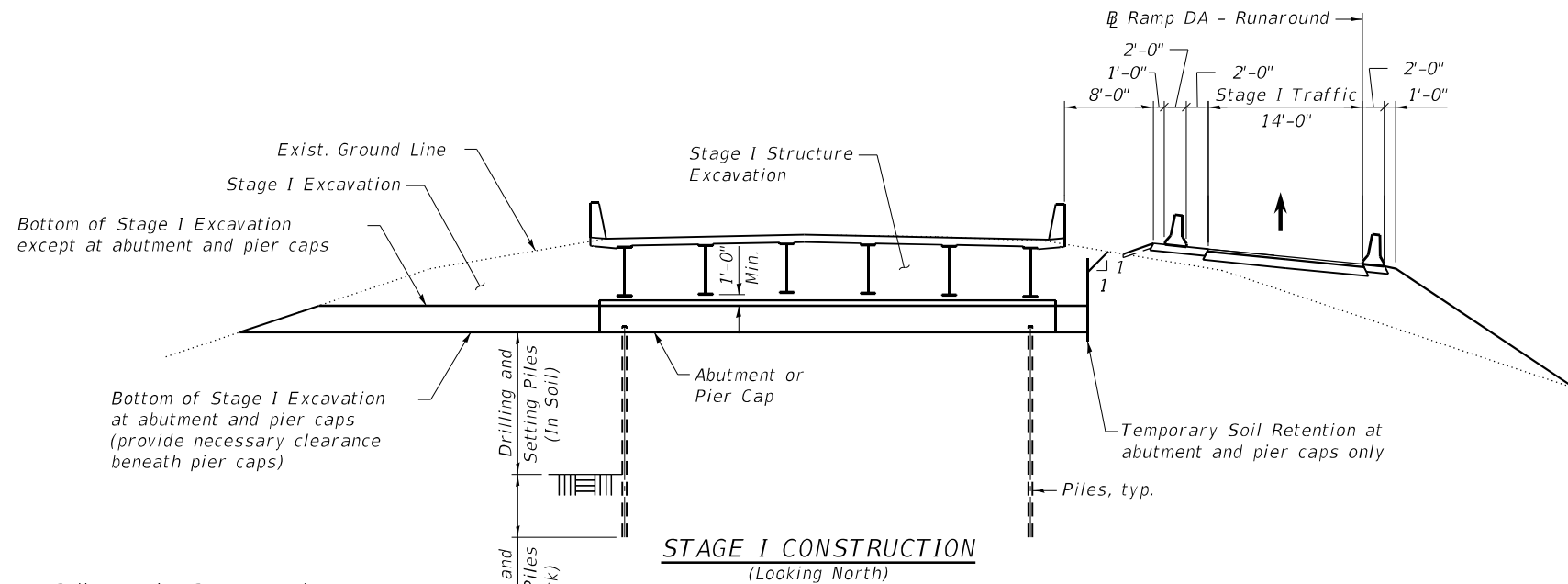
SECTION THRU
CONCRETE SLOPEWALL
(South Abutment)



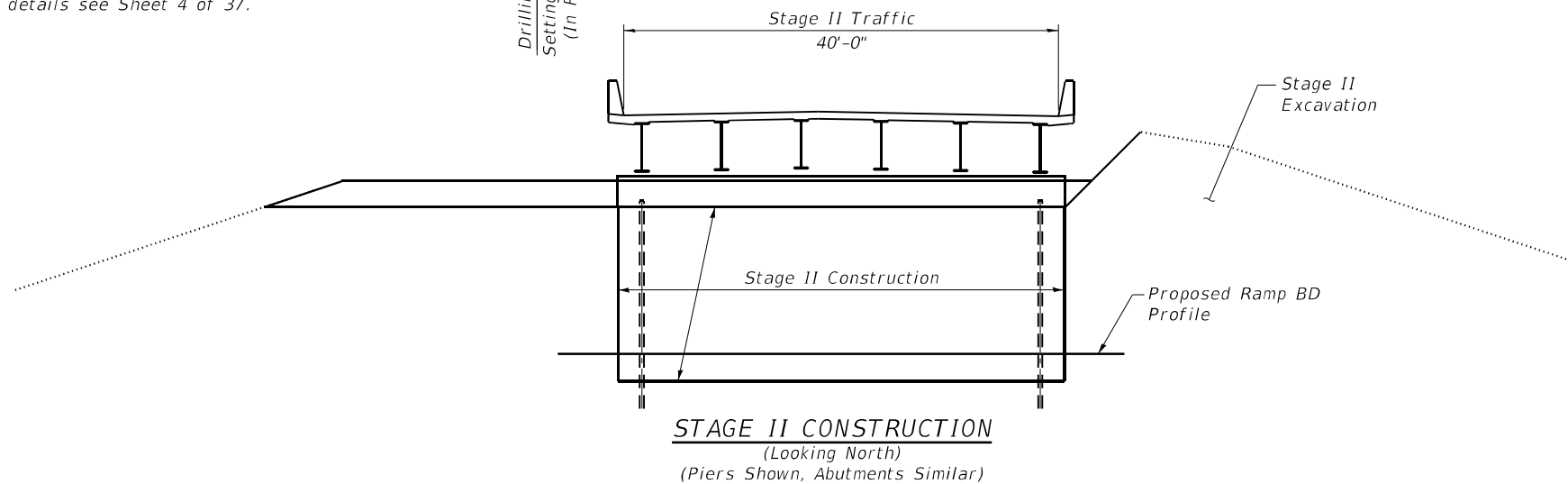
SECTION THRU
CONCRETE SLOPEWALL
(North Abutment)

 QUIGG ENGINEERING INC	USER NAME = rwhiteside	DESIGNED - RPW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL DATA STRUCTURE NO. 101-0204					F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	D264C62-1010204-SHT-002-GeneralDetails	CHECKED - KFO	REVISED -		39	(201-3)K	WINNEBAGO	2192	864					
	PLOT SCALE = 0.1667' / in.	DRAWN - LMC	REVISED -		CONTRACT NO. 64B13									
	PLOT DATE = 03/31/2023	CHECKED - MDC	REVISED -		SHEET 2 OF 37 SHEETS									

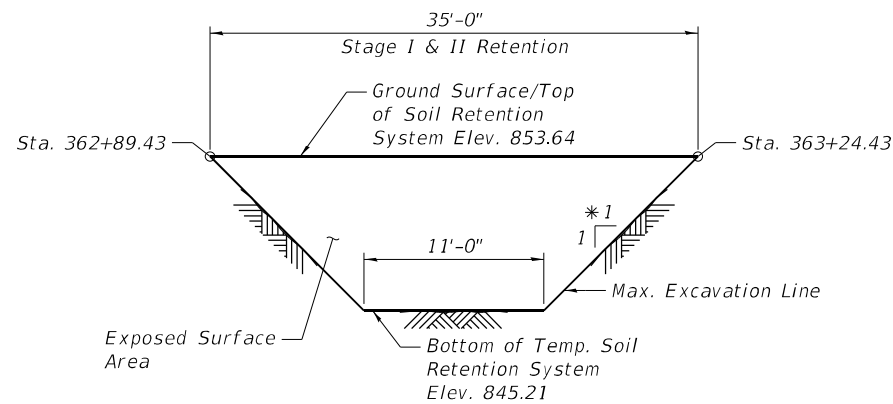
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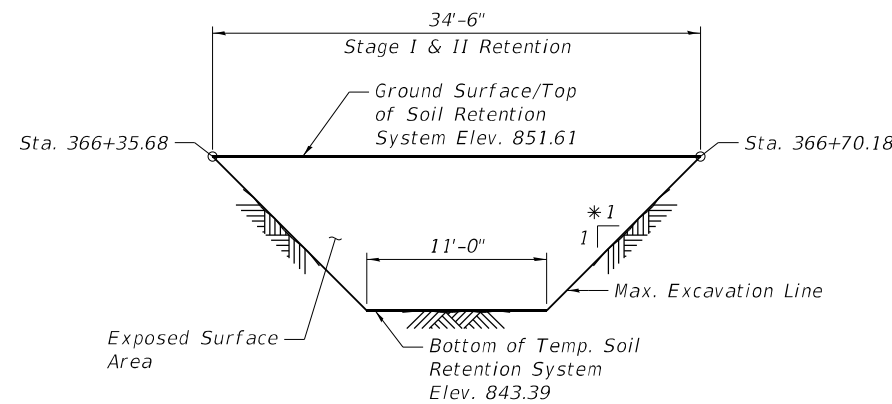
STAGE I CONSTRUCTION
(Looking North)



STAGE II CONSTRUCTION
(Looking North)
(Piers Shown, Abutments Similar)



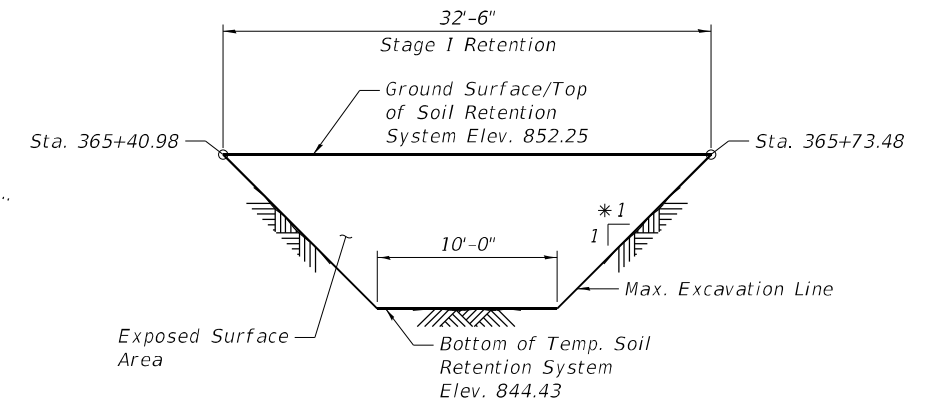
TEMPORARY SOIL RETENTION SYSTEM
AT SOUTH ABUTMENT



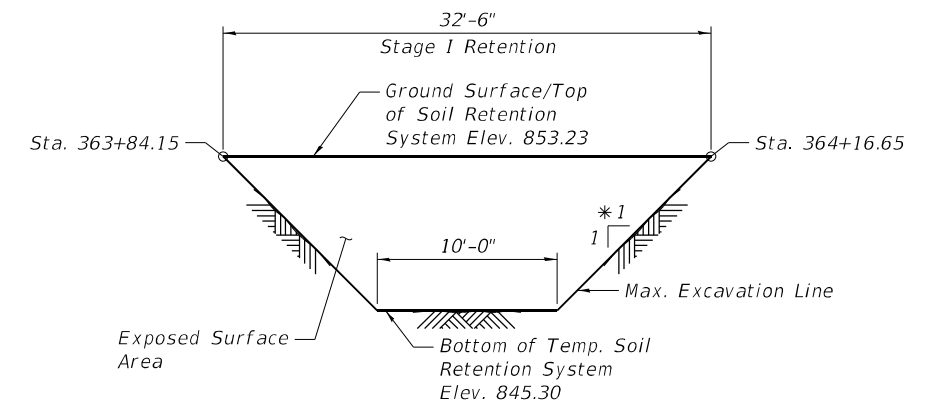
TEMPORARY SOIL RETENTION SYSTEM
AT NORTH ABUTMENT

*At right angles to excavation

- CONSTRUCTION SEQUENCE**
- Ramp DA over Ramp BD will be constructed using a top-down construction method. A runaround to the east will be utilized to maintain one lane of traffic (minimum) for Ramp DA at all times as indicated below.
1. Construct a runaround to the east.
 2. Direct Ramp DA traffic to the runaround.
 3. Proceed with Stage I Excavation to 1'-0" min. below the bottom of the proposed girders across the spans using slopes laid back at 1:1 as shown on Stage I Construction Detail.
 4. Install Temporary Soil Retention System as required at the abutments and piers and excavate as required to construct the substructure foundations and caps.
 5. Install piles.
 6. Complete Stage I Construction including the abutment caps, abutment west wings, pier caps, superstructure and approach slabs. During Stage I Construction only part of the east wing at each abutment shall be constructed.
 7. Direct Ramp DA traffic to Stage II Traffic.
 8. Proceed with Stage II Excavation beneath Stage I Construction and as required for Stage II Construction.
 9. Proceed with Stage II Construction including the pier stem walls and the abutment slope walls. During Stage II Construction the east wing at both abutments will be completed.



TEMPORARY SOIL RETENTION SYSTEM AT PIER 2



TEMPORARY SOIL RETENTION SYSTEM AT PIER 1

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structure Excavation	Cu. Yd.	3,931
Temporary Soil Retention System	Sq. Ft.	716



QUIGG ENGINEERING INC

USER NAME =	rwhiteside	DESIGNED -	RPW	REVISED -	
D264C62-1010204-SHT-003-Staging1		CHECKED -	KFO	REVISED -	
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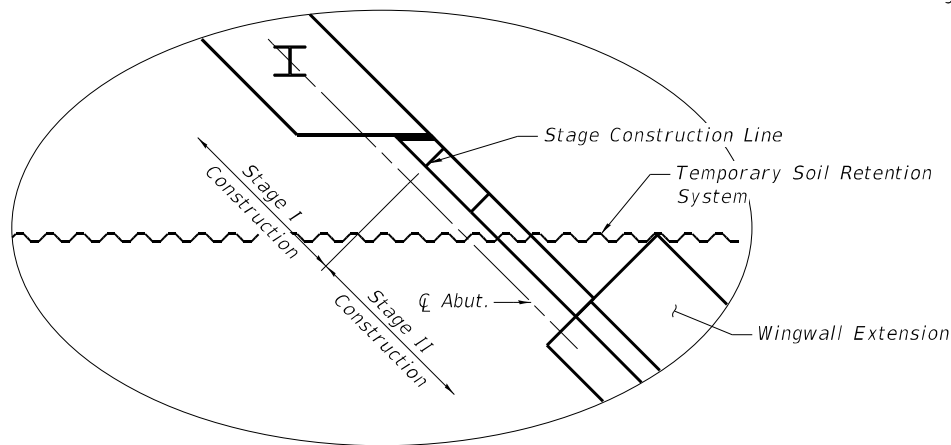
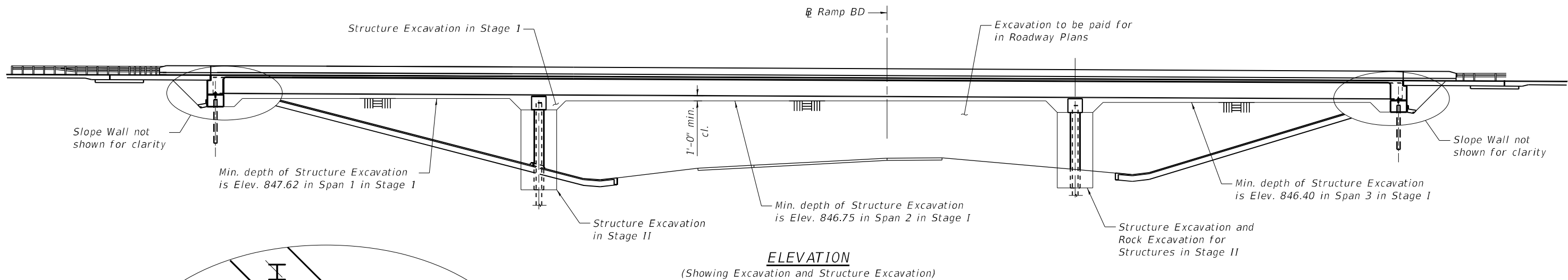
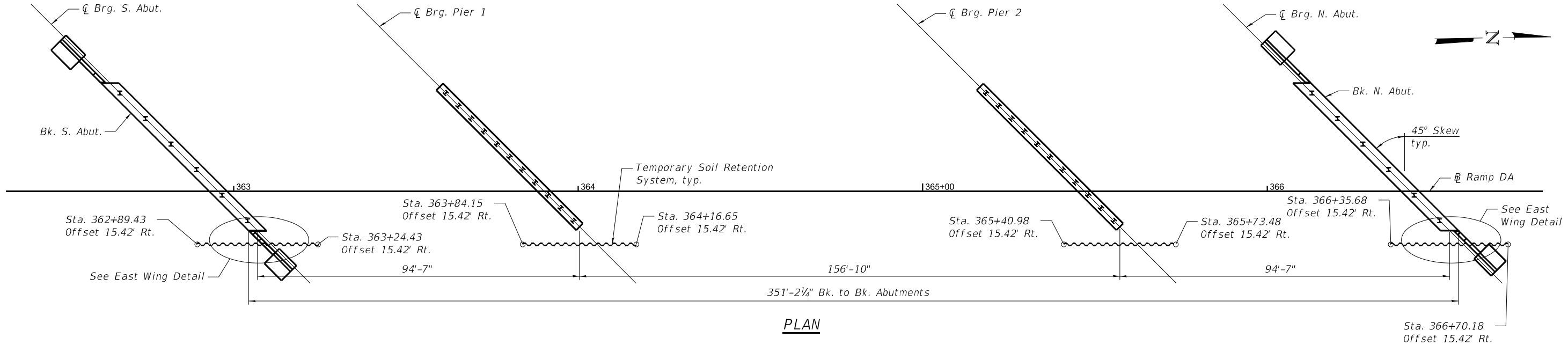
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 101-0204

SHEET 3 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	865
				CONTRACT NO. 64B13
ILLINOIS FED. AID PROJECT				

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3/30/2023 8:27:00 AM



Notes:
The information shown for the temporary soil retention system is estimated.
For limits of Structure Excavation at abutment and pier caps in Stage I see Temporary Soil Retention System Details. For limits of Structure Excavation in Stage I below girders see Elevation. For quantity and limits of Structure Excavation and Rock Excavation for Structures at pier stem see Pier sheets.
For Temporary Soil Retention System Details and additional notes and details see Sheet 3 of 37.



QUIGG ENGINEERING INC

USER NAME	=	rwhite
DESIGNED	-	RPW
D264C62-1010204-SHT-004-Staging2	CHECKED	- KFO
PLOT SCALE	=	0.1667' / in.
DRAWN	-	LMC
PLOT DATE	=	03/31/2023
CHECKED	-	MDC

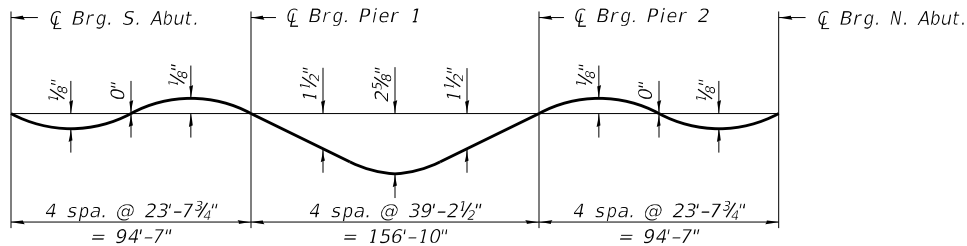
REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

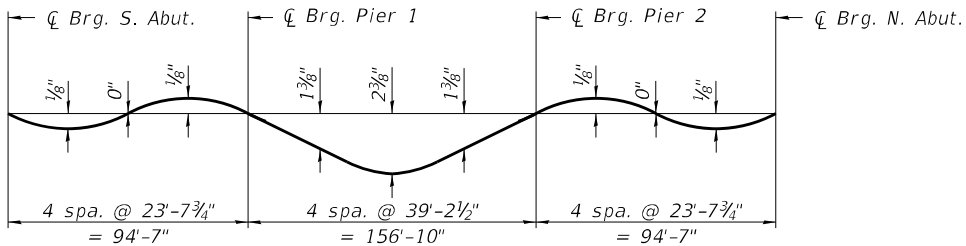
STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 101-0204

SHEET 4 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	866
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

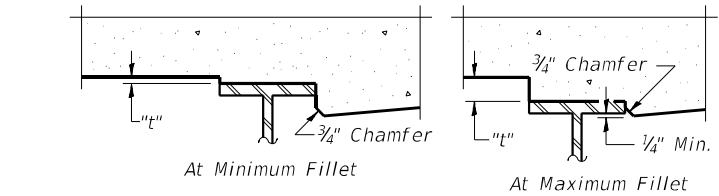


INTERIOR GIRDER DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only.)



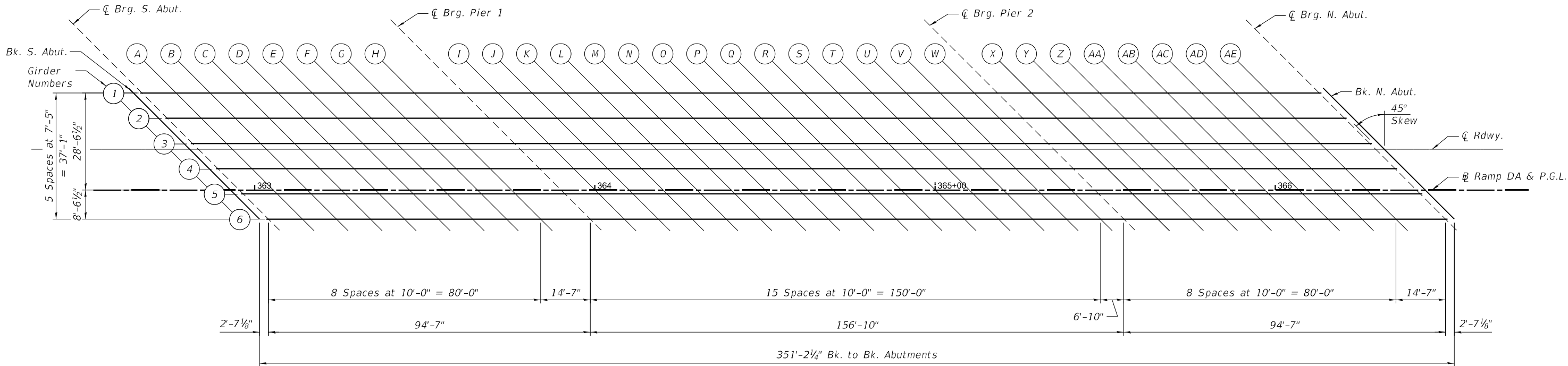
EXTERIOR GIRDER DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown on Sheets 6 through 8 of 37.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown on Sheets 6 through 8 of 37, minus the initial slab thickness prior to grinding, equals the fillet heights "t" above top flange of girders.
The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown on Sheets 6 through 8 of 37. For grinding the deck, see Special Provisions.

FILLET HEIGHTS



PLAN

MODEL: Default
FILE NAME: pw:\\benesch-pw-bentley.com\\benesch-pw-q\\Documents\\10800\\10800\\00\\Eng_Docs\\CAD_Sheets\\SN 0204 Ramp DA [Quigg]D264C62-1010204-SHT-005-TSElev1



QUIGG ENGINEERING INC

USER NAME	=	rwhteside	DESIGNED	-	RPW	REVISED	-
D264C62-1010204-SHT-005-TSElev1			CHECKED	-	KFO	REVISED	-
PLOT SCALE	=	30.0000' / in.	DRAWN	-	LMC	REVISED	-
PLOT DATE	=	03/31/2023	CHECKED	-	MDC	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 101-0204

SHEET 5 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	867
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

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3/30/2023 8:27:12 AM

GIRDER 1				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. S. Abut.	362+64.38	-28.54	854.87	854.89
⌀ Brg. S. Abut.	362+66.97	-28.54	854.86	854.88
A	362+76.97	-28.54	854.83	854.85
B	362+86.97	-28.54	854.79	854.82
C	362+96.97	-28.54	854.76	854.79
D	363+06.97	-28.54	854.72	854.75
E	363+16.97	-28.54	854.68	854.70
F	363+26.97	-28.54	854.64	854.66
G	363+36.97	-28.54	854.60	854.61
H	363+46.97	-28.54	854.56	854.57
⌀ Brg. Pier 1	363+61.55	-28.54	854.50	854.52
I	363+71.55	-28.54	854.45	854.49
J	363+81.55	-28.54	854.40	854.48
K	363+91.55	-28.54	854.36	854.46
L	364+01.55	-28.54	854.31	854.45
M	364+11.55	-28.54	854.26	854.43
N	364+21.55	-28.54	854.20	854.40
O	364+31.55	-28.54	854.15	854.37
P	364+41.55	-28.54	854.10	854.32
Q	364+51.55	-28.54	854.04	854.25
R	364+61.55	-28.54	853.98	854.18
S	364+71.55	-28.54	853.93	854.09
T	364+81.55	-28.54	853.87	854.00
U	364+91.55	-28.54	853.81	853.91
V	365+01.55	-28.54	853.76	853.82
W	365+11.55	-28.54	853.70	853.73
⌀ Brg. Pier 2	365+18.39	-28.54	853.66	853.68
X	365+28.39	-28.54	853.60	853.61
Y	365+38.39	-28.54	853.55	853.55
Z	365+48.39	-28.54	853.49	853.50
AA	365+58.39	-28.54	853.43	853.45
AB	365+68.39	-28.54	853.38	853.40
AC	365+78.39	-28.54	853.32	853.34
AD	365+88.39	-28.54	853.26	853.29
AE	365+98.39	-28.54	853.20	853.23
⌀ Brg. N. Abut.	366+12.97	-28.54	853.12	853.14
Bk. N. Abut.	366+15.56	-28.54	853.11	853.13

GIRDER 2				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. S. Abut.	362+71.79	-21.13	854.98	855.00
⌀ Brg. S. Abut.	362+74.39	-21.13	854.97	854.99
A	362+84.39	-21.13	854.94	854.96
B	362+94.39	-21.13	854.90	854.93
C	363+04.39	-21.13	854.86	854.89
D	363+14.39	-21.13	854.83	854.85
E	363+24.39	-21.13	854.79	854.81
F	363+34.39	-21.13	854.75	854.76
G	363+44.39	-21.13	854.70	854.71
H	363+54.39	-21.13	854.66	854.67
⌀ Brg. Pier 1	363+68.97	-21.13	854.60	854.62
I	363+78.97	-21.13	854.55	854.59
J	363+88.97	-21.13	854.50	854.58
K	363+98.97	-21.13	854.45	854.57
L	364+08.97	-21.13	854.40	854.55
M	364+18.97	-21.13	854.35	854.54
N	364+28.97	-21.13	854.30	854.51
O	364+38.97	-21.13	854.24	854.48
P	364+48.97	-21.13	854.19	854.43
Q	364+58.97	-21.13	854.13	854.36
R	364+68.97	-21.13	854.08	854.28
S	364+78.97	-21.13	854.02	854.20
T	364+88.97	-21.13	853.96	854.10
U	364+98.97	-21.13	853.90	854.01
V	365+08.97	-21.13	853.85	853.91
W	365+18.97	-21.13	853.79	853.83
⌀ Brg. Pier 2	365+25.80	-21.13	853.75	853.77
X	365+35.80	-21.13	853.69	853.70
Y	365+45.80	-21.13	853.64	853.64
Z	365+55.80	-21.13	853.58	853.59
AA	365+65.80	-21.13	853.52	853.54
AB	365+75.80	-21.13	853.47	853.49
AC	365+85.80	-21.13	853.41	853.44
AD	365+95.80	-21.13	853.35	853.38
AE	366+05.80	-21.13	853.30	853.32
⌀ Brg. N. Abut.	366+20.39	-21.13	853.21	853.23
Bk. N. Abut.	366+22.98	-21.13	853.20	853.22

GIRDER 3				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. S. Abut.	362+79.21	-13.71	855.06	855.09
⌀ Brg. S. Abut.	362+81.80	-13.71	855.06	855.08
A	362+91.80	-13.71	855.02	855.05
B	363+01.80	-13.71	854.98	855.02
C	363+11.80	-13.71	854.95	854.98
D	363+21.80	-13.71	854.91	854.93
E	363+31.80	-13.71	854.87	854.89
F	363+41.80	-13.71	854.83	854.84
G	363+51.80	-13.71	854.78	854.79
H	363+61.80	-13.71	854.74	854.75
⌀ Brg. Pier 1	363+76.39	-13.71	854.67	854.69
I	363+86.39	-13.71	854.63	854.67
J	363+96.39	-13.71	854.58	854.65
K	364+06.39	-13.71	854.53	854.64
L	364+16.39	-13.71	854.48	854.63
M	364+26.39	-13.71	854.42	854.61
N	364+36.39	-13.71	854.37	854.59
O	364+46.39	-13.71	854.31	854.55
P	364+56.39	-13.71	854.26	854.50
Q	364+66.39	-13.71	854.20	854.43
R	364+76.39	-13.71	854.14	854.35
S	364+86.39	-13.71	854.09	854.27
T	364+96.39	-13.71	854.03	854.17
U	365+06.39	-13.71	853.97	854.08
V	365+16.39	-13.71	853.92	853.98
W	365+26.39	-13.71	853.86	853.90
⌀ Brg. Pier 2	365+33.22	-13.71	853.82	853.84
X	365+43.22	-13.71	853.76	853.77
Y	365+53.22	-13.71	853.71	853.71
Z	365+63.22	-13.71	853.65	853.66
AA	365+73.22	-13.71	853.59	853.61
AB	365+83.22	-13.71	853.54	853.56
AC	365+93.22	-13.71	853.48	853.51
AD	366+03.22	-13.71	853.42	853.45
AE	366+13.22	-13.71	853.36	853.39
⌀ Brg. N. Abut.	366+27.80	-13.71	853.28	853.30
Bk. N. Abut.	366+30.40	-13.71	853.27	853.29



QUIGG ENGINEERING INC

USER NAME	=	rwhtleside	DESIGNED	-	RPW	REVISED	-
D264C62-1010204-SHT-006-TSElev2			CHECKED	-	KFO	REVISED	-
PLOT SCALE	=	0.1667" / in.	DRAWN	-	LMC	REVISED	-
PLOT DATE	=	03/31/2023	CHECKED	-	MDC	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 101-0204

SHEET 6 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	868
		CONTRACT NO. 64B13		
		ILLINOIS	FED. AID PROJECT	

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. S. Abut.	362+80.92	-12.00	855.08	855.11
☿ Brg. S. Abut.	362+83.51	-12.00	855.08	855.10
A	362+93.51	-12.00	855.04	855.07
B	363+03.51	-12.00	855.00	855.04
C	363+13.51	-12.00	854.97	855.00
D	363+23.51	-12.00	854.93	854.95
E	363+33.51	-12.00	854.89	854.91
F	363+43.51	-12.00	854.85	854.86
G	363+53.51	-12.00	854.80	854.81
H	363+63.51	-12.00	854.76	854.77
☿ Brg. Pier 1	363+78.10	-12.00	854.69	854.71
I	363+88.10	-12.00	854.64	854.69
J	363+98.10	-12.00	854.59	854.67
K	364+08.10	-12.00	854.54	854.66
L	364+18.10	-12.00	854.49	854.64
M	364+28.10	-12.00	854.44	854.63
N	364+38.10	-12.00	854.39	854.60
O	364+48.10	-12.00	854.33	854.56
P	364+58.10	-12.00	854.27	854.51
Q	364+68.10	-12.00	854.22	854.45
R	364+78.10	-12.00	854.16	854.37
S	364+88.10	-12.00	854.10	854.28
T	364+98.10	-12.00	854.05	854.19
U	365+08.10	-12.00	853.99	854.09
V	365+18.10	-12.00	853.93	854.00
W	365+28.10	-12.00	853.88	853.91
☿ Brg. Pier 2	365+34.93	-12.00	853.84	853.86
X	365+44.93	-12.00	853.78	853.79
Y	365+54.93	-12.00	853.72	853.73
Z	365+64.93	-12.00	853.67	853.67
AA	365+74.93	-12.00	853.61	853.62
AB	365+84.93	-12.00	853.55	853.57
AC	365+94.93	-12.00	853.49	853.52
AD	366+04.93	-12.00	853.44	853.47
AE	366+14.93	-12.00	853.38	853.41
☿ Brg. N. Abut.	366+29.51	-12.00	853.30	853.32
Bk. N. Abut.	366+32.10	-12.00	853.28	853.30

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. S. Abut.	362+86.63	-6.29	854.98	855.00
☒ Brg. S. Abut.	362+89.22	-6.29	854.97	854.99
A	362+99.22	-6.29	854.93	854.96
B	363+09.22	-6.29	854.90	854.93
C	363+19.22	-6.29	854.86	854.89
D	363+29.22	-6.29	854.82	854.85
E	363+39.22	-6.29	854.78	854.80
F	363+49.22	-6.29	854.74	854.75
G	363+59.22	-6.29	854.69	854.70
H	363+69.22	-6.29	854.65	854.65
☒ Brg. Pier 1	363+83.80	-6.29	854.58	854.60
I	363+93.80	-6.29	854.53	854.57
J	364+03.80	-6.29	854.48	854.56
K	364+13.80	-6.29	854.43	854.54
L	364+23.80	-6.29	854.38	854.53
M	364+33.80	-6.29	854.32	854.51
N	364+43.80	-6.29	854.27	854.48
O	364+53.80	-6.29	854.21	854.45
P	364+63.80	-6.29	854.16	854.40
Q	364+73.80	-6.29	854.10	854.33
R	364+83.80	-6.29	854.04	854.25
S	364+93.80	-6.29	853.99	854.16
T	365+03.80	-6.29	853.93	854.07
U	365+13.80	-6.29	853.87	853.97
V	365+23.80	-6.29	853.81	853.88
W	365+33.80	-6.29	853.76	853.79
☒ Brg. Pier 2	365+40.64	-6.29	853.72	853.74
X	365+50.64	-6.29	853.66	853.67
Y	365+60.64	-6.29	853.60	853.61
Z	365+70.64	-6.29	853.55	853.56
AA	365+80.64	-6.29	853.49	853.51
AB	365+90.64	-6.29	853.43	853.46
AC	366+00.64	-6.29	853.38	853.40
AD	366+10.64	-6.29	853.32	853.35
AE	366+20.64	-6.29	853.26	853.29
☒ Brg. N. Abut.	366+35.22	-6.29	853.18	853.20
Bk. N. Abut.	366+37.81	-6.29	853.16	853.19

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. S. Abut.	362+92.92	0.00	854.86	854.88
Ÿ Brg. S. Abut.	362+95.51	0.00	854.85	854.87
A	363+05.51	0.00	854.82	854.84
B	363+15.51	0.00	854.78	854.81
C	363+25.51	0.00	854.74	854.77
D	363+35.51	0.00	854.70	854.73
E	363+45.51	0.00	854.66	854.68
F	363+55.51	0.00	854.61	854.63
G	363+65.51	0.00	854.57	854.58
H	363+75.51	0.00	854.52	854.53
Ÿ Brg. Pier 1	363+90.10	0.00	854.45	854.47
I	364+00.10	0.00	854.40	854.45
J	364+10.10	0.00	854.35	854.43
K	364+20.10	0.00	854.30	854.42
L	364+30.10	0.00	854.25	854.40
M	364+40.10	0.00	854.19	854.38
N	364+50.10	0.00	854.14	854.36
O	364+60.10	0.00	854.08	854.32
P	364+70.10	0.00	854.03	854.26
Q	364+80.10	0.00	853.97	854.20
R	364+90.10	0.00	853.91	854.12
S	365+00.10	0.00	853.85	854.03
T	365+10.10	0.00	853.80	853.94
U	365+20.10	0.00	853.74	853.84
V	365+30.10	0.00	853.68	853.75
W	365+40.10	0.00	853.63	853.66
Ÿ Brg. Pier 2	365+46.93	0.00	853.59	853.61
X	365+56.93	0.00	853.53	853.54
Y	365+66.93	0.00	853.47	853.48
Z	365+76.93	0.00	853.42	853.43
AA	365+86.93	0.00	853.36	853.38
AB	365+96.93	0.00	853.30	853.33
AC	366+06.93	0.00	853.25	853.27
AD	366+16.93	0.00	853.19	853.22
AE	366+26.93	0.00	853.13	853.16
Ÿ Brg. N. Abut.	366+41.51	0.00	853.05	853.07
Bk. N. Abut.	366+44.10	0.00	853.03	853.06

MODEL: Default
FILE NAME: pw:\\benesch-pw.bentley.com\\benesch-pw-q\\Documents\\10800\\10800\\00\\Erg_Docs\\CAD_Sheets\\SN 0204 Ramp DA [Quigg]D264C62-1010204-SHT-008-TSElev4

GIRDER 5				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. S. Abut.	362+94.04	1.13	854.84	854.86
⌒ Brg. S. Abut.	362+96.64	1.13	854.83	854.85
A	363+06.64	1.13	854.79	854.82
B	363+16.64	1.13	854.75	854.78
C	363+26.64	1.13	854.71	854.74
D	363+36.64	1.13	854.67	854.70
E	363+46.64	1.13	854.63	854.65
F	363+56.64	1.13	854.59	854.60
G	363+66.64	1.13	854.54	854.55
H	363+76.64	1.13	854.50	854.50
⌒ Brg. Pier 1	363+91.22	1.13	854.43	854.45
I	364+01.22	1.13	854.38	854.42
J	364+11.22	1.13	854.33	854.40
K	364+21.22	1.13	854.27	854.39
L	364+31.22	1.13	854.22	854.37
M	364+41.22	1.13	854.17	854.35
N	364+51.22	1.13	854.11	854.33
O	364+61.22	1.13	854.05	854.29
P	364+71.22	1.13	854.00	854.24
Q	364+81.22	1.13	853.94	854.17
R	364+91.22	1.13	853.88	854.09
S	365+01.22	1.13	853.83	854.00
T	365+11.22	1.13	853.77	853.91
U	365+21.22	1.13	853.71	853.81
V	365+31.22	1.13	853.66	853.72
W	365+41.22	1.13	853.60	853.63
⌒ Brg. Pier 2	365+48.05	1.13	853.56	853.58
X	365+58.05	1.13	853.50	853.51
Y	365+68.05	1.13	853.45	853.45
Z	365+78.05	1.13	853.39	853.40
AA	365+88.05	1.13	853.33	853.35
AB	365+98.05	1.13	853.27	853.30
AC	366+08.05	1.13	853.22	853.24
AD	366+18.05	1.13	853.16	853.19
AE	366+28.05	1.13	853.10	853.13
⌒ Brg. N. Abut.	366+42.64	1.13	853.02	853.04
Bk. N. Abut.	366+45.23	1.13	853.01	853.03

GIRDER 6				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. S. Abut.	363+01.46	8.54	854.66	854.68
⌒ Brg. S. Abut.	363+04.05	8.54	854.65	854.67
A	363+14.05	8.54	854.61	854.64
B	363+24.05	8.54	854.57	854.60
C	363+34.05	8.54	854.53	854.56
D	363+44.05	8.54	854.49	854.52
E	363+54.05	8.54	854.45	854.47
F	363+64.05	8.54	854.40	854.42
G	363+74.05	8.54	854.36	854.37
H	363+84.05	8.54	854.31	854.32
⌒ Brg. Pier 1	363+98.64	8.54	854.24	854.26
I	364+08.64	8.54	854.19	854.23
J	364+18.64	8.54	854.14	854.21
K	364+28.64	8.54	854.09	854.19
L	364+38.64	8.54	854.03	854.17
M	364+48.64	8.54	853.98	854.15
N	364+58.64	8.54	853.92	854.12
O	364+68.64	8.54	853.86	854.08
P	364+78.64	8.54	853.81	854.03
Q	364+88.64	8.54	853.75	853.96
R	364+98.64	8.54	853.69	853.89
S	365+08.64	8.54	853.64	853.80
T	365+18.64	8.54	853.58	853.71
U	365+28.64	8.54	853.52	853.62
V	365+38.64	8.54	853.46	853.53
W	365+48.64	8.54	853.41	853.44
⌒ Brg. Pier 2	365+55.47	8.54	853.37	853.39
X	365+65.47	8.54	853.31	853.32
Y	365+75.47	8.54	853.25	853.26
Z	365+85.47	8.54	853.20	853.21
AA	365+95.47	8.54	853.14	853.16
AB	366+05.47	8.54	853.08	853.10
AC	366+15.47	8.54	853.03	853.05
AD	366+25.47	8.54	852.97	853.00
AE	366+35.47	8.54	852.91	852.94
⌒ Brg. N. Abut.	366+50.05	8.54	852.83	852.85
Bk. N. Abut.	366+52.65	8.54	852.81	852.84



QUIGG ENGINEERING INC

USER NAME	=	rwhtleside	DESIGNED	-	RPW	REVISED	-
D264C62-1010204-SHT-008-TSElev4			CHECKED	-	KFO	REVISED	-
PLOT SCALE	=	0.1667" / in.	DRAWN	-	LMC	REVISED	-
PLOT DATE	=	03/31/2023	CHECKED	-	MDC	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 101-0204

SHEET 8 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	870
		CONTRACT NO. 64B13		
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
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WEST EDGE OF SHOULDER

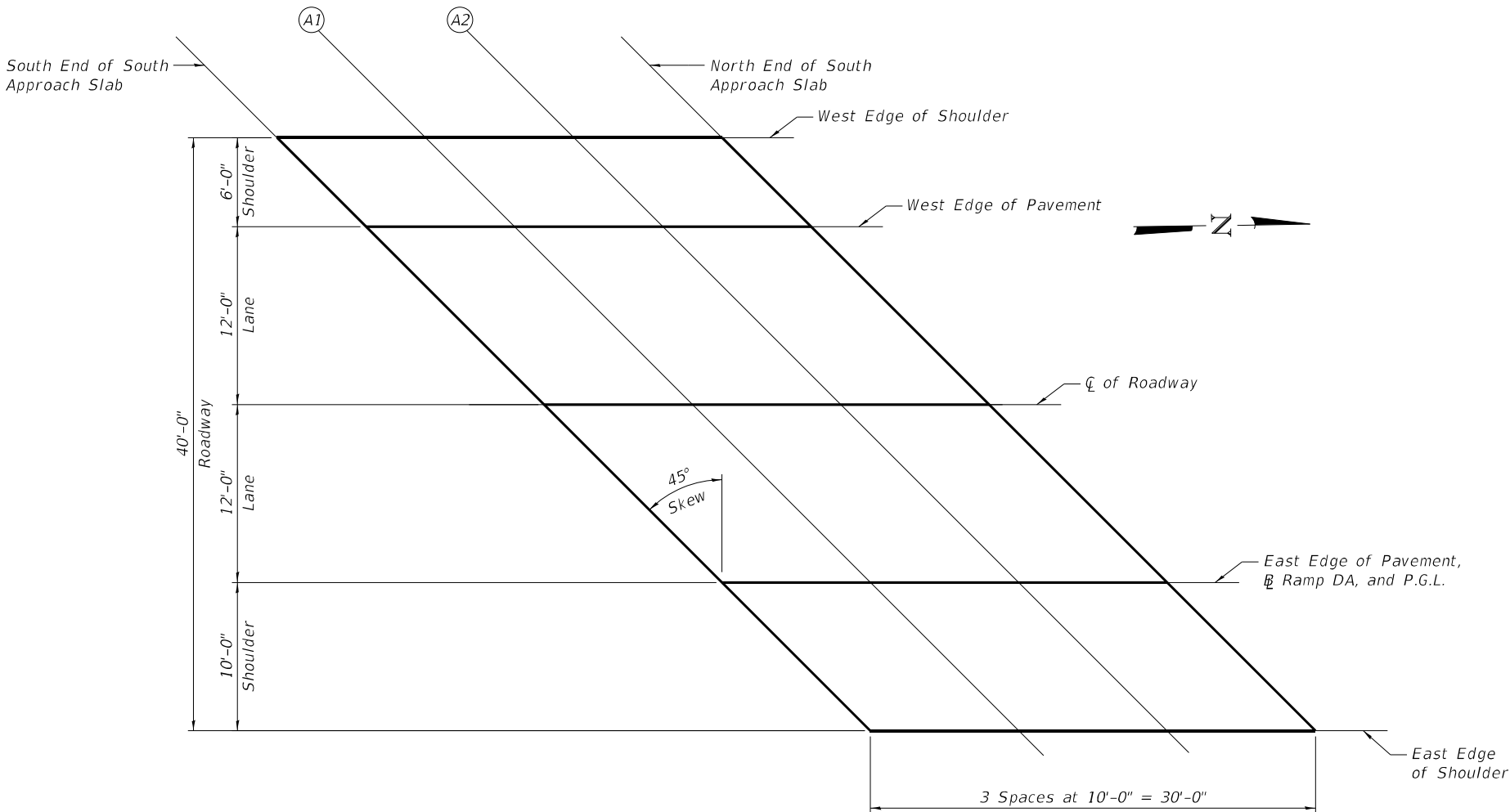
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of S. Appr. Slab	362+34.33	-30.00	854.93	854.95
A1	362+44.33	-30.00	854.90	854.92
A2	362+54.33	-30.00	854.87	854.89
N. End of S. Appr. Slab	362+64.33	-30.00	854.84	854.86

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of S. Appr. Slab	362+40.33	-24.00	855.03	855.05
A1	362+50.33	-24.00	855.00	855.02
A2	362+60.33	-24.00	854.97	854.99
N. End of S. Appr. Slab	362+70.33	-24.00	854.94	854.96

☐ OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of S. Appr. Slab	362+52.33	-12.00	855.18	855.20
A1	362+62.33	-12.00	855.15	855.17
A2	362+72.33	-12.00	855.11	855.13
N. End of S. Appr. Slab	362+82.33	-12.00	855.08	855.10



PLAN
(South Approach)

EAST EDGE OF PAVEMENT, ☐ RAMP DA, & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of S. Appr. Slab	362+64.33	0.00	854.96	854.98
A1	362+74.33	0.00	854.93	854.95
A2	362+84.33	0.00	854.89	854.91
N. End of S. Appr. Slab	362+94.33	0.00	854.86	854.88

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of S. Appr. Slab	362+74.33	10.00	854.73	854.75
A1	362+84.33	10.00	854.69	854.71
A2	362+94.33	10.00	854.66	854.68
N. End of S. Appr. Slab	363+04.33	10.00	854.62	854.64



QUIGG ENGINEERING INC

USER NAME	=	rwhiteside	DESIGNED	-	RPW	REVISED	-
D264C62-1010204-SHT-009-TAElev1			CHECKED	-	KFO	REVISED	-
PLOT SCALE	=	0.1667' / in.	DRAWN	-	LMC	REVISED	-
PLOT DATE	=	03/31/2023	CHECKED	-	MDC	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SOUTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 101-0204

SHEET 9 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	871
		CONTRACT NO. 64B13		
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
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WEST EDGE OF SHOULDER

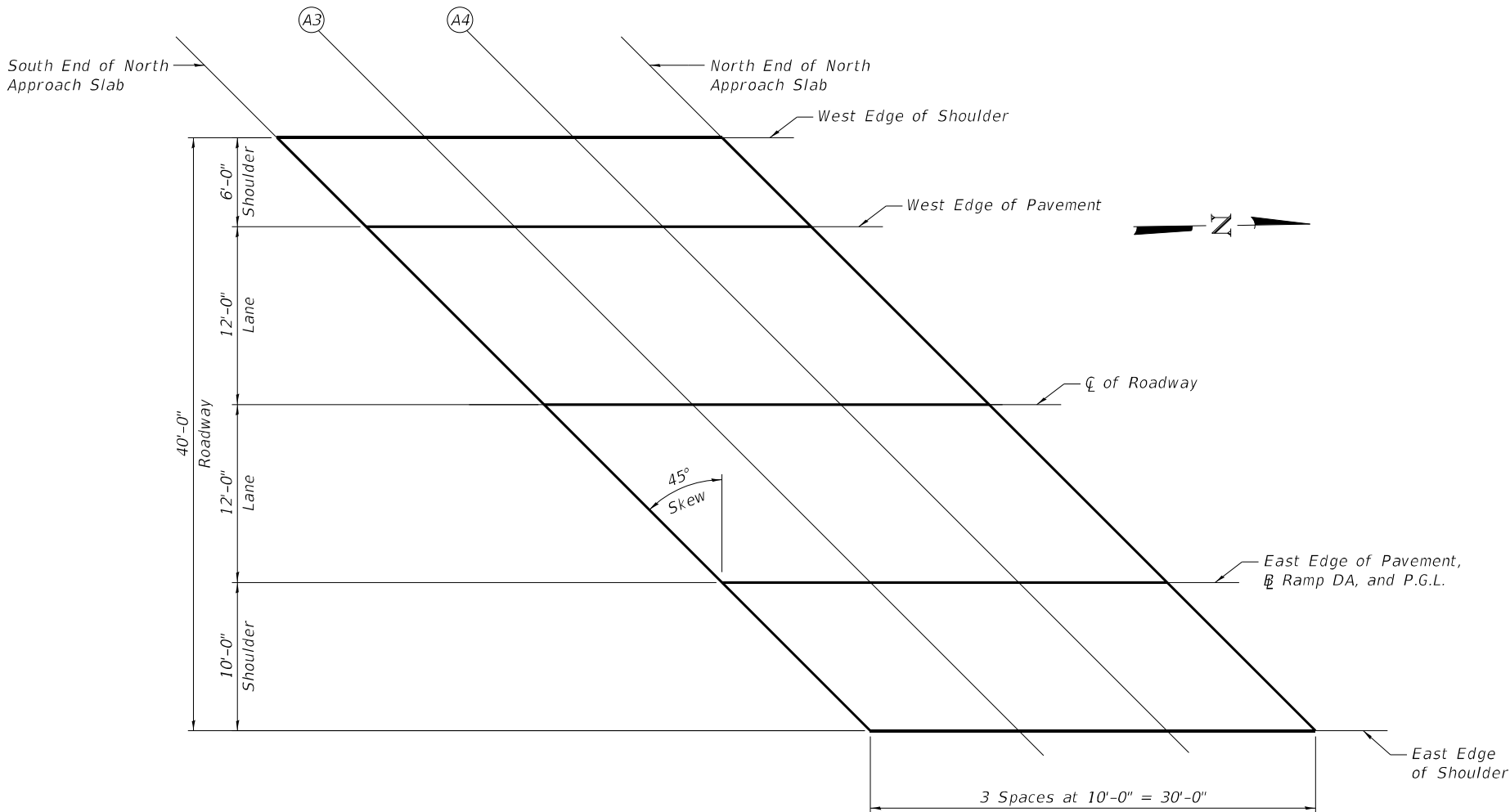
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of N. Appr. Slab	366+12.69	-30.00	853.09	853.11
A3	366+22.69	-30.00	853.04	853.06
A4	366+32.69	-30.00	852.98	853.00
N. End of N. Appr. Slab	366+42.69	-30.00	852.92	852.94

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of N. Appr. Slab	366+18.69	-24.00	853.18	853.20
A3	366+28.69	-24.00	853.12	853.14
A4	366+38.69	-24.00	853.07	853.09
N. End of N. Appr. Slab	366+48.69	-24.00	853.01	853.03

☐ OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of N. Appr. Slab	366+30.69	-12.00	853.29	853.31
A3	366+40.69	-12.00	853.23	853.25
A4	366+50.69	-12.00	853.18	853.20
N. End of N. Appr. Slab	366+60.69	-12.00	853.12	853.14



PLAN
(North Approach)

EAST EDGE OF PAVEMENT, ☐ RAMP DA, & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of N. Appr. Slab	366+42.69	0.00	853.04	853.06
A3	366+52.69	0.00	852.99	853.01
A4	366+62.69	0.00	852.93	852.95
N. End of N. Appr. Slab	366+72.69	0.00	852.87	852.89

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of N. Appr. Slab	366+52.69	10.00	852.79	852.81
A3	366+62.69	10.00	852.73	852.75
A4	366+72.69	10.00	852.67	852.69
N. End of N. Appr. Slab	366+82.69	10.00	852.61	852.64



QUIGG ENGINEERING INC

USER NAME	=	rwhteside	DESIGNED	-	RPW	REVISED	-
D264C62-1010204-SHT-010-TAElev2			CHECKED	-	KFO	REVISED	-
PLOT SCALE	=	0.1667' / in.	DRAWN	-	LMC	REVISED	-
PLOT DATE	=	03/31/2023	CHECKED	-	MDC	REVISED	-

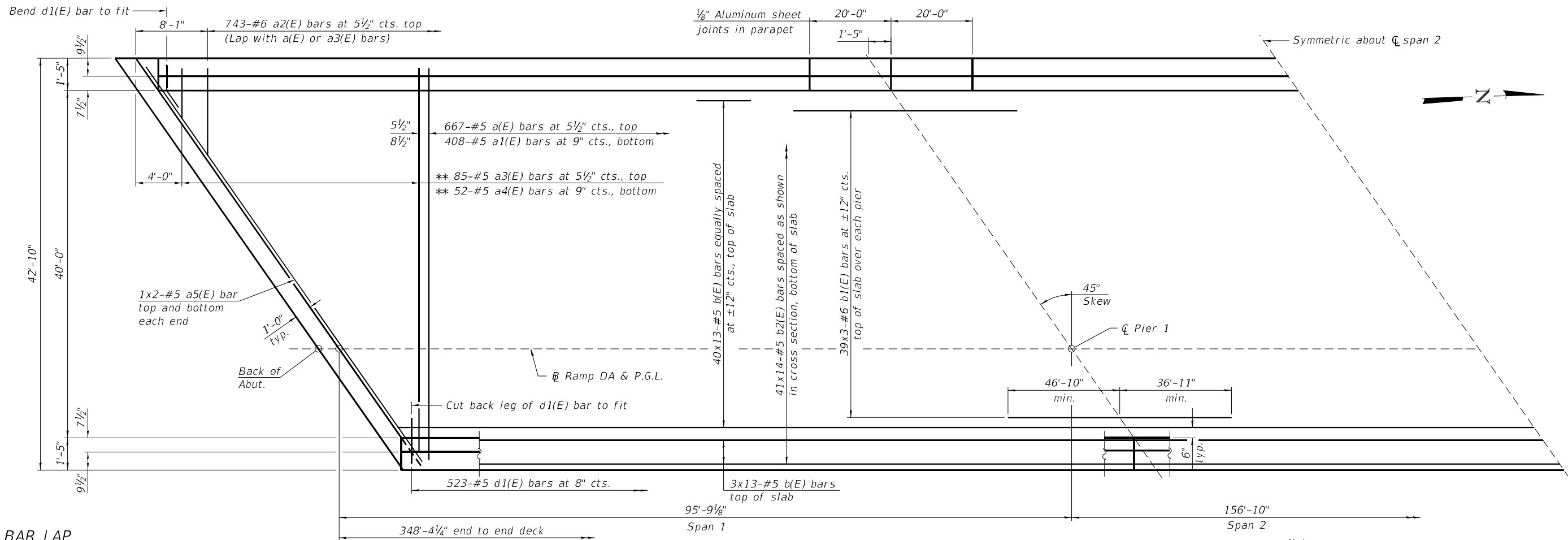
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 101-0204

SHEET 10 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	872
			CONTRACT NO. 64B13	
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
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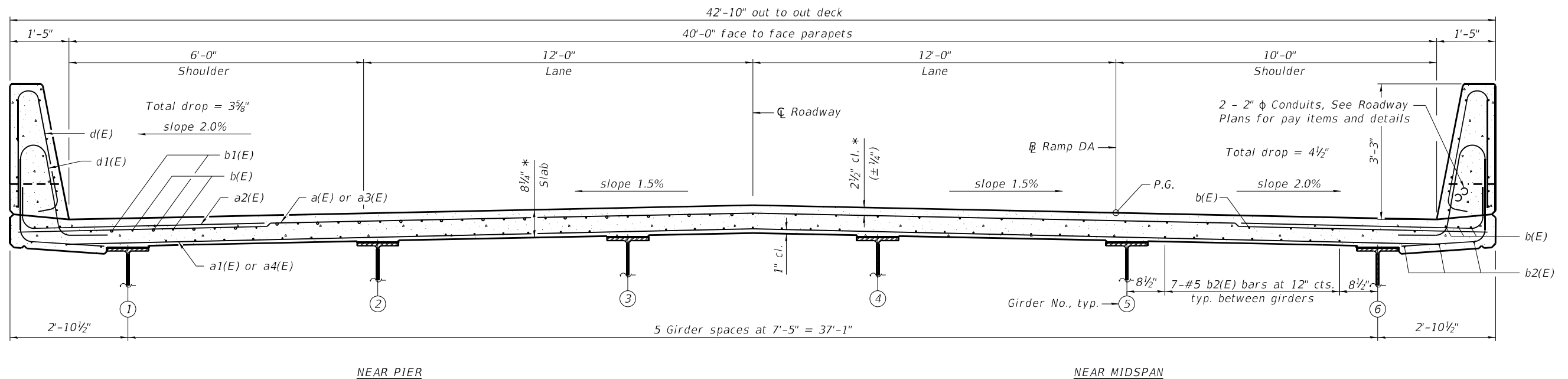
MINIMUM BAR LAP

#5 bar = 3'-6"
#6 bar = 3'-7"

* Prior to Grinding
** See Field Cutting Diagram
on Sheet 13 of 37.

PARTIAL PLAN

Notes:
See Sheets 12 and 13 of 37 for superstructure
details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20
lines of bars with 3 lengths per line.
For location of scuppers and floor drains, see
Sheet 1 of 37.



CROSS SECTION

(Looking North)

SI-SB-2-R(>30°)

6-15-2019



QUIGG ENGINEERING INC

USER NAME =	rwhiteside	DESIGNED -	RPW	REVISED -	
D264C62-1010204-SHT-011-Super1		CHECKED -	KFO	REVISED -	
PLOT SCALE =	0.1667' / in.	DRAWN -	LMC	REVISED -	
PLOT DATE =	03/31/2023	CHECKED -	MDC	REVISED -	

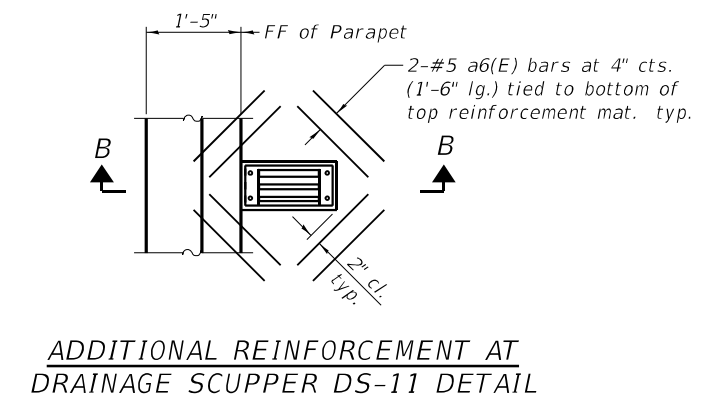
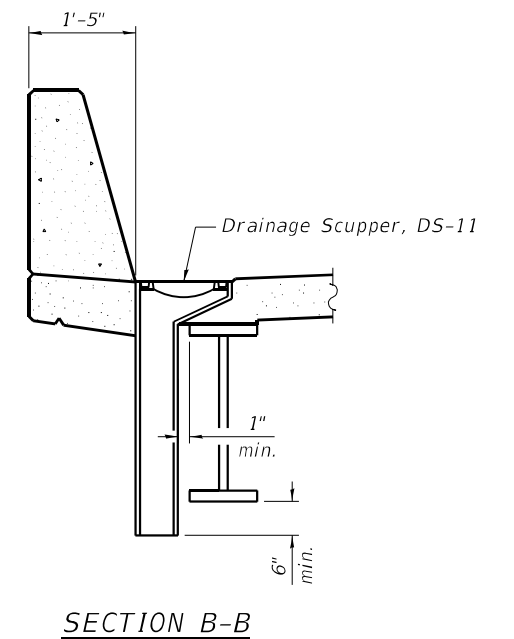
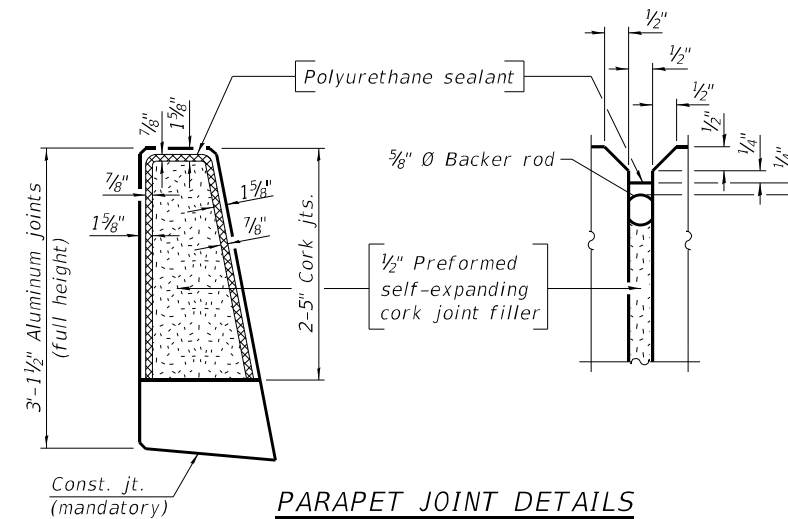
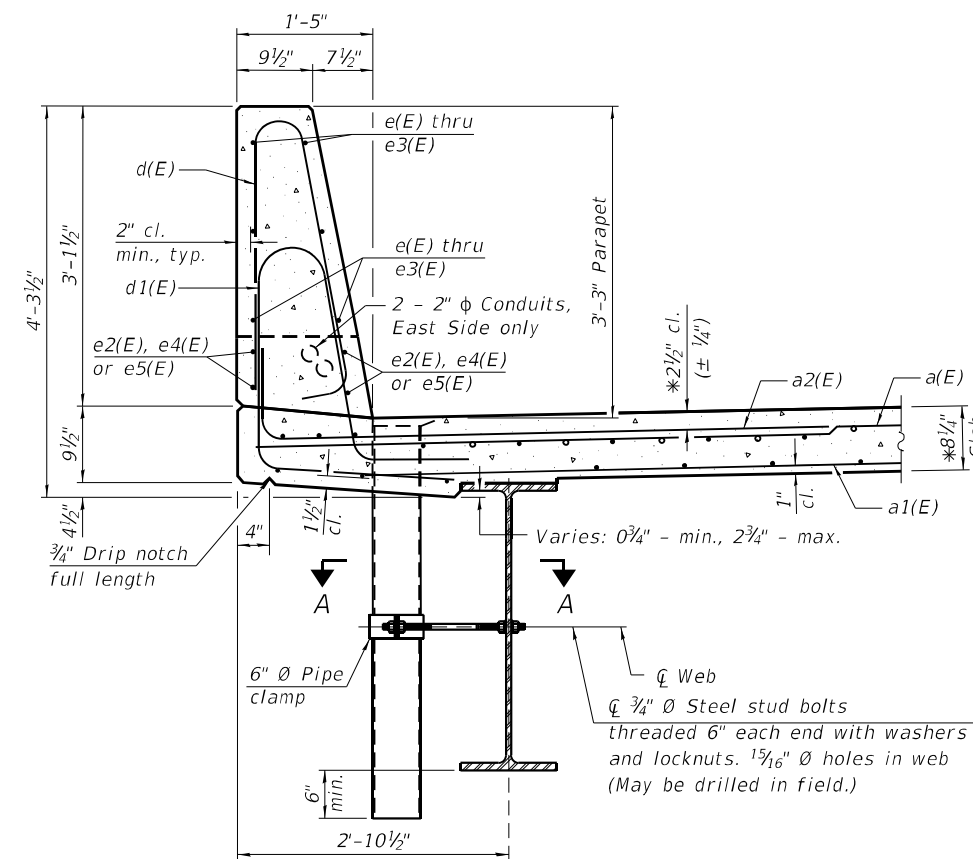
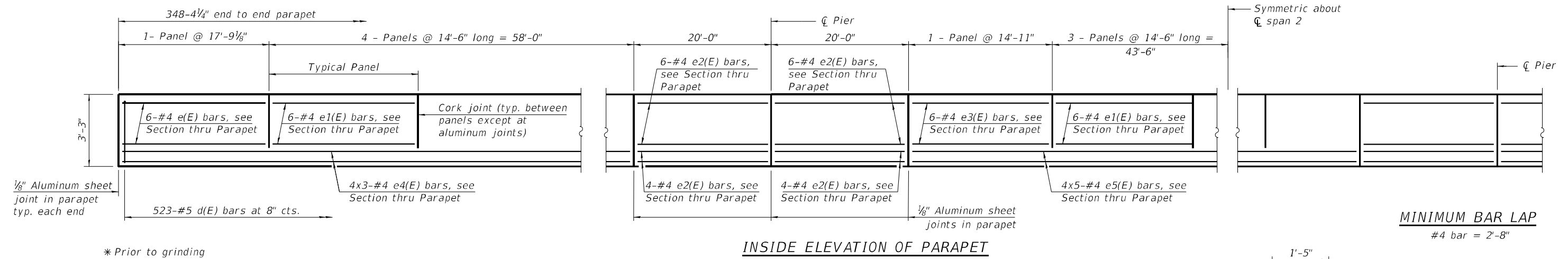
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 101-0204

SHEET 11 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	873
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

3/30/2023 8:27:37 AM



Notes:

Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

Exterior surfaces of floor drains below deck shall be pigmented or painted to match the color of the adjacent girder.

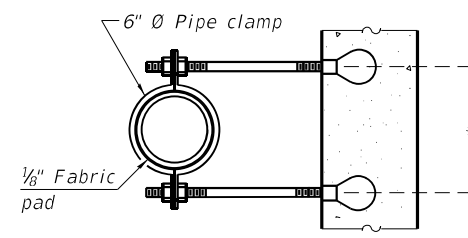
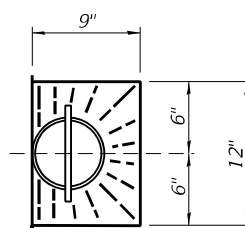
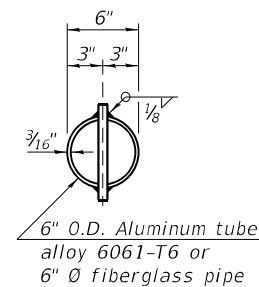
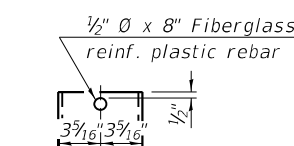
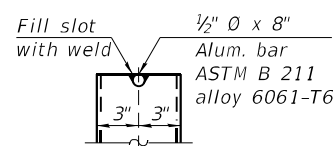
The top portion of aluminum floor drains shall be coated to minimize reaction with wet concrete.

The clamping device shall be galvanized according to AASHTO M 232. Cost of clamping device included with Floor Drains.

The 1/8" aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.

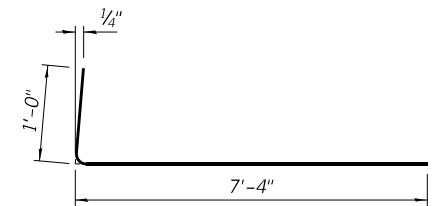
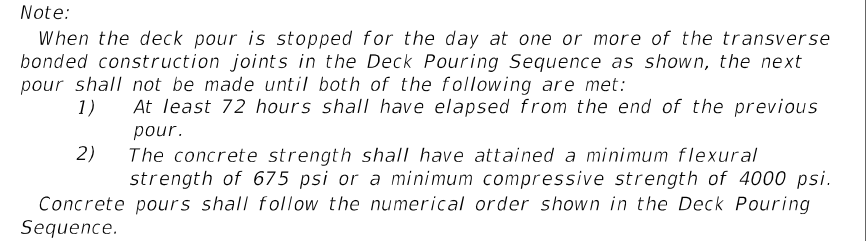
The polyurethane sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.

Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.



*Dimension as required by pipe clamp

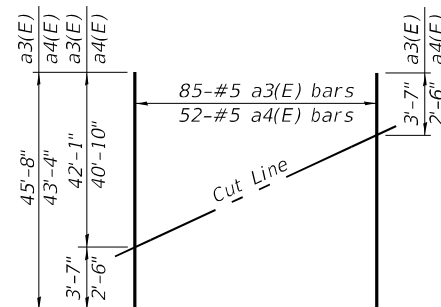
Note:
Cut longitudinal reinforcement to
clear drainage scuppers.

BAR a2(E)

SUPERSTRUCTURE
BILL OF MATERIAL

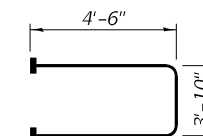
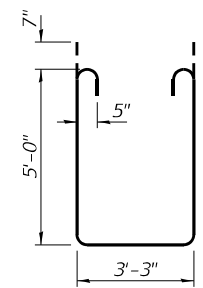
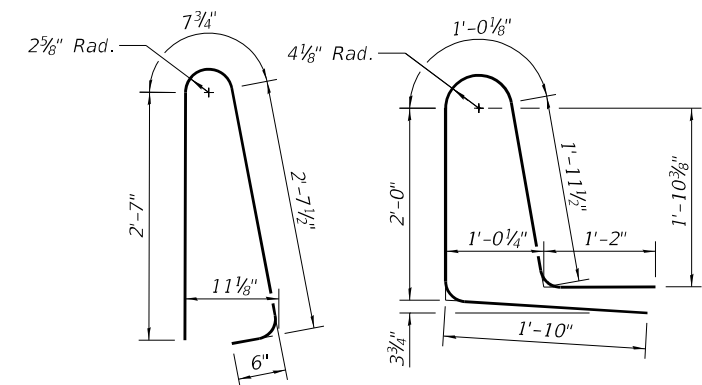
Bar	No.	Size	Length	Shape
a1(E)	667	#5	42'-6"	———
a1(E)	408	#5	40'-6"	———
a2(E)	1,486	#6	8'-4"	L——
a3(E)	85	#5	45'-8"	———
a4(E)	52	#5	43'-4"	———
a5(E)	8	#5	31'-10"	———
a6(E)	16	#5	1'-6"	———
b(E)	598	#5	30'-2"	———
b1(E)	234	#6	30'-6"	———
b2(E)	574	#5	28'-3"	———
d(E)	1,046	#5	6'-5"	I
d1(E)	1,046	#5	8'-0"	L
e(E)	24	#4	17'-5"	———
e1(E)	168	#4	14'-2"	———
e2(E)	80	#4	19'-8"	———
e3(E)	24	#4	14'-7"	———
e4(E)	48	#4	27'-1"	———
e5(E)	40	#4	25'-7"	———
m10(E)	24	#6	32'-4"	———
m11(E)	50	#6	10'-0"	———
m12(E)	20	#6	3'-6"	———
s10(E)	82	#5	12'-10"	≡
s11(E)	82	#5	14'-5"	U
Floor Drains			Each	14
Concrete Superstructure			Cu. Yds.	574.4
Reinforcement Bars, Epoxy Coated			Lbs.	143,330

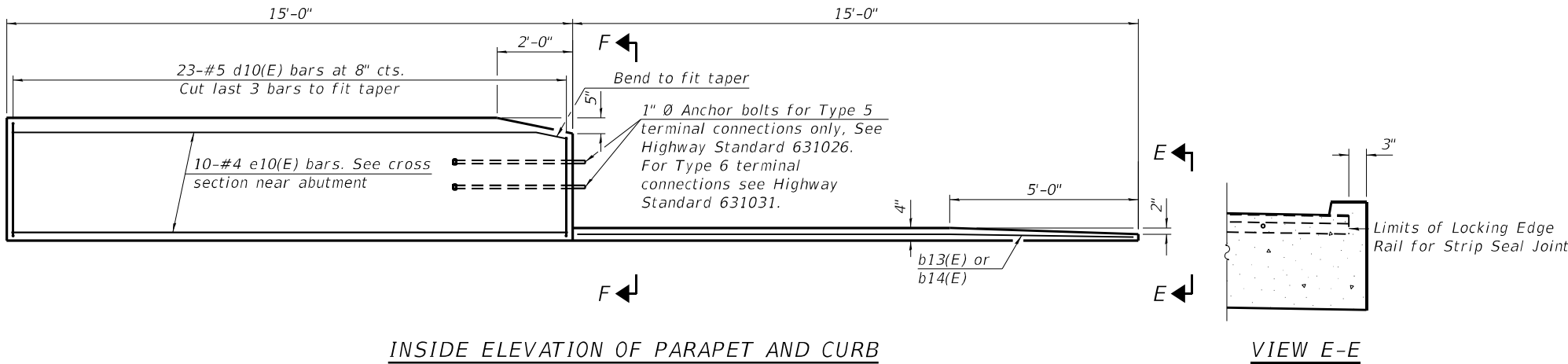
Bars indicated thus 1 x 2-#4 etc. indicates 1 line of bars with 2 lengths per line.



FIELD CUTTING DIAGRAM

Order a3(E) and a4(E) bars full length.
Cut as shown and use remainder of
bars in opposite end of deck.


$$\frac{BAR\ s10(E)}{(Headed)}$$
BAR s11(E)
$$\underline{BAR \ d(E)}$$
$$\underline{BAR \ d1(E)}$$



Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.

After precast bridge approach slabs have been erected, holes shall be drilled into abutment and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of precast slab and cured according to Article 1020.13(a)(3) or 1020.13(a)(5) of the Standard Specifications for a minimum of 24 hours before casting the shear keys and wearing surface.

Any concrete poured monolithically with the wearing surface, such as curbs, shall not be paid for separately, but will be included in the cost of Concrete Wearing Surface, 5".

The strip seal shall extend 6" beyond the edge of the approach slab on each end. Parapet concrete shall be paid for as Concrete Superstructure.

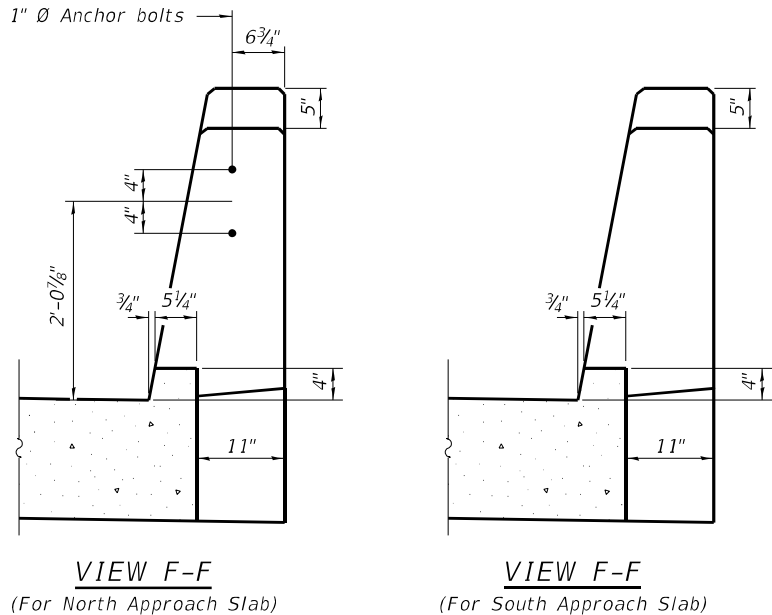
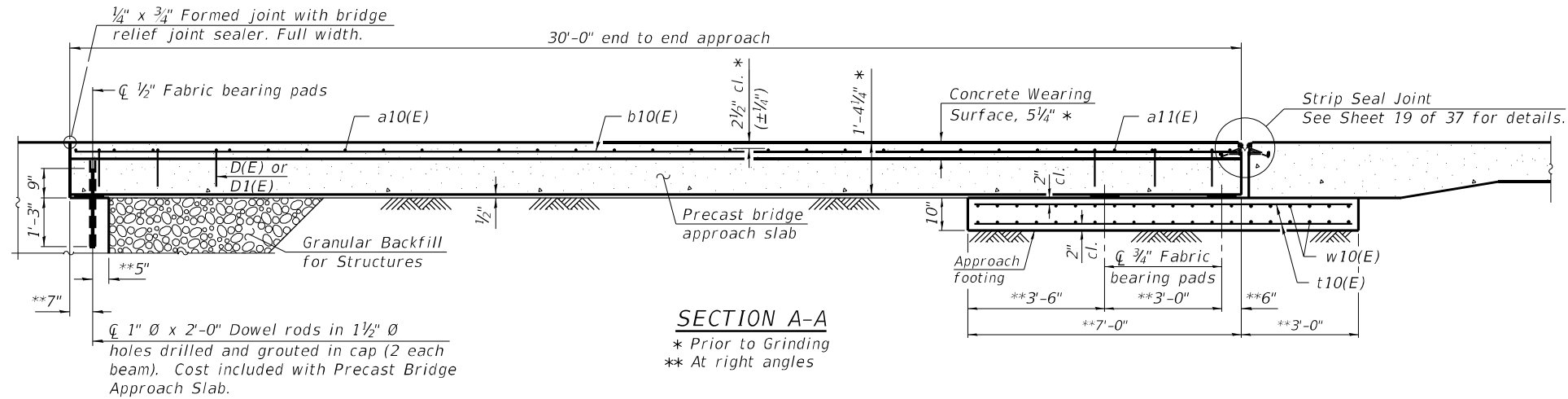
Approach footing concrete shall be paid for as Concrete Structures.

The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

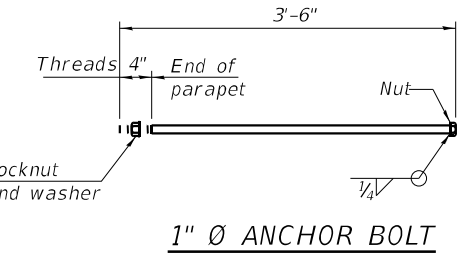
For Granular Backfill for Structures and drainage treatment details, see Sheet 2 of 37.

Cost of cellular polystyrene is included with Concrete Superstructure.



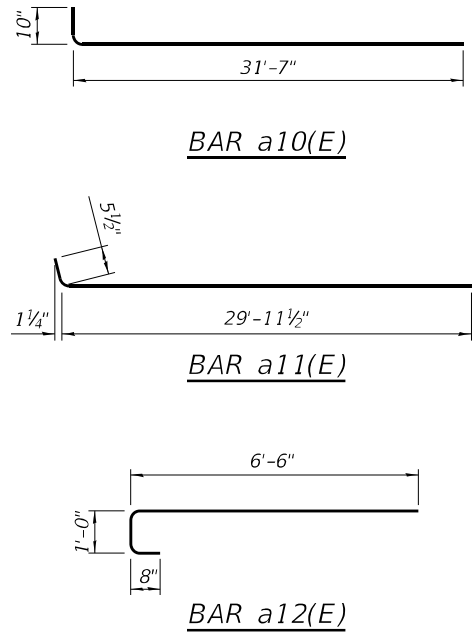
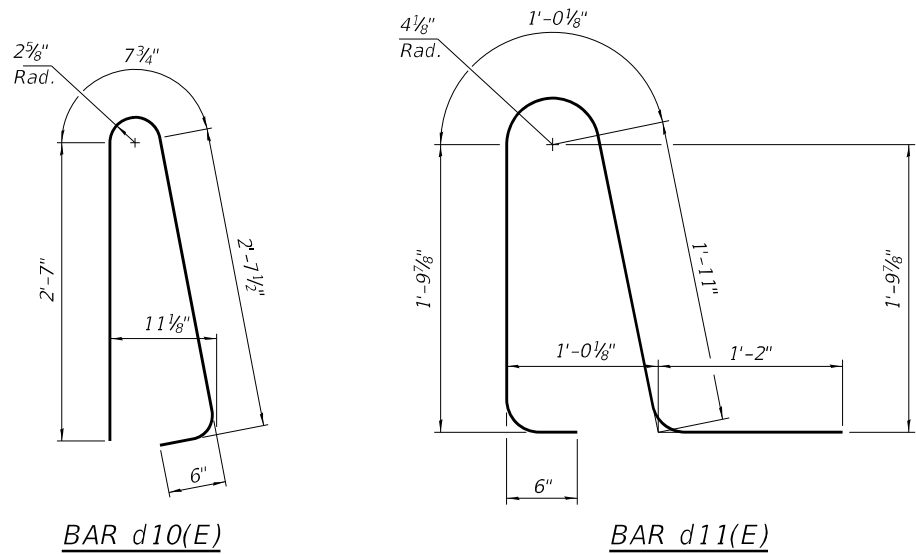
TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	44	#5	32'-5"	
a11(E)	44	#4	30'-5"	
a12(E)	44	#5	8'-2"	
b10(E)	84	#4	29'-8"	
b11(E)	8	#5	15'-11"	
b12(E)	8	#5	14'-0"	
b13(E)	2	#4	14'-5"	
b14(E)	2	#4	14'-11"	
d10(E)	92	#5	6'-5"	
d11(E)	92	#5	6'-5"	
e10(E)	40	#4	14'-8"	
t10(E)	168	#4	13'-9"	
w10(E)	160	#5	30'-5"	
Concrete Superstructure			Cu. Yd.	3.9
Concrete Structures			Cu. Yd.	35.8
Reinforcement Bars, Epoxy Coated			Pound	12,960
Precast Bridge Approach Slab			Sq. Ft.	2,380
Concrete Wearing Surface, 5"			Sq. Yd.	280



(Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications.

Cost of anchor bolt assemblies included with Concrete Superstructure)



(Beams: 36" min. width; 72" max. width)

(Sheet 3 of 3)

MODEL: Default
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3/30/2023 8:28:08 AM



QUIGG ENGINEERING INC

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D264C62-1010204-SHT-018-Appr3
PLOT SCALE = 0.1667' / in.
PLOT DATE = 03/31/2023

DESIGNED - RPW
CHECKED - KFO
DRAWN - LMC
CHECKED - MDC

REVISED -
REVISED -
REVISED -
REVISED -

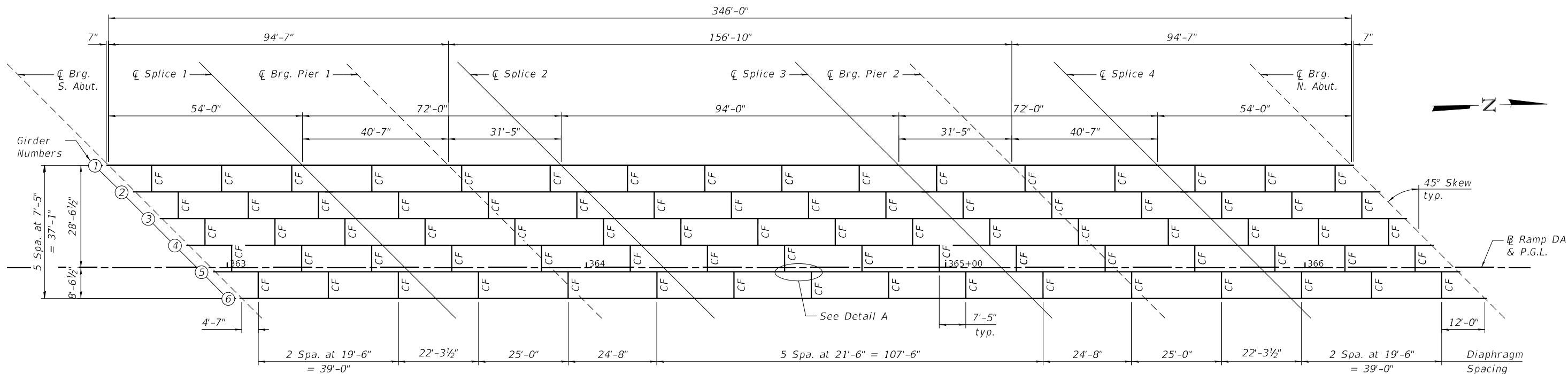
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST BRIDGE APPROACH SLAB
STRUCTURE NO. 101-0204

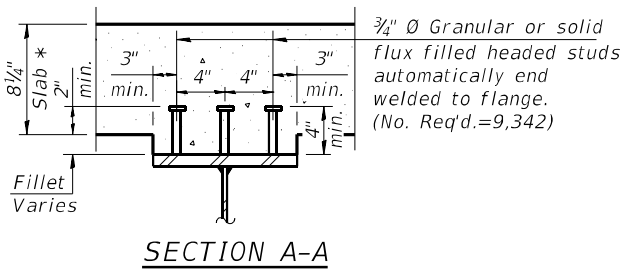
SHEET 18 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	880
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

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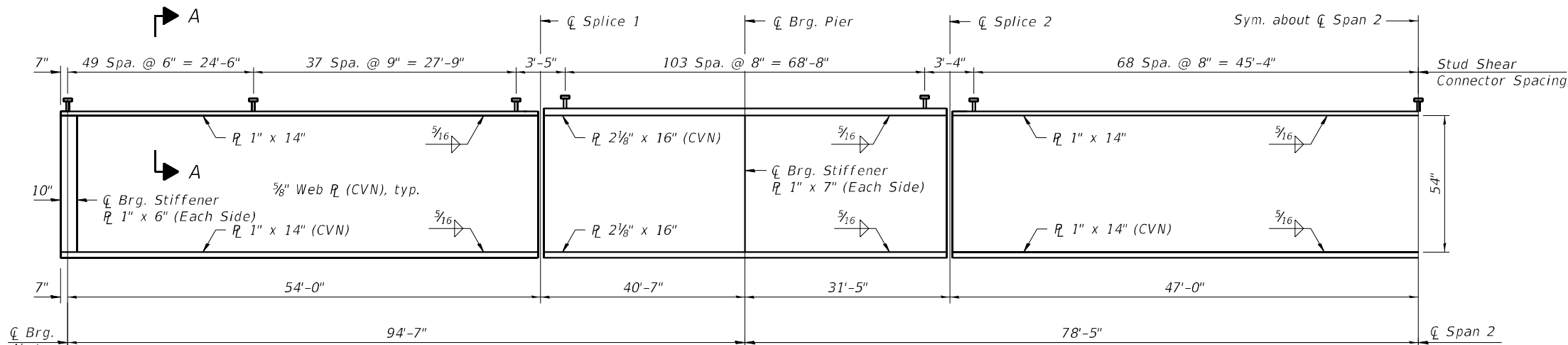


STEEL FRAMING PLAN



TOP OF WEB ELEVATION
(For Fabrication Only)

Location	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6
℄ Brg. S. Abut.	854.02	854.13	854.21	854.13	853.99	853.81
Field Splice 1	853.67	853.78	853.86	853.76	853.61	853.43
℄ Brg. Pier 1	853.56	853.67	853.74	853.65	853.49	853.30
Field Splice 2	853.35	853.45	853.52	853.43	853.27	853.07
Field Splice 3	852.83	852.92	852.99	852.89	852.73	852.54
℄ Brg. Pier 2	852.73	852.83	852.90	852.79	852.63	852.44
Field Splice 4	852.43	852.53	852.60	852.49	852.32	852.14
℄ Brg. N. Abut.	852.28	852.37	852.44	852.34	852.18	851.99



GIRDER ELEVATION

"CVN" denotes Charpy-V-Notch impact energy requirements, zone 2.

* Prior to Grinding

Notes:
See Sheet 21 of 37 for Detail A and additional details.
All girders, bearing stiffeners, and splice plates, including filler plates, shall be AASHTO M270 Grade 50.
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
Girders shall be braced for stability during erection and remain braced until deck is poured and cured.



QUIGG ENGINEERING INC

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D264C62-1010204-SHT-020-FramingPlan
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PLOT DATE = 03/31/2023

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CHECKED - KFO
DRAWN - LMC
CHECKED - MDC

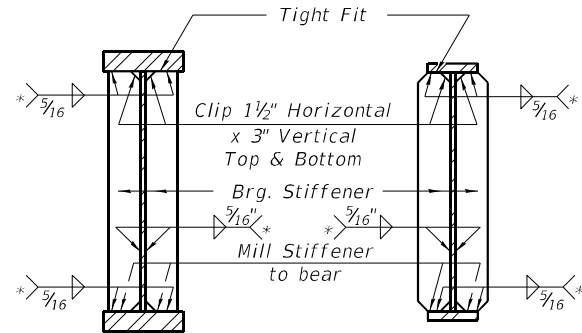
REVISED -
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REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 101-0204

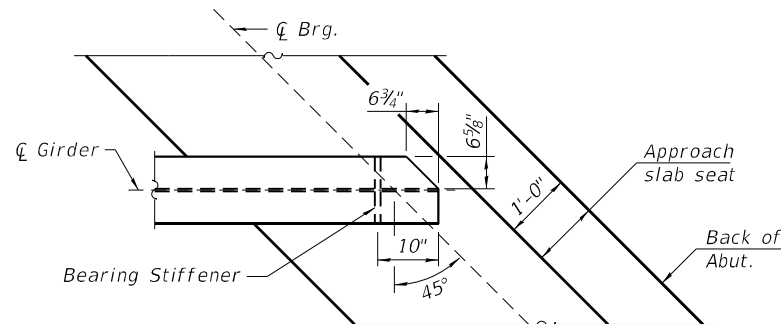
SHEET 20 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

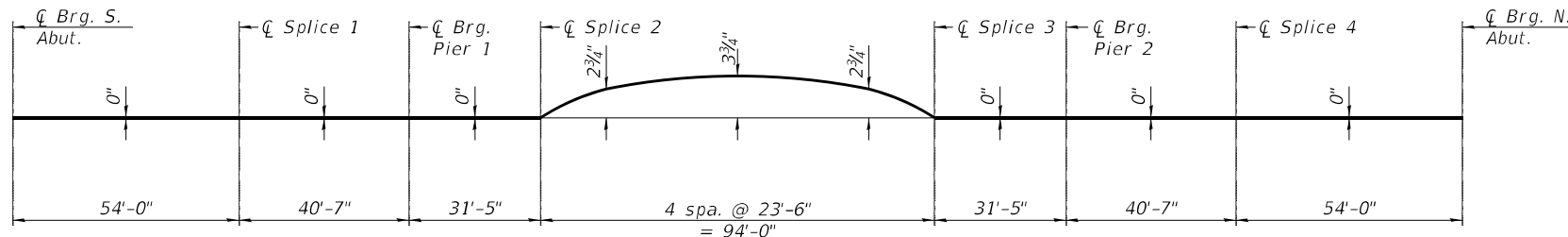


SECTION
AT PIER

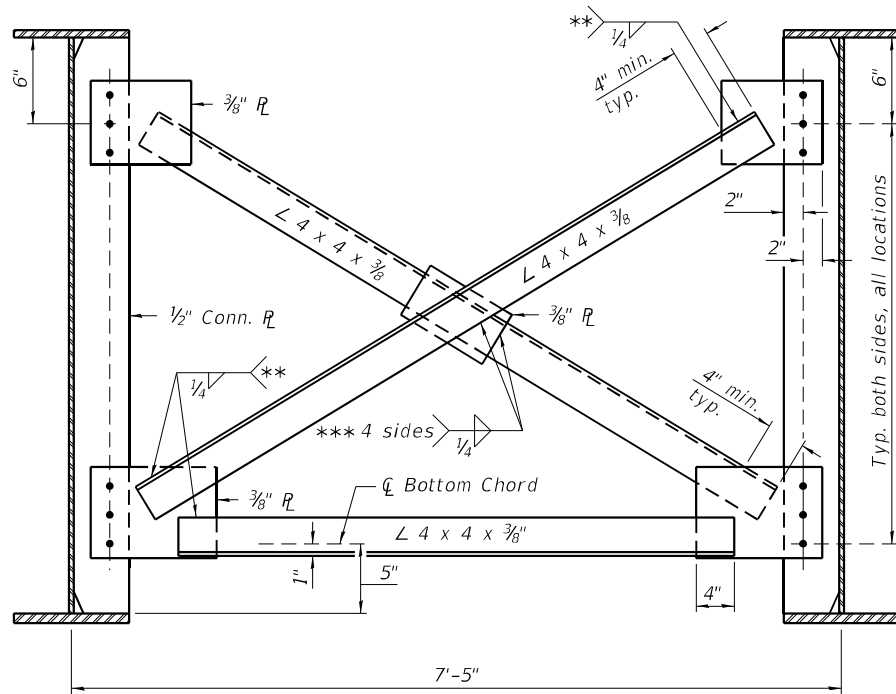
SECTION
AT ABUTMENT



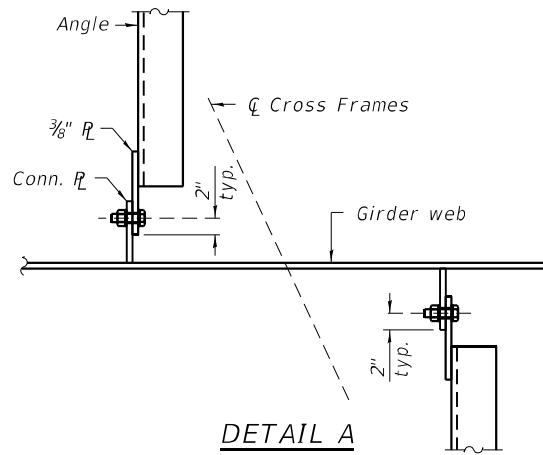
TOP FLANGE PLAN - CLIPPED



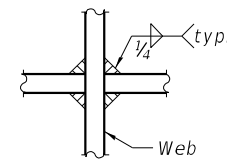
CAMBER DIAGRAM



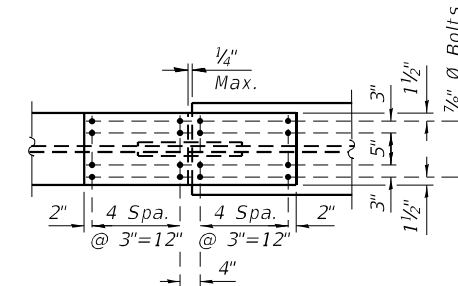
TYPICAL INTERIOR CROSS-FRAME CF
(80 Required)



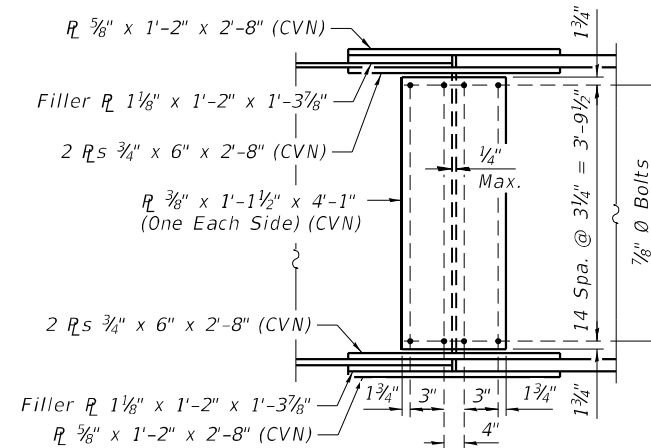
DETAIL A



WEB WELD DETAIL



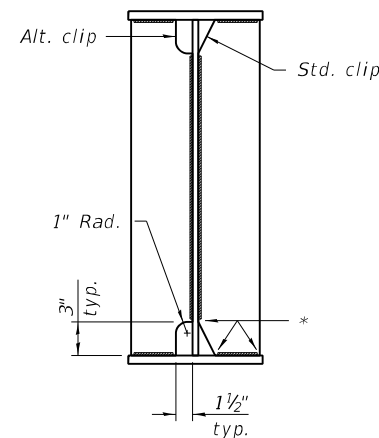
PLAN - TOP AND BOTTOM FLANGE



ELEVATION

FIELD SPLICE DETAIL

"CVN" denotes Charpy-V-Notch
Impact energy requirements,
zone 2

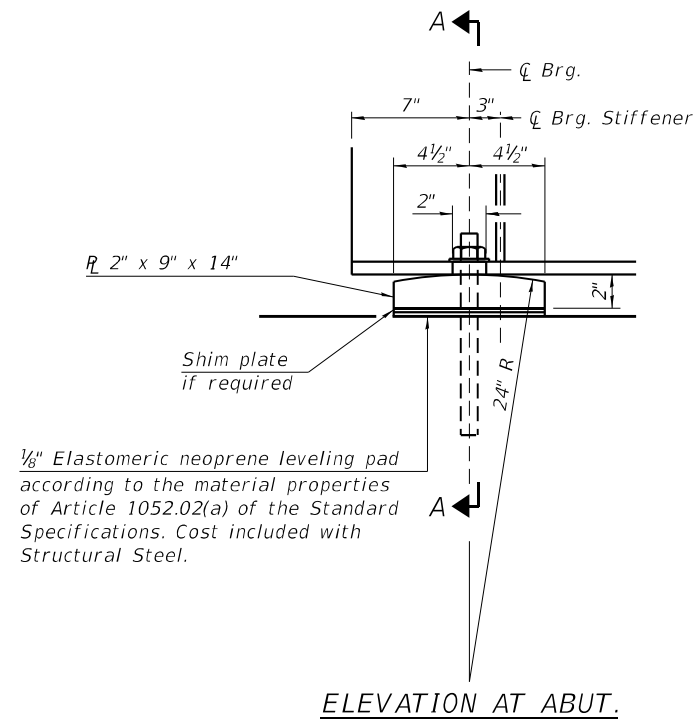


WELD LIMITS AND CLIP DETAILS

- * Stop welds 1/4" (±1/8") from edges as shown. Typical.
- ** Fillet weld angles along 3 sides on one face of gusset plate; however, if cross-frames are galvanized, weld all-around.
- *** If cross-frames are galvanized, weld all-around.

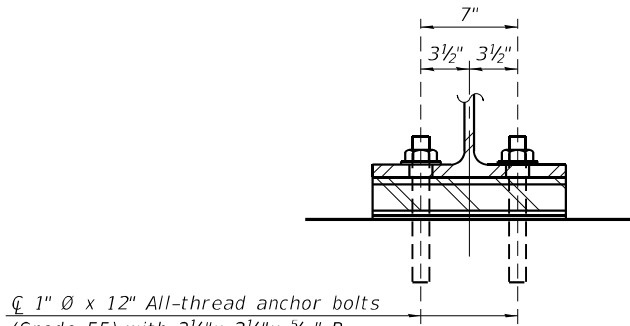


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1/8" Elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Structural Steel.

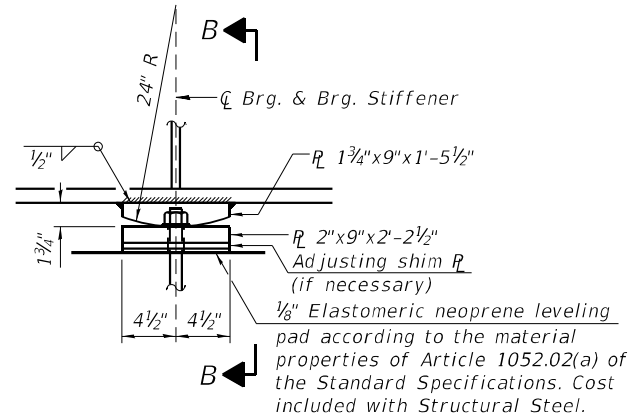
ELEVATION AT ABUT.



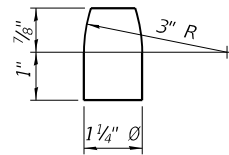
1" $\varnothing$ x 12" All-thread anchor bolts (Grade 55) with 2 1/4" x 2 1/4" x 5/16" R_L washers under nuts. 1 3/8" x 2" slotted holes in flange. 1 1/2" $\varnothing$ Holes in bearing plate.

SECTION A-A

FIXED BEARING AT ABUTMENTS
(12 Required)

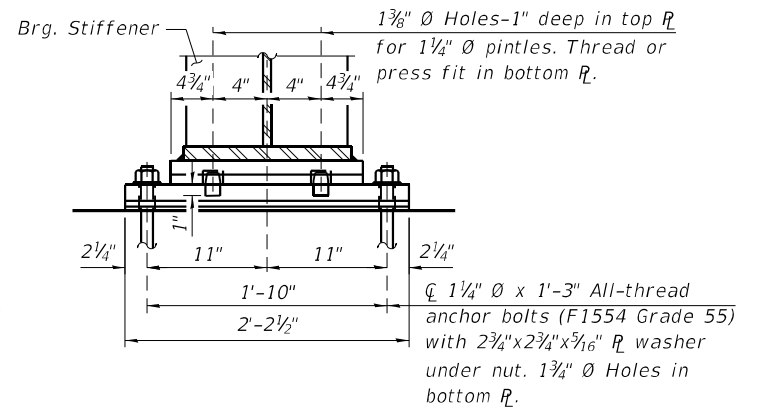


ELEVATION AT PIER



PINTLE

FIXED BEARING AT PIER
(12 Required)



SECTION B-B

Notes:
Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.
The structural steel plates and pintles of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.
Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
All bearing plates, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	24
Anchor Bolts, 1 1/4"	Each	24



QUIGG ENGINEERING INC

USER NAME	=	rwhiteside	DESIGNED	-	RPW	REVISED	-
D264C62-1010204-SHT-023-Bearings			CHECKED	-	KFO	REVISED	-
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PLOT DATE	=	03/31/2023	CHECKED	-	MDC	REVISED	-

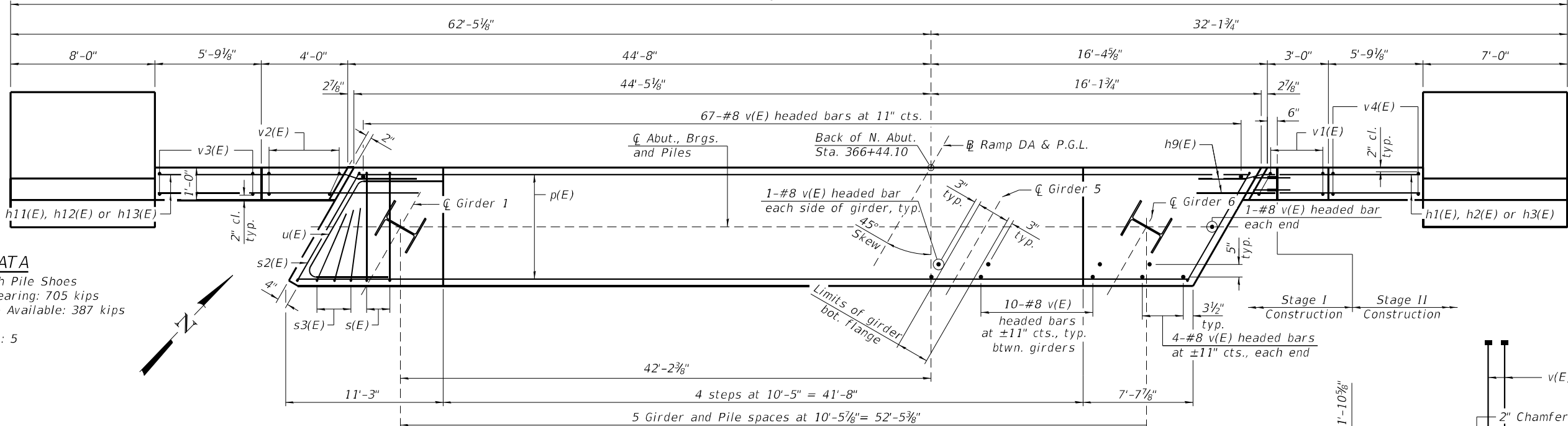
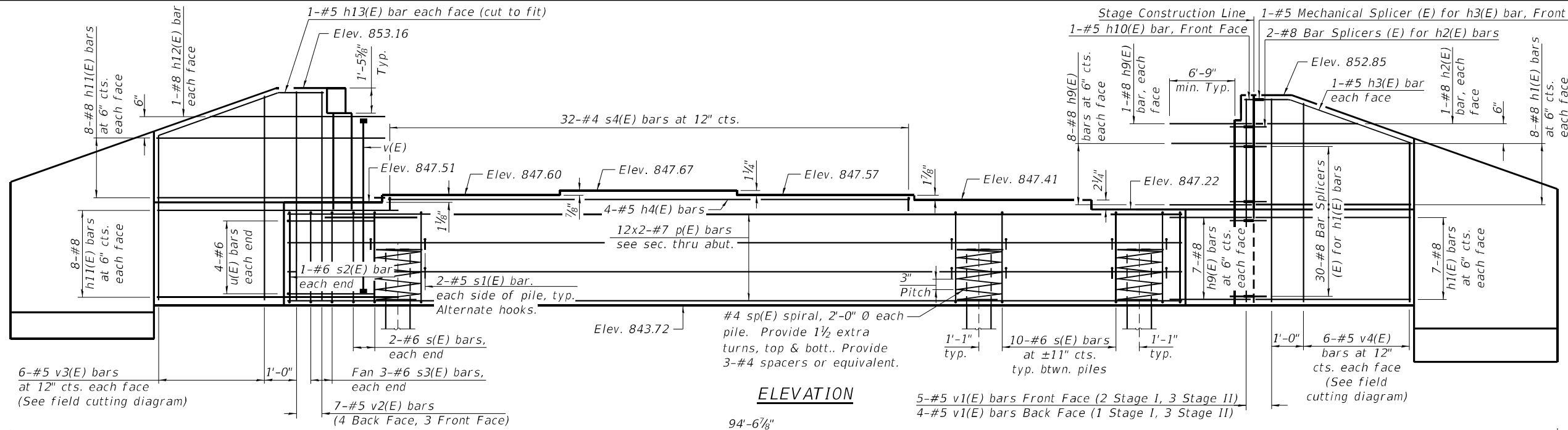
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
STRUCTURE NO. 101-0204

SHEET 23 OF 37 SHEETS

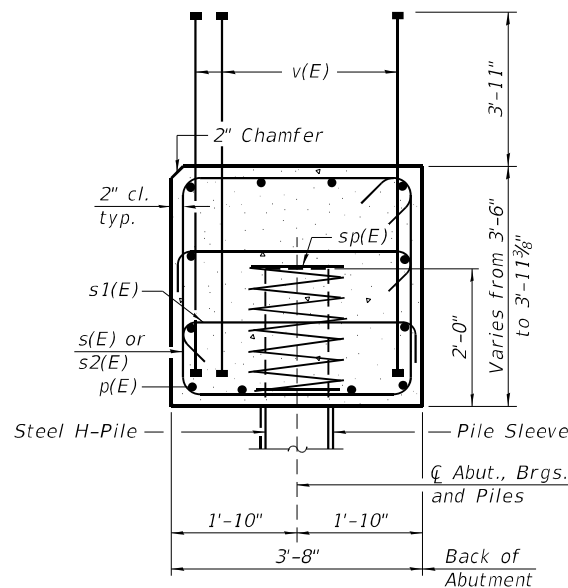
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	885
				CONTRACT NO. 64B13
		ILLINOIS	FED. AID PROJECT	

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PILE DATA

Type: HP 14x89 with Pile Shoes
Nominal Required Bearing: 705 kips
Factored Resistance Available: 387 kips
Est. Length: 27 ft.
No. Production Piles: 5
No. Test Piles: 1



Notes:
Piles shall be driven through 30" diameter precored holes extending to elevation 833.0 according to Article 512.09(c) of the Standard Specifications except that the void space outside of the pile shall be filled with bentonite according to the manufacturer's recommendations to achieve a Qu of 1.5 tsf.
For additional details see Sheet 26 and 27 of 37.

MINIMUM BAR LAP

#7 bar = 5'-0"

WEST WING ELEVATION

EAST WING ELEVATION



QUIGG ENGINEERING INC

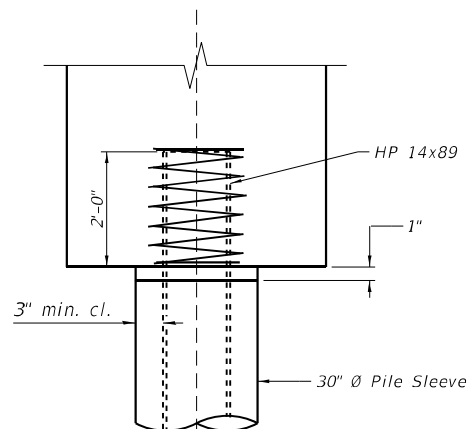
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PLOT DATE	=	03/31/2023	CHECKED	-	MDC	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT
STRUCTURE NO. 101-0204

SHEET 25 OF 37 SHEETS

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	887
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				



PILE SLEEVE DETAIL

Notes:

Precored holes are required to allow lateral movement of the abutment piles within the very dense native soil. Pile sleeves and hydrated bentonite shall be placed around each pile from 1" below the bottom of the proposed abutment to a minimum depth of 10 feet below the bottom of abutment.

The precored hole for each pile shall remain open and clear until the pile has been driven. The hole shall be backfilled after the pile has been driven. Contractor shall utilize pile sleeves and remove any sloughed soil as required to maintain the minimum clearance specified.

The pile sleeve furnished by the Contractor shall have adequate strength to withstand earth pressures during pile driving without collapse. Pile sleeve material, shape, and wall thickness shall be submitted to the Engineer for approval.

The inside of the pile sleeve and any precored hole below shall be backfilled with dry bentonite chips and then flooded with clean water to hydrate the bentonite. Any visible gaps outside the pile sleeve shall be filled with bentonite chips or a thick bentonite slurry. Bentonite shall be topped off to the bottom of the abutment before the abutment concrete is placed. Contact between the pile sleeve and pile shall not be permitted.

Cost of pile sleeve, precoring, and hydrated bentonite shall be included with Furnishing Steel Piles HP14x89.

Pour steps monolithically with cap.

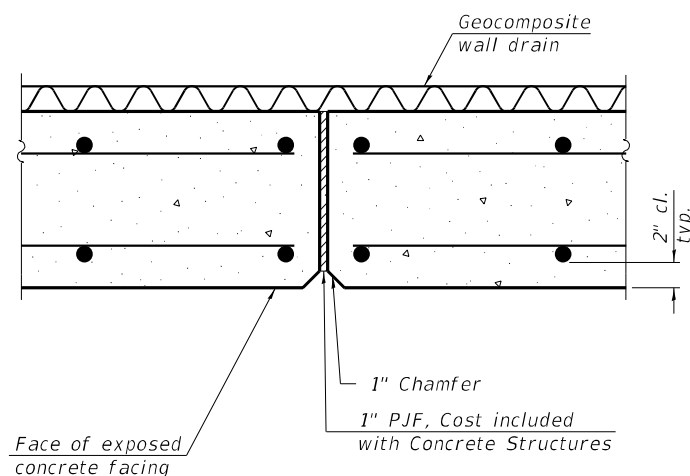
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

For details of piles see Sheet 31 of 37.

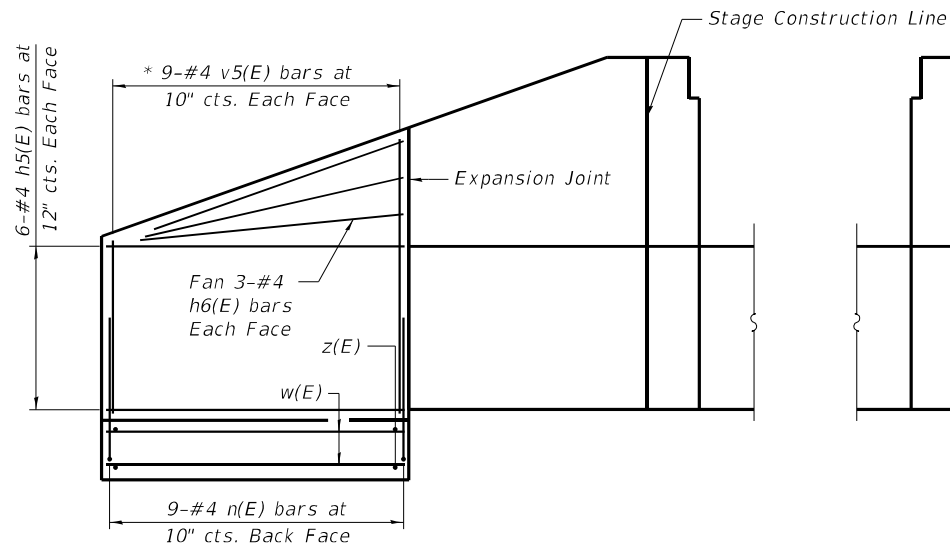
Stage I Construction includes the excavation for the Abutment Cap, West Wing, and part of the East Wing and the construction of the Abutment Cap, West Wing, and part of the East Wing. Stage II Construction includes the excavation of the remainder of the East Wing and construction of the remainder of the East Wing.

See Sheet 30 of 37 for Bar Splicer Details.

Maximum applied service bearing pressure for spread footings, $Q_{max} = 1.55$ ksf.

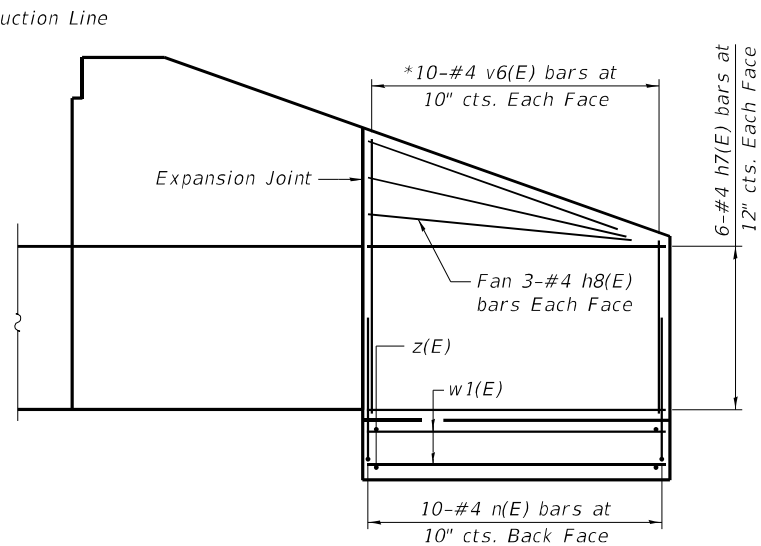


EXPANSION JOINT



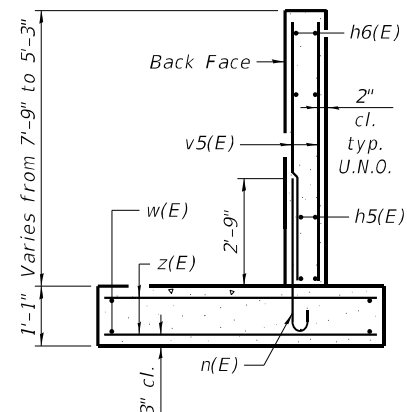
SOUTHEAST AND NORTHEAST
WINGWALL EXTENSION ELEVATION

(Southeast Wingwall Shown,
Northeast Wingwall Similar)

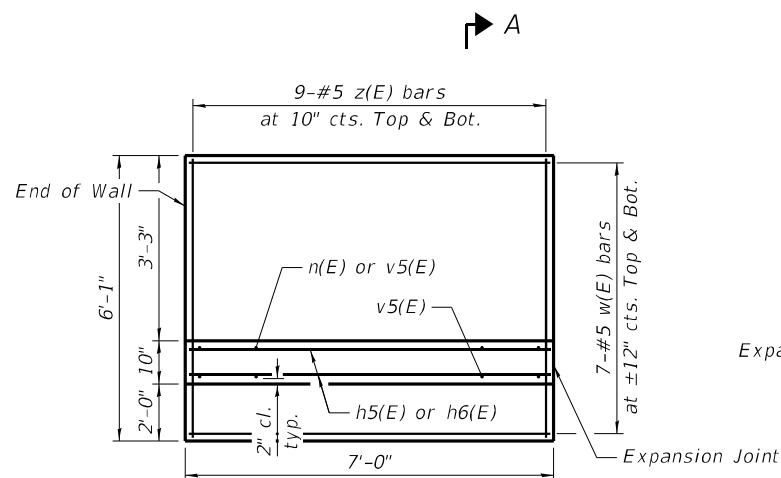


SOUTHWEST AND NORTHWEST
WINGWALL EXTENSION ELEVATION

(Southwest Wingwall Shown,
Northwest Wingwall Similar)

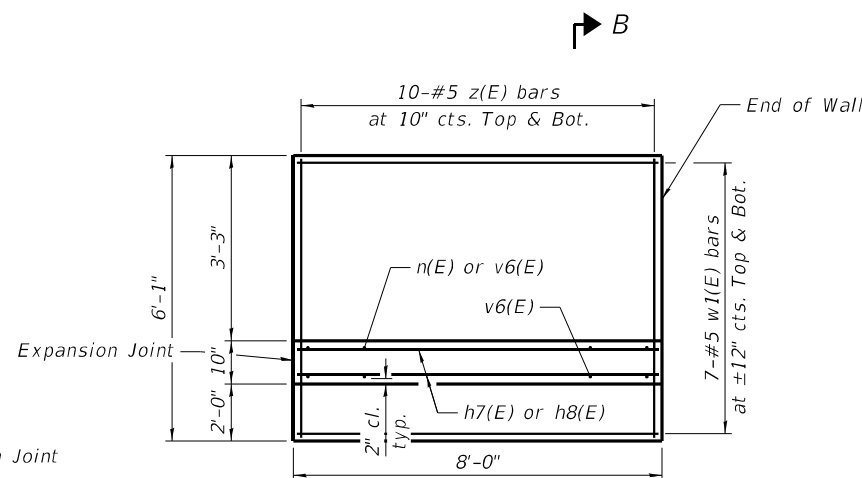


SECTION A-A



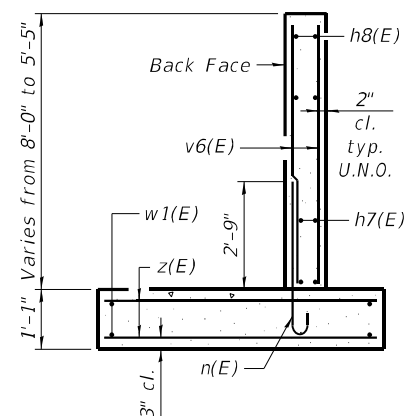
SOUTHEAST AND NORTHEAST
WINGWALL EXTENSION PLAN

(Southeast Wingwall Shown,
Northeast Wingwall Similar)



SOUTHWEST AND NORTHWEST
WINGWALL EXTENSION PLAN

(Southwest Wingwall Shown,
Northwest Wingwall Similar)



SECTION B-B

* See Field Cutting Diagram

Diagram illustrating the connection of a girder to an abutment, bridge, or pile. The connection is shown at a 45° skew. The girder is 21½" wide. The connection uses 1" diameter anchor bolts, typical. The distance from the centerline of the girder to the centerline of the anchor bolt is 21½". The distance from the centerline of the anchor bolt to the centerline of the abutment, bridge, or pile is 31½". The distance from the centerline of the girder to the centerline of the abutment, bridge, or pile is 52½". The connection is labeled "Girder" and "Abut., Brgs., & Piles".

Diagram of a Z-profile with dimensions: 3'-2" (height), 3'-2" (top flange width), 4'-4" (bottom flange width), and 4'-6" (web height).

Diagram of a pipe layout with dimensions: $5\frac{1}{2}"$, $3'-4"$, and $6"$. A 135° angle is indicated at the start of the horizontal section.

A right triangle is shown with a vertical leg labeled $5'-11''$, a horizontal leg labeled $2'-2\frac{1}{4}''$, and a hypotenuse labeled $2'-4''$.

A square plate with side length $3'-2''$. The bottom edge is divided into two segments: $3'-4''$ and $4'-8\frac{1}{2}''$. The right edge is labeled with $s(E)$ and $s2(E)$. A corner detail shows a 6° angle and a hatched area.

<i>Bar</i>	<i>n</i>	<i>A</i>	<i>B</i>	<i>C</i>
$v3(E)$	6	16'-4"	9'-0"	7'-4"
$v4(E)$	6	15'-10"	8'-9"	7'-1"
$v5(E)$	9	12'-3"	7'-4"	4'-11"
$v6(E)$	10	12'-8"	7'-7"	5'-1"

The diagram shows a cross-section of a reinforced concrete beam. The total height is labeled A . The height of the concrete cover to the top reinforcement is labeled B . The height of the concrete cover to the bottom reinforcement is labeled C . The number of reinforcement bars is labeled n bars. A diagonal line labeled "Cut Line" is drawn across the section, indicating the location for a cut.



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D264C62-1010204-SHT-027-AbutDetails2		
PLOT SCALE	=	0.1667' / in.
PLOT DATE	=	03/31/2023

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CHECKED	-	H
DRAWN	-	L
CHECKED	-	M

DESIGNED	-	P
CHECKED	-	H
DRAWN	-	L
CHECKED	-	M

DESIGNED	-	P
CHECKED	-	H
DRAWN	-	L
CHECKED	-	M

DESIGNED	-	P
CHECKED	-	H
DRAWN	-	L
CHECKED	-	M

REVISED	-
REVISED	-
REVISED	-
REVISED	-

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REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ABUTMENT DETAILS
STRUCTURE NO. 101-0204

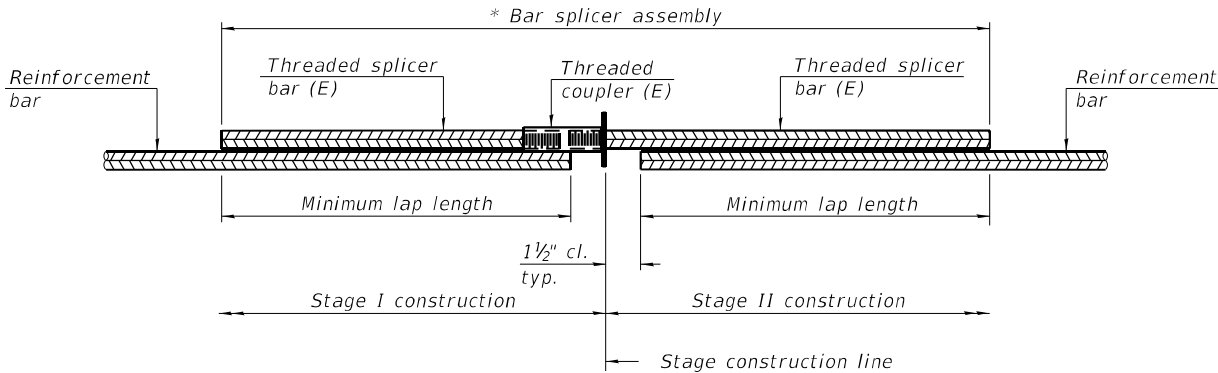
SHEET 27 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	889
		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		

ILLINOIS	FED. AID PROJECT
----------	------------------

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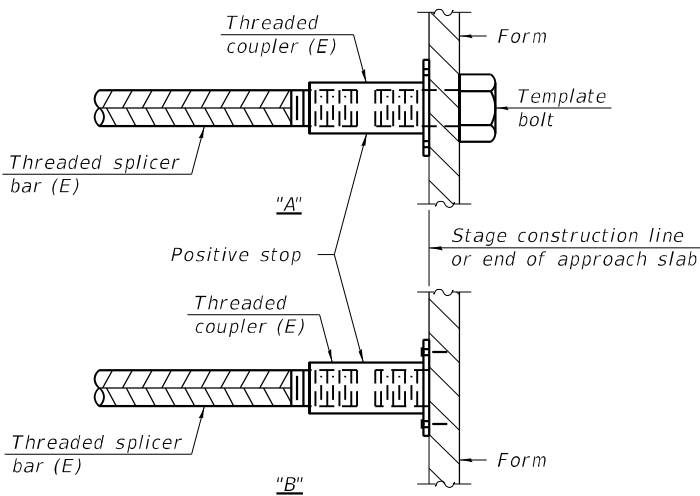


STANDARD BAR SPLICER ASSEMBLY PLAN
(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

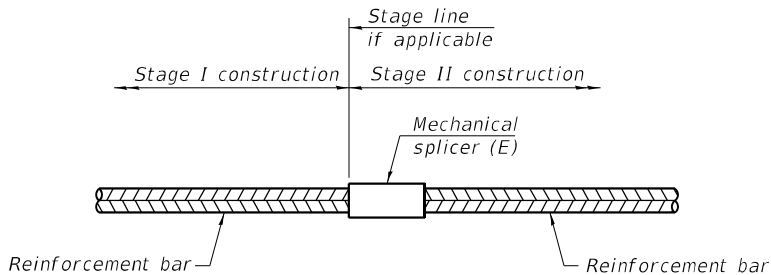
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
S. Abut.	#8	32	5'-9"
N. Abut.	#8	32	5'-9"



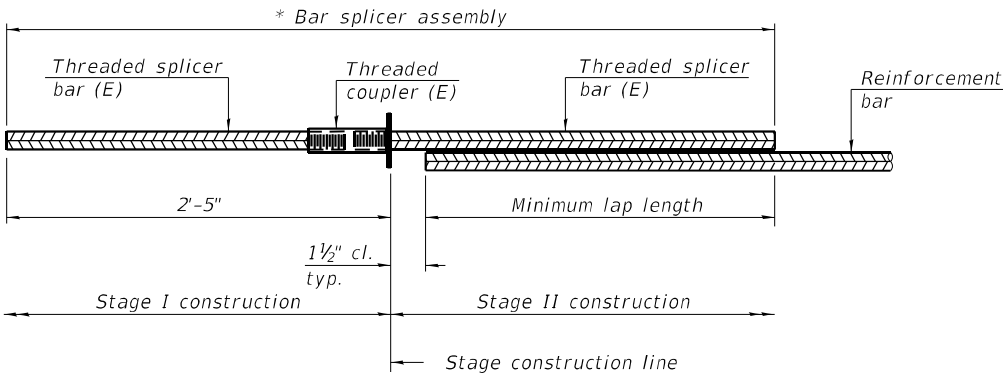
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
S. Abut.	#5	1
N. Abut.	#5	1



STANDARD BAR SPLICER ASSEMBLY PLAN
(All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Pier 1	#5	118	2'-5"
Pier 2	#5	118	2'-5"

Notes:
Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.



QUIGG ENGINEERING INC

USER NAME =	rwhiteside	DESIGNED -	RPW	REVISED -	
D264C62-1010204-SHT-030-BarSplice		CHECKED -	KFO	REVISED -	
PLOT SCALE =	0.1667" / in.	DRAWN -	LMC	REVISED -	
PLOT DATE =	03/31/2023	CHECKED -	MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER DETAILS
STRUCTURE NO. 101-0204

SHEET 30 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	892
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

ELEVATION

SHOE ATTACHMENT

ELEVATION

WELDED COMMERCIAL SPLICE



WELDED COMMERCIAL SPLICE ALTERNATE

ELEVATION

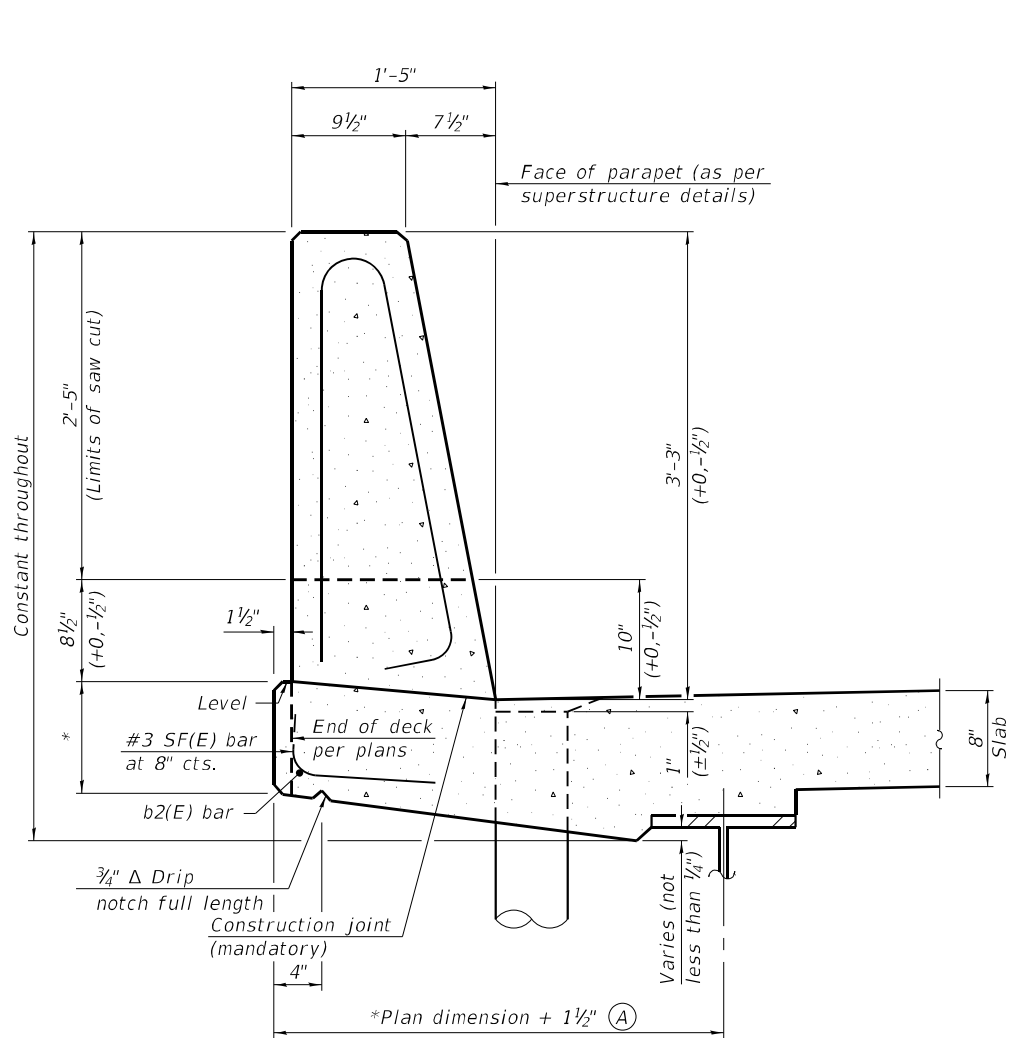
INDIVIDUAL PILE
CONCRETE ENCASEMENT
(when specified)



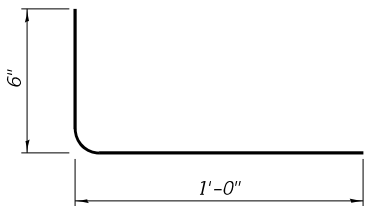
DETAIL D

WELDED PLATE FIELD SPLICE

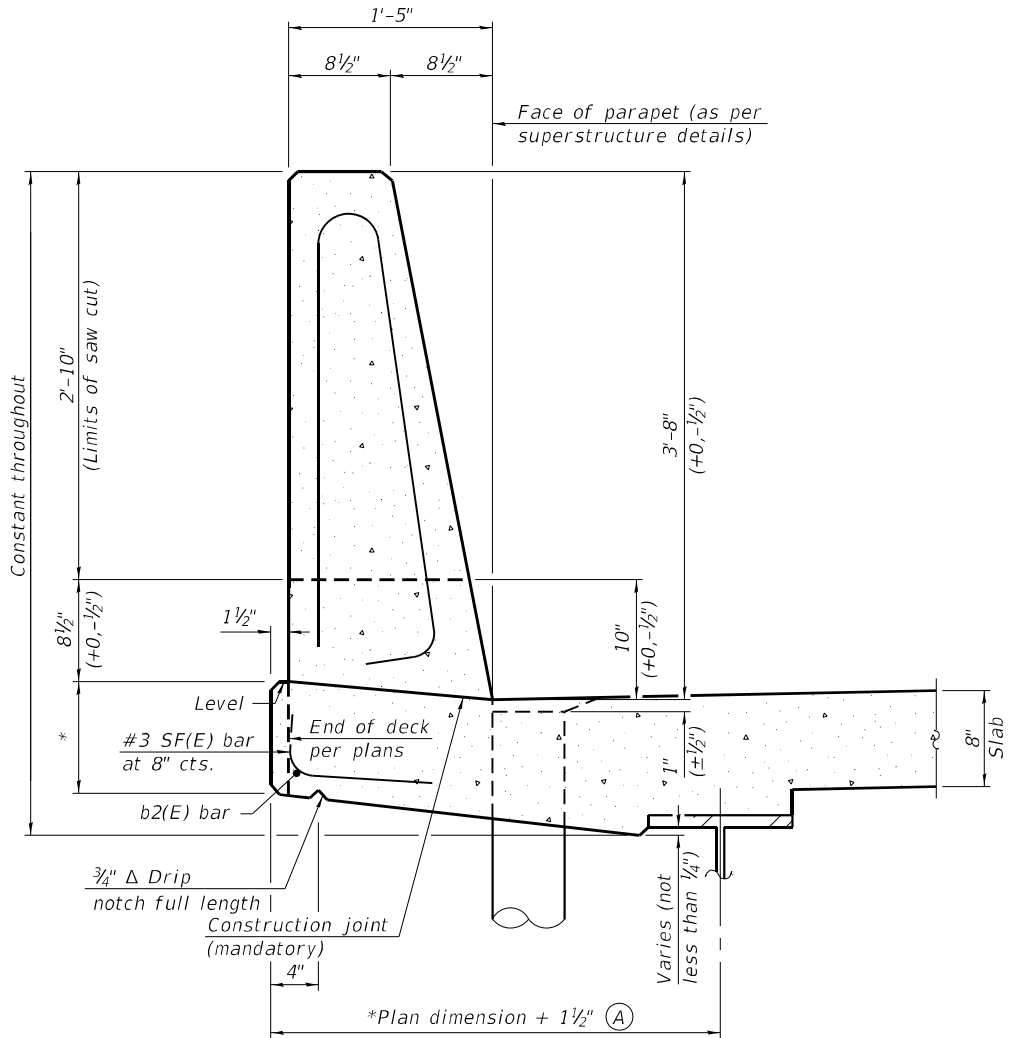
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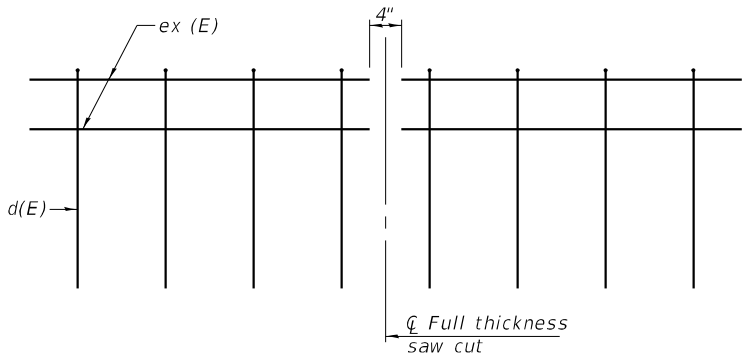
**39" CONSTANT-SLOPE
PARAPET SECTION**
(Showing dimensions and d(E))



#3 SF(E) BAR



**44" CONSTANT-SLOPE
PARAPET SECTION**
(Showing dimensions and d(E))



SAW CUT DETAIL

Notes:
All dimensions shall remain the same as shown on superstructure details, except dimension A which is to be revised as shown. Additional concrete needed to revise dimension A = 0.00348 cu. yds./ft. for 39" and 44" parapets.
Place full depth aluminum sheets as shown on superstructure details.
Replace all cork joint filler locations with a full thickness saw cut.
Steel superstructure shown. Other superstructure types similar.



QUIGG ENGINEERING INC

USER NAME	=	rwhteside
D264C62-1010204-SHT-032-SFParapet		
PLOT SCALE	=	0.1667' / in.
PLOT DATE	=	03/31/2023

DESIGNED	-	RPW
CHECKED	-	KFO
DRAWN	-	LMC
CHECKED	-	MDC

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE PARAPET SLIPFORMING OPTION
STRUCTURE NO. 101-0204

SHEET 32 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	894
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				



Illinois Department
of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 2/23/09

ROUTE FAP 301 DESCRIPTION P92-075-05x Proposed I-39 SB Ramp BD LOGGED BY W. Garza

SECTION (201-3)K (4-1, 5)K LOCATION Cherry Valley Twp. - 9NW, SW, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Latitude Longitude Northing Easting
Station

BORING NO. B-1a
Station 158+40
Offset 8.00ft Rt CL
Ground Surface Elev. 849.80 ft

D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. ft Stream Bed Elev. ft	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
		0.5 P	26.0	MEDIUM tan weathered LIMESTONE (continued)		8 7		
848.30					828.30			
	10 6 6			HARD tan SILTY CLAY LOAM		6 7 12	5.0 B	17.0
846.30					826.30			
	12 9 7			STIFF tan SILTY CLAY LOAM	-25	5 4 7	1.9 B	23.0
843.80					823.80			
	9 7 9			STIFF reddish brown CLAY LOAM		3 5 10	1.7 S	20.0
841.30					820.80			
	16 20 14			VERY DENSE tan weathered LIMESTONE	819.80	-30	100/8"	
838.80				End of Boring				
	8 14 15							
836.30								
	16 13 12				-35			
833.30								
	7 4 4	3.0 P	16.0	VERY STIFF tan LOAM				
830.80								
	11				-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Note:

Boring B-1a is at approximately @ Ramp DA Sta. 365+36.25 and Offset 25.50' Rt.



Illinois Department
of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 1/21/09

ROUTE FAP 301 DESCRIPTION P92-075-05x Proposed I-39 SB Ramp BD LOGGED BY W. Garza

SECTION (201-3)K (4-1, 5)K LOCATION Cherry Valley Twp. - 9NW, SW, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Latitude Longitude Northing Easting
Station

BORING NO. B-2a
Station 160+00
Offset 0.00ft CL
Ground Surface Elev. 850.10 ft

D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. ft Stream Bed Elev. ft	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
		0.5 P	9.0	STIFF brown SILTY CLAY LOAM (continued)	829.10		5 8	2.0 B
848.10								
	10 8 6			STIFF brown/gray SILTY LOAM with SAND lens		4 5 6	1.8 P	14.0
846.60					826.60			
	16 10 24			STIFF tan/gray SANDY LOAM	-25	3 6 8	1.3 S	12.0
844.10					824.10			
	5 5 21			STIFF tan/gray SANDY LOAM		3 2 3	1.1 S	13.0
841.60				End of Boring	821.60			
	8 16 16				-30			
839.10								
	16 13 8							
836.10								
	6 5 7	0.3 P	17.0	SOFT tan/brown SANDY LOAM with tan weathered LIMESTONE	-35			
834.10								
	7 7 10	3.5 B	18.0	VERY STIFF brown SILTY CLAY LOAM				
831.60								
	4			STIFF brown SILTY CLAY LOAM	-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Note:

Boring B-2a is at approximately @ Ramp DA Sta. 364+04.75 and Offset 66.50' Lt.

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QUIGG ENGINEERING INC

USER NAME = rwhiteside	DESIGNED - RPW	REVISED -
D264C62-1010204-SHT-033-Boring1	CHECKED - KFO	REVISED -
PLOT SCALE = 0.1667" / in.	DRAWN - LMC	REVISED -
PLOT DATE = 03/31/2023	CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 101-0204

SHEET 33 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	895
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

Page 1 of 1

Date 6/19/12

ROUTE	Bypass 20, FAP 301	DESCRIPTION	P02-075-08 Proposed bridge, I-39 NB to WB US 20 Bypass - Ramp bridge	LOGGED BY	W. Garza
-------	--------------------	-------------	---	-----------	----------

SECTION (3, 4) R LOCATION Cherry Valley Twp. - 9NW, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO. _____
Station _____

BORING NO. B-1i
Station 2564+45
Offset 21.00ft Lt BL
Ground Surface Elev. 850.9

[illegible]

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Boring B-1i is at approximately ~~B~~ Ramp DA Sta. 364+19.75 and Offset 23.00' Lt.

Page 1 of 1

Date 6/20/12

ROUTE	Bypass 20, FAP 301	DESCRIPTION	P92-075-08 Proposed bridge, I-39 NB to WB US 20 Bypass - Ramp bridge	LOGGED BY	W. Garza
-------	--------------------	-------------	---	-----------	----------

SECTION (3, 4) R LOCATION Cherry Valley Twp. - 9NW, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO. _____
Station _____

BORING NO. B-2i
Station 2565+87
Offset 25.00ft Rt BL
Ground Surface Elev. 850.0

[illegible]

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Boring B-2i is at approximately ~~B~~ Ramp DA Sta. 365+61.75 and Offset 24.00' Rt.



USER NAME =	rwhtleside	DESIGNED -	RPW	REVISED -
D264C62-1010204-SHT-034-Boring2		CHECKED -	KFO	REVISED -
PLOT SCALE =	0.1667' / in.	DRAWN -	LMC	REVISED -
PLOT DATE =	03/31/2023	CHECKED -	MDC	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS
STRUCTURE NO. 101-0204

SHEET 34 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	896
CONTRACT NO. 64B13				
ILLINOIS		FED. AID PROJECT		

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3/30/2023 8:29:47 AM



Illinois Department
of Transportation
Division of Highways
Illinois Department of Transportation

ROCK CORE LOG

Page 1 of 1

Date 6/20/12

ROUTE Bypass 20, FAP 301 DESCRIPTION P92-075-08 Proposed bridge, I-39 NB to WB US
20 Bypass - Ramp bridge LOGGED BY W. Garza

SECTION (3, 4) R LOCATION Cherry Valley Twp. - 9NW, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago CORING METHOD

STRUCT. NO. CORING BARREL TYPE & SIZE
Station Core Diameter 2 in
BORING NO. B-2i Top of Rock Elev. 825.50 ft
Station 2503+87 Begin Core Elev. 821.00 ft
Offset 25.00ft Rt BL
Ground Surface Elev. 850.0 ft

DEPTH (ft)	CORE (#)	RECOVER (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
821.00	1	95	27	2	267
-30					
816.00	2	100	82	1.6	355
-35					
811.00					
-40					
-45					

Color pictures of the cores
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

Note:
Boring B-2i is at approximately ½ Ramp DA Sta. 365+61.75 and Offset 24.00' Rt.



Illinois Department
of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 6/26/12

ROUTE Bypass 20, FAP 301 DESCRIPTION P92-075-08 Proposed bridge, I-39 NB to WB US
20 Bypass - Ramp bridge LOGGED BY W. Garza

SECTION (3, 4) R LOCATION Cherry Valley Twp. - 9NW, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO.
Station
BORING NO. B-3i
Station 2563+00
Offset 40.00ft Lt BL
Ground Surface Elev. 850.9 ft

DEPTH (ft)	BLOW COUNT (tsf)	UCS (tsf)	MOIST (%)	Surface Water Elev. ft	Stream Bed Elev. ft	Groundwater Elev.: First Encounter ft	Upon Completion ft	After Hrs. ft	DEPTH (ft)	BLOW COUNT (tsf)	UCS (tsf)	MOIST (%)
829.40	11								2	3	1.1	20
846.40	19								5	5	1.1	15
846.90	14								6	7		
844.40	5								6	5		
841.90	10								4	15	1.3	12
838.90	6								8			
836.90	3	1.2	20						100/2'			
834.40	8	1.9	10									
831.90	2	2.0	16									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Note:
Boring B-3i is at approximately ½ Ramp DA Sta. 362+75.00 and Offset 43.25' Lt.

MODEL: Default
FILE NAME: pw\\benesch-pw-bentley.com\\benesch-pw-q\\Documents\\10800\\10800\\00\\Eng_Docs\\CAD_Sheets\\SN 0204 Ramp DA [Quigg]D264C62-1010204-SHT-035-Boring3



QUIGG ENGINEERING INC

USER NAME = rwhite	DESIGNED - RPW	REVISED -
D264C62-1010204-SHT-035-Boring3	CHECKED - KFO	REVISED -
PLOT SCALE = 0.1667" / in.	DRAWN - LMC	REVISED -
PLOT DATE = 03/31/2023	CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 101-0204

SHEET 35 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	897
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

Page 1 of 1

Date 6/26/12

SECTION (3, 4) R LOCATION Cherry Valley Twp. - 9NW, SEC., TWP. 43N, RNG. 2E

STRUCT. NO. _____ CORING BARREL TYPE & SIZE _____

Dolomite: tan-buff, pitted, 2-foot void encountered from 816.9 to 814.9, mostly fractured thereafter. t.s.f.: 813.9 to 813.4	817.90	1	50	27	1	240
---	--------	---	----	----	---	-----

End of Boring _____ 797.90 _____
 Color pictures of the cores _____
 Cores will be stored for examination until _____
 The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
 BBS, form 138 (Rev. 8-99)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Page 1 of 2

Date 3/7/06

SECTION (201-3) K LOCATION , SEC. , TWP. , RNG.

STRUCT. NO. _____ D B U M Surface Water Elev. _____ ft D B U M
 Station _____ E L C O Stream Bed Elev. _____ ft E L C O

SOFT brown SANDY LOAM	0.3	15	VERY STIFF dark gray LOAM	6		
	P			6	3.3	10
848.20			828.70	20	P	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BORING LOGS
STRUCTURE NO. 101-0204

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	898
		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		

Page 2 of 2

Date 3/7/06

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO. _____	D	B	U	M	Surface Water Elev. _____ ft
Station _____	E	L	C	O	Stream Bed Elev. _____ ft
	P	Q	S	I	
BORING NO. _____	T	W		S	Groundwater Elev.: _____
Station _____	H	S	Qu	T	First Encounter _____ None _____ ft
Offset _____					Upon Completion _____ Dry _____ ft
Ground Surface Elev. _____ 850.2 ft	(ft)	(/6")	(tsf)	(%)	After _____ Hrs. _____ ft

Time: 8 minutes FAIR tan LIMESTONE 100% Recovery (continued)	806.20		
Time: 8 minutes FAIR tan LIMESTONE 100% Recovery	801.20		
End of Boring			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Note:
Boring B-15 is at approximately ~~B~~ Ramp DA Sta. 364+44.00 and Offset 28.50' Lt.



USER NAME =	rwhiteside	DESIGNED -	RPW	REVISED -	
D264C62-1010204-SHT-037-Boring5		CHECKED -	KFO	REVISED -	
PLOT SCALE =	0.1667' / in.	DRAWN -	LMC	REVISED -	
PLOT DATE =	03/31/2023	CHECKED -	MDC	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS
STRUCTURE NO. 101-0204

SHEET 37 OF 37 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	899
		CONTRACT NO. 64B13		
		ILLINOIS	FED. AID PROJECT	

Existing Structure: S.N. 101-0139: Originally built in 1981 as a single span steel beam bridge with vaulted abutments on spread footing. Span length is 103'-0" and the total length back to back of approach bents is 157'-0". The deck is 28'-0" out to out. The structure carries I-39 SB (Ramp BD) over Linden Road.

Roadway will be closed to traffic during construction.

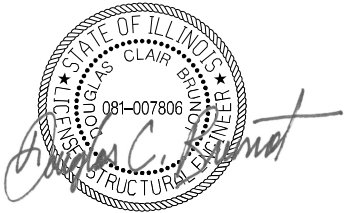
Benchmark: Cut "□" south side of eastern base of 30 mph ramp sign located east of the ramp connecting I-39 NB to US 20 West (Ramp DA) 0.1 mile north of the centerline of Linden Road. El. 851.37, 42°-13'-06.37" N. 89°-00'-39.64" W.

NOTE: Up to ¼" may be ground off the bridge deck and the bridge approach slabs.

NOTE: See Sheet 2 of 24 for Bill of Materials, General Notes, and Section A-A and Section B-B.

INDEX OF SHEETS

- 1-2 General Plan and Elevation
- 3-4 Top of Slab Elevations
- 5-6 Top of Approach Slab Elevations
- 7 Superstructure
- 8 Superstructure Details
- 9 Concrete Parapet Slipforming Option
- 10 Diaphragm Details
- 11-12 Bridge Approach Slab Details
- 13 Framing Plan
- 14 IL72N Beam
- 15 IL72N Beam Details
- 16 Bearing Details
- 17-18 East Abutment Details
- 19-20 West Abutment Details
- 21-24 Boring Logs



DATE: 05-05-2023
EXPIRES 11/30/24

APPROVED
For Structural Adequacy Only
James F. Jelliff
Engineer of Bridges & Structures

DESIGN SPECIFICATIONS
2020 AASHTO LRFD Bridge
Design Specifications, 9th Edition

LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
f'c = 4,000 psi (Superstructure Concrete)
fy = 60,000 psi (Reinforcement)

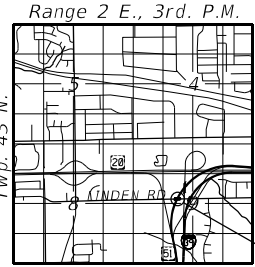
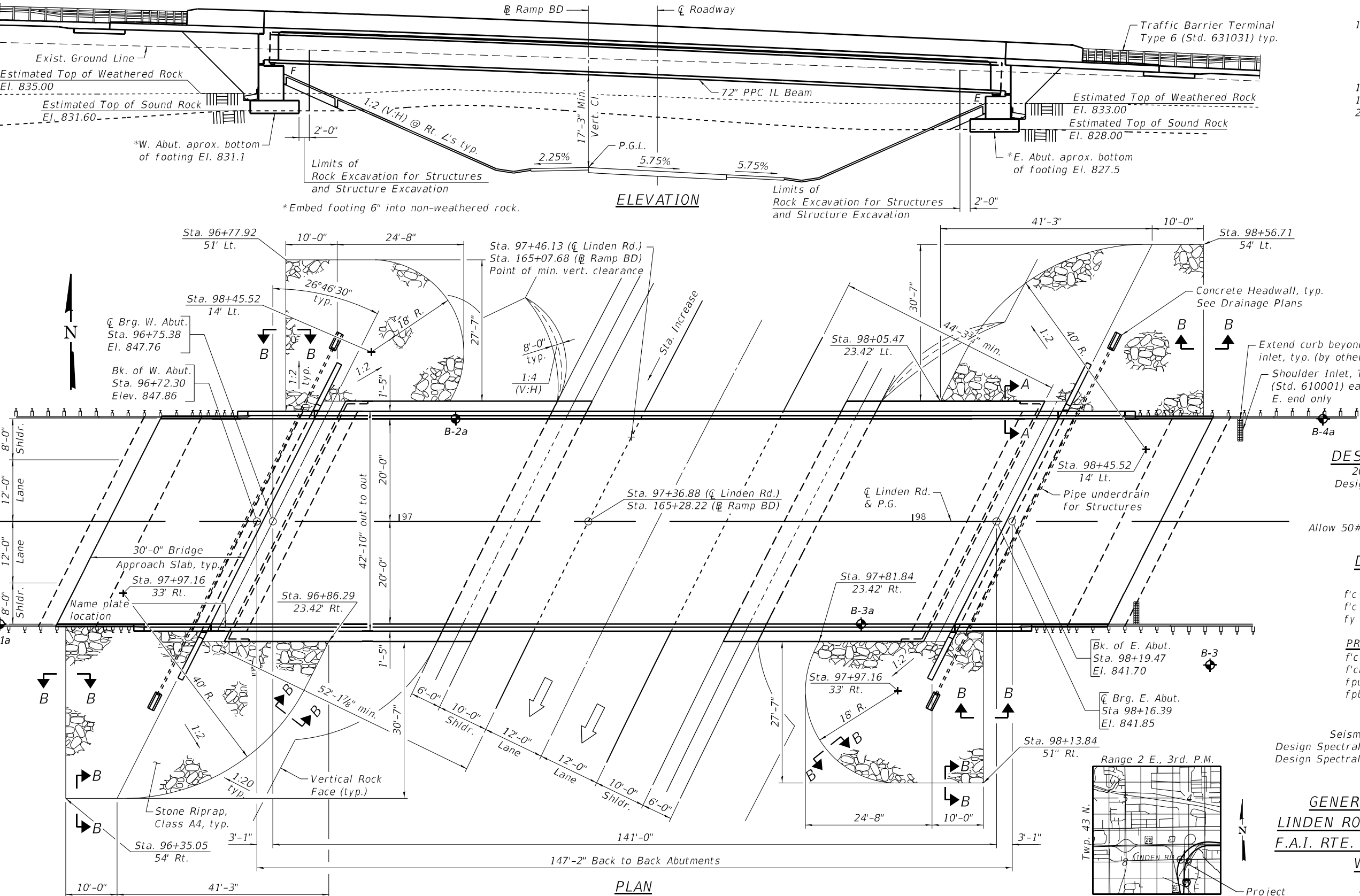
PRECAST PRESTRESSED UNITS

f'c = 8,500 psi
f'ci = 6,500 psi
fpu = 270,000 psi (0.6" Ø low lax. strands)
fpbt = 202,300 psi (0.6" Ø low lax. strands)

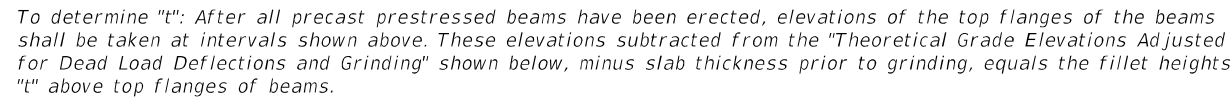
SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.033 G
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.085 G
Soil Site Class = B

GENERAL PLAN AND ELEVATION
LINDEN ROAD OVER I-39 SB (RAMP BD)
F.A.I. RTE. 39 SEC. (201-3)K & (4-1.5)R
WINNEBAGO COUNTY
STATION 97+36.88
STRUCTURE NO. 101-0216



 WILLET HOFMANN & ASSOCIATES, INC. PROFESSIONAL ARCHITECTURE AND SURVEYING 809 EAST 73rd ST. STE. 100, CHICAGO, IL 60611-0007 TEL: 312-354-1301 FAX: 312-354-0091	USER NAME = frank		DESIGNED - ESG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHEET 1 OF 24 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			CHECKED - DCB	REVISED -			39	(201-3)K & (4-1.5)R	WINNEBAGO	2192	900
			DRAWN - RDA/FDL	REVISED -			WHA # 1390D19		CONTRACT NO. 64B13		
	PLOT DATE = 5/5/2023		DATE - 03/31/2023	REVISED -			ILLINOIS		FED. AID PROJECT		



The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown below on this sheet and sheet 4 of 24. For grinding the deck, see Special Provisions.

FILLET HEIGHTS

<u>BEAM 3</u>				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut	96+74.15	-3.67	847.75	847.77
Q Brg. W. Abut	96+77.23	-3.67	847.65	847.67
A	96+87.23	-3.67	847.31	847.37
B	96+97.23	-3.67	846.96	847.06
C	97+07.23	-3.67	846.59	846.72
D	97+17.23	-3.67	846.21	846.37
E	97+27.23	-3.67	845.81	846.00
F	97+37.23	-3.67	845.41	845.60
G	97+47.23	-3.67	844.98	845.18
H	97+57.23	-3.67	844.55	844.74
I	97+67.23	-3.67	844.10	844.28
J	97+77.23	-3.67	843.63	843.79
K	97+87.23	-3.67	843.16	843.30
L	97+97.23	-3.67	842.69	842.80
M	98+07.23	-3.67	842.22	842.29
Q Brg. E. Abut	98+18.24	-3.67	841.71	841.73
Bk. E. Abut	98+21.32	-3.67	841.56	841.58

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CL ROADWAY & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut	96+72.30	0.00	847.86	847.88
CL Brg. W. Abut	96+75.38	0.00	847.76	847.78
A	96+85.38	0.00	847.43	847.49
B	96+95.38	0.00	847.08	847.18
C	97+05.38	0.00	846.71	846.85
D	97+15.38	0.00	846.34	846.50
E	97+25.38	0.00	845.94	846.13
F	97+35.38	0.00	845.54	845.73
G	97+45.38	0.00	845.12	845.32
H	97+55.38	0.00	844.68	844.88
I	97+65.38	0.00	844.23	844.42
J	97+75.38	0.00	843.77	843.94
K	97+85.38	0.00	843.30	843.44
L	97+95.38	0.00	842.83	842.94
M	98+05.38	0.00	842.37	842.43
CL Brg. E. Abut	98+16.39	0.00	841.85	841.87
Bk. E. Abut	98+19.47	0.00	841.71	841.73

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut	96+70.45	+3.67	847.87	847.89
CL Brg. W. Abut	96+73.53	+3.67	847.77	847.79
A	96+83.53	+3.67	847.44	847.50
B	96+93.53	+3.67	847.09	847.19
C	97+03.53	+3.67	846.73	846.86
D	97+13.53	+3.67	846.35	846.51
E	97+23.53	+3.67	845.96	846.14
F	97+33.53	+3.67	845.56	845.75
G	97+43.53	+3.67	845.14	845.34
H	97+53.53	+3.67	844.71	844.91
I	97+63.53	+3.67	844.26	844.45
J	97+73.53	+3.67	843.80	843.97
K	97+83.53	+3.67	843.34	843.47
L	97+93.53	+3.67	842.87	842.97
M	98+03.53	+3.67	842.40	842.46
CL Brg. E. Abut	98+14.54	+3.67	841.88	841.90
Bk. E. Abut	98+17.62	+3.67	841.74	841.76

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut	96+66.75	+11.00	847.88	847.90
CL Brg. W. Abut	96+69.83	+11.00	847.78	847.80
A	96+79.83	+11.00	847.45	847.51
B	96+89.83	+11.00	847.11	847.21
C	96+99.83	+11.00	846.75	846.89
D	97+09.83	+11.00	846.38	846.54
E	97+19.83	+11.00	846.00	846.18
F	97+29.83	+11.00	845.60	845.79
G	97+39.83	+11.00	845.19	845.39
H	97+49.83	+11.00	844.76	844.96
I	97+59.83	+11.00	844.32	844.50
J	97+69.83	+11.00	843.87	844.03
K	97+79.83	+11.00	843.40	843.53
L	97+89.83	+11.00	842.93	843.03
M	97+99.83	+11.00	842.46	842.53
CL Brg. E. Abut	98+10.84	+11.00	841.94	841.97
Bk. E. Abut	98+13.92	+11.00	841.80	841.82

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut	96+63.05	+18.33	847.85	847.87
CL Brg. W. Abut	96+66.13	+18.33	847.75	847.77
A	96+76.13	+18.33	847.43	847.49
B	96+86.13	+18.33	847.09	847.19
C	96+96.13	+18.33	846.74	846.87
D	97+06.13	+18.33	846.38	846.54
E	97+16.13	+18.33	846.00	846.18
F	97+26.13	+18.33	845.61	845.80
G	97+36.13	+18.33	845.20	845.39
H	97+46.13	+18.33	844.78	844.97
I	97+56.13	+18.33	844.34	844.52
J	97+66.13	+18.33	843.89	844.05
K	97+76.13	+18.33	843.43	843.56
L	97+86.13	+18.33	842.96	843.06
M	97+96.13	+18.33	842.49	842.56
CL Brg. E. Abut	98+07.14	+18.33	841.98	842.00
Bk. E. Abut	98+10.22	+18.33	841.83	841.85

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NORTH EDGE OF SHOULDER

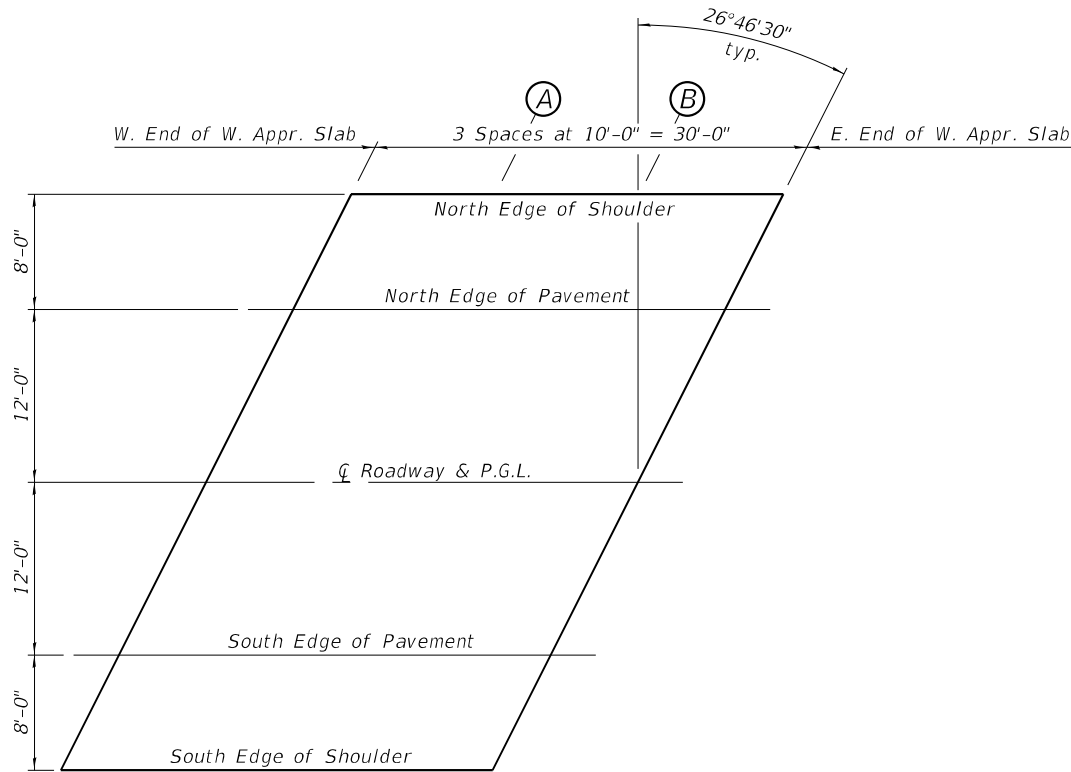
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of W. Aprpr.	96+53.51	-20.00	848.11	848.13
A	96+63.51	-20.00	847.80	847.82
B	96+73.51	-20.00	847.48	847.50
E. End of W. Aprpr.	96+83.51	-20.00	847.15	847.17

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of W. Aprpr.	96+49.48	-12.00	848.39	848.41
A	96+59.48	-12.00	848.09	848.11
B	96+69.48	-12.00	847.77	847.80
E. End of W. Aprpr.	96+79.48	-12.00	847.45	847.47

CL ROADWAY & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of W. Aprpr.	96+43.42	0.00	848.74	848.76
A	96+53.42	0.00	848.45	848.47
B	96+63.42	0.00	848.15	848.17
E. End of W. Aprpr.	96+73.42	0.00	847.83	847.85



SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of W. Aprpr.	96+37.37	+12.00	848.73	848.75
A	96+47.37	+12.00	848.45	848.47
B	96+57.37	+12.00	848.15	848.17
E. End of W. Aprpr.	96+67.37	+12.00	847.84	847.86

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of W. Aprpr.	96+33.33	+20.00	848.68	848.70
A	96+43.33	+20.00	848.40	848.42
B	96+53.33	+20.00	848.11	848.13
E. End of W. Aprpr.	96+63.33	+20.00	847.81	847.83



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809 EAST 2ND STREET, OROQUO, IL 61021-0367
T. 815-384-3351 DED. CNVTR. 2154-000015

USER NAME = frank	DESIGNED - ESG	REVISED -
	CHECKED - DCB	REVISED -
	DRAWN - RDAFDL	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF WEST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 101-0216

SHEET 5 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1.5)R	WINNEBAGO	2192	904
WHA # 1390D19		CONTRACT NO. 64B13		
		ILLINOIS	FED. AID PROJECT	

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NORTH EDGE OF SHOULDER

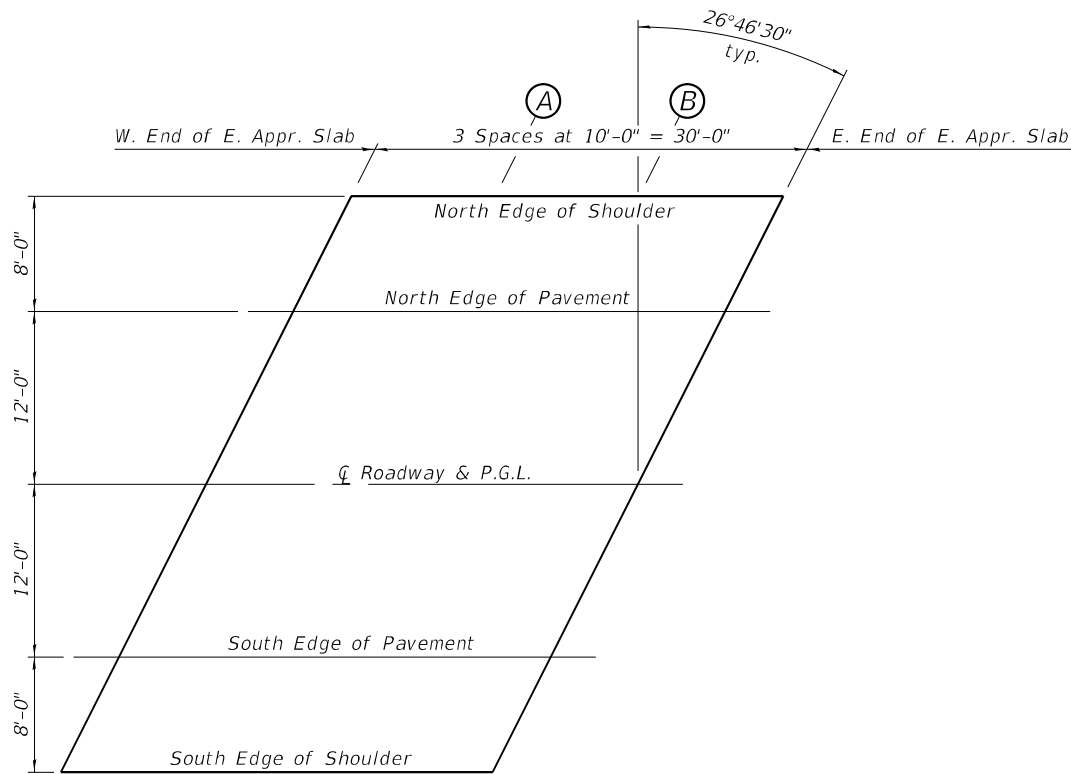
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of E. Aprpr.	98+28.44	-20.00	840.94	840.97
A	98+38.44	-20.00	840.48	840.50
B	98+48.44	-20.00	840.01	840.03
E. End of E. Aprpr.	98+58.44	-20.00	839.54	839.56

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of E. Aprpr.	98+24.40	-12.00	841.29	841.31
A	98+34.40	-12.00	840.83	840.85
B	98+44.40	-12.00	840.36	840.38
E. End of E. Aprpr.	98+54.40	-12.00	839.89	839.91

CL ROADWAY & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of E. Aprpr.	98+18.35	0.00	841.76	841.78
A	98+28.35	0.00	841.29	841.31
B	98+38.35	0.00	840.82	840.84
E. End of E. Aprpr.	98+48.35	0.00	840.35	840.37



PLAN

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of E. Aprpr.	98+12.29	+12.00	841.86	841.88
A	98+22.29	+12.00	841.39	841.41
B	98+32.29	+12.00	840.92	840.94
E. End of E. Aprpr.	98+42.29	+12.00	840.46	840.48

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of E. Aprpr.	98+08.26	+20.00	841.89	841.91
A	98+18.26	+20.00	841.42	841.44
B	98+28.26	+20.00	840.95	840.97
E. End of E. Aprpr.	98+38.26	+20.00	840.48	840.51



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USER NAME = frank	DESIGNED - ESG	REVISED -
	CHECKED - DCB	REVISED -
	DRAWN - RDA/FDL	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

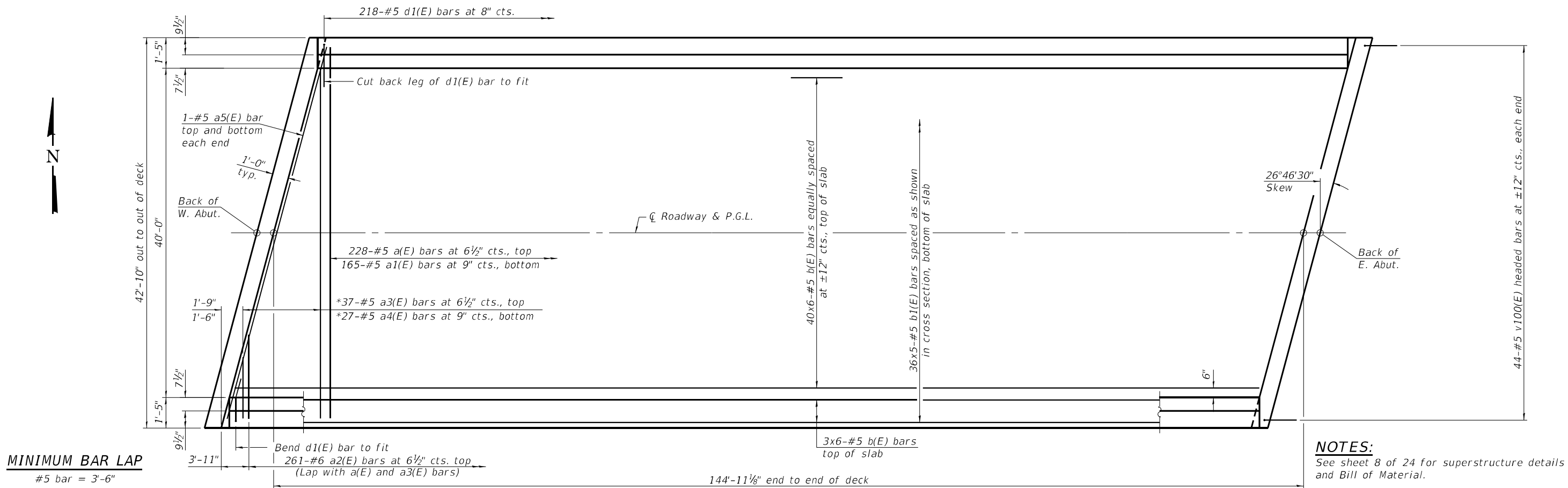
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 101-0216

SHEET 6 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1.5)R	WINNEBAGO	2192	905
WHA # 1390D19		CONTRACT NO. 64B13		
		ILLINOIS	FED. AID PROJECT	

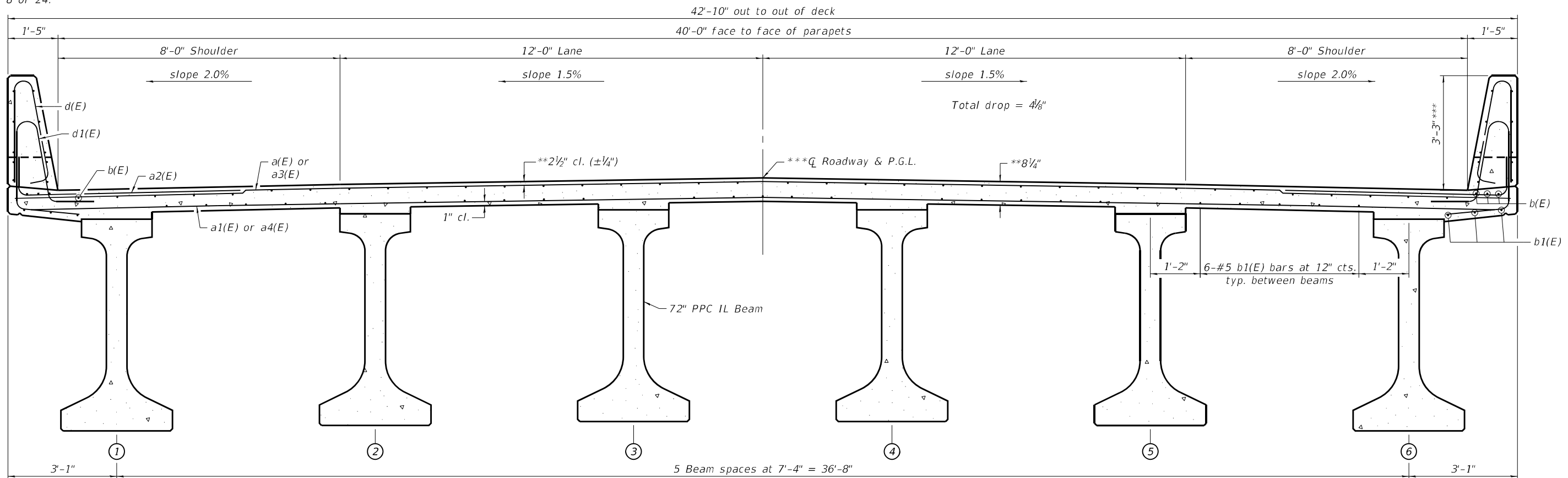
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MINIMUM BAR LAP
#5 bar = 3'-6"

*See Field Cutting Diagram on sheet 8 of 24.

NOTES:
See sheet 8 of 24 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



CROSS SECTION
(Looking East)

** Prior to Grinding
*** After Grinding



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USER NAME	= frank
DESIGNED	- ESG
CHECKED	- DCB
DRAWN	- RDA/FDL
PLOT DATE	= 3/30/2023

REVISED	-
REVISED	-
REVISED	-
REVISED	-

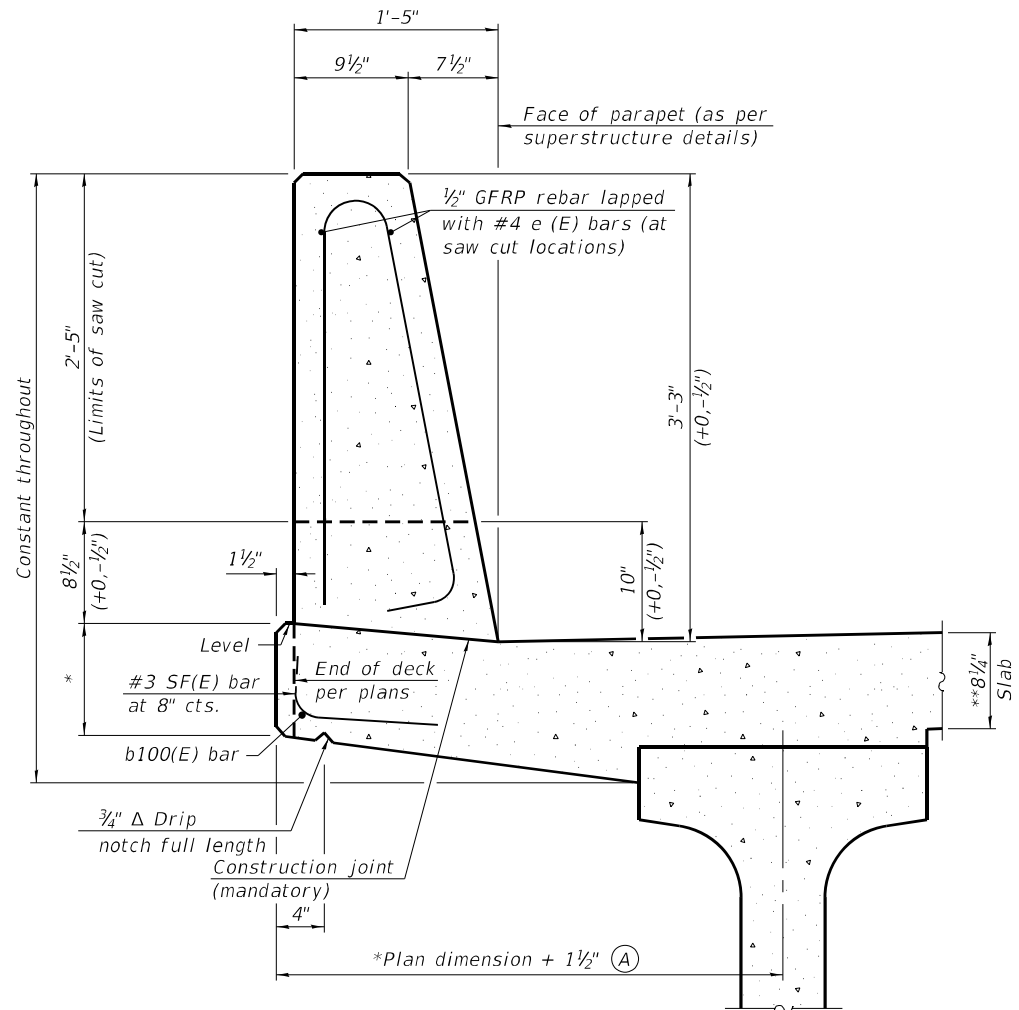
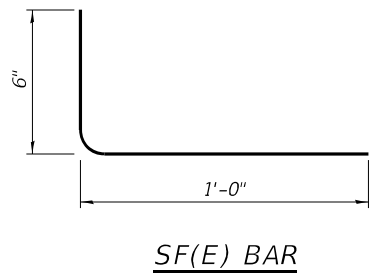
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 101-0216

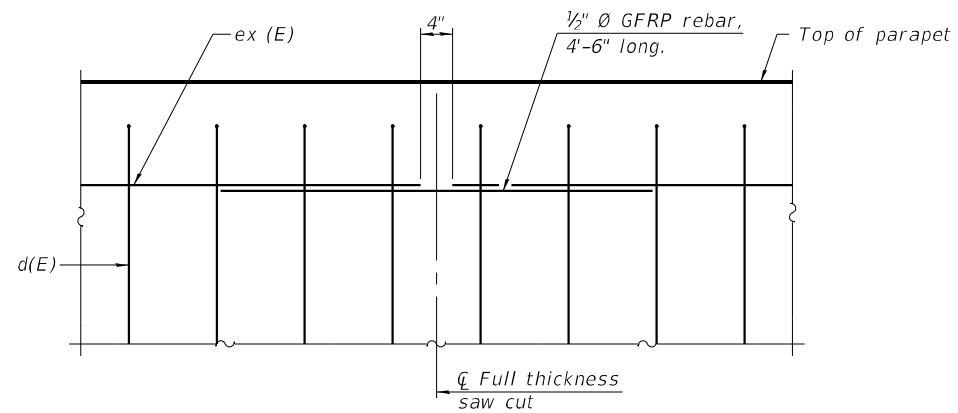
SHEET 7 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1.5)R	WINNEBAGO	2192	906
WHA # 1390D19		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		

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**39" CONSTANT-SLOPE
PARAPET SECTION**
(Showing dimensions, d(E), and 1/2" Ø GFRP rebar)
*See Superstructure Details.
**Prior to Gridding



GFRP REBAR STIFFENING DETAIL
(Place as shown in parapet section
at each parapet joint location.)

Notes:
All dimensions shall remain the same as shown on
superstructure details, except dimension A which is
to be revised as shown. Additional concrete
needed to revise dimension A = 0.00348 cu. yds./ft.
Place full depth aluminum sheets as shown on
superstructure details.
Replace all cork joint filler locations with a full
thickness saw cut.



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USER NAME	= frank
DESIGNED	- ESG
CHECKED	- DCB
DRAWN	- FDL
PLOT DATE	= 3/30/2023
DATE	- 03/31/2023

REVISED	-
REVISED	-
REVISED	-
REVISED	-

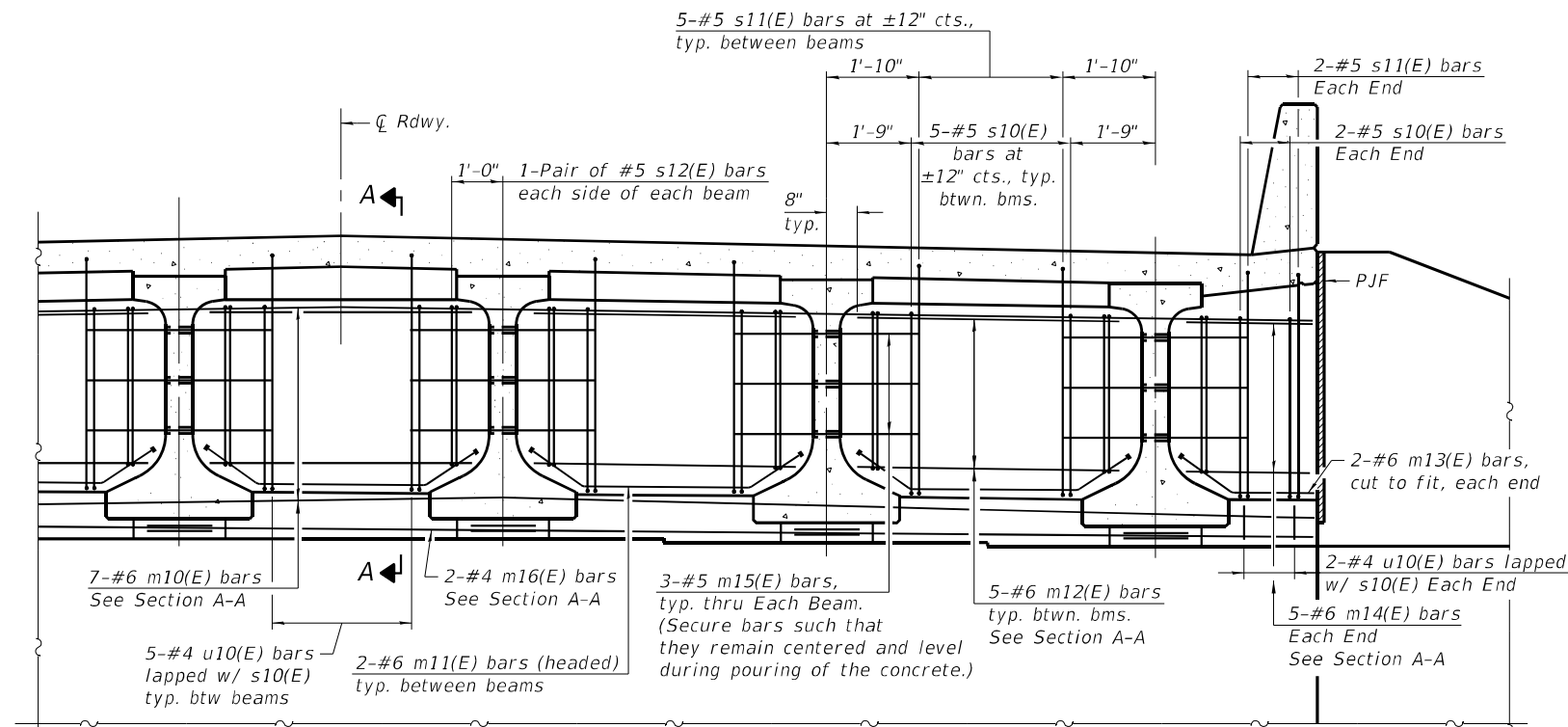
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CONCRETE PARAPET SLIPFORMING OPTION
STRUCTURE NO. 101-0216**

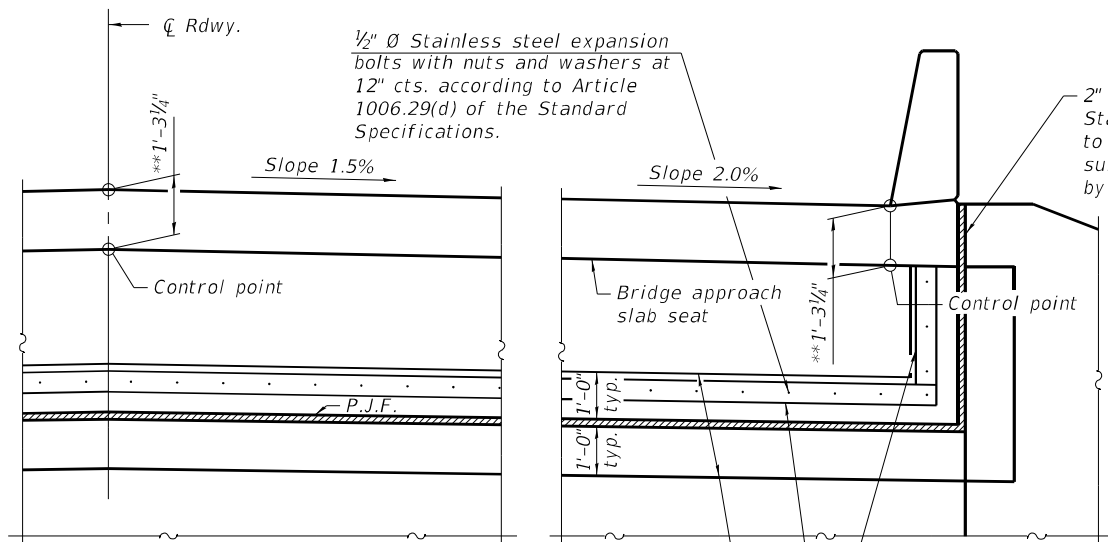
SHEET 9 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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WHA # 1390D19		CONTRACT NO. 64B13		
		ILLINOIS	FED. AID PROJECT	

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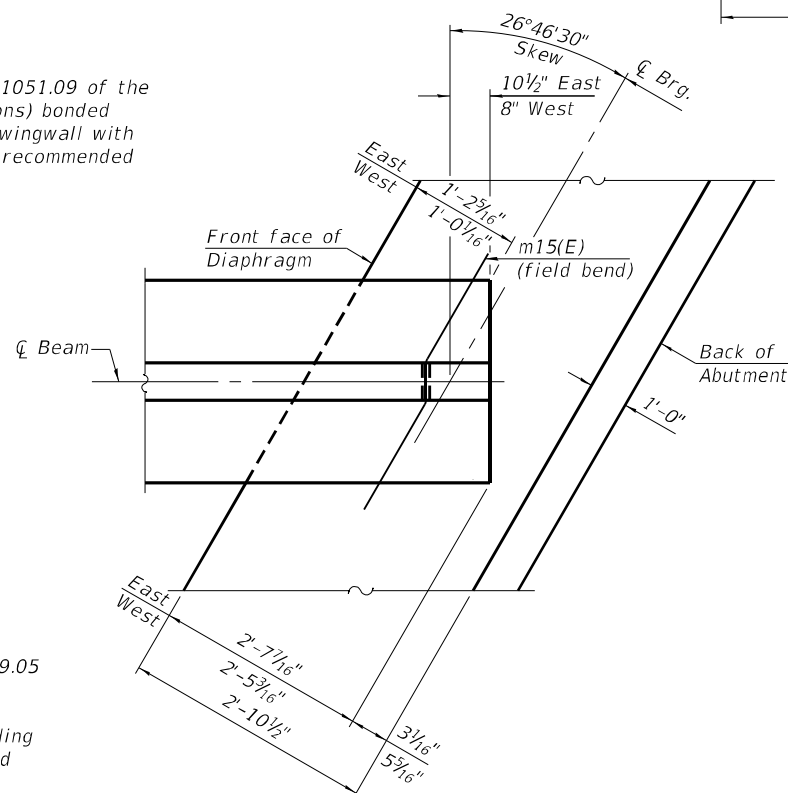
DIAPHRAGM AT ABUTMENT



VIEW B-B

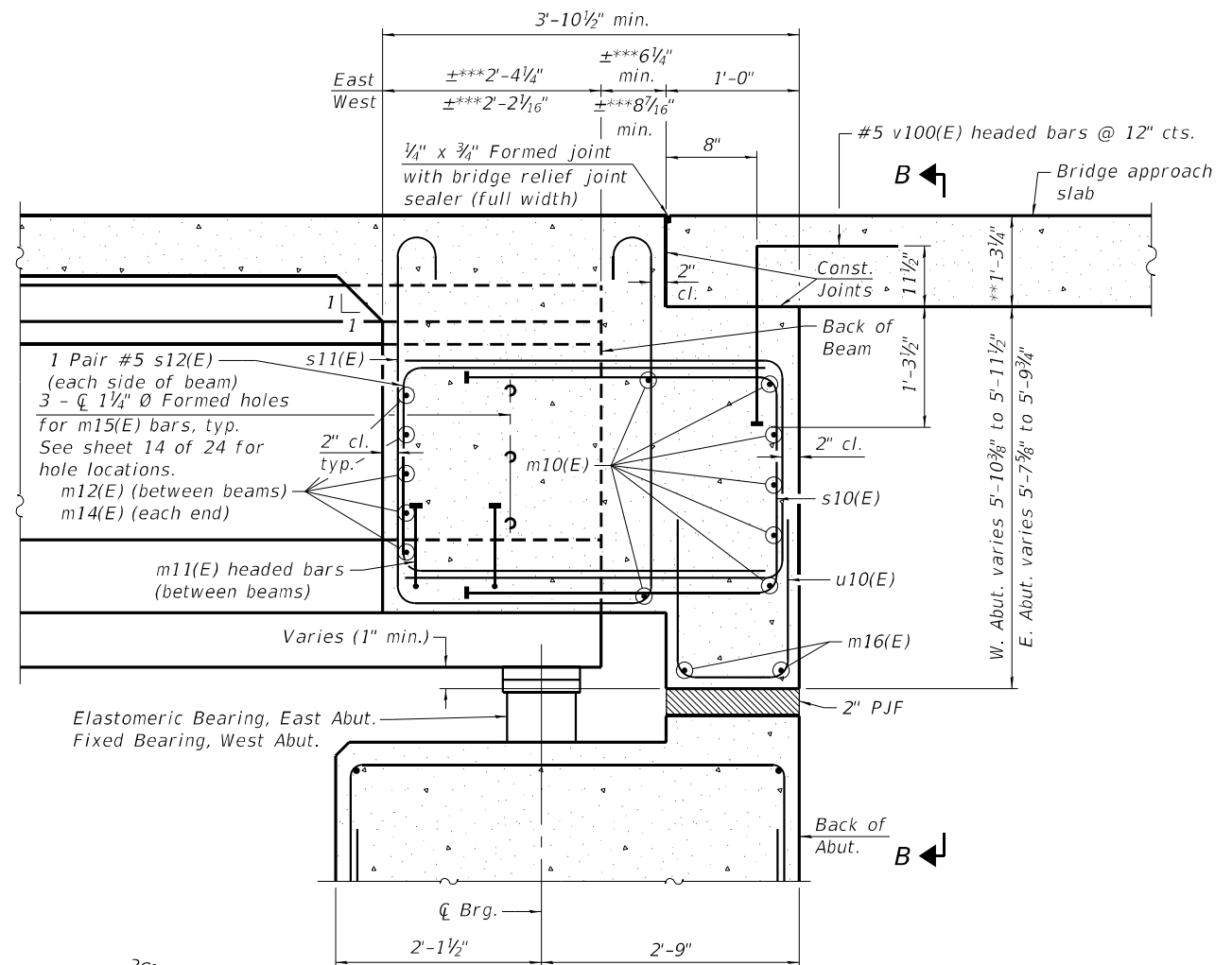
$\frac{3}{8}" \times 5"$ Galvanized R_L according to Article 509.05 of the Standard Specifications.

Limits of fabric reinforced elastomeric mat according to Section 1028 of the Standard Specifications and installed according to applicable requirements of Article 520.09 of the Standard Specifications.



PLAN AT ABUTMENT

(Showing bottom flange of beam)



SECTION A-A

(Horiz. dim. @ Rt. L's)
***Dimensions to Top Flange

**Prior to grinding

NOTES:

See sheet 8 of 24 for superstructure details and Bill of Material.

The s10(E), s11(E), s12(E), u10(E) and v100(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

The approach slab seat shall have a constant slope determined from the control points shown.

Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

Cost of fabric reinforced elastomeric mat, galvanized R_L , stainless steel expansion bolts with nuts and washers and installation are included in the cost of Concrete Superstructure.



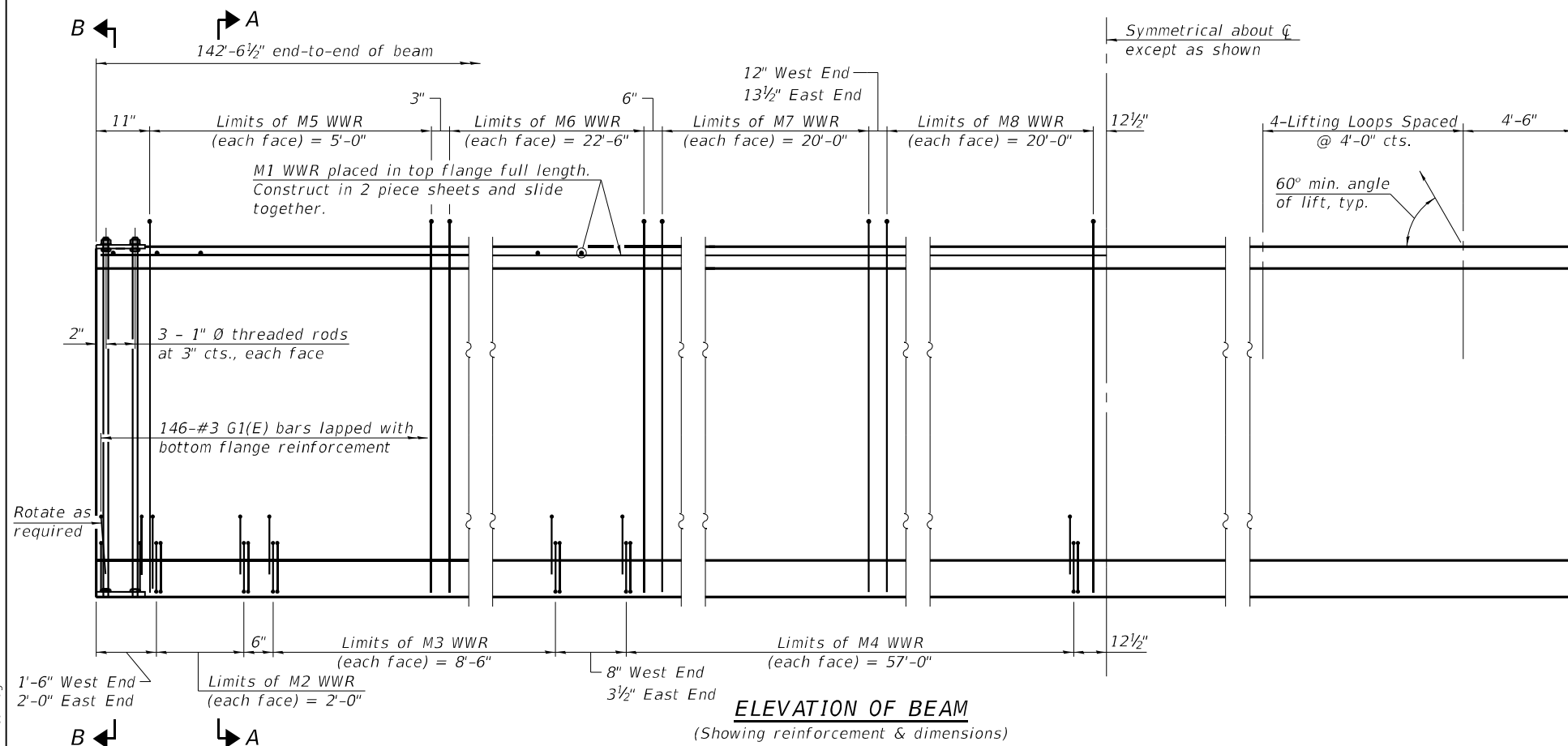
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	CHECKED - DCB	REVISED -
	DRAWN - RDA/FDL	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

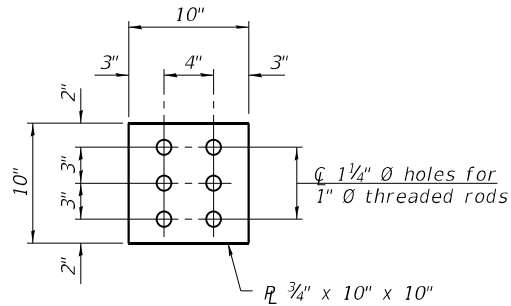
DIAPHRAGM DETAILS
STRUCTURE NO. 101-0216

SHEET 10 OF 24 SHEETS

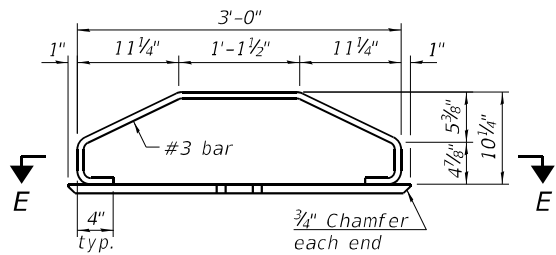
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1.5)R	WINNEBAGO	2192	909
WHA # 1390D19		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		



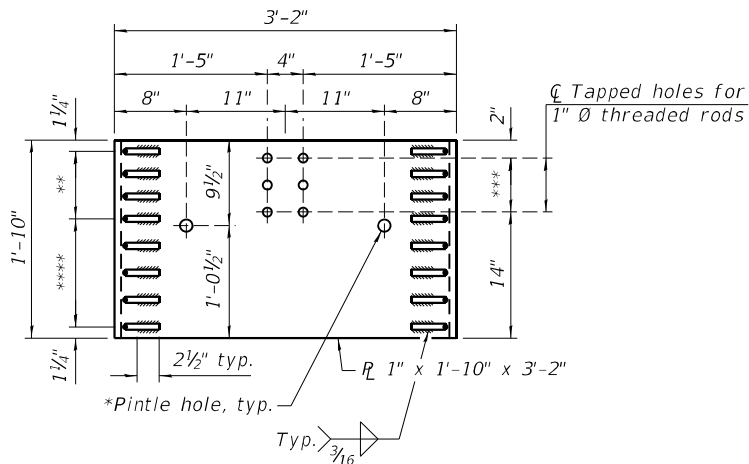
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PLAN - TOP PLATE



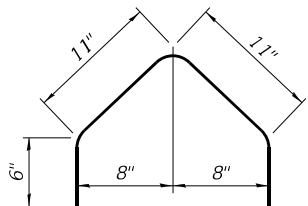
ELEVATION - BOTTOM
PLATE ASSEMBLY



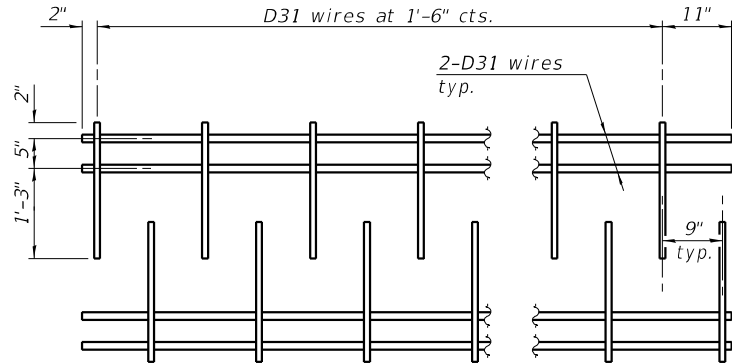
SECTION E-E - EXPANSION END

* 1 3/8" Ø holes for pintles. Plug before casting beam. One side of beam only.

** 3 Spaces at 2 1/2" = 7 1/2"
*** 2 Spaces at 3" = 6"
**** 4 Spaces at 3" = 12"

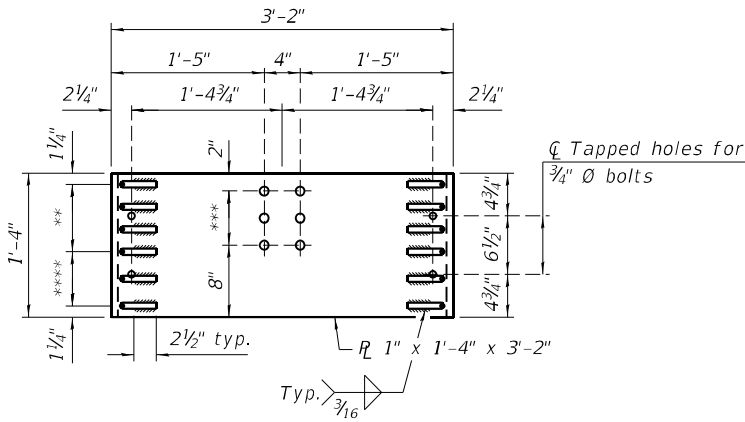


BAR G1(E)



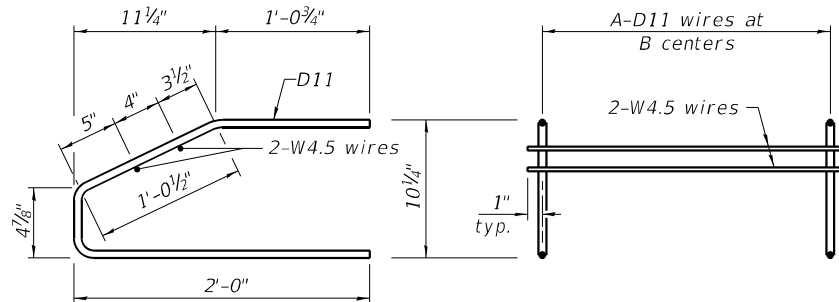
M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



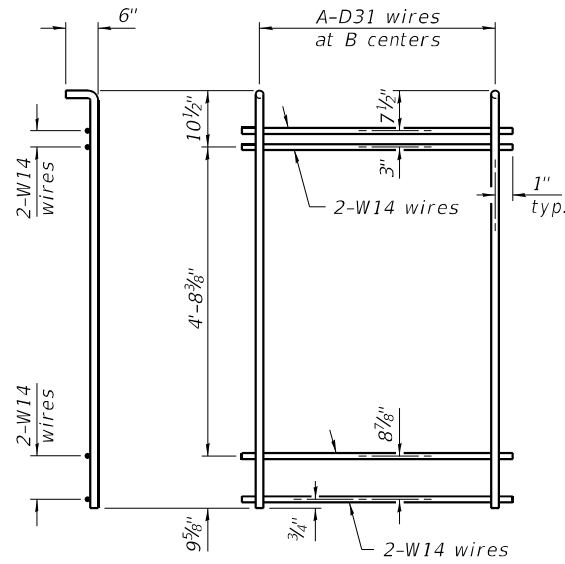
SECTION E-E - FIXED END

** 3 Spaces at 2 1/2" = 7 1/2"
*** 2 Spaces at 3" = 6"
**** 2 Spaces at 3" = 6"



M2 THRU M4 WWR DETAIL

(See Table of Dimensions)



M5 THRU M8 WWR DETAIL

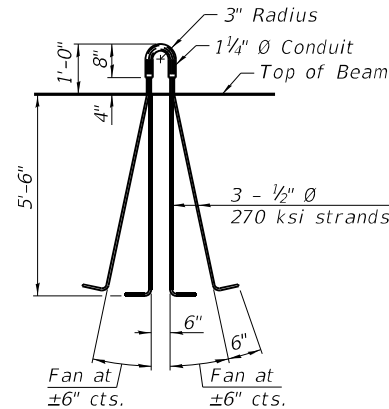
(See Table of Dimensions)

TABLE OF DIMENSIONS

(The WWR designs assume grade 60. If necessary, this permits the fabricator to directly substitute grade 60 rebar as detailed in the Manual for Fabrication of Precast Prestressed Concrete Products.)

SPAN 1

WWR	A	B
M2	9	3"
M3	18	6"
M4	39	1'-6"
M5	21	3"
M6	46	6"
M7	21	1'-0"
M8	11	2'-0"



LIFTING LOOP DETAIL

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL72N	Ft.	856

NOTES:

Inserts for 3/4" Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be 1/2" and the nominal cross sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, f'c, of 8,500 psi and a release concrete compressive strength, f'ci, of 6,500 psi.

A minimum 2 1/2" Ø lifting pin shall be used to engage the lifting loops during handling.

The top and bottom R's shall be AASHTO M270 Grade 50.

The top plates and bottom R assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55.

Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating or ASTM A1060, Table 3 galvanized coating.



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USER NAME = frank	DESIGNED - ESG	REVISED -
	CHECKED - DCB	REVISED -
	DRAWN - RDA	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

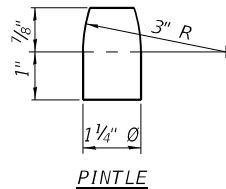
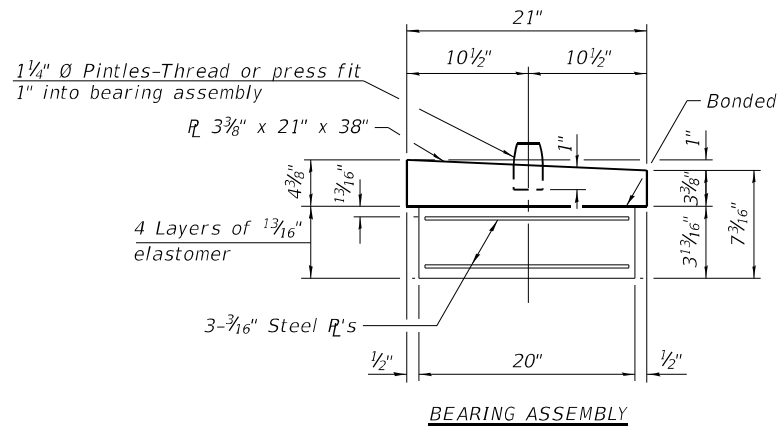
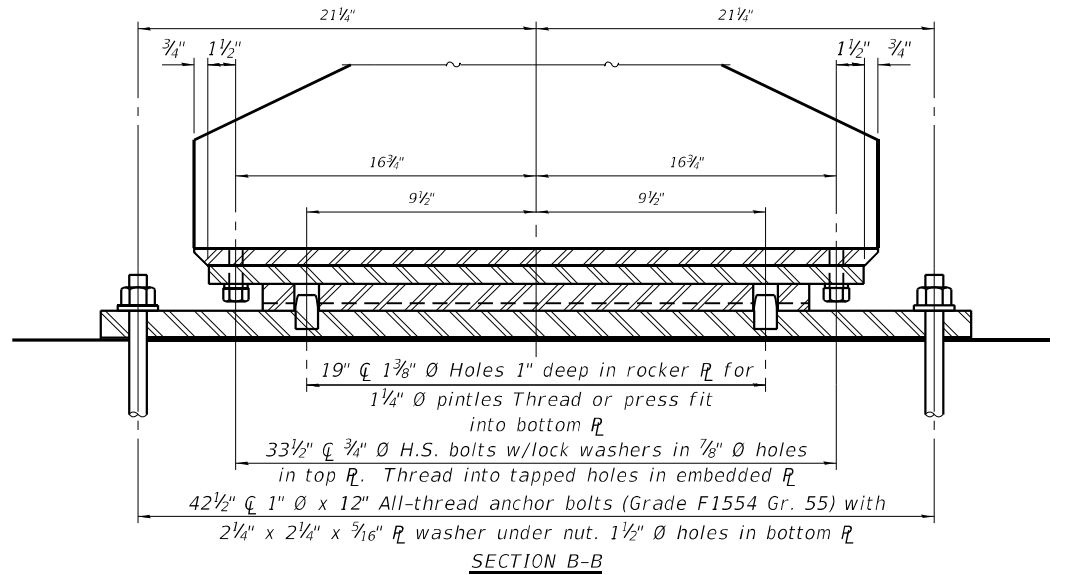
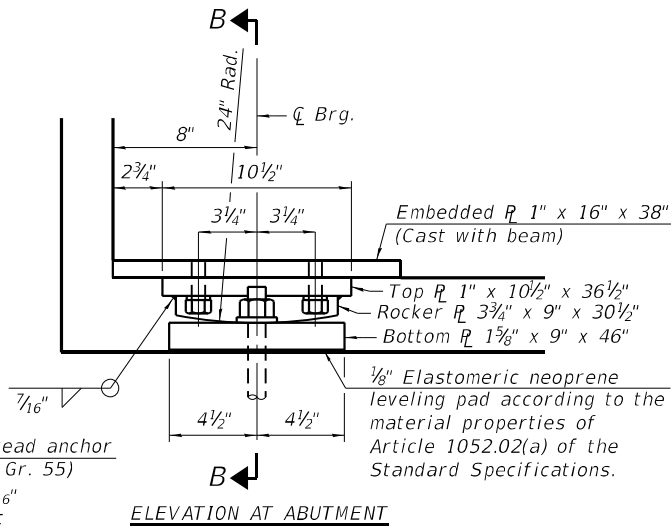
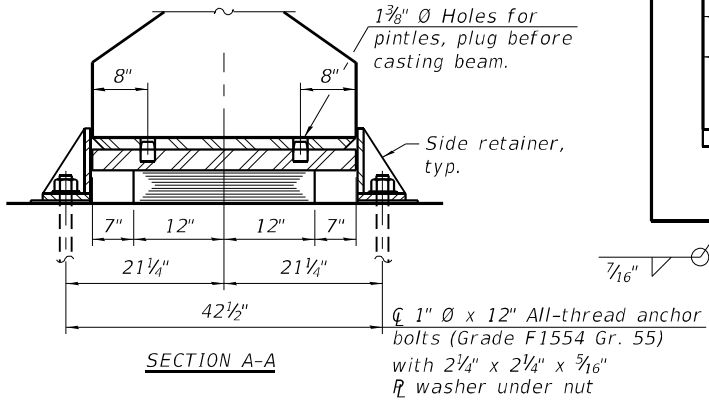
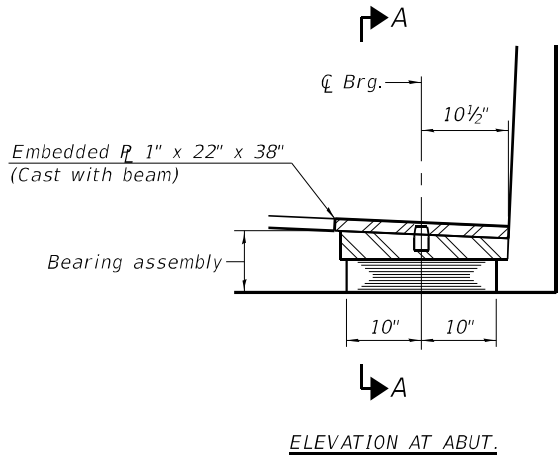
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL72N BEAM DETAILS
STRUCTURE NO. 101-0216

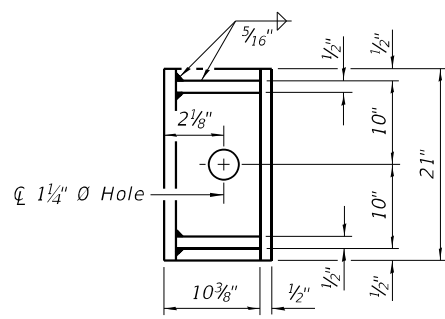
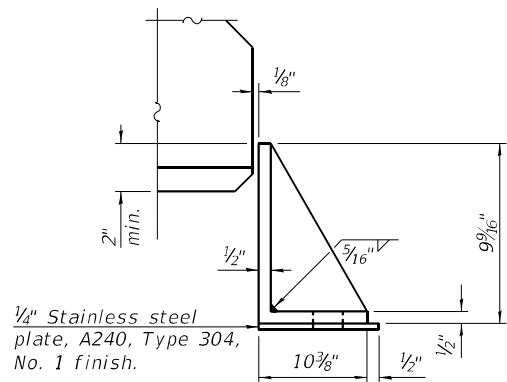
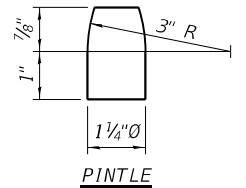
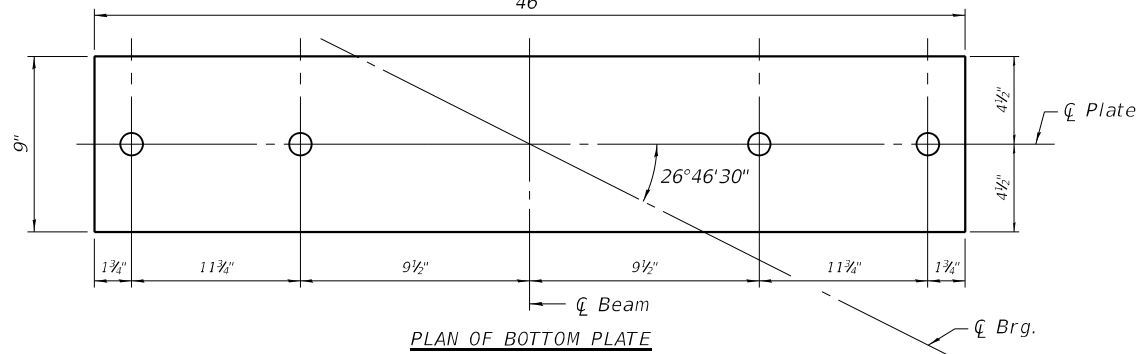
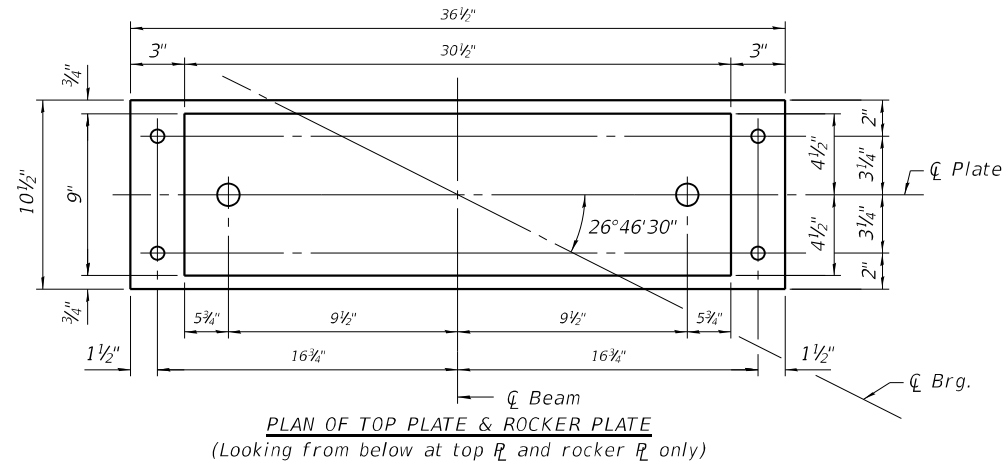
SHEET 15 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1.5)R	WINNEBAGO	2192	914
WHA # 1390D19		CONTRACT NO. 64B13		
		ILLINOIS FED. AID PROJECT		

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ϕ Brg.



SIDE RETAINER

Equivalent rolled angle with stiffeners
will be allowed in lieu of welded R 's.

TYPE I ELASTOMERIC EXP. BRG.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	6
Anchor Bolts, 1"	Each	24

NOTES:

Side retainers and stainless steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.

See sheet 15 of 24 for additional details of embedded R .

Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

All exposed bearing plates and side retainers shall be hot dip galvanized according to AASHTO M111.

All R 's, hardware, and leveling pads required for the bearing, except anchor bolts, shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete 1L72N Beams.

All (embedded and separate) bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.



USER NAME	= frank
DESIGNED	- ESG
CHECKED	- DCB
DRAWN	- RDA/FDL
PLOT DATE	= 3/30/2023

DESIGNED	- ESG
CHECKED	- DCB
DRAWN	- RDA/FDL
DATE	- 03/31/2023

REVISED	-
REVISED	-
REVISED	-
REVISED	-

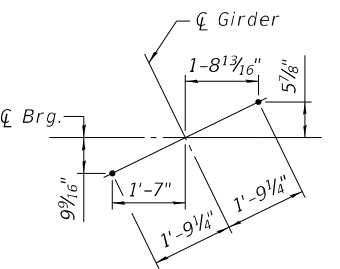
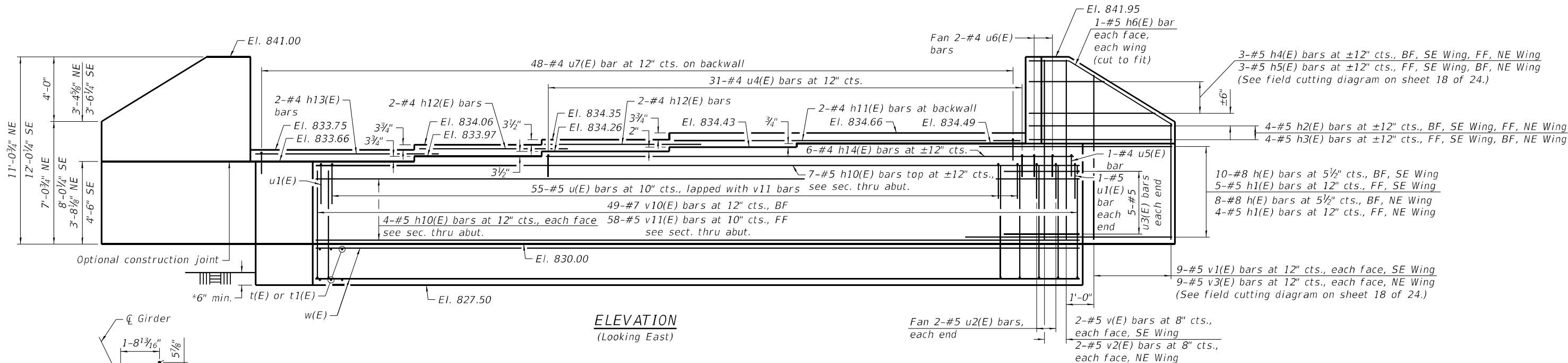
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
STRUCTURE NO. 101-0216

SHEET 16 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1.5)R	WINNEBAGO	2192	915
WHA # 1390D19		CONTRACT NO. 64B13		
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
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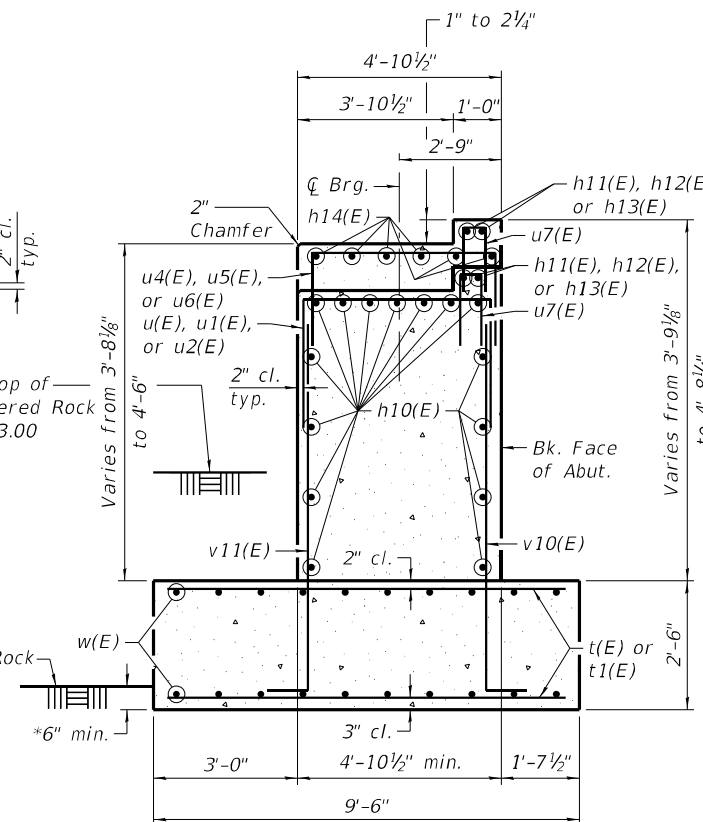
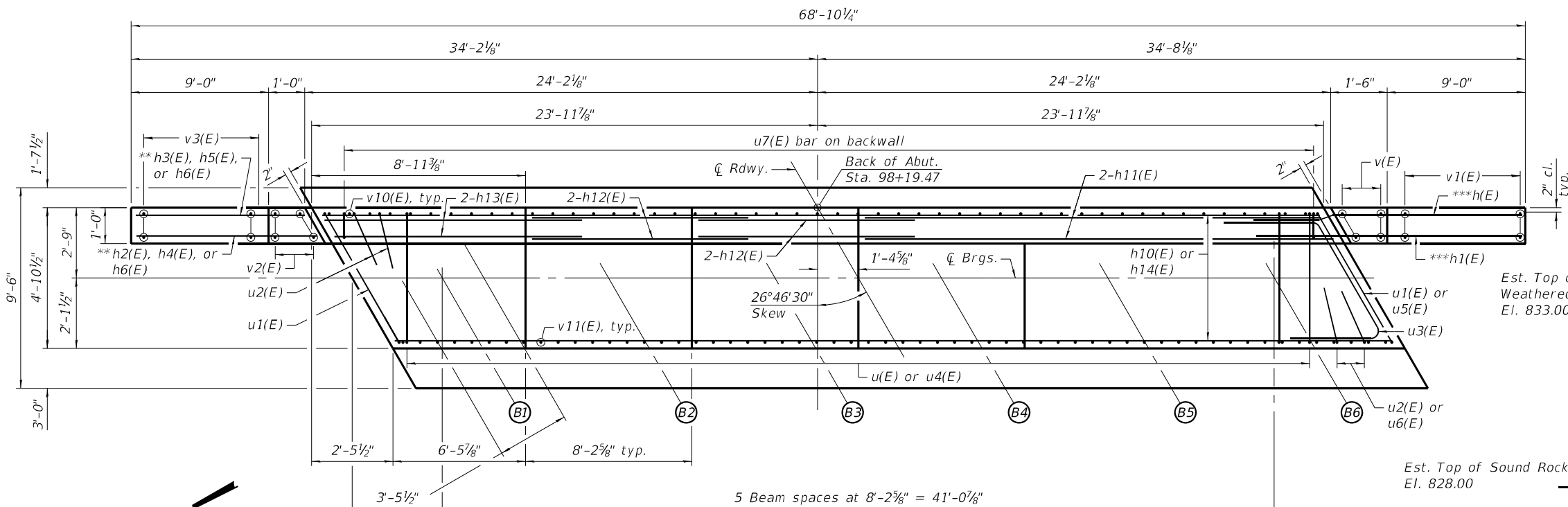


ANCHOR BOLT LAYOUT

*"The bottom of footing elevation(s) shall be adjusted to ensure a minimum embedment of 6" in non-weathered rock.
The rock excavation shall be made with near-vertical sides at the plan dimensions to allow the sides and base of the embedded portion of the footing to be cast against undisturbed rock surface."

NOTE:
See sheet 18 of 24 for Section thru Wingwall.

BEARING PRESSURE DATA
Maximum Applied Service Bearing Pressure, Q max.: 22 ksf



SEC. THRU ABUT.
Dimensions @ Rt. L's to abutment

(Sheet 1 of 2)



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USER NAME	= frank
DESIGNED	- ESG
CHECKED	- DCB
DRAWN	- RDA/FDL
PLOT DATE	= 3/30/2023

DESIGNED	- ESG
CHECKED	- DCB
DRAWN	- RDA/FDL
DATE	- 03/31/2023

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT DETAILS
STRUCTURE NO. 101-0216

SHEET 17 OF 24 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1.5)R	WINNEBAGO	2192	916
WHA # 1390D19		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		



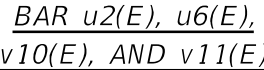
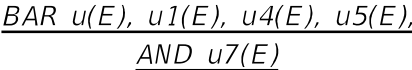
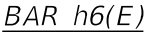
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	18	#8	18'-8"	=====
h1(E)	9	#5	14'-1"	=====
h2(E)	8	#5	10'-2"	=====
h3(E)	8	#5	9'-8"	=====
h4(E)	3	#5	12'-4"	=====
h5(E)	3	#5	11'-4"	=====
h6(E)	4	#5	11'-0"	=====
h10(E)	15	#5	47'-8"	=====
h11(E)	2	#4	22'-3"	=====
h12(E)	4	#4	9'-7"	=====
h13(E)	2	#4	10'-4"	=====
h14(E)	6	#4	18'-3"	=====
t(E)	43	#7	9'-2"	=====
t1(E)	4	#7	10'-3"	=====
t2(E)	16	#7	5'-5"	=====
u(E)	55	#5	9'-7"	=====
u1(E)	2	#5	10'-1"	=====
u2(E)	4	#5	5'-6"	=====
u3(E)	10	#5	8'-5"	=====
u4(E)	31	#4	7'-3"	=====
u5(E)	1	#4	7'-9"	=====
u6(E)	2	#4	4'-4"	=====
u7(E)	48	#4	3'-4"	=====
v(E)	4	#5	11'-7"	=====
v1(E)	9	#5	18'-10"	=====
v2(E)	4	#5	10'-7"	=====
v3(E)	9	#5	17'-3"	=====
v10(E)	49	#7	6'-11"	=====
v11(E)	58	#5	6'-7"	=====
w(E)	20	#5	47'-8"	=====
Rock Excavation for Structures			Cu. Yd.	157
Structure Excavation			Cu. Yd.	278
Concrete Structures			Cu. Yd.	86.9
Reinforcement Bars, Epoxy Coated			Pound	6,740
Granular Backfill for Structures			Cu. Yd.	126
Geocomposite Wall Drain			Sq. Yd.	73
Pipe Underdrain for Structures 4"			Foot	109

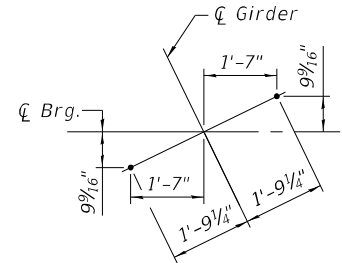
NOTE:
Pour steps monolithically with cap.



Order h4(E) and v1(E) full length. Cut as shown and use remainder of bars in opposite wing.

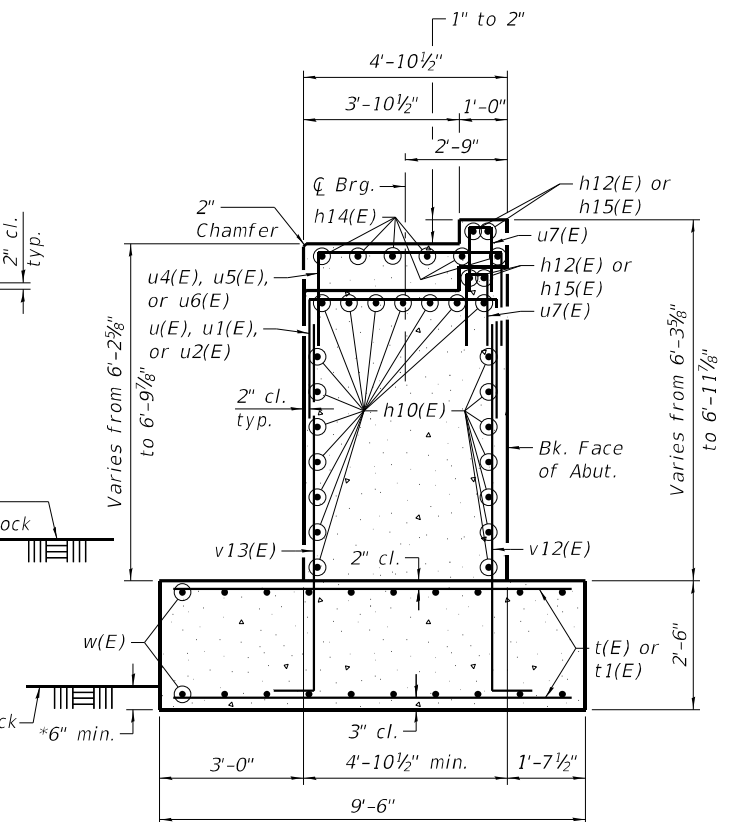


(Sheet 2 of 2)

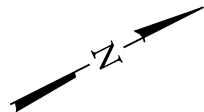


*"The bottom of footing elevation(s) shall be adjusted to ensure a minimum embedment of 6" in non-weathered rock. The rock excavation shall be made with near-vertical sides at the plan dimensions to allow the sides and base of the embedded portion of the footing to be cast against undisturbed rock surface."

Maximum Applied Service Bearing Pressure, Q_{max} : 22 ksf



(Sheet 1 of 2)



12"

$h4(E)$

$h6(E)$

$h5(E)$

$h4(E)$

$h2(E)$

$h3(E)$

$v4(E)$ or $v5(E)$

Optional Construction Joint

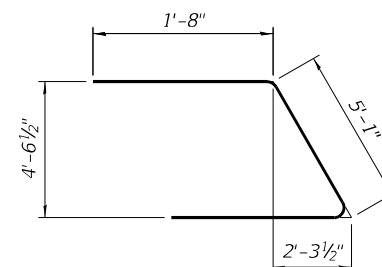
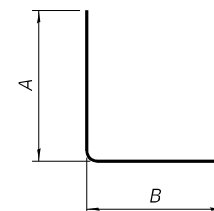
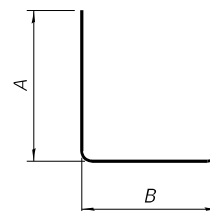
$h(E)$

$h1(E)$

Bk. Face of Wingwall

BAR LENGTH		
BARS	A	B
u(E)	2'-6"	4'-6½"
u1(E)	2'-6"	5'-1"
u4(E)	1'-4"	4'-6½"
u5(E)	1'-4"	5'-1"
u7(E)	1'-4"	8"

BAR LENGTH		
BARS	A	B
u2(E)	2'-6"	3'-0"
u6(E)	1'-4"	3'-0"
v12(E)	1'-2"	8'-3"
v13(E)	10"	8'-3"



BAR u3(E)

NOTE:
Pour steps monolithically with cap.



Page 1 of 1

Date 3/14/16

ROUTE	FAI 39 & FAP 301	DESCRIPTION	Linden Road	LOGGED BY	W. Garza
-------	------------------	-------------	-------------	-----------	----------

SECTION (201-3)K & 4-1,5)K LOCATION , SEC. , TWP. , RNG.

COUNTY	Winnebago	DRILLING METHOD	Hollow Stem Auger	HAMMER TYPE	B-53
--------	-----------	-----------------	-------------------	-------------	------

STRUCT. NO. _____ Latitude 42° 13' 00.59" Northing 2,023,652.1495
 Station _____ Longitude -89° 00' 46.27" Easting 2,609,129.1559
 _____ Surface Water Flow _____ ft

BORING NO. B-1a.
Station 96+22
Offset 20.00ft Rt
Ground Surface Elev. 844.30 ft

D	B	U	M	Surface Water Elev. _____	ft
E	L	C	O	Stream Bed Elev. _____	ft
P	O	S	I		
T	W		S	Groundwater Elev.: _____	
H	S	Qu	T	First Encounter _____	ft
				Upon Completion _____	ft
(ft)	((5"))	(tsf)	(%)	After _____ Hrs.	ft

[illegible]

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



Page 1 of 1

Date 3/14/16

ROUTE	FAI 39 & FAP 301	DESCRIPTION	Linden Road	LOGGED BY	W. Garza
-------	------------------	-------------	-------------	-----------	----------

SECTION (201-3)K & 4-1,5)K LOCATION , SEC. , TWP. , RNG.

COUNTY	Winnebago	CORING METHOD		R		CORE	S
--------	-----------	---------------	--	---	--	------	---

CORING BARREL TYPE & SIZE			D E P T H	C O R E	C O V E R Y	R Q D	T I M E	S T R E N G T H
STRUCT. NO.		Core Diameter						
Station		Top of Rock Elev.	834.80	ft				
		Begin Core Elev.	828.80	ft				
BORING NO.	B-1a.	Latitude	42° 13' 00.59"					
Station	96+22	Longitude	-89° 00' 46.27"					
Offset	20.00ft Rt	Northing	2,023,652.1495					
Ground Surface Elev.	844.30	Easting	2,609,129.1559					

Description	Depth (ft)	Diameter (in)	Area (sq ft)	Volume (cu ft)	Weight (lb)
Dolomite: buff-white, micritic, vuggy, laminate fractures in 1" to 4" segments throughout. t.s.f.: 826.6 to 826.2	828.80	1	100	15	2.8
Dolomite: as above t.s.f.: 820.2 to 819.8	823.80	2	100	27	1.4
End of Boring	818.80				

Color pictures of the cores _____
Cores will be stored for examination until _____
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)



USER NAME	= frank
PLOT DATE	= 3/30/2012

DESIGNED	-	ESG
CHECKED	-	DCB
DRAWN	-	FDL
DATE	-	03/31/2023

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

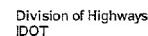
BORING LOGS
STRUCTURE NO. 101-0216

SHEET 21 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1.5)R	WINNEBAGO	2192	920
WHA # 1390D19		CONTRACT NO. 64B13		
	ILLINOIS	FED. AID PROJECT		

ILLINOIS	FED. AID PROJECT
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MODEL: Default
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Page 1 of 1

Date 3/21/16

COUNTY	Winnebago	DRILLING METHOD	Hollow Stem Auger	HAMMER TYPE	B-53
--------	-----------	-----------------	-------------------	-------------	------

BORING NO. B-2a.
Station 97+11
Offset 20.00ft Lt
Ground Surface Elev. 842.70 ft

D	B	U	M	Surface Water Elev.	_____	ft
E	L	C	O	Stream Bed Elev.	_____	ft
P	W	S	I	Groundwater Elev.:		
T	O		S	First Encounter	_____	ft
H	S	Qu	T	Upon Completion	_____	ft
(ft)	((/6"))	(tsf)	(%)	After	Hrs.	ft

LOOSE light brown SANDY LOAM

MEDIUM light brown SANDY
LOAM

MEDIUM tan SILTY LOAM

VERY DENSE tan weathered
LIMESTONE

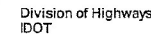
Auger Refusal @ 10'

Borehole continued with rock coring.

Northing and Easting were calculated using the ILHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Page 1 of 1Date 3/21/16

COUNTY	Winnebago	CORING METHOD		R		CORE	S
--------	-----------	---------------	--	---	--	------	---

STRUCT. NO. _____ Station _____		CORING BARREL TYPE & SIZE _____		DEPTH (ft)	CORE (#)	RECOVERY (%)	R. Q. D. (%)	TIME (min/ft)	STRENGTH (tsf)
		Core Diameter	2 in						
		Top of Rock Elev.	835.70 ft						
		Begin Core Elev.	832.70 ft						
BORING NO. B-2a.		Latitude	42° 13' 00.99"						
Station 97+11		Longitude	-89° 00' 45.12"						
Offset 20.00ft Lt		Northing	2,023,693.4158						
Ground Surface Elev. 842.70 ft		Easting	2,609,215.8380						

Dolomite: buff-white, severely fractured in 1" - 3" segments, micritic, pitted and pocked	832.70	1	100	0	1.6
---	--------	---	-----	---	-----

Dolomite: as above, medium bedded, with occasional severe pocking visible.
t.s.f.: 827.0 to 826.5 and 824.4 to 823.8

End of Boring

Northings and Eastings were calculated using the ILLHP-WF coordinate system

Color pictures of the cores _____
Cores will be stored for examination until _____
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)



USER NAME	= frank
PLOT DATE	= 3/30/

DESIGNED	-	ESG
CHECKED	-	DCB
DRAWN	-	FDL
DATE	-	03/31/2023

REVISED	-
REVISED	-
REVISED	-
REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BORING LOGS
STRUCTURE NO. 101-0216

SHEET 22 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1.5)R	WINNEBAGO	2192	921
WHA # 1390D19		CONTRACT NO. 64B13		
UNIONS		FED. AID PROJECT		

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Illinois Department
of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 3/16/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Proposed I-39 SB Ramp bridge over Linden Road LOGGED BY W. Garza

SECTION (201-3)K & 4-1.5)K LOCATION SEC. TWP. RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53

STRUCT. NO. Latitude 42° 13' 00.63" Northing 2,023,658.1150
Station Longitude -89° 00' 44.00" Easting 2,609,300.5764

BORING NO. B-3a.
Station 97+90
Offset 20.00ft Rt
Ground Surface Elev. 840.00 ft

D E P T H S	B L O W S Qu	U C S T	M O I S T	Surface Water Elev. ft	Stream Bed Elev. ft
(ft)	(/6")	(tsf)	(%)	Groundwater Elev.: ft	First Encounter ft
				Upon Completion ft	After Hrs. ft

SOFT brown SANDY LOAM
837.50
0.4 P 12.0

SOFT light brown SILTY LOAM
836.00
4 0.4 P 26.0
6

STIFF brown CLAY LOAM
833.00
2 1.8 B 23.0
4 6

MEDIUM tan weathered LIMESTONE
831.00
6 8 9

VERY DENSE tan weathered LIMESTONE
-10
60 100/5"

Auger Refusal @ 12'
828.00

Borehole continued with rock coring.

-15
-20

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
IDOT

ROCK CORE LOG

Page 1 of 1

Date 3/16/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Proposed I-39 SB Ramp bridge over Linden Road LOGGED BY W. Garza

SECTION (201-3)K & 4-1.5)K LOCATION SEC. TWP. RNG.

COUNTY Winnebago CORING METHOD

STRUCT. NO. CORING BARREL TYPE & SIZE
Station Core Diameter 2 in
Top of Rock Elev. 833.00 ft
Begin Core Elev. 828.00 ft

BORING NO. B-3a. Latitude 42° 13' 00.63"
Station 97+90 Longitude -89° 00' 44.00"
Offset 20.00ft Rt Northing 2,023,658.1150
Ground Surface Elev. 840.00 ft Easting 2,609,300.5764

Dolomite: buff-white, micritic, pitted and pocked throughout, mostly fractured in 1" to 3" segments.
t.s.f.: 824.3 to 823.0
828.00
1 90 10 1.6 497.0

Dolomite: as above, fractured likewise
t.s.f.: 819.6 to 819.3
823.00
2 100 6 1.6 302.0

End of Boring
818.00

-25
-30

Color pictures of the cores
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

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WILLET HOFMANN
ASSOCIATES, INC.
UNDESIGNED - ARE TO LOCATE - LAND SURVEYING
809 EAST 2ND STREET, OROON, IL 61021-0367
T 815-334-3351 FAX 815-334-3351

USER NAME = frank
DESIGNED - ESG
CHECKED - DCB
DRAWN - FDL
PLOT DATE = 3/30/2023

DESIGNED - ESG
CHECKED - DCB
DRAWN - FDL
DATE - 03/31/2023

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 101-0216

SHEET 23 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1.5)R	WINNEBAGO	2192	922
WHA # 1390D19		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		



Illinois Department
of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 3/4/06

ROUTE FAI 39 DESCRIPTION P92-075-05 Soil Survey, I-39 @ Bypass 20,
south edge of Rockford LOGGED BY W. Garza

SECTION (201-3)K LOCATION , SEC. , TWP. , RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-45 Automatic

STRUCT. NO. Station	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. N/A ft Stream Bed Elev. N/A ft Groundwater Elev.: First Encounter ft Upon Completion ft After Hrs. ft	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
BORING NO. B-3 Station 98+58 Offset 28.00ft Rt Ground Surface Elev. 837.1 ft									
MEDIUM brown SILTY CLAY LOAM			0.8 P	17	Time: 7 minutes FAIR tan LIMESTONE 95% Recovery				
MEDIUM brown SILTY LOAM	834.60	3 4 6	0.6 P	21					
	832.60								
VERY DENSE tan weathered LIMESTONE	-5	30 100/11"			End of Boring	812.10	-25		
	830.60								
VERY DENSE tan weathered LIMESTONE		100/3"							
	827.10								
Box #9 Time: 6 minutes FAIR tan LIMESTONE 100% Recovery	-10	100/2"							
	822.10								
Time: 7 minutes FAIR tan LIMESTONE 100% Recovery	-15								
	817.10								
	-20								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) **FIGURE 2**
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 1

Date 3/15/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Proposed I-39 SB Ramp bridge over
Linden Road LOGGED BY W. Garza

SECTION (201-3)K & 4-1.5)K LOCATION , SEC. , TWP. , RNG.

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53

STRUCT. NO. Latitude 42° 13' 01.09"
Station Longitude -89° 00' 42.84" Northing 2,023,706.3021
Easting 2,609,386.8936

BORING NO. Station Offset Ground Surface Elev.	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. ft Stream Bed Elev. ft Groundwater Elev.: First Encounter ft Upon Completion ft After Dry Hrs. None ft
B-4a 98+80 20.00ft Lt 836.80 ft					
STIFF brown LOAM			1.6 P	14.0	
	834.80				
SOFT light brown SILTY CLAY LOAM		3 3 4	0.4 P	22.0	
	833.30				
VERY DENSE tan weathered LIMESTONE	-5	23 41 53			
	830.80				
VERY DENSE tan weathered LIMESTONE Auger Refusal @ 8' End of Boring		100/3"			
	828.80				
	-10				
	-15				
	-20				

Northing and Easting were calculated using the IHP-WF coordinate system

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 101-0216

SHEET 24 OF 24 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K & (4-1.5)R	WINNEBAGO	2192	923
WHA # 1390D19		CONTRACT NO. 64B13		
		ILLINOIS FED. AID PROJECT		

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WILLETT HOFMANN
ASSOCIATES, INC.
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, OROON, IL 61021-0367
T. 815-394-3351, DED. CNVTS@WHI 2154400015

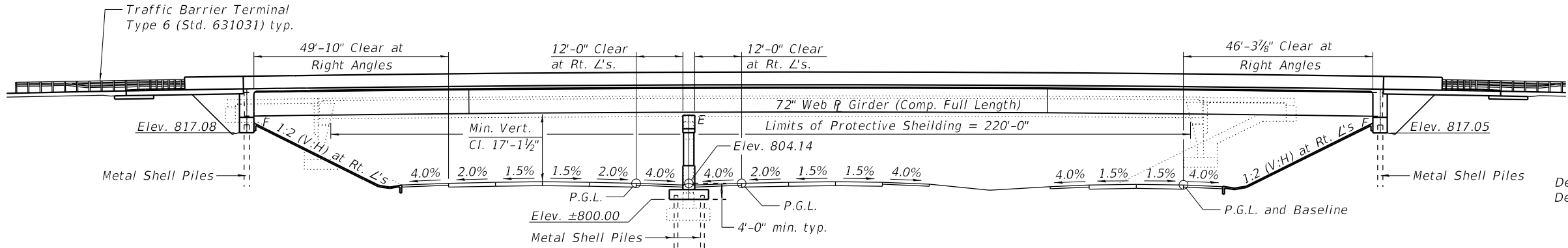
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	CHECKED - DCB	REVISED -
	DRAWN - FDL	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

BM: # 316 2" Aluminum Disk on Approx. C of U.S. 20 - on pier base under Mulford Rd. - Elevation 805.75

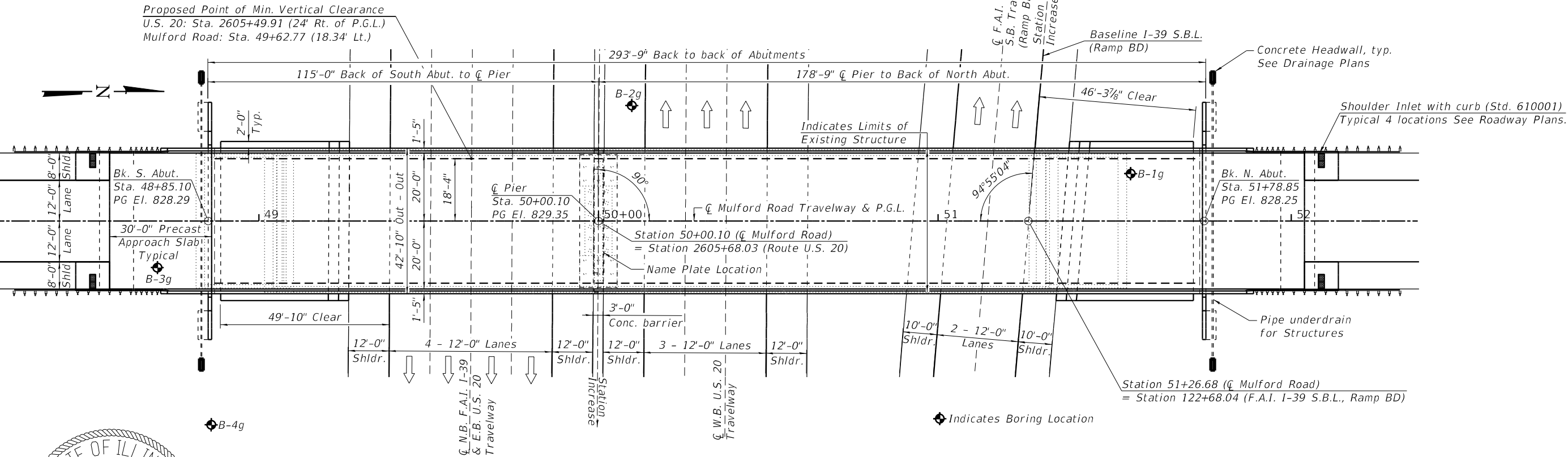
Existing Structure (No. 101-0131): Originally constructed in 1963 under FA 194, Section 4-HB-2, the structure was a 4 span, concrete deck on steel girder superstructure with concrete piers and pile bent abutments. The structure was reconstructed in 1976 under FA 194, Section 201-3HB-3 as a 2 span concrete deck on continuous steel girder superstructure with concrete piers and closed sand filled pile bent abutments. The structure has a Bk. to Bk. = 274'-0" with an out-out of deck of 42'-0". The structure was repainted in 1999.

Roadway will be closed to traffic during construction.

No Salvage.



ELEVATION



PLAN

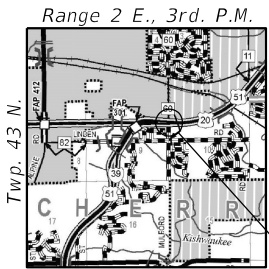


APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

03-30-2023
EXPIRES 11/30/24

STATION 50+00.10
BUILT 202_ BY
STATE OF ILLINOIS
F.A.I. 39 - SECTION (201-3)K & (4-1.5)R
LOADING HL-93
STRUCTURE NO. 101-0207

NAME PLATE
See Std. 515001



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
MULFORD ROAD OVER I-39 & U.S.20
F.A.U. 5147 - SECTION (201-3)K & (4-1.5)R
WINNEBAGO COUNTY
STA. 50+00.10
STRUCTURE NUMBER 101-0207



USER NAME	= frank	DESIGNED	- EEL	REVISED	-
CHECKED	- DCB	REVIS	-		
DRAWN	- FDL	REVIS	-		
DATE	- 03/31/2023	REVIS	-		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	924
WHA # 1390D19		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		

- 1 General Plan and Elevation
- 2 General Data
- 3 Slope Wall and Pile Layout
- 4-6 Top of Slab Elevations
- 7 Top of S Approach Slab Elevations
- 8 Top of N Approach Slab Elevations
- 9 Superstructure
- 10 Superstructure Details
- 11 Concrete Parapet Slipforming Option
- 12 Diaphragm Details
- 13-15 Precast Bridge Approach Slab
- 16 Modified Preformed Joint Strip Seal
- 17 Framing Plan
- 18-19 Structural Steel Details
- 20 Guided Expansion HLMR Pot Bearing Details
- 21 Fixed Bearing Details
- 22-23 South Abutment
- 24-25 North Abutment
- 26 Pier Details
- 27 Metal Shell Pile Details
- 28-31 Soil Boring Logs



When the deck pour is stopped for the day at one or more of the bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:

1. At least 72 hours have elapsed from the end of the previous pour.
2. The concrete strength shall have attained a minimum flexural strength of 675 psi or a minimum compression strength of 4,000 psi



All drainage components shall extend to 2'-0" from the end of each wingwall, except an outlet pipe shall extend until intersecting with the side slopes. The pipe shall drain into concrete headwalls. (see Article 601.05 of the Standard Specifications and Highway Standard 601101).



Along & Mulford Road.
The profile grade shows the final
elevations after grinding.



Along I-39 NBL and US-20 Inside E.O.P.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal Of Existing Structures No. 5	Each	0.5	0.5	1
Protective Shield	Sq Yd	1,048	—	1,048
Structure Excavation	Cu Yd	—	600	600
Concrete Structures	Cu Yd	25.3	166.7	192.0
Concrete Superstructure	Cu Yd	501.4	—	501.4
Protective Coat	Sq Yd	1,862	81	1,943
Furnishing And Erecting Structural Steel	L. Sum	0.2	—	0.2
Stud Shear Connectors	Each	4,488	—	4,488
Reinforcement Bars, Epoxy Coated	Pound	127,710	27,720	155,430
Slope Wall 4 Inch	Sq Yd	—	437	437
Furnishing Metal Shell Piles 12"x0.25"	Foot	—	880	880
Driving Piles	Foot	—	880	880
Test Pile Metal Shells	Each	—	3	3
Name Plates	Each	1	—	1
Preformed Joint Strip Seal	Foot	82	—	82
Anchor Bolts, 1"	Each	—	48	48
Granular Backfill For Structures	Cu Yd	—	263	263
Geocomposite Wall Drain	Sq Yd	—	140	140
Pipe Underdrains For Structures 4"	Foot	—	210	210
Diamond Grinding (Bridge Section)	Sq Yd	1,407	—	1,407
Bridge Deck Grooving (Longitudinal)	Sq Yd	938	—	938
Concrete Wearing Surface, 5"	Sq Yd	280	—	280
Precast Bridge Approach Slab	Sq Ft	2,380	—	2,380
High Load Multi-Rotational Bearings, Pot Guided Expansion, 600K	Each	—	6	6

Fasteners shall be ASTM F3125 Grade A325 Type 1, Hot-Dip Galvanized Bolts in metalized areas. Bolts $\frac{7}{8}$ " Ø, holes $1\frac{5}{16}$ " Ø unless otherwise noted.

Calculated weight of Structural Steel = 625,640 lbs. (Grade 50),
Calculated weight of Structural Steel = 18,830 lbs. (Grade 36)

All new structural steel to be metalized. See Special Provisions for "Metalizing of Structural Steel".

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

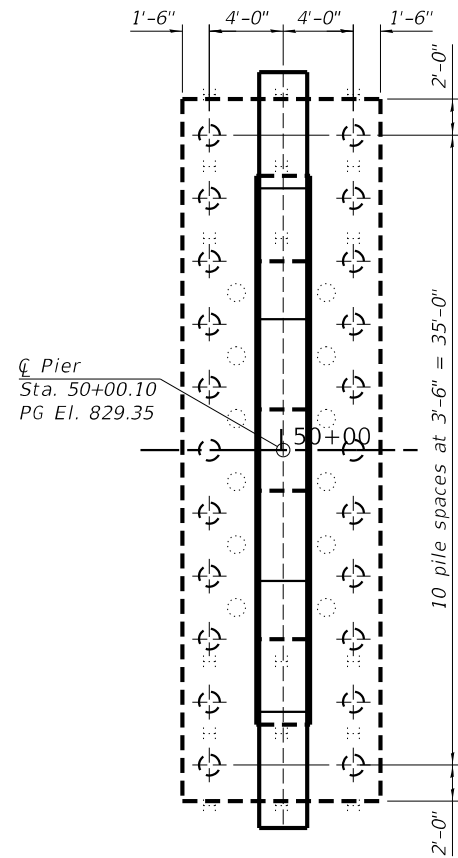
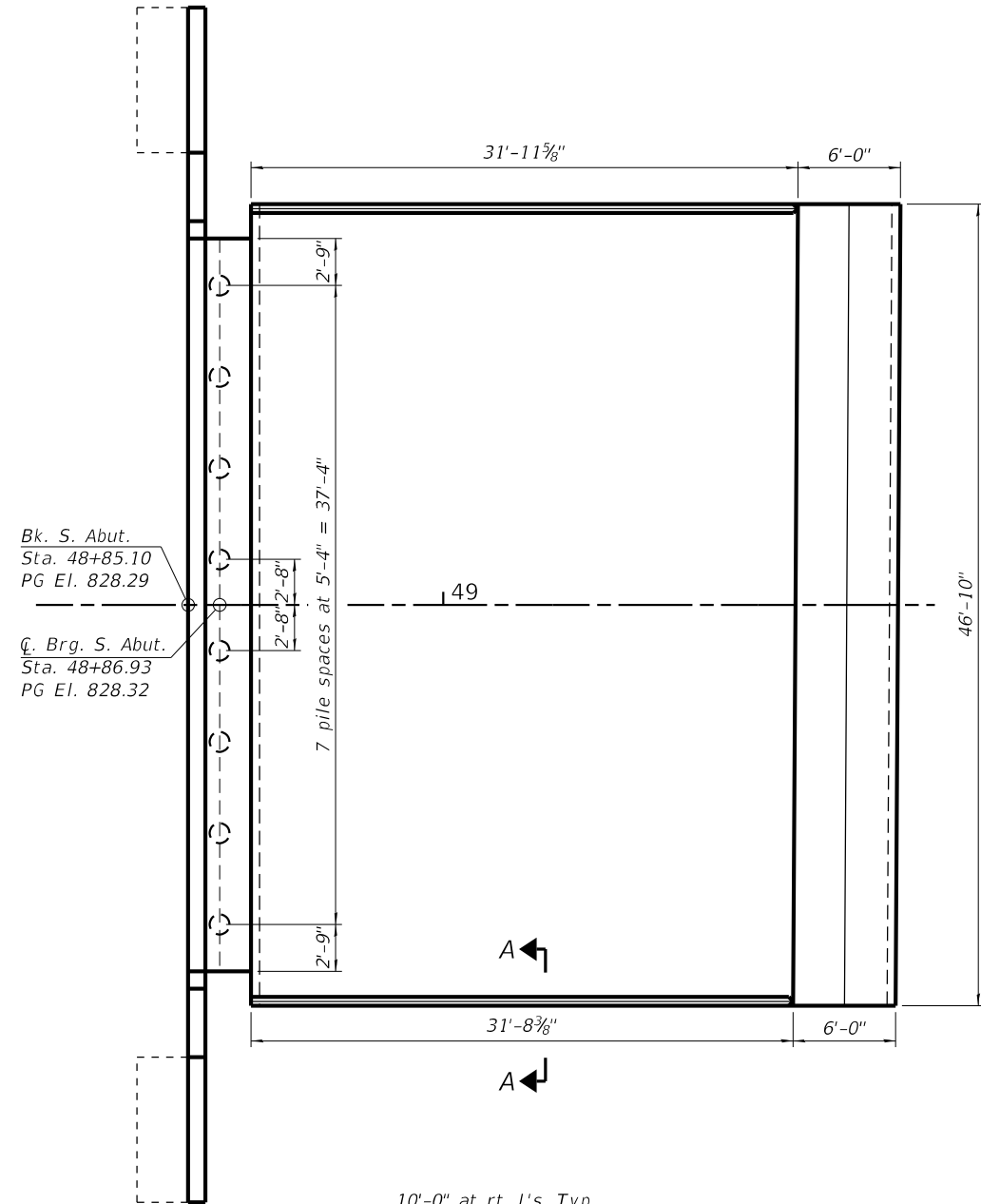
No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

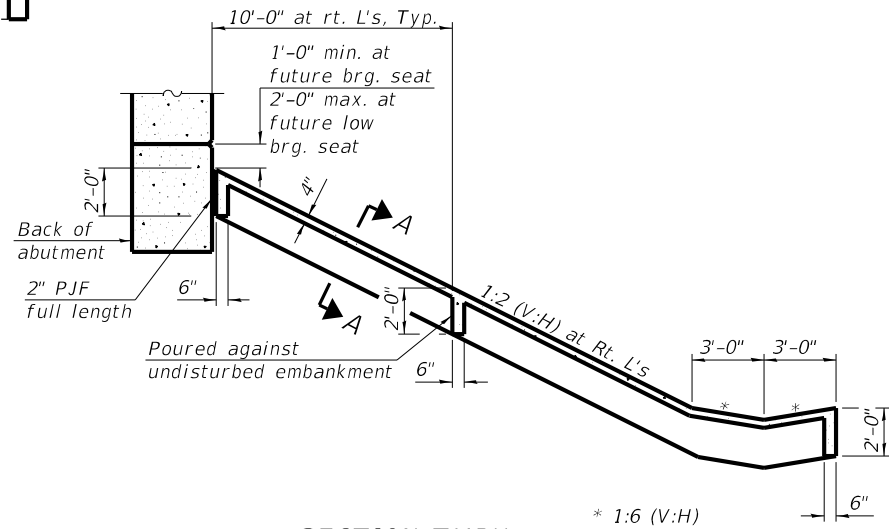
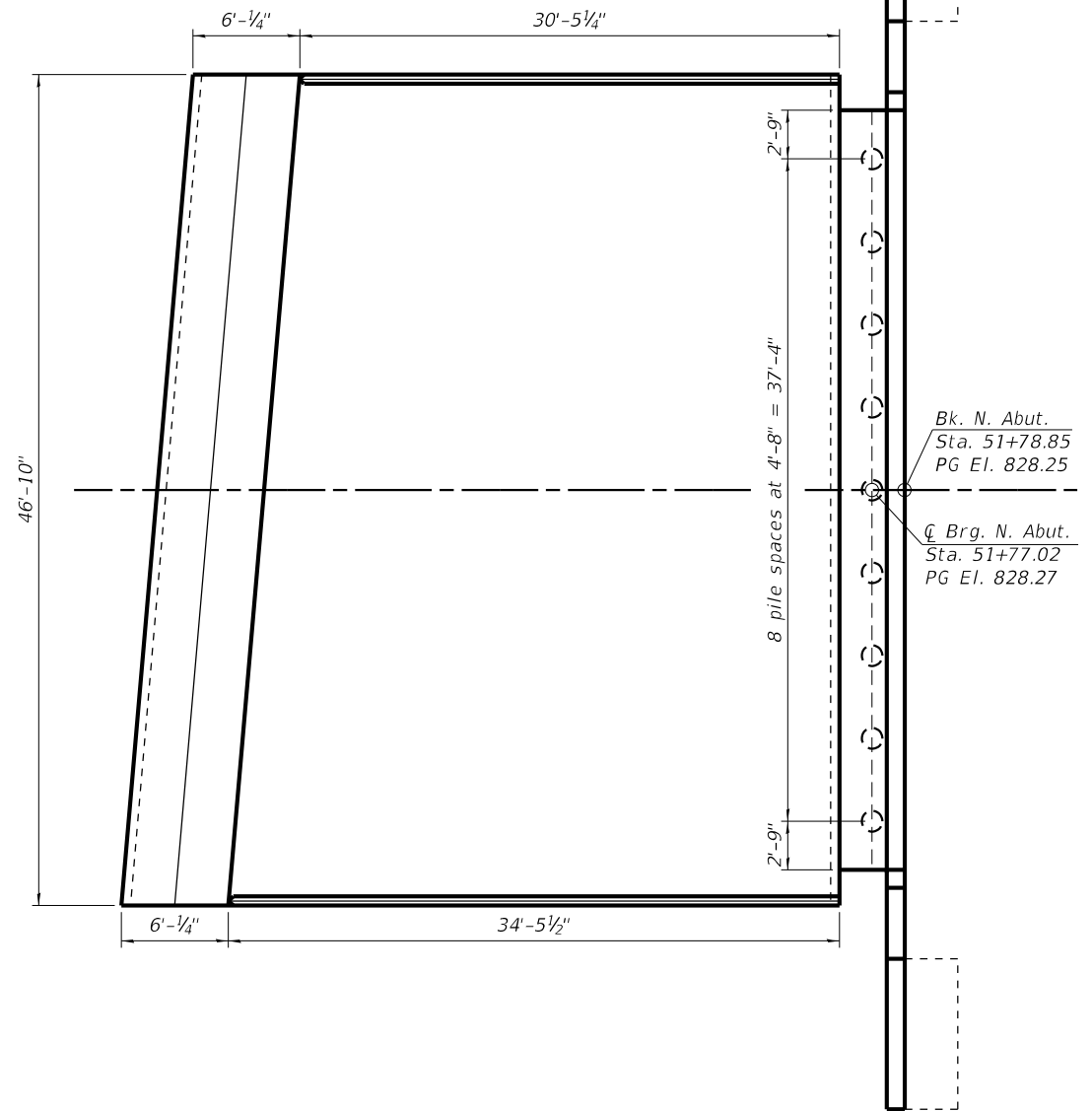
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ in. (0.01 ft.) Adjustments shall be made by grinding the surface or by shimming the Bearings.

The existing structure (S.N. 101-0131) carrying Mulford Road over I-39 & U.S. 20 shall removed per Article 501.04 of the Standard Specifications. See Staging Plans in the roadway plans for timing of removal and related staging information. Please reference the "Additional Information" provided to bidders for existing structure plans.

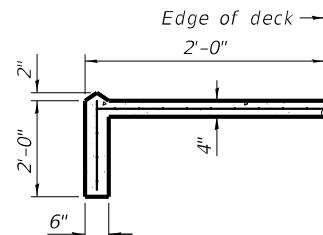
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PLAN VIEW



SECTION THRU
CONCRETE SLOEWALL



SECTION A-A

BILL OF MATERIAL

Item	Unit	Quantity
Slope wall 4 Inch	Sq Yd	437

NOTE:

Slope wall shall be reinforced with welded wire fabric,
6 in. x 6 in. - W4.0 x W4.0 weighing 58 lbs. per 100 Sq. Ft.



WILLETT HOFMANN
ASSOCIATES INC.
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, OAKTON, IL 61021-0367
T 815-284-3381 DES/CA/PROJ: #184-000918

USER NAME = frank	DESIGNED - EEL	REVISED -
	CHECKED - DCB	REVISED -
	DRAWN - FDL	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPE WALL AND PILE LAYOUT
STRUCTURE NO. 101-0207

SHEET 3 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	926
WHA # 1390D19		CONTRACT NO. 64B13		
		ILLINOIS	FED. AID PROJECT	



MODEL: Default
FILE NAME: pw:

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	*Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. S. Abut.	48+85.10	-3.67	828.23	828.25
Q Brg. S. Abut.	48+86.93	-3.67	828.26	828.28
A	48+96.93	-3.67	828.41	828.43
B	49+06.93	-3.67	828.54	828.57
C	49+16.93	-3.67	828.66	828.69
D	49+26.93	-3.67	828.78	828.80
E	49+36.93	-3.67	828.88	828.90
F	49+46.93	-3.67	828.97	828.98
G	49+56.93	-3.67	829.06	829.06
H	49+66.93	-3.67	829.13	829.12
I	49+76.93	-3.67	829.19	829.18
J	49+86.93	-3.67	829.24	829.24
Q Brg. Pier	50+00.10	-3.67	829.29	829.31
K	50+10.00	-3.67	829.32	829.37
L	50+20.00	-3.67	829.33	829.43
M	50+30.00	-3.67	829.34	829.48
N	50+40.00	-3.67	829.33	829.52
O	50+50.00	-3.67	829.32	829.55
P	50+60.00	-3.67	829.29	829.57
Q	50+70.00	-3.67	829.26	829.57
R	50+80.00	-3.67	829.21	829.54
S	50+90.00	-3.67	829.15	829.50
T	51+00.00	-3.67	829.09	829.44
U	51+10.00	-3.67	829.01	829.35
V	51+20.00	-3.67	828.92	829.24
W	51+30.00	-3.67	828.82	829.11
X	51+40.00	-3.67	828.71	828.96
Y	51+50.00	-3.67	828.59	828.79
Z	51+60.10	-3.67	828.46	828.60
AA	51+70.10	-3.67	828.32	828.39
Q Brg. N. Abut.	51+77.02	-3.67	828.22	828.24
Bk. N. Abut.	51+78.85	-3.67	828.19	828.21

Negative offset values indicate offset left of PGL and
Positive offset values indicate offset right of PGL

CENTERLINE ROADWAY & P.G.

Location	Station	Offset	Theoretical Grade Elevations	*Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. S. Abut.	48+85.10	0.00	828.29	828.31
℄ Brg. S. Abut.	48+86.93	0.00	828.32	828.34
A	48+96.93	0.00	828.46	828.49
B	49+06.93	0.00	828.60	828.62
C	49+16.93	0.00	828.72	828.75
D	49+26.93	0.00	828.83	828.86
E	49+36.93	0.00	828.94	828.95
F	49+46.93	0.00	829.03	829.04
G	49+56.93	0.00	829.11	829.11
H	49+66.93	0.00	829.18	829.18
I	49+76.93	0.00	829.24	829.24
J	49+86.93	0.00	829.29	829.29
℄ Brg. Pier	50+00.10	0.00	829.35	829.37
K	50+10.00	0.00	829.37	829.42
L	50+20.00	0.00	829.39	829.48
M	50+30.00	0.00	829.39	829.53
N	50+40.00	0.00	829.39	829.57
O	50+50.00	0.00	829.37	829.60
P	50+60.00	0.00	829.35	829.62
Q	50+70.00	0.00	829.31	829.62
R	50+80.00	0.00	829.27	829.60
S	50+90.00	0.00	829.21	829.56
T	51+00.00	0.00	829.14	829.49
U	51+10.00	0.00	829.06	829.41
V	51+20.00	0.00	828.97	829.30
W	51+30.00	0.00	828.88	829.17
X	51+40.00	0.00	828.77	829.01
Y	51+50.00	0.00	828.65	828.84
Z	51+60.10	0.00	828.52	828.65
AA	51+70.10	0.00	828.38	828.44
℄ Brg. N. Abut.	51+77.02	0.00	828.27	828.29
Bk. N. Abut.	51+78.85	0.00	828.24	828.27

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	*Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. S. Abut.	48+85.10	3.67	828.23	828.25
Q. Brg. S. Abut.	48+86.93	3.67	828.26	828.28
A	48+96.93	3.67	828.41	828.43
B	49+06.93	3.67	828.54	828.57
C	49+16.93	3.67	828.66	828.69
D	49+26.93	3.67	828.78	828.80
E	49+36.93	3.67	828.88	828.90
F	49+46.93	3.67	828.97	828.98
G	49+56.93	3.67	829.06	829.06
H	49+66.93	3.67	829.13	829.12
I	49+76.93	3.67	829.19	829.18
J	49+86.93	3.67	829.24	829.24
Q. Brg. Pier	50+00.10	3.67	829.29	829.31
K	50+10.00	3.67	829.32	829.37
L	50+20.00	3.67	829.33	829.43
M	50+30.00	3.67	829.34	829.48
N	50+40.00	3.67	829.33	829.52
O	50+50.00	3.67	829.32	829.55
P	50+60.00	3.67	829.29	829.57
Q	50+70.00	3.67	829.26	829.57
R	50+80.00	3.67	829.21	829.54
S	50+90.00	3.67	829.15	829.50
T	51+00.00	3.67	829.09	829.44
U	51+10.00	3.67	829.01	829.35
V	51+20.00	3.67	828.92	829.24
W	51+30.00	3.67	828.82	829.11
X	51+40.00	3.67	828.71	828.96
Y	51+50.00	3.67	828.59	828.79
Z	51+60.10	3.67	828.46	828.60
AA	51+70.10	3.67	828.32	828.39
Q. Brg. N. Abut.	51+77.02	3.67	828.22	828.24
Bk. N. Abut.	51+78.85	3.67	828.19	828.21

*Prior to Grinding

(Sheet 2 of 3)

 WILLETTT HOFMANN ASSOCIATES INC. ENGINEERING ARCHITECTURE LAND SURVEYING 809 EAST 72ND STREET, DUNDEE, IL 61021-0587 TEL: 815-264-3337 DESIGN/TEAM: P184-00019	USER NAME = frank	DESIGNED - EEL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NO. 101-0207	F&I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - DCB	REVISED -			39	(201-3)K	WINNEBAGO	2192	928
		DRAWN - FDL	REVISED -			WHA # 1390D19 CONTRACT NO. 64B13				
						ILLINOIS FED. AID PROJECT				
	PLOT DATE = 3/30/2023	DATE = 03/31/2023	REVISED -			SHEET 5 OF 31 SHEETS				

MODEL: Default
FILE NAME: pw:\\benesch-pw-01\Documents\10800s\10800.00\Eng_Docs\CAD_Sheets\SN 0207 Mulford [WHA]\D64C62-1010207-TOS_Elevs.dgn

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	*Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. S. Abut.	48+85.10	11.00	828.12	828.14
Q Brg. S. Abut.	48+86.93	11.00	828.15	828.17
A	48+96.93	11.00	828.30	828.32
B	49+06.93	11.00	828.43	828.46
C	49+16.93	11.00	828.55	828.58
D	49+26.93	11.00	828.67	828.69
E	49+36.93	11.00	828.77	828.79
F	49+46.93	11.00	828.86	828.87
G	49+56.93	11.00	828.95	828.95
H	49+66.93	11.00	829.02	829.01
I	49+76.93	11.00	829.08	829.07
J	49+86.93	11.00	829.13	829.13
Q Brg. Pier	50+00.10	11.00	829.18	829.20
K	50+10.00	11.00	829.21	829.26
L	50+20.00	11.00	829.22	829.32
M	50+30.00	11.00	829.23	829.37
N	50+40.00	11.00	829.22	829.41
O	50+50.00	11.00	829.21	829.44
P	50+60.00	11.00	829.18	829.46
Q	50+70.00	11.00	829.15	829.46
R	50+80.00	11.00	829.10	829.43
S	50+90.00	11.00	829.04	829.39
T	51+00.00	11.00	828.98	829.33
U	51+10.00	11.00	828.90	829.24
V	51+20.00	11.00	828.81	829.13
W	51+30.00	11.00	828.71	829.00
X	51+40.00	11.00	828.60	828.85
Y	51+50.00	11.00	828.48	828.68
Z	51+60.10	11.00	828.35	828.49
AA	51+70.10	11.00	828.21	828.28
Q Brg. N. Abut.	51+77.02	11.00	828.11	828.13
Bk. N. Abut.	51+78.85	11.00	828.08	828.10

Negative offset values indicate offset left of PGL and
Positive offset values indicate offset right of PGL

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	*Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. S. Abut.	48+85.10	18.33	827.98	828.00
Q Brg. S. Abut.	48+86.93	18.33	828.01	828.03
A	48+96.93	18.33	828.15	828.18
B	49+06.93	18.33	828.29	828.32
C	49+16.93	18.33	828.41	828.44
D	49+26.93	18.33	828.53	828.55
E	49+36.93	18.33	828.63	828.65
F	49+46.93	18.33	828.72	828.73
G	49+56.93	18.33	828.80	828.81
H	49+66.93	18.33	828.88	828.87
I	49+76.93	18.33	828.94	828.93
J	49+86.93	18.33	828.99	828.99
Q Brg. Pier	50+00.10	18.33	829.04	829.06
K	50+10.00	18.33	829.07	829.12
L	50+20.00	18.33	829.08	829.17
M	50+30.00	18.33	829.09	829.22
N	50+40.00	18.33	829.08	829.27
O	50+50.00	18.33	829.07	829.30
P	50+60.00	18.33	829.04	829.31
Q	50+70.00	18.33	829.01	829.31
R	50+80.00	18.33	828.96	829.29
S	50+90.00	18.33	828.90	829.25
T	51+00.00	18.33	828.83	829.19
U	51+10.00	18.33	828.76	829.10
V	51+20.00	18.33	828.67	828.99
W	51+30.00	18.33	828.57	828.86
X	51+40.00	18.33	828.46	828.71
Y	51+50.00	18.33	828.34	828.53
Z	51+60.10	18.33	828.21	828.34
AA	51+70.10	18.33	828.07	828.14
Q Brg. N. Abut.	51+77.02	18.33	827.97	827.99
Bk. N. Abut.	51+78.85	18.33	827.94	827.96

*Prior to Grinding

(Sheet 3 of 3)

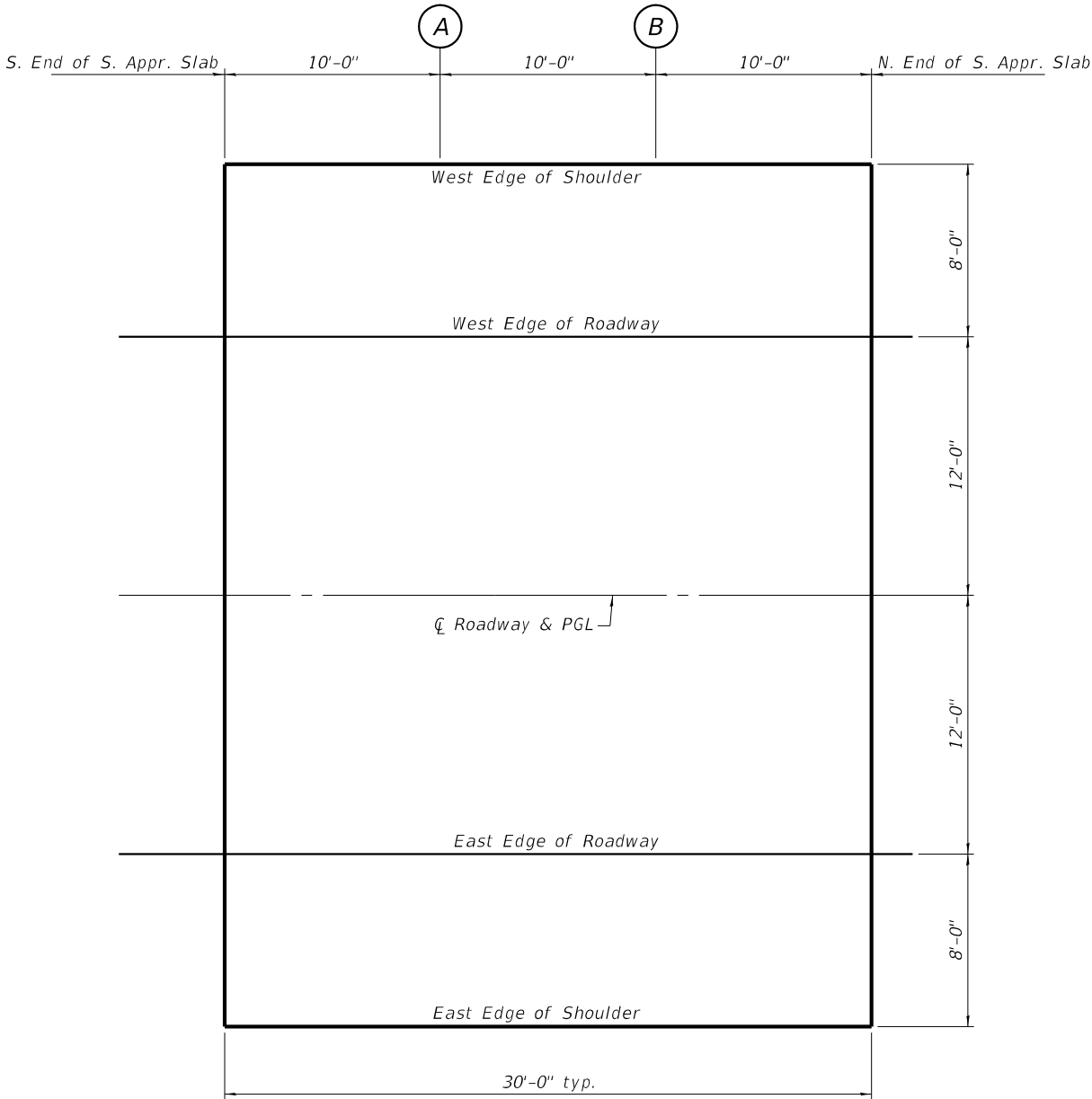
 WILLETT HOFMANN ASSOCIATES INC. ENGINEERING, ARCHITECTURE, LAND SURVEYING 809 EAST 2ND STREET, OGDEN, IL 61001-0387 T 815-234-3301 FAX 815-234-0001 E	USER NAME = frank	DESIGNED - EEL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NO. 101-0207	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
		CHECKED - DCB	REVISED -			39	(201-3)K	WINNEBAGO	2192	929		
		DRAWN - FDL	REVISED -			WHA # 1390019		CONTRACT NO. 64B13				
	PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -			SHEET 6 OF 31 SHEETS						
						ILLINOIS FED. AID PROJECT						

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FILE NAME: pw:\\benesch-pw.bentley.com\\benesch-pw-01\\Documents\\10800s\\10800s\\Eng_Docs\\CAD_Sheets\\SN 0207 Mulford [WHA]\\D64C62-1010207-007-T05_S_Appr_Elevs.dgn

WEST EDGE OF SHOULDER				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of S. Appr. Slab A B	48+56.10	-20.00	827.46	827.48
	48+66.10	-20.00	827.64	827.66
	48+76.10	-20.00	827.81	827.83
N. End of S. Appr. Slab	48+86.10	-20.00	827.96	827.98

WEST EDGE OF ROADWAY				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of S. Appr. Slab A B	48+56.10	-12.00	827.62	827.64
	48+66.10	-12.00	827.80	827.82
	48+76.10	-12.00	827.97	827.99
N. End of S. Appr. Slab	48+86.10	-12.00	828.12	828.14

CENTERLINE OF ROADWAY & P.G.L.				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of S. Appr. Slab A B	48+56.10	0.00	827.80	827.82
	48+66.10	0.00	827.98	828.00
	48+76.10	0.00	828.15	828.17
N. End of S. Appr. Slab	48+86.10	0.00	828.30	828.32



PLAN

EAST EDGE OF ROADWAY				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of S. Appr. Slab A B	48+56.10	12.00	827.62	827.64
	48+66.10	12.00	827.80	827.82
	48+76.10	12.00	827.97	827.99
N. End of S. Appr. Slab	48+86.10	12.00	828.12	828.14

EAST EDGE OF SHOULDER				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
S. End of S. Appr. Slab A B	48+56.10	20.00	827.46	827.48
	48+66.10	20.00	827.64	827.66
	48+76.10	20.00	827.81	827.83
N. End of S. Appr. Slab	48+86.10	20.00	827.96	827.98



USER NAME = frank	DESIGNED - EEL	REVISED -
	CHECKED - DCB	REVISED -
	DRAWN - FDL	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

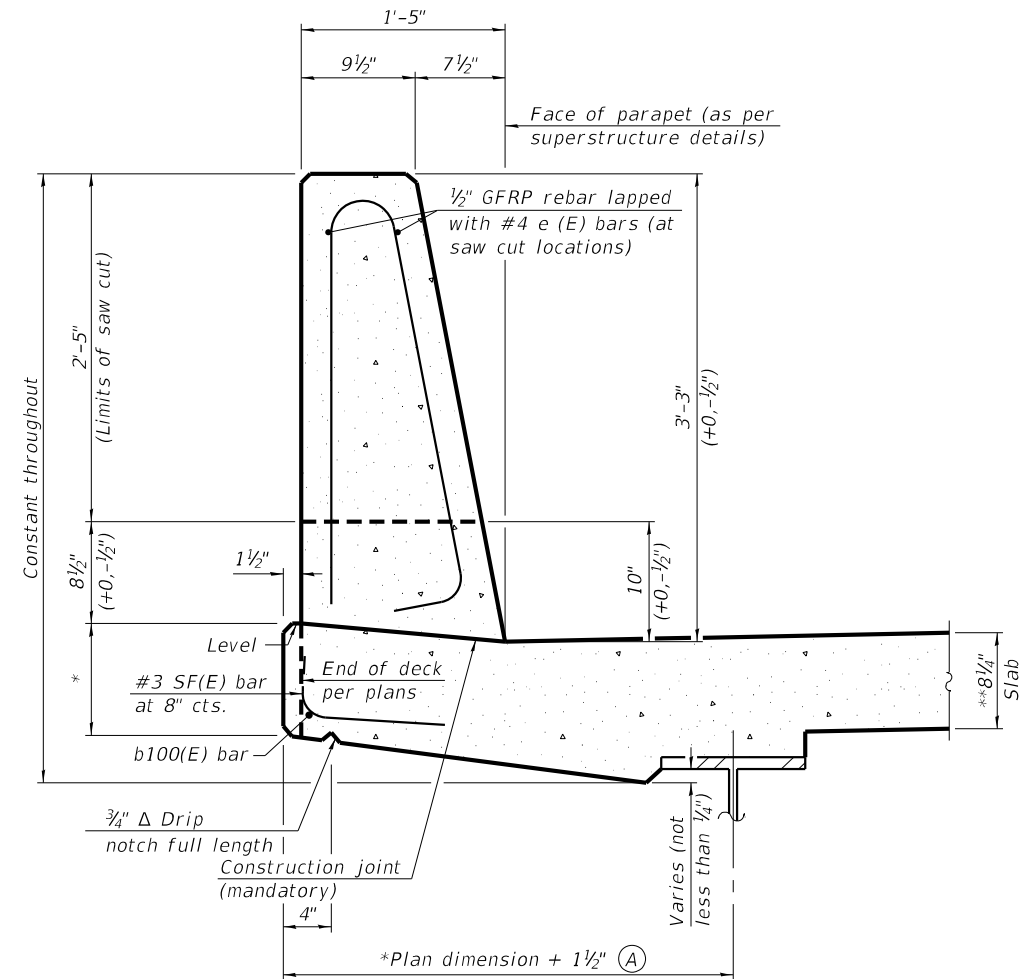
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF S APPROACH SLAB ELEVATIONS
STRUCTURE NO. 101-0207

SHEET 7 OF 31 SHEETS

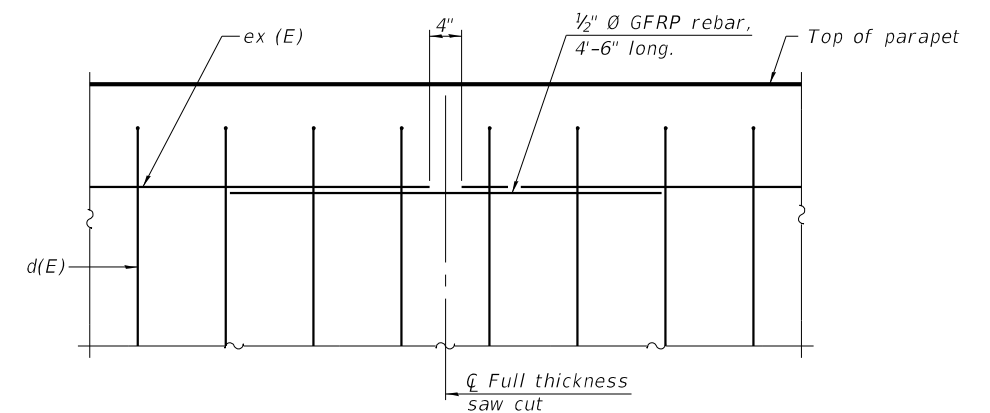
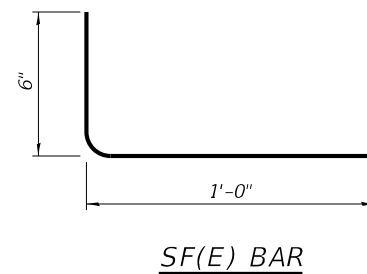
F&I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	930
WHA # 1390D19		CONTRACT NO. 64B13		
		ILLINOIS	FED. AID PROJECT	

Notes:
All dimensions shall remain the same as shown on superstructure details, except dimension A which is to be revised as shown. Additional concrete needed to revise dimension A = 0.00348 cu. yds./ft. Place full depth aluminum sheets as shown on superstructure details.
Replace all cork joint filler locations with a full thickness saw cut.



39" CONSTANT-SLOPE
PARAPET SECTION

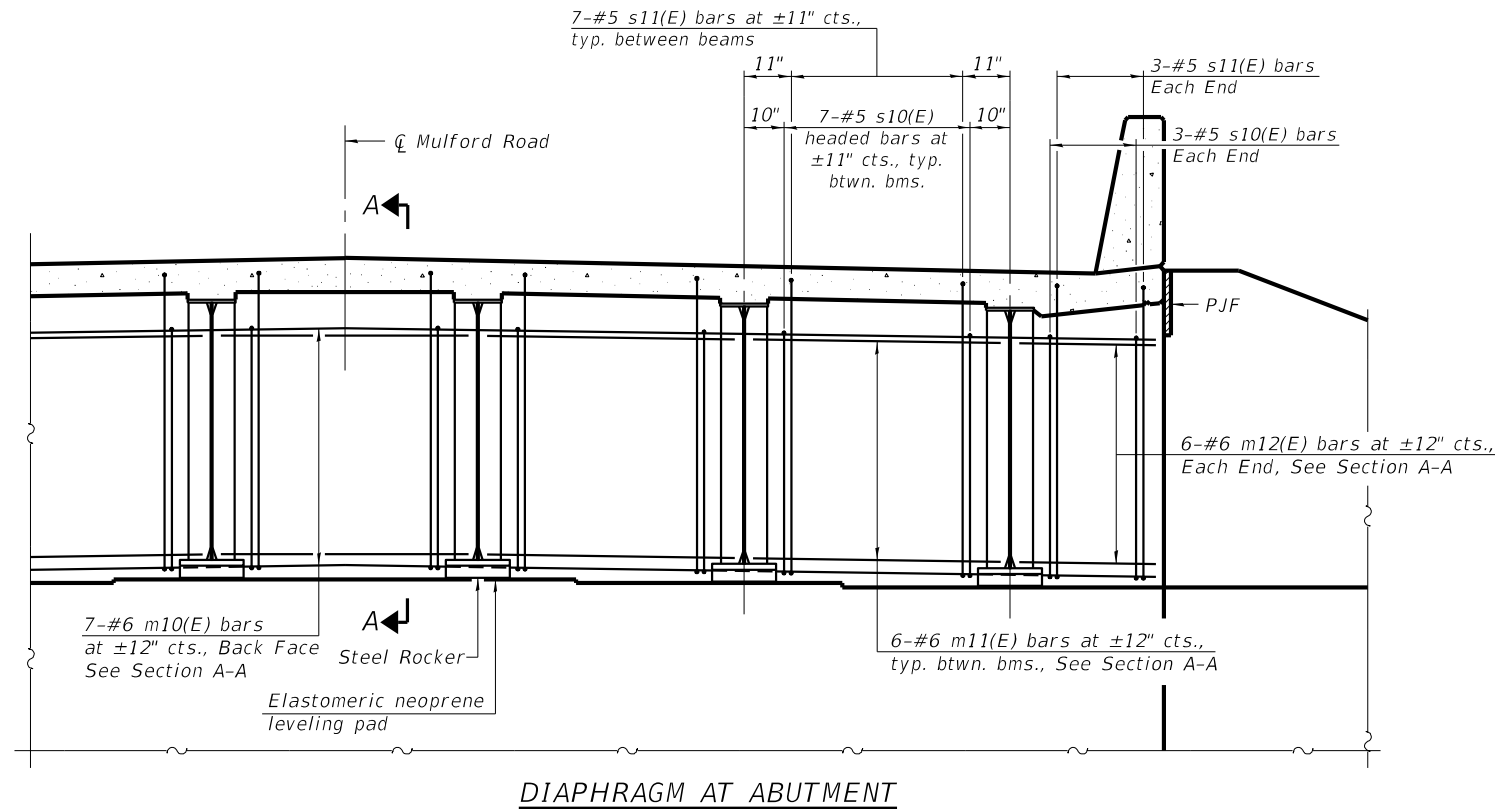
(Showing dimensions, d(E), and 1/2" Ø GFRP rebar)
 *See Superstructure Details.
 **Prior to Gridding



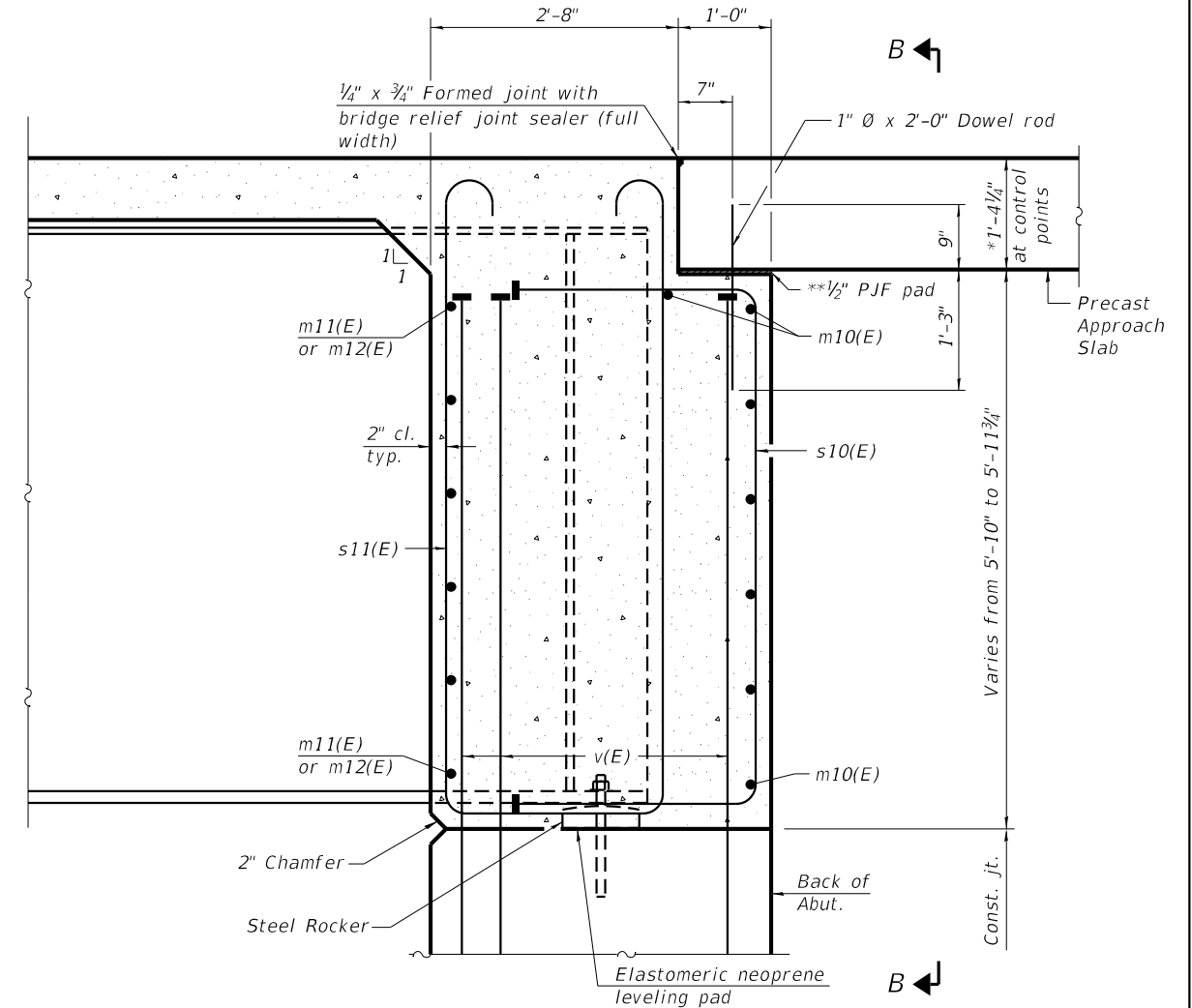
GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section
at each parapet joint location.)

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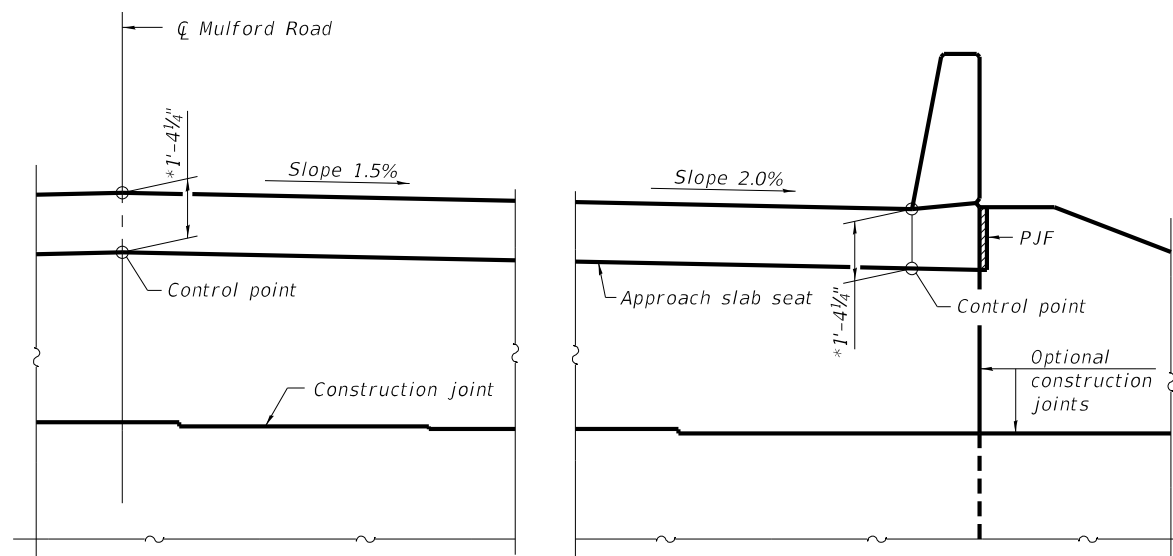
DIAPHRAGM AT ABUTMENT



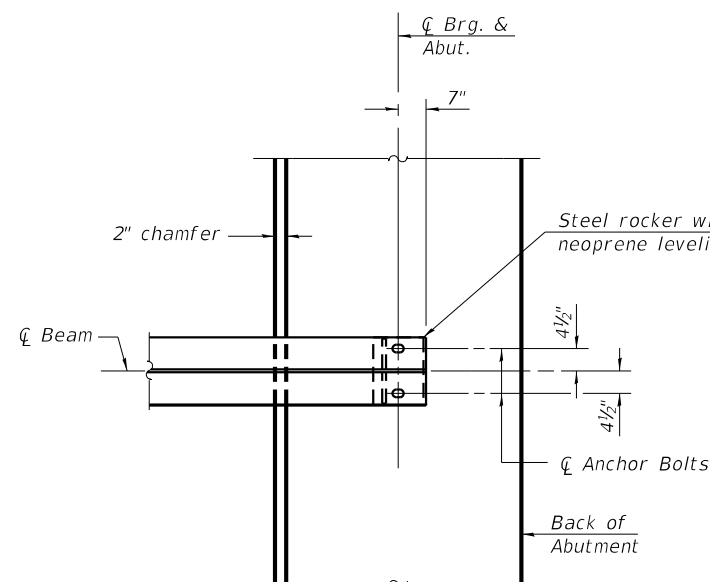
SECTION A-A

**Cost included with Precast Bridge Approach Slab

*Prior to Gridding



VIEW B-B



PLAN AT ABUTMENT

(Showing bottom flange of beam)

Notes:

See sheet 10 of 31 for superstructure details and Bill of Material.
See sheet 13 of 31 for PJF details.
See sheet 23 & 25 of 31 for abutment details and v(E) bars
The approach slab seat shall have a constant slope determined from the control points shown.



WILLETT HOFMANN
ASSOCIATES, INC.
ENGINEERING, ARCHITECTURE, LAND SURVEYING
809 EAST 2ND STREET, CHICAGO, IL 60611-0367
T 312-284-3381, DESIGNS: 312-284-3381

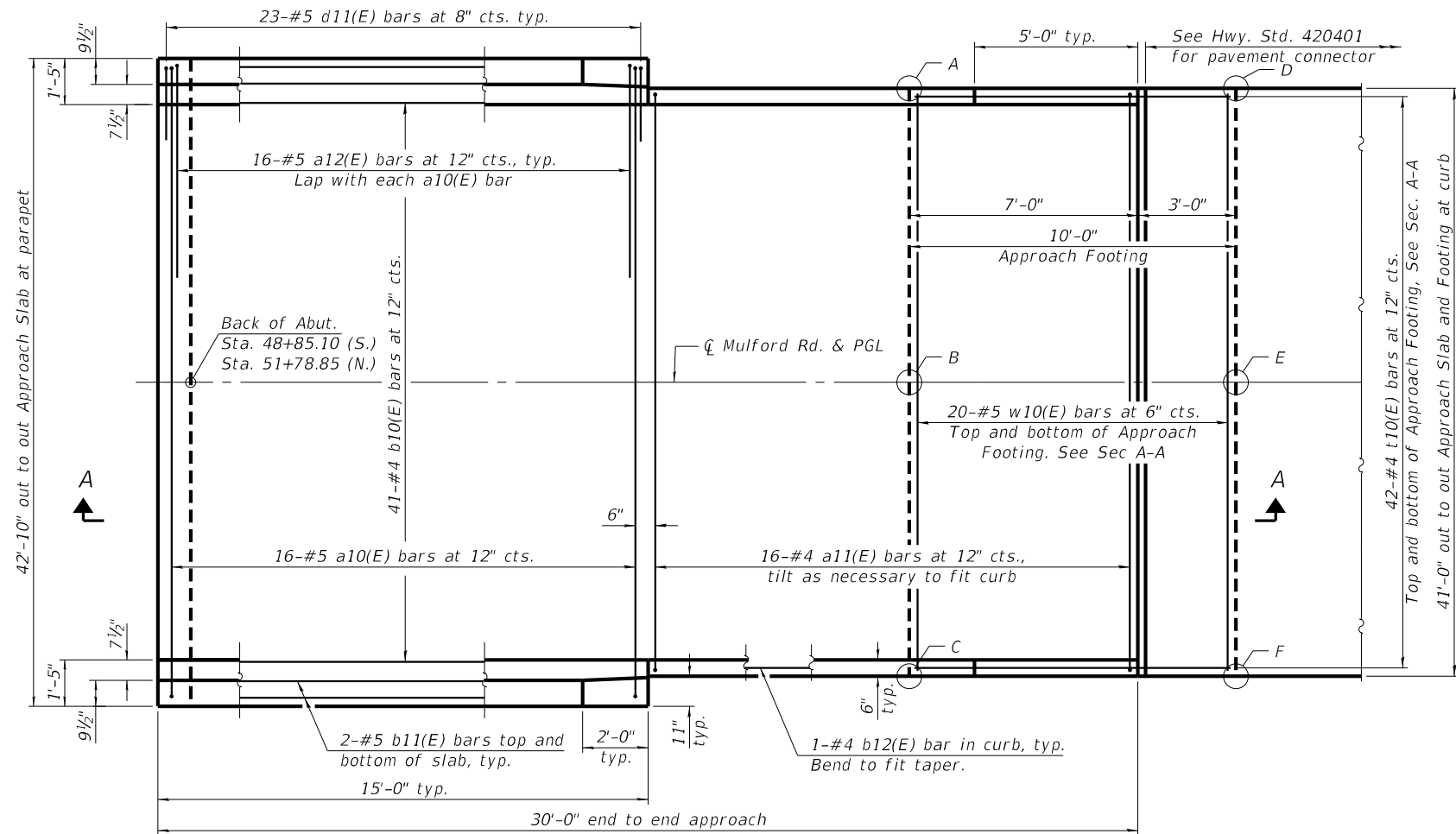
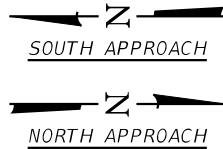
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		CHECKED	- DCB	REVISED	-
		DRAWN	- FDL	REVISED	-
PLOT DATE	= 3/30/2023	DATE	- 03/31/2023	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS
STRUCTURE NO. 101-0207

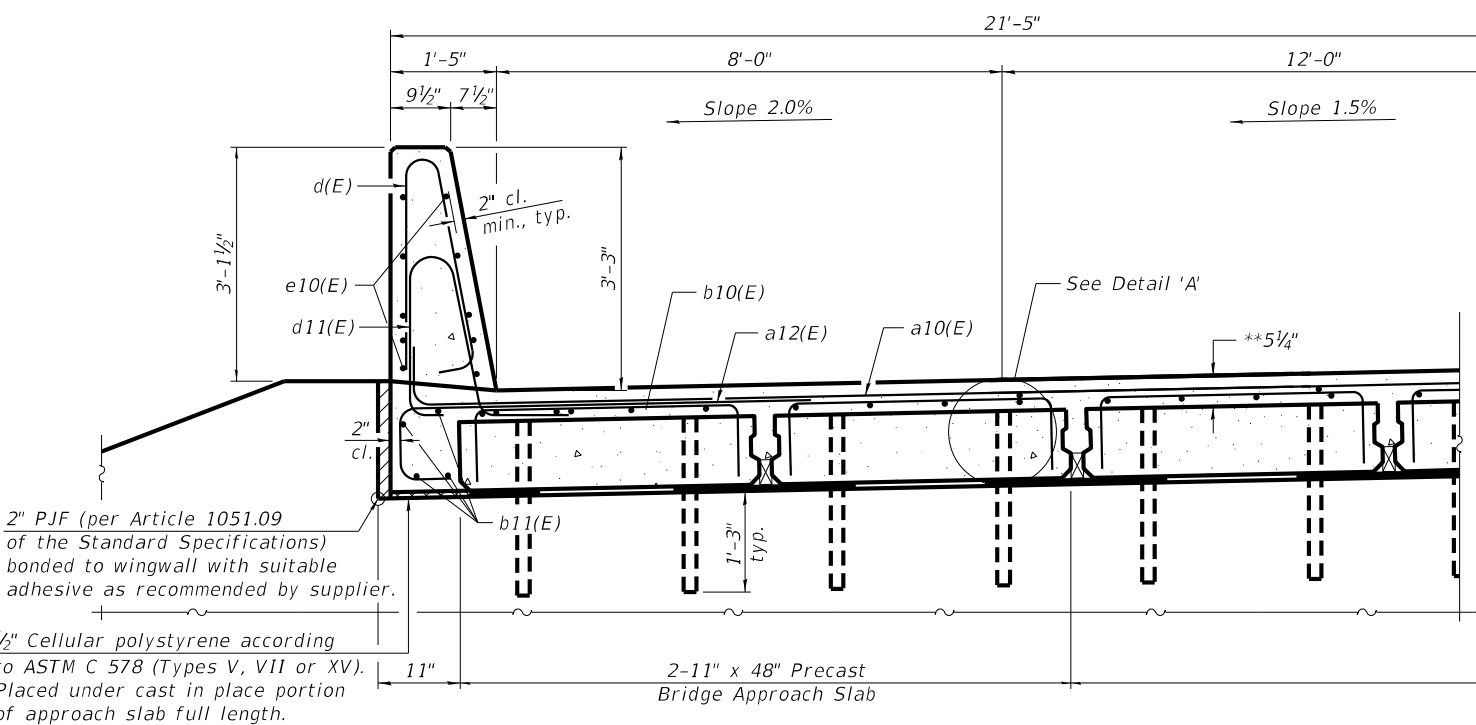
SHEET 12 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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WHA # 1390D19		CONTRACT NO. 64B13		
		ILLINOIS	FED. AID PROJECT	

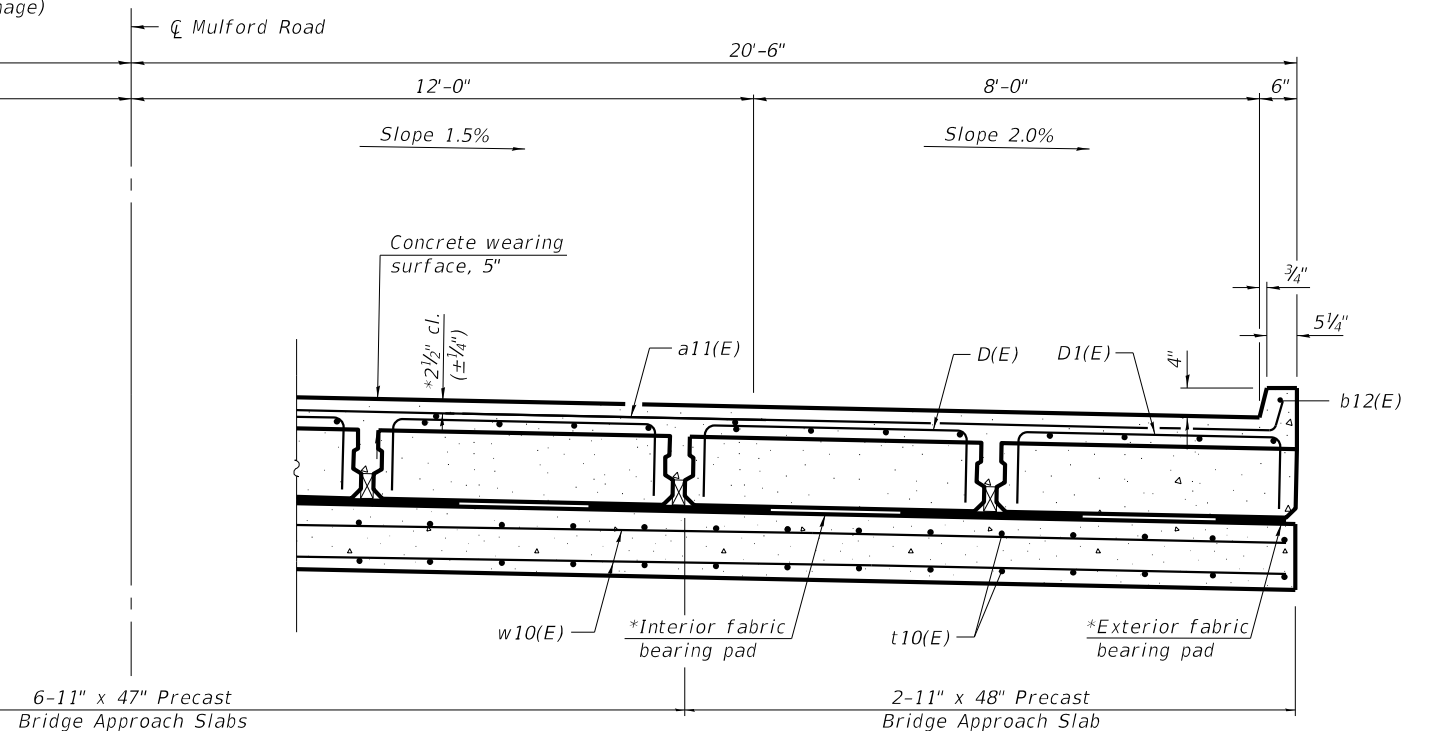


PLAN

(N. Approach Slab shown, S. Approach Slab similar by mirror image)

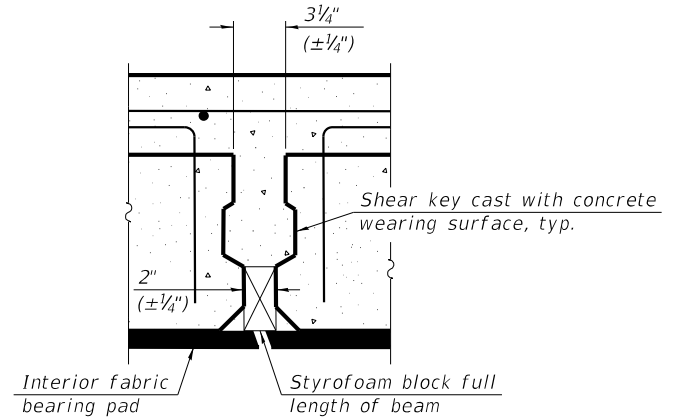


NEAR ABUTMENT



CROSS SECTION
(Looking North)

AT APPROACH FOOTING



DETAIL 'A'

TOP AND BOTTOM ELEVATIONS
FOR APPROACH FOOTING

South Approach			North Approach		
Point	Top	Bottom	Point	Top	Bottom
A - NE	826.24	825.40	A - SW	826.19	825.35
B - N C	826.60	825.76	B - S C	826.55	825.71
C - NW	826.24	825.40	C - SE	826.19	825.35
D - SE	826.06	825.22	D - NW	826.00	825.17
E - S C	826.42	825.58	E - N C	826.36	825.53
F - SW	826.06	825.22	F - NE	826.00	825.17

* Fabric bearing pads at the expansion end shall be recessed 1/4" into the approach footing and bonded. Adjusting shims, when required, shall be bonded to the top of the fabric bearing pads.

** Prior to Grinding

(Sheet 1 of 3)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST BRIDGE APPROACH SLAB
STRUCTURE NO. 101-0207

SHEET 13 OF 31 SHEETS

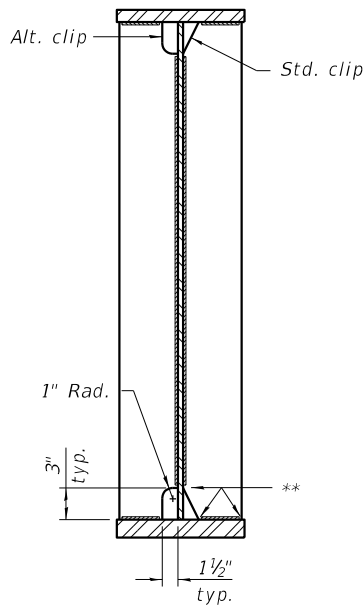
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39	(201-3)K	WINNEBAGO	2192	936
WHA # 1390D19		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		

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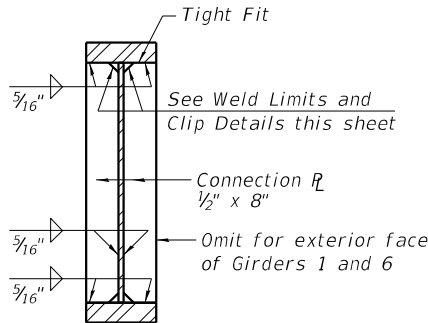
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	CHECKED - DCB	REVISED -
	DRAWN - FDL	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

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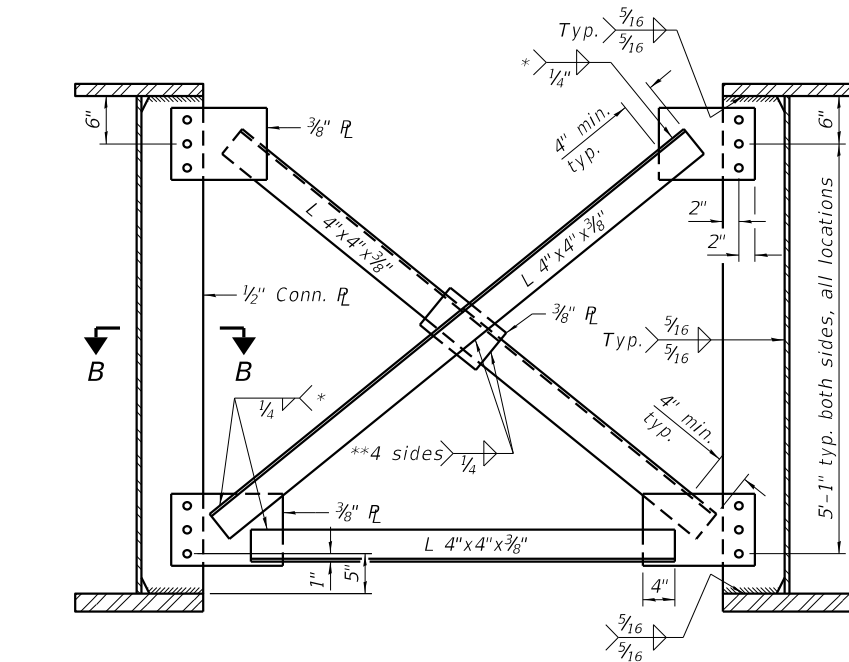
WELD LIMITS AND CLIP DETAILS

** Stop welds 1/4" ($\pm 1/8$ ") from edges as shown.
Typical.



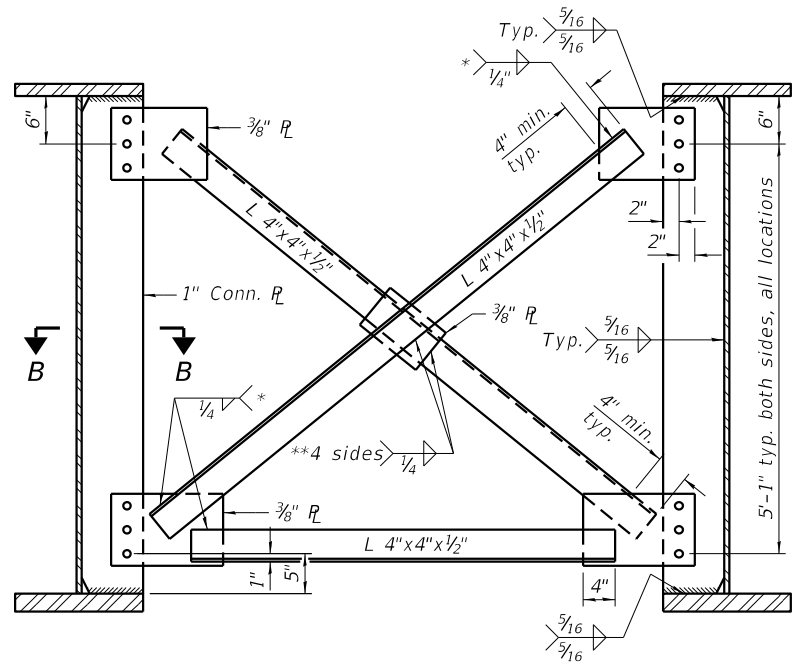
CONNECTION PLATE

(No. plates required = 140)



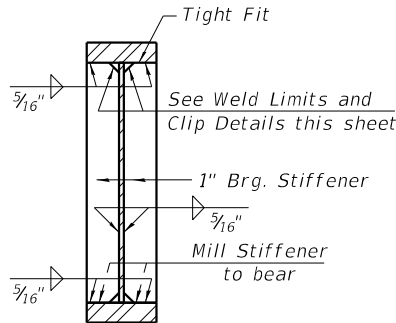
INTERIOR CROSS FRAME (C)

* Fillet weld L's along 3 sides on one face of gusset R; however if cross frames are galvanized, weld all around.
** If cross frames are galvanized, weld all around.
(70 required)



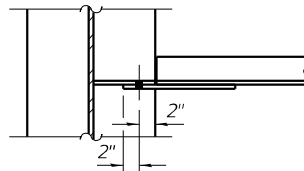
INTERIOR CROSS FRAME (C1)

* Fillet weld L's along 3 sides on one face of gusset R; however if cross frames are galvanized, weld all around.
** If cross frames are galvanized, weld all around.
(5 required)



BEARING STIFFENERS

(No. plates required = 36)



SECTION B-B

NOTES:

Bolts shall be 3/4" $\emptyset$ bolts, 1 1/16" $\emptyset$ holes.

Two hardened washers required for each set of oversized holes.

All cross frames shall be installed as steel is erected and secured with erection pins and bolts. Individual cross frames at supports may be temporarily disconnected to install bearing anchor rods.

(Sheet 2 of 2)



WILLETT HOFMANN
ASSOCIATES INC.
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, OAKTON, IL 61021-0367
T 815-284-3381 DES/CA/PROJ: #184-000918

USER NAME	= frank	DESIGNED -	EEL	REVISED -	
CHECKED -	DCB	REVISED -			
DRAWN -	FDL	REVISED -			
PLOT DATE	= 3/30/2023	DATE	= 03/31/2023	REVISED -	

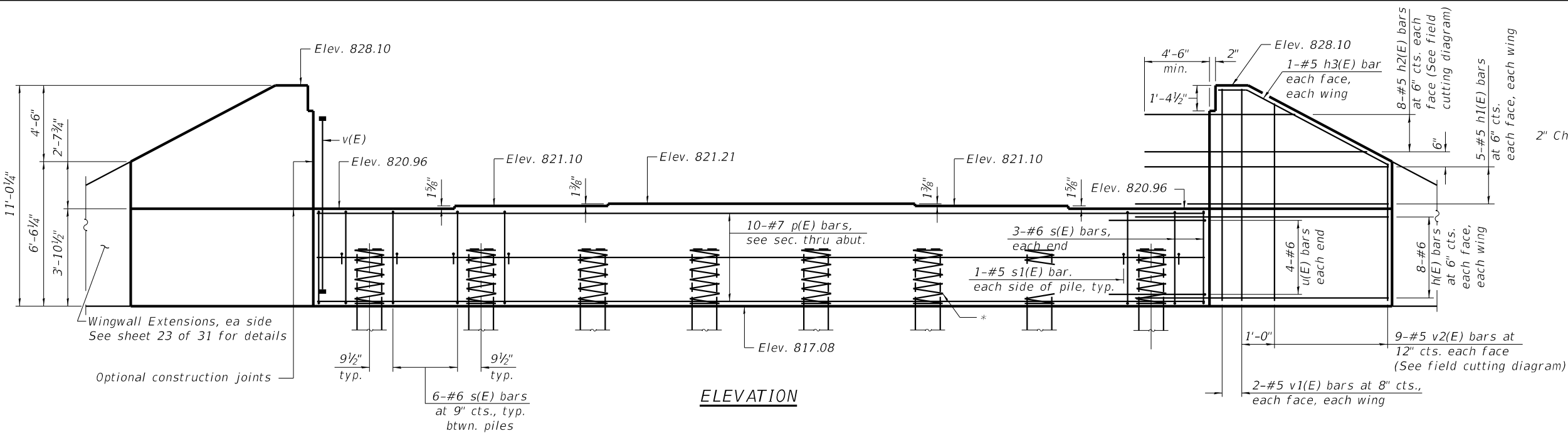
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 101-0207

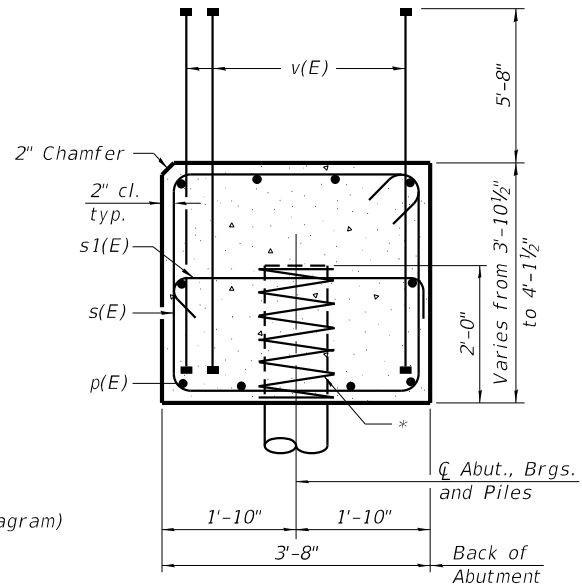
SHEET 19 OF 31 SHEETS

F&I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	942
WHA # 1390D19		CONTRACT NO. 64B13		
		ILLINOIS	FED. AID PROJECT	

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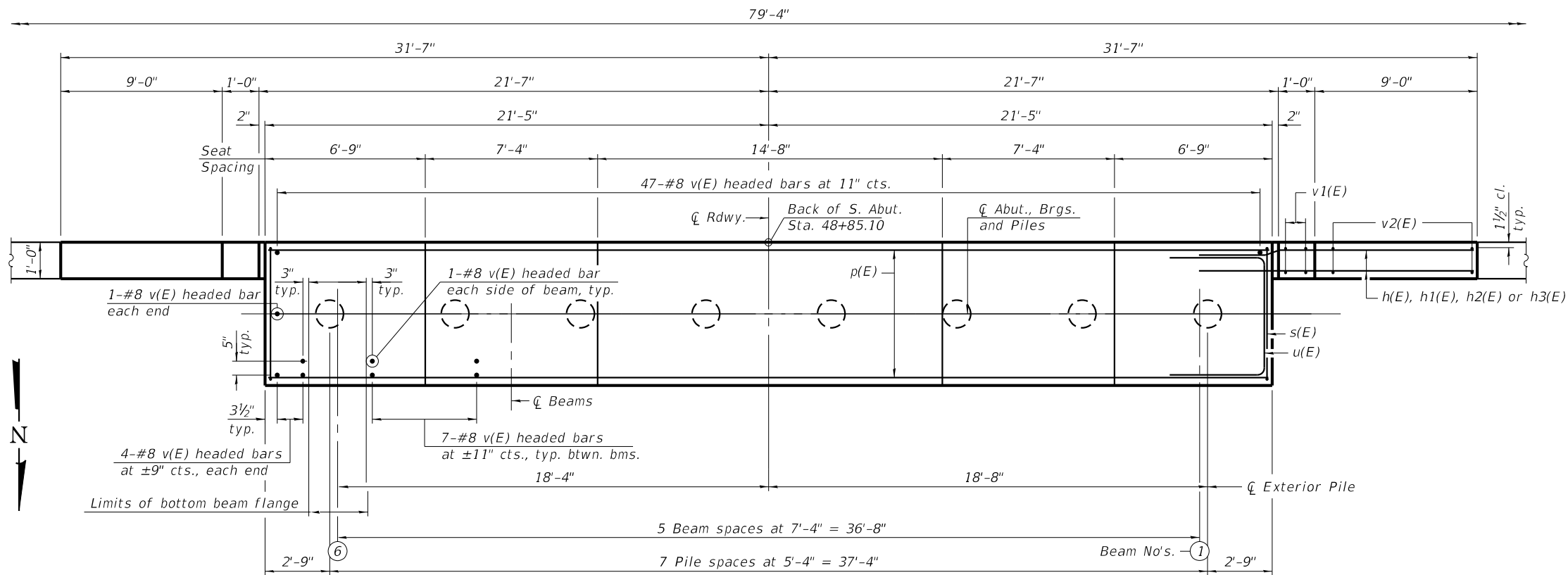


ELEVATION

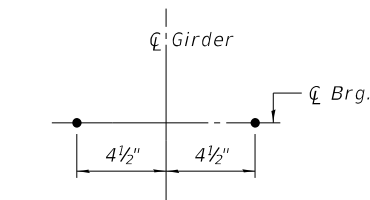


SEC. THRU ABUT.

* #4 sp(E) spiral (2'-0" Ø; 3" pitch;
1 1/2" extra turns top and bottom)



PLAN



ANCHOR BOLT LAYOUT

PILE DATA

Type: Metal Shell Piles, 12" Ø x 0.25"
Nominal Required Bearing: 392 k
Factored Resistance Available: 216 k
Est. Length: 31 ft.
No. Production Piles: 7
No. Test Piles: 1



USER NAME = frank	DESIGNED - EEL	REVISED -
CHECKED - DCB	REVISED -	
DRAWN - FDL	REVISED -	
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT
STRUCTURE NO. 101-0207

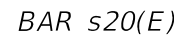
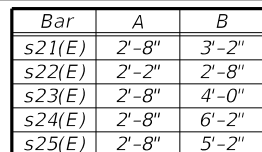
(Sheet 1 of 2)

SHEET 22 OF 31 SHEETS

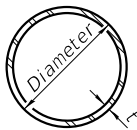
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	945
WHA # 1390D19		CONTRACT NO. 64B13		
		ILLINOIS	FED. AID PROJECT	

Apply protective coat to pier crashwall and all 4 sides of columns.

Type: Metal Shell Piles 12" Ø x 0.25"
Nominal Required Bearing: 392 kips
Factored Resistance Available: 216 kips
Est. Length: 19 ft.
No. Production Piles: 21
No. Test Piles: 1

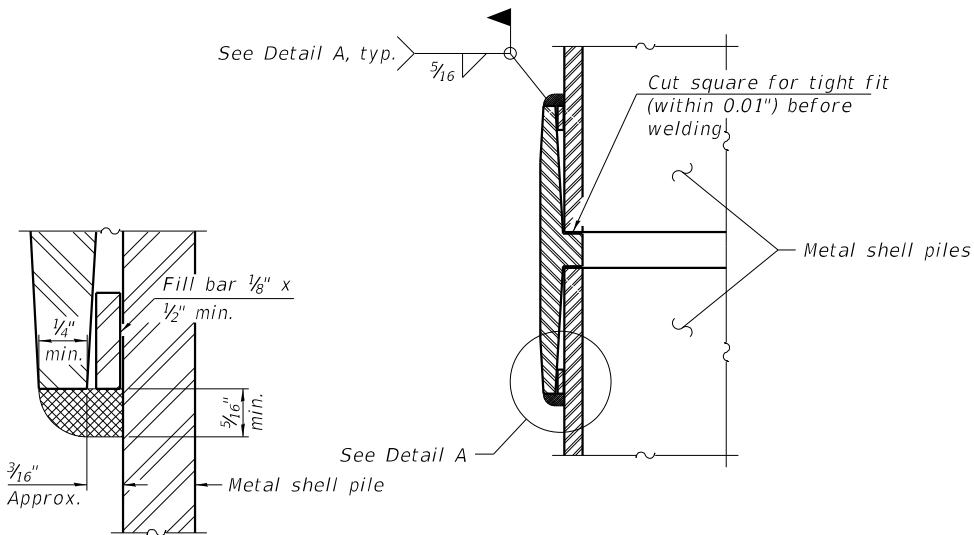


Bar	No.	Size	Length	Shape
h10(E)	4	#8	41'-8"	=====
h11(E)	31	#6	30'-2"	=====
n1(E)	30	#9	9'-3"	C
p1(E)	16	#9	41'-8"	=====
p2(E)	8	#9	41'-10"	=====
s20(E)	30	#5	14'-7"	□
s21(E)	28	#5	9'-0"	□
s22(E)	48	#5	7'-6"	□
s23(E)	28	#6	10'-8"	□
s24(E)	41	#6	15'-0"	□
s25(E)	41	#6	13'-0"	□
t1(E)	99	#6	10'-8"	=====
u1(E)	6	#8	13'-8"	=====
v10(E)	30	#9	10'-0"	=====
w1(E)	21	#5	38'-8"	=====
Structure Excavation			Cu. Yd.	210
Concrete Structures			Cu. Yd.	91.8
Reinforcement Coat			Sq. Yd.	81
Reinforcement Bars, Epoxy Coated			Pound	13,140
Furnishing Metal Shell Piles 12" x 0.25"			Foot	399
Driving Piles			Foot	399
Test Pile Metal Shell			Each	1
Name Plate			Each	1

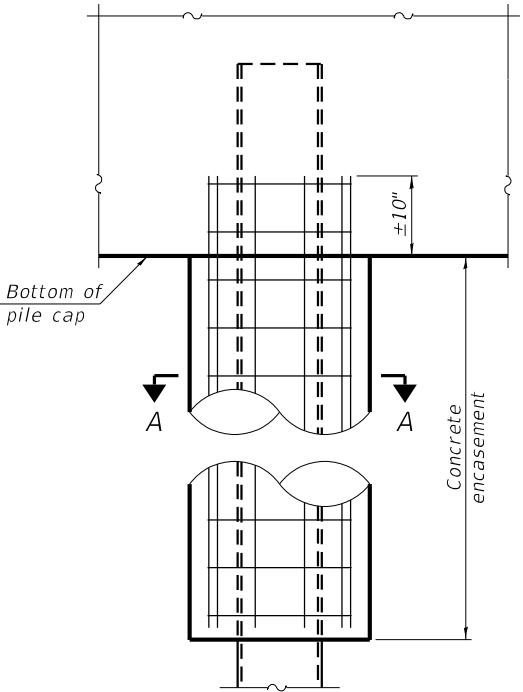


METAL SHELL PILE TABLE

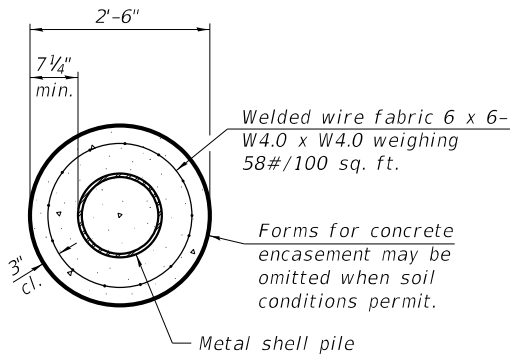
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470



DETAIL A

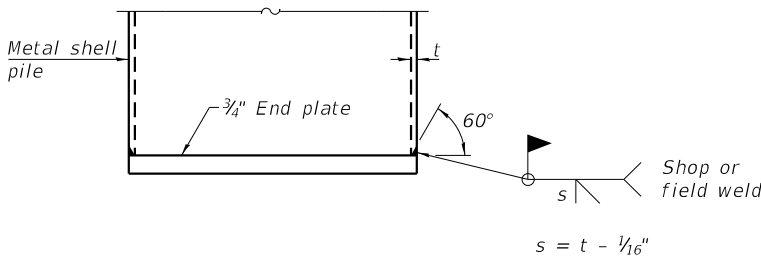


ELEVATION

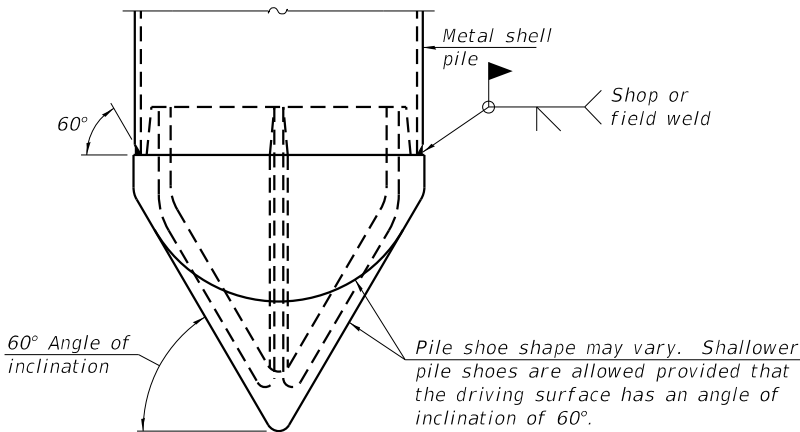


SECTION A-A

INDIVIDUAL PILE
CONCRETE ENCASEMENT
(When specified)



END PLATE ATTACHMENT

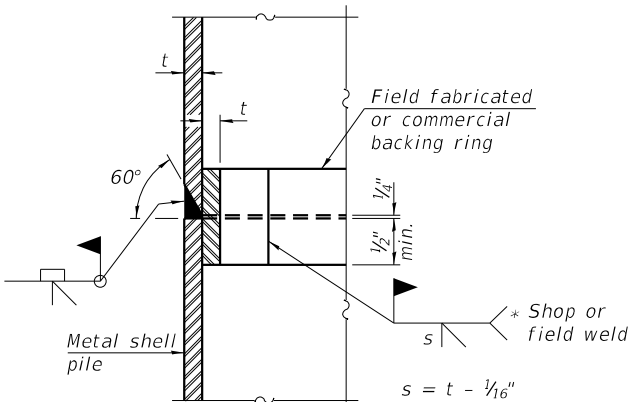


PILE SHOE ATTACHMENT

(When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 80-50 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld).

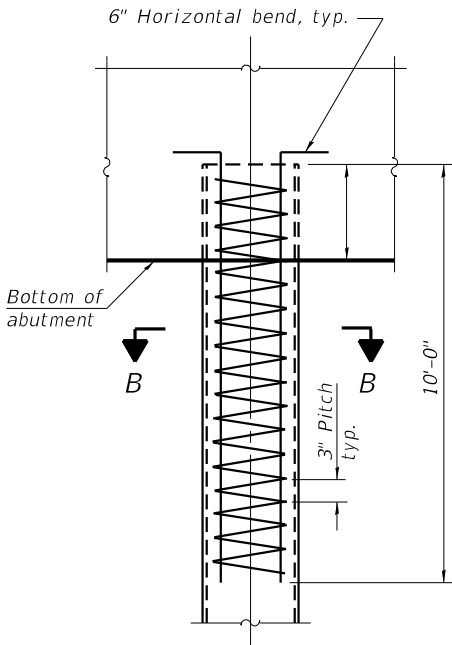
WELDED COMMERCIAL SPLICE

Notes:
The 1/8 inch x 1/2 inch min. fill bar may be constructed of 2 bars with a 1/8 inch max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

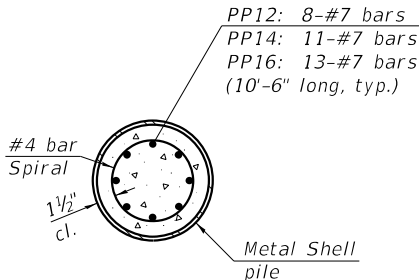


COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION



SECTION B-B

REINFORCEMENT AT ABUTMENTS
(Omit when concrete encasement is specified)

Note:
The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.

F-MS

1-1-2020



USER NAME = frank	DESIGNED - EEL	REVISED -
	CHECKED - DCB	REVISED -
	DRAWN - FDL	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

METAL SHELL PILE DETAILS
STRUCTURE NO. 101-0207

SHEET 27 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	950
WHA # 1390D19		CONTRACT NO. 64B13		
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
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Illinois Department of Transportation

Division of Highways

Illinois Department of Transportation/D-2

SOIL BORING LOG

Page 1 of 2

Date 7/25/08

ROUTE FAP 301

DESCRIPTION P92-111-06 Mulford Road Bridge over US 20 Bypass, 25 m. S. of Sandy Hollow Road

LOGGED BY J. Strating

SECTION (201-3) K (4-1, 5) K

LOCATION Cherry Valley Twp. - 9 NE, SEC., TWP. 43N, RNG. 2E

COUNTY Winnebago

DRILLING METHOD Hollow Stem Auger

HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO. _____

Station _____

BORING NO. B-1g

Station 51+57

Offset 14.00ft Lt CL

Ground Surface Elev. 825.70 ft

DEPT H

BLOWS Qu

UCS (tsf)

MOIST (%)

Surface Water Elev. _____ ft

Stream Bed Elev. 77.00 ft

Groundwater Elev.: _____ ft

First Encounter 793.2 ft

Upon Completion _____ ft

After _____ Hrs.

SOFT brown SANDY LOAM

823.20

1

0.3

14.0

VERY STIFF brown/gray CLAY LOAM with ORGANICS

804.20

7

3.5

19.0

SOFT tan/brown SANDY LOAM

821.70

1

0.3

15.0

VERY STIFF dark gray SILTY CLAY LOAM

801.70

7

3.3

21.0

HARD tan SANDY LOAM TILL

819.20

6

4.5

8.0

STIFF dark gray SILTY LOAM

799.20

2

1.3

28.0

VERY STIFF brown/gray CLAY LOAM

816.70

6

2.4

21.0

STIFF gray CLAY LOAM

796.70

1

1.2

25.0

HARD tan SANDY LOAM TILL

814.20

7

4.5

9.0

MEDIUM gray/brown CLAY LOAM with SAND lens

794.20

2

1.0

21.0

tan SANDY LOAM with large piece of GRAVEL in nose

811.70

6

11.0

MEDIUM tan SANDY LOAM TILL

791.70

5

0.6

9.0

VERY STIFF brown/gray CLAY LOAM

809.20

6

2.4

20.0

VERY STIFF tan SANDY LOAM TILL

789.20

14

2.3

9.0

VERY STIFF brown/gray CLAY LOAM

806.70

4

3.1

22.0

VERY STIFF brown/gray CLAY LOAM

786.70

20

8.0

VERY STIFF brown/gray CLAY LOAM

786.70

25

8.0

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)

The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways

Illinois Department of Transportation/D-2

SOIL BORING LOG

Page 2 of 2

Date 7/25/08

ROUTE FAP 301

DESCRIPTION P92-111-06 Mulford Road Bridge over US 20 Bypass, 25 m. S. of Sandy Hollow Road

LOGGED BY J. Strating

SECTION (201-3) K (4-1, 5) K

LOCATION Cherry Valley Twp. - 9 NE, SEC., TWP. 43N, RNG. 2E

COUNTY Winnebago

DRILLING METHOD Hollow Stem Auger

HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO. _____

Station _____

BORING NO. B-1g

Station 51+57

Offset 14.00ft Lt CL

Ground Surface Elev. 825.70 ft

DEPT H

BLOWS Qu

UCS (tsf)

MOIST (%)

Surface Water Elev. _____ ft

Stream Bed Elev. 77.00 ft

Groundwater Elev.: _____ ft

First Encounter 793.2 ft

Upon Completion _____ ft

After _____ Hrs.

HARD tan SANDY LOAM TILL

784.20

25

42

61

HARD tan SANDY LOAM TILL

781.20

100/9'

VERY DENSE brown dirty coarse SAND & GRAVEL

779.20

24

26

30

VERY DENSE tan dirty SAND & GRAVEL

776.70

100/2'

End of Boring

776.70

100/2'

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)

The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



WILLET HOFMANN
& ASSOCIATES INC.
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, OAKTON, IL 61021-0367
T 815-284-3381 DES/CA/7034/4184-000918

USER NAME = frank	DESIGNED - EEL	REVISED -
	CHECKED - DCB	REVISED -
	DRAWN - FDL	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 101-0207

SHEET 28 OF 31 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	951
WHA # 1390D19		CONTRACT NO. 64B13		
		ILLINOIS	FED. AID PROJECT	

Page 1 of 1Date 7/27/08

ROUTE	FAP 301	DESCRIPTION	P92-111-06 Mulford Road Bridge over US 20 Bypass, 25 m. S. of Sandy Hollow Road	LOGGED BY	W. Garza
-------	---------	-------------	---	-----------	----------

SECTION (201-3) K (4-1, 5) K LOCATION Cherry Valley Twp. - 9 NE, SEC., TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Page 1 of 2Date 7/28/08

ROUTE FAP 301 DESCRIPTION P92-111-06 Mulford Road Bridge over US 20 Bypass, .25 m. S. of Sandy Hollow Road LOGGED BY W. Garza

SECTION (201-3) K (4-1, 5) K LOCATION Cherry Valley Twp. - 9 NE, SEC., TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)



SOIL BORING LOG

Page 2 of 2

Date 7/28/08

ROUTE	FAP 301	DESCRIPTION	F92-111-06 Mulford Road Bridge over US 20 Bypass, 25 m. S. of Sandy Hollow Road	LOGGED BY	W. Garza
-------	---------	-------------	--	-----------	----------

SECTION (201-3) K (4-1, 5) K LOCATION Cherry Valley Twp. - 9 NE, SEC., TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE B-53 Diedrich Automatic

STRUCT. NO. _____	D E P T H	B L O W S	U C S	M O I S T	Surface Water Elev. _____ ft	D E P T H	B L O W S	U C S	M O I S T
Station _____					Stream Bed Elev. <u>77.00</u> ft				
BORING NO. <u>B-3g</u>					Groundwater Elev.: _____				
Station <u>48+70</u>					First Encounter <u>801.7</u> ft <u>▼</u>				
Offset <u>15.00ft Rt CL</u>					Upon Completion <u>805.2</u> ft <u>▽</u>				
Ground Surface Elev. <u>824.20</u> ft	(ft)	(6")	(tsf)	(%)	After _____ Hrs. _____ ft	(ft)	(6")	(tsf)	(%)

Soil Description	Depth (ft)	Soil Description	Depth (ft)	Soil Description	Depth (ft)
DENSE tan SANDY LOAM TILL	35	VERY DENSE tan fine SAND	30		
	19		100/11"		
	11		762.70		
		End of Boring			
STIFF gray SANDY LOAM TILL	4				
	11				
	15	1.6			
	B	8.0			
VERY STIFF gray SANDY LOAM TILL with GRAVEL	6				
	9	2.5			
	12	S			
STIFF gray SANDY LOAM TILL	5				
	9	1.5			
	10	B			
	10.0				
MEDIUM gray fine SAND with medium GRAVEL	2				
	6				
	23				
DENSE gray fine SAND	12				
	17				
	19				
VERY DENSE tan SAND with GRAVEL	42				
	100/7"				
VERY DENSE tan SANDY LOAM TILL with SANDY GRAVEL lens	29				
	100/9"				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



SOIL BORING LOG

Page 1 of 2

Date 2/17/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Mulford Road over Byapss 20 LOGGED BY W. Garza

SECTION (201-3)K & 4-1,5)K LOCATION Cherry Valley Twp. - 10NW, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-55

STRUCT. NO. _____	Latitude	<u>42° 13' 11.65"</u>	Northing	<u>2,024,824.8893</u>
	Longitude	<u>-88° 59' 54.20"</u>	Easting	<u>2,613,032.2599</u>

Station		D E P T H S	B L O W S	U C S	M O I S T	Surface Water Elev. _____ ft	D E P T H S	B L O W S	U C S	M O I S T
BORING NO. B-4g						Stream Bed Elev. _____ ft				
Station 48+48						Groundwater Elev.: _____ ft				
Offset 205.00 ft. Rt			Qu			First Encounter 793.0 ft ∇			Qu	
Ground Surface Elev. 802.00 ft	(ft)	(6")	(tsf)	(%)		Upon Completion 768.0 ft ∇			(ft)	(6") (tsf) (%)
						After _____ Hrs.				

MEDIUM brown SILTY CLAY LOAM				DENSE, VERY STIFF tan SANDY LOAM TILL (continued)			
800.50			0.7 P	23.0	781.00		
STIFF tan SILTY CLAY LOAM	1				DENSE tan fine SAND	13	
	3					29	
799.00	3	1.5 B	28.0		779.00	18	
SOFT tan LOAM with SAND, medium GRAVEL lens	1				VERY DENSE tan fine SAND	34	
	2					41	
-5	3	0.4 P	25.0		776.50	43	
796.00							
LOOSE tan dirty SANDY GRAVEL	0				MEDIUM/DENSE tan very fine SAND	14	
	1					11	
	3				774.00	19	
793.50							
MEDIUM tan SANDY LOAM TILL	1				DENSE tan fine SAND with CLAY lens	3	
-10	3	0.5 B	11.0			18	
791.50	4				-30	17	
					771.00		
STIFF tan SANDY LOAM TILL	2				VERY STIFF gray SANDY LOAM TILL with SAND lens	10	
	3	2.0 P	10.0			14	3.7 S
789.00	7				769.00	21	9.0
DENSE, No Recovery, assume as above.	22				HARD gray LOAM TILL	11	
-15	17					15	6.0 S
786.50	22				766.50	25	12.0
DENSE, No Recovery, assume as above.	11				HARD gray LOAM TILL with ORGANICS	12	
	12					16	5.9 S
784.00	22				764.00	21	12.0
DENSE, VERY STIFF tan SANDY LOAM TILL	6				HARD gray LOAM TILL	8	
-20	10	2.8				45	4.8 S
					-40	10.0	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



WILLETT HOFMANN
 & ASSOCIATES INC.
 ENGINEERING ARCHITECTURE LAND SURVEYING
 899 EAST 2ND STREET, DIXON, IL 61021-0367
 T 815-284-3381 DESIGN FIRM: #184-000918

USER NAME = frank	DESIGNED - EEL	REVISED -
	CHECKED - DCB	REVISED -
	DRAWN - FDL	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SOIL BORING LOGS
STRUCTURE NO. 101-0207

SHEET 30 OF 31 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	953
WHA # 1390D19		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		

MODEL: Default
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Illinois Department
of Transportation
Division of Highways
DOT

SOIL BORING LOG

Page 2 of 2

Date 2/17/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Mulford Road over Byapss 20 LOGGED BY W. Garza

SECTION (201-3)K & 4-1.5)K LOCATION Cherry Valey Twp. - 10NW, SEC. , TWP. 43N, RNG. 2E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME-55

STRUCT. NO. _____
Station _____
BORING NO. B-4g
Station 48+48
Offset 205.00 ft. Rt
Ground Surface Elev. 802.00 ft
Latitude 42° 13' 11.65"
Longitude -88° 59' 54.20"
Northing 2,024,824.8893
Easting 2,613,032.2599

D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft Groundwater Elev.: _____ ft First Encounter _____ ft Upon Completion _____ ft After _____ Hrs. _____ ft	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
-------------------------------	--------------------------------	----------------------------	------------------------------	---	-------------------------------	--------------------------------	----------------------------	------------------------------

Northing and Easting were calculated using the ILIP-WF coordinate system

HARD gray LOAM TILL (continued)	761.50	23	G					
VERY DENSE gray SANDY LOAM TILL	759.00	19 60 26						
VERY DENSE light gray SANDY LOAM TILL	756.00	23 100/8"						
VERY DENSE light gray weathered LIMESTONE	754.00	26 32 29						
VERY DENSE light gray weathered LIMESTONE	748.00	25 27 67		No Refusal to 74.0'				
	743.00			End of Boring				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



Illinois Department
of Transportation
Division of Highways
DOT

SOIL BORING LOG

Page 1 of 1

Date 5/19/16

ROUTE FAI 39 & FAP 301 DESCRIPTION P92-111-06 Mulford Road over Byapss 20 LOGGED BY W. Garza

SECTION (201-3)K & 4-1.5)K LOCATION SEC. , TWP. , RNG.

COUNTY Winnebago DRILLING METHOD Shelby HAMMER TYPE Shelby

STRUCT. NO. _____
Station _____
BORING NO. B-4g Shelby
Station 49+27
Offset 32.00 ft. Rt
Ground Surface Elev. 801.60 ft
Latitude _____
Longitude _____
Northing _____
Easting _____

D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft Groundwater Elev.: _____ ft First Encounter _____ ft Upon Completion _____ ft After _____ Hrs. _____ ft
-------------------------------	--------------------------------	----------------------------	------------------------------	---

25" Recovery				
16" Recovery	799.10			
21" Recovery	796.60	-5		
22" Recovery	794.10			
30" Recovery	791.60	-10		
Lifted Truck @ 14" Pushed 20" 20" Recovery	789.10			
End of Boring	786.60	-15		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



WILLETT HOFMANN
& ASSOCIATES INC.
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, OXFORD, IL 61001-0367
T 815-234-3351 DES/CA/PROJ #184-000918

USER NAME = frank	DESIGNED - EEL	REVISED -
CHECKED - DCB	REVISED -	
DRAWN - FDL	REVISED -	
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

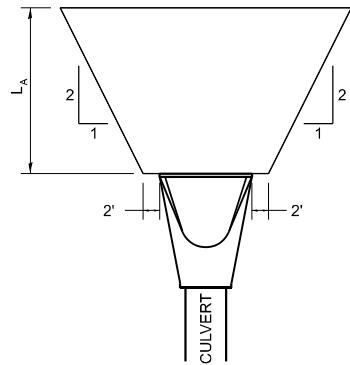
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 101-0207

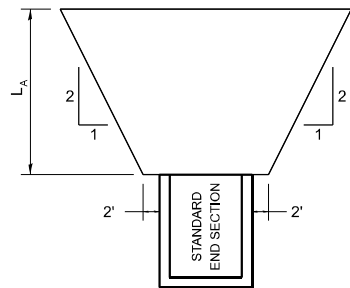
SHEET 31 OF 31 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	954
WHA # 1390D19		CONTRACT NO. 64B13		
		ILLINOIS	FED. AID PROJECT	

RIPRAP AT END SECTIONS



FLARED END SECTION



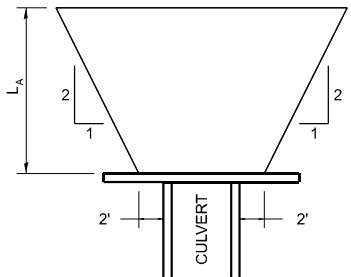
STANDARD END SECTION

REVISED - 7-13-16
REVISED - 11-12-14
REVISED - 2-10-14

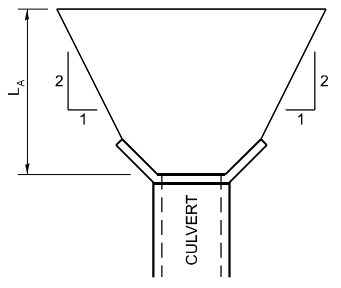
L_A = APRON LENGTH (ft)

IF THE CULVERT OUTLETS INTO A
DEFINED CHANNEL, RIPRAP BANK
TO BANK FOR LENGTH (L_A)

STANDARD END SECTION:
542001 (PIPE), 542011 (ELLIPTICAL)
DISTRICT STANDARD 10.1 (BOX).



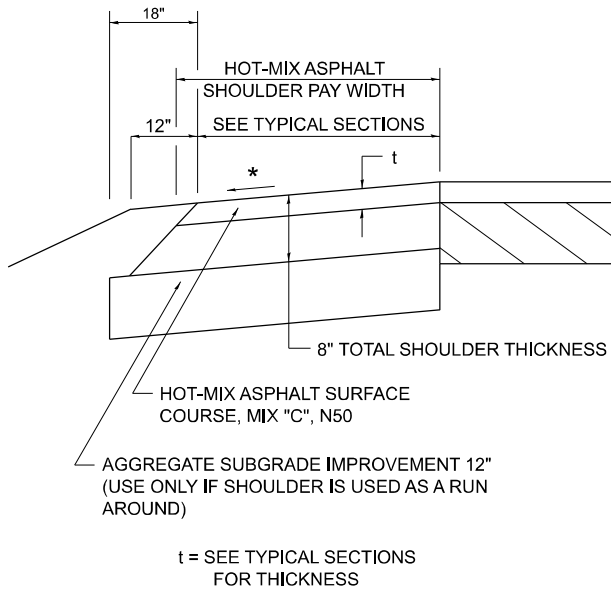
CULVERT WITH HEADWALL



CULVERT WITH WING WALLS

RIPRAP AT END SECTIONS 19.4

HOT-MIX ASPHALT SHOULDER



REVISED - 1-05-16
REVISED - 3-13-13

GENERAL NOTES

THE HOT-MIX ASPHALT SHOULDER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 482 EXCEPT THE TOP LIFT SHALL BE HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50. THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 AND SQUARE YARD FOR HOT-MIX ASPHALT SHOULDERS OF THE THICKNESS SPECIFIED.

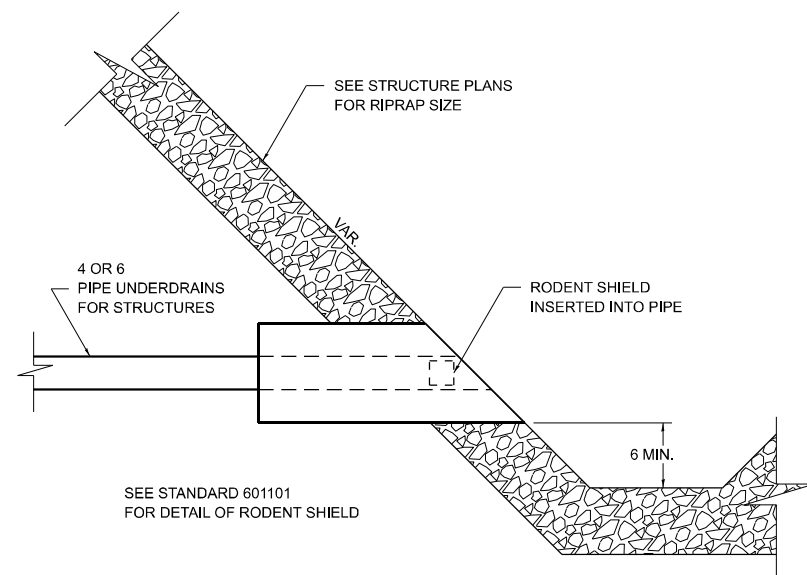
USE HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50. WHEN RESURFACING EXISTING HOT-MIX ASPHALT SHOULDERS. THE THICKNESS IS SHOWN ON THE TYPICAL SECTIONS. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50.

REMOVAL OF MATERIAL FOR PLACEMENT OF THE HOT-MIX ASPHALT SHOULDER TO BE PAID FOR IN UNITS FOR EXCAVATING AND GRADING EXISTING SHOULDERS OR IN CUBIC YARDS FOR EARTH EXCAVATION OR EARTH EXCAVATION WIDENING.

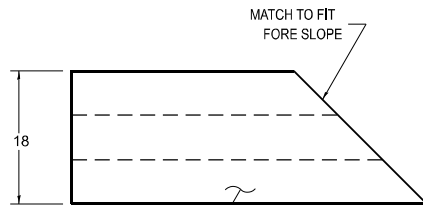
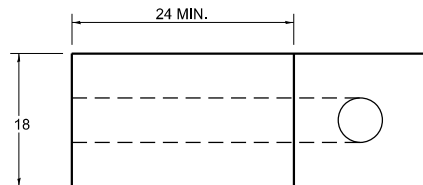
* 4% WHEN MAINLINE IS ON TANGENT. FOR CROSS SLOPE ON SUPERELEVATION SECTION, SEE HIGHWAY STANDARD 482001 OR 482006.

HOT-MIX ASPHALT SHOULDER 22.4

CONCRETE HEADWALLS FOR PIPE UNDERDRAINS FOR STRUCTURES



REVISED - 9-28-17
REVISED - 11-12-14
REVISED - 10-03-11

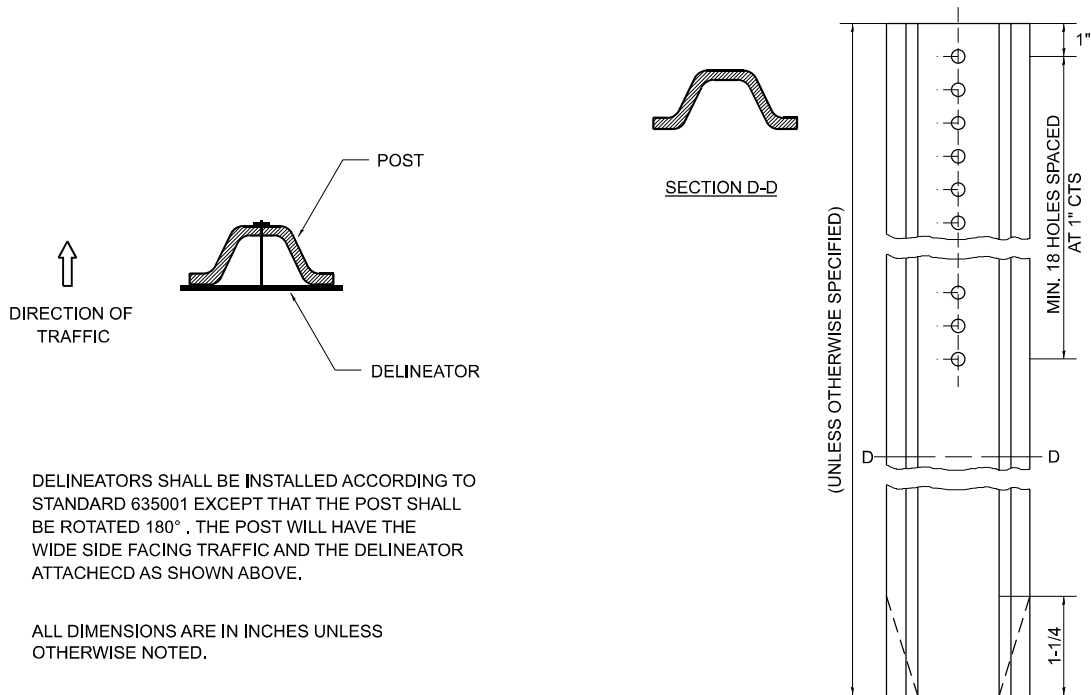


CLASS SI CONCRETE

ALL DIMENSIONS ARE IN INCHES UNLESS
OTHERWISE NOTED.

CONCRETE HEADWALLS FOR PIPE UNDERDRAINS FOR STRUCTURES 27.4

DELINEATOR AND POST ORIENTATION



REVISED - 10-03-11

DELINEATORS SHALL BE INSTALLED ACCORDING TO STANDARD 635001 EXCEPT THAT THE POST SHALL BE ROTATED 180°, THE POST WILL HAVE THE WIDE SIDE FACING TRAFFIC AND THE DELINEATOR ATTACHECD AS SHOWN ABOVE.

ALL DIMENSIONS ARE IN INCHES UNLESS
OTHERWISE NOTED.

DELINEATOR AND POST ORIENTATION 37.4

MODEL: 01-D2-quarter size - 19.4 27.4 37.4
FILE NAME: project\resch\dwg\01\Documents\10800.dwg Docx\CAD Sheets\02 Standards\0264813-5-19-22 Standards-01.dgn



USER NAME = tobank
DESIGNED -
DRAWN -
PLOT SCALE = 0.167" = 1'-0"
PLOT DATE = 3/30/2023

DESIGNED -
DRAWN -
CHECKED -
DATE = 03/31/2023

REVISED -
REVISED -
REVISED -
REVISED -

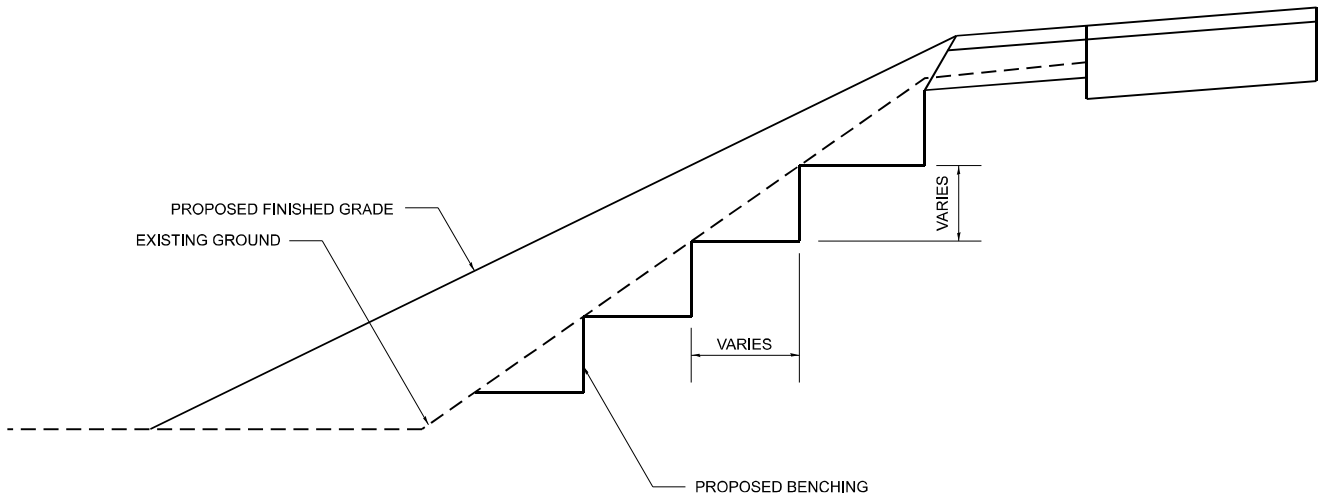
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REGION 2/ DISTRICT 2 STANDARD

SCALE: N/A SHEET 1 OF 18 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	955
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

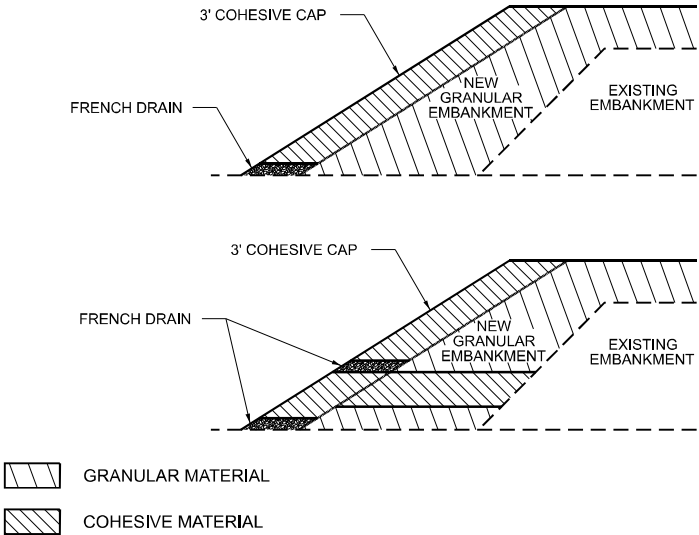
TYPICAL BENCHING ON EXISTING EMBANKMENT



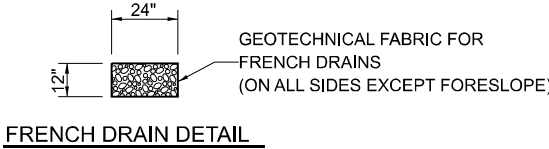
REVISED - 2-22-06

TYPICAL BENCHING ON EXISTING EMBANKMENT 50.4

TYPICAL CONSTRUCTION OF EMBANKMENTS WITH GRANULAR MATERIAL



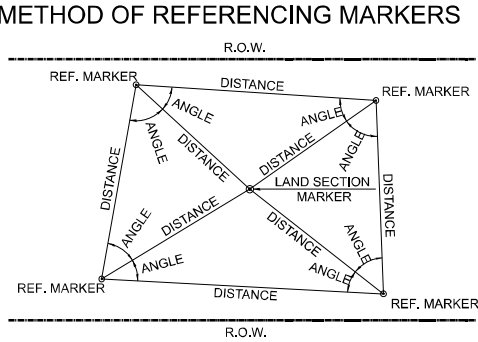
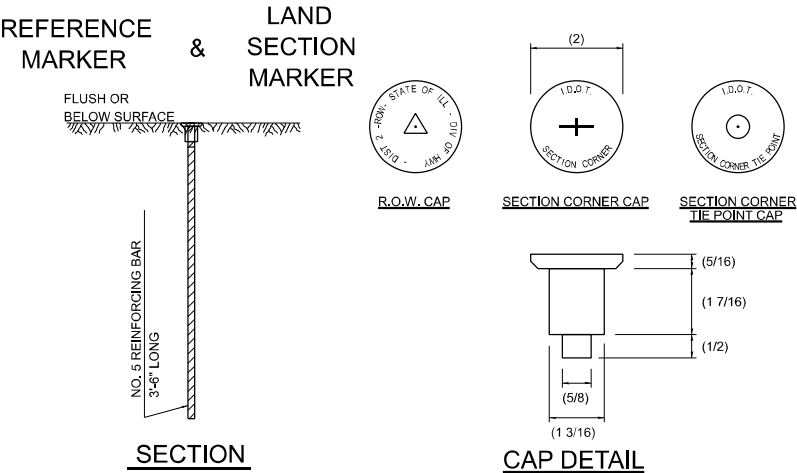
NOTES:
WHEN THE CONTRACTOR ELECTS TO USE A GRANULAR TYPE OF MATERIAL TO CONSTRUCT THE NEW EMBANKMENT, A 3' THICK COHESIVE MATERIAL WILL BE REQUIRED ON THE SLOPE CONSTRUCTED CONCURRENTLY WITH THE GRANULAR EMBANKMENT LIFTS.
IF THE CONTRACTOR SWITCHES BETWEEN GRANULAR TYPES OF MATERIAL LIFTS AND COHESIVE MATERIAL LIFTS IN THE NEWER EMBANKMENT, FRENCH DRAINS SHALL BE CONSTRUCTED EVERY 250' ACCORDING TO ARTICLE 601.06. THE COST OF MATERIALS AND LABOR WILL BE INCLUDED IN THE CONTRACT UNIT PRICE OF EARTH EXCAVATION.



REVISED - 12-07-21

TYPICAL CONSTRUCTION OF EMBANKMENTS WITH GRANULAR MATERIAL 51.4

LAND SECTION & REFERENCE MARKERS



- USE INSTRUMENT TIES TO NEARBY LAND-MARKS (STEEPLES, TOWERS, SILOS, ETC...)
- IN CULTIVATED FIELDS, SET 28" OR MORE BELOW GROUND SURFACE.
- IN FENCE LINE OR PROTECTED AREA SET TOP AT GROUND LEVEL SO AS NOT TO BE DISTURBED BY MOWING.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

METHOD OF REFERENCING POINTS
REFERENCE MARKERS SHALL BE USED TO TIE IN PERMANENT LAND SECTION AND 1/4 SECTION CORNERS. WHERE LAND SECTION MARKERS FALL IN THE SHOULDERS OR GRAVEL SURFACES, THE TOP OF THE BAR SHALL BE KEPT 3" BELOW THE SURFACE. LAND SECTION MARKERS LOCATED IN TRAFFIC LANES SHALL BE REPLACED BY CORE DRILL AND RESETTING PIN.
ALUMINUM CAPS SHALL BE PLACED ON TOP OF THE REINFORCEMENT BAR. THERE ARE 3 TYPES OF CAPS, ONE FOR THE RIGHT-OF-WAY CORNERS, ONE FOR THE SECTION CORNERS AND ONE FOR THE SECTION CORNER TIE POINTS. THE CAPS WILL BE SUPPLIED BY THE SURVEYOR WHO IS RESPONSIBLE FOR MONUMENTING CORNERS.
REVISED - 3-05-10

LAND SECTION & REFERENCE MARKERS 63.4

MODEL: 02-D2-quarter size - 50.4 51.4 63.4
FILE NAME: project\resch\p2\standard\benesch-gw-01\Documents\10800-01\Eng_Docs\CAD_Sheets\02_Standards\02_Standards-01.dgn



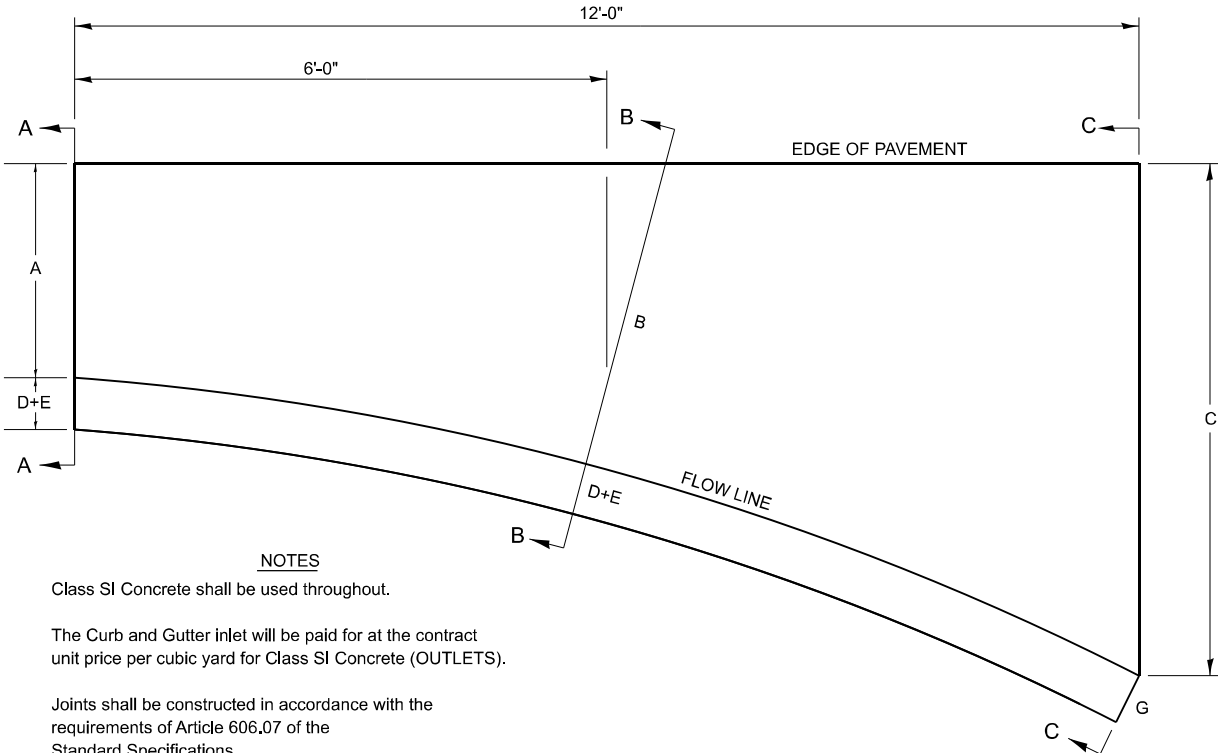
USER NAME = tobank	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.167 " / in.	CHECKED -	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

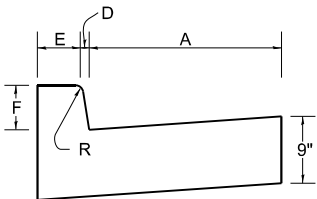
REGION 2/ DISTRICT 2 STANDARD			
SCALE: N/A	SHEET 2 OF 18 SHEETS	STA.	TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	956
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

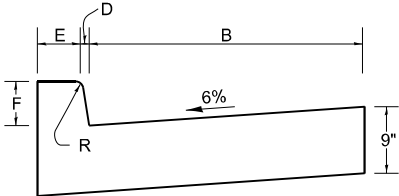
STANDARD INLET FOR CURB & GUTTER



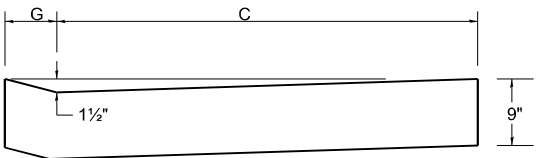
- NOTES**
- Class SI Concrete shall be used throughout.
- The Curb and Gutter inlet will be paid for at the contract unit price per cubic yard for Class SI Concrete (OUTLETS).
- Joints shall be constructed in accordance with the requirements of Article 606.07 of the Standard Specifications.
- When curb and gutter is constructed adjacent to flexible pavement, a 1" expansion joint shall be installed at construction joints.
- All dimensions are in inches unless otherwise noted.



SECTION A-A



SECTION B-B



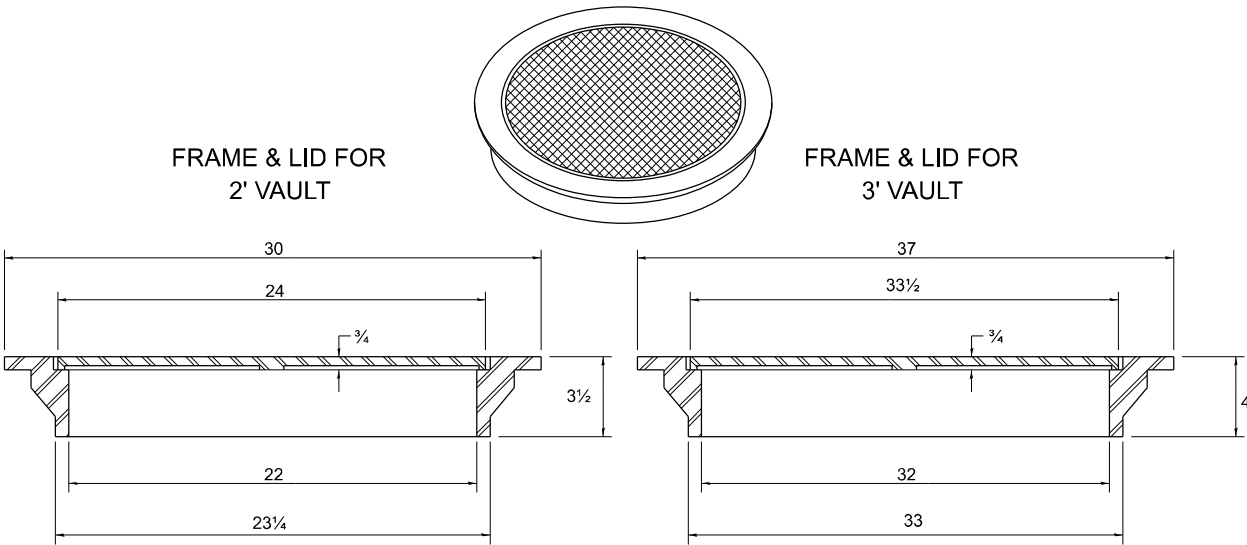
SECTION C-C

TYPE OF CURB & GUTTER	TABLE OF DIMENSIONS								CONCRETE QUANTITY A-A TO C-C (CU YDS)
	A	B	C	D	E	F	G	R	
B-6.06	6	15	4'	1	6	6	7	1	0.87
B-6.12	12	18.25	4'	1	6	6	7	1	0.95
B-6.18	18	27.25	4' 9"	1	6	6	7	1	1.18
B-6.24	24	32.4	4' 9"	1	6	6	7	1	1.30
M-4.06	6	17.8	3' 9"	4	3	4	7	3	0.75
M-4.12	12	18.25	4'	4	3	4	7	3	0.91
M-4.18	18	27.25	4' 9"	4	3	4	7	3	1.14
M-4.24	24	32.4	4' 9"	4	3	4	7	3	1.25
M-6.06	6	17.8	3' 9"	6	2	6	8	3	0.86
M-6.12	12	18.25	4'	6	2	6	8	2	0.96
M-6.18	18	27.25	4' 9"	6	2	6	8	2	1.20
M-6.24	24	32.4	4' 9"	6	2	6	8	2	1.30

- REVISED - 11-12-14
- REVISED - 8-27-13
- REVISED - 10-10-06

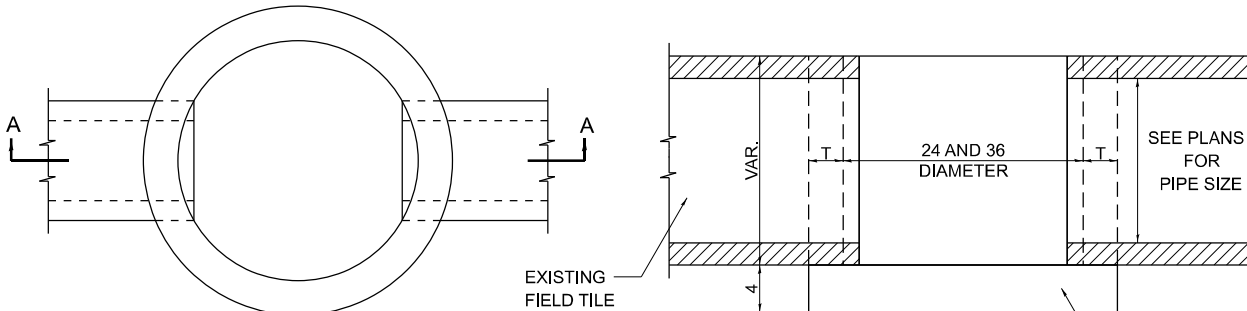
STANDARD INLET FOR CURB & GUTTER 21.2

FIELD TILE JUNCTION VAULTS 2' AND 3' DIA.



TOTAL WEIGHT: 146 LBS.

TOTAL WEIGHT: 280 LBS.



PLAN

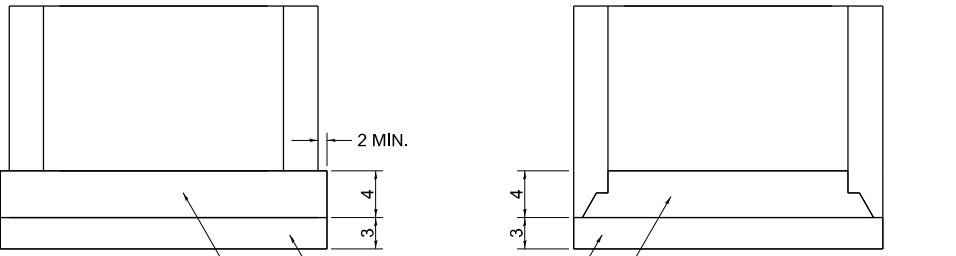
SECTION A-A

- GENERAL NOTES:**
- THE FRAME AND LID IS REQUIRED ON ALL JUNCTION VAULTS.
- THE FRAME AND LID SHALL BE INSTALLED FLUSH WITH THE GROUND.

FRAME AND LIDS:

- R-6040 OR EQUIVALENT (2')
- R-6080 OR EQUIVALENT (3')

ALTERNATE MATERIALS FOR WALLS		T
BRICK MASONRY		8
CAST-IN-PLACE CONCRETE		6
CONCRETE MASONRY UNIT		5
PRECAST REINFORCED CONCRETE SECTION		3



- ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
- REVISED - 1-03-18
- REVISED - 6-27-14
- REVISED - 10-14-11

ALTERNATE METHODS

FIELD TILE JUNCTION VAULTS 2' AND 3' DIA. 30.2

MODEL: 02A-02-half size - 21.2 30.2
FILE NAME: project\resch\p\21.2\02_half size - 21.2 30.2.dgn



USER NAME = tobank	DESIGNED -	REVISED -
PLOT SCALE = 0.167" = 1'	DRAWN -	REVISED -
PLOT DATE = 3/30/2023	CHECKED -	REVISED -
DATE = 03/31/2023	DATE -	REVISED -

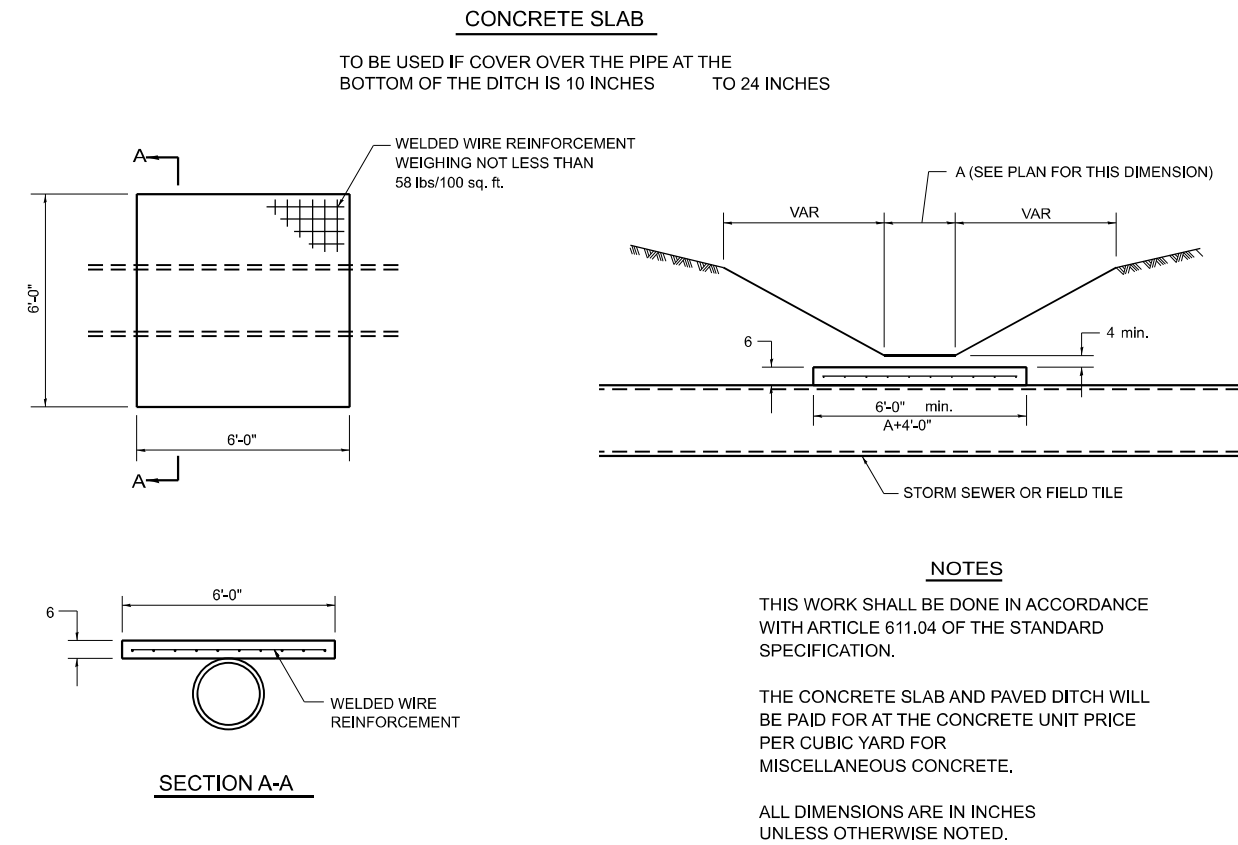
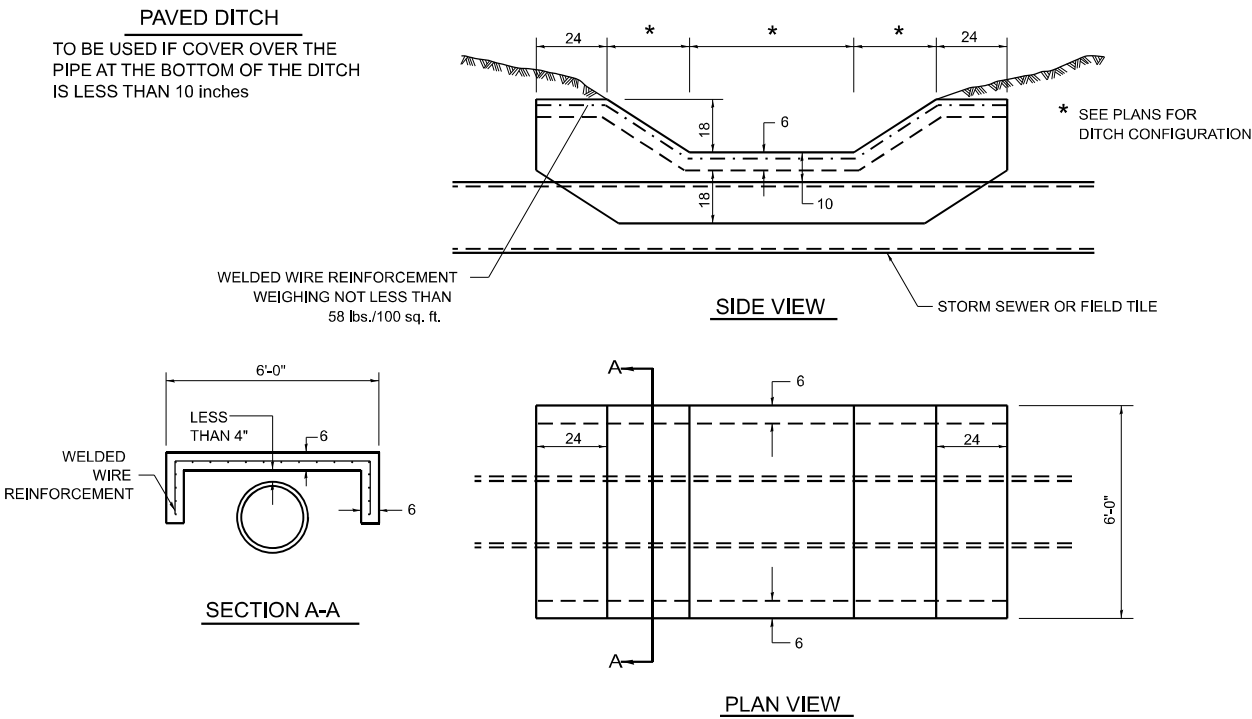
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REGION 2/ DISTRICT 2 STANDARD

SCALE: N/A SHEET 3 OF 18 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	957
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

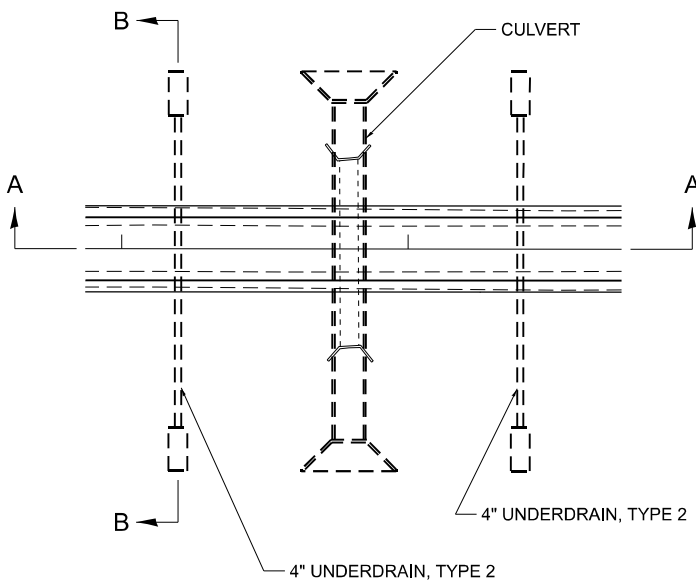
TREATMENT OF FIELD TILE SYSTEMS UNDER DITCHES



REVISED - 1-05-16
REVISED - 10-14-11

TREATMENT OF FIELD TILE SYSTEMS UNDER DITCHES 31.2

UNDERDRAIN FOR ACROSS ROAD (AR) CULVERTS



NOTES:

IN SAG CONDITIONS INSTALL PIPE UNDERDRAINS, TYPE 2, 4" ON BOTH SIDES OF CULVERT.

ON HIGHWAY GRADES GREATER THAN 2% INSTALL PIPE UNDERDRAINS, TYPE 2, 4" ON THE HIGH SIDE OF THE CULVERT.

THIS WORK SHALL BE COMPLETED ACCORDING TO SECTION 601 OF THE STANDARD SPECIFICATIONS.

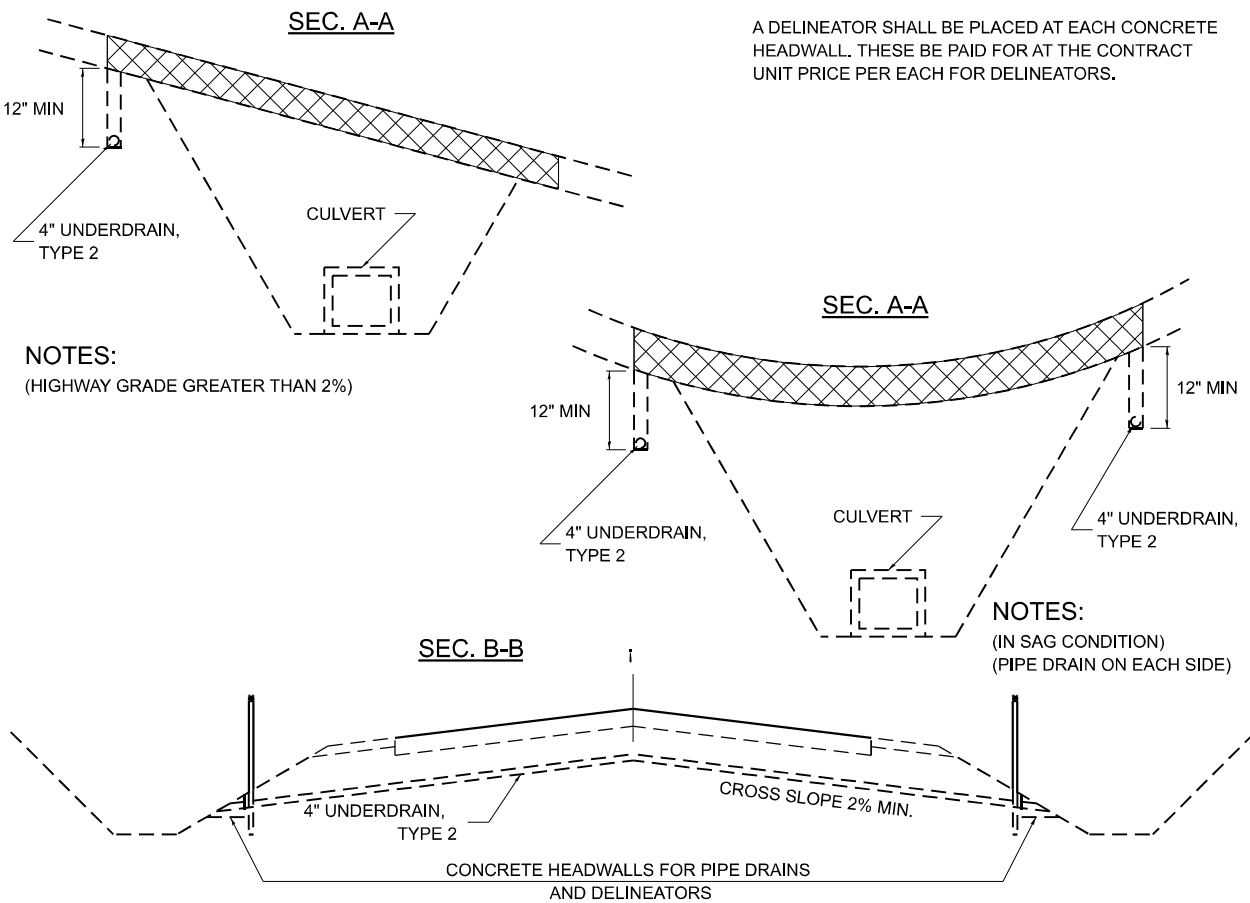
THE UNDERDRAIN SHALL EXTEND UNTIL INTERSECTING WITH THE SIDE SLOPES. THE PIPES SHALL DRAIN INTO CONCRETE HEADWALLS. (SEE ARTICLE 601.05 OF THE STANDARD SPECIFICATIONS AND HIGHWAY STANDARD 601101).

THE UNDERDRAIN SHALL BE A MINIMUM OF 12" BELOW THE EXISTING PAVEMENT.

PIPE UNDERDRAINS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR PIPE UNDERDRAINS, TYPE 2, 4".

CONCRETE HEADWALLS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR CONCRETE HEADWALLS FOR PIPE DRAINS.

A DELINEATOR SHALL BE PLACED AT EACH CONCRETE HEADWALL. THESE BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR DELINEATORS.



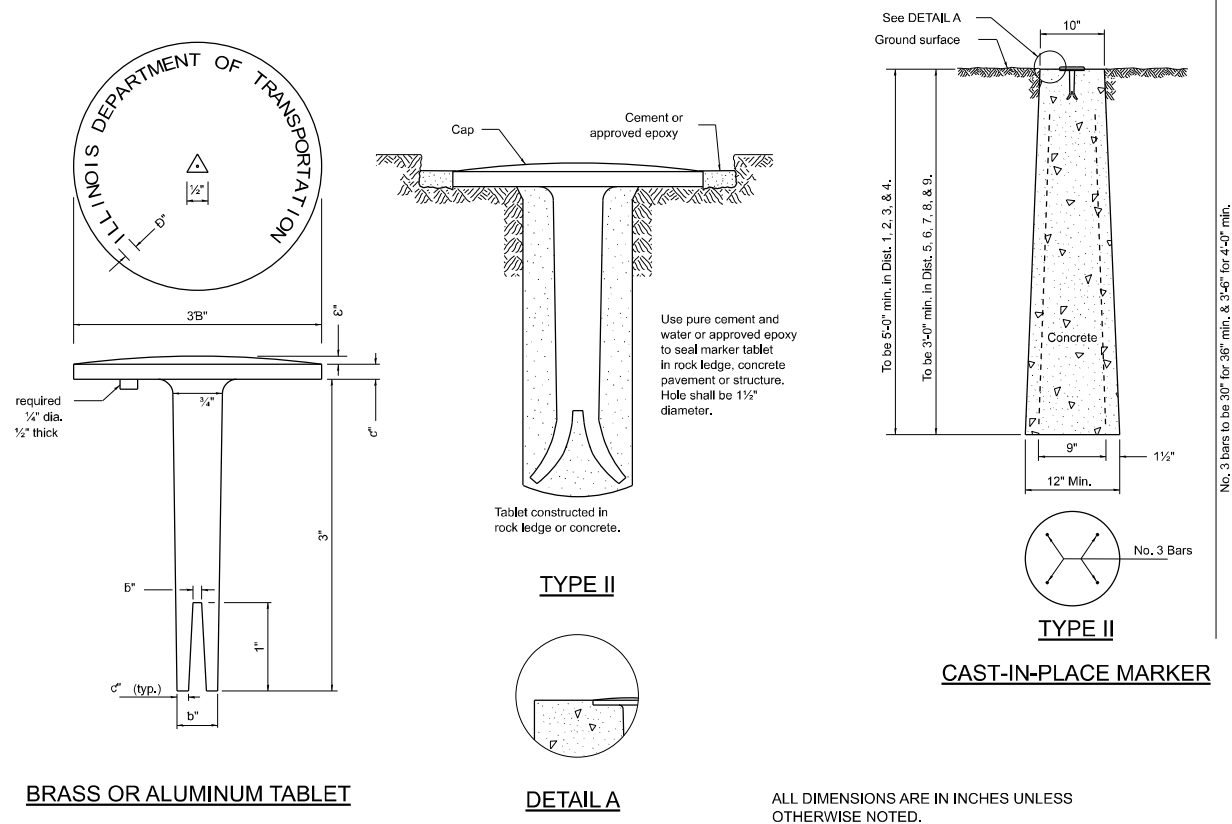
REVISED - 8-03-17
REVISED - 7-13-16
REVISED - 1-05-16
REVISED - 6-27-14

UNDERDRAIN FOR ACROSS ROAD (AR) CULVERTS 37.2

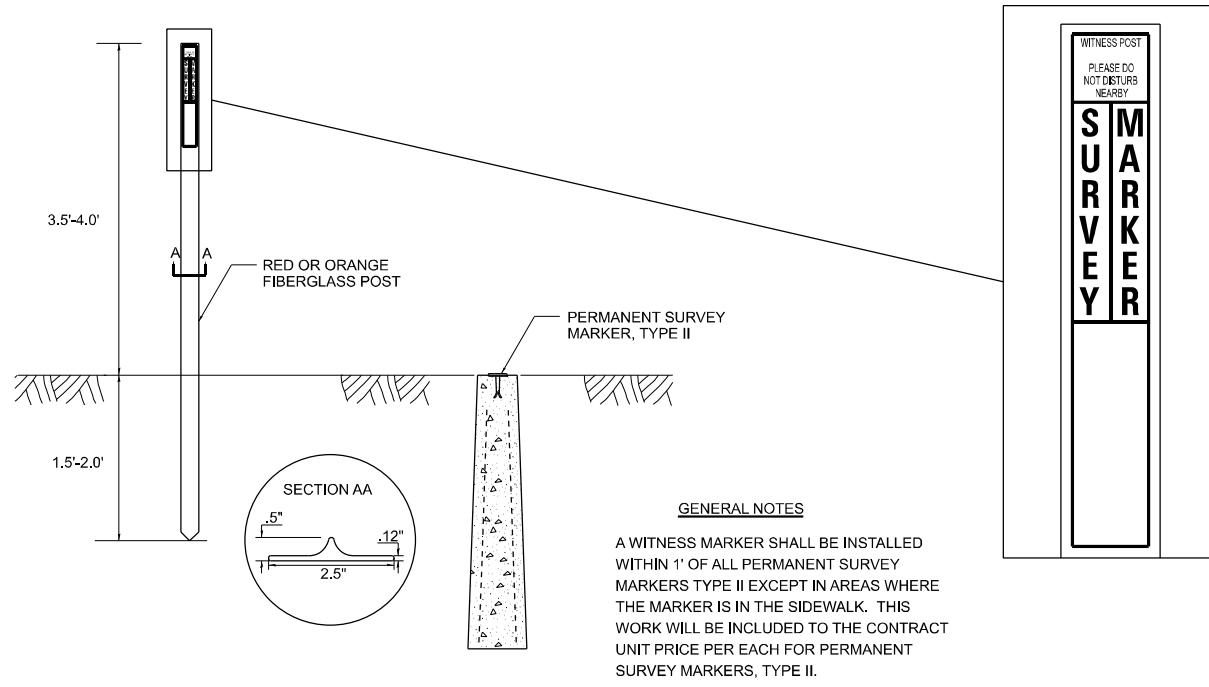
MODEL: 03-D2-2-half.dwg - 31.2 37.2
FILE NAME: project\resch\mch\by.com\benesch-gw-01\Documents\10800\00Eng_Docs\CAD_Sheets\02_Standards\02_Standards-01.dgn

 Allred Benesch & Company 35 W. Wacker Drive, Suite 3300 Chicago, Illinois 60601 312.555.0150 Job No. 10800.00	USER NAME = tblank		DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				REGION 2/ DISTRICT 2 STANDARD					F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -		CHECKED -	REVISED -										39	(201-3)K	WINNEBAGO	2192	958
	PLOT SCALE = 0.167 " / in.		DATE - 03/31/2023						CONTRACT NO. 64B13									
	PLOT DATE = 3/30/2023		REVISED -						ILLINOIS FED. AID PROJECT									
	SCALE: N/A		SHEET 4 OF 18 SHEETS		STA.		TO STA.											

PERMANENT SURVEY MARKERS, TYPE II



WITNESS MARKER FOR PERMANENT SURVEY MARKERS, TYPE II



REVISED - 6-27-14
REVISED - 10-14-11

PERMANENT SURVEY MARKERS, TYPE II 66.2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REGION 2/ DISTRICT 2 STANDARD

SCALE: N/A SHEET 5 OF 18 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	959
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

MODEL: 04-D2-half size-66.2
FILE NAME: project\res\csm\benesch-gw-01\Documents\10800s\10800s.dwg Docx:CAD Sheets\02 Standards\02 Standards-01.dgn

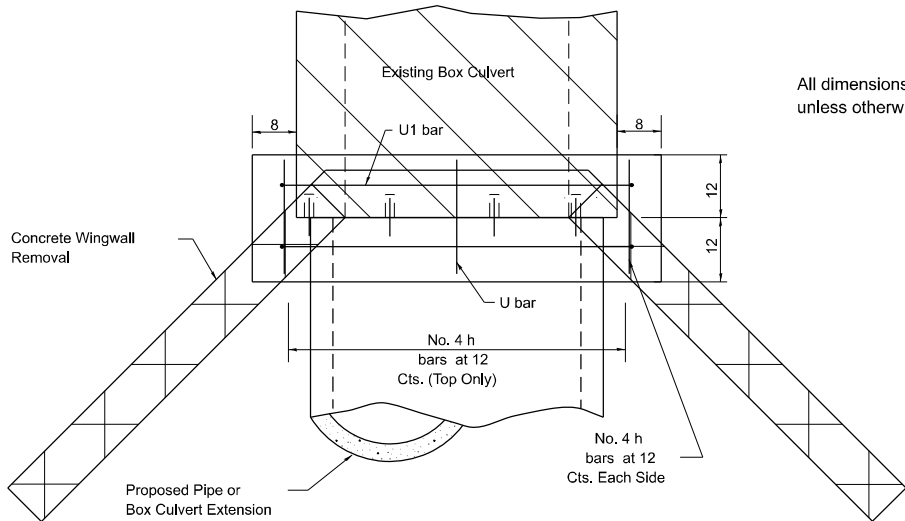
Alfred Benesch & Company
35 W. Wacker Drive, Suite 3300
Chicago, Illinois 60601
312.565.4150 Job No. 10800.00

CONCRETE COLLARS FOR PIPE OR BOX CULVERT EXTENSIONS

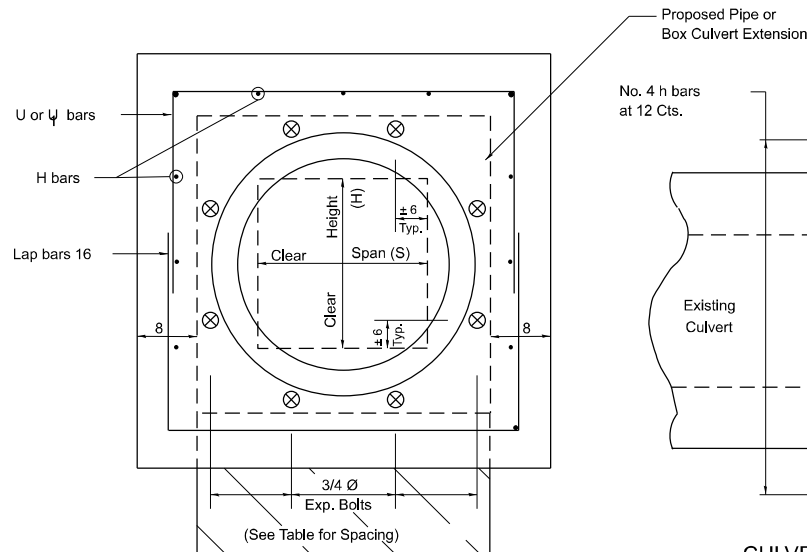
Bill of Materials

Structure ID	h bar	U bar dimensions				U _l bar dimensions				REINF. BARS	EXPANSION BOLTS ¾"	CONCRETE COLLAR
	Quantity	X	Y	Length	Quantity	X	Z	Length	Quantity	LBS	EACH	Cu. Yds.
B202	28	7.83	4.58	17.00	8	--	--	--	--	119	20	3
B312	20	5.50	3.42	12.33	8	--	--	--	--	86	12	2
All h bars 18 Long									Total	205	32	5

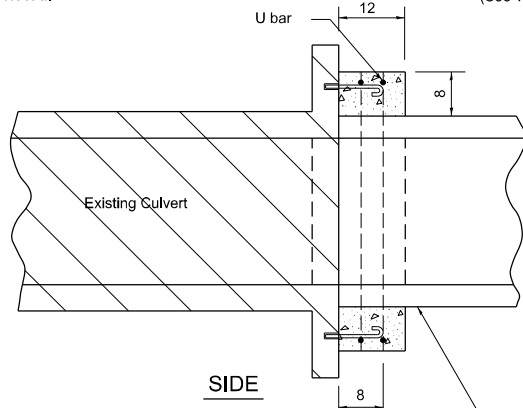
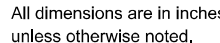
All h bars 18 Long



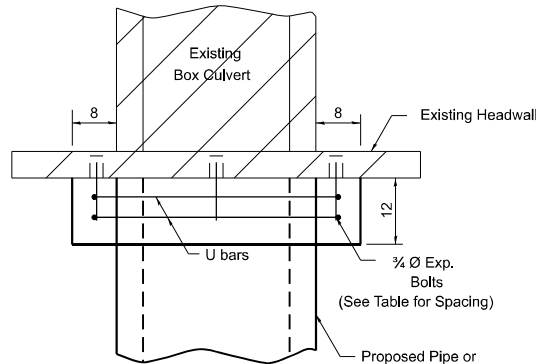
PLAN OF CULVERT WITH ANGLED WING WALLS



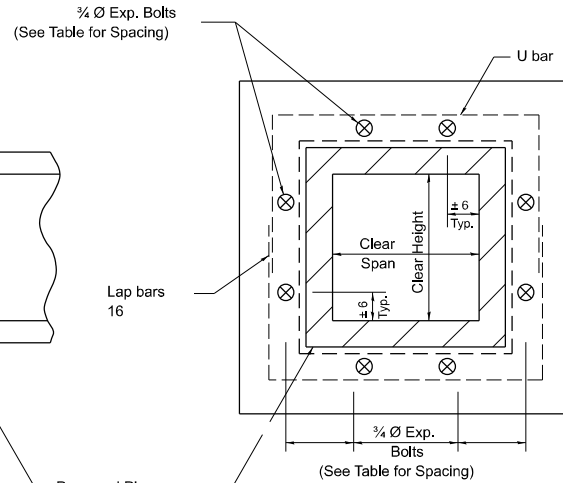
FRONT



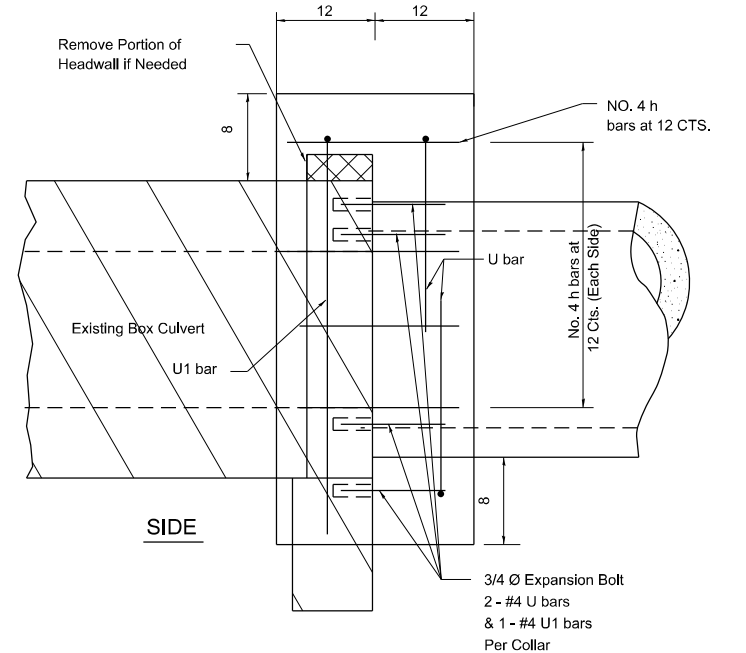
SIDE



PLAN OF CULVERT WITH STRAIGHT HEADWALL



FRONT



SIDE

PLACEMENT DETAILS FOR EXPANSION BOLT

H or S	NUMBER OF EXPANSION BOLTS REQUIRED PER SIDE			
	EXTENSIONS ≤ 15'		EXTENSIONS > 15'	
	NUMBER *	SPACING	NUMBER *	SPACING
24	**	**	**	**
30	2	18	2	18
36	2	24	2	24
48	3	18	3	18
60	4	16	3	24
72	5	15	4	20
84	5	18	4	24
96	6	17	5	21
108	6	19	5	24
120	7	18	6	21
132	8	17	6	24
144	8	19	7	22

* Expansion bolts based on non-skewed culverts.
** Minimum one expansion bolt at each corner.

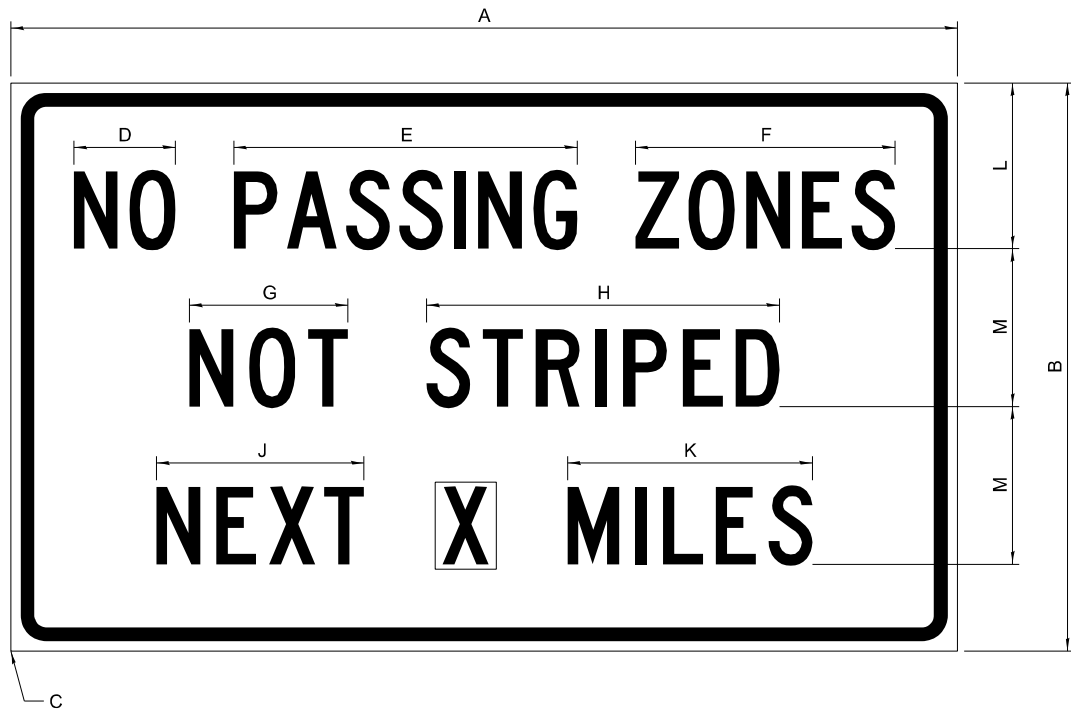
Example:
6' x 4' box culvert to be
extended 18' at one end only.

From table find
6' side requires 4 - $\frac{3}{4}$ " $\varnothing$
expansion bolts at 20" cts.
4' side requires 3 - $\frac{3}{4}$ " $\varnothing$
expansion bolts at 18" cts.

Total Number required
(4+3)2 = 14 - 3/4" Ø
expansion bolts

WORK ZONE SIGN DETAILS

ILLINOIS STANDARD G20-I100



COLOR LEGEND AND BORDER BACKGROUND BLACK ORANGE NON-REFLECTORIZED REFLECTORIZED

SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
60 x 36	60.00	36.00	2.25	6.4	21.80	16.40	10.00	22.40	13.20	15.50	10.50	10.00

SIGN SIZE	SERIES BY LINE			MARGIN	BORDER
	1	2	3		
60 x 36	5C	5C	5C	0.625	0.875

Sign not to scale

GENERAL NOTES

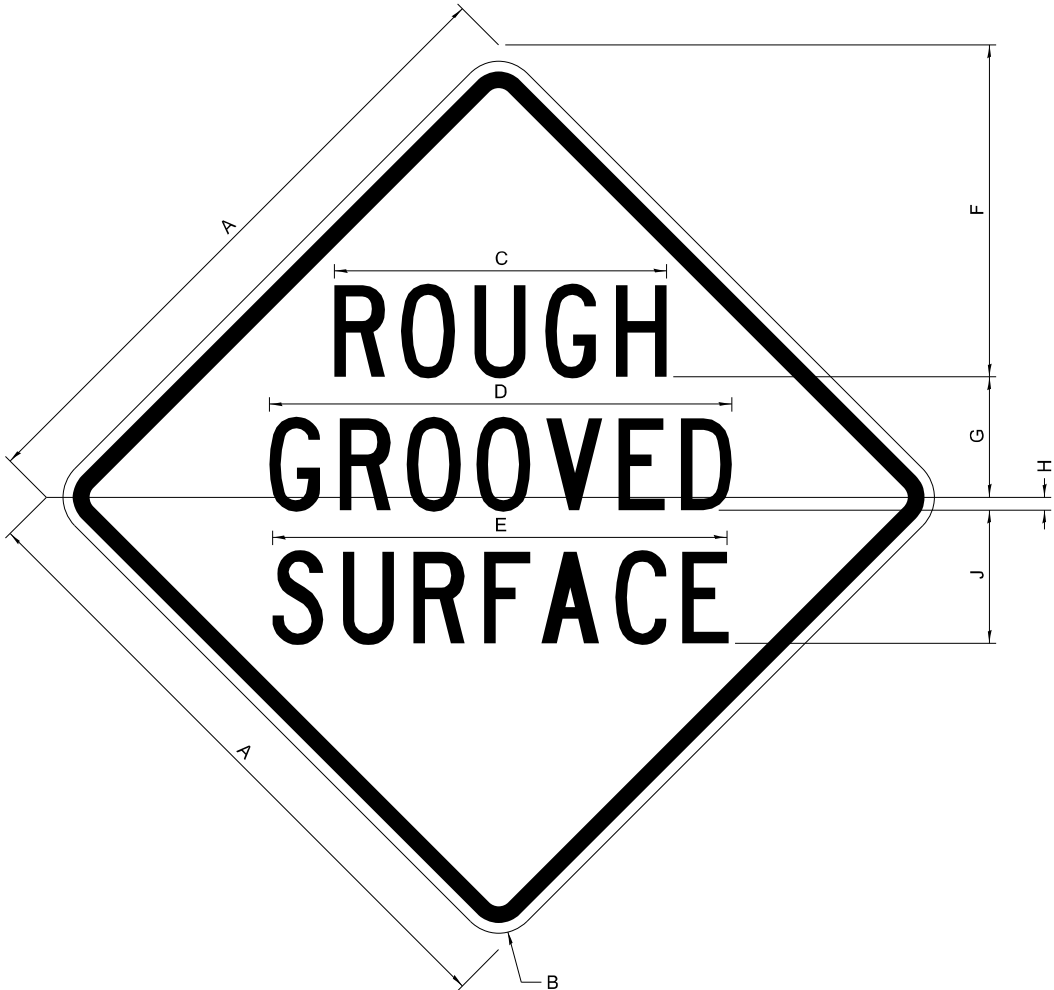
All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.

ILLINOIS STANDARD W8-I107



COLOR LEGEND AND BORDER BACKGROUND BLACK ORANGE NON-REFLECTORIZED REFLECTORIZED

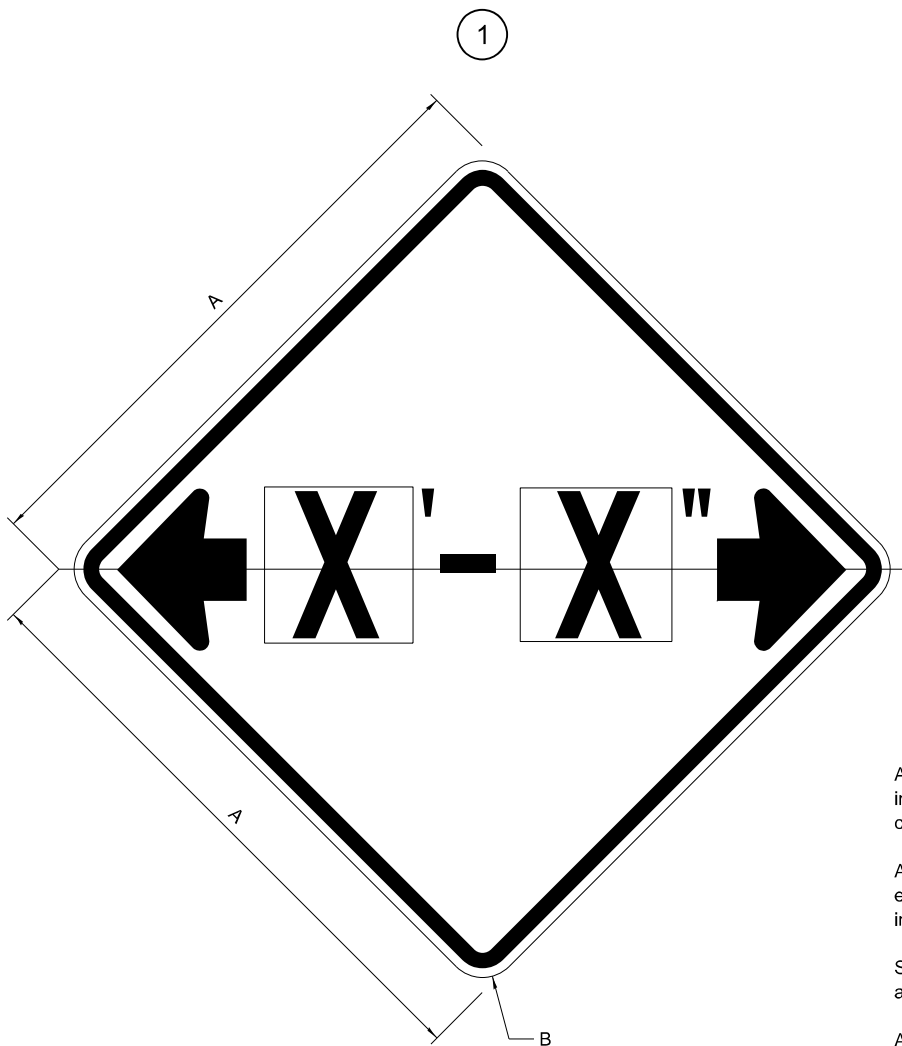
SIGN SIZE	DIMENSIONS								
	A	B	C	D	E	F	G	H	J
48 x 48	48.00	3.00	25.00	34.80	34.20	24.94	9.00	1.00	10.00

SIGN SIZE	SERIES BY LINE			MARGIN	BORDER
	1	2	3		
48 x 48	7C	7C	7C	1.250	0.750

Sign not to scale

WORK ZONE SIGN DETAILS

ILLINOIS STANDARD W12-I102



GENERAL NOTES

All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.

COLOR LEGEND AND BORDER BACKGROUND BLACK FL ORANGE NON-REFLECTORIZED REFLECTORIZED

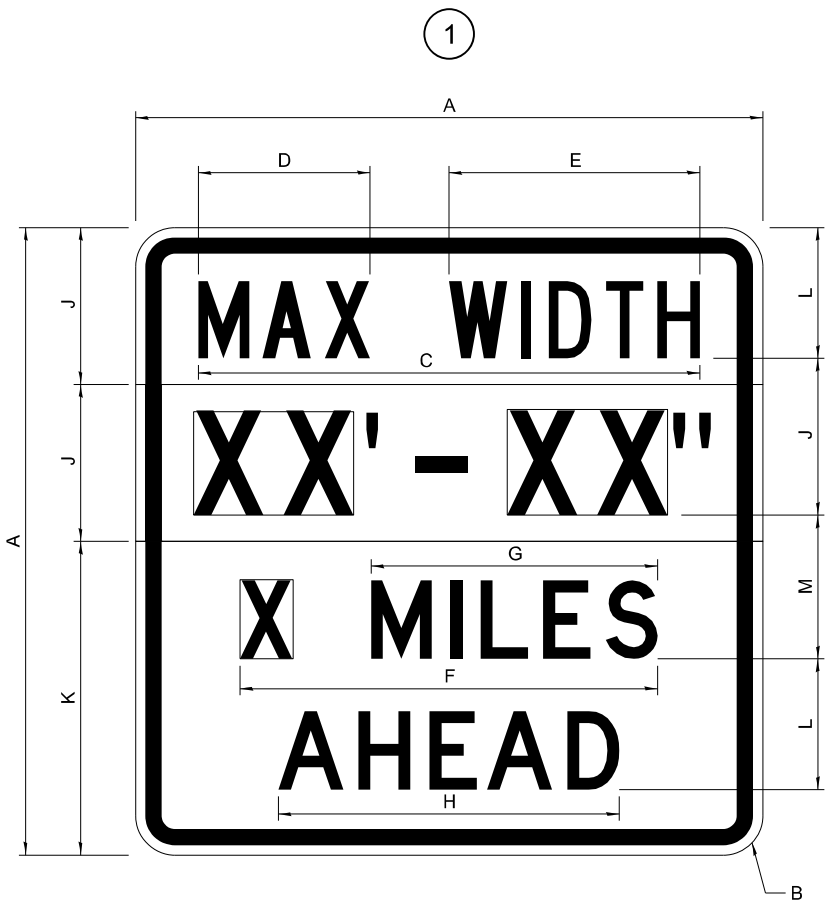
SIGN SIZE	DIMENSIONS	
	A	B
48 x 48	48.00	3.00

1 Illinois Standard signs W12-I102 and W12-I103 shall be used as described in the special provisions.

SIGN SIZE	SERIES BY LINE	MARGIN	BORDER
	1		
48 x 48	12C	0.750	1.250

Sign not to scale

ILLINOIS STANDARD W12-I103



COLOR LEGEND AND BORDER BACKGROUND BLACK WHITE FL ORANGE NON-REFLECTORIZED REFLECTORIZED REFLECTORIZED

SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
48 x 48	48.00	3.00	38.40	13.20	19.20	32.00	22.00	26.20	12.00	24.00	10.00	11.00

SIGN SIZE	SERIES BY LINE				MARGIN	BORDER
	1	2	3	4		
48 x 48	6C	8D	6D	6D	0.750	1.250

Sign not to scale

XX'-XX" WIDTH AND X MILES ARE VARIABLE
TOP AND BOTTOM OF BACKGROUND WHITE

WORK ZONE SIGN DETAILS

ROAD CLOSED TO OVERSIZED LOADS

STOP LINE SIGN FOR TEMPORARY SIGNALS



COLOR	LEGEND AND BORDER BACKGROUND	BLACK ORANGE	NON-REFLECTORIZED REFLECTORIZED
-------	------------------------------	--------------	---------------------------------

Permit Loads - Loads Over 13 Feet; 3.0" Radius, 1.3" Border;
[NO OVERSIZE -] D; [OVERWEIGHT LOADS] D 85% spacing; [XX MILES AHEAD] D;
Table of letter and object lefts.

N	O	O	V	E	R	S	I	Z	E	-
11.7	18.1	30.0	36.2	42.8	48.4	54.4	60.7	63.5	69.5	80.8

O	V	E	R	W	E	I	G	H	T	L	O	A	D	S
2.6	8.6	15.0	20.4	26.2	33.4	38.8	41.3	47.4	53.2	64.5	69.9	75.9	82.9	88.7

X	X	M	I	L	E	S	A	H	E	A	D
7.6	13.6	25.3	32.3	35.1	40.6	46.2	57.9	65.1	71.4	76.6	83.7

Sign not to scale

COLOR	LEGEND AND BORDER BACKGROUND	BLACK WHITE	NON-REFLECTORIZED REFLECTORIZED
-------	------------------------------	-------------	---------------------------------

SIGN SIZE	SERIES BY LINE		
	1	2	3
24 x 24	4C	4C	4C

Sign not to scale

GENERAL NOTES

All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.



USER NAME = tblank	DESIGNED -	REVISED - 3-02-16
	DRAWN -	REVISED -
PLOT SCALE = 0.167" / in.	CHECKED -	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

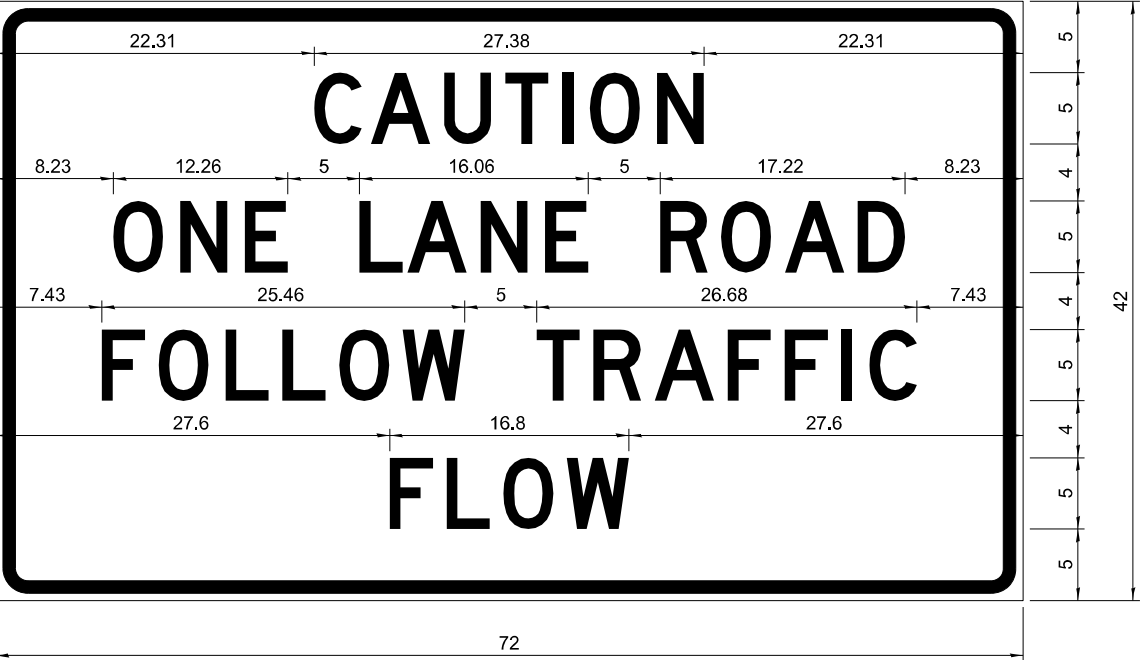
REGION 2/ DISTRICT 2 STANDARD

SCALE: N/A	SHEET 9 OF 18 SHEETS	STA. TO STA.
------------	----------------------	--------------

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	963
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

ENTRANCE SIGN FOR USE
WITH TEMPORARY SIGNALS

WORK ZONE SIGN DETAILS



COLOR	LEGEND AND BORDER BACKGROUND	BLACK ORANGE	NON-REFLECTORIZED REFLECTORIZED
-------	---------------------------------	-----------------	------------------------------------

2.25" Radius, 0.88" Border, 0.50" Indent;
[CAUTION] D; [ONE LANE ROAD] D;
[FOLLOW TRAFFIC] D; [FLOW] D

2 This sign shall be installed at entrances located between the temporary signals as shown in the staging plans.

Table Of Widths And Spaces

22.31	C	3.36	0.62	A	4.18	0.94	U	3.36	0.94	T	3.04	0.94	I	0.78	1.17	O	3.52	1.17	N	3.36	22.31
-------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	-------

8.23	O	3.51	1.17	N	3.36	1.18	E	3.04
------	---	------	------	---	------	------	---	------

5.00	L	3.05	0.31	A	4.18	0.94	N	3.36	1.17	E	3.05
------	---	------	------	---	------	------	---	------	------	---	------

5.00	R	3.36	0.93	O	3.52	0.94	A	4.18	0.93	D	3.36	8.23
------	---	------	------	---	------	------	---	------	------	---	------	------

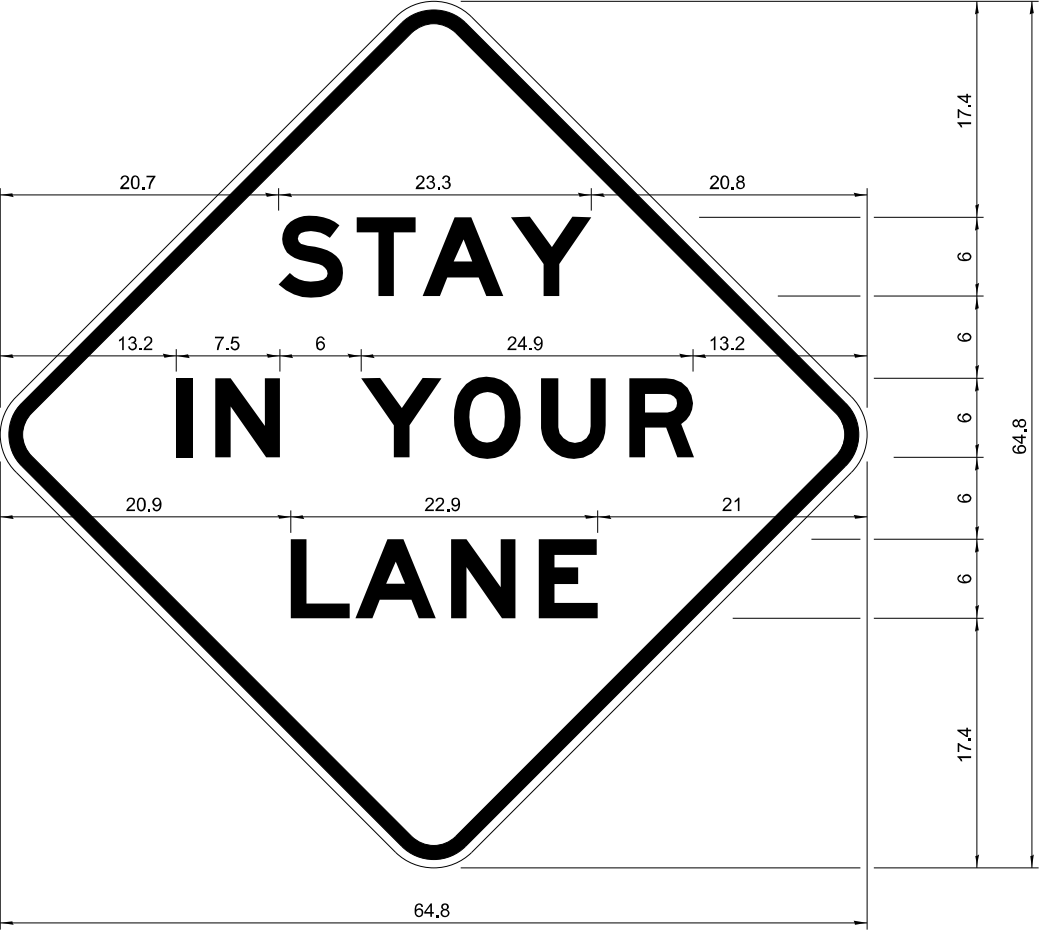
7.43	F	3.04	0.94	O	3.52	1.17	L	3.04	0.94	L	3.05	0.94	O	3.51	0.94	W	4.37
------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------	---	------

5.00	T	3.05	0.94	R	3.36	0.94	A	4.18	0.93	F	3.05	0.94	F	3.04	0.94	I	0.78	1.18	C	3.35	7.43
------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------

27.60	F	3.05	0.94	L	3.04	0.94	O	3.52	0.93	W	4.38	27.60
-------	---	------	------	---	------	------	---	------	------	---	------	-------

Sign not to scale

STAY IN YOUR LANE



COLOR	LEGEND AND BORDER BACKGROUND	BLACK ORANGE	NON-REFLECTORIZED REFLECTORIZED
-------	---------------------------------	-----------------	------------------------------------

48.0" across sides 3.8" Radius, 1.0" Border, 0.6" Indent;
"STAY" E Mod; "IN YOUR" E Mod; "LANE" E Mod;

Table of Letter and Object Lefts

S	T	A	Y
20.7	26.8	31.6	38.0

I	N	Y	O	U	R
13.2	15.9	26.7	33.9	40.5	46.8

L	A	N	E
20.9	25.8	33.1	39.4

Sign not to scale

GENERAL NOTES

All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.



USER NAME = tblank	DESIGNED -	REVISED - 3-02-16
	DRAWN -	REVISED -
PLOT SCALE = 0.167" / in.	CHECKED -	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

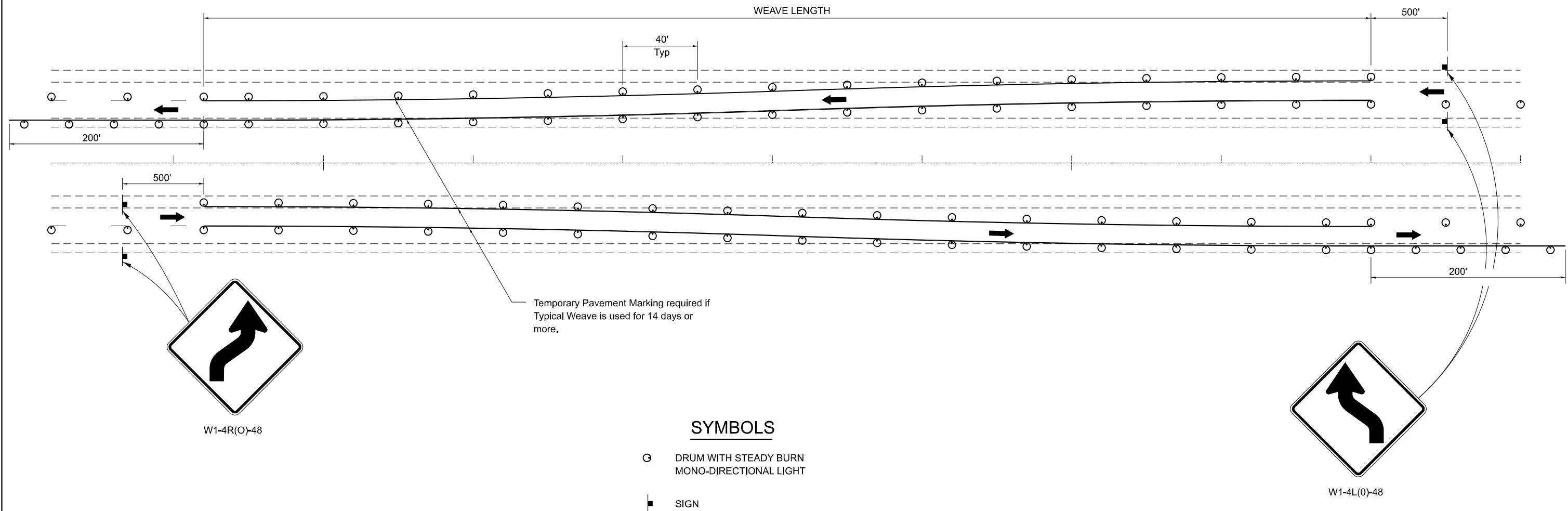
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REGION 2/ DISTRICT 2 STANDARD

SCALE: N/A SHEET 10 OF 18 SHEETS STA. TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	964
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

TRAFFIC CONTROL TYPICAL WEAVE



STANDARD WEAVE CONDITIONS FOR DIFFERENT SPEED LIMITS

POSTED SPEED LIMIT	WEAVE LENGTH
65 MPH OR HIGHER	780 FT.
55 MPH	660 FT.
45 MPH	540 FT.

GENERAL NOTES:

USE ON LONG 4-LANE PROJECTS WHERE THE CONTRACTOR MAY CHANGE A PORTION OF THE WORK TO THE OPPOSITE LANE.

USE WHERE THE PROJECT IS ADJACENT TO ANOTHER AND THE CONTRACTOR COULD BE WORKING ON DIFFERENT LANES.

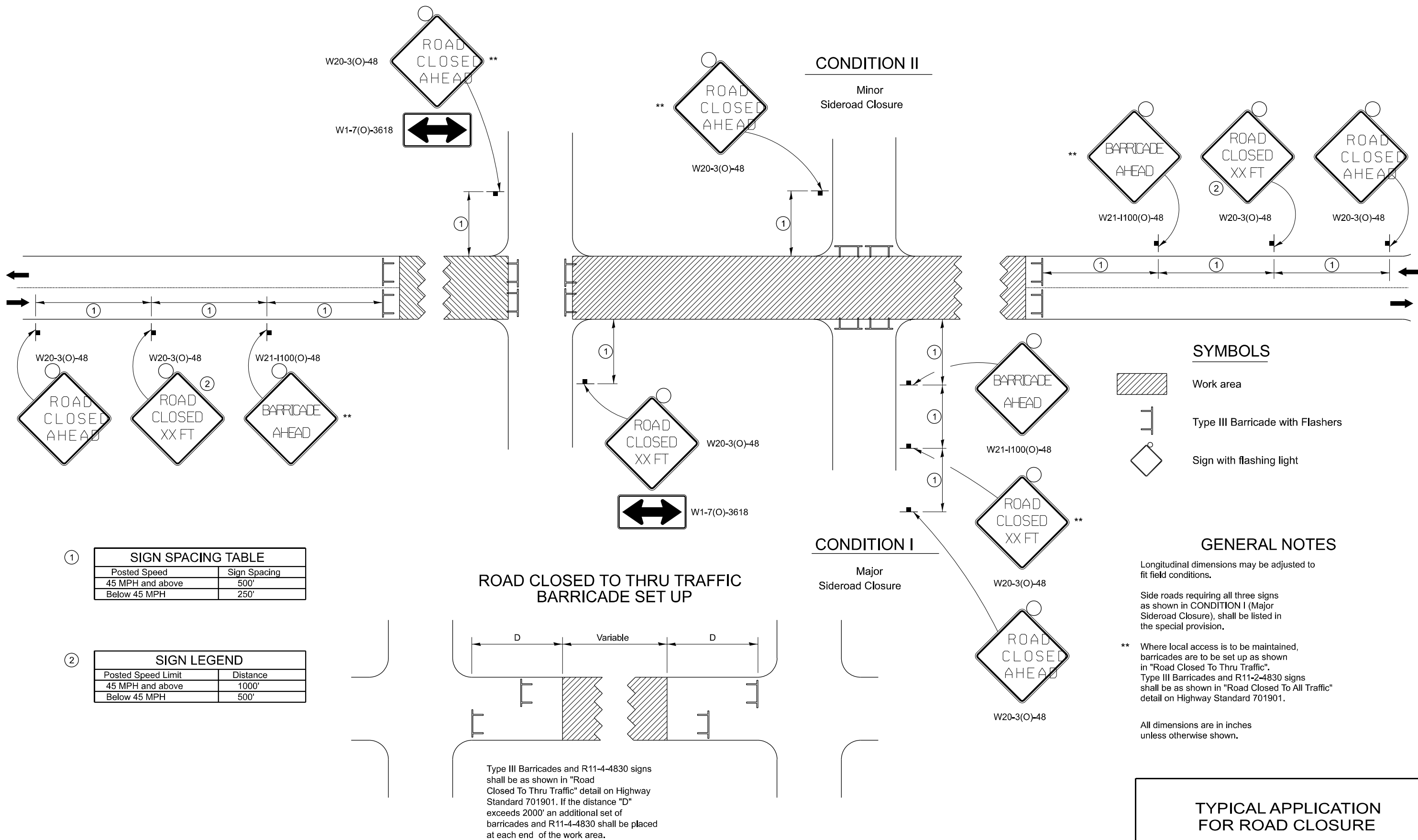
TEMPORARY PAVEMENT MARKING SHALL BE USED WHEN TYPICAL WEAVE IS USED FOR 14 DAYS OR MORE.

TRAFFIC CONTROL TYPICAL WEAVE SHALL BE INCLUDED IN THE COST OF THE SPECIFIC TRAFFIC CONTROL STANDARDS OF ITEMS.

ALL DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE NOTED.

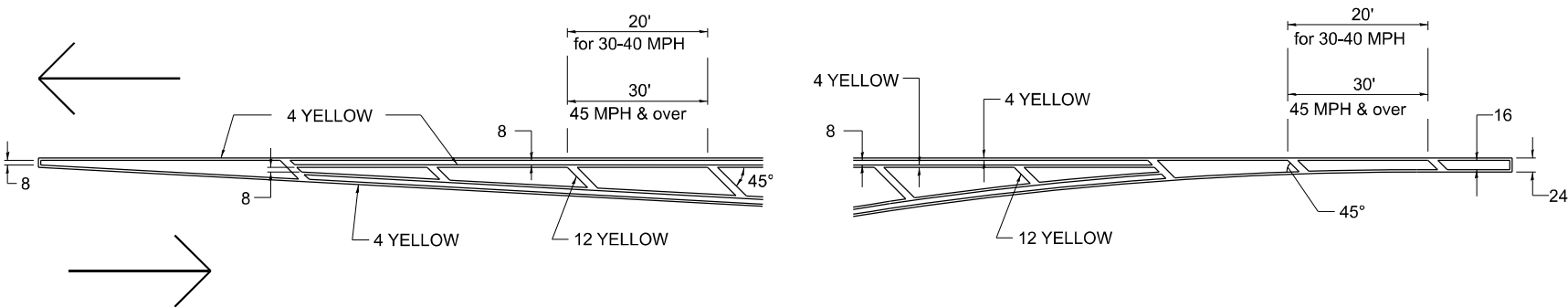
 Alfred Benesch & Company 30 W. Wacker Drive, Suite 3300 Chicago, Illinois 60601 312-565-0450 Job No. 10600.00	USER NAME = tblank	DESIGNED -	REVISED - 1-05-16	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REGION 2/ DISTRICT 2 STANDARD			F&I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - 6-27-14					39	(201-3)K	WINNEBAGO	2192	965
	PLOT SCALE = 0.167" / in.	CHECKED -	REVISED - 8-27-13		SCALE: N/A			CONTRACT NO. 64B13				
	PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED - 10-17-11		SHEET 11 OF 18 SHEETS			ILLINOIS FED. AID PROJECT				

TRAFFIC CONTROL FOR ROAD CLOSURE

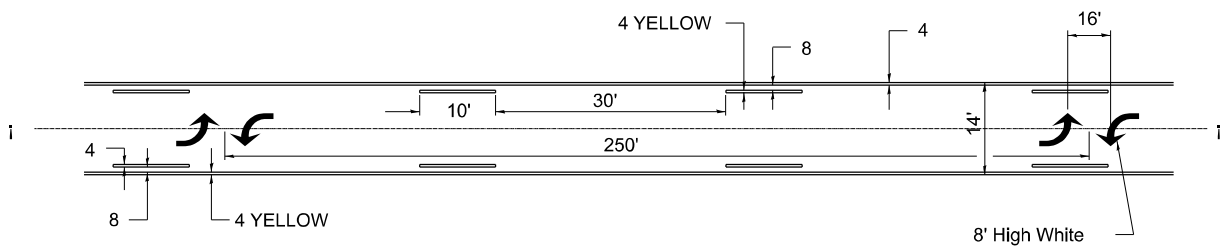


TYPICAL PAVEMENT MARKINGS

TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN AT LEFT TURN LANE

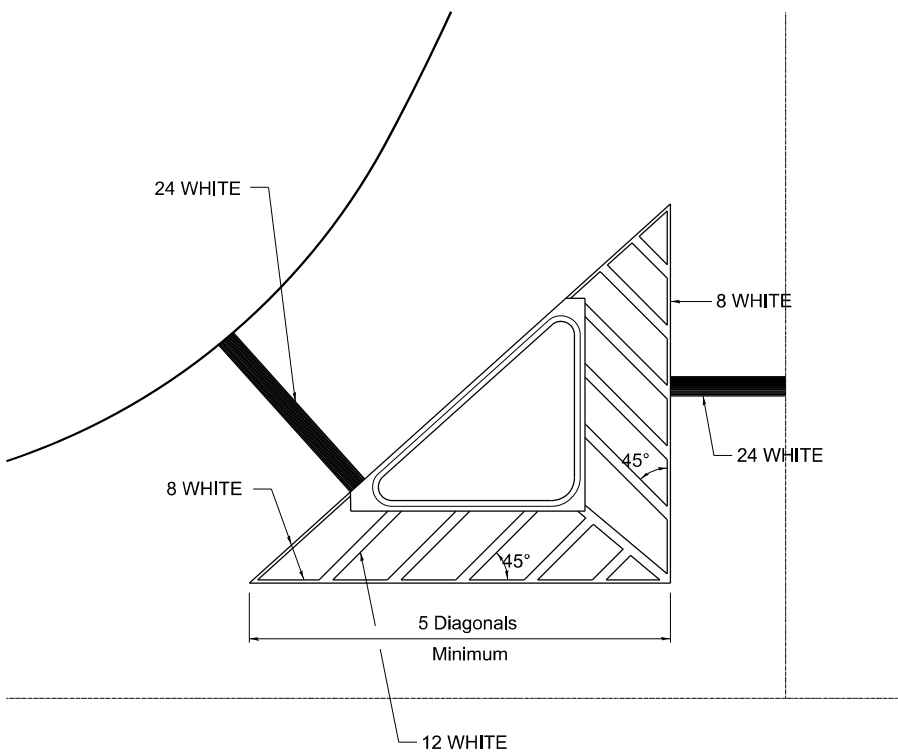


MEDIAN PAVEMENT MARKING

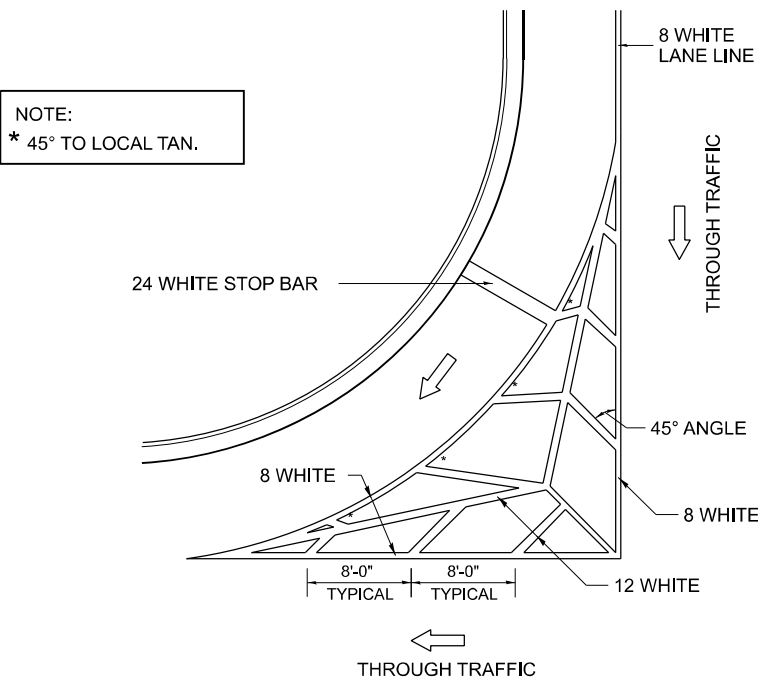


** ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

TYPICAL ISLAND OFFSET SHOULDER WIDTH

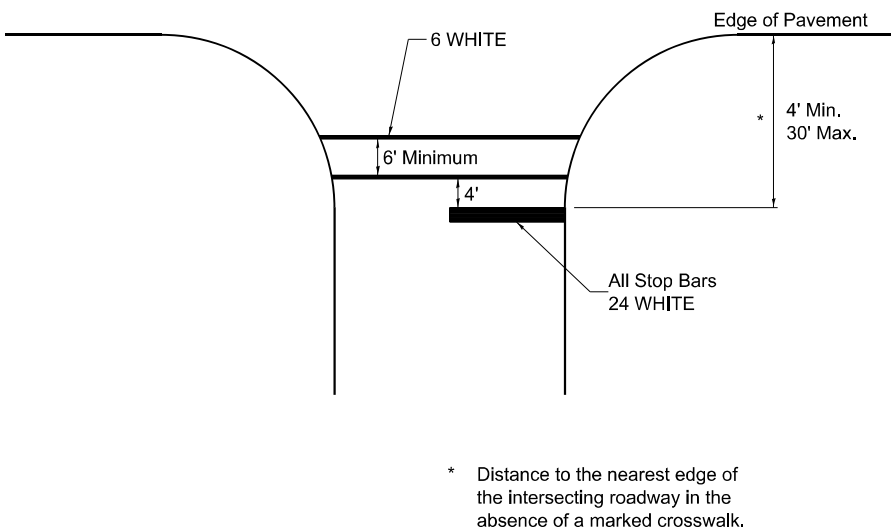


TYPICAL MARKING FOR PAINTED ISLANDS



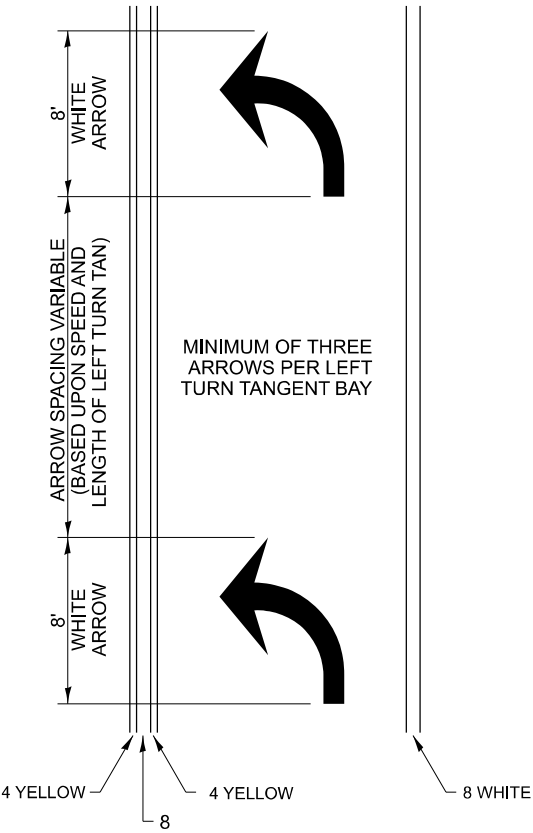
STANDARD CROSSWALK MARKING

See Schedules for Locations



TYPICAL PAVEMENT MARKINGS

ARROW LAYOUT



- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER
- TWO-WAY AMBER MARKER

ALL DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE NOTED.

6 at 40' O.C.
APPROACH SIDE ONLY

See Typical
Drawing at right

40' O.C.

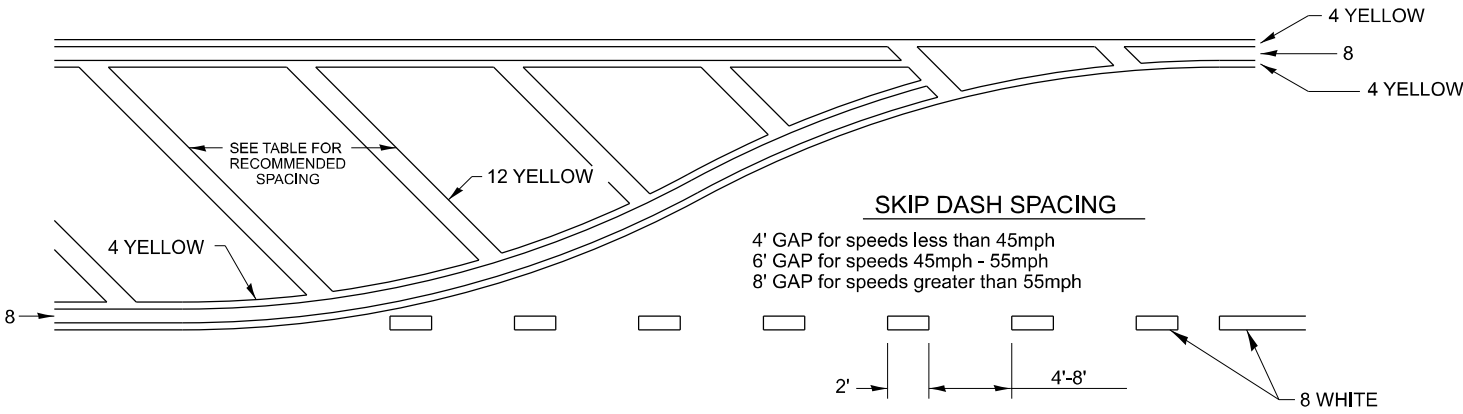
6' MINIMUM

8 WHITE

See Typical
Drawing above

6 at 40' O.C.
APPROACH SIDE ONLY

TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN

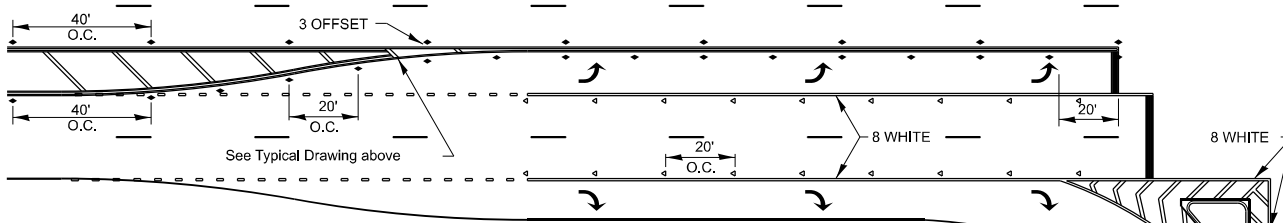


RECOMMENDED SPACING BETWEEN DIAGONALS (IN FEET)

Speed Limit Range	Continuous Median Area	Intersection Channelization	Objects (Islands)
less than 30MPH	50'	15'	10'
30-40MPH	75'	20'	15'
45MPH & over	75'	30'	20'

NOTE: if the spacing recommended in the Table does not permit at least five diagonal lines in the area being marked, the spacing from the next lowest speed range should be used. The recommended spacing is measured parallel to the pavement center line.

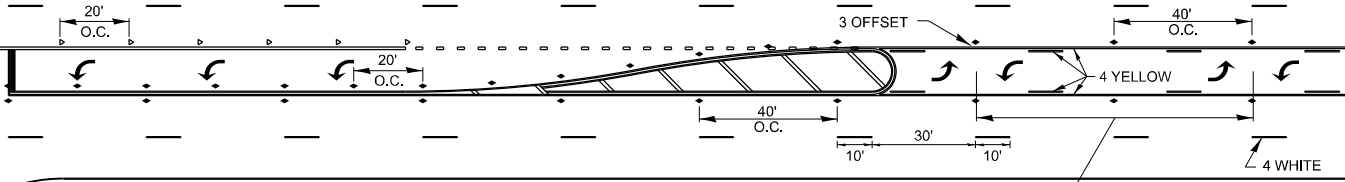
6 WHITE CROSSWALK LINES



See Typical Drawing above

12 WHITE

8 WHITE

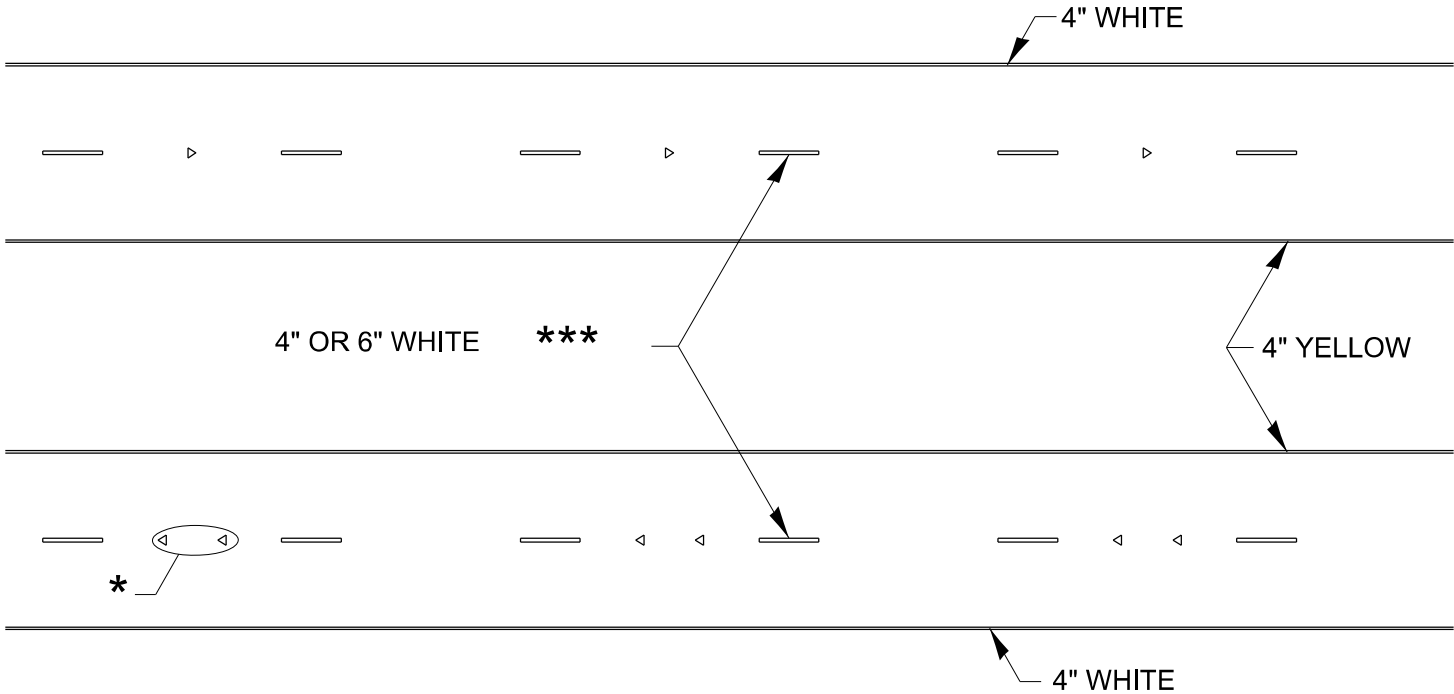


MINIMUM OF TWO PAIRS OF ARROWS.
ADDITIONAL PAIRS EVERY 200'-300'.

24 WHITE STOP LINE

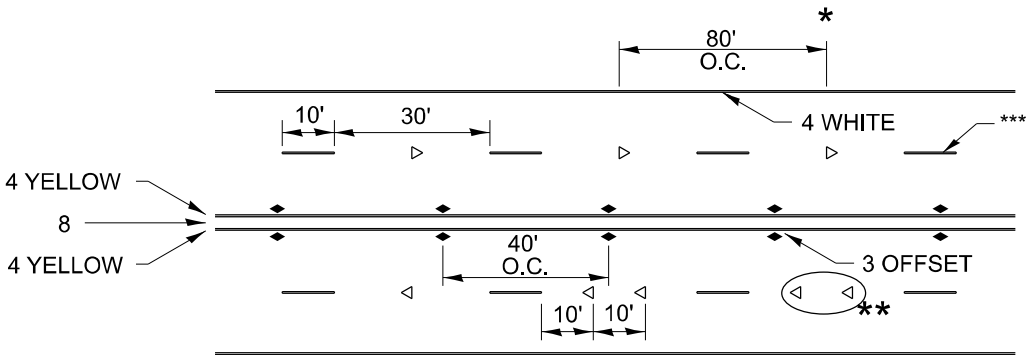
40' O.C.

TYPICAL PAVEMENT MARKINGS



* SEE HIGHWAY STANDARD 781001 FOR SPACING DETAILS.
USE DOUBLE MARKERS WHEN ADT ≥ 20,000.

MULTI-LANE / DIVIDED



* REDUCE TO 40' O.C. ON CURVES WHERE ADVISORY SPEEDS ARE
10 MPH LOWER THAN POSTED SPEEDS.

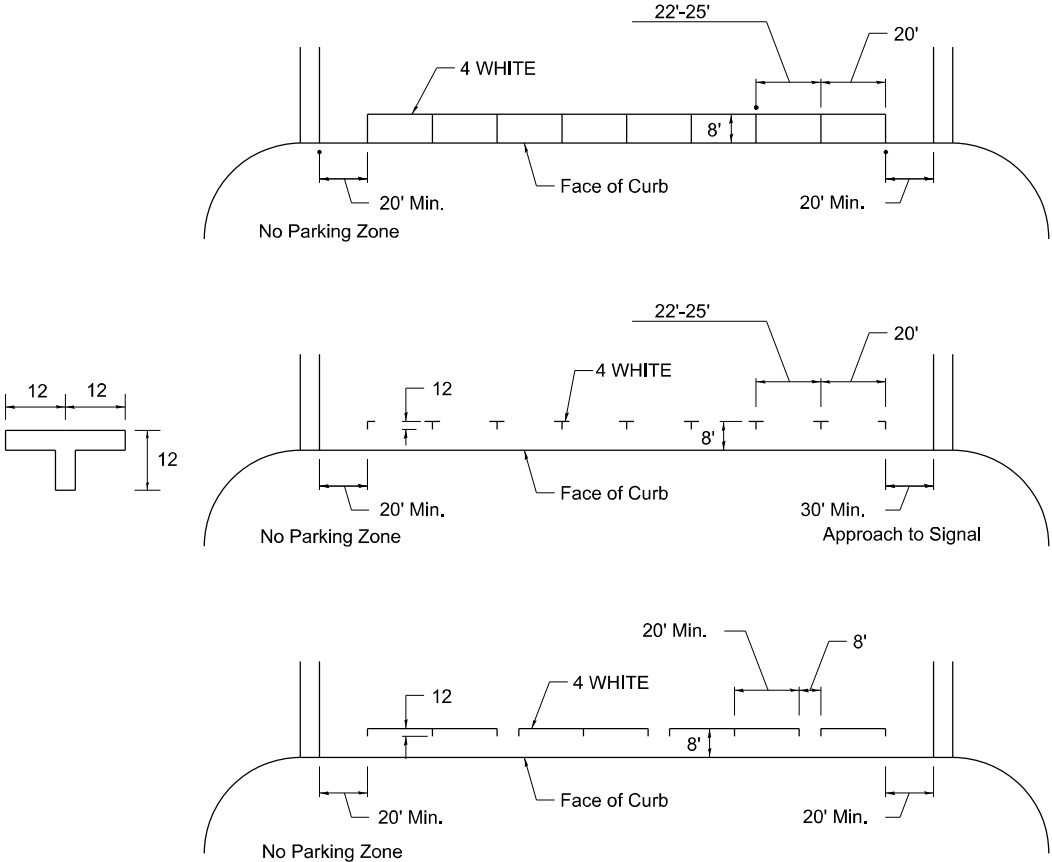
** USE DOUBLE MARKERS WHEN ADT ≥ 20,000

*** CENTERLINE SKIP DASH PAVEMENT MARKING SPEED LIMIT
LESS THAN 40 MPH USE 4" LINE. SPEED LIMIT 40 MPH AND
OVER USE 6" LINE.

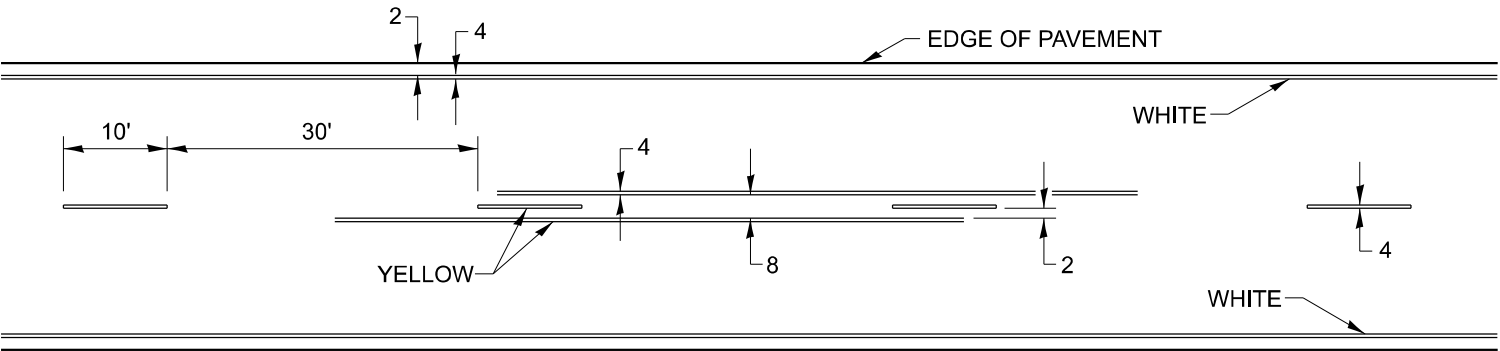
MULTI-LANE / UNDIVIDED & ONE WAY

(FOR MULTI-LANE UNDIVIDED HIGHWAYS USE THIS
DETAIL NOT HIGHWAY STANDARD 781001)

TYPICAL PARKING SPACING



TYPICAL PAVEMENT MARKING FOR TWO LANE SECTION – NO PASSING ZONES



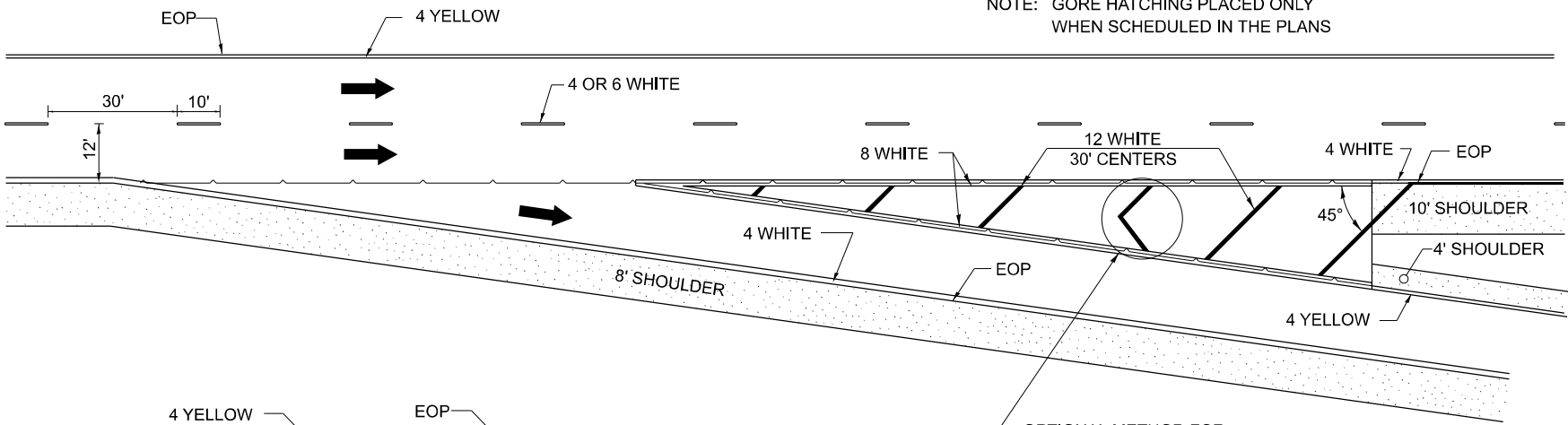
SYMBOLS

PAINTING DETAILS

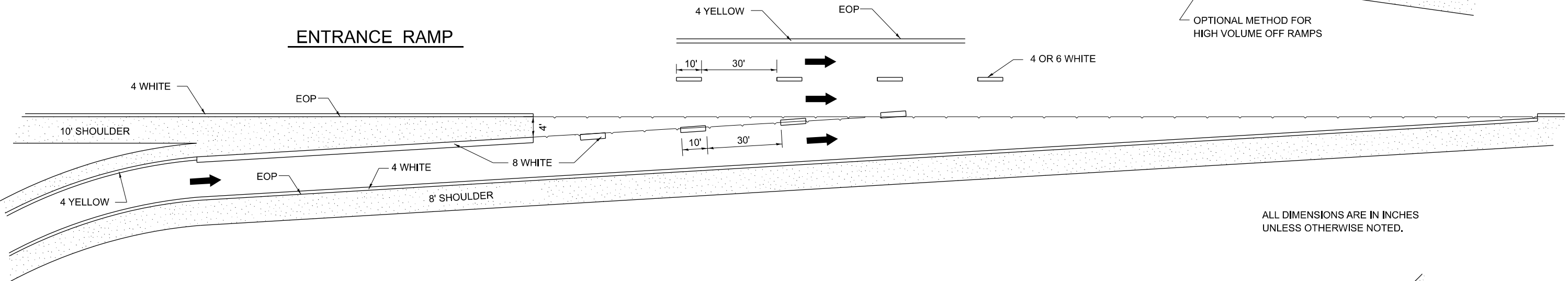
EXIT RAMP

NOTE: GORE HATCHING PLACED ONLY WHEN SCHEDULED IN THE PLANS

CENTERLINE SKIP DASH PAVEMENT MARKING WIDTH SHALL BE 4" WHEN THE POSTED SPEED LIMIT IS UNDER 40 MPH AND 6" WHEN THE POSTED SPEED LIMIT IS 40 MPH AND OVER.

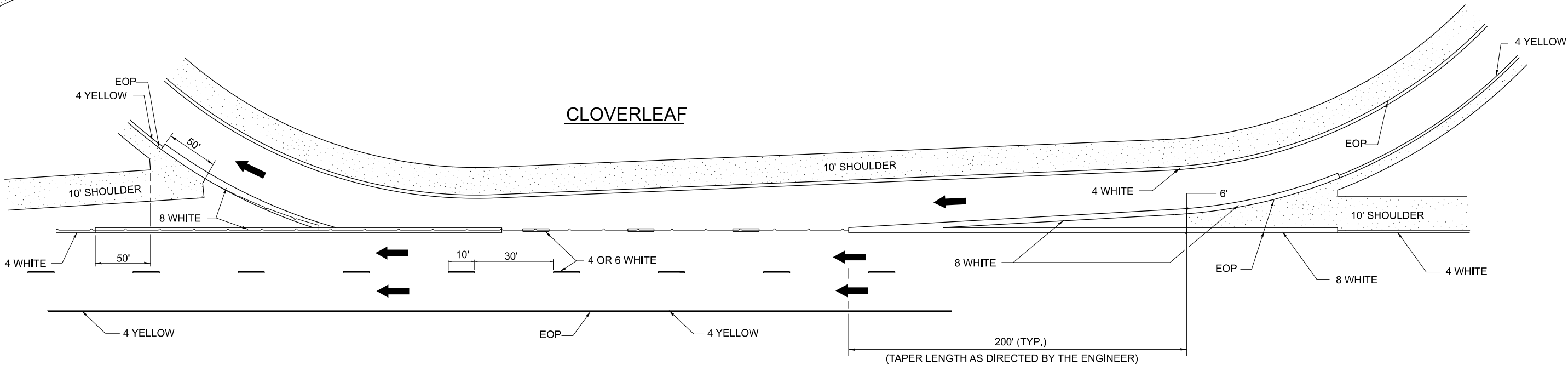


ENTRANCE RAMP



ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

CLOVERLEAF



200' (TYP.) (TAPER LENGTH AS DIRECTED BY THE ENGINEER)



USER NAME	= tblank	DESIGNED	-	REVISED	-	8-27-13
DRAWN	-	REVIS	-	10-18-11		
PLOT SCALE	= 0.167" / in.	CHECKED	-	REVISED	-	
PLOT DATE	= 3/30/2023	DATE	-	REVISED	-	

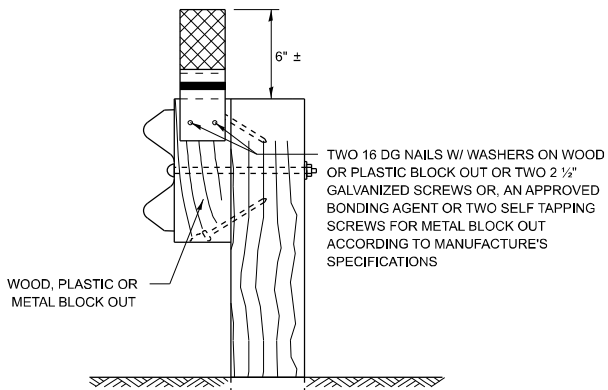
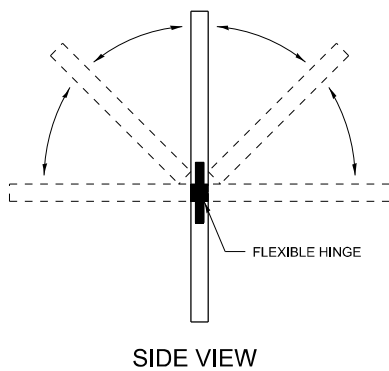
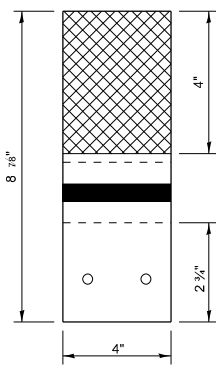
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REGION 2/ DISTRICT 2 STANDARD

SCALE: N/A SHEET 16 OF 18 SHEETS STA. TO STA.

F&I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	970
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

GUARDRAIL REFLECTORS, TYPE C (SPECIAL)

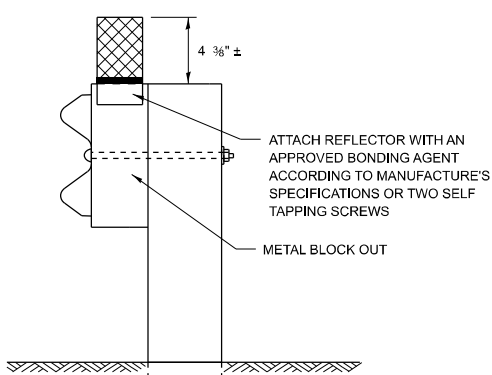
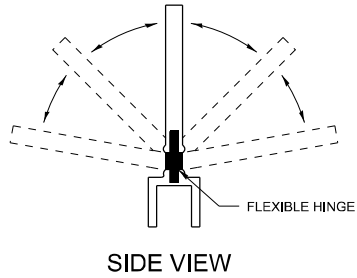
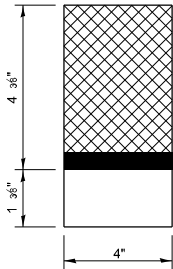


MOUNTED ON A WOOD OR PASTIC GUARDRAIL BLOCK OUT

REFLECTORS SHALL BE MOUNTED DIRECTLY TO WOOD OR PLASTIC BLOCK OUTS.

REFLECTORS MOUNTED ON WOODEN OR PLASTIC BLOCK OUT SHALL BE MOUNTED USING TWO 16 DG NAILS AND TWO 3/16" WASHERS OR TWO 2 1/2" GALVANIZED SCREWS WITH WASHERS.

REFLECTORS MOUNTED ON WOOD OR PLASTIC GUARDRAIL BLOCK OUT



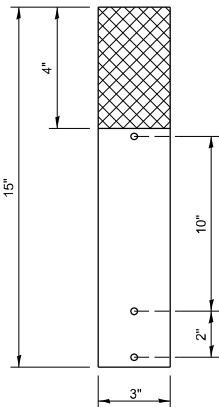
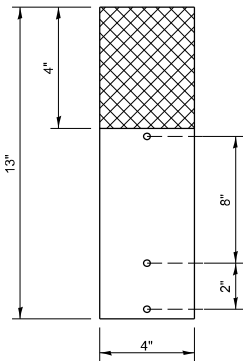
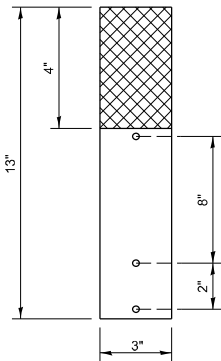
MOUNTED ON A METAL GUARDRAIL BLOCK OUT

REFLECTORS SHALL BE MOUNTED DIRECTLY TO METAL BLOCK OUT.

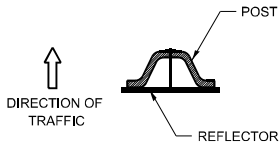
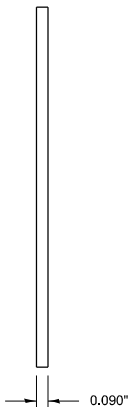
REFLECTORS MOUNTED ON METAL BLOCK OUT SHALL BE MOUNTED USING AN APPROVED BONDING AGENT PER THE MANUFACTURE'S SPECIFICATIONS OR TWO SELF TAPPING GALVANIZED SCREWS WITH WASHERS.

REFLECTORS MOUNTED ON METAL GUARDRAIL BLOCK OUT

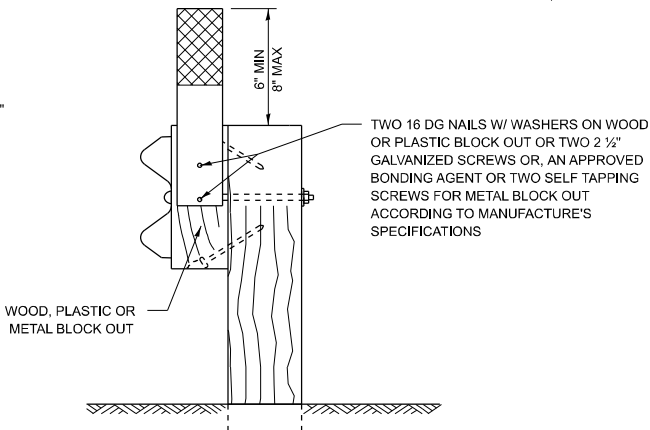
STRAIGHT GUARDRAIL / DELINEATOR REFLECTOR



SIDE VIEW



DELINEATORS SHALL BE INSTALLED ACCORDING TO STANDARD 635001 EXCEPT THAT THE POST SHALL BE ROTATED 180°. THE POST WILL HAVE THE WIDE SIDE FACING TRAFFIC AND THE REFLECTOR ATTACHECD AS SHOWN ABOVE.



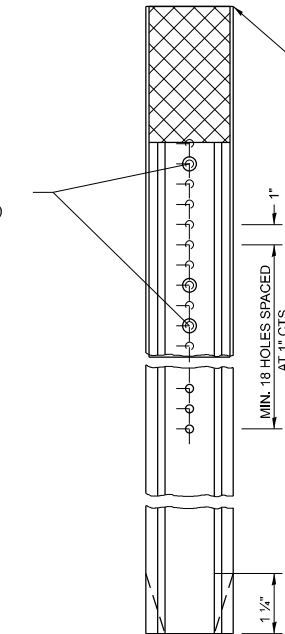
MOUNTED ON A WOOD OR PASTIC GUARDRAIL BLOCK OUT

REFLECTORS MAY BE MOUNTED TO DELINEATOR POST USING TWO 10/24 X 1 1/2" BOLTS WITH NUTS AND WASHERS.

ADDITIONAL HOLES SHALL BE DRILLED IN THE REFLECTORS AS SHOWN ABOVE.

10/24 X 1 1/2" BOLTS WITH WASHERS AND NUT (ADDITIONAL HOLES MAY BE DRILLED AS NEEDED)

ADDITIONAL SHEETING MAY BE ADDED AS NEEDED FOR TURN AROUNDS AS SHOWN IN THE PLANS



MOUNTED ON A DELINEATOR POST

NOTE:

REFLECTORS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR GUARDRAIL REFLECTORS, TYPE C (SPECIAL), WHICH PRICE SHALL ALSO INCLUDE SCREWS/NAILS, WASHERS OR BONDING AGENT.

REFLECTORS INSTALLED ON TWO LANE ROADS SHALL BE DOUBLE SIDED AND BOTH SIDES SHALL BE CRYSTAL.

REFLECTORS INSTALLED ON DIVIDED HIGHWAYS SHALL BE SINGLE SIDED CRYSTAL.

SHEETING COLOR SHALL BE CALLED OUT IN THE PLANS.

SPACING FOR REFLECTORS SHALL BE ACCORDING TO STANDARD 782006 UNLESS OTHERWISE NOTED IN THE PLANS.

REFLECTORS MOUNTED ON GUARDRAIL SHALL BE 4" WIDE.

REFLECTORS MOUNTED ON DELINEATOR POST SHALL BE 3" WIDE.



USER NAME	= tblank	DESIGNED	-	REVISED	-	6-21-21
		DRAWN	-	REVISED	-	
PLOT SCALE	= 0.167" / in.	CHECKED	-	REVISED	-	
PLOT DATE	= 3/30/2023	DATE	-	REVISED	-	03/31/2023

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REGION 2/ DISTRICT 2 STANDARD

SCALE: N/A SHEET 17 OF 18 SHEETS STA. TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	971
CONTRACT NO. 64B13				

ILLINOIS FED. AID PROJECT

LOADING CONDITION	MAX. EXTENDER HEIGHT - "H"
H20/H25 * 750 PSI CONCRETE	19"

* 125 PSI TIRE PRESSURE

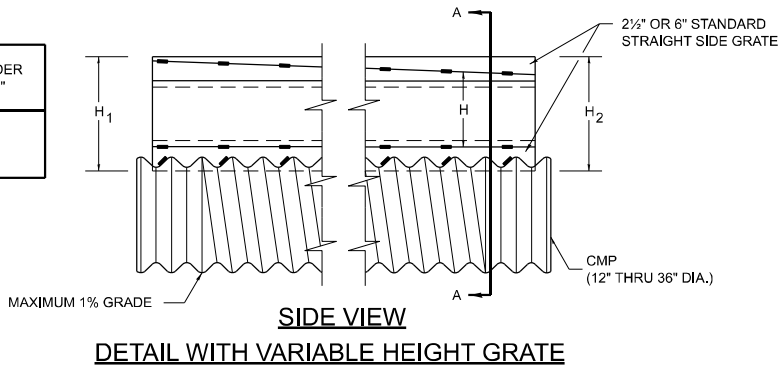
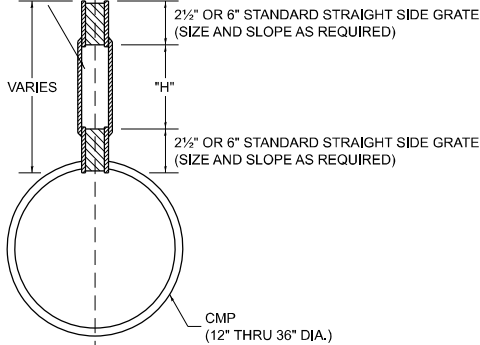


PLATE EXTENDERS
7 GA. GALVANIZED PLATE
PER ASTM A761
SLOPE AS REQUIRED.



GENERAL

Class SI Concrete shall be used throughout.
This specification covers Slotted Drain used for the removal of water as shown on the plans.
The Slotted Drain shall be Corrugated Pipe Culvert with Integral Slotted Drains.
Before placing the concrete adjacent to the pipe, the slot shall be covered by either thin, flat metal sheeting or by a board notched to fit over the grate bars. This covering must fit closely in the slot to prevent entry of concrete into the pipe. Paving over the slotted drain will then be one continuous operation over the protected drain. The protection for the drain slot shall then be removed. The pipe shall drain into the side of the inlet. The opening where the slot is removed shall be covered to prevent concrete from entering the pipe.
The Corrugated Steel Pipe used in the Slotted Drain shall meet the requirements of AASHTO M36/ASTM A760.
The CMP shall be ALUMINIZED STEEL Type 2.
The diameter shall be as shown on the plans.
Steel grating shall meet the galvanizing requirements of AASHTO M111.
This work will be paid for at the contract unit price per foot for SLOTTED DRAIN of the pipe diameter specified WITH VARIABLE SLOT, or SLOTTED DRAIN, of the pipe diameter specified, WITH 6" SLOT, and shall include concrete and grating for depth specified on plans.
Use approved end cap to prevent concrete entry into the pipe during gutter construction on the upstream end of the pipe.

CONNECTIONS

The Corrugated Steel Pipe shall have a minimum of two rerolled annular ends.
The Slotted Drain bands shall be modified HUGGER Bands to secure the pipe and prevent infiltration of the backfill.
When the Slotted Drain is banded together, the adjacent grates shall have a maximum 3" gap.

GRATES

The grates shall be manufactured from ASTM A670, Grade 36 steel. The spacers and bearing bars (sides) shall be 3/16" material $\pm 0.008"$.
The spacers shall be on 6" centers and welded on both sides to each bearing bar (sides) with four (4) 1- 1/4" long 3/16" fillet welds on each side of the bearing bar.
The plate extender shall be 7 gage steel meeting ASTM A761.
The engineer may call for tensile strength tests on the grate if the grate is not in compliance with the above spacer specifications. If tensile strength tests are called for, minimum results for an in-place spacer pulled perpendicular to the bearing bar shall be:
T= 12,000 pounds for 2- 1/2" grate
T= 15,000 pounds for 6" grate

GALVANIZING

The grate and plate extenders shall be galvanized in accordance with ASTM A123 except with a 2 oz. galvanized coating.

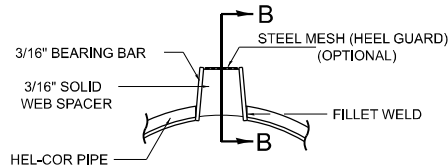
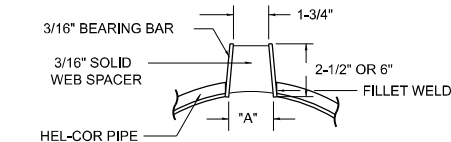
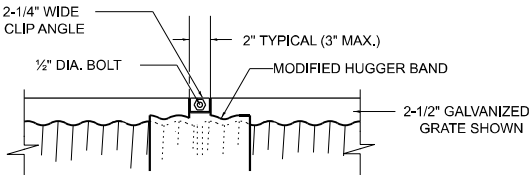
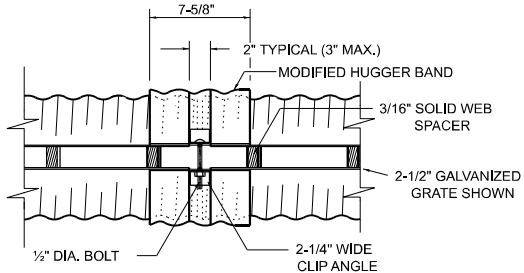
GRATE ATTACHED TO CSP

The grate shall be fillet welded with a minimum weld 1" long to the CSP on each side of the grate at every other corrugation.

TOLERANCES - FINISHED SLOTTED DRAIN - 20' LENGTHS

Vertical Bow= $\pm 3/8"$
Horizontal Bow= $\pm 5/8"$
Twist= $\pm 1/2"$

SLOTTED DRAIN PIPE



(TRAPEZOIDAL GALVANIZED GRATE SHOWN)

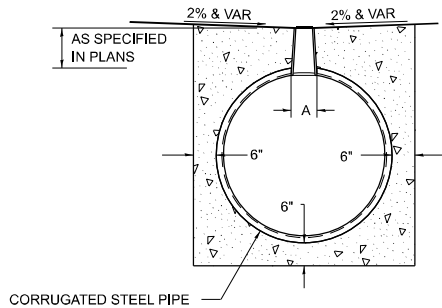
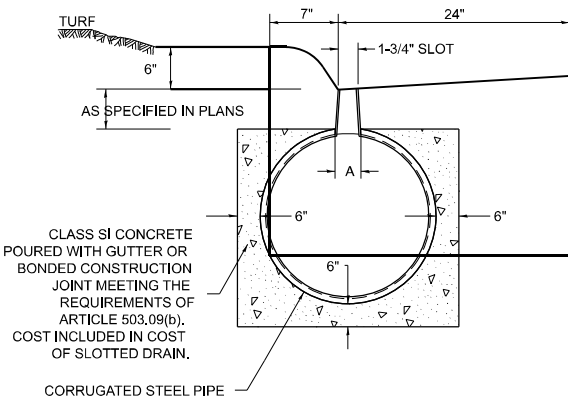
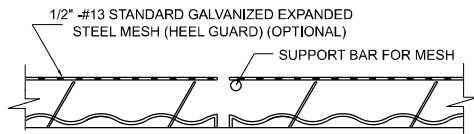
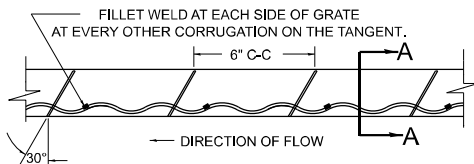
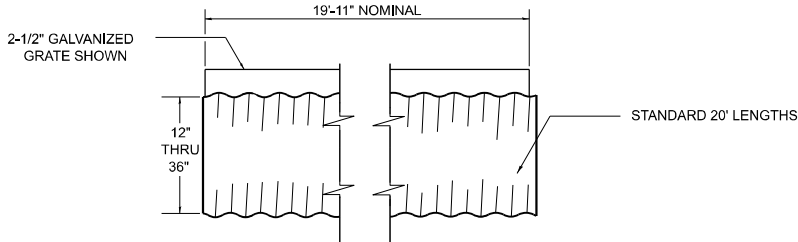
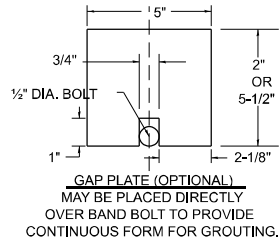
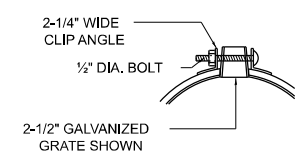
STANDARD SIZES						
GAGE OF PIPE	DIAMETER OF PIPE					
	12"	15"	18"	24"	30"	36"
16	X	X	X	X	X	X
14	X	X	X	X	X	X
12	N.A.	N.A.	N.A.	N.A.	X	X

GRATE TYPE	"A"	
VERT	2-1/2"	1-3/4"
VERT	6"	1-3/4"
TRAP	2-1/2"	2-1/4"
TRAP	6"	3"

VERT = VERTICAL
TRAP = TRAPIZOIDAL

SLOTTED DRAIN NOTES

- GRATING IS AVAILABLE IN DEPTHS OF 2-1/2" AND 6".
- VERTICAL GRATING (STRAIGHT SIDES) WITH VERTICAL SPACERS IS ALSO AVAILABLE.
- FOR 6" VERTICAL & TRAPIZOIDAL REQUIREMENTS, THE SLOTTED DRAIN BAND MAY BE FURNISHED WITH THE 4" TECHCO BAND ANGLE.
- DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
- DIMENSIONS FOR H AND H AS REQUIRED.
- H AND H MEASURED FROM TOP OF GRATE TO BOTTOM OF OF GRATE.



ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

USER NAME = tblank	DESIGNED -	REVISED - 6-21-21
	DRAWN -	REVISED -
PLOT SCALE = 0.167' / in.	CHECKED -	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	972
				CONTRACT NO. 64B13
				ILLINOIS FED. AID PROJECT

ORIGINAL SURVEY	SURVEYED _____ PLOTTED _____ TEMPLATE _____ AREAS _____ AREAS CHECKED _____	BY _____	DATE _____
NOTE BOOK			
NO. _____			

STA 1145+50.00

Station	Existing Elevation (EL)	Proposed Elevation (EL)	Cut/Fill
-60.19	834.13	834.13	Cut
-55.76	834.13	834.13	Cut
-54.82	834.13	834.13	Cut
-54.58	834.13	834.13	Cut
-53.95	834.13	834.13	Cut

Summary:

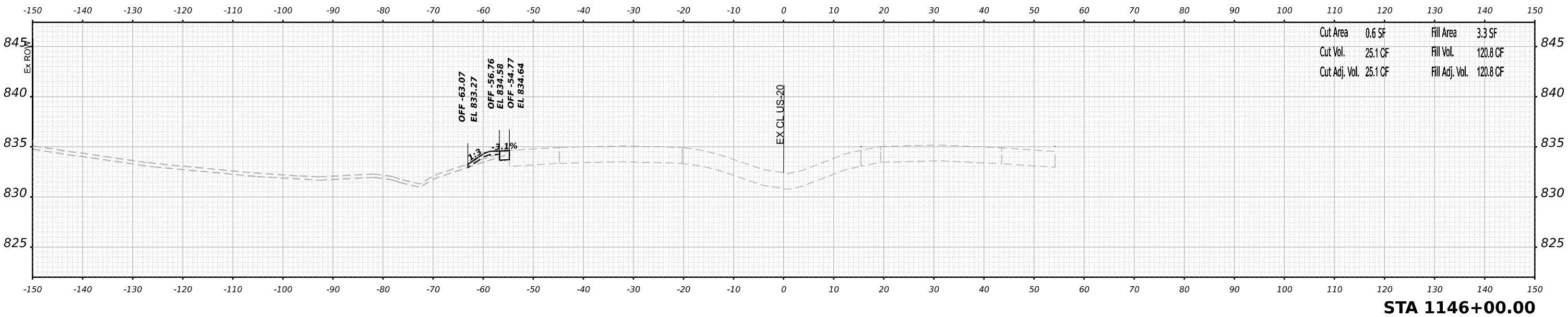
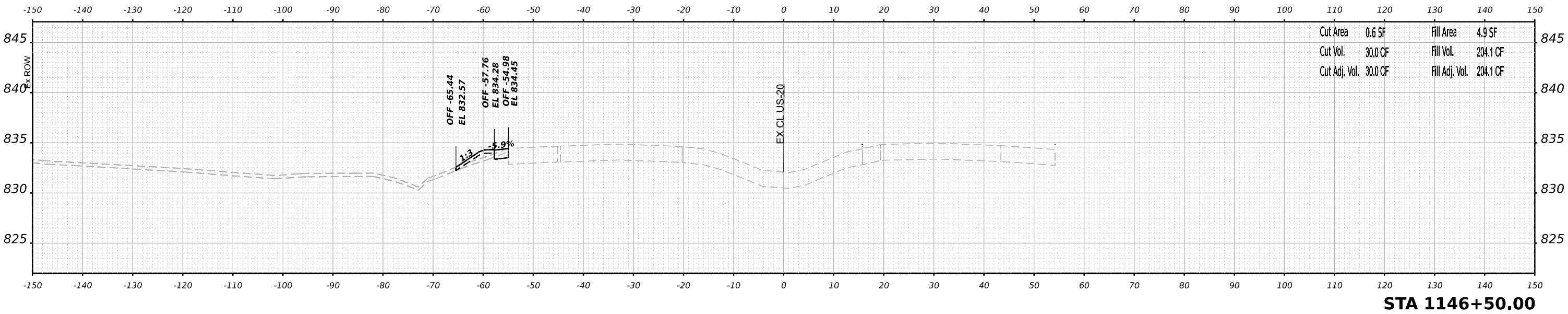
Item	Value
Cut Area	0.4 SF
Fill Area	1.5 SF
Cut Vol.	4.0 CF
Fill Vol.	14.3 CF
Cut Adj. Vol.	4.0 CF
Fill Adj. Vol.	14.3 CF

 benesch Allied Benesch & Company 35, W Wacker Drive, Suite 3300 Chicago, Illinois 60601 312-265-4050 Job No. 10860.00	USER NAME = tvogler	DESIGNED - T.VOGLER	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS US 20 STAGE 1					F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 3/30/2023	CHECKED - J.TARDY	REVISED -		CONTRACT NO. 64B13									
	PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -		SCALE: N/A SHEET 1 OF 91 SHEETS STA. 1145+40.12 TO STA. 1145+50.00 ILLINOIS FED. AID PROJECT									

FINAL SURVEY NO.	SURVEYED PLOTTED NOTE BOOK AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED NOTE BOOK AREAS CHECKED	BY	DATE

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PLOT SCALE	= 0.16666667 ' / in.
PLOT DATE	= 3/30/2023

DESIGNED	- T.VOGLER
DRAWN	- T.VOGLER
CHECKED	- J.TARDY
DATE	- 03/31/2023

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US 20 STAGE 1

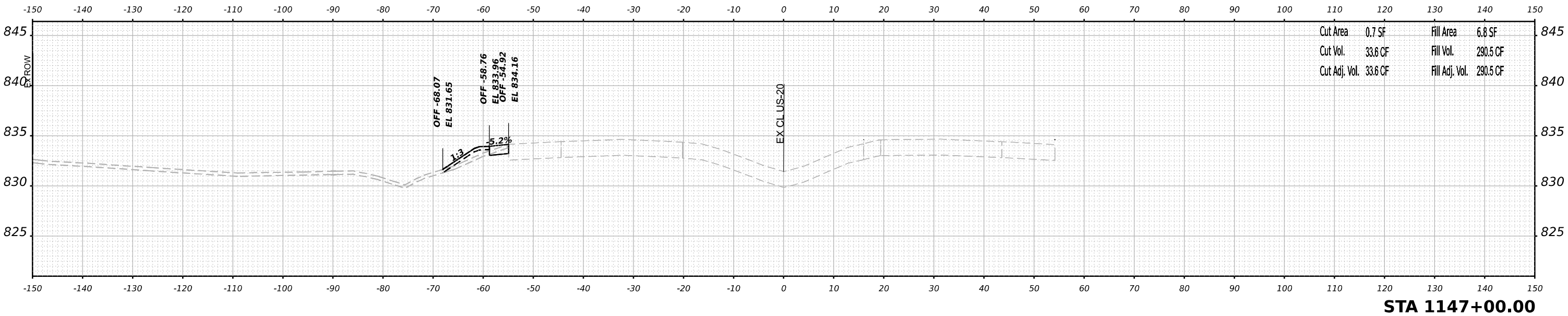
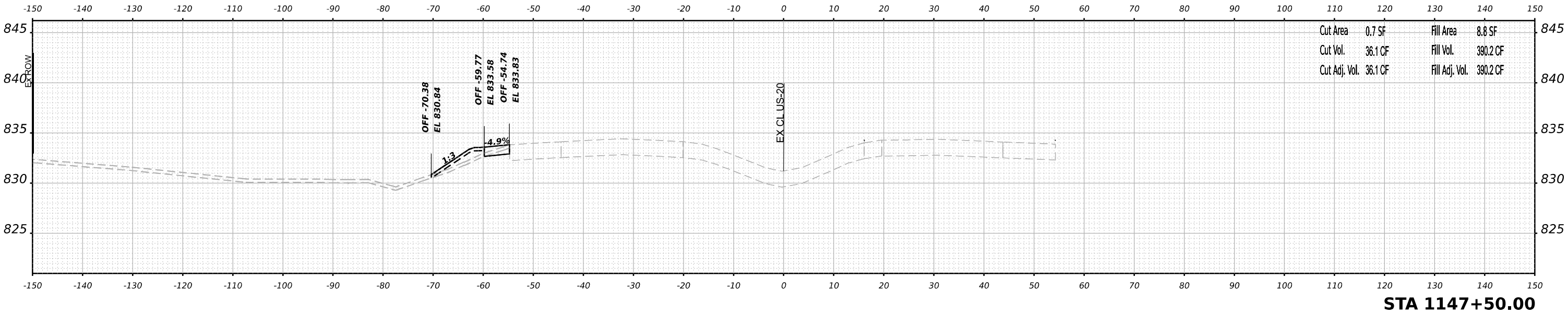
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	974
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED NOTE BOOK AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED NOTE BOOK AREAS CHECKED	BY	DATE

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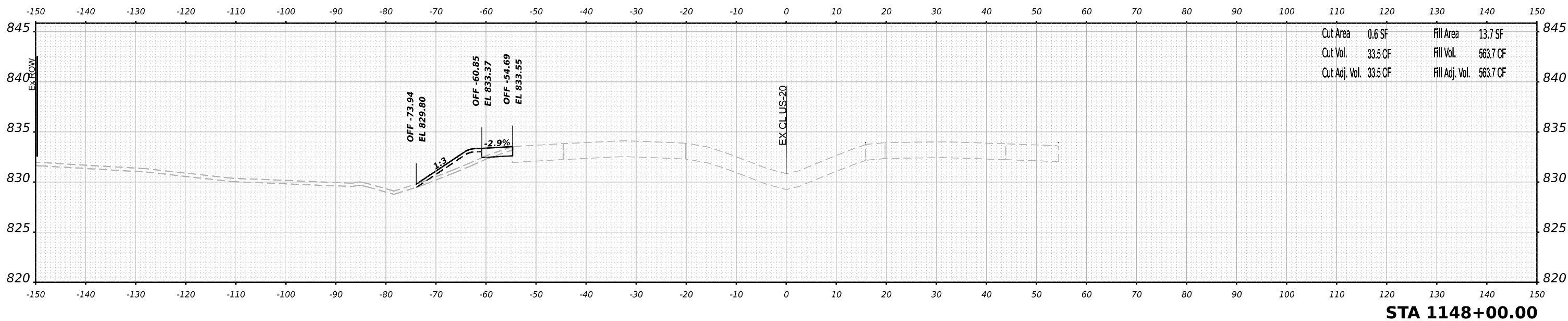
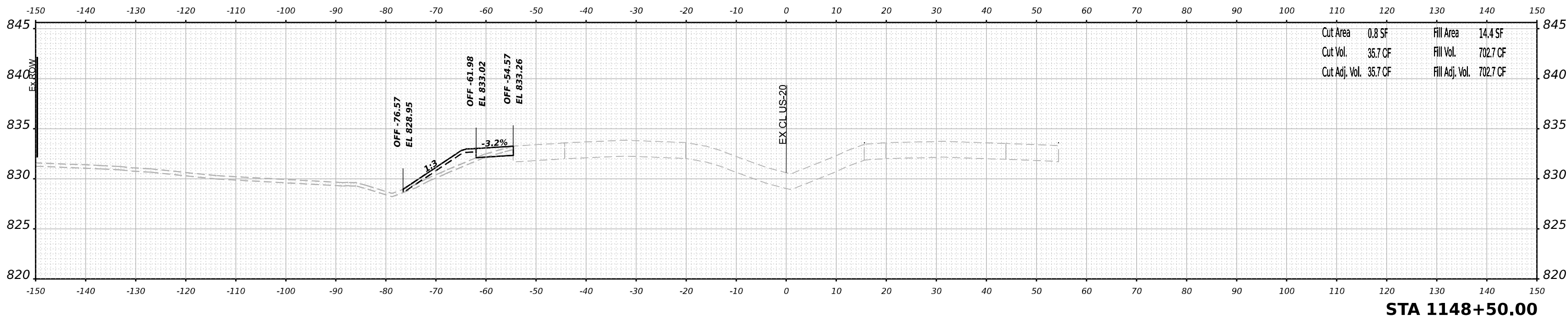


 Allied Benesch & Company 35 W Wacker Drive, Suite 3300 Chicago, Illinois 60601 312.465.4150 Job No. 10800,00	USER NAME = tvogler		DESIGNED - T.VOGLER	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS US 20 STAGE 1			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 3/30/2023		CHECKED - J.TARDY	REVISED -		SCALE: N/A SHEET 3 OF 91 SHEETS STA. 1147+00.00 TO STA. 1147+50.00			CONTRACT NO. 64B13				
			DATE - 03/31/2023	REVISED -					ILLINOIS FED. AID PROJECT				

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
NO. _____	AREAS CHECKED _____		

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USER NAME = tvogler	DESIGNED - T.VOGLER	REVISED -
	DRAWN - T.VOGLER	REVISED -
PLOT SCALE = 0.16666667' / in.	CHECKED - J.TARDY	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

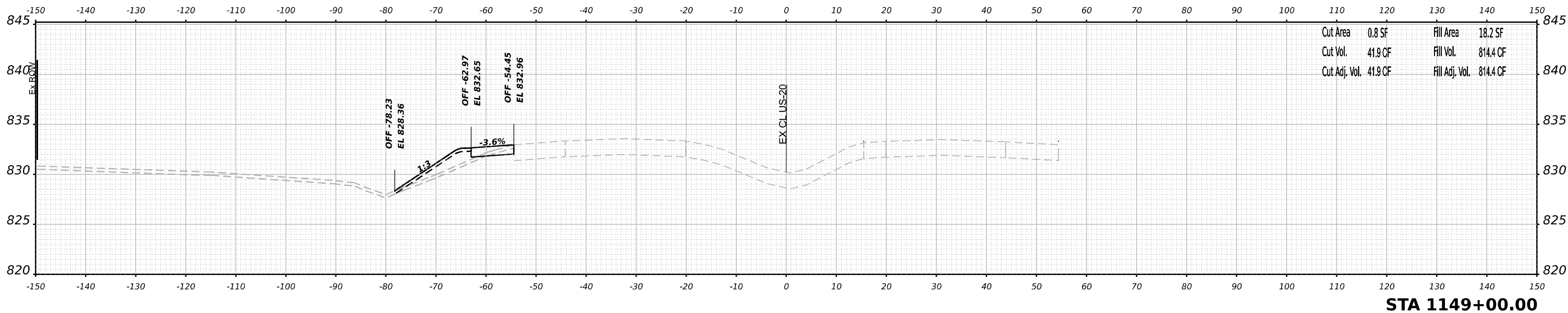
CROSS SECTIONS US 20 STAGE 1

SCALE: N/A	SHEET 4 OF 91 SHEETS	STA. 1148+00.00 TO STA. 1148+50.00
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	976
		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		

ORIGINAL SURVEY			BY _____	DATE _____
SURVEYED _____				
PLOTTED _____				
TEMPLATE _____				
AREAS _____				
NO. _____				
AREAS CHECKED _____				

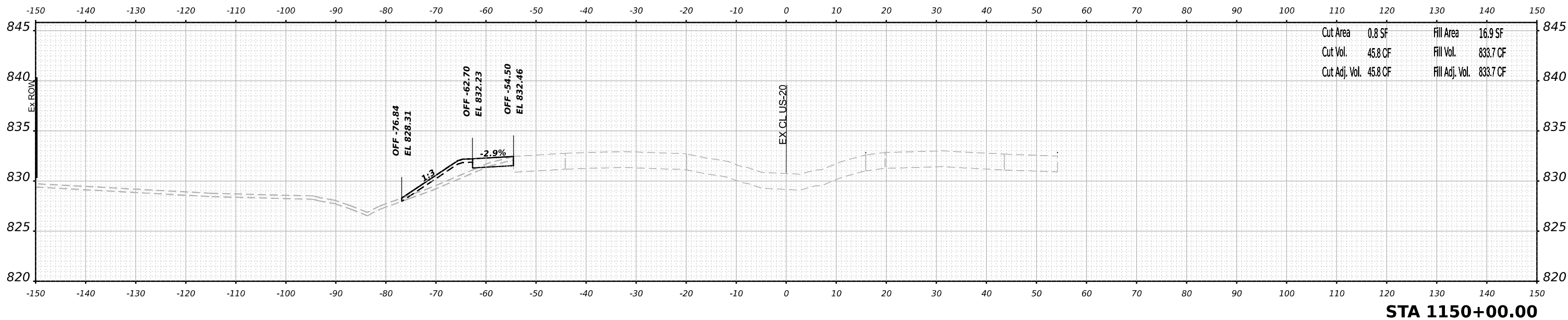
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 benesch Alfred Benesch & Company 35 W Wacker Drive, Suite 3300 Chicago, Illinois 60601 312.455.4150 Job No. 10800.00	USER NAME = tvogler	DESIGNED - T.VOGLER	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS US 20 STAGE 1					F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 3/30/2023	CHECKED - J.TARDY	REVISED -		DATE - 03/31/2023	REVISED -	CONTRACT NO. 64B13							
					SCALE: N/A	SHEET 5 OF 91 SHEETS	STA. 1149+00.00 TO STA. 1149+50.00	ILLINOIS	FED. AID PROJECT					

ORIGINAL SURVEY			BY _____	DATE _____
SURVEYED _____				
PLOTTED _____				
TEMAPIE _____				
AREAS _____				
NO. _____				
AREAS CHECKED _____				

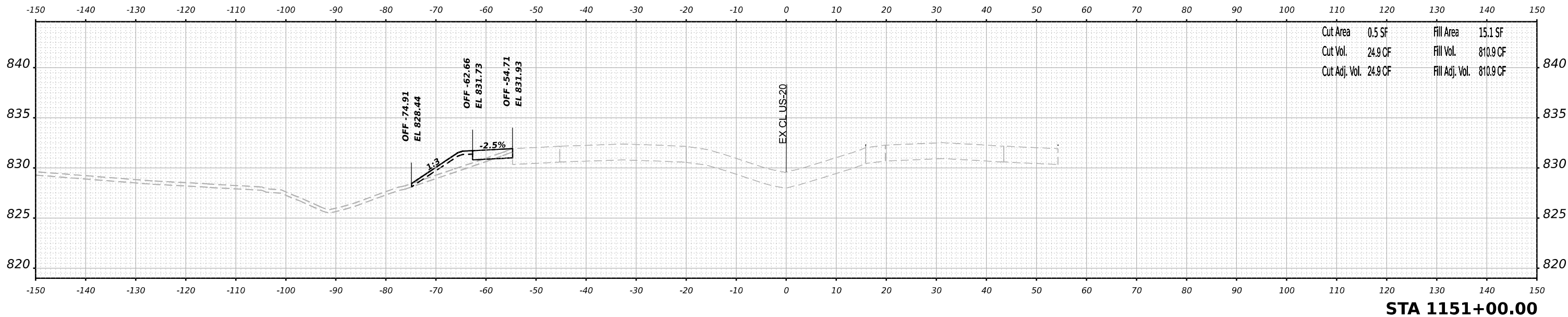
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 benesch Alfred Benesch & Company 35 W Wacker Drive, Suite 3300 Chicago, Illinois 60601 312-565-5150 Job No. 10800.00	USER NAME = tvogler	DESIGNED - T.VOGLER	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS US 20 STAGE 1					F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 3/30/2023	CHECKED - J.TARDY	DATE - 03/31/2023		REVISED -	SCALE: N/A SHEET 6 OF 91 SHEETS STA. 1150+00.00 TO STA. 1150+50.00					ILLINOIS FED. AID PROJECT			

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
NOTE BOOK	TEMPLATE _____		
	AREAS _____		
NO. _____	AREAS CHECKED _____		

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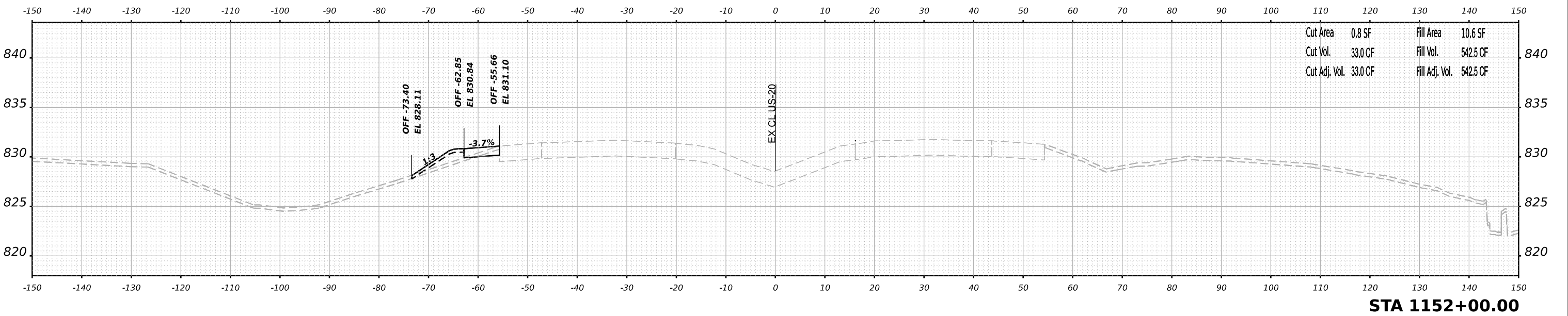
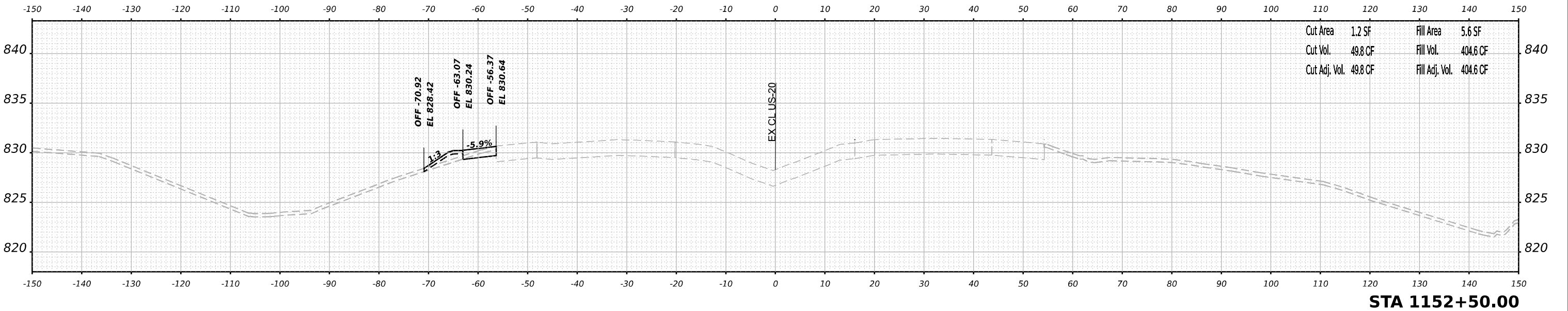


 benesch Alfred Benesch & Company 35, W. Wacker Drive, Suite 3300 Chicago, Illinois 60601 312-455-4150 Job No. 10800,00	USER NAME = tvogler	DESIGNED - T.VOGLER	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS US 20 STAGE 1				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 3/30/2023	CHECKED - J.TARDY	DATE - 03/31/2023		REVISED -	SCALE: N/A	SHEET 7 OF 91 SHEETS	STA. 1151+00.00 TO STA. 1151+50.00	CONTRACT NO. 64B13				

FINAL SURVEY NOTE BOOK NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NOTE BOOK NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

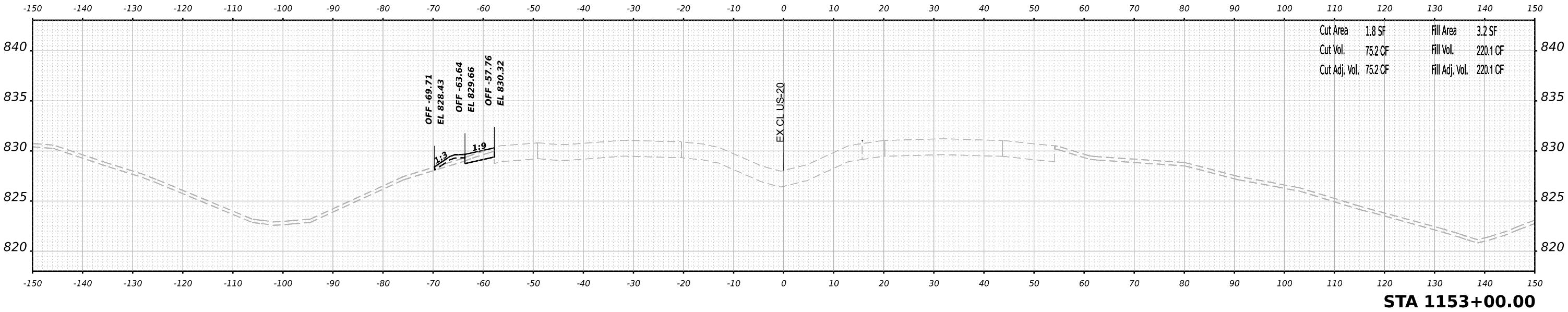
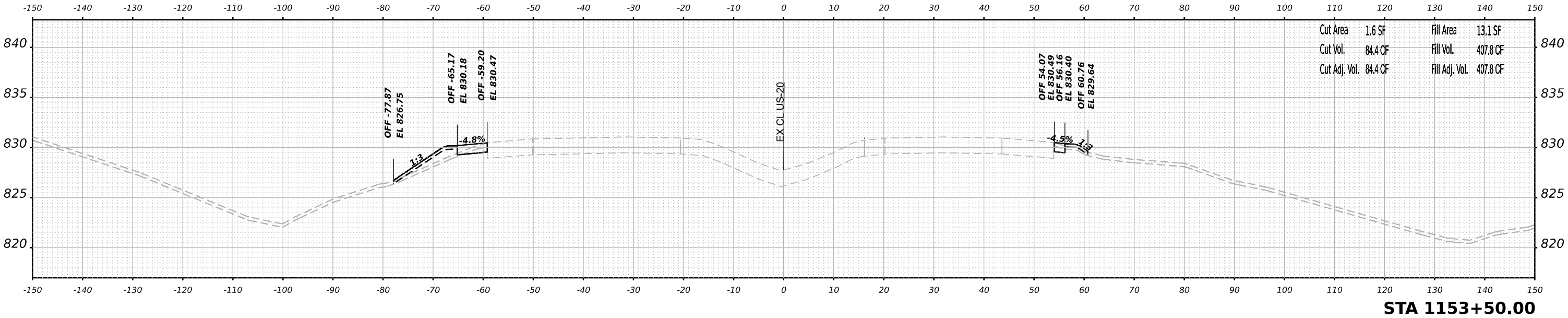
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FINAL SURVEY NO.	SURVEYED NOTE BOOK	PLOTTED TEMPLATE	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED NOTE BOOK	PLOTTED TEMPLATE	BY	DATE

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Alfred Benesch & Company
35 W Wacker Drive, Suite 3300
Chicago, Illinois 60601
312.465.4150 Job No. 10800.00

USER NAME = tvogler	DESIGNED - T.VOGLER	REVISED -
	DRAWN - T.VOGLER	REVISED -
PLOT SCALE = 0.16666667" / in.	CHECKED - J.TARDY	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US 20 STAGE 1

SCALE: N/A	SHEET 9 OF 91 SHEETS	STA. 1153+00.00 TO STA. 1153+50.00
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F.A.I. RTE. 39	SECTION (201-3)K	COUNTY WINNEBAGO	TOTAL SHEETS 2192	SHEET NO. 981
CONTRACT NO. 64B13				
ILLINOIS		FED. AID PROJECT		

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
NOTE BOOK	TEMPLATE _____		
	AREAS _____		
NO. _____	AREAS CHECKED _____		

The profile view displays the road's vertical alignment. The horizontal axis represents stationing from -150 to 150, and the vertical axis represents elevation from 810 to 840 feet. The profile includes a solid line for the existing ground and a dashed line for the proposed road grade. Key features include:

- Cut Areas:** Indicated by vertical lines and labels for areas where the road is cut into the existing ground. Labels include:
 - OFF -85.11, EL 825.53
 - OFF -70.25, EL 829.69
 - OFF -61.23, EL 830.02
 - OFF 54.18, EL 829.96
 - OFF 57.93, EL 829.82
 - OFF 61.85, EL 829.30
- Fill Areas:** Indicated by vertical lines and labels for areas where the road is filled above the existing ground. Labels include:
 - OFF -70.25, EL 829.69
 - OFF -61.23, EL 830.02
 - OFF 54.18, EL 829.96
 - OFF 57.93, EL 829.82
 - OFF 61.85, EL 829.30
- Grades:** Percentages indicating the slope of the road segments: 1.3% and -3.6%.
- EX CL US-20:** A label indicating the location of the existing US-20 road.

Summary of Cut and Fill Data:

Category	Value
Cut Area	1.9 SF
Cut Vol.	92.4 CF
Cut Adj. Vol.	92.4 CF
Fill Area	21.7 SF
Fill Vol.	1,036.7 CF
Fill Adj. Vol.	1,036.7 CF

The profile view displays the road's vertical alignment. The horizontal axis represents stationing from -150 to 150, and the vertical axis represents elevation from 810 to 840 feet. The existing ground is shown as a dashed line, and the proposed road grade is shown as a solid line. Key features include:

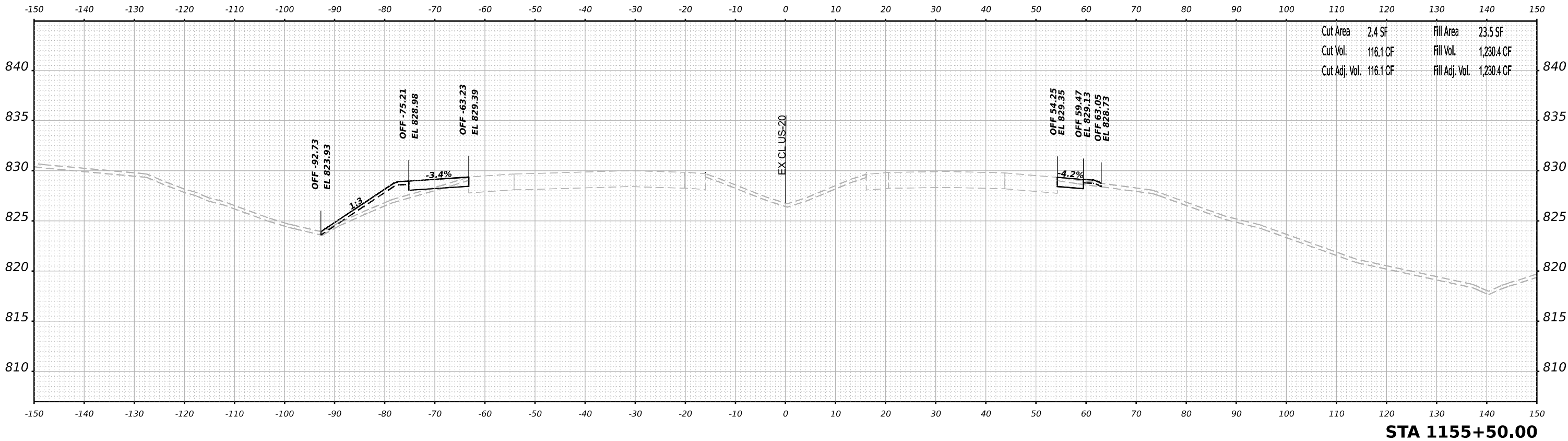
- Cut Areas:** Indicated by dashed lines above the solid grade line. Two cut areas are identified with labels: "OFF -82.30 EL 825.89" and "OFF -67.43 EL 830.06".
- Fill Areas:** Indicated by solid lines below the dashed ground line. Two fill areas are identified with labels: "OFF -60.24 EL 830.31" and "OFF 54.04 EL 830.27".
- Grades:** Percentages are shown on the profile: "1.3" and "3.5%".
- Vertical Curve:** A vertical curve is shown with a label "EX CL US-20" and a stationing range from approximately -10 to 10.
- Summary Table:** A table in the top right corner provides summary statistics for the cut and fill areas.

Station	Off	Elev
-82.30	825.89	
-67.43	830.06	
-60.24	830.31	
54.04	830.27	
57.08	830.15	
61.11	829.60	

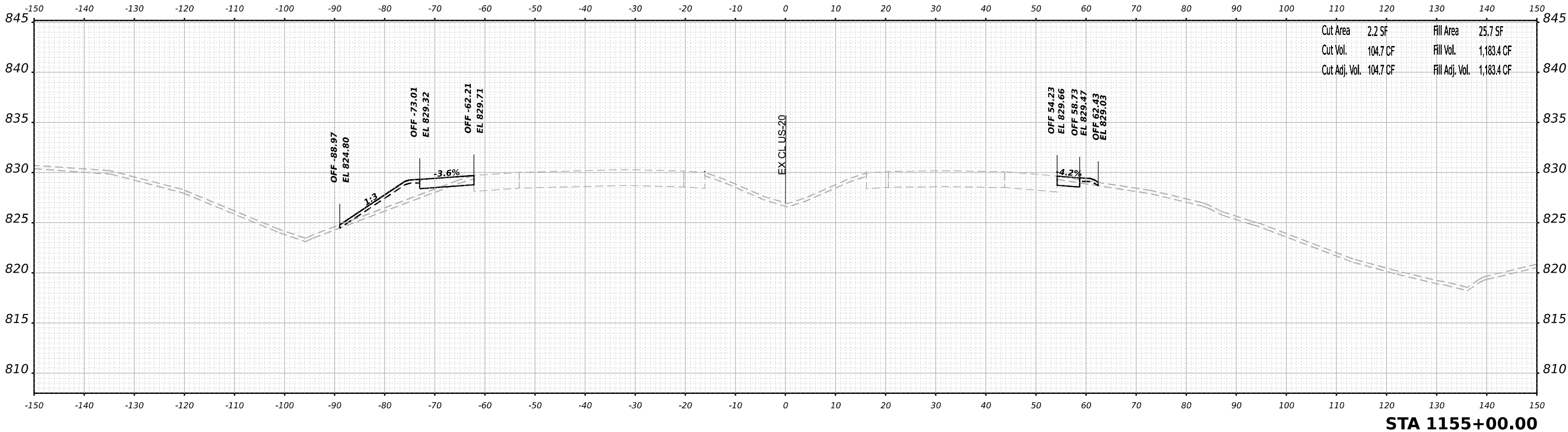
Area	Area	Vol.	Vol.
Cut Area	1.8 SF	Fill Area	19.8 SF
Cut Vol.	83.4 CF	Fill Vol.	823.2 CF
Cut Adj. Vol.	83.4 CF	Fill Adj. Vol.	823.2 CF

 benesch Allied Benesch & Company 35 W Wacker Drive, Suite 3300 Chicago, Illinois 60601 312.665.4050 Job No. 10880.00	USER NAME = tvogler	DESIGNED - T.VOGLER	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS US 20 STAGE 1					F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 0.16666667' / in.	DRAWN - T.VOGLER	REVISED -							39	(201-3)K	WINNEBAGO	2192	982
	PLOT DATE = 3/30/2023	CHECKED - J.TARDY	REVISED -		CONTRACT NO. 64B13									
	PLOT DATE = 03/31/2023	DATE - 03/31/2023	REVISED -		SCALE: N/A SHEET 10 OF 91 SHEETS STA. 1154+00.00 TO STA. 1154+50.00 ILLINOIS FED. AID PROJECT									

FINAL SURVEY	SURVEYED PLOTTED NOTE BOOK	BY	DATE
NO.	AREAS CHECKED		



ORIGINAL SURVEY	SURVEYED PLOTTED NOTE BOOK	BY	DATE
NO.	AREAS CHECKED		



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USER NAME = tvogler
PLOT SCALE = 0.16666667" / in.
PLOT DATE = 3/30/2023

DESIGNED - T.VOGLER
DRAWN - T.VOGLER
CHECKED - J.TARDY
DATE - 03/31/2023

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

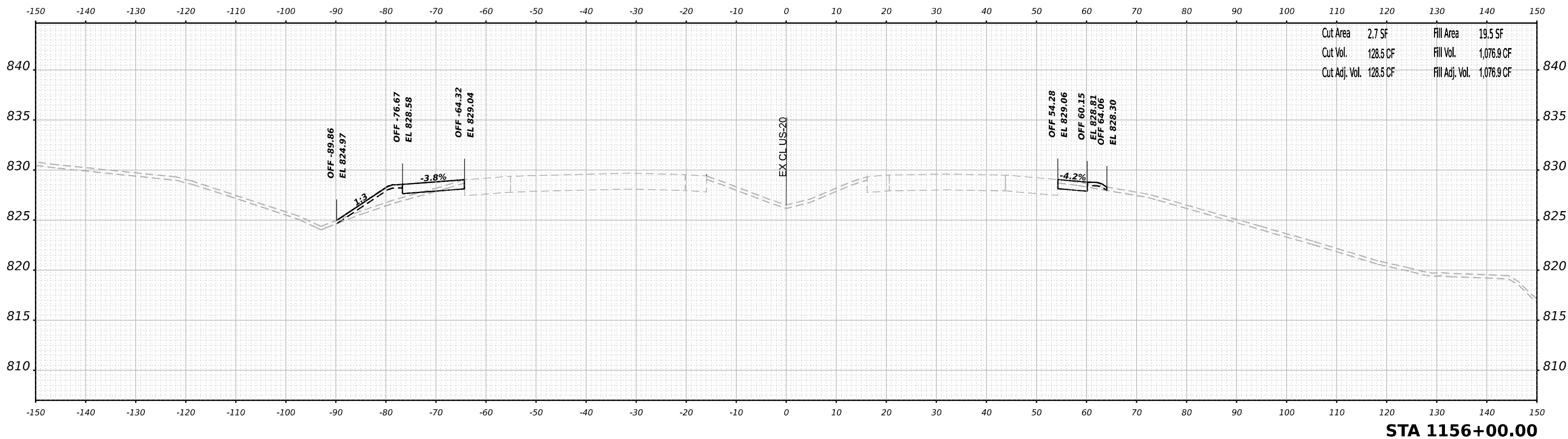
CROSS SECTIONS
US 20 STAGE 1

SCALE: N/A SHEET 11 OF 91 SHEETS STA. 1155+00.00 TO STA. 1155+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	983
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
NOTE BOOK	TEMPLATE _____		
	AREAS _____		
NO. _____	AREAS CHECKED _____		

FILE NAME: [pw://benesch-pw.bentley.com/benesch-pw-01/Documents/10800s/10800.00/Eng_Docs/Design/System_Exchange/Cross_Sections/D264B13-Cor-I-39-SI-XS-Stage1.dgn](http://pw.bentley.com/benesch-pw-01/Documents/10800s/10800.00/Eng_Docs/Design/System_Exchange/Cross_Sections/D264B13-Cor-I-39-SI-XS-Stage1.dgn)

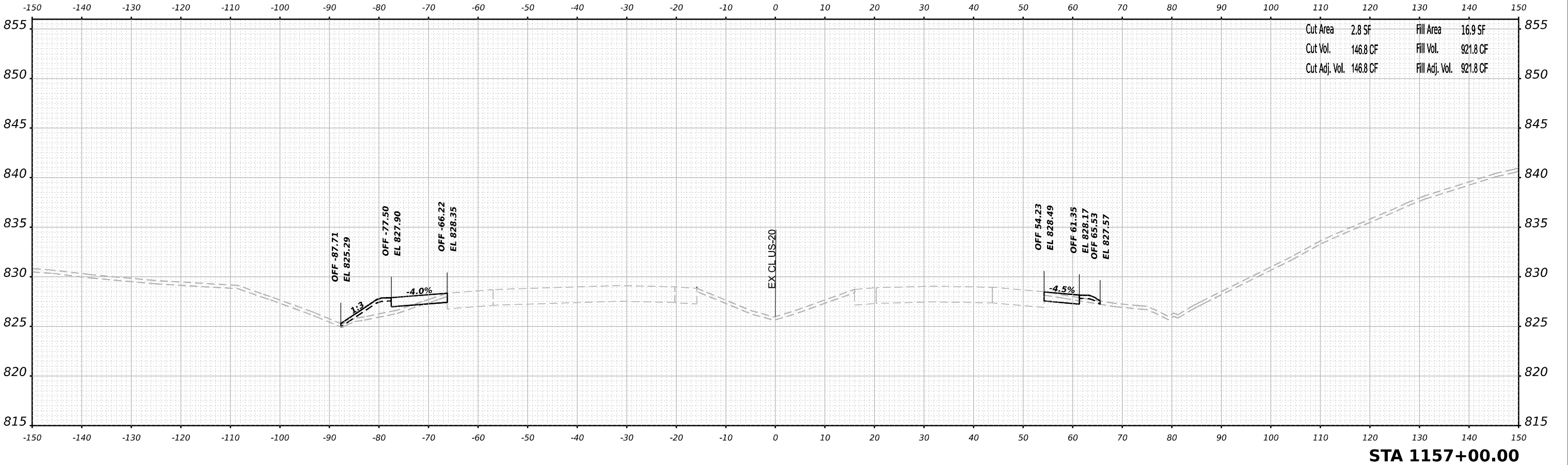


 benesch Alfred Benesch & Company 35, W. Wacker Drive, Suite 3300 Chicago, Illinois 60601 312-455-4150 Job No. 10800,02	USER NAME = tvogler	DESIGNED - T.VOGLER	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS US 20 STAGE 1					F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 0.16666667 ' / in.	DRAWN - T.VOGLER	REVISED -							39	(201-3)K	WINNEBAGO	2192	984
	PLOT DATE = 3/30/2023	CHECKED - J.TARDY	DATE - 03/31/2023		REVISED -	SCALE: N/A SHEET 12 OF 91 SHEETS STA. 1156+00.00 TO STA. 1156+50.00					CONTRACT NO. 64B13			

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

MODEL: E:\CL\US20.XS - 1157+00.00 [Sheet]
FILE NAME: p:\benesch\pw\benesch.com\benesch-pw\2\Documents\10800\00\Eng Docs\Design\System Interchange\Cross Sections\024413-Cor-139-SUS-Stage1.dgn



USER NAME	= tvogler	DESIGNED	- T.VOGLER	REVISED	-
		DRAWN	- T.VOGLER	REVISED	-
PLOT SCALE	= 0.16666667 " / in.	CHECKED	- J.TARDY	REVISED	-
PLOT DATE	= 3/30/2023	DATE	- 03/31/2023	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

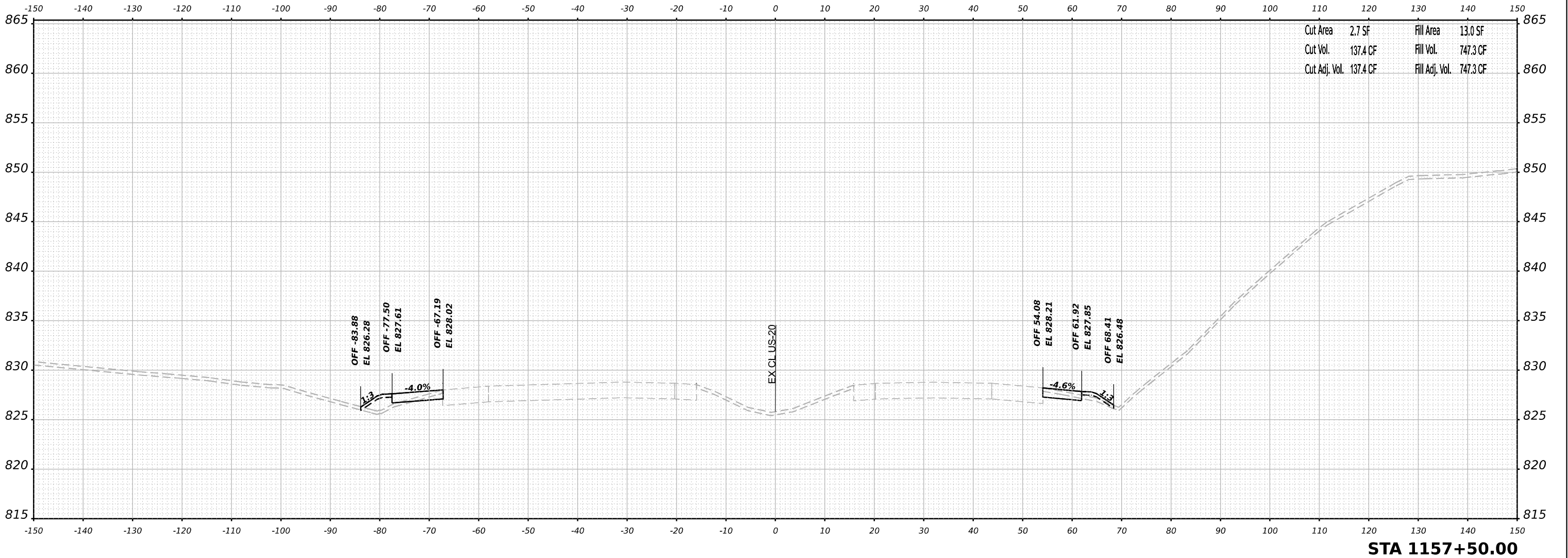
CROSS SECTIONS US 20 STAGE 1			
SCALE: N/A	SHEET 13	OF 91 SHEETS	STA. 1157+00.00 TO STA. 1157+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	985
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NOTE BOOK NO.	SURVEYED PLOTTED AREAS AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NOTE BOOK NO.	SURVEYED PLOTTED AREAS AREAS CHECKED	BY	DATE

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USER NAME	= tvogler
PLOT SCALE	= 0.16666667 " / in.
PLOT DATE	= 3/30/2023

DESIGNED	- T.VOGLER
DRAWN	- T.VOGLER
CHECKED	- J.TARDY
DATE	- 03/31/2023

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US 20 STAGE 1

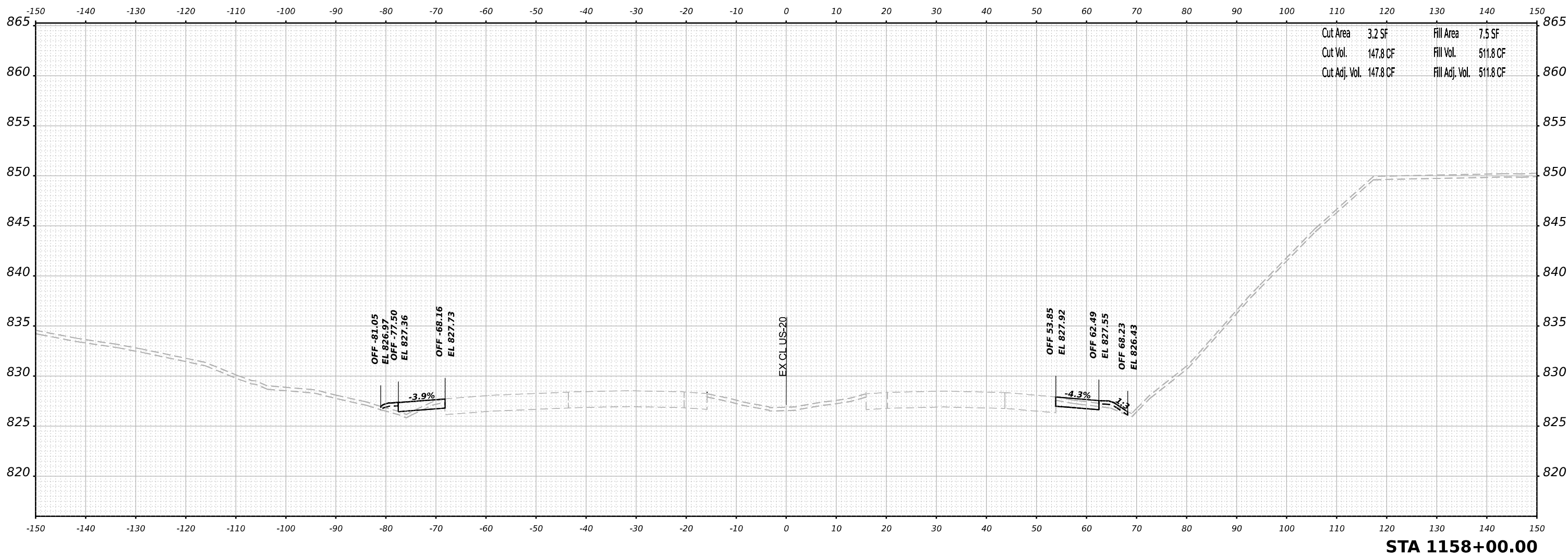
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	986
CONTRACT NO. 64B13				
ILLINOIS			FED. AID PROJECT	

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
NOTE BOOK	TEMPLATE _____	NO. _____	AREAS CHECKED _____
	AREAS _____		

MODEL: ExCL_US20_XS - 1158+00.00 [Sheet]

FILE NAME: pw://benesch-pw.bentley.com:ben



STA 1158+00.00



USER NAME = tvogler	DESIGNED - T.VOGLER	REVISED -
	DRAWN - T.VOGLER	REVISED -
PLOT SCALE = 0.16666667 ' / in.	CHECKED - J.TARDY	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS US 20 STAGE 1

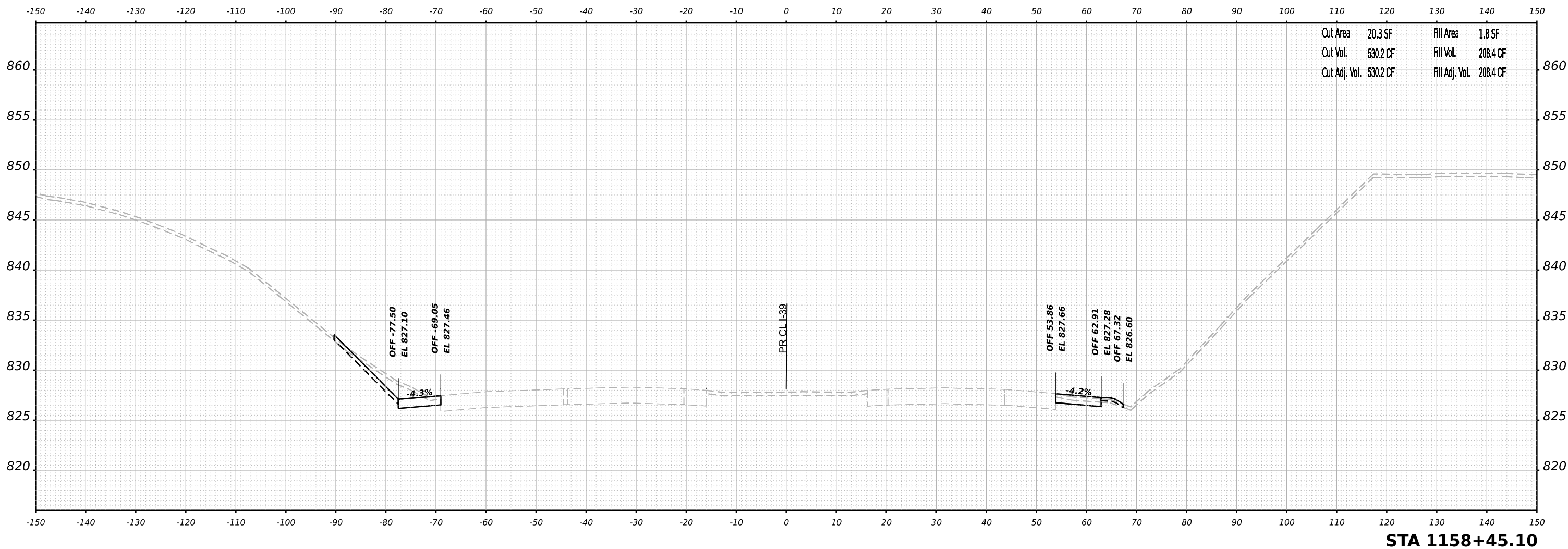
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	987
		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
NOTE BOOK	TEMPLATE _____	_____	_____
	AREAS _____		
NO. _____	AREAS CHECKED _____	_____	_____

MODEL: ExCL_US20_XS - 1158+45.10 [Sheet]

FILE NAME: pw://benesch-pw.bentley.com:benesch



STA 1158+45.10



USER NAME = tvogler	DESIGNED - T.VOGLER	REVISED -
	DRAWN - T.VOGLER	REVISED -
PLOT SCALE = 0.16666667 ' / in.	CHECKED - J.TARDY	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS US 20 STAGE 1

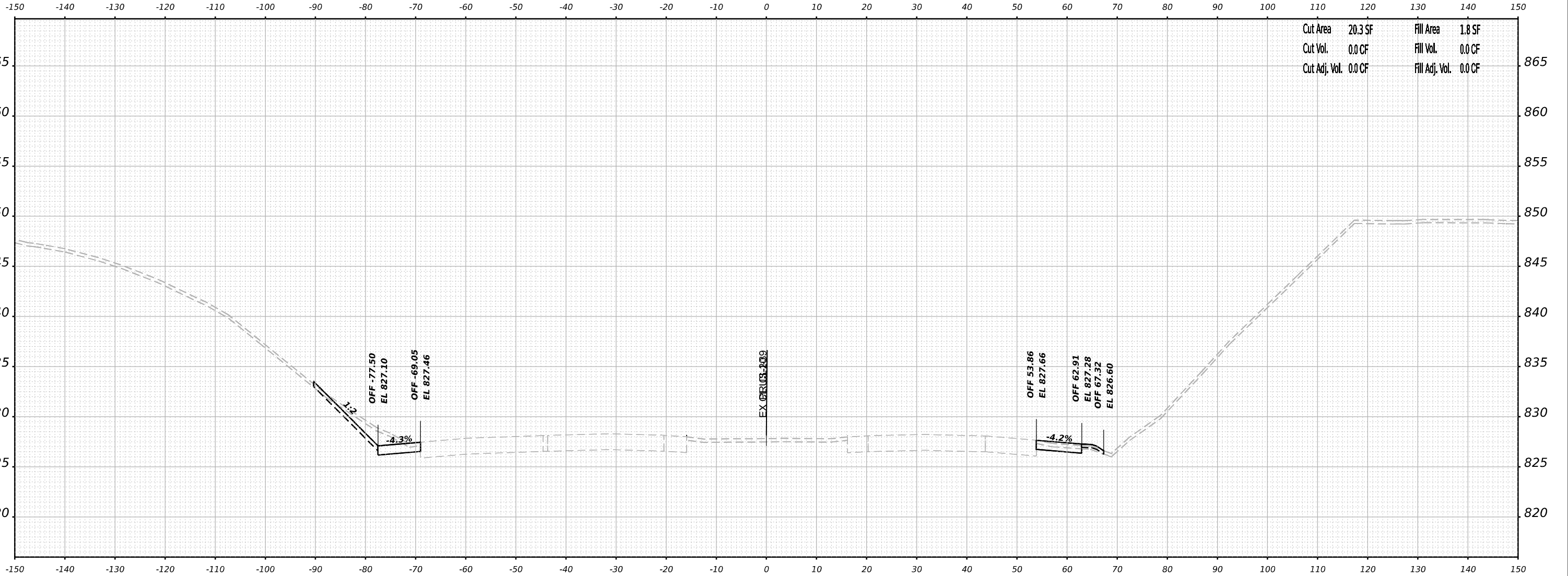
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	988
CONTRACT NO. 64B13				
ILLINOIS		FED. AID PROJECT		

FINAL SURVEY	NO.	SURVEYED NOTE BOOK	BY	DATE
SURVEYED PLOTTED	AREAS CHECKED	NO.	BY	DATE

ORIGINAL SURVEY	NO.	SURVEYED NOTE BOOK	BY	DATE
SURVEYED PLOTTED	AREAS CHECKED	NO.	BY	DATE

MODEL: P4-39_XS - 2571+69.15 [Sheet]
FILE NAME: p4-39_XS-2571+69.15.dgn



Cut Area	20.3 SF	Fill Area	1.8 SF
Cut Vol.	0.0 CF	Fill Vol.	0.0 CF
Cut Adj. Vol.	0.0 CF	Fill Adj. Vol.	0.0 CF

STA 2571+69.15



USER NAME	= tvogler	DESIGNED	- T.VOGLER	REVISED	-
DRAWN	- T.VOGLER	REVISIONS	-	REVISIONS	-
PLOT SCALE	= 0.16666667 ' / in.	CHECKED	- J.TARDY	REVISIONS	-
PLOT DATE	= 3/30/2023	DATE	- 03/31/2023	REVISIONS	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

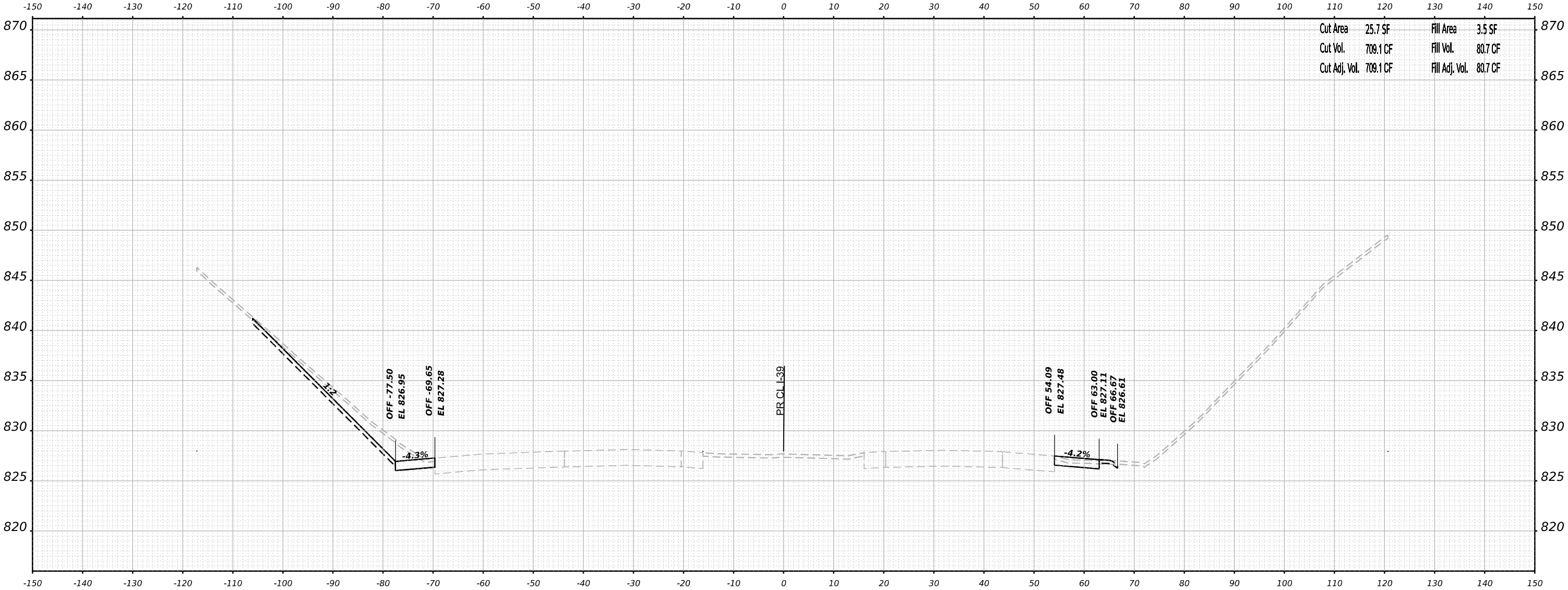
CROSS SECTIONS US 20 STAGE 1			
SCALE: N/A	SHEET 17 OF 91 SHEETS	STA. 2571+69.15 TO STA.	2571+69.15

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	989
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	NO.	SURVEYED _____	BY _____	DATE _____
		PLOTTED _____		
NOTE BOOK		TEMPLATE _____		
		AREAS _____		
		AREAS CHECKED _____		

ORIGINAL SURVEY	BY	DATE
NOTE BOOK		
NO.	SURVEYED	
	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

MODEL: P4-39_XS - 2572+00.00 [Sheet]
FILE NAME: p4-39_XS-2572+00.00.dgn



ALLIED BENESCH & COMPANY
35 W. Wacker Drive, Suite 3300
Chicago, Illinois 60601
312.465.4150 Job No. 10880.00

USER NAME = tvogler	DESIGNED - T.VOGLER	REVISED -
PLOT SCALE = 0.16666667' / in.	DRAWN - T.VOGLER	REVISED -
PLOT DATE = 3/30/2023	CHECKED - J.TARDY	REVISED -
DATE - 03/31/2023	REVISIONS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US 20 STAGE 1

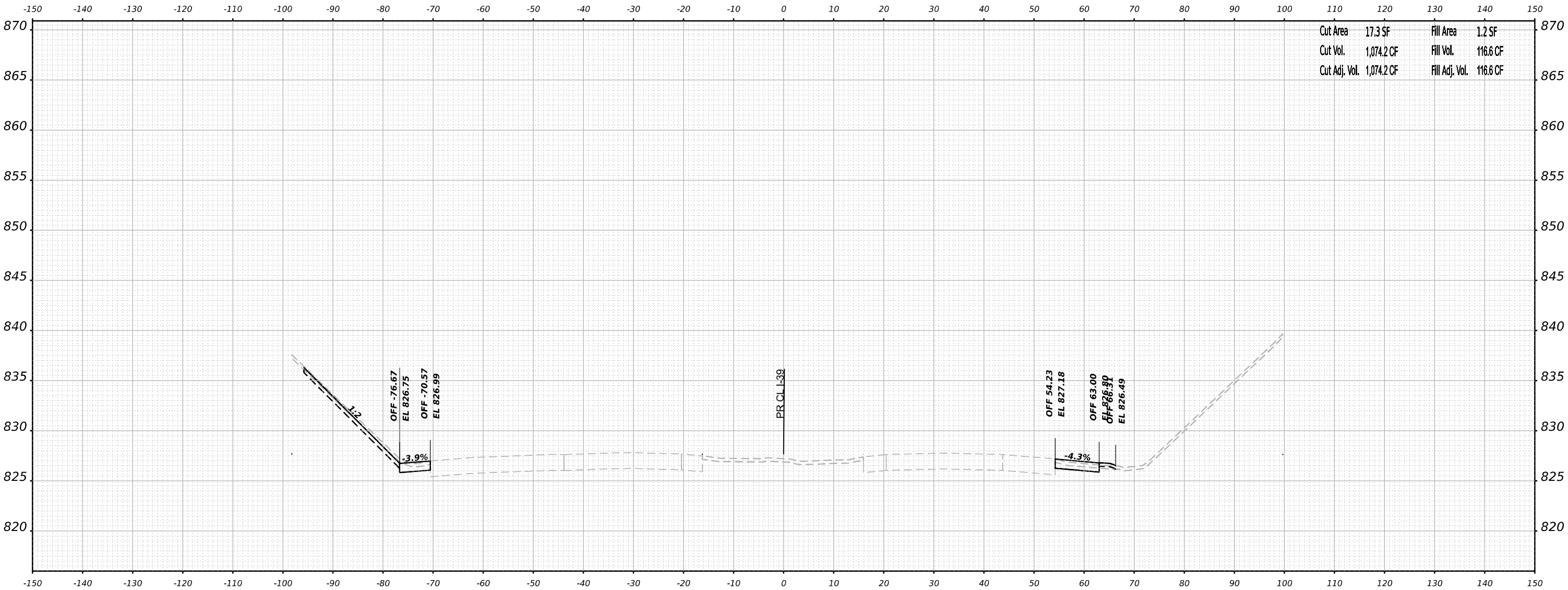
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F.A.I. RTE. 39	SECTION (201-3)K	COUNTY WINNEBAGO	TOTAL SHEETS 2192	SHEET NO. 990
CONTRACT NO. 64B13				
ILLINOIS		FED. AID PROJECT		

FINAL SURVEY	NO.	SURVEYED _____	BY _____	DATE _____
		PLOTTED _____		
NOTE BOOK		TEMPLATE _____		
		AREAS _____		
		AREAS CHECKED _____		

ORIGINAL SURVEY	BY	DATE
NOTE BOOK		
NO.	SURVEYED	
	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

MODEL: P4-39_XS - 2572+50.00 [Sheet]
FILE NAME: p4-39_XS-2572+50.00.dgn



STA 2572+50.00



USER NAME	= tvogler
PLOT SCALE	= 0.16666667 ' / in.
PLOT DATE	= 3/30/2023

DESIGNED	- T.VOGLER
DRAWN	- T.VOGLER
CHECKED	- J.TARDY
DATE	- 03/31/2023

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US 20 STAGE 1

SCALE: N/A	SHEET 19 OF 91 SHEETS	STA. 2572+50.00 TO STA. 2572+50.00
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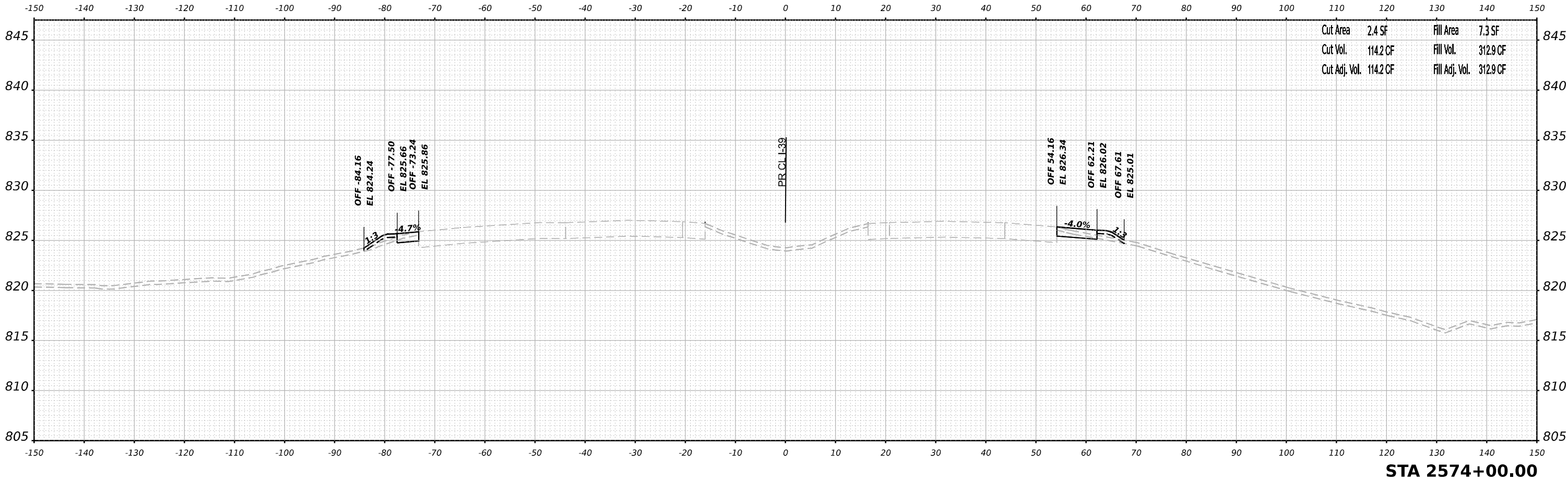
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	991
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
NO. _____	AREAS CHECKED _____		

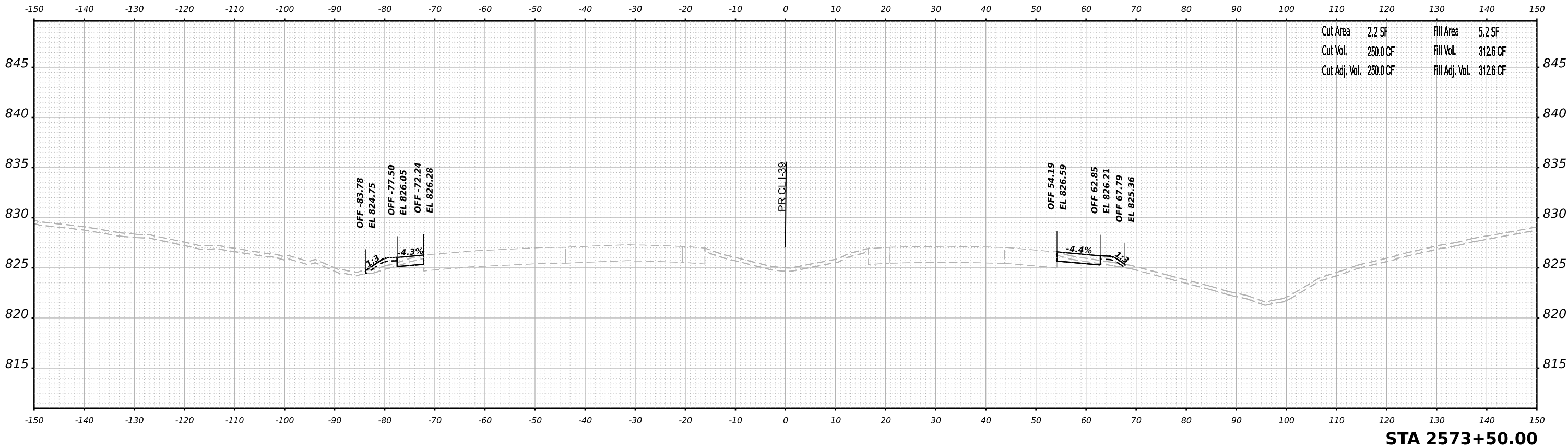


 benesch Alfred Benesch & Company 35 W. Wacker Drive, Suite 3300 Chicago, Illinois 60601 312.665.4150 Job No. 10800.00	USER NAME = tvogler DESIGNED - T.VOGLER REVISED -	DRAWN - T.VOGLER REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS US 20 STAGE 1					F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 0.166666667' / in. CHECKED - J.TARDY REVISED -	DATE - 03/31/2023 REVISED -							39	(201-3)K	WINNEBAGO	2192	992
	SCALE: N/A SHEET 20 OF 91 SHEETS STA. 2573+00.00 TO STA. 2573+00.00					CONTRACT NO. 64B13							
						ILLINOIS FED. AID PROJECT							

FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		



ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		



USER NAME	= tvogler
PLOT SCALE	= 0.16666667 ' / in.
PLOT DATE	= 3/30/2023

DESIGNED	- T.VOGLER
DRAWN	- T.VOGLER
CHECKED	- J.TARDY
DATE	- 03/31/2023

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US 20 STAGE 1

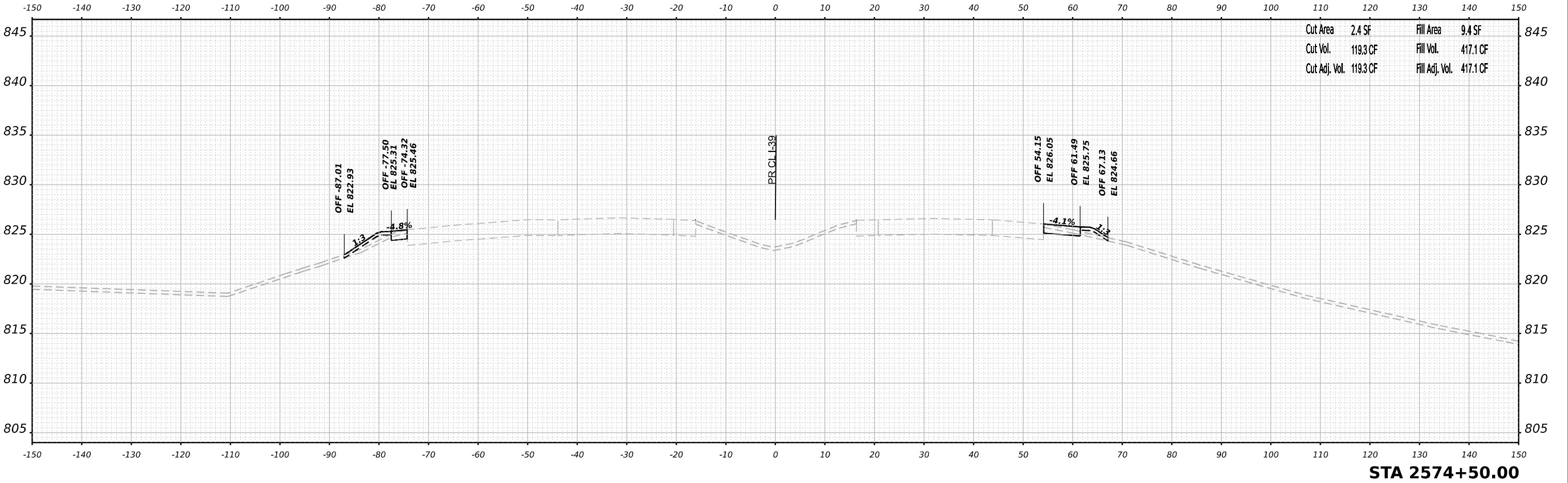
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	993
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SURVEYED _____		BY _____	DATE _____
	PLOTTED _____			
NOTE BOOK	TEMPLATE _____			
	AREAS _____			
NO. _____	AREAS CHECKED _____			

ORIGINAL SURVEY	BY _____	DATE _____
NOTE BOOK	SURVEYED _____	
	PLOTTED _____	
	TEMPLATE _____	
	AREAS _____	
NO. _____	AREAS CHECKED _____	

MODEL: P14-39_XS - 2574+50.00 [Sheet]
FILE NAME: p14-39_XS-2574+50.00.dgn



Alfred Benesch & Company
35 W. Wacker Drive, Suite 3300
Chicago, Illinois 60601
312.465.4150 Job No. 10800.00

USER NAME = tvogler	DESIGNED - T.VOGLER	REVISED -
	DRAWN - T.VOGLER	REVISED -
PLOT SCALE = 0.16666667" / in.	CHECKED - J.TARDY	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

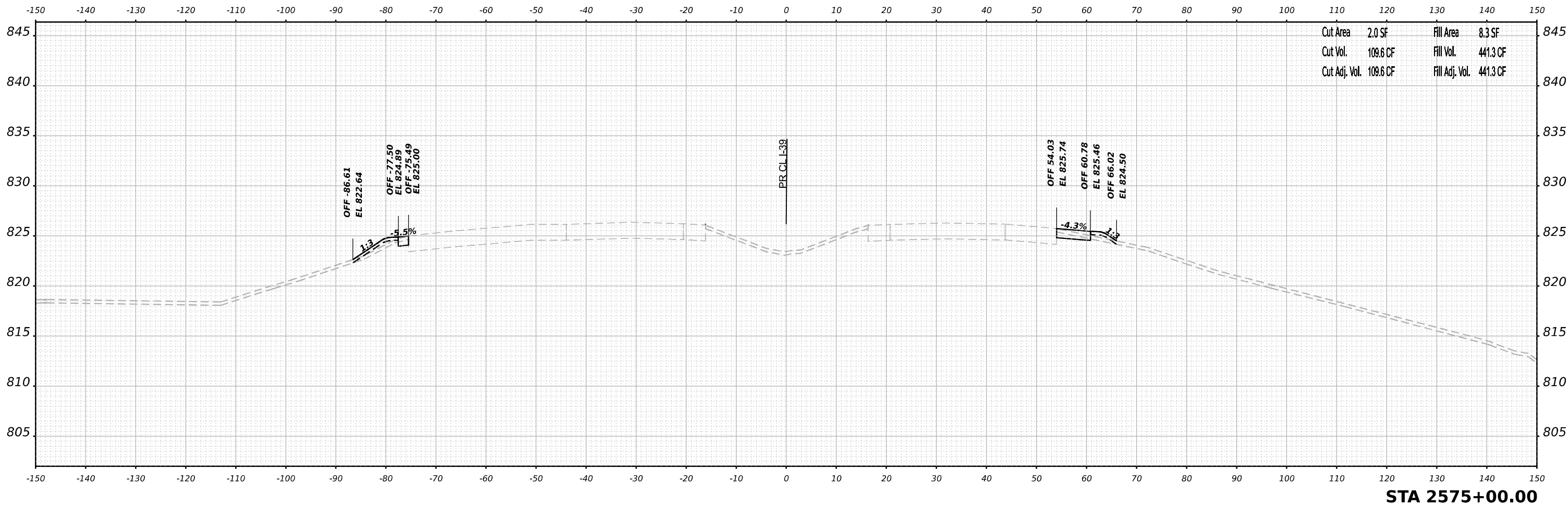
CROSS SECTIONS
US 20 STAGE 1

SCALE: N/A	SHEET 22 OF 91 SHEETS	STA. 2574+50.00 TO STA. 2574+50.00
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F.A.I. RTE. 39	SECTION (201-3)K	COUNTY WINNEBAGO	TOTAL SHEETS 2192	SHEET NO. 994
CONTRACT NO. 64B13				
ILLINOIS		FED. AID PROJECT		

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
NOTE BOOK	TEMPLATE _____	_____	_____
	AREAS _____		
NO. _____	AREAS CHECKED _____	_____	_____

NO.	AREAS CHECKED
MODEL: PR-139_XS - 2575+00.00 [Sheet]	
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STA 2575+00.00



USER NAME = tvogler	DESIGNED - T.VOGLER	REVISED -
	DRAWN - T.VOGLER	REVISED -
PLOT SCALE = 0.16666667 ' / in.	CHECKED - J.TARDY	REVISED -
PLOT DATE = 3/30/2023	DATE - 03/31/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS US 20 STAGE 1

SCALE: N/A	SHEET 23 OF 91 SHEETS	STA. 2575+00.00 TO STA. 2575+00.00
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	995
		CONTRACT NO. 64B13		
ILLINOIS		FED. AID PROJECT		

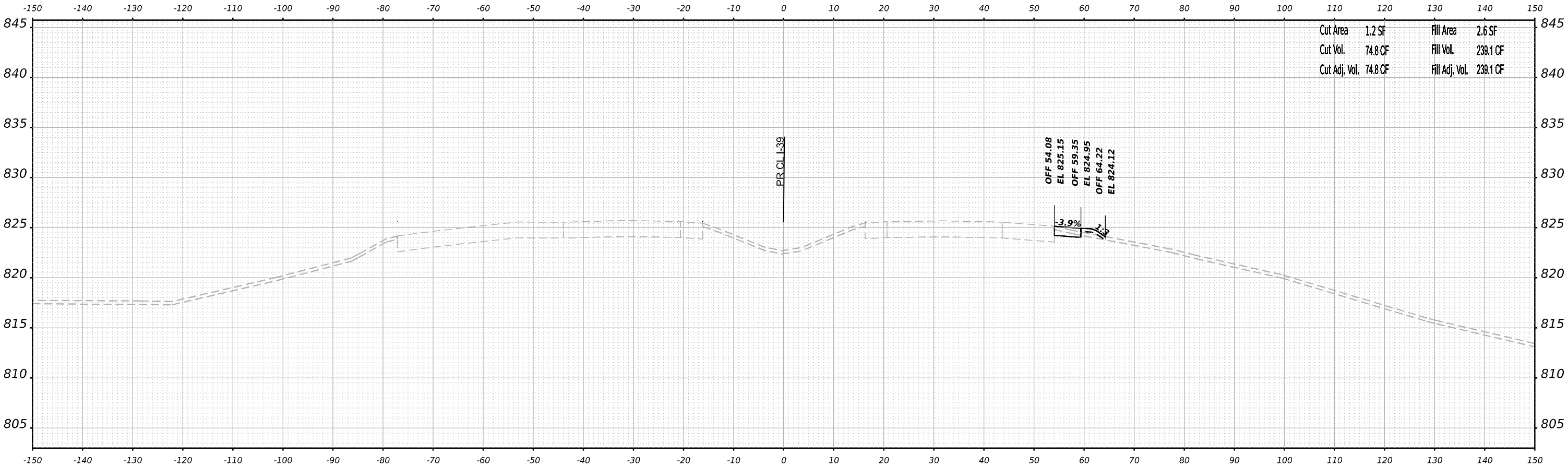
ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
NOTE BOOK	TEMPLATE _____	_____	_____
	AREAS _____		
NO. _____	AREAS CHECKED _____	_____	_____



FINAL SURVEY NOTE BOOK NO.	SURVEYED PLOTTED TEMPLATE AREAS AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NOTE BOOK NO.	SURVEYED PLOTTED TEMPLATE AREAS AREAS CHECKED	BY	DATE

MODEL: P14-39_XS - 2576+00.00 (Sheet)
FILE NAME: p14-39_XS-2576+00.00.dgn



Cut Area	1.2 SF	Fill Area	2.6 SF
Cut Vol.	74.8 CF	Fill Vol.	239.1 CF
Cut Adj. Vol.	74.8 CF	Fill Adj. Vol.	239.1 CF



USER NAME	= tvogler	DESIGNED	- T.VOGLER	REVISED	-
		DRAWN	- T.VOGLER	REVISED	-
PLOT SCALE	= 0.16666667 ' / in.	CHECKED	- J.TARDY	REVISED	-
PLOT DATE	= 3/30/2023	DATE	- 03/31/2023	REVISED	-

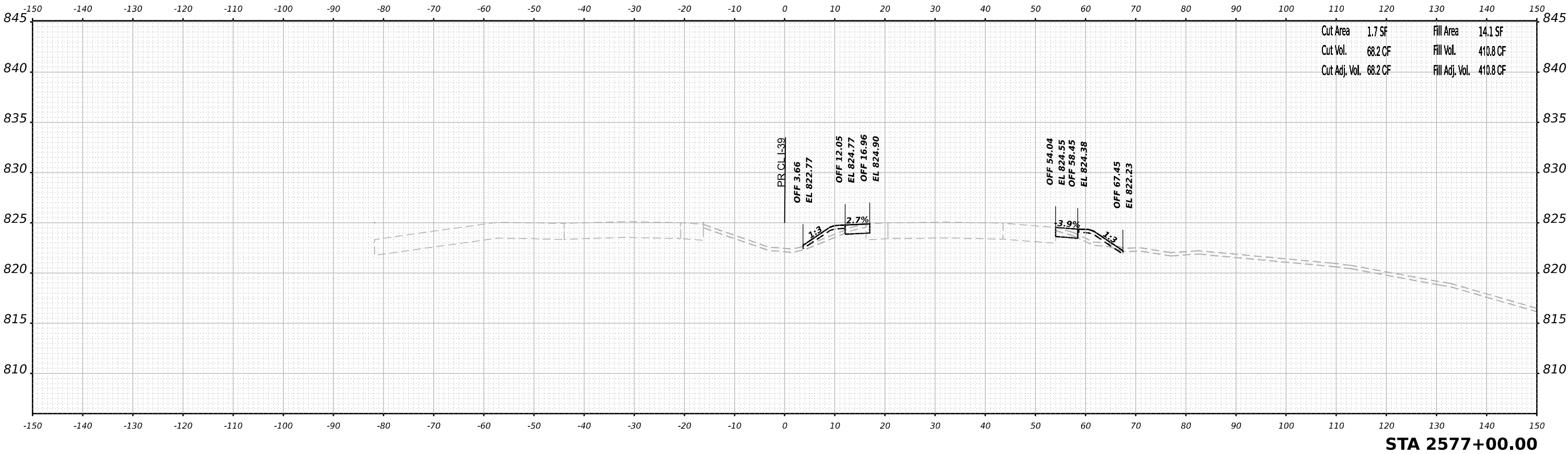
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US 20 STAGE 1

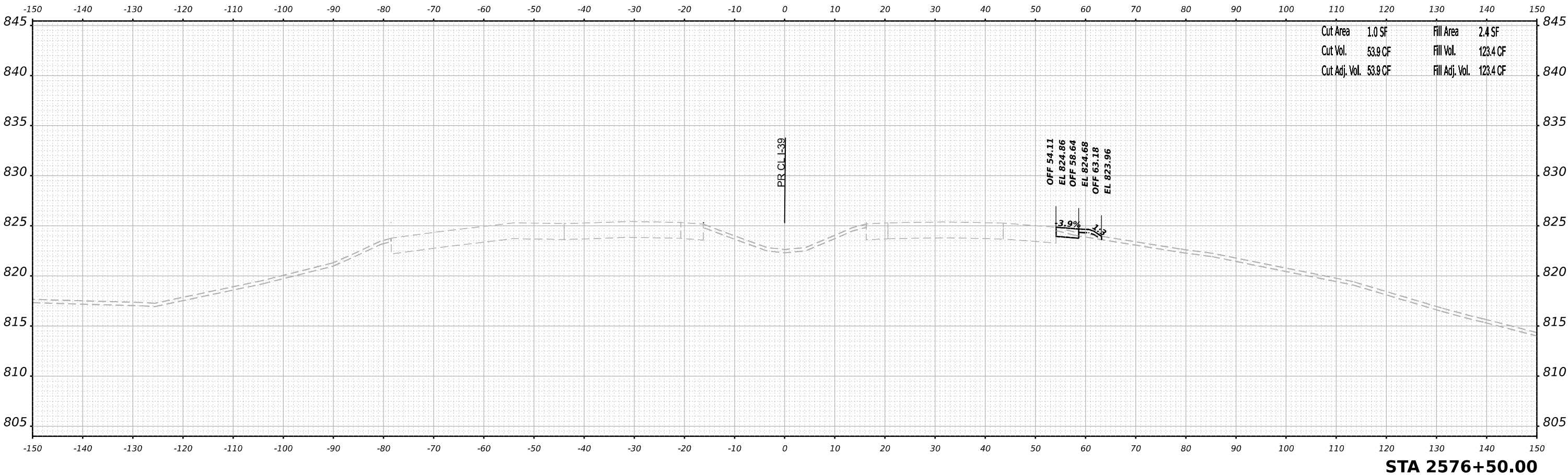
SCALE: N/A	SHEET 25 OF 91 SHEETS	STA. 2576+00.00 TO STA. 2576+00.00
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	997
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE



ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE



MODEL: P14-39_XS - 2576+50.00 [Sheet]

FILE NAME: p14-39-XS-2576+50.00.dgn



USER NAME = tvogler
DRAWN - T.VOGLER
CHECKED - J.TARDY
DATE - 03/31/2023

DESIGNED - T.VOGLER
DRAWN - T.VOGLER
CHECKED - J.TARDY
DATE - 03/31/2023

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US 20 STAGE 1

SCALE: N/A SHEET 26 OF 91 SHEETS STA. 2576+50.00 TO STA. 2577+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	998
CONTRACT NO. 64B13				

ILLINOIS FED. AID PROJECT

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
NOTE BOOK	TEMPLATE _____	_____	_____
	AREAS _____		
NO. _____	AREAS CHECKED _____	_____	_____

Profile view of STA 2578+00.00 showing elevation (EL) versus stationing. The profile includes a dashed line for the existing ground and a solid line for the proposed road grade. Key data points include:

- OFF 1.46, EL 823.66
- OFF 8.04, EL 824.00
- OFF 16.66, EL 824.27
- OFF 54.04, EL 823.96
- OFF 65.53, EL 823.56
- OFF 78.65, EL 819.97

Slopes are indicated as 3.2%, -3.5%, and 1.3%.

Summary statistics:

Category	Value
Cut Area	1.7 SF
Cut Vol.	85.7 CF
Cut Adj. Vol.	85.7 CF
Fill Area	37.1 SF
Fill Vol.	1,789.7 CF
Fill Adj. Vol.	1,789.7 CF

Profile view of STA 2577+50.00 showing elevation (EL) and stationing (STA). The profile includes a dashed line for the existing ground and a solid line for the proposed road grade. Key data points include:

- OFF -3.34, EL 822.19, PRCL L39 at station 0
- OFF 5.22, EL 824.25 at station 10
- OFF 16.81, EL 824.59 at station 20
- OFF 54.02, EL 824.24 at station 55
- OFF 62.40, EL 823.92 at station 65
- OFF 75.10, EL 820.48 at station 75

Slopes are indicated as 1:3, 3.0%, and -3.8%.

Summary statistics at the top right:

Category	Value
Cut Area	1.7 SF
Cut Vol.	85.9 CF
Cut Adj. Vol.	85.9 CF
Fill Area	34.5 SF
Fill Vol.	1,215.0 CF
Fill Adj. Vol.	1,215.0 CF

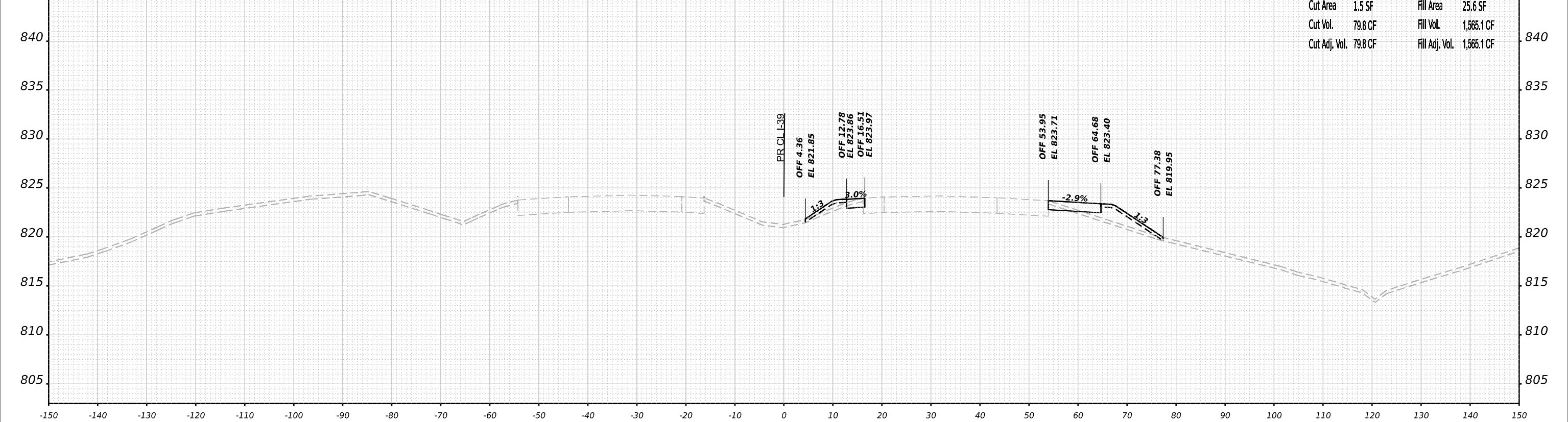


benesch
 Allied Benesch & Company
 35, W Wacker Drive, Suite 3300
 Chicago, Illinois 60601
 312-565-0450 Job No. 10809,00

FINAL SURVEY NO. _____	SURVEYED PLOTTED AREAS CHECKED	BY _____	DATE _____

ORIGINAL SURVEY NO. _____	SURVEYED PLOTTED AREAS CHECKED	BY _____	DATE _____

MODEL: P4-39_XS - 2578+50.00 [Sheet]
FILE NAME: p4-39_XS-2578+50.00.dgn



Cut Area	1.5 SF	Fill Area	25.6 SF
Cut Vol.	79.8 CF	Fill Vol.	1,565.1 CF
Cut Adj. Vol.	79.8 CF	Fill Adj. Vol.	1,565.1 CF

STA 2578+50.00



USER NAME	= tvogler	DESIGNED	- T.VOGLER	REVISED	-
DRAWN	- T.VOGLER	REVISIONS	-	REVISIONS	-
PLOT SCALE	= 0.16666667 ' / in.	CHECKED	- J.TARDY	REVISIONS	-
PLOT DATE	= 3/30/2023	DATE	- 03/31/2023	REVISIONS	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS US 20 STAGE 1			
SCALE: N/A	SHEET	28	OF 91 SHEETS
STA. 2578+50.00 TO STA. 2578+50.00			

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	(201-3)K	WINNEBAGO	2192	1000
CONTRACT NO. 64B13				
ILLINOIS FED. AID PROJECT				