

72083 #35 3-802 FAP 658 Menard + Mason Sec K(B-1) I+R #5

55

95%
5-1-2003

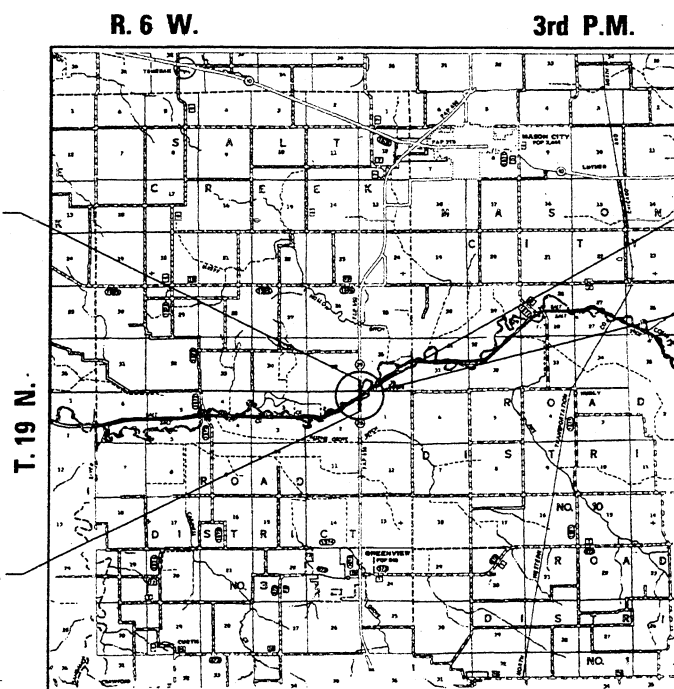
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 658 (IL 29)
SECTION K(B-1)
PROJECT **BRF-F-658 (21)**
MENARD & MASON COUNTIES
C-96-504-01

FOR INDEX OF SHEETS, SEE SHEET NO 2

IMPROVEMENT ENDS
STA. 784 + 50

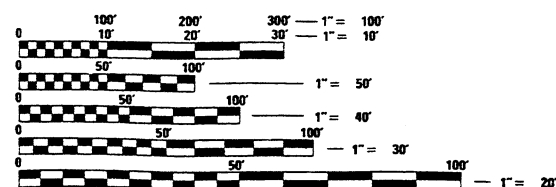
IMPROVEMENT BEGINS
STA. 732 + 50



PROJECT LOCATION
BRIDGE REPLACEMENT
IL. 29 OVER SALT CREEK
SN# 065-0001

LOCATION MAP

GROSS LENGTH = 5200 FT. = 0.985 MILES
NET LENGTH = 5200 FT. = 0.985 MILES



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS
ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

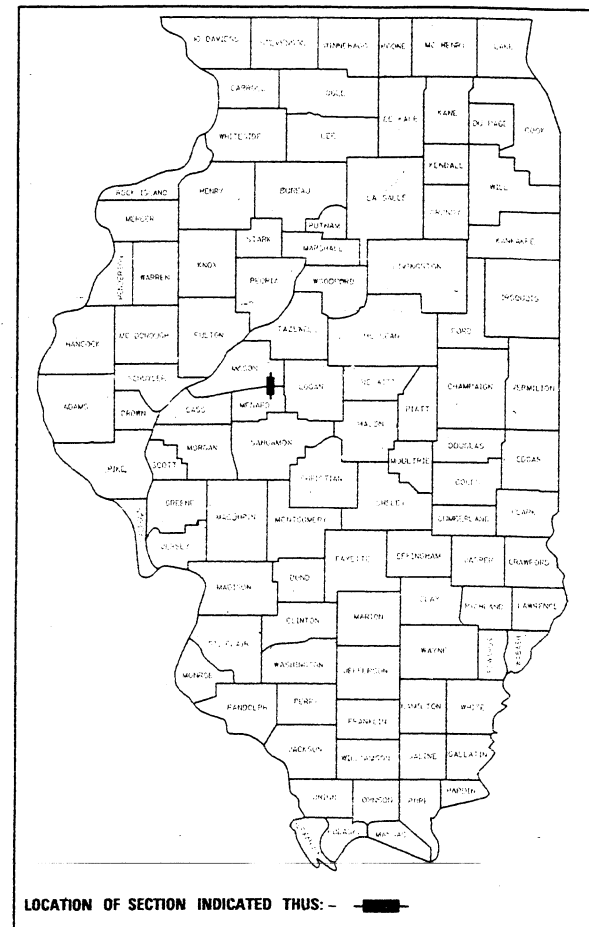
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-392-0123

CONTRACT NO. 72083

065-0501

F.A.P.
RTE. 658
SECTION K(B-1)
COUNTY
TOTAL SHEETS 198
SHEET NO. 1

D96-542-97



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED February 1, 2002
Michael R. Klein
DISTRICT ENGINEER

February 1, 2002
Michael R. Klein
ENGINEER OF DESIGN AND ENVIRONMENT

February 1, 2002
James R. Sautel
DIRECTOR, DIVISION OF HIGHWAYS

DESIGN DESIGNATION

ADT 2,200 (1999) 2,800 (2022)
92.5% PV 7.5% TRUCKS



Philip J. Mator
SIGNATURE

EXPIRATION DATE NOV. 30, 2003

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

6-264

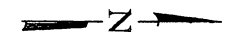
REVISED 11/19/01
REVISED 12/18/01

065-0501

No salvage.

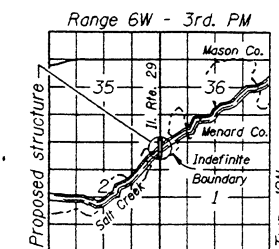
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 658	K(B-1)	MENARD	198	34
FED. ROAD DIST. NO. 7		ALLINGS	FED. AID PROJECT-	

SHEET NO. 1
62 SHEETS



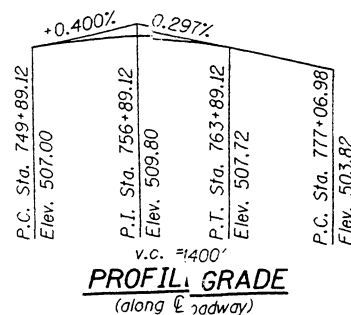
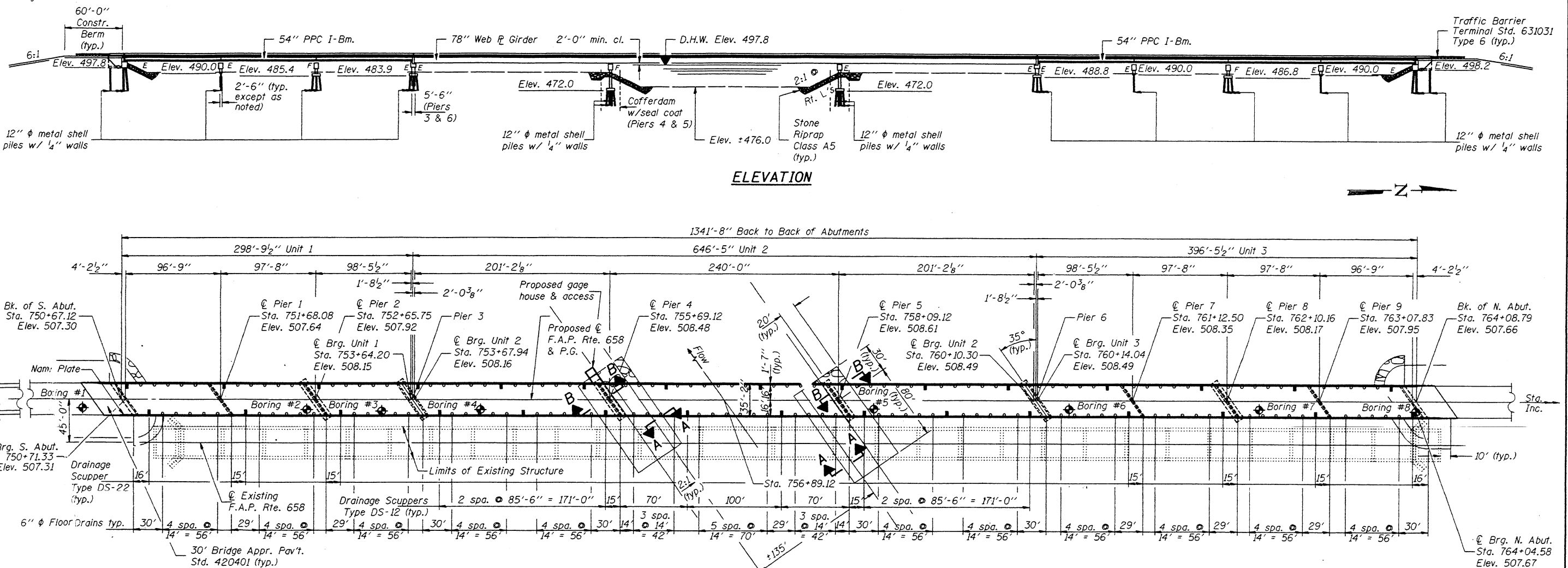
$f'_c = 3,500 \text{ psi}$
 $f_y = 60,000 \text{ psi (reinforcement)}$
 $f_y = 50,000 \text{ psi (AASHTO M270 Grade 50W)}$
PRECAST PRESTRESSED UNITS
 $f'_c = 6,000 \text{ psi}$
 $f'_{ci} = 5,000 \text{ psi}$
 $f'_s = 270,000 \text{ psi } (1/2" \phi \text{ low lax. strands})$
 $f_{si} = 201,960 \text{ psi } (1/2" \phi \text{ low lax. strands})$

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 4.6%g
Site Coefficient (S) = 1.5



LOCATION SKETCH

GENERAL PLAN
ILLINOIS ROUTE 29 OVER
SALT CREEK
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501



DESIGNED *Mike J.*
CHECKED *Chad E. Hall*
DRAWN *R. Doty/h.t. pangs*
CHECKED *AST CEH*

Feb. 4, 2002

EXAMINED *Thomas J. Young*
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph J. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES



EXPIRES 11-30-2002

Drainage Area = 1084.0 sq. mi. Low Grade Elev. 367.5 @ Sta.									
Flood Design Base Overlapping Max. Calc	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater Elev.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
	50	40850	8521	9240	497.8	0.4	0.4	498.2	498.8
	100	46900	95.03	10246	498.8	0.4	0.4	499.2	499.8
	-	-	-	-	-	-	-	-	-
	500	60600	10587	11492	499.9	0.5	0.5	500.4	500.9

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. 2
FAP 658	K(B-1)	MENARD	198	35	62 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

GENERAL NOTES

Fasteners shall be high strength bolts AASHTO M 164, Type 3. Bolts $\frac{7}{8}$ " ϕ , open holes $\frac{9}{16}$ " ϕ unless otherwise noted.

Calculated weight of Structural Steel = 1,078,650 Pound (AASHTO M 270 Gr. 50W). All structural steel shall be AASHTO M 270 Grade 50W except expansion joint plates and attached bars which shall be AASHTO M 270 Grade 36.

Expansion joint plates and attached bars shall be shop painted with the inorganic zinc rich primer.

Field welding of construction accessories will not be permitted to the bottom flange of girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before bolting cross frames over supports.

The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50W.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the tension flanges, webs and all splice plate material of the steel girders except fill plates.

Reinforcement bars shall conform to the requirements of AASHTO M 31, M 42 or M 53 Grade 60.

The Contractor shall drive one (1) Metal Shell test pile in a permanent location at each abutment and piers 1, 4, 5, 7 and 9 as directed by the Engineer before ordering the remainder of piles.

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ ". Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, two $\frac{1}{8}$ " adjusting shims shall be provided for each bearing and placed as detailed.

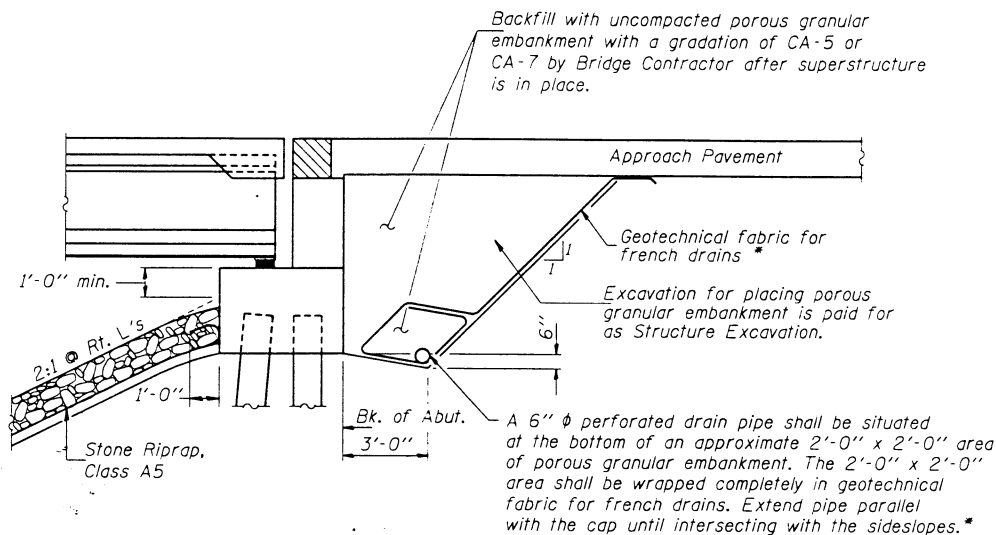
Bridge Seat Sealer shall be applied to the seat area of both abutments and piers 3 and 6.

When the deck pour is stopped for the day at one or more of the Transverse Bonded Construction Joints in the deck Pouring Sequence as shown, the next pour shall not be made until both the following requirements are met:

- At least 72 hours shall have elapsed from the end of the previous pour.
- The concrete strength shall have attained a minimum modulus of rupture of 650 psi, or a minimum compressive strength of 3500 psi.

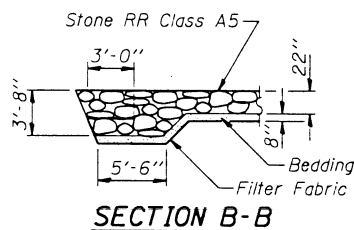
AASHTO M 270 Grade 50W structural steel shall only be painted, for a distance of three times the depth of the beams or girders (but not exceeding 10 feet) each way from the deck joints. All structural steel shall be cleaned as specified in the special provision for "Surface Preparation and Painting Requirements for Weathering Steel". All bearings of Unit 2 shall be painted with a top coat of the color specified in the special provision for "Surface Preparation and Painting Requirements for Weathering Steel".

The SSPC-QP1 painting contractor certification will not be required for this bridge.



SECTION THRU ABUTMENT

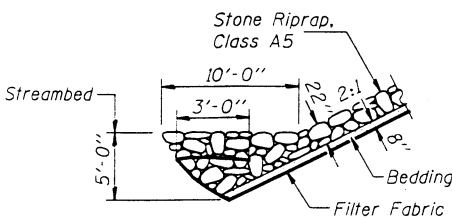
(Horiz. Dimensions @ Rt. L's)



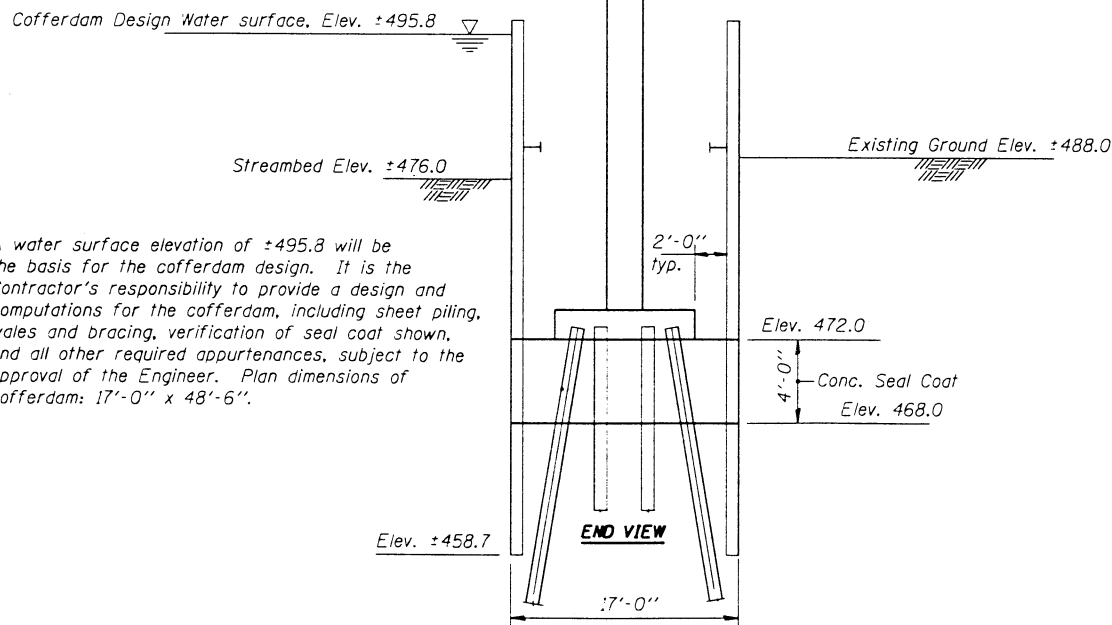
STATION 756+89.12
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RT. 658 SECTION K(B-1)
F.A. PROJECT:
LOADING HS20-44
STR. NO. 065-0501

NAME PLATE

See Std. 515001



SECTION A-A



A water surface elevation of ± 495.8 will be the basis for the cofferdam design. It is the Contractor's responsibility to provide a design and computations for the cofferdam, including sheet piling, wales and bracing, verification of seal coat shown, and all other required appurtenances, subject to the approval of the Engineer. Plan dimensions of cofferdam: 17'-0" x 48'-6".

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each	1		1
Structure Excavation	Cu. Yd.		472	472
Porous Granular Embankment	Cu. Yd.		176	176
Drainage Scuppers, DS-12	Each	16		16
Drainage Scuppers, DS-22	Each	14		14
Floor Drains	Each	138		138
Protective Coat	Sq. Yd.	5863		5863
High Perf. Concrete Superstructure	Cu. Yd.	1527.5		1527.5
Concrete Structures	Cu. Yd.		1137	1137
Furnishing and Erecting Precast Prestressed Concrete I Beams, 54"	Foot	4101.5		4101.5
Neoprene Expansion Joint 2 1/2"	Foot	83		83
Neoprene Expansion Joint 4"	Foot	41.5		41.5
Elastomeric Bearing Assembly, Type I	Each	42		42
Elastomeric Bearing Assembly, Type II	Each	18		18
Floating Bearings, Guided Expansion, (250 kip)	Each	8		8
Floating Bearings, Guided Expansion, (700 kip)	Each	4		4
Floating Bearings, Fixed, (700 kip)	Each	4		4
Furnishing & Erecting Structural Steel	L.S.	1		1
Stud Shear Connectors	Each	3504		3504
Reinforcement Bars, Epoxy Coated	Pound	366450	102970	469420
Stone Riprap Class A5	Sq. Yd.		2250	2250
Filter Fabric for use with Riprap	Sq. Yd.		2250	2250
Name Plates	Each	1		1
Bridge Deck Grooving	Sq. Yd.	4450		4450
Furnishing Metal Pile Shells 12"	Foot		21160	21160
Driving and Filling Shells	Foot		21160	21160
Test Pile Metal Shells	Each		7	7
Bridge Seat Sealer	Sq. Ft.		757	757
Cofferdam (Pier 4)	Each		1	1
Cofferdam (Pier 5)	Each		1	1
Seal Coat Concrete	Cu. Yd.		244.3	244.3
Cofferdam Excavation	Cu. Yd.		1221.5	1221.5
Modular Expansion Joint 9"	Foot	41.5		41.5
Gage House and Access	L.S.	1		1
Trial Batch	Each	1		1
Bar Splicers	Each	80		80
Class SI Concrete Encasement	Cu. Yd.		15	15

GENERAL DATA

F.A.P. ROUTE 658 - SECTION K(B-1)

MENARD COUNTY

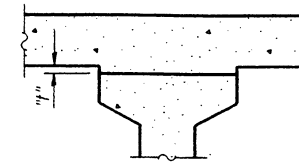
STATION 756+89.12

STRUCTURE NO. 065-0501

DESIGNED	Mike J. Treilo
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

EXAMINED	Thomas J. Domagala
PASSED	Ralph E. Anderson
APPROVED	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 62 SHEETS
FAP 658	K(18-1)	MENARD	198	36	
FED. ROAD DIST. NO. 7	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 below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" minus slab thickness, equals the fillet heights "t" above top flanges of beams.



Feb. 4, 2082

EXAMINED *Thomas J. Domagala*
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED

TOP OF SLAB ELEVATIONS
SPANS 1 THRU 3
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FAP 658	K(B-1)	MENARD	198	37
SHEET NO. 4				
62 SHEETS				
FED. ROAD DIST. NO. 7				
ILLINOIS				
FED. NO. PROJECT				

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	75056.909	-14.583	507.018	507.018
CL Brg S. Abut	75061.117	-14.583	507.034	507.034
A	75071.117	-14.583	507.070	507.100
B	75081.117	-14.583	507.106	507.166
C	75091.117	-14.583	507.141	507.221
D	75101.117	-14.583	507.176	507.269
E	75111.117	-14.583	507.210	507.312
F	75121.117	-14.583	507.243	507.333
G	75131.117	-14.583	507.277	507.353
H	75141.117	-14.583	507.309	507.360
I	75151.117	-14.583	507.341	507.362
CL Pier 1	75157.867	-14.583	507.363	507.363
J	75167.867	-14.583	507.394	507.424
K	75177.867	-14.583	507.425	507.485
L	75187.867	-14.583	507.455	507.535
M	75197.867	-14.583	507.485	507.578
N	75207.867	-14.583	507.515	507.617
O	75217.867	-14.583	507.544	507.633
P	75227.867	-14.583	507.572	507.649
Q	75237.867	-14.583	507.600	507.652
R	75247.867	-14.583	507.627	507.650
CL Pier 2	75255.534	-14.583	507.648	507.648
S	75265.534	-14.583	507.674	507.704
T	75275.534	-14.583	507.700	507.759
U	75285.534	-14.583	507.726	507.805
V	75295.534	-14.583	507.751	507.843
W	75305.534	-14.583	507.775	507.878
X	75315.534	-14.583	507.799	507.890
Y	75325.534	-14.583	507.823	507.901
Z	75335.534	-14.583	507.846	507.900
AI	75345.534	-14.583	507.868	507.893
CL S. Brg Pier 3	75353.992	-14.583	507.887	507.887

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	75060.993	-8.750	507.138	507.138
CL Brg S. Abut	75065.201	-8.750	507.153	507.153
A	75075.201	-8.750	507.189	507.219
B	75085.201	-8.750	507.225	507.285
C	75095.201	-8.750	507.260	507.340
D	75105.201	-8.750	507.294	507.387
E	75115.201	-8.750	507.328	507.430
F	75125.201	-8.750	507.362	507.451
G	75135.201	-8.750	507.394	507.471
H	75145.201	-8.750	507.427	507.477
I	75155.201	-8.750	507.459	507.479
CL Pier 1	75161.951	-8.750	507.480	507.480
J	75171.951	-8.750	507.511	507.541
K	75181.951	-8.750	507.542	507.602
L	75191.951	-8.750	507.572	507.652
M	75201.951	-8.750	507.602	507.695
N	75211.951	-8.750	507.631	507.734
O	75221.951	-8.750	507.660	507.750
P	75231.951	-8.750	507.688	507.765
Q	75241.951	-8.750	507.715	507.768
R	75251.951	-8.750	507.743	507.766
CL Pier 2	75259.618	-8.750	507.763	507.763
S	75269.618	-8.750	507.789	507.819
T	75279.618	-8.750	507.815	507.874
U	75289.618	-8.750	507.840	507.920
V	75299.618	-8.750	507.865	507.958
W	75309.618	-8.750	507.890	507.993
X	75319.618	-8.750	507.913	508.004
Y	75329.618	-8.750	507.937	508.014
Z	75339.618	-8.750	507.959	508.014
AI	75349.618	-8.750	507.982	508.007
CL S. Brg Pier 3	75358.076	-8.750	508.000	508.000

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	75065.077	-2.917	507.244	507.244
CL Brg S. Abut	75069.285	-2.917	507.259	507.259
A	75079.285	-2.917	507.295	507.325
B	75089.285	-2.917	507.330	507.390
C	75099.285	-2.917	507.365	507.445
D	75109.285	-2.917	507.399	507.492
E	75119.285	-2.917	507.433	507.535
F	75129.285	-2.917	507.466	507.555
G	75139.285	-2.917	507.499	507.575
H	75149.285	-2.917	507.531	507.582
I	75159.285	-2.917	507.563	507.583
CL Pier 1	75166.035	-2.917	507.584	507.584
J	75176.035	-2.917	507.615	507.645
K	75186.035	-2.917	507.646	507.705
L	75196.035	-2.917	507.676	507.756
M	75206.035	-2.917	507.705	507.798
N	75216.035	-2.917	507.734	507.837
O	75226.035	-2.917	507.762	507.852
P	75236.035	-2.917	507.790	507.867
Q	75246.035	-2.917	507.818	507.871
R	75256.035	-2.917	507.845	507.868
CL Pier 2	75263.702	-2.917	507.865	507.865
S	75273.702	-2.917	507.891	507.921
T	75283.702	-2.917	507.917	507.976
U	75293.702	-2.917	507.942	508.022
V	75303.702	-2.917	507.966	508.059
W	75313.702	-2.917	507.990	508.094
X	75323.702	-2.917	508.014	508.105
Y	75333.702	-2.917	508.037	508.115
Z	75343.702	-2.917	508.060	508.114
AI	75353.702	-2.917	508.082	508.107
CL S. Brg Pier 3	75362.160	-2.917	508.100	508.100

ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	75067.120	0.000	507.297	507.297
CL Brg S. Abut	75071.328	0.000	507.312	507.312
A	75081.328	0.000	507.348	507.378
B	75091.328	0.000	507.383	507.443
C	75101.328	0.000	507.417	507.498
D	75111.328	0.000	507.452	507.545
E	75121.328	0.000	507.485	507.587
F	75131.328	0.000	507.518	507.608
G	75141.328	0.000	507.551	507.627
H	75151.328	0.000	507.583	507.634
I	75161.328	0.000	507.615	507.635
CL Pier 1	75168.078	0.000	507.636	507.636
J	75178.078	0.000	507.667	507.697
K	75188.078	0.000	507.697	507.757
L	75198.078	0.000	507.727	507.807
M	75208.078	0.000	507.756	507.849
N	75218.078	0.000	507.785	507.888
O	75228.078	0.000	507.814	507.904
P	75238.078	0.000	507.842	507.919
Q	75248.078	0.000	507.869	507.922
R	75258.078	0.000	507.896	507.919
CL Pier 2	75265.745	0.000	507.916	507.916
S	75275.745	0.000	507.942	507.972
T	75285.745	0.000	507.967	508.027
U	75295.745	0.000	507.992	508.072
V	75305.745	0.000	508.017	508.109
W	75315.745	0.000	508.041	508.144
X	75325.745	0.000	508.064	508.155
Y	75335.745	0.000	508.087	508.165
Z	75345.745	0.000	508.110	508.165
AI	75355.745	0.000	508.132	508.157
CL S. Brg Pier 3	75364.203	0.000	508.150	508.150

TOP OF SLAB ELEVATIONS
SPANS 1 THRU 3
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

EXAMINED	Feb. 4, 2002
PASSED	Thomas J. Romagosa
APPROVED	Rafael A. Anderson

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5
FAP 658	K(B)-1	MENARD	198	38	62 SHEETS
FED. ROAD DIST. NO. 7		BLANK	FED. ROAD PROJECT		

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	75069.163	2.917	507.259	507.259
CL Brg S. Abut	75073.371	2.917	507.274	507.274
A	75083.371	2.917	507.309	507.339
B	75093.371	2.917	507.344	507.405
C	75103.371	2.917	507.379	507.459
D	75113.371	2.917	507.413	507.506
E	75123.371	2.917	507.447	507.549
F	75133.371	2.917	507.480	507.589
G	75143.371	2.917	507.512	507.588
H	75153.371	2.917	507.544	507.595
I	75163.371	2.917	507.576	507.596
CL Pier 1	75170.121	2.917	507.597	507.597
J	75180.121	2.917	507.628	507.657
K	75190.121	2.917	507.658	507.718
L	75200.121	2.917	507.688	507.768
M	75210.121	2.917	507.717	507.810
N	75220.121	2.917	507.746	507.848
O	75230.121	2.917	507.774	507.864
P	75240.121	2.917	507.802	507.879
Q	75250.121	2.917	507.829	507.882
R	75260.121	2.917	507.856	507.879
CL Pier 2	75267.788	2.917	507.876	507.876
S	75277.788	2.917	507.902	507.931
T	75287.788	2.917	507.927	507.986
U	75297.788	2.917	507.952	508.032
V	75307.788	2.917	507.976	508.069
W	75317.788	2.917	508.000	508.103
X	75327.788	2.917	508.024	508.114
Y	75337.788	2.917	508.046	508.124
Z	75347.788	2.917	508.069	508.124
AI	75357.788	2.917	508.091	508.116
CL S. Brg Pier 3	75366.246	2.917	508.109	508.109

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	75073.247	8.750	507.182	507.182
CL Brg S. Abut	75077.455	8.750	507.197	507.197
A	75087.455	8.750	507.233	507.263
B	75097.455	8.750	507.267	507.328
C	75107.455	8.750	507.302	507.382
D	75117.455	8.750	507.336	507.429
E	75127.455	8.750	507.369	507.471
F	75137.455	8.750	507.402	507.491
G	75147.455	8.750	507.434	507.510
H	75157.455	8.750	507.466	507.517
I	75167.455	8.750	507.497	507.518
CL Pier 1	75174.205	8.750	507.518	507.518
J	75184.205	8.750	507.549	507.579
K	75194.205	8.750	507.579	507.639
L	75204.205	8.750	507.608	507.689
M	75214.205	8.750	507.638	507.730
N	75224.205	8.750	507.666	507.769
O	75234.205	8.750	507.694	507.784
P	75244.205	8.750	507.722	507.799
Q	75254.205	8.750	507.749	507.801
R	75264.205	8.750	507.775	507.798
CL Pier 2	75271.872	8.750	507.795	507.795
S	75281.872	8.750	507.821	507.851
T	75291.872	8.750	507.846	507.905
U	75301.872	8.750	507.871	507.951
V	75311.872	8.750	507.895	507.987
W	75321.872	8.750	507.919	508.022
X	75331.872	8.750	507.942	508.032
Y	75341.872	8.750	507.965	508.042
Z	75351.872	8.750	507.987	508.041
AI	75361.872	8.750	508.008	508.033
CL S. Brg Pier 3	75370.330	8.750	508.026	508.026

BEAM 6

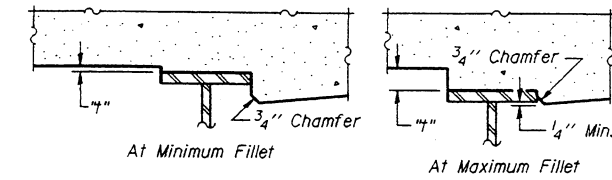
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	75077.331	14.583	507.092	507.092
CL Brg S. Abut	75081.539	14.583	507.107	507.107
A	75091.539	14.583	507.142	507.172
B	75101.539	14.583	507.177	507.237
C	75111.539	14.583	507.211	507.292
D	75121.539	14.583	507.245	507.338
E	75131.539	14.583	507.278	507.380
F	75141.539	14.583	507.311	507.400
G	75151.539	14.583	507.343	507.419
H	75161.539	14.583	507.374	507.425
I	75171.539	14.583	507.406	507.426
CL Pier 1	75178.289	14.583	507.426	507.426
J	75188.289	14.583	507.457	507.487
K	75198.289	14.583	507.487	507.546
L	75208.289	14.583	507.516	507.596
M	75218.289	14.583	507.545	507.638
N	75228.289	14.583	507.573	507.676
O	75238.289	14.583	507.601	507.691
P	75248.289	14.583	507.628	507.705
Q	75258.289	14.583	507.655	507.708
R	75268.289	14.583	507.681	507.704
CL Pier 2	75275.956	14.583	507.701	507.701
S	75285.956	14.583	507.727	507.756
T	75295.956	14.583	507.752	507.811
U	75305.956	14.583	507.776	507.856
V	75315.956	14.583	507.800	507.893
W	75325.956	14.583	507.824	507.927
X	75335.956	14.583	507.847	507.937
Y	75345.956	14.583	507.869	507.947
Z	75355.956	14.583	507.891	507.946
AI	75365.956	14.583	507.913	507.938
CL S. Brg Pier 3	75374.414	14.583	507.930	507.930

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

EXAMINED	Feb. 4, 2002
PASSED	Thomas J. Damagallo ENGINEER OF BRIDGE DESIGN
APPROVED	Ronald E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
SPANS 1 THRU 3
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

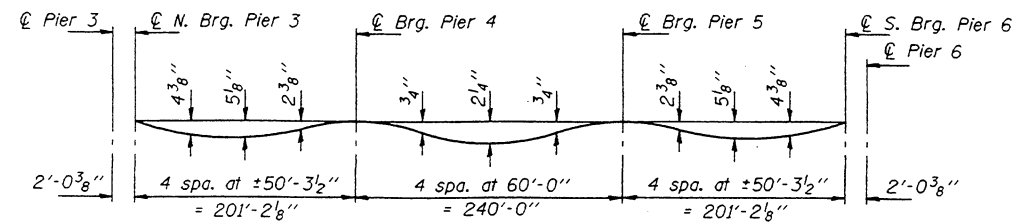
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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" shown below, minus slab thickness, equals the fillet heights "t" above top flange of girders.

FILLET HEIGHTS

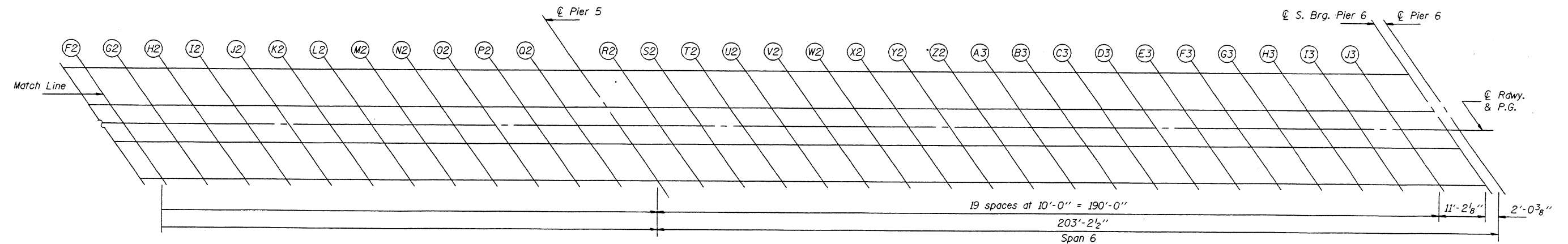
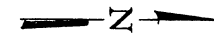
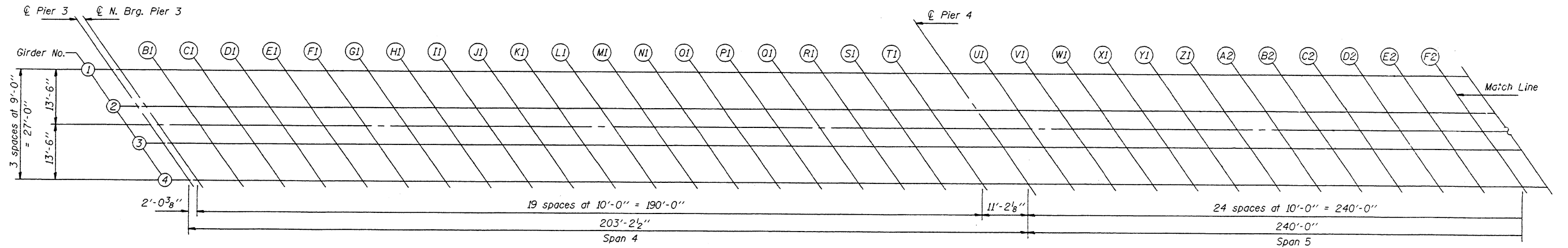
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO. 6
FAP 658	K(B-1)	MENARD	198	39	62 SHEETS
FED. ROAD DIST. NO. 7					



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 as shown on sheets 7 & 8 of 62.



PLAN

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

EXAMINED	Thomas J. Donaghy
PASSED	Rafael E. Anderson
APPROVED	

Feb. 4, 2002

TOP OF SLAB ELEVATIONS
SPANS 4 THRU 6
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET TOTAL
FAP 658	KIB-D	MENARD	198	40	62 SHEETS
FED. ROAD DIST. NO. 7		ALIGNED	FED. ROAD PROJECT		

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL N. Brg Pier 3	75358.487	-13.500	507.919	507.919
B1	75368.487	-13.500	507.941	508.013
C1	75378.487	-13.500	507.961	508.106
D1	75388.487	-13.500	507.982	508.198
E1	75398.487	-13.500	508.002	508.291
F1	75408.487	-13.500	508.021	508.382
G1	75418.487	-13.500	508.040	508.415
H1	75428.487	-13.500	508.058	508.445
I1	75438.487	-13.500	508.076	508.475
J1	75448.487	-13.500	508.093	508.505
K1	75458.487	-13.500	508.110	508.534
L1	75468.487	-13.500	508.127	508.509
M1	75478.487	-13.500	508.143	508.480
N1	75488.487	-13.500	508.158	508.451
O1	75498.487	-13.500	508.173	508.421
P1	75508.487	-13.500	508.187	508.390
Q1	75518.487	-13.500	508.201	508.364
R1	75528.487	-13.500	508.215	508.338
S1	75538.487	-13.500	508.227	508.311
T1	75548.487	-13.500	508.240	508.284
CL Pier 4	75559.664	-13.500	508.253	508.253
U1	75569.664	-13.500	508.265	508.275
V1	75579.664	-13.500	508.275	508.297
W1	75589.664	-13.500	508.286	508.319
X1	75599.664	-13.500	508.296	508.339
Y1	75609.664	-13.500	508.305	508.360
Z1	75619.664	-13.500	508.314	508.380
A2	75629.664	-13.500	508.322	508.407
B2	75639.664	-13.500	508.330	508.435
C2	75649.664	-13.500	508.337	508.462
D2	75659.664	-13.500	508.344	508.488
E2	75669.664	-13.500	508.351	508.514
F2	75679.664	-13.500	508.356	508.539
G2	75689.664	-13.500	508.362	508.525
H2	75699.664	-13.500	508.367	508.510
I2	75709.664	-13.500	508.371	508.495
J2	75719.664	-13.500	508.375	508.480
K2	75729.664	-13.500	508.378	508.464
L2	75739.664	-13.500	508.381	508.447
M2	75749.664	-13.500	508.384	508.438
N2	75759.664	-13.500	508.385	508.429
O2	75769.664	-13.500	508.387	508.420
P2	75779.664	-13.500	508.388	508.410
Q2	75789.664	-13.500	508.388	508.399
CL Pier 5	75799.664	-13.500	508.388	508.388
R2	75809.664	-13.500	508.387	508.427
S2	75819.664	-13.500	508.386	508.466
T2	75829.664	-13.500	508.385	508.504
U2	75839.664	-13.500	508.383	508.541
V2	75849.664	-13.500	508.380	508.578
W2	75859.664	-13.500	508.377	508.620
X2	75869.664	-13.500	508.373	508.661
Y2	75879.664	-13.500	508.369	508.701
Z2	75889.664	-13.500	508.365	508.742
A3	75899.664	-13.500	508.360	508.781
B3	75909.664	-13.500	508.354	508.767
C3	75919.664	-13.500	508.348	508.749
D3	75929.664	-13.500	508.341	508.730
E3	75939.664	-13.500	508.334	508.711
F3	75949.664	-13.500	508.327	508.691
G3	75959.664	-13.500	508.319	508.616
H3	75969.664	-13.500	508.310	508.535
I3	75979.664	-13.500	508.301	508.454
J3	75989.664	-13.500	508.291	508.372
CL S. Brg Pier 6	76000.841	-13.500	508.280	508.280

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL N. Brg Pier 3	75364.789	-4.500	508.081	508.081
B1	75374.789	-4.500	508.102	508.174
C1	75384.789	-4.500	508.123	508.267
D1	75394.789	-4.500	508.143	508.359
E1	75404.789	-4.500	508.162	508.451
F1	75414.789	-4.500	508.181	508.543
G1	75424.789	-4.500	508.200	508.575
H1	75434.789	-4.500	508.218	508.605
I1	75444.789	-4.500	508.236	508.635
J1	75454.789	-4.500	508.253	508.664
K1	75464.789	-4.500	508.269	508.693
L1	75474.789	-4.500	508.285	508.667
M1	75484.789	-4.500	508.301	508.638
N1	75494.789	-4.500	508.316	508.608
O1	75504.789	-4.500	508.330	508.578
P1	75514.789	-4.500	508.345	508.548
Q1	75524.789	-4.500	508.358	508.521
R1	75534.789	-4.500	508.371	508.495
S1	75544.789	-4.500	508.384	508.468
T1	75554.789	-4.500	508.396	508.440
CL Pier 4	75565.966	-4.500	508.409	508.409
U1	75575.966	-4.500	508.420	508.431
V1	75585.966	-4.500	508.430	508.452
W1	75595.966	-4.500	508.440	508.473
X1	75605.966	-4.500	508.450	508.494
Y1	75615.966	-4.500	508.459	508.514
Z1	75625.966	-4.500	508.467	508.533
A2	75635.966	-4.500	508.476	508.561
B2	75645.966	-4.500	508.483	508.588
C2	75655.966	-4.500	508.490	508.614
D2	75665.966	-4.500	508.497	508.640
E2	75675.966	-4.500	508.503	508.666
F2	75685.966	-4.500	508.508	508.691
G2	75695.966	-4.500	508.513	508.676
H2	75705.966	-4.500	508.518	508.662
I2	75715.966	-4.500	508.522	508.646
J2	75725.966	-4.500	508.526	508.630
K2	75735.966	-4.500	508.529	508.614
L2	75745.966	-4.500	508.531	508.597
M2	75755.966	-4.500	508.533	508.588
N2	75765.966	-4.500	508.535	508.579
O2	75775.966	-4.500	508.536	508.569
P2	75785.966	-4.500	508.536	508.558
Q2	75795.966	-4.500	508.537	508.548
CL Pier 5	75805.966	-4.500	508.536	508.536
R2	75815.966	-4.500	508.535	508.575
S2	75825.966	-4.500	508.534	508.613
T2	75835.966	-4.500	508.532	508.651
U2	75845.966	-4.500	508.529	508.688
V2	75855.966	-4.500	508.527	508.725
W2	75865.966	-4.500	508.523	508.766
X2	75875.966	-4.500	508.519	508.807
Y2	75885.966	-4.500	508.515	508.847
Z2	75895.966	-4.500	508.510	508.887
A3	75905.966	-4.500	508.505	508.926
B3	75915.966	-4.500	508.499	508.911
C3	75925.966	-4.500	508.492	508.893
D3	75935.966	-4.500	508.485	508.874
E3	75945.966	-4.500	508.478	508.854
F3	75955.966	-4.500	508.470	508.835
G3	75965.966	-4.500	508.462	508.759
H3	75975.966	-4.500	508.453	508.678
I3	75985.966	-4.500	508.443	508.596
J3	75995.966	-4.500	508.434	508.514
CL S. Brg Pier 6	76007.143	-4.500	508.422	508.422

ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL N. Brg Pier 3	75367.940	0.000	508.158	508.158
B1	75377.940	0.000	508.179	508.251
C1	75387.940	0.000	508.199	508.344
D1	75397.940	0.000	508.219	508.436
E1	75407.940	0.000	508.239	508.528
F1	75417.940	0.000	508.258	508.619
G1	75427.940	0.000	508.276	508.651
H1	75437.940	0.000	508.294	508.681
I1	75447.940	0.000	508.311	508.711
J1	75457.940	0.000	508.328	508.740
K1	75467.940	0.000	508.345	508.768
L1	75477.940	0.000	508.360	508.743
M1	75487.940	0.000	508.376	508.713
N1	75497.940	0.000	508.391	508.683
O1	75507.940	0.000	508.405	508.653
P1	75517.940	0.000	508.419	508.622
Q1	75527.940	0.000	508.436	508.593
R1	75537.940	0.000	508.445	508.569
S1	75547.940	0.000	508.458	508.542
T1	75557.940	0.000	508.470	508.514
CL Pier 4	75569.117	0.000	508.483	508.483
U1	75579.117	0.000	508.493	508.504
V1	75589.117	0.000	508.504	508.526
W1	75599.117	0.000	508.514	508.547
X1	75609.117	0.000	508.523	508.567
Y1	75619.117	0.000	508.532	508.589
Z1	75629.117	0.000	508.540	508.606
A2	75639.117	0.000	508.548	508.634
B2	75649.117	0.000	508.556	508.660
C2	75659.117	0.000	508.563	508.687
D2	75669.117	0.000	508.569	508.713
E2	75679.117	0.000	508.575	508.738
F2	75689.117	0.000	508.580	508.763
G2	75699.117	0.000	508.585	508.748
H2	75709.117	0.000	508.590	508.733
I2	75719.117	0.000	508.593	508.718
J2	75729.117	0.000	508.597	508.702
K2	75739.117	0.000	508.600	508.685
L2	75749.117	0.000	508.602	508.668
M2	75759.117	0.000	508.604	508.659
N2	75769.117	0.000	508.606	508.649
O2	75779.117	0.000	508.606	508.639
P2	75789.117	0.000	508.607	508.629
Q2	75799.117	0.000	508.607	508.618
CL Pier 5	75809.117	0.000	508.606	508.606
R2	75819.117	0.000	508.605	508.645
S2	75829.117	0.000	508.604	508.683
T2	75839.117	0.000	508.601	508.720
U2	75849.117	0.000	508.599	508.757
V2	75859.117	0.000	508.596	508.794
W2	75869.117	0.000	508.592	508.835
X2	75879.117	0.000	508.588	508.876
Y2	75889.117	0.000	508.584	508.916
Z2	75899.117	0.000	508.579	508.955
A3	75909.117	0.000	508.573	508.995
B3	75919.117	0.000	508.567	508.980
C3	75929.117	0.000	508.560	508.961
D3	75939.117	0.000	508.553	508.942
E3	75949.117	0.000	508.546	508.922
F3	75959.117	0.000	508.538	508.902
G3	75969.117	0.000	508.529	508.827
H3	75979.117	0.000	508.520	508.745
I3	75989.117	0.000	508.511	508.664
J3	75999.117	0.000	508.501	508.581
CL S. Brg Pier 6	76010.294	0.000	508.489	508.489

TOP OF SLAB ELEVATIONS
SPANS 4 THRU 6
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

Feb. 4, 2002
EXAMINED *Thomas J. Donagale*
PASSED *Ralph E. Anderson*
APPROVED

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8
FAP 658	KIB-D	MENARD	198	41	62 SHEETS
PED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL N. Brg Pier 3	75371.091	4.500	508.094	508.094
B1	75381.091	4.500	508.115	508.187
C1	75391.091	4.500	508.135	508.280
D1	75401.091	4.500	508.155	508.372
E1	75411.091	4.500	508.174	508.463
F1	75421.091	4.500	508.193	508.554
G1	75431.091	4.500	508.211	508.586
H1	75441.091	4.500	508.229	508.616
I1	75451.091	4.500	508.246	508.646
J1	75461.091	4.500	508.263	508.674
K1	75471.091	4.500	508.279	508.703
L1	75481.091	4.500	508.295	508.777
M1	75491.091	4.500	508.310	508.848
N1	75501.091	4.500	508.325	508.618
O1	75511.091	4.500	508.339	508.587
P1	75521.091	4.500	508.353	508.556
Q1	75531.091	4.500	508.366	508.529
R1	75541.091	4.500	508.379	508.503
S1	75551.091	4.500	508.391	508.475
T1	75561.091	4.500	508.403	508.447
CL Pier 4	75572.268	4.500	508.416	508.416
U1	75582.268	4.500	508.426	508.437
V1	75592.268	4.500	508.437	508.459
W1	75602.268	4.500	508.446	508.479
X1	75612.268	4.500	508.456	508.500
Y1	75622.268	4.500	508.464	508.519
Z1	75632.268	4.500	508.473	508.538
A2	75642.268	4.500	508.480	508.566
B2	75652.268	4.500	508.488	508.592
C2	75662.268	4.500	508.494	508.618
D2	75672.268	4.500	508.501	508.644
E2	75682.268	4.500	508.506	508.669
F2	75692.268	4.500	508.512	508.694
G2	75702.268	4.500	508.516	508.679
H2	75712.268	4.500	508.521	508.664
I2	75722.268	4.500	508.524	508.648
J2	75732.268	4.500	508.529	508.632
K2	75742.268	4.500	508.530	508.616
L2	75752.268	4.500	508.533	508.598
M2	75762.268	4.500	508.534	508.589
N2	75772.268	4.500	508.536	508.579
O2	75782.268	4.500	508.536	508.569
P2	75792.268	4.500	508.537	508.559
Q2	75802.268	4.500	508.536	508.547
CL Pier 5	75812.268	4.500	508.536	508.536
R2	75822.268	4.500	508.534	508.574
S2	75832.268	4.500	508.533	508.612
T2	75842.268	4.500	508.530	508.649
U2	75852.268	4.500	508.528	508.686
V2	75862.268	4.500	508.524	508.722
W2	75872.268	4.500	508.521	508.763
X2	75882.268	4.500	508.517	508.804
Y2	75892.268	4.500	508.512	508.844
Z2	75902.268	4.500	508.507	508.883
A3	75912.268	4.500	508.501	508.922
B3	75922.268	4.500	508.495	508.967
C3	75932.268	4.500	508.488	508.889
D3	75942.268	4.500	508.481	508.869
E3	75952.268	4.500	508.473	508.850
F3	75962.268	4.500	508.465	508.829
G3	75972.268	4.500	508.456	508.754
H3	75982.268	4.500	508.441	508.672
I3	75992.268	4.500	508.437	508.590
J3	76002.268	4.500	508.427	508.508
CL S. Brg Pier 6	76013.445	4.500	508.415	508.415

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL N. Brg Pier 3	75377.393	13.500	507.959	507.959
B1	75387.393	13.500	507.980	508.052
C1	75397.393	13.500	507.999	508.144
D1	75407.393	13.500	508.019	508.236
E1	75417.393	13.500	508.038	508.327
F1	75427.393	13.500	508.056	508.417
G1	75437.393	13.500	508.074	508.449
H1	75447.393	13.500	508.092	508.479
I1	75457.393	13.500	508.109	508.509
J1	75467.393	13.500	508.125	508.536
K1	75477.393	13.500	508.141	508.564
L1	75487.393	13.500	508.156	508.538
M1	75497.393	13.500	508.171	508.509
N1	75507.393	13.500	508.187	508.478
O1	75517.393	13.500	508.200	508.448
P1	75527.393	13.500	508.213	508.416
Q1	75537.393	13.500	508.226	508.389
R1	75547.393	13.500	508.239	508.362
S1	75557.393	13.500	508.251	508.334
T1	75567.393	13.500	508.262	508.306
CL Pier 4	75578.570	13.500	508.274	508.274
U1	75588.570	13.500	508.285	508.296
V1	75598.570	13.500	508.295	508.316
W1	75608.570	13.500	508.304	508.337
X1	75618.570	13.500	508.313	508.357
Y1	75628.570	13.500	508.321	508.376
Z1	75638.570	13.500	508.329	508.395
A2	75648.570	13.500	508.337	508.422
B2	75658.570	13.500	508.345	508.448
C2	75668.570	13.500	508.350	508.474
D2	75678.570	13.500	508.356	508.499
E2	75688.570	13.500	508.361	508.524
F2	75698.570	13.500	508.365	508.549
G2	75708.570	13.500	508.371	508.534
H2	75718.570	13.500	508.375	508.518
I2	75728.570	13.500	508.378	508.502
J2	75738.570	13.500	508.381	508.486
K2	75748.570	13.500	508.385	508.469
L2	75758.570	13.500	508.385	508.451
M2	75768.570	13.500	508.387	508.442
N2	75778.570	13.500	508.388	508.432
O2	75788.570	13.500	508.388	508.421
P2	75798.570	13.500	508.388	508.410
Q2	75808.570	13.500	508.388	508.399
CL Pier 5	75818.570	13.500	508.387	508.387
R2	75828.570	13.500	508.385	508.425
S2	75838.570	13.500	508.383	508.462
T2	75848.570	13.500	508.380	508.499
U2	75858.570	13.500	508.377	508.536
V2	75868.570	13.500	508.374	508.572
W2	75878.570	13.500	508.370	508.612
X2	75888.570	13.500	508.365	508.653
Y2	75898.570	13.500	508.360	508.692
Z2	75908.570	13.500	508.355	508.731
A3	75918.570	13.500	508.349	508.770
B3	75928.570	13.500	508.342	508.755
C3	75938.570	13.500	508.335	508.736
D3	75948.570	13.500	508.328	508.716
E3	75958.570	13.500	508.320	508.696
F3	75968.570	13.500	508.311	508.675
G3	75978.570	13.500	508.302	508.650
H3	75988.570	13.500	508.293	508.618
I3	75998.570	13.500	508.283	508.586
J3	76008.570	13.500	508.272	508.553
CL S. Brg Pier 6	76019.747	13.500	508.260	508.260

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

Feb. 4, 2002

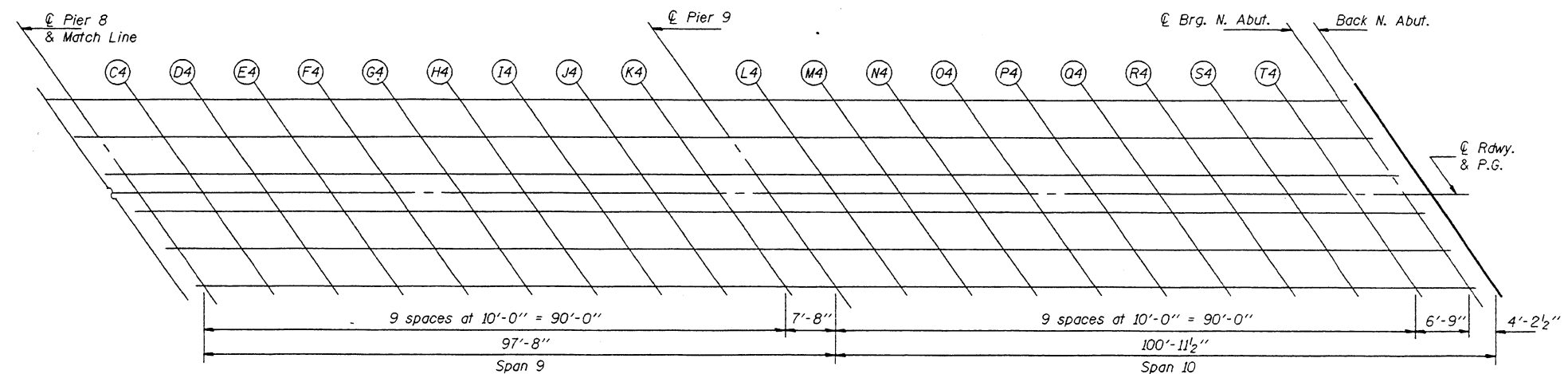
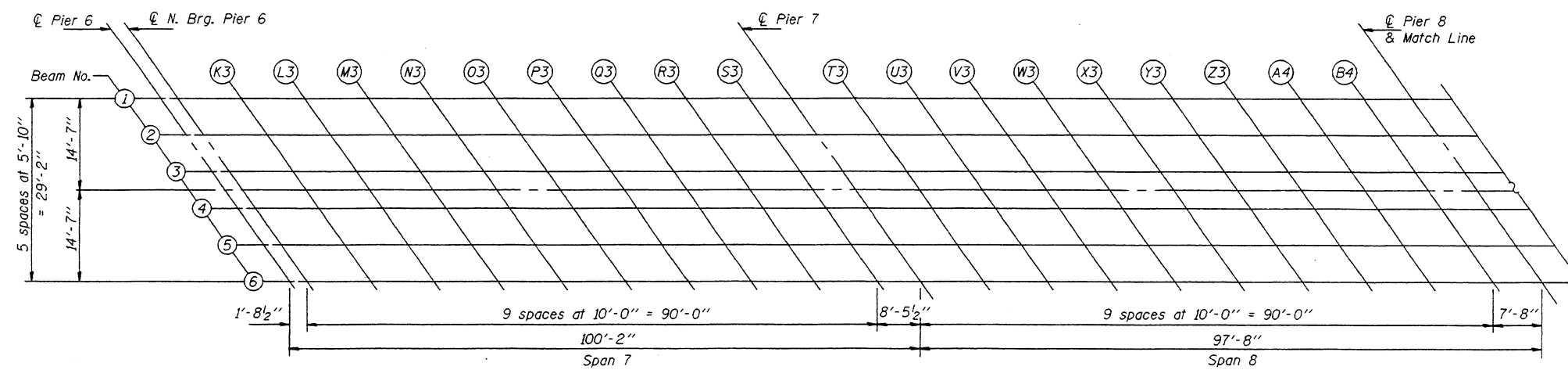
EXAMINED *Thomas J. Domagala*
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED

TOP OF SLAB ELEVATIONS
SPANS 4 THRU 6
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

FILLET HEIGHTS



TOP OF SLAB ELEVATIONS
SPANS 7 THRU 10
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO.
FAP 658	KIB-1	MENARD	198	43	62 SHEETS
FED. ROAD DIST. NO. 7		SHEET NO.		FED. ROAD PROJECT	

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL N. Brg Pier 6	76003.829	-14.583	508.255	508.255
K3	76013.829	-14.583	508.244	508.273
L3	76023.829	-14.583	508.233	508.292
M3	76033.829	-14.583	508.221	508.301
N3	76043.829	-14.583	508.209	508.301
O3	76053.829	-14.583	508.196	508.299
P3	76063.829	-14.583	508.182	508.273
Q3	76073.829	-14.583	508.169	508.247
R3	76083.829	-14.583	508.154	508.209
S3	76093.829	-14.583	508.140	508.165
CL Pier 7	76102.287	-14.583	508.127	508.127
T3	76112.287	-14.583	508.111	508.141
U3	76122.287	-14.583	508.095	508.155
V3	76132.287	-14.583	508.078	508.158
W3	76142.287	-14.583	508.061	508.154
X3	76152.287	-14.583	508.044	508.146
Y3	76162.287	-14.583	508.025	508.115
Z3	76172.287	-14.583	508.007	508.084
A4	76182.287	-14.583	507.988	508.040
B4	76192.287	-14.583	507.968	507.991
CL Pier 8	76199.954	-14.583	507.953	507.953
C4	76209.954	-14.583	507.932	507.962
D4	76219.954	-14.583	507.911	507.971
E4	76229.954	-14.583	507.889	507.969
F4	76239.954	-14.583	507.867	507.960
G4	76249.954	-14.583	507.845	507.948
H4	76259.954	-14.583	507.822	507.912
I4	76269.954	-14.583	507.798	507.875
J4	76279.954	-14.583	507.774	507.827
K4	76289.954	-14.583	507.750	507.773
CL Pier 9	76297.621	-14.583	507.731	507.731
L4	76307.621	-14.583	507.705	507.735
M4	76317.621	-14.583	507.679	507.740
N4	76327.621	-14.583	507.653	507.733
O4	76337.621	-14.583	507.626	507.719
P4	76347.621	-14.583	507.599	507.701
Q4	76357.621	-14.583	507.571	507.660
R4	76367.621	-14.583	507.542	507.619
S4	76377.621	-14.583	507.514	507.564
T4	76387.621	-14.583	507.484	507.505
CL Brg N. Abut	76394.371	-14.583	507.464	507.464
Back N. Abut	76398.579	-14.583	507.452	507.452

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL N. Brg Pier 6	76007.913	-8.750	508.355	508.355
K3	76017.913	-8.750	508.344	508.373
L3	76027.913	-8.750	508.332	508.392
M3	76037.913	-8.750	508.320	508.400
N3	76047.913	-8.750	508.308	508.400
O3	76057.913	-8.750	508.295	508.398
P3	76067.913	-8.750	508.281	508.372
Q3	76077.913	-8.750	508.267	508.345
R3	76087.913	-8.750	508.253	508.308
S3	76097.913	-8.750	508.238	508.263
CL Pier 7	76106.371	-8.750	508.225	508.225
T3	76116.371	-8.750	508.209	508.239
U3	76126.371	-8.750	508.193	508.253
V3	76136.371	-8.750	508.176	508.256
W3	76146.371	-8.750	508.159	508.251
X3	76156.371	-8.750	508.141	508.243
Y3	76166.371	-8.750	508.122	508.212
Z3	76176.371	-8.750	508.103	508.181
A4	76186.371	-8.750	508.084	508.137
B4	76196.371	-8.750	508.064	508.087
CL Pier 8	76204.038	-8.750	508.049	508.049
C4	76214.038	-8.750	508.028	508.058
D4	76224.038	-8.750	508.007	508.066
E4	76234.038	-8.750	507.985	508.065
F4	76244.038	-8.750	507.963	508.056
G4	76254.038	-8.750	507.940	508.043
H4	76264.038	-8.750	507.917	508.007
I4	76274.038	-8.750	507.893	507.970
J4	76284.038	-8.750	507.869	507.922
K4	76294.038	-8.750	507.844	507.867
CL Pier 9	76301.705	-8.750	507.825	507.825
L4	76311.705	-8.750	507.799	507.829
M4	76321.705	-8.750	507.773	507.833
N4	76331.705	-8.750	507.747	507.827
O4	76341.705	-8.750	507.720	507.813
P4	76351.705	-8.750	507.692	507.794
Q4	76361.705	-8.750	507.664	507.753
R4	76371.705	-8.750	507.635	507.711
S4	76381.705	-8.750	507.606	507.657
T4	76391.705	-8.750	507.577	507.597
CL Brg N. Abut	76398.455	-8.750	507.557	507.557
Back N. Abut	76402.663	-8.750	507.544	507.544

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL N. Brg Pier 6	76011.997	-2.917	508.441	508.441
K3	76021.997	-2.917	508.430	508.460
L3	76031.997	-2.917	508.419	508.478
M3	76041.997	-2.917	508.406	508.486
N3	76051.997	-2.917	508.394	508.486
O3	76061.997	-2.917	508.381	508.484
P3	76071.997	-2.917	508.367	508.457
Q3	76081.997	-2.917	508.353	508.431
R3	76091.997	-2.917	508.338	508.393
S3	76101.997	-2.917	508.323	508.348
CL Pier 7	76110.455	-2.917	508.310	508.310
T3	76120.455	-2.917	508.294	508.324
U3	76130.455	-2.917	508.277	508.337
V3	76140.455	-2.917	508.260	508.340
W3	76150.455	-2.917	508.242	508.335
X3	76160.455	-2.917	508.224	508.327
Y3	76170.455	-2.917	508.206	508.296
Z3	76180.455	-2.917	508.187	508.264
A4	76190.455	-2.917	508.167	508.220
B4	76200.455	-2.917	508.147	508.170
CL Pier 8	76208.122	-2.917	508.131	508.131
C4	76218.122	-2.917	508.110	508.140
D4	76228.122	-2.917	508.089	508.149
E4	76238.122	-2.917	508.067	508.147
F4	76248.122	-2.917	508.045	508.138
G4	76258.122	-2.917	508.022	508.124
H4	76268.122	-2.917	507.998	508.088
I4	76278.122	-2.917	507.974	508.051
J4	76288.122	-2.917	507.950	508.003
K4	76298.122	-2.917	507.925	507.948
CL Pier 9	76305.789	-2.917	507.906	507.906
L4	76315.789	-2.917	507.880	507.910
M4	76325.789	-2.917	507.854	507.914
N4	76335.789	-2.917	507.827	507.907
O4	76345.789	-2.917	507.799	507.893
P4	76355.789	-2.917	507.772	507.874
Q4	76365.789	-2.917	507.743	507.833
R4	76375.789	-2.917	507.715	507.791
S4	76385.789	-2.917	507.685	507.736
T4	76395.789	-2.917	507.656	507.676
CL Brg N. Abut	76402.539	-2.917	507.636	507.636
Back N. Abut	76406.747	-2.917	507.623	507.623

ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL N. Brg Pier 6	76014.040	0.000	508.485	508.485
K3	76024.040	0.000	508.474	508.503
L3	76034.040	0.000	508.462	508.521
M3	76044.040	0.000	508.449	508.529
N3	76054.040	0.000	508.437	508.529
O3	76064.040	0.000	508.423	508.527
P3	76074.040	0.000	508.414	508.500
Q3	76084.040	0.000	508.395	508.473
R3	76094.040	0.000	508.381	508.435
S3	76104.040	0.000	508.365	508.390
CL Pier 7	76112.498	0.000	508.352	508.352
T3	76122.498	0.000	508.335	508.366
U3	76132.498	0.000	508.319	508.379
V3	76142.498	0.000	508.302	508.382
W3	76152.498	0.000	508.284	508.377
X3	76162.498	0.000	508.266	508.369
Y3	76172.498	0.000	508.248	508.337
Z3	76182.498	0.000	508.228	508.305
A4	76192.498	0.000	508.209	508.261
B4	76202.498	0.000	508.189	508.211
CL Pier 8	76210.165	0.000	508.173	508.173
C4	76220.165	0.000	508.152	508.182
D4	76230.165	0.000	508.130	508.190
E4	76240.165	0.000	508.108	508.188
F4	76250.165	0.000	508.086	508.178
G4	76260.165	0.000	508.063	508.165
H4	76270.165	0.000	508.039	508.129
I4	76280.165	0.000	508.015	508.092
J4	76290.165	0.000	507.991	508.043
K4	76300.165	0.000	507.965	507.988
CL Pier 9	76307.832	0.000	507.946	507.946
L4	76317.832	0.000	507.920	507.950
M4	76327.832	0.000	507.894	507.954
N4	76337.832	0.000	507.867	507.947
O4	76347.832	0.000	507.839	507.933
P4	76357.832	0.000	507.811	507.914
Q4	76367.832	0.000	507.783	507.872
R4	76377.832	0.000	507.754	507.830
S4	76387.832	0.000	507.725	507.775
T4	76397.832	0.000	507.695	507.715
CL Brg N. Abut	76404.582	0.000	507.675	507.675
Back N. Abut	76408.790	0.000	507.663	507.663

TOP OF SLAB ELEVATIONS
SPANS 7 THRU 10
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

EXAMINED	Thomas J. Donagalli	Feb. 4, 2002
PASSED	Ralph E. Carls	
APPROVED		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL
FAP 658	KIB-D	MENARD	198	44
SHEET NO. 11				
62 SHEETS				

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL N. Brg Pier 6	76016.083	2.917	508.437	508.437
K3	76026.083	2.917	508.426	508.455
L3	76036.083	2.917	508.414	508.473
M3	76046.083	2.917	508.401	508.481
N3	76056.083	2.917	508.388	508.481
O3	76066.083	2.917	508.375	508.478
P3	76076.083	2.917	508.361	508.452
Q3	76086.083	2.917	508.347	508.425
R3	76096.083	2.917	508.332	508.387
S3	76106.083	2.917	508.317	508.342
CL Pier 7	76114.541	2.917	508.303	508.303
T3	76124.541	2.917	508.287	508.317
U3	76134.541	2.917	508.270	508.330
V3	76144.541	2.917	508.253	508.333
W3	76154.541	2.917	508.235	508.328
X3	76164.541	2.917	508.217	508.320
Y3	76174.541	2.917	508.198	508.288
Z3	76184.541	2.917	508.179	508.256
A4	76194.541	2.917	508.159	508.212
B4	76204.541	2.917	508.139	508.162
CL Pier 8	76212.208	2.917	508.123	508.123
C4	76222.208	2.917	508.102	508.132
D4	76232.208	2.917	508.080	508.140
E4	76242.208	2.917	508.058	508.138
F4	76252.208	2.917	508.035	508.128
G4	76262.208	2.917	508.012	508.115
H4	76272.208	2.917	507.989	508.079
I4	76282.208	2.917	507.964	508.042
J4	76292.208	2.917	507.940	507.993
K4	76302.208	2.917	507.915	507.938
CL Pier 9	76309.875	2.917	507.895	507.895
L4	76319.875	2.917	507.869	507.899
M4	76329.875	2.917	507.843	507.903
N4	76339.875	2.917	507.816	507.896
O4	76349.875	2.917	507.788	507.881
P4	76359.875	2.917	507.760	507.862
Q4	76369.875	2.917	507.732	507.821
R4	76379.875	2.917	507.703	507.779
S4	76389.875	2.917	507.673	507.724
T4	76399.875	2.917	507.643	507.664
CL Brg N. Abut	76406.625	2.917	507.623	507.623
Back N. Abut	76410.833	2.917	507.611	507.611

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL N. Brg Pier 6	76020.167	8.750	508.341	508.341
K3	76030.167	8.750	508.330	508.359
L3	76040.167	8.750	508.318	508.377
M3	76050.167	8.750	508.305	508.385
N3	76060.167	8.750	508.292	508.384
O3	76070.167	8.750	508.278	508.382
P3	76080.167	8.750	508.264	508.355
Q3	76090.167	8.750	508.250	508.327
R3	76100.167	8.750	508.235	508.289
S3	76110.167	8.750	508.219	508.244
CL Pier 7	76118.625	8.750	508.206	508.206
T3	76128.625	8.750	508.189	508.219
U3	76138.625	8.750	508.172	508.232
V3	76148.625	8.750	508.155	508.235
W3	76158.625	8.750	508.137	508.229
X3	76168.625	8.750	508.118	508.221
Y3	76178.625	8.750	508.099	508.189
Z3	76188.625	8.750	508.080	508.157
A4	76198.625	8.750	508.060	508.112
B4	76208.625	8.750	508.039	508.062
CL Pier 8	76216.292	8.750	508.023	508.023
C4	76226.292	8.750	508.002	508.032
D4	76236.292	8.750	507.980	508.040
E4	76246.292	8.750	507.958	508.038
F4	76256.292	8.750	507.935	508.028
G4	76266.292	8.750	507.912	508.014
H4	76276.292	8.750	507.888	507.978
I4	76286.292	8.750	507.863	507.940
J4	76296.292	8.750	507.839	507.891
K4	76306.292	8.750	507.813	507.836
CL Pier 9	76313.959	8.750	507.793	507.793
L4	76323.959	8.750	507.767	507.797
M4	76333.959	8.750	507.741	507.801
N4	76343.959	8.750	507.713	507.794
O4	76353.959	8.750	507.686	507.779
P4	76363.959	8.750	507.657	507.760
Q4	76373.959	8.750	507.629	507.718
R4	76383.959	8.750	507.600	507.676
S4	76393.959	8.750	507.570	507.620
T4	76403.959	8.750	507.540	507.561
CL Brg N. Abut	76410.709	8.750	507.520	507.520
Back N. Abut	76414.917	8.750	507.508	507.508

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL N. Brg Pier 6	76024.251	14.583	508.232	508.232
K3	76034.251	14.583	508.220	508.250
L3	76044.251	14.583	508.208	508.267
M3	76054.251	14.583	508.195	508.275
N3	76064.251	14.583	508.182	508.274
O3	76074.251	14.583	508.168	508.271
P3	76084.251	14.583	508.154	508.244
Q3	76094.251	14.583	508.139	508.217
R3	76104.251	14.583	508.124	508.179
S3	76114.251	14.583	508.108	508.133
CL Pier 7	76122.709	14.583	508.094	508.094
T3	76132.709	14.583	508.078	508.108
U3	76142.709	14.583	508.060	508.120
V3	76152.709	14.583	508.043	508.123
W3	76162.709	14.583	508.025	508.117
X3	76172.709	14.583	508.006	508.109
Y3	76182.709	14.583	507.987	508.077
Z3	76192.709	14.583	507.967	508.044
A4	76202.709	14.583	507.947	508.000
B4	76212.709	14.583	507.926	507.949
CL Pier 8	76220.376	14.583	507.910	507.910
C4	76230.376	14.583	507.889	507.918
D4	76240.376	14.583	507.866	507.926
E4	76250.376	14.583	507.844	507.924
F4	76260.376	14.583	507.821	507.914
G4	76270.376	14.583	507.797	507.900
H4	76280.376	14.583	507.773	507.863
I4	76290.376	14.583	507.749	507.826
J4	76300.376	14.583	507.724	507.776
K4	76310.376	14.583	507.698	507.721
CL Pier 9	76318.043	14.583	507.678	507.678
L4	76328.043	14.583	507.652	507.682
M4	76338.043	14.583	507.625	507.685
N4	76348.043	14.583	507.598	507.678
O4	76358.043	14.583	507.570	507.663
P4	76368.043	14.583	507.541	507.643
Q4	76378.043	14.583	507.512	507.602
R4	76388.043	14.583	507.483	507.559
S4	76398.043	14.583	507.453	507.504
T4	76408.043	14.583	507.424	507.444
CL Brg N. Abut	76414.793	14.583	507.404	507.404
Back N. Abut	76419.001	14.583	507.391	507.391

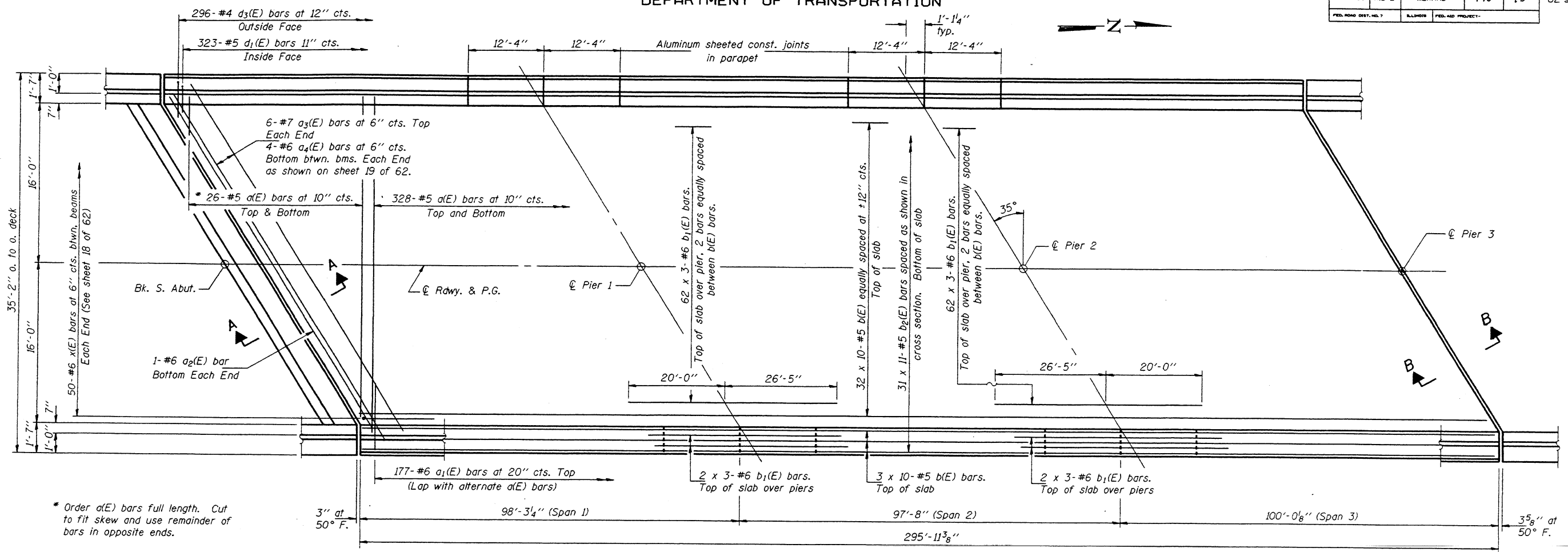
DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

EXAMINED	Thomas J. Donaghy
PASSED	Ralph E. Anderson
APPROVED	

TOP OF SLAB ELEVATIONS
SPANS 7 THRU 10
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

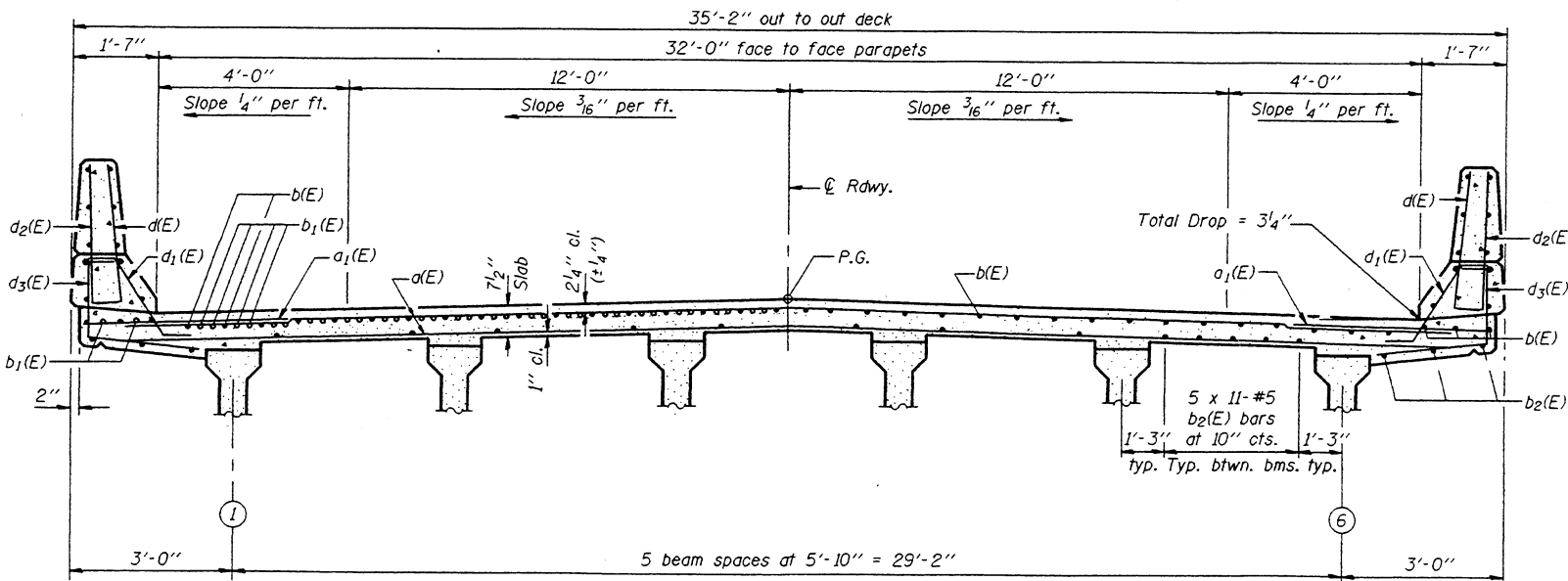
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO.
FAP 658	K(B-1)	MENARD	198	45	62 SHEETS
FED. ROAD DIST. NO. 1					



* Order a(E) bars full length. Cut to fit skew and use remainder of bars in opposite ends.

PLAN

Notes: See sheet 1 of 62 for location of floor drains and drainage scuppers.
Cut longitudinal reinforcement to clear drainage scuppers.
See sheet 15 of 62 for parapet reinforcement, superstructure details and Bill of Material.
See sheet 19 of 62 for Sections A-A and B-B.
Bars indicated thus 32 x 9-#5 etc. indicates 32 lines of bars with 9 lengths per line.
Reinforcement bars designated (E) shall be epoxy coated.



MIN. BAR LAPS
#5 bars = 2'-2"
#6 bars = 2'-7"

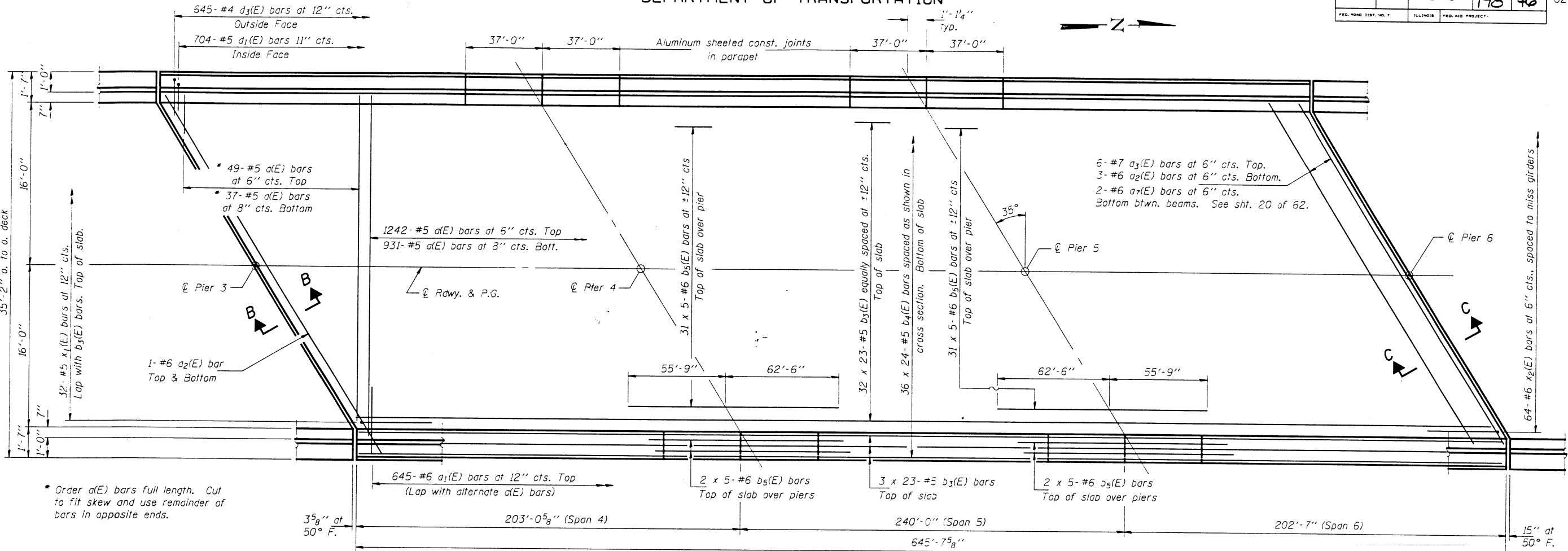
SUPERSTRUCTURE
SPANS 1 THRU 3
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

DESIGNED	Mike J. Trello	EXAMINED	Thomas J. Deming
CHECKED	Chad E. Hodel	PASSED	Ralph E. Anderson
DRAWN	R. Doty/h.t. parsons	APPROVED	
CHECKED	MJT/CEH		

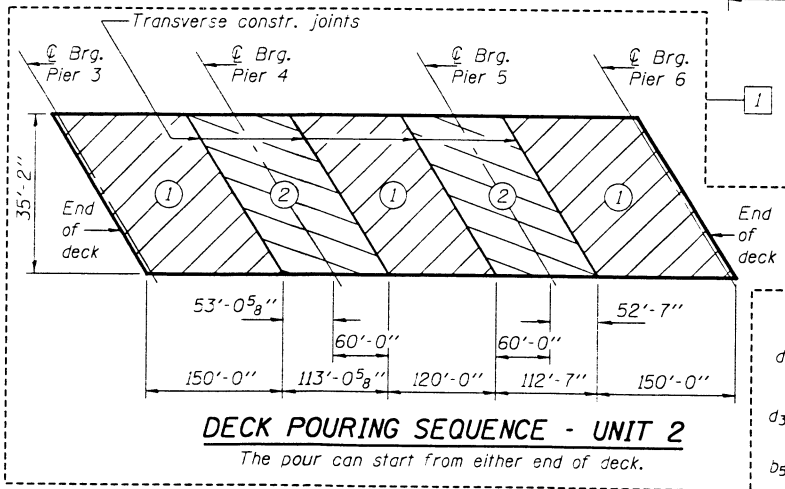
CROSS SECTION
(Looking North)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

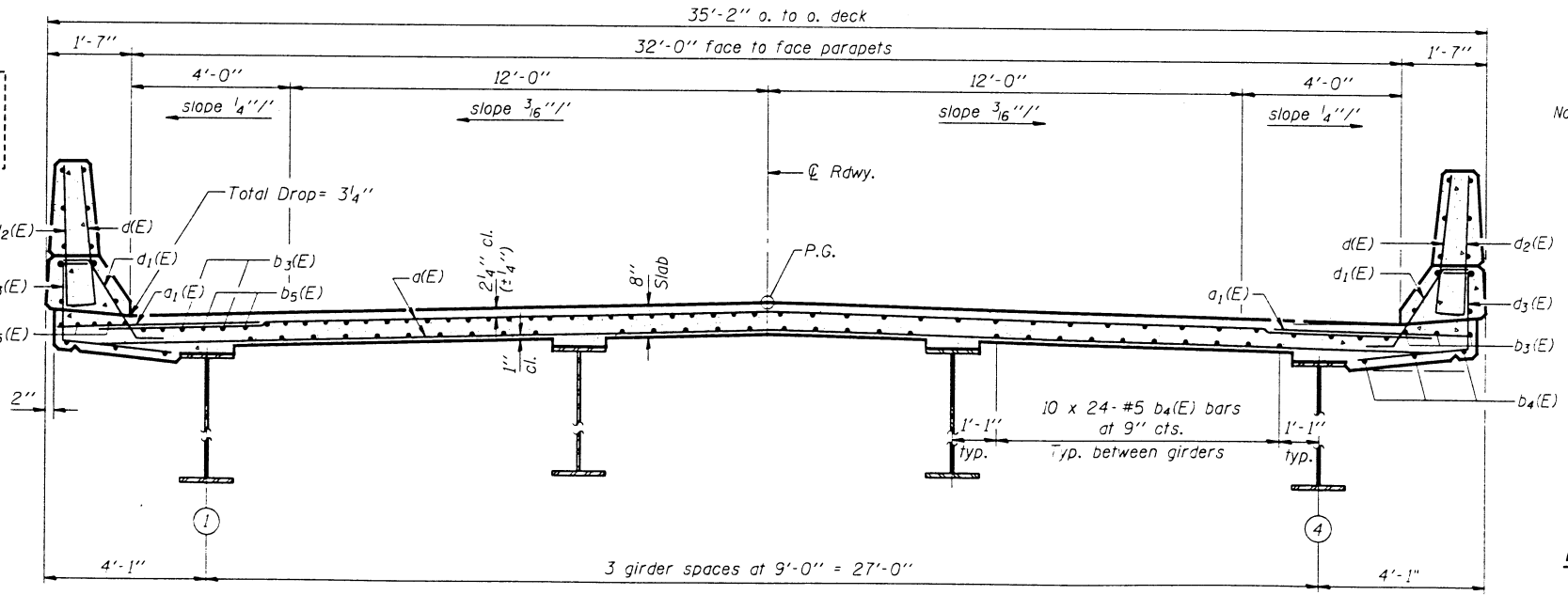
ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO.
FAP 658	K(B-1)	MENARD	198	40	62 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



PLAN



DECK POURING SEQUENCE - UNIT 2
The pour can start from either end of deck.



CROSS SECTION
(Looking North)

MIN. BAR LAPS

#5 bars = 2'-2"
#6 bars = 2'-7"

Notes: See sheet 1 of 62 for location of floor drains and drainage scuppers.
Cut longitudinal reinforcement to clear drainage scuppers.
See sheet 16 of 62 for parapet reinforcement, superstructure details and Bill of Material.
See sheet 19 of 62 for Section B-B.
See sheet 20 of 62 for Section C-C.
Bars indicated thus 32 x 21-#5 etc. indicates 32 lines of bars with 21 lengths per line.
Reinforcement bars designated (E) shall be epoxy coated.

SUPERSTRUCTURE

SPANS 4 THRU 6

F.A.P. ROUTE 658 - SECTION K(B-1)

MENARD COUNTY

STATION 756+89.12

STRUCTURE NO. 065-0501

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

EXAMINED	Thomas J. Donaghy
PASSED	Rafael E. Anderson
APPROVED	

Feb. 4, 2002

—Z—

DEPARTMENT OF TRANSPORTATION

393-#4 d₃(E) bars at 12" cts.
Outside Face
429-#5 d₁(E) bars 11" cts.
Inside Face

12'-4" 12'-4" 12'-4" 12'-4" 12'-4" 12'-4"

Aluminum sheeted const. joints in parapet

1'-7" 1'-0" 7" 1'-0" 7"

16'-0" 16'-0"

35'-2" o. to o. deck

* 26-#5 a(E) bars at 10" cts. Top & Bottom

446-#5 a(E) bars at 10" cts. Top and Bottom

62 x 3-#6 b₁(E) bars. Top of slab over pier, 2 bars equally spaced btwn. b₆(E) bars.

62 x 14-#5 b₆(E) bars equally spaced at ±12" cts. Top of slab

31 x 15-#5 b₇(E) bars spaced as shown in cross section, Bottom of slab

62 x 3-#6 b₈(E) bars. Top of slab over pier, 2 bars equally spaced btwn. b₆(E) bars.

62 x 3-#6 b₁(E) bars. Top of slab over pier, 2 bars equally spaced btwn. b₆(E) bars.

6-#7 a₃(E) bars at 6" cts. Top. Each End
4-#6 a₄(E) bars at 6" cts. Bottom btwn. bms. Ea. End as shown on sheet 19 of 62.

1-#6 a₂(E) bar Bott. Each End

Bk. N. Abut.

50-#6 x(E) bars at 6" cts. btwn. beams Each End (See sheet 18 of 62.)

20'-0" 26'-5" 26'-5" 26'-5" 20'-0"

35°

236-#6 a₁(E) bars at 20" cts. Top (Lap with alternate a(E) bars)

2 x 3-#6 b₁(E) bars Top of slab over piers

3 x 14-#5 b₆(E) bars Top of slab

2 x 3-#6 b₈(E) bars Top of slab over piers

2 x 3-#6 b₁(E) bars Top of slab over piers

15" at 50° F.

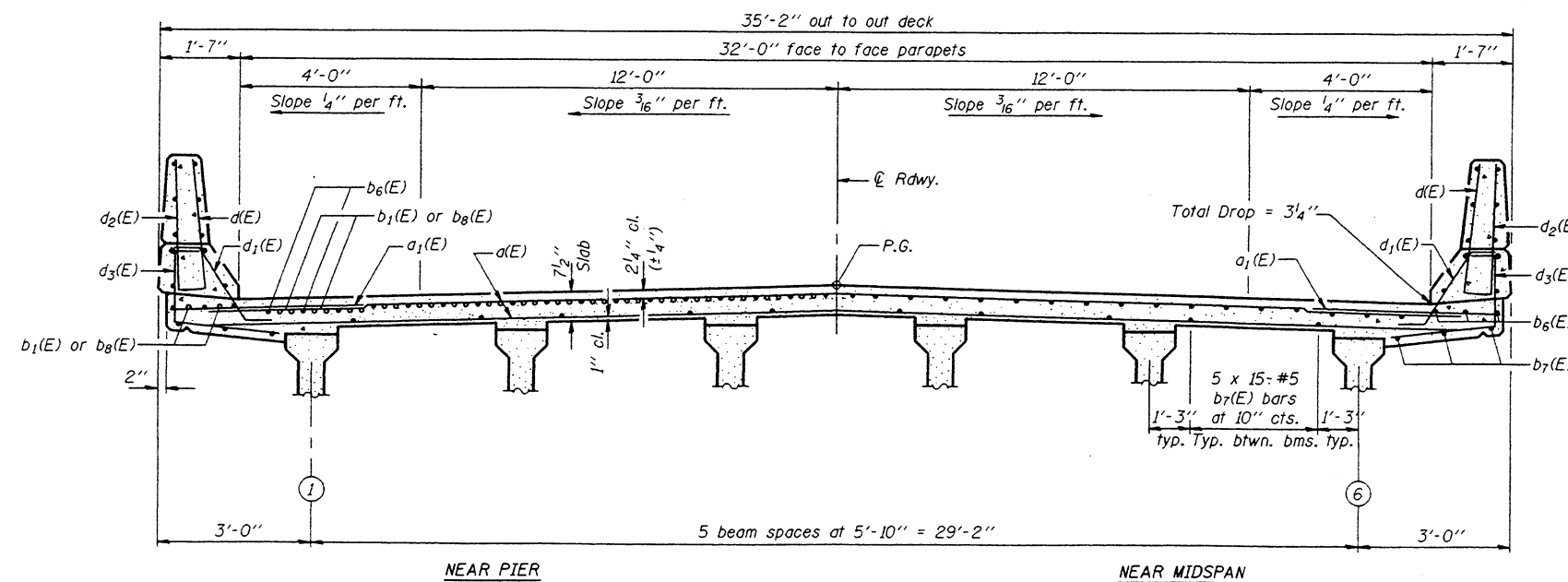
99'-6 1/2" (Span 7) 97'-8" (Span 8) 97'-8" (Span 9) 98'-3 1/4" (Span 10)

393'-13 3/4"

3" at 50° F.

* Order a(E) bars full length. Cut to fit skew and use remainder of bars in opposite ends.

Notes: See sheet 1 of 62 for location of floor drains and drainage scuppers.
Cut longitudinal reinforcement to clear drainage scuppers.
See sheet 17 of 62 for parapet reinforcement, superstructure details and Bill of Material.
See sheet 19 of 62 for Section B-B.
See sheet 20 of 62 for Section C-C.
Bars indicated thus 32 x 21-#5 etc. indicates 32 lines of bars with 21 lengths per line.
Reinforcement bars designated (E) shall be epoxy coated.



#5 bars = 2'-2"
#6 bars = 2'-7"

SUPERSTRUCTURE
SPANS 7 THRU 10
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

Feb. 4, 2082

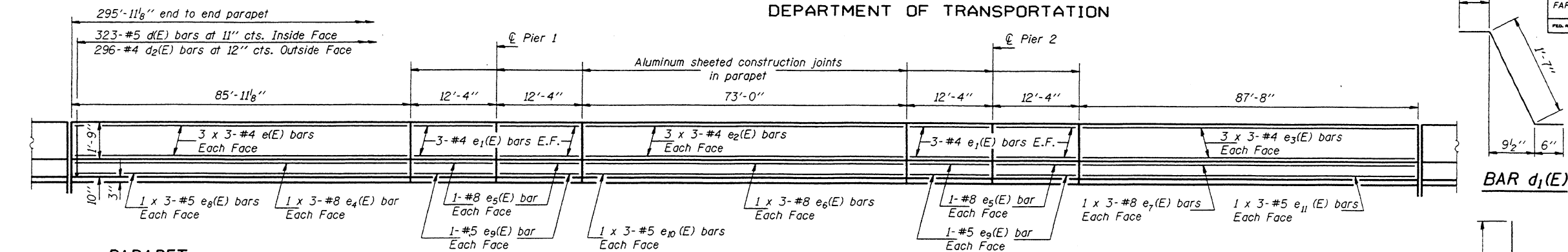
EXAMINED *Thomas J. Donagale*
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

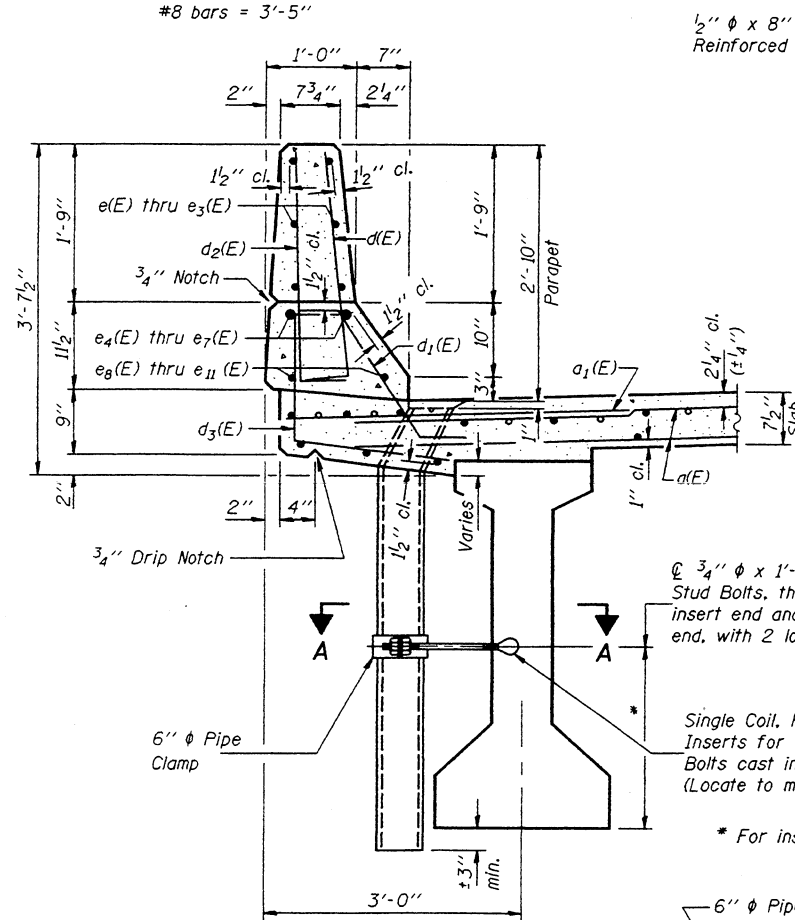
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO.
FAP 658	K(B-1)	MENARD	148	48	62 SHEETS
FED. ROAD DIST. NO. 7					



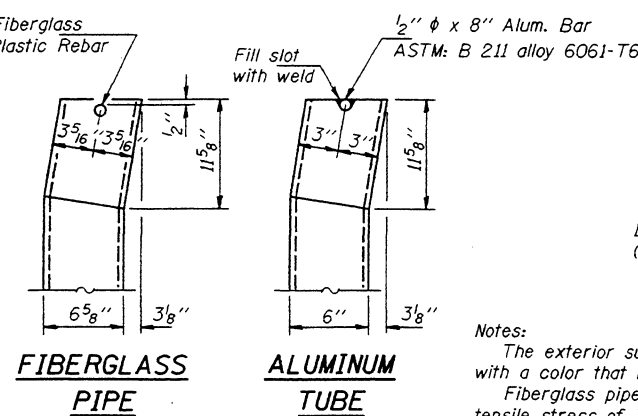
**PARAPET
MIN. BAR LAPS**

#4 bars = 1'-4"
#5 bars = 1'-8"
#8 bars = 3'-5"

PARAPET ELEVATION
(Measured along inside face)

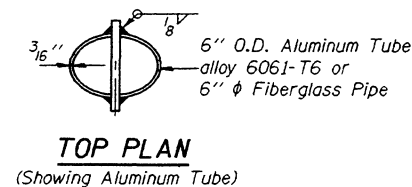


SECTION THRU PARAPET

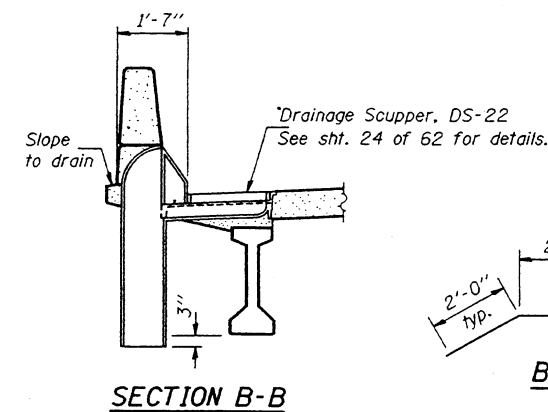


PARAPET JOINT DETAILS

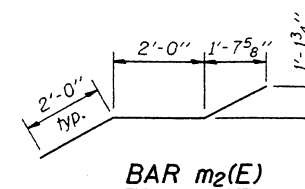
Notes:
The exterior surfaces of the floor drains shall be coated or pigmented by the manufacturer with a color that matches the color of the concrete.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
The clamping device and inserts shall be galvanized according to AASHTO M-232.



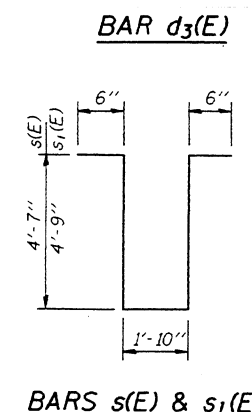
TOP PLAN
(Showing Aluminum Tube)



SECTION B-B



BAR m2(E)



BARS s(E) & s1(E)

**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d(E)	708	#5	33'-3"	
a1(E)	354	#6	4'-0"	
a2(E)	2	#6	41'-6"	
a3(E)	12	#7	41'-6"	
a4(E)	40	#6	6'-2"	
a5(E)	48	#5	2'-0"	
a6(E)	12	#5	7'-1"	
b(E)	380	#5	31'-7"	
b1(E)	396	#6	17'-3"	
b2(E)	341	#5	28'-11"	
d(E)	646	#5	3'-0"	
d1(E)	646	#5	2'-7"	
d2(E)	592	#4	3'-0"	
d3(E)	592	#4	3'-8"	
e(E)	36	#4	29'-6"	
e1(E)	48	#4	12'-0"	
e2(E)	36	#4	25'-2"	
e3(E)	36	#4	30'-0"	
e4(E)	12	#8	30'-11"	
e5(E)	16	#8	12'-0"	
e6(E)	12	#8	26'-7"	
e7(E)	12	#8	31'-6"	
e8(E)	12	#5	29'-9"	
e9(E)	16	#5	12'-0"	
e10(E)	12	#5	25'-5"	
e11(E)	12	#5	30'-3"	
m(E)	40	#4	6'-1"	
m1(E)	20	#6	4'-6"	
m2(E)	12	#8	6'-0"	
s(E)	20	#4	12'-0"	
s1(E)	20	#4	12'-4"	
x(E)	100	#6	7'-4"	
Reinforcement Bars, Epoxy Coated			Pound	76810
High Performance Conc. Superstructure			Cu. Yd.	349.6

Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 3-#5 etc., indicates 1 line of bars with 3 lengths per line.

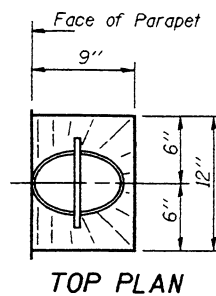
**SUPERSTRUCTURE DETAILS
SPANS 1 THRU 3
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501**

DESIGNED	Mike J. Trella
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

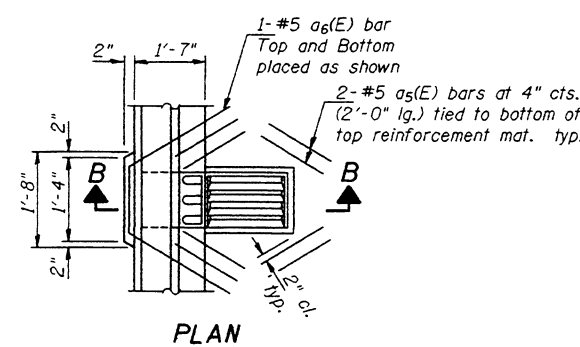
EXAMINED	Thomas J. Rongelab
PASSED	Ronald E. Anderson
APPROVED	

** Dimension as required by pipe clamp.

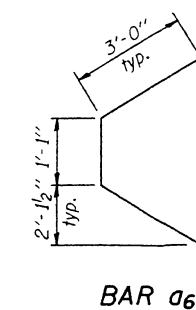
SECTION A-A



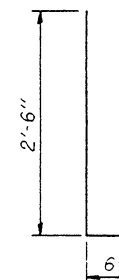
TOP PLAN



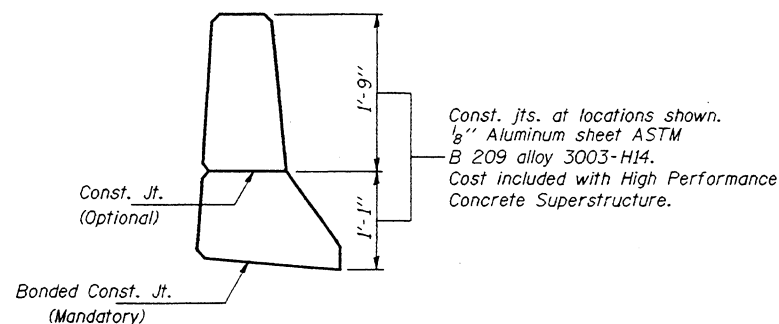
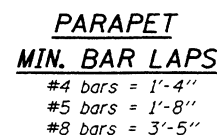
PLAN



BAR a6(E)

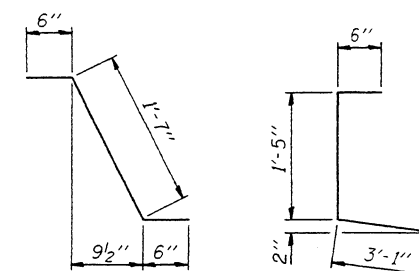


BARS $d(E)$ & $d_2(E)$

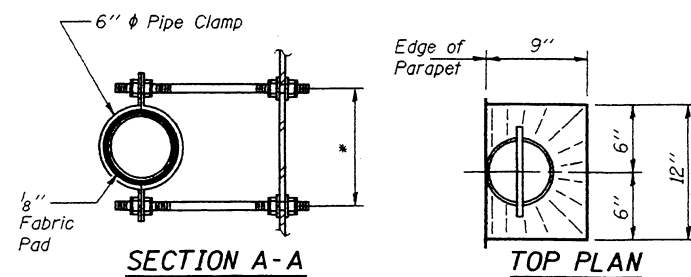


PARAPET JOINT DETAILS

Notes:
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for surface preparation & painting required for weathering steel. The exterior surfaces of the drain shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SPI prior to painting.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.


$$BAR \ d_1(E)$$
 $BAR\ d_3(E)$

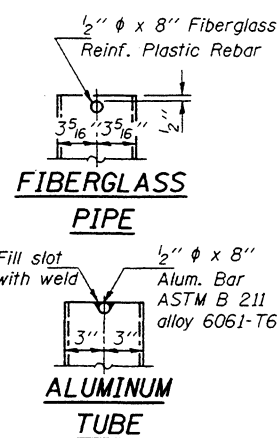
SECTION THRU PARAPET



SECTION A-A

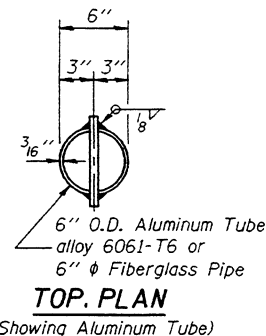
TOP PLAN

* Dimension as required
by Pipe Clamp

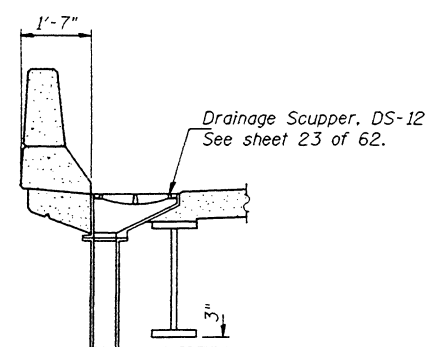


FIBERGLASS
PIPE

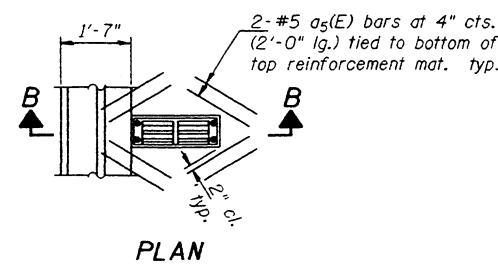
ALUMINUM
TUBE



TOP. PLAN
(Showing Aluminum Tube)



SECTION B-B



PLAN

$$\text{BAR } x_1(E)$$

BAR $x_2(E)$

SUPERSTRUCTURE
BILL OF MATERIAL

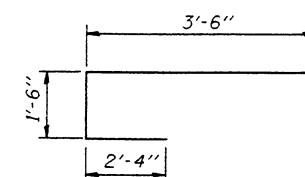
Bar	No.	Size	Length	Shape
a(E)	2259	#5	33'-3"	—
a ₁ (E)	1290	#6	4'-0"	—
a ₂ (E)	5	#6	41'-6"	—
a ₃ (E)	6	#7	41'-6"	—
a ₅ (E)	128	#5	2'-0"	—
a ₇ (E)	6	#6	10'-7"	—
b ₃ (E)	874	#5	30'-2"	—
b ₄ (E)	864	#5	29'-0"	—
b ₅ (E)	350	#6	25'-9"	—
d(E)	1408	#5	3'-0"	┐
d ₁ (E)	1408	#5	2'-7"	┐
d ₂ (E)	1290	#4	3'-0"	┐
d ₃ (E)	1290	#4	5'-0"	┐
e ₁₂ (E)	180	#4	34'-3"	—
e ₁₃ (E)	48	#4	36'-8"	—
e ₁₄ (E)	48	#8	44'-0"	—
e ₁₅ (E)	16	#8	36'-8"	—
e ₁₆ (E)	48	#5	42'-9"	—
e ₁₇ (E)	16	#5	36'-8"	—
x ₁ (E)	32	#5	4'-1"	┐
x ₂ (E)	64	#6	6'-9"	┐
Reinforcement Bars, Epoxy Coated			Pound	185570
High Performance Conc. Superstructure			Cu. Yd.	714.8

Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 4-#5 etc. indicates 1 line of bars with 4 lengths per line.

SUPERSTRUCTURE DETAILS
SPANS 4 THRU 6
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 658	K(B-1)	MENARD	198	50
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 17
62 SHEETS



Bar	No.	Size	Length	Shape
a1(E)	944	#5	33'-3"	—
a1(E)	472	#6	4'-0"	—
a2(E)	2	#6	41'-6"	—
a3(E)	12	#7	41'-6"	—
a4(E)	40	#6	6'-2"	—
a5(E)	64	#5	2'-0"	—
a6(E)	16	#5	7'-1"	U
b1(E)	396	#6	17'-3"	—
b6(E)	532	#5	30'-2"	—
b7(E)	465	#5	28'-4"	—
b8(E)	198	#6	19'-6"	—
d(E)	858	#5	3'-0"	—
d1(E)	858	#5	2'-7"	└
d2(E)	786	#4	3'-0"	└
d3(E)	786	#4	3'-8"	└
e(E)	36	#4	29'-6"	—
e1(E)	72	#4	12'-0"	—
e2(E)	72	#4	25'-2"	—
e3(E)	36	#4	30'-0"	—
e4(E)	12	#8	30'-11"	—
e5(E)	24	#8	12'-0"	—
e6(E)	24	#8	26'-7"	—
e7(E)	12	#8	31'-6"	—
e8(E)	12	#5	29'-9"	—
e9(E)	24	#5	12'-0"	—
e10(E)	24	#5	25'-5"	—
e11(E)	12	#5	30'-3"	—
m(E)	60	#4	6'-1"	—
m1(E)	30	#6	4'-6"	—
m2(E)	18	#8	6'-0"	—
s(E)	40	#4	12'-0"	U
s1(E)	20	#4	12'-4"	U
x(E)	100	#6	7'-4"	└
Reinforcement Bars, Epoxy Coated			Pound	104070
High Performance Conc. Superstructure			Cu. Yd.	463.1

SUPERSTRUCTURE DETAILS
SPANS 7 THRU 10
A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

PLAN

Feb. 4, 2082

EXAMINED *Thomas J. Donagale*
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED

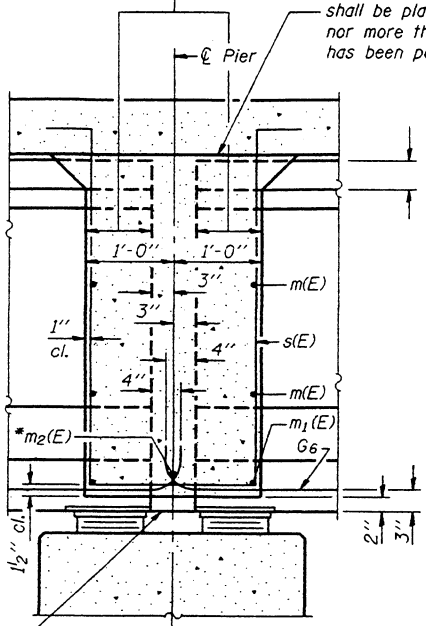
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO.
FAP 658	K(B-1)	MENARD	198	51	62 SHEETS
PED. ROAD DIST. NO. 1	ILLINOIS	PED. AND PROJECT			

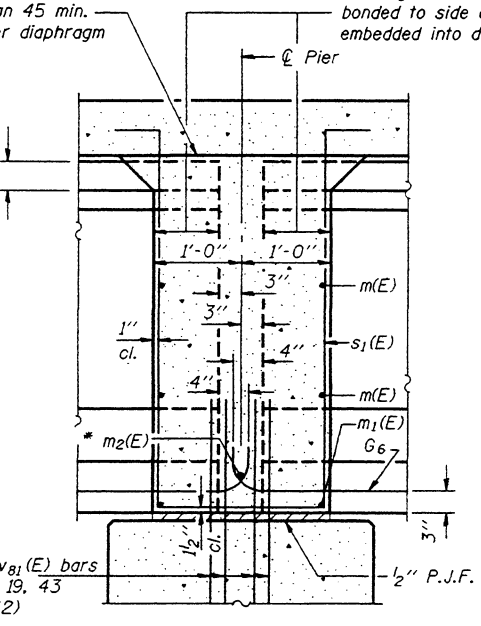
**Roofing felt shall be bonded to side of beam embedded into diaphragm.

Pour diaphragm flush with bott. of slab. Concrete in slab above this line shall be placed not less than 45 min. nor more than 90 min. after diaphragm has been poured.

**Roofing felt shall be bonded to side of beam embedded into diaphragm.



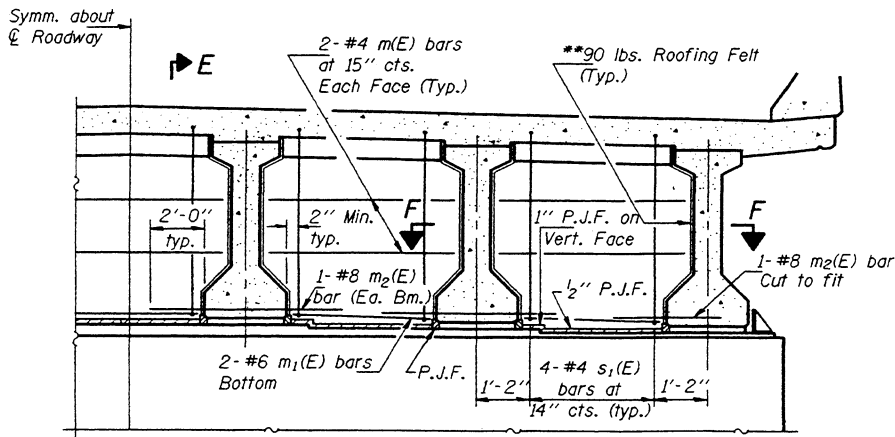
SECTION D-D
AT PIERS 1, 7 & 9
(Dimensions are at Rt. L's)



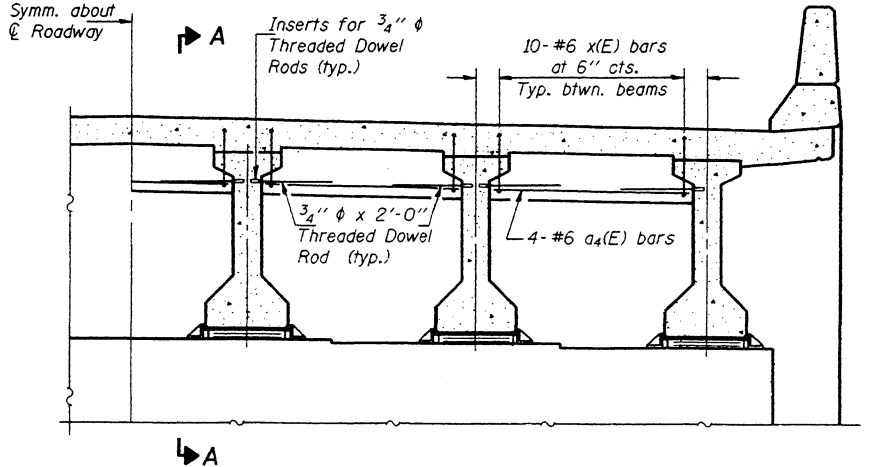
SECTION E-E
AT PIERS 2 & 8
(Dimensions are at Rt. L's)

- *Tightly fasten the #8 bars together with No. 9 wire ties.
- **Cost of 90 lbs. roofing felt is included with High Performance Concrete Superstructure.
- Cost of 1/2" P.J.F. is included with High Performance Concrete Superstructure.

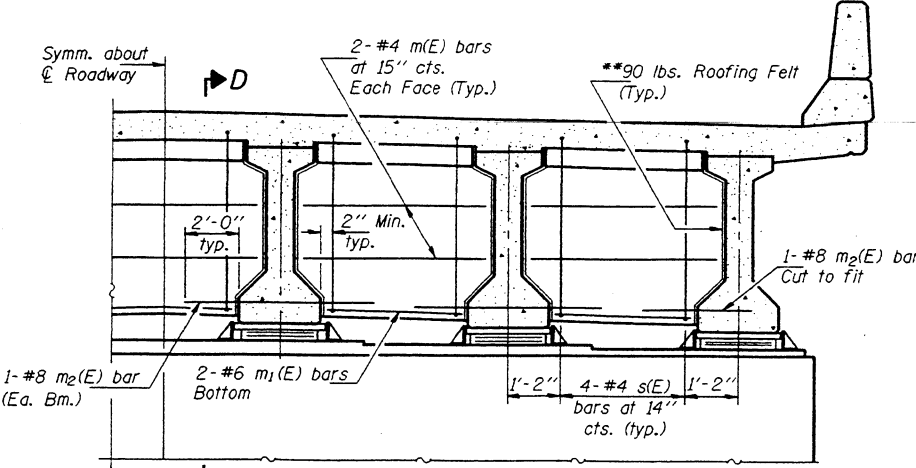
Notes: Reinforcement bars in diaphragm are billed with superstructure on sheets 15 & 17 of 62.
Concrete in diaphragm is included with High Performance Concrete Superstructure on sheets 15 & 17 of 62.
For details of bars s(E) & s1(E) see sheets 15 & 17 of 62.
The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
See sheet 19 of 62, for Section A-A & Section F-F.



DIAPHRAGM AT PIERS 2 & 8



DIAPHRAGM AT ABUTMENT
South side Pier 3 & North side Pier 6.



DIAPHRAGM AT PIERS 1, 7 & 9

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

EXAMINED	Thomas J. Damagala
PASSED	Ralph E. Johnson
APPROVED	

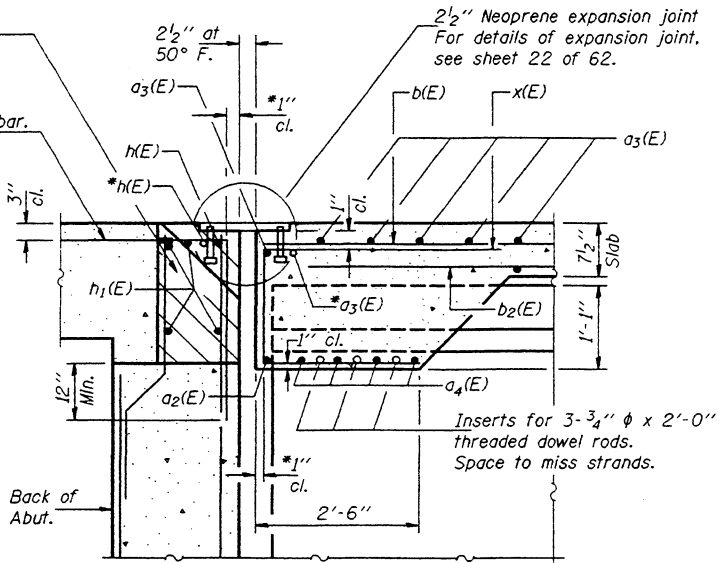
SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FAP 658	K(B-1)	MENARD	198	52
SHEET NO. 19 62 SHEETS				

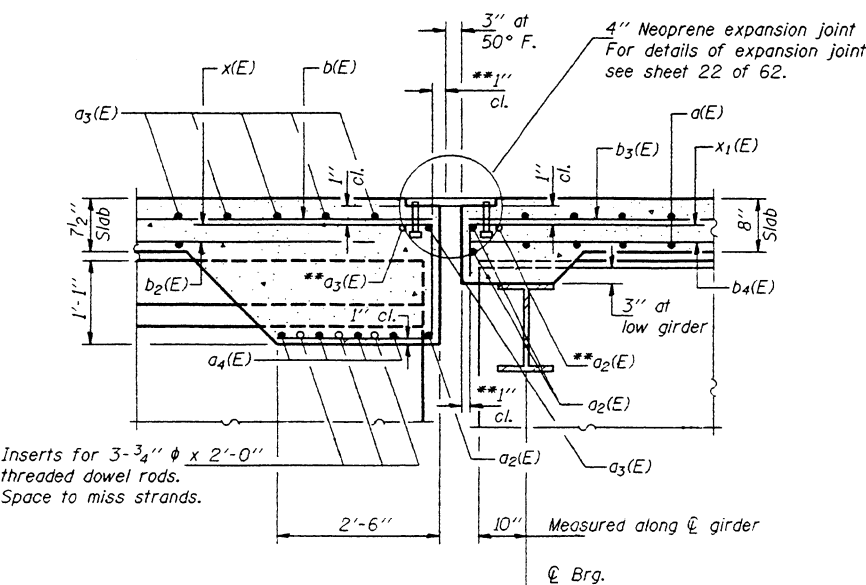
Hatched area to be poured after
superstructure forms have been
removed. Quantity of concrete
included with High Performance
Concrete Superstructure.

Bar Splicer (E) for #5 bar.
See sheet 53 of 62.

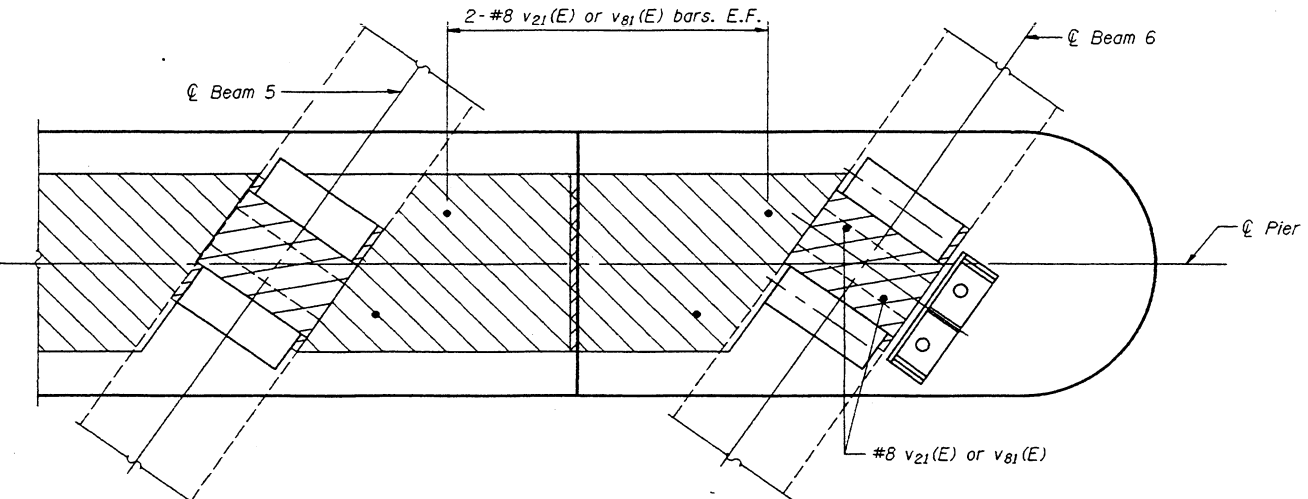


SECTION A-A
(Dimensions are at Rt. L's)

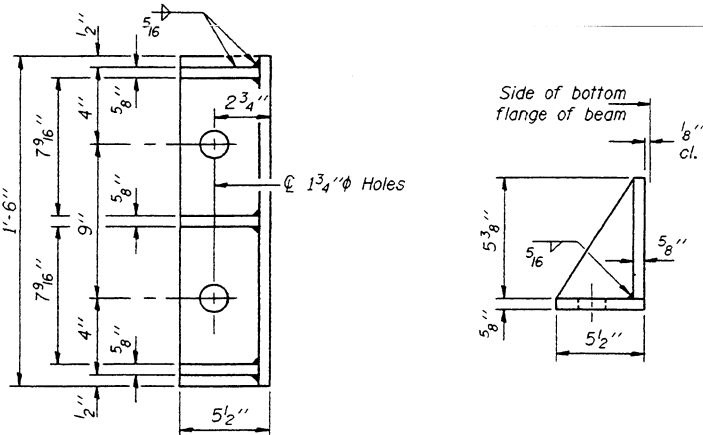
- * Place $a_3(E)$ and $h(E)$ bars in back of anchor bolt as shown if required to maintain 1" cl. (+0-1/4"). Anchor bolts should be tied to $a_3(E)$ and $h(E)$ bars.
- ** Place $a_2(E)$ and $a_3(E)$ bars in back of anchor bolt as shown if required to maintain 1" cl. (+0-1/4"). Anchor bolts should be tied to $a_2(E)$ and $a_3(E)$ bars.



SECTION B-B
(Dimensions are at Rt. L's except as shown)



SECTION F-F



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

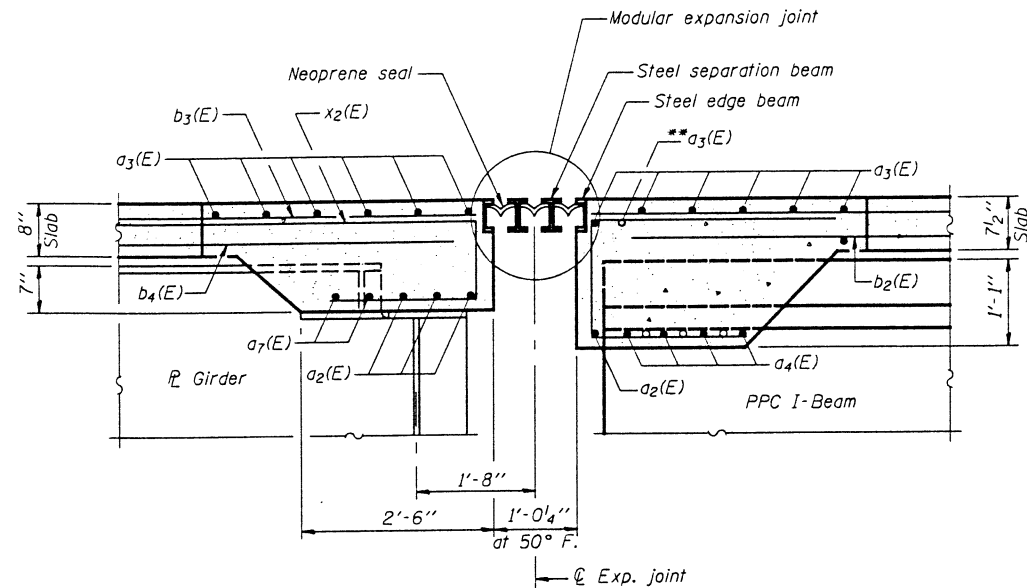
Note: Side retainers shall be galvanized after shop fabrication according to AASHTO III and ASTM A385. The cost of the side retainers, anchor bolts and installation shall be included with Furnishing & Erecting Structural Steel. For location of anchor bolt, see sheets 43 & 49 of 62.

SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

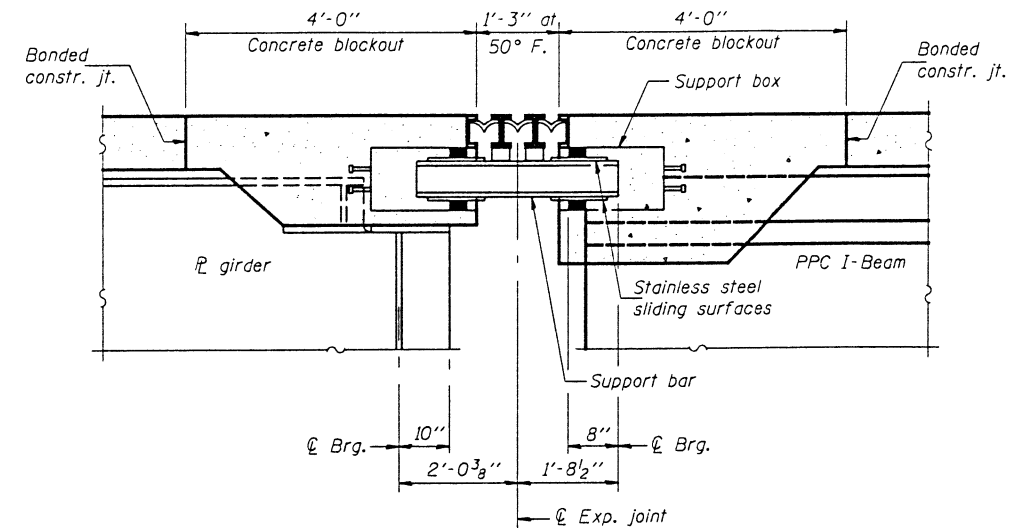
DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH
EXAMINED	Thomas J. Damagala
PASSED	Rafael E. Anderson
APPROVED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. 20
FAP 658	K(B-1)	MENARD	198	53	62 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

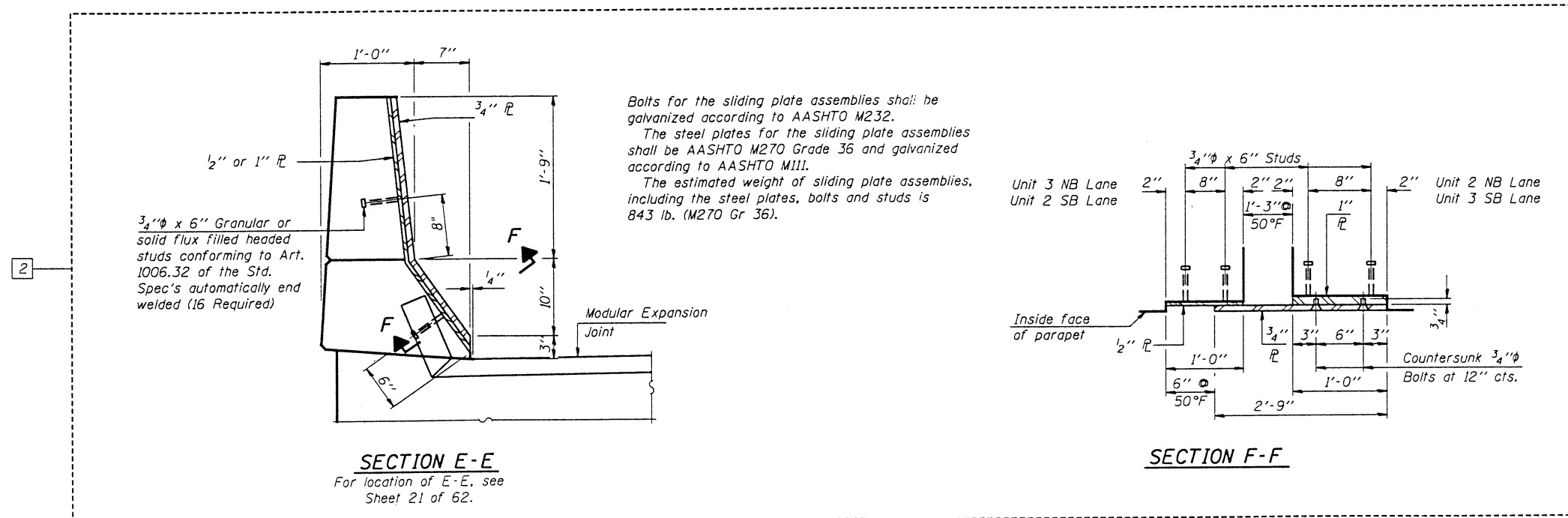


SECTION C-C
(Dimensions are at Rt. L's)

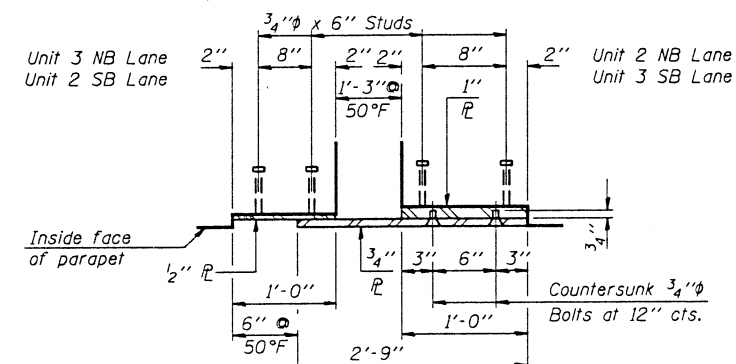


SECTION D-D

For location of D-D, see sheet 21 of 62.



SECTION E-E
For location of E-E, see
Sheet 21 of 62.



SECTION F-F

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

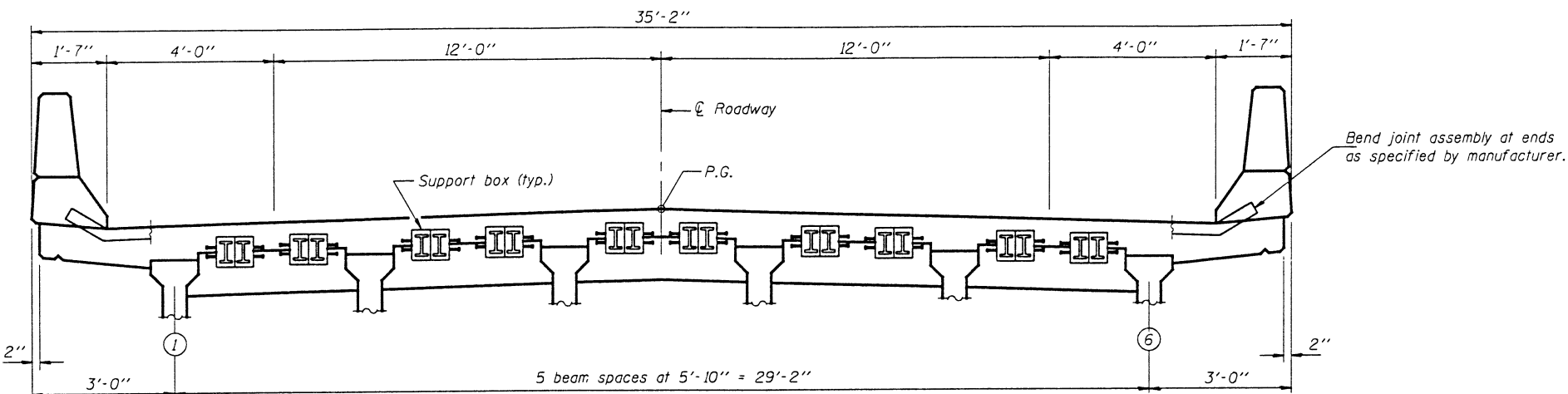
EXAMINED	Thomas J. Demagala	Feb. 4, 2002
PASSED	Ralph E. Anderson	
APPROVED		

EXPANSION JOINT DETAILS AT PIER 6
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

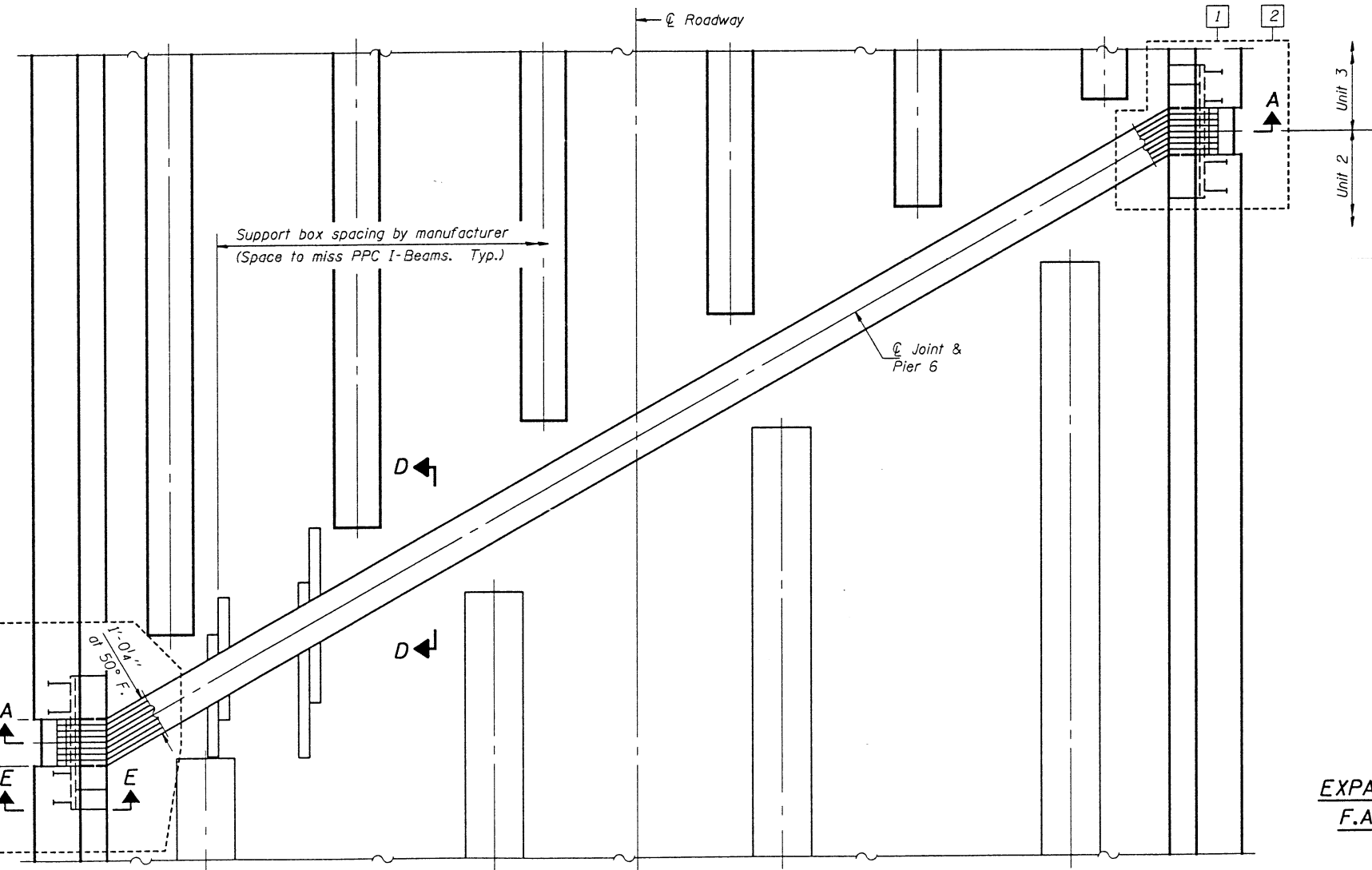
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET
FAP 658	K(B-1)	MENARD	19854	62 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 21
62 SHEETS



SECTION A-A
(Looking North)



PLAN

Notes: The modular expansion joint shall be either MAURER model "D" by DS Brown Co., WABO model "D" by Watson Bowman Acme Corp., or the ROBEK LG system by the TechStar, Inc. The joint shall provide the following movement:

Location	Movement (in.)
Pier 6	8"

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/H. Parsons
CHECKED	MJT/CEH

EXAMINED	Thomas J. Damagala
PASSED	Ralph E. Anderson
APPROVED	

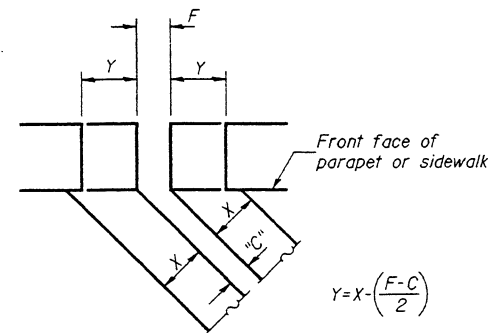
EXPANSION JOINT DETAILS AT PIER 6
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1½" Min.
2½"	2½"	1¾" Min.
4"	3"	2½" Min.

INSTALLATION NOTES

- Install continuous seal in roadway, parapet, curb, and sidewalk.
- Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.



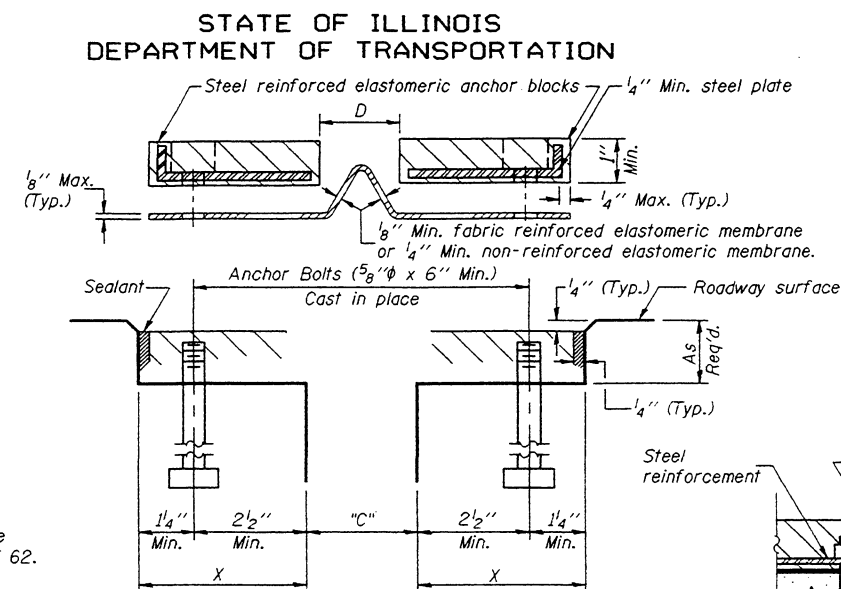
$$Y = X - \left(\frac{F - C}{2} \right)$$

For dimension "F", see sheets 12, 13 & 14 of 62.

FORMING BLOCKOUT SKETCH

SKREW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed according to dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



CROSS SECTION

ANCHOR BLOCK WITH ASPHALT SURFACE

GENERAL NOTES

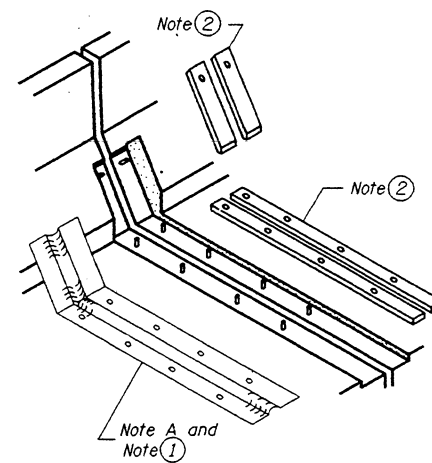
Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

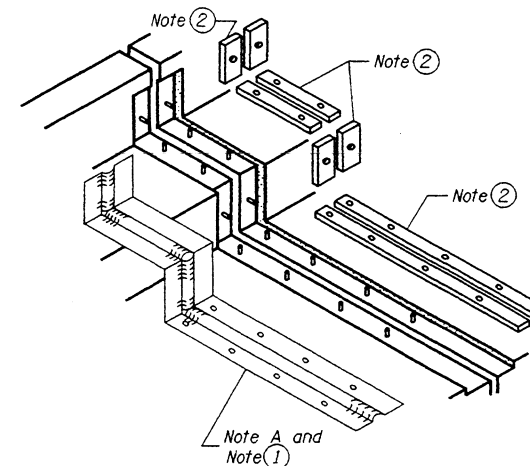
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

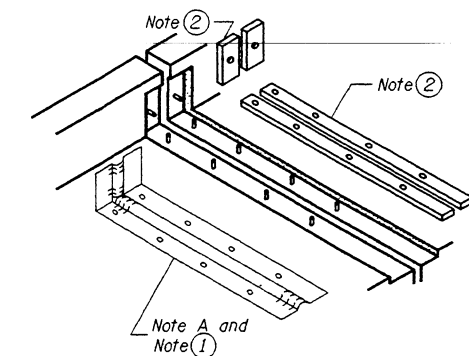
The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.



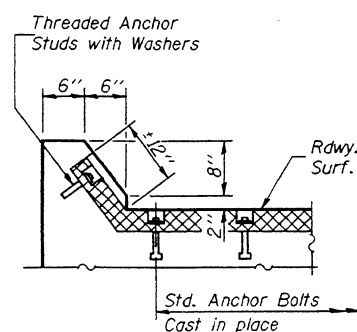
AT PARAPET



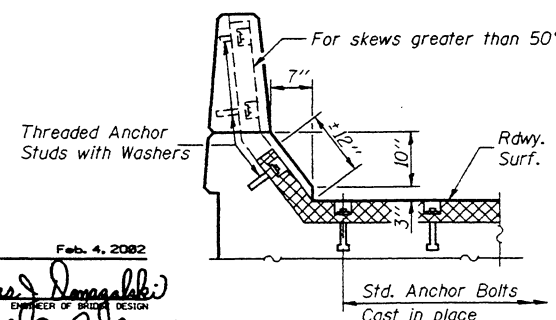
AT SIDEWALK OR MEDIAN



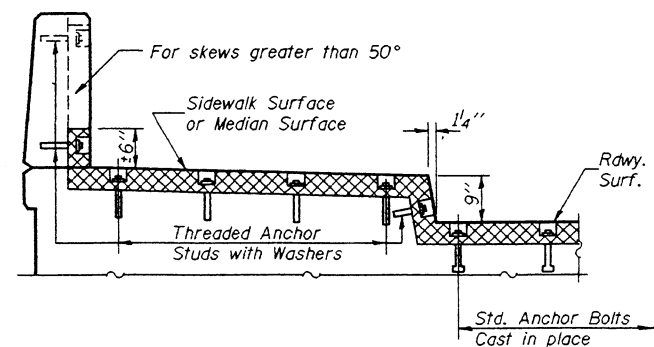
AT WALL



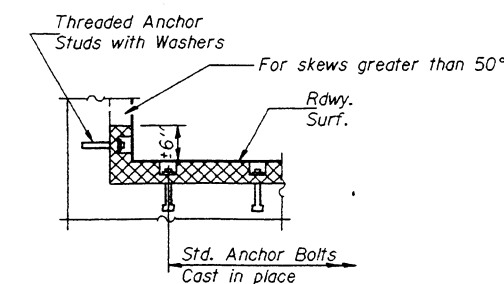
AT CURB



AT PARAPET



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS



AT WALL

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH
EJ-CS	4-30-97

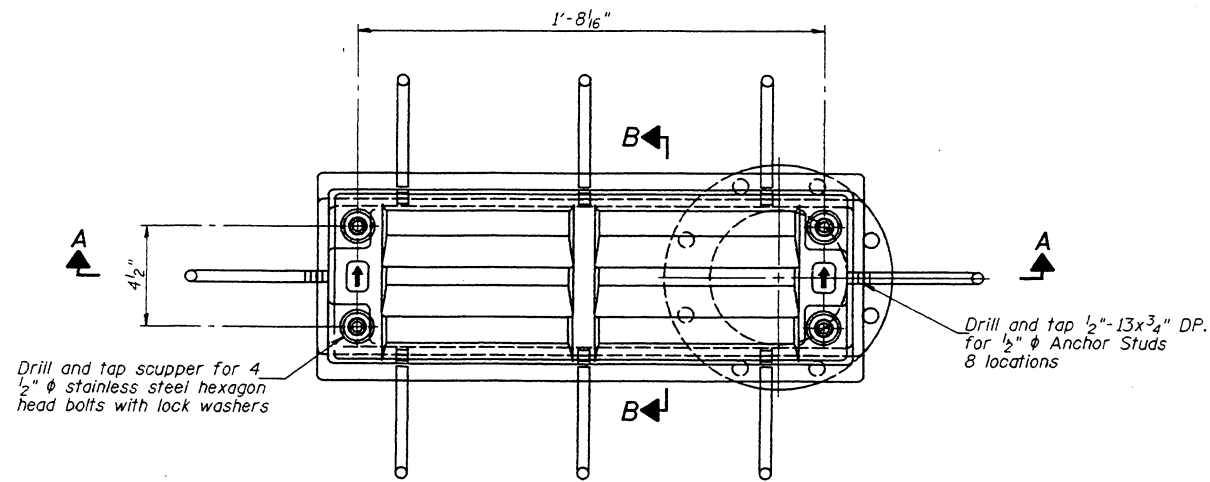
Feb. 4, 2002
 EXAMINED *Thomas J. Romagosa*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES
 APPROVED

CONTINUOUS SEAL TYPE
 NEOPRENE EXPANSION JOINTS
 For 2", 2½" and 4" Movement

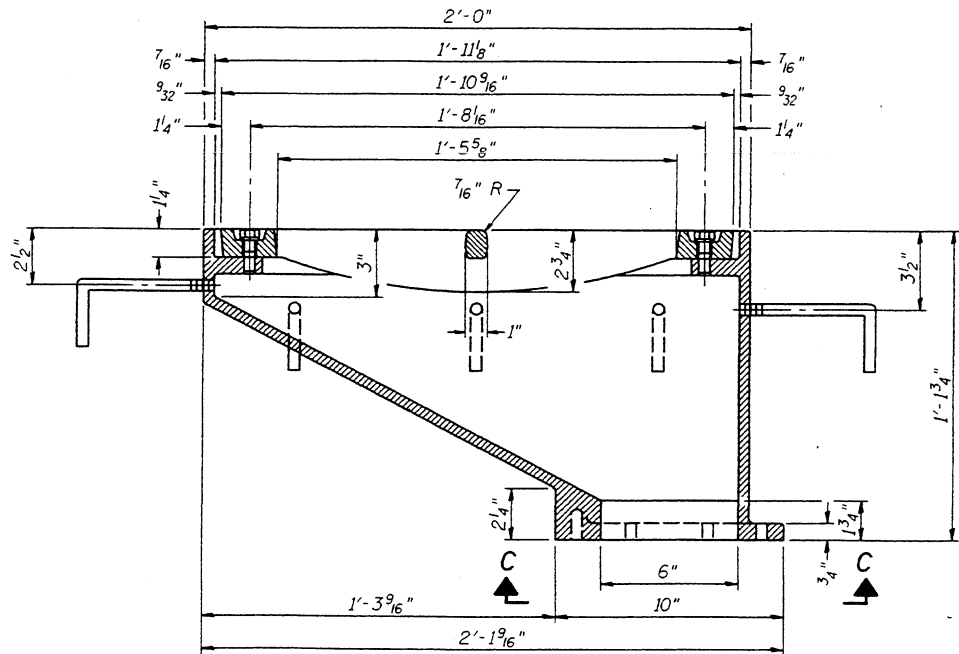
F.A.P. ROUTE 658 - SECTION K(B-1)
 MENARD COUNTY
 STATION 756+89.12
 STRUCTURE NO. 065-0501

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. 23
FAP 658	K(B-1)	MENARD	198	56	62 SHEETS
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

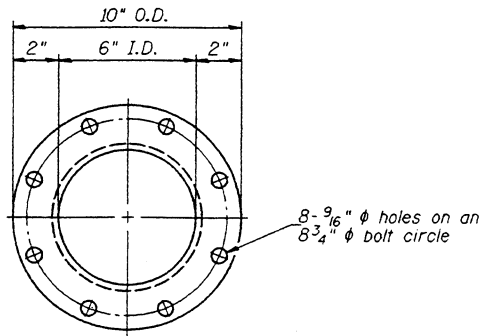


PLAN

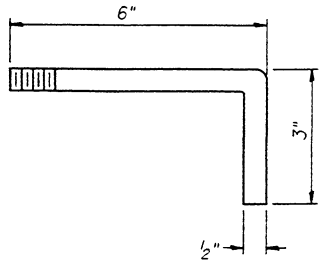


SECTION A-A

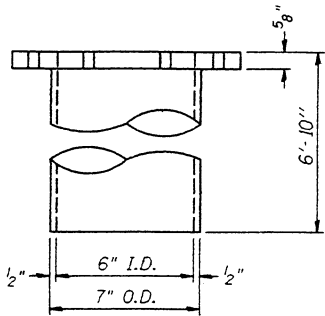
See sheet 1 of 62 for scupper location relative to parapet.



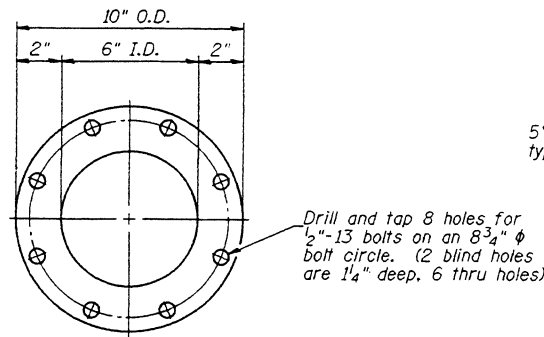
BOLT HOLE DETAIL



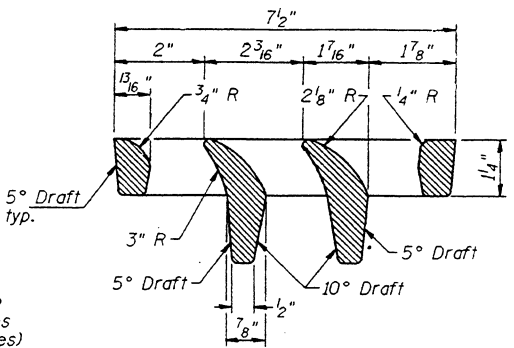
ANCHOR STUD DETAIL



DOWNSPOUT



VIEW C-C



VANE GRATE DETAIL

Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
Structural steel weldments of equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scuppers, DS-12.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers, DS-12	Each	16

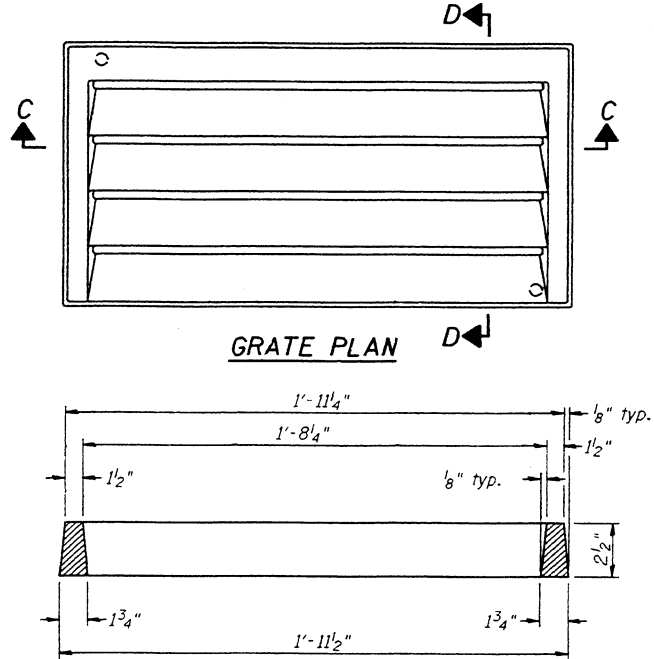
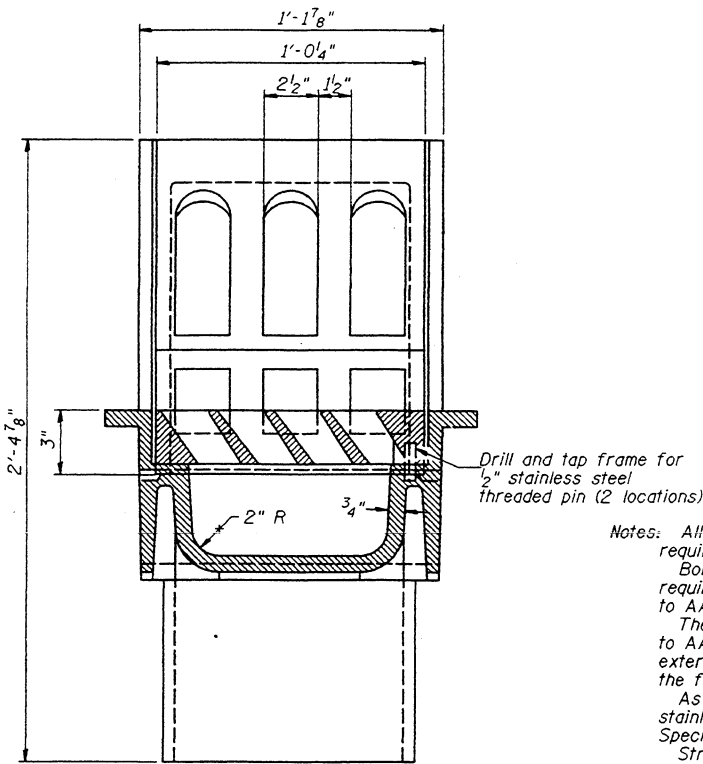
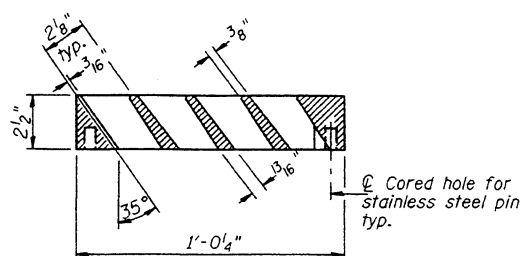
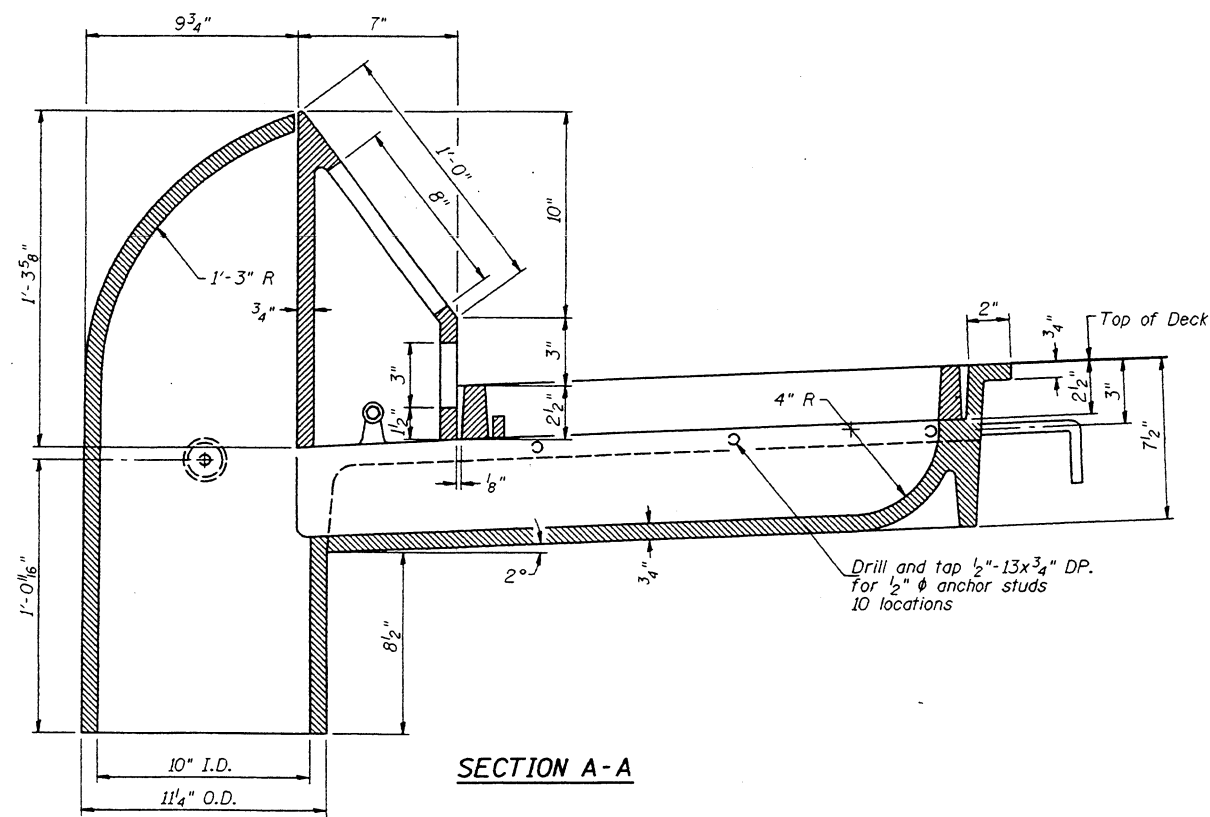
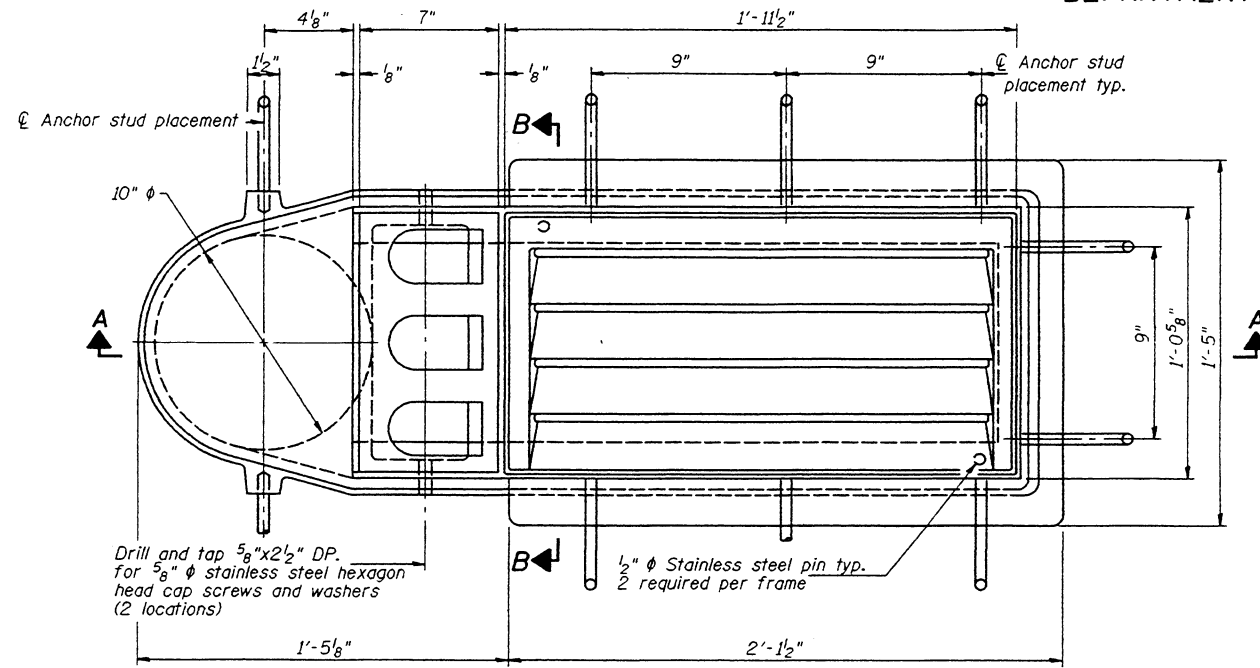
DRAINAGE SCUPPERS, DS-12
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

EXAMINED	Thomas J. Romagosa
PASSED	Rafael E. Anderson
APPROVED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL
FAP 658	K(B-1)	MENARD	198	57
SHEET NO. 24				
62 SHEETS				



Notes: All cast iron parts shall be ductile iron conforming to the requirements of ASTM A-536, Grade 80-55-06. Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232. The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam. As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications. Structural steel weldments of equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. The downspout connection may be accomplished by either a bolted flange or by casting the scupper with exterior threads to receive a threaded flange. Fiberglass or aluminum downspouts shall be connected to the adjacent beam with 2-3/4" steel stud bolts and a pipe clamp. The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper. Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scuppers, DS-22.

BILL OF MATERIAL

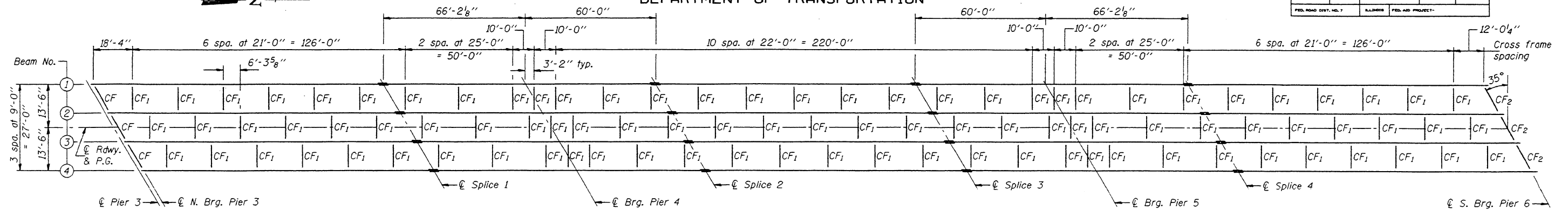
ITEM	UNIT	QUANTITY
Drainage Scuppers, DS-22	Each	14

DRAINAGE SCUPPERS, DS-22
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

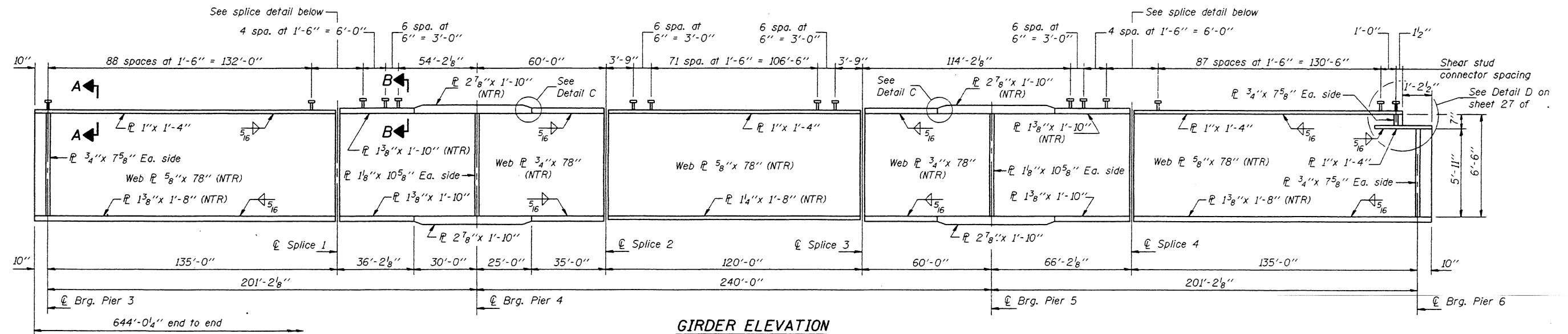
DESIGNED	Mike J. Trello	Feb. 4, 2002
CHECKED	Chad E. Hodel	
DRAWN	R. Doty/h.t. parsons	
CHECKED	MJT/CEH	
EXAMINED	Thomas J. Damagala	
PASSED	Ralph E. Robinson	
APPROVED		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. 25
FAP 658	K(B-D)	MENARD	198	58	62 SHEETS
FED. ROAD DIST. NO. 7	SUBMITTER	FED. AID PROJECT			

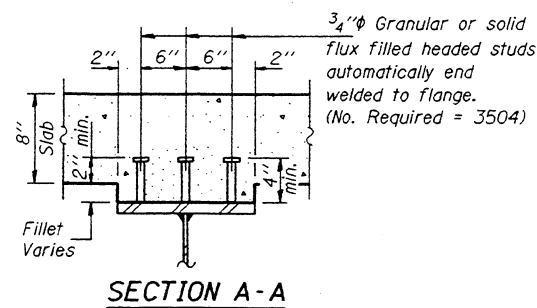


FRAMING PLAN

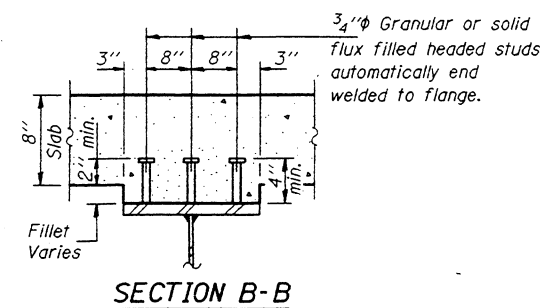


GIRDER ELEVATION

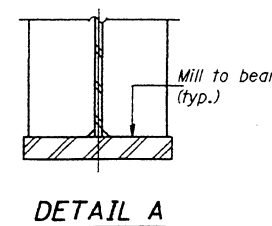
"NTR" denotes plates to which notch toughness requirements are applicable.
All plates of the girders, including bearing stiffeners, shall be AASHTO M 270 Grade 50W.



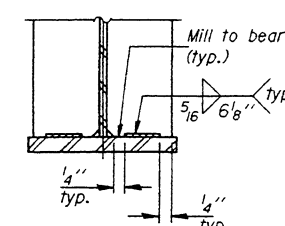
SECTION A-A



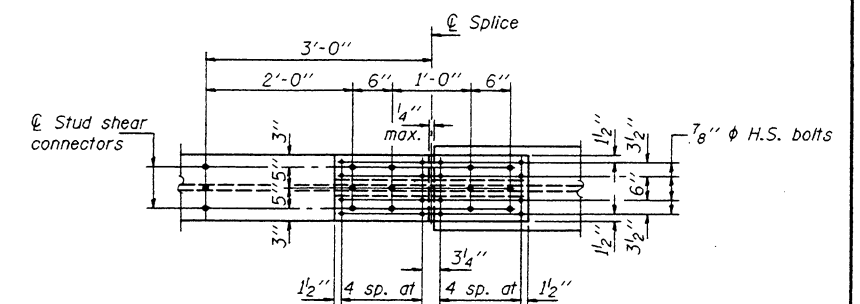
SECTION B-B



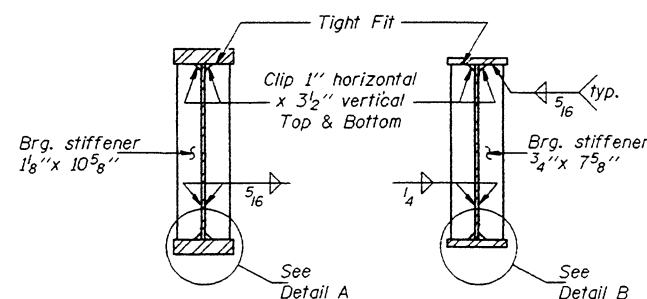
DETAIL A



DETAIL B

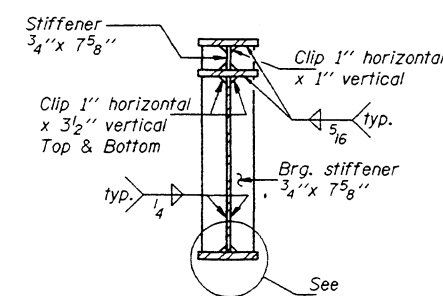


PLAN - SPLICES 1 & 4
Splice 1 shown - Splice 4 similar



SECTION AT
PIERS 4 & 5

SECTION AT
PIER 3



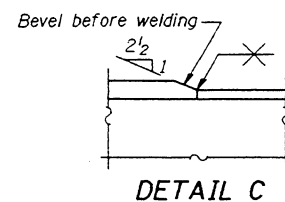
SECTION AT PIER 6

STRUCTURAL STEEL
SPANS 4 THRU 6
F.A.P. ROUTE 658 - SECTION K(B-D)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

EXAMINED	Thomas J. Damschke
PASSED	Ralph E. Anderson
APPROVED	

Feb. 4, 2002



DETAIL C

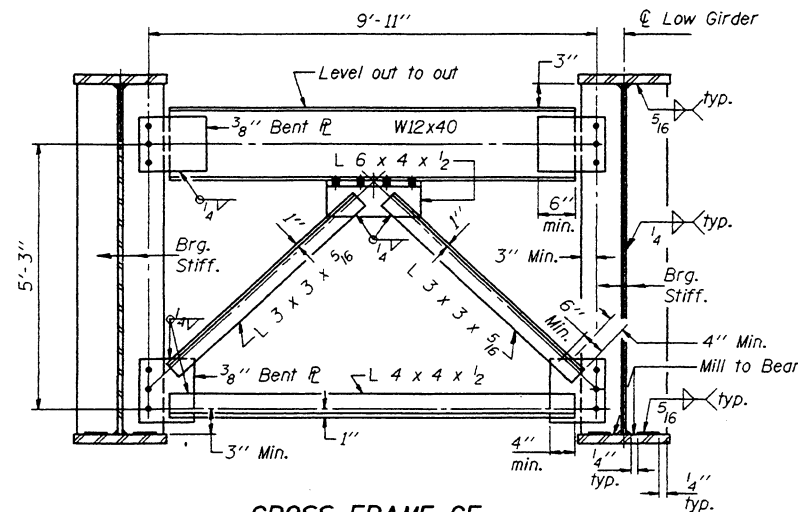
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 658	K(B-1)	MENARD	198	59
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 26
62 SHEETS

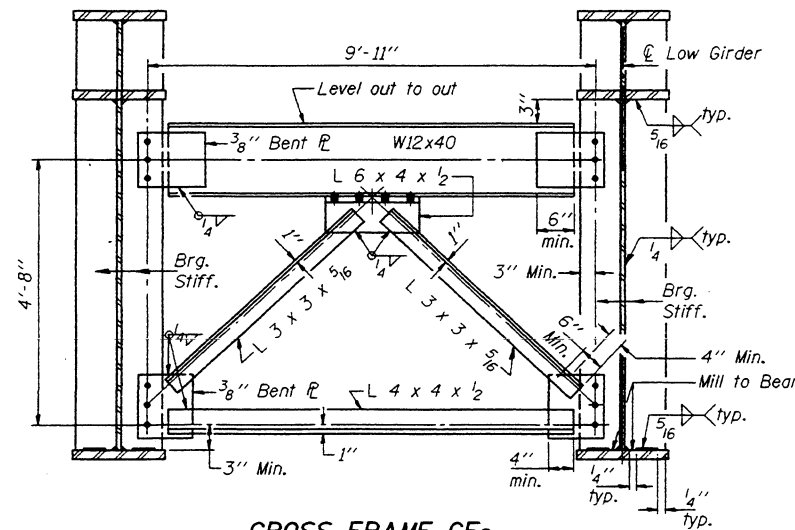
		0.4 Sp. 4 & 0.6 Sp. 6	Pier 4 & Pier 5	0.5 Sp. 5
Is	(in ⁴)	90713	236598	87505
Ic (n)	(in ⁴)	200796	————	191901
Ic (3n)	(in ⁴)	144632	————	138980
Ss	(in ³)	2563	5650	2414
Sc (n)	(in ³)	3387	————	3198
Sc (3n)	(in ³)	3070	————	2896
D	(k'')	1.289	2.335	1.278
M ϕ	('k)	3387	10839	1945
s ϕ	(k'')	0.663	————	0.663
Ms ϕ	('k)	1911	————	1500
M Δ	('k)	2796	3532	2639
M (Imp)	('k)	428	512	404
S ₃ [M Δ +M[Imp]]	('k)	5373	6740	5072
Ma	('k)	13873	22853	11072
Mu	('k)	15093	————	12287
fs ϕ non-comp(k.s.i.)		15.9	23.0	9.7
fs ϕ (comp) (k.s.i.)		7.5	————	6.2
fs ₃ (Δ +Imp) (k.s.i.)		19.0	14.3	19.0
fs (Overload) (k.s.i.)		42.4	37.3	34.9
fs (Total) (k.s.i.)		————	48.5	————
VR	(k)	92	————	84

	Pier 3 & Pier 6	Pier 4 & Pier 5
R_D (k)	143.9	511.6
R_t (k)	69.4	158.3
Imp. (k)	10.6	23.0
R (Total) (k)	223.9	692.9

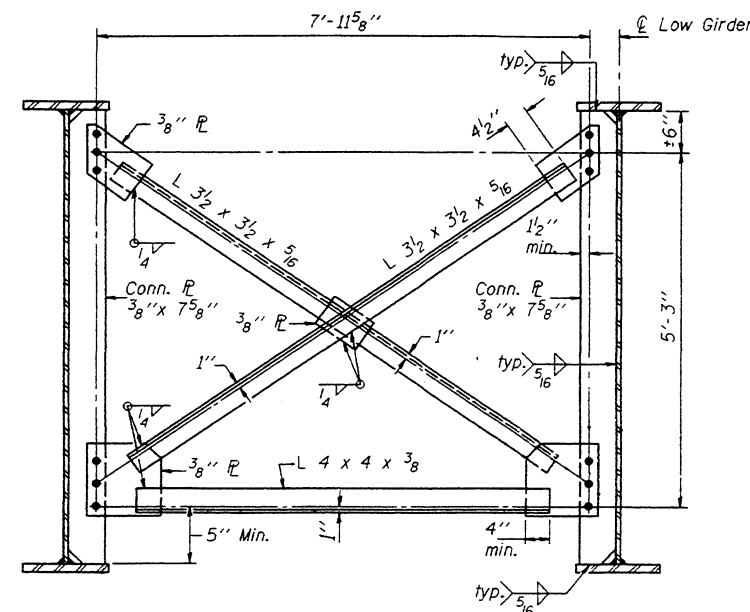
f_s (Total) (Non-compact section) is the sum of the stresses due to $1.3[MP + MsP + {}^5_3(M_L + M_{Imp})]$.



CROSS FRAME CF
(3 Required)



CROSS FRAME CF₂
(3 Required)



CROSS FRAME CF₁
(93 Required)

* TOP OF WEB ELEVATION

Location	Girder 1	Girder 2	Girder 3	Girder 4
Ⓒ Brg. Pier 3	507.11	507.27	507.28	507.15
Ⓒ Splice 1	507.65	507.80	507.81	507.67
Ⓒ Brg. Pier 4	507.28	507.44	507.45	507.30
Ⓒ Splice 2	507.49	507.65	507.65	507.51
Ⓒ Splice 3	507.56	507.71	507.71	507.56
Ⓒ Brg. Pier 5	507.42	507.56	507.56	507.41
Ⓒ Splice 4	506.86	508.00	508.00	507.85
Ⓒ Brg. Pier 6	506.89	507.03	507.02	506.87

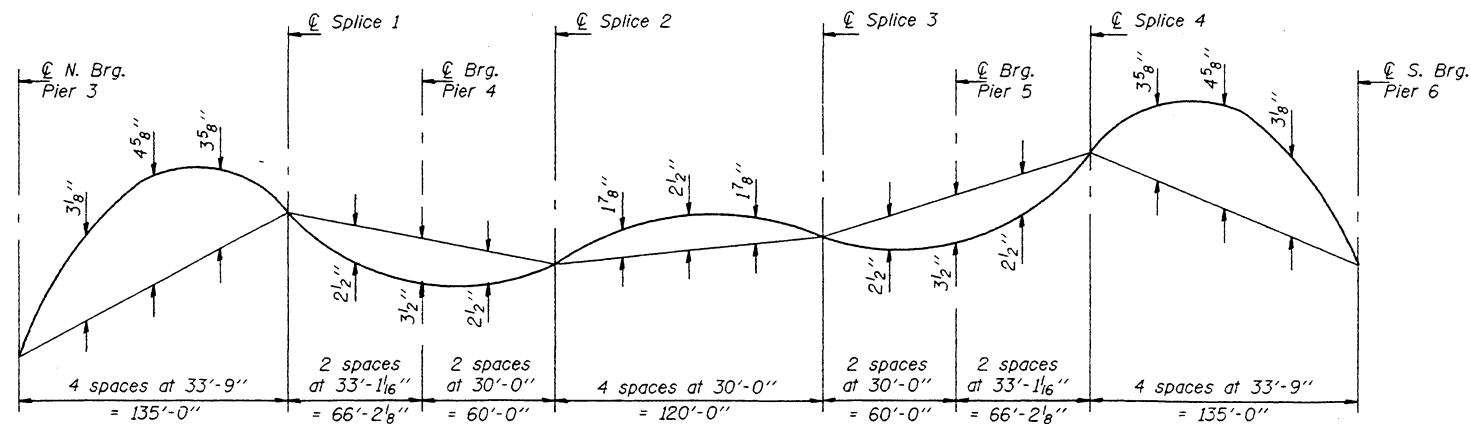
**See sheet 27 of 62 detail D for top of web elevation location.

Notes: All cross frames shall have $1\frac{1}{16}$ " ϕ holes for $\frac{7}{8}$ " ϕ H.S. bolts.
Two hardened washers shall be required over all oversized holes.

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

Feb. 4, 2082

EXAMINED Thomas J. Domagala
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED

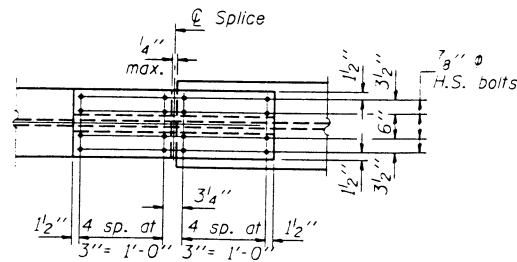


CAMBER DIAGRAM

STRUCTURAL STEEL DETAILS
SPANS 4 THRU 6
F.A.P. ROUTE 658 - SECTION K(B-I)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

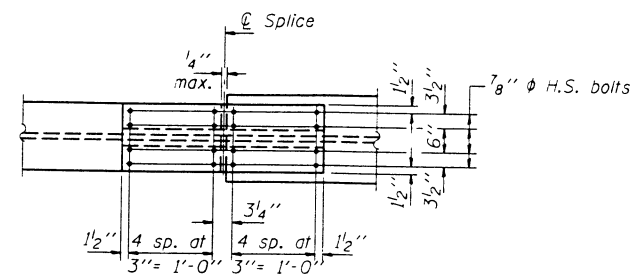
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. 27
FAP 658	K(B-1)	MENARD	193	60	62 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



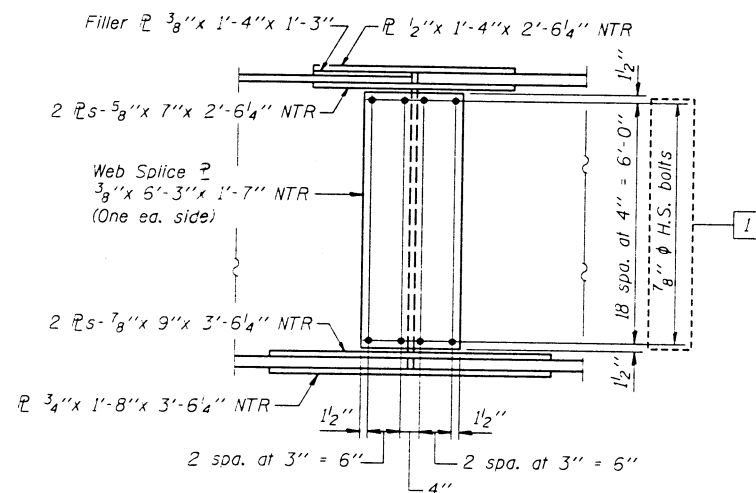
PLAN - SPLICES 1 & 4

Splice 1 shown - Splice 4 similar
(Top flange)



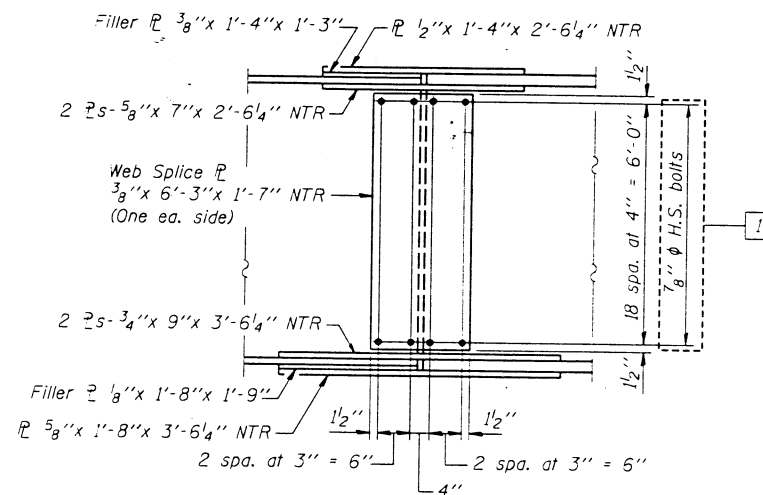
PLAN - SPLICES 2 & 3

Splice 2 shown - Splice 3 similar
(Top flange)



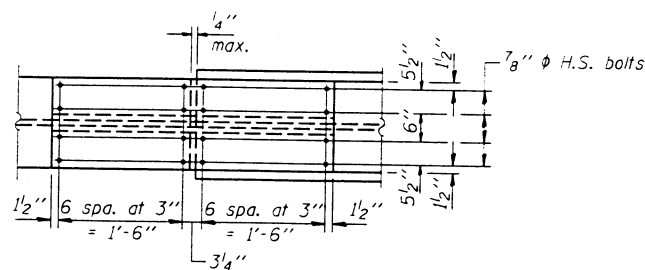
ELEVATION - SPLICES 1 & 4

Splice 1 shown - Splice 4 similar



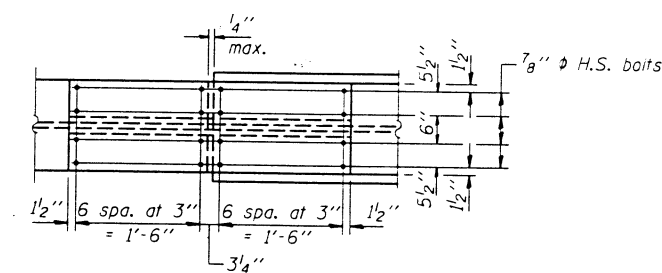
ELEVATION - SPLICES 2 & 3

Splice 2 shown - Splice 3 similar



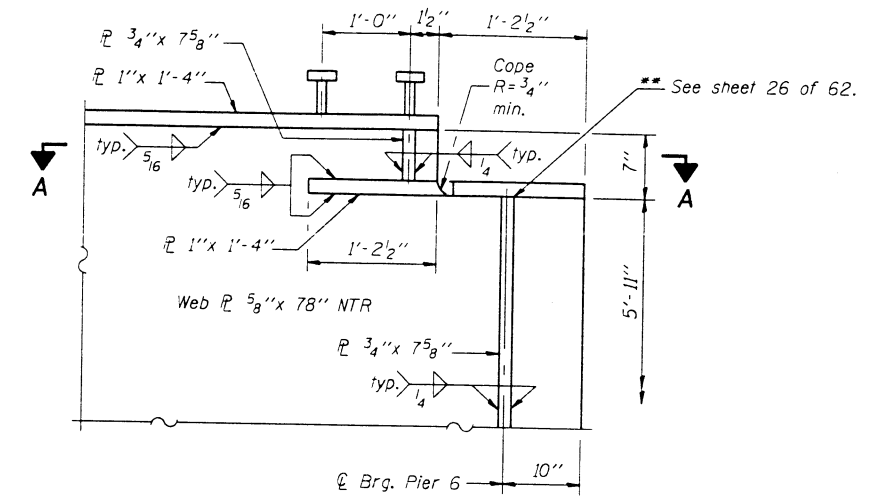
PLAN - SPLICES 1 & 4

Splice 1 shown - Splice 4 similar
(Bottom flange)

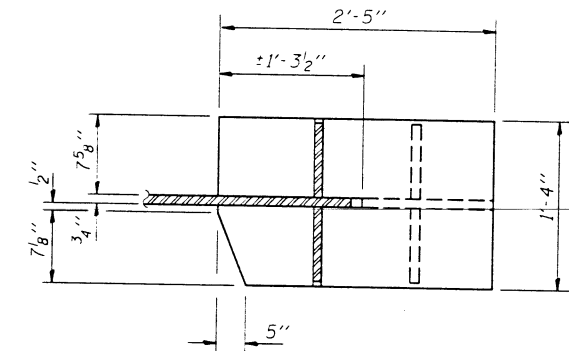


PLAN - SPLICES 2 & 3

Splice 2 shown - Splice 3 similar
(Bottom flange)



DETAIL D



SECTION A-A

Notes: Notch Toughness Requirements are applicable for all splice plates.

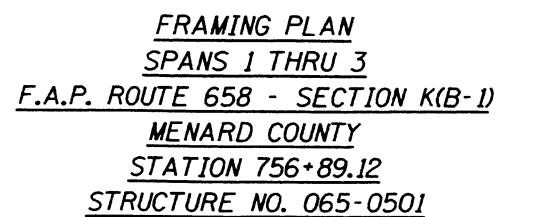
DESIGNED	Mike J. Trella
CHECKED	Chad E. Hodel
DRAWN	h.t. parsons
CHECKED	MJT/CEH

EXAMINED	Thomas J. Donagale
PASSED	Ralph E. Anderson

STRUCTURAL STEEL DETAILS
SPANS 4 THRU 6
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 658	KIB-D	MENARD	198	61
FED. ROAD DIST. NO. 7		S.L.D. NO.	FED. AID PROJECT-	

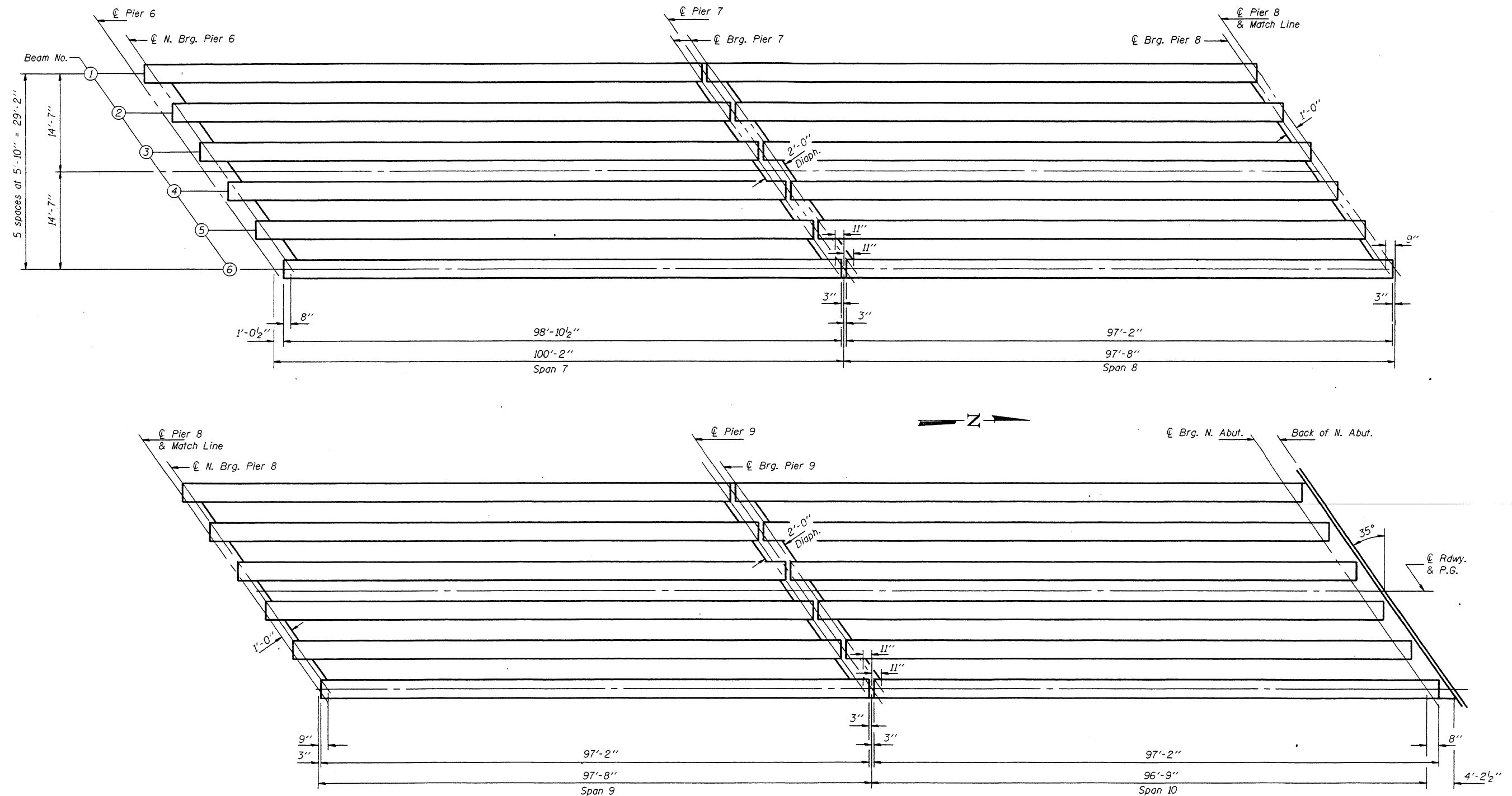
SHEET NO. 28
62 SHEETS



DESIGNED	Mike J. Trello	Feb. 4, 2082
CHECKED	Chad E. Hodel	EXAMINED <i>Thomas J. Donagabizi</i> ENGINEER OF BRIDGE DESIGN
DRAWN	R. Doty/h.t. parsons	PASSED <i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	MJT/CEH	APPROVED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 29
FAP 658	K(B-1)	MENARD	198	62	62 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



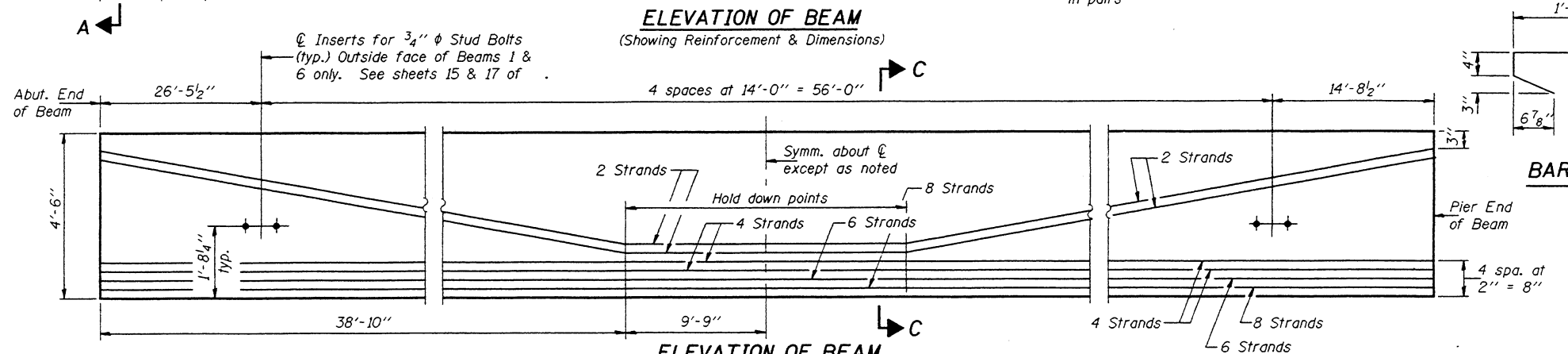
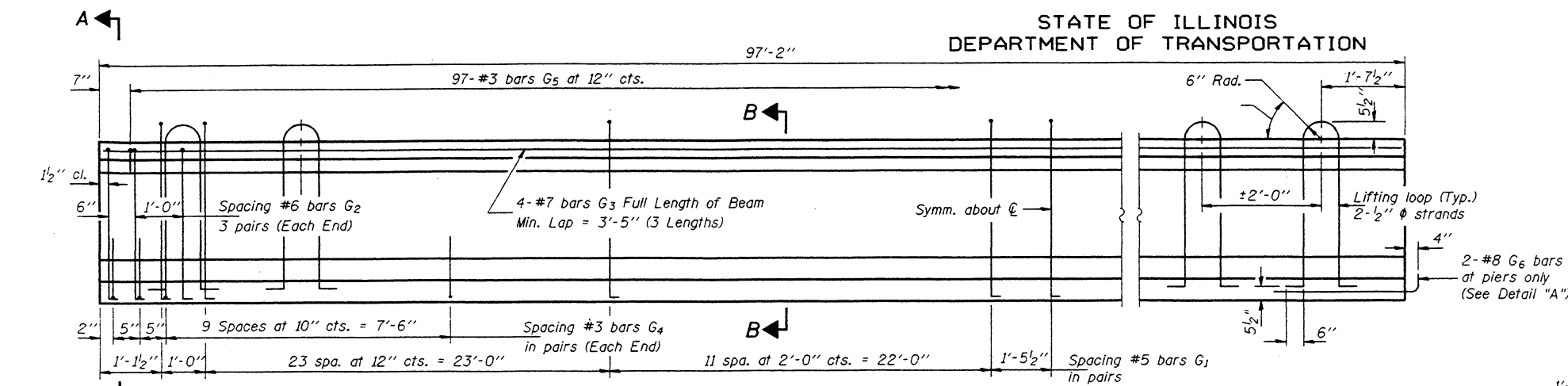
DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

EXAMINED	Thomas J. Damagala	Feb. 4, 2002
PASSED	Ralph E. Anderson	
APPROVED		

FRAMING PLAN
SPANS 7 THRU 10
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET TOTAL
FAP 658	K(B)-1	MENARD	198	63	62 SHEETS
FEL. ROAD DIST. NO. 7					
ALLIANCE					



INTERIOR BEAM MOMENT TABLE (SPANS 1 THRU 3)					
	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
I	(in ⁴) 213715		213715		213715
I'	(in ⁴) 472913		472913		472913
S _b	(in ³) 8559		8559		8559
S _b '	(in ³) 12419		12419		12419
S _t	(in ³) 7362		7362		7362
S _t '	(in ³) 29706		29706		29706
Q	(k/')	1.187	1.187	1.187	1.187
M _Q	(k)	1333	1415	1381	
s _Q	(k/')	.429	.429	.429	.429
Ms _Q	(k)	321	402	103	333
M _L	(k)	620	543	517	632
M (Imp)	(k)	140	122	116	142

INTERIOR BEAM REACTION TABLE (SPANS 1 THRU 3)						
	S. Abut.	Pier 1 Sp. 1	Pier 1 Sp. 2	Pier 2 Sp. 2	Pier 2 Sp. 3	Pier 3 Sp. 3
R _Q	(k)	57.4	57.4	58.0	58.0	58.4
Rs _Q	(k)	16.6	22.9	22.9	23.2	16.9
R _L	(k)	33.6	26.7	26.7	26.9	33.6
Imp.	(k)	7.6	6.0	6.0	6.0	7.5
R (Total)	(k)	115.2	113.0	113.6	114.1	116.4

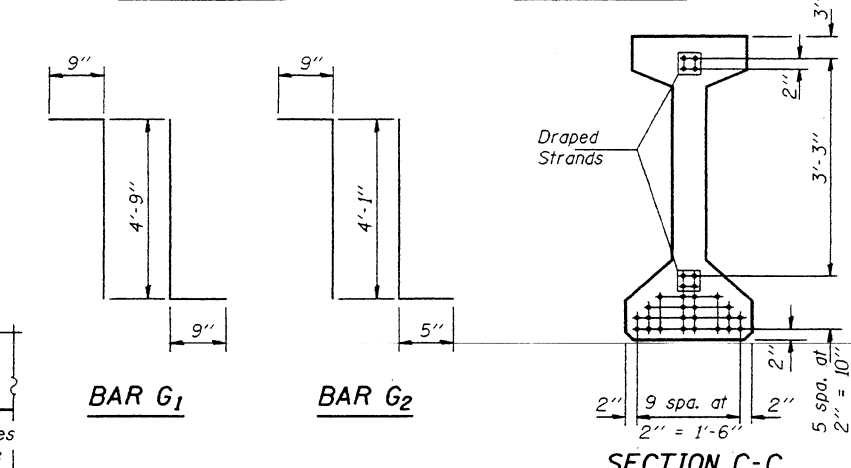
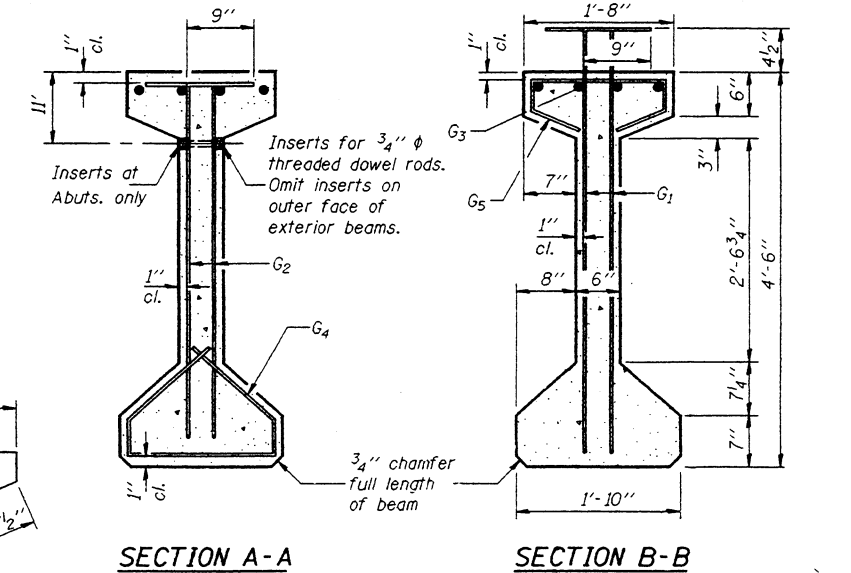
DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

EXAMINED	Thomas J. D'Amico	Feb. 4, 2002
PASSED	Robert E. Anderson	
APPROVED		

I and I' are the moment of inertia and composite moment of inertia of the beam section.
S_b and S_b' are the non-composite and composite section modulus for the bottom fiber of the prestressed beam.
S_t and S_t' are the non-composite and composite section modulus for the top fiber of the prestressed beam.
M_Q is the moment due to dead loads on the non-composite prestressed beam. It is conservatively calculated at 0.5 of the span.
Ms_Q is the moment due to dead loads on the composite section.
M_L is the moment due to live load on the composite section.
M (Imp) is the moment due to live load impact on the composite section.
R (Total) is the sum of the reaction per bearing due to R_Q (non-composite) + Rs_Q (composite) + R_L + I (composite).

NOTES

All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per foot of Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54 in.
Inserts for 3/4" threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
Non-prestressing steel shall conform to AASHTO designation M-31, M-42 or M-53 Grade 60.
Lifting loops shall be 2-1/2" 270 ksi strands, as shown.
Required release strength, f'ci, shall be 5000 psi.
Reinforcement bars designated (E) shall be epoxy coated.



* BAR LIST

Bar	No.	Size	Length	Shape
G1	146	#5	6'-3"	7L
G2	12	#6	5'-3"	7L
G3	12	#7	34'-8"	—
G4	48	#3	3'-4 1/2"	—
G5	97	#3	3'-5"	—
G6	2	#8	3'-6"	—

* For one beam only.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54"	Foot	1166

BEAM DETAILS

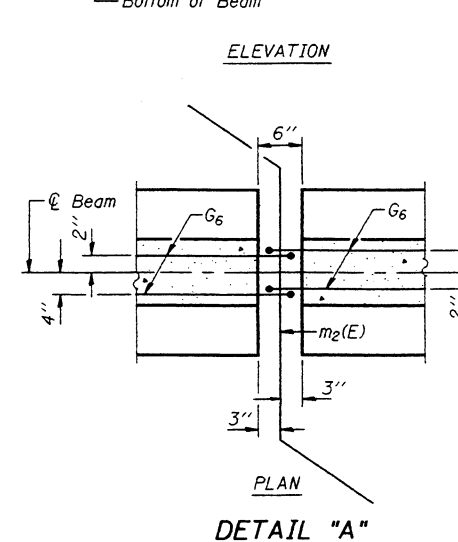
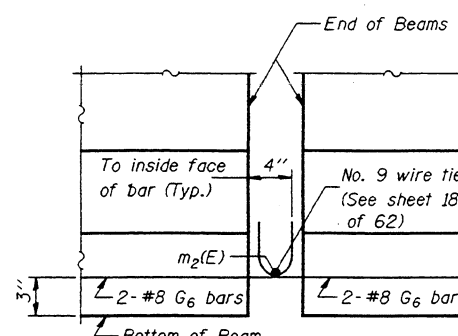
SPANS 1 AND 10

F.A.P. ROUTE 658 - SECTION K(B)-1

MENARD COUNTY

STATION 756+89.12

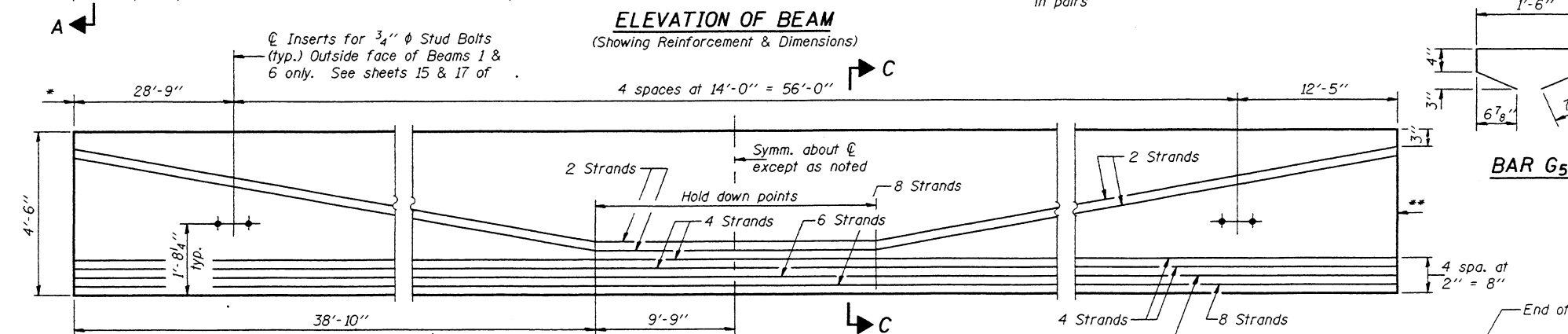
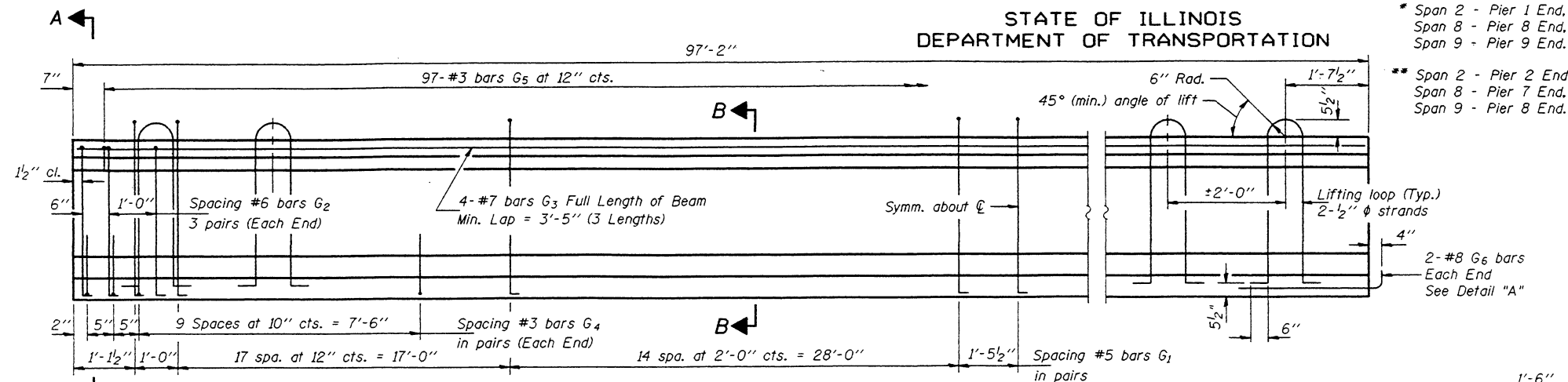
STRUCTURE NO. 065-0501



ELEVATION

PLAN

DETAIL "A"



	0.4 Sp. 7	Pier 7	0.5 Sp. 8	Pier 8	0.5 Sp. 9	Pier 9	0.6 Sp. 10
I (in ⁴)	213715	————	213715	————	213715	————	213715
I' (in ⁴)	472913	————	472913	————	472913	————	472913
S _b (in ³)	8559	————	8559	————	8559	————	8559
S _b ' (in ³)	12419	————	12419	————	12419	————	12419
S _t (in ³)	7362	————	7362	————	7362	————	7362
S _t ' (in ³)	29706	————	29706	————	29706	————	29706
Q (k/')	1.187	————	1.187	————	1.187	————	1.187
M _Q (k)	1381	————	1415	————	1415	————	1333
s _Q (k/')	.429	.429	.429	.429	.429	.429	.429
M _{sQ} (k)	322	443	144	293	149	433	309
M _L (k)	616	564	510	507	509	555	620
M (1mp) (k)	138	126	115	114	115	125	139

INTERIOR BEAM REACTION TABLE (SPANS 7 THRU 10)									
		Pier 6 Sp. 7	Pier 7 Sp. 7	Pier 7 Sp. 8	Pier 8 Sp. 8	Pier 8 Sp. 9	Pier 9 Sp. 9	Pier 9 Sp. 10	N. Abut.
R_L	(k)	58.4	58.4	58.0	58.0	58.0	58.0	57.4	57.4
R_{SL}	(k)	16.6	24.1	24.1	19.5	19.5	23.8	23.8	16.3
R_L	(k)	33.6	27.3	27.3	25.8	25.8	27.1	27.1	33.6
Imp.	(k)	7.5	6.1	6.1	5.8	5.8	6.1	6.1	7.6
R (Total)	(k)	116.1	115.9	115.5	109.1	109.1	115.0	114.4	114.9



I and I' are the moment of inertia and composite moment of inertia of the beam section.

S_b and $S_{b'}$ are the non-composite and composite section modulus for the bottom fiber of the prestressed beam.

S_t and $S_{t'}$ are the non-composite and composite section modulus for the top fiber of the prestressed beam.

M_L is the moment due to dead loads on the non-composite prestressed beam. It is conservatively calculated at 0.5 of the span.

M_{SL} is the moment due to dead loads on the composite section.

M_L is the moment due to live load on the composite section.

M (Imp) is the moment due to live load impact on the composite section.

R (Total) is the sum of the reaction per bearing due to R_L (non-composite) + R_{SL} (composite) + R_L + I (composite).

NOTES

All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per foot of Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54 in.

Inserts for $\frac{3}{4}$ " threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

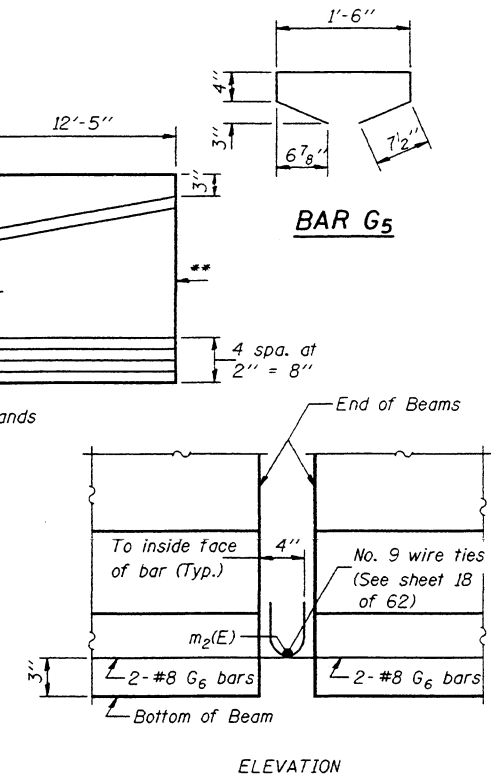
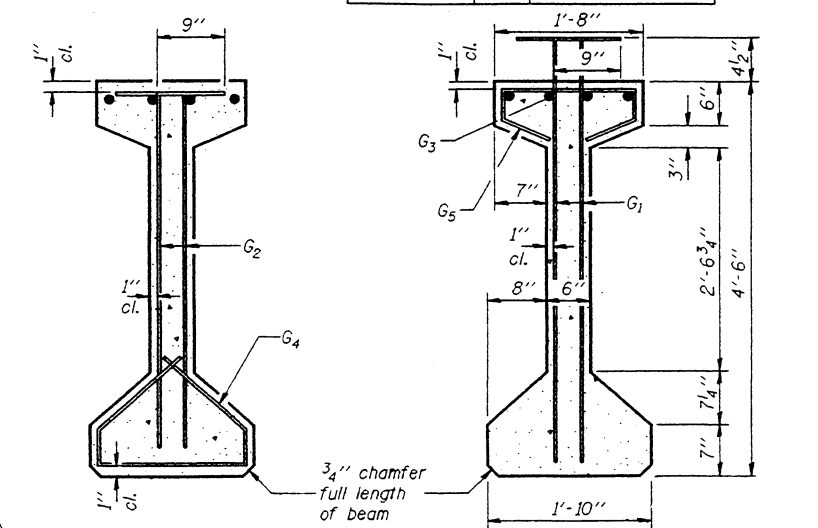
The nominal diameter shall be $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in.

Non-prestressing steel shall conform to AASHTO designation M-31, M-42 or M-53 Grade 60.

Lifting loops shall be 2- $\frac{1}{2}$ "-270 ksi strands, as shown.

Required release strength, f'ci, shall be 5000 psi.

Reinforcement bars designated (E) shall be epoxy coated.



*** BAR LIST**

Bar	No.	Size	Length	Shape
G ₁	134	#5	6'-3"	7L
G ₂	12	#6	5'-3"	7L
G ₃	12	#7	34'-8"	—
G ₄	48	#3	3'-4 1/2"	└
G ₅	97	#3	3'-5"	└
G ₆	4	#8	3'-6"	└

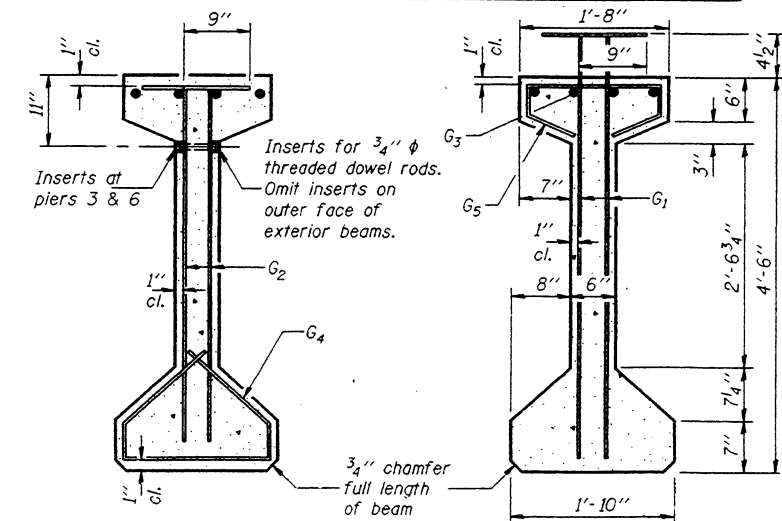
<u>BILL OF MATERIAL</u>		
<i>Item</i>	<i>Unit</i>	<i>Total</i>
<i>Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54"</i>	<i>Foot</i>	<i>1749</i>

BEAM DETAILS
SPANS 2, 8 AND 9
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

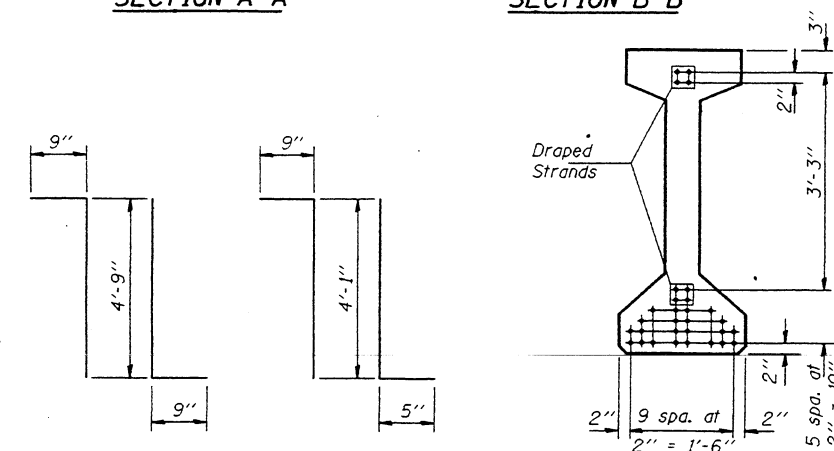
DESIGNED	Mike J. Trello	Feb. 4, 2002
CHECKED	Chad E. Hodel	EXAMINED <i>Thomas J. Donagallo</i> ENGINEER OF BRIDGE DESIGN
DRAWN	R. Doty/h.t. parsons	PASSED <i>Ralph E. Jackson</i> ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	MJT/CEH	APPROVED

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 658	K(B-1)	MENARD	198	65
FED. ROAD DIST. NO. 7	R.L.SHOES		FED. AID PROJECT -	

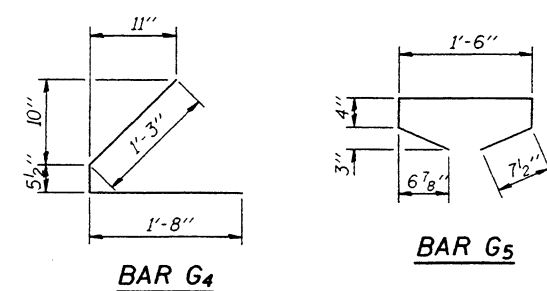
SHEET NO. 32
62 SHEETS



SECTION B-B



SECTION C-C



BAR G₅

BAR G_6

Bar	No.	Size	Length	Shape
G ₁	150	#5	6'-3"	TL
G ₂	12	#6	5'-3"	TL
G ₃	12	#7	35'-3"	—
G ₄	48	#3	3'-4½"	C
G ₅	99	#3	3'-5"	U
G ₆	2	#8	3'-6"	U

* For one beam only.

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete T-Beams, 54"	Ft.	1186.5

All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per foot of "Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54 in."

Inserts for $\frac{3}{4}$ " ϕ threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in.

Non-prestressing steel shall conform to AASHTO designation M-31, M-42 or M-53 Grade 60.

Lifting loops shall be 2- $\frac{1}{2}$ " ϕ -270 ksi strands, as shown.

Required release strength, f'ci, shall be 5000 psi.

Reinforcement bars designated (E) shall be epoxy coated.

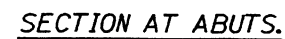
Feb. 4, 2002

EXAMINED *Thomas J. Damgalab*
ENGINEER OF BRIDGE DESIGN

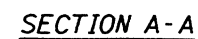
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED

BEAM DETAILS
SPANS 3 AND 7
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501



TYPE II TFE ELASTOMERIC EXP. BRG.



DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

Feb. 4, 2002

EXAMINED Thomas J. Domagala
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED _____

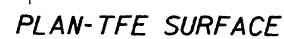
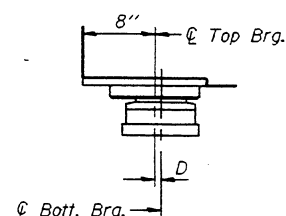


Diagram illustrating a vertical shaft assembly. The top bracket is labeled "Top Brg." and has a dimension of 8" indicated. The bottom bracket is labeled "Bott. Brg." and has a dimension of D indicated.

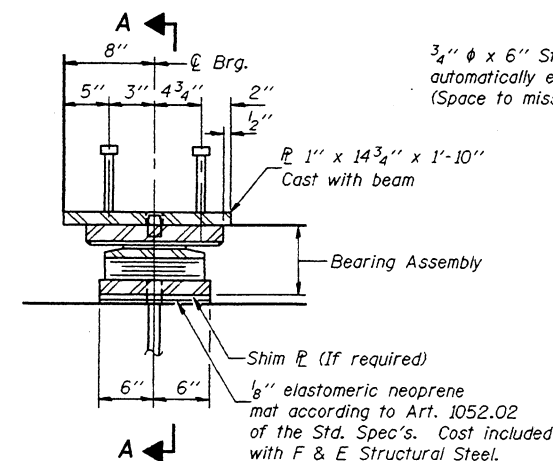
BELOW 50°F.
(Move bott. brg. away from fixed brg.)



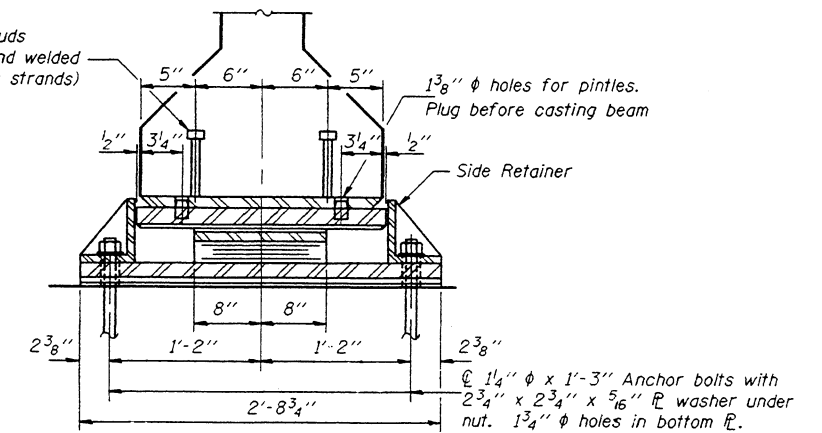
ABOVE 50°F.
(Move bott. bra. toward fixed bra.)

SETTING ANCHOR BOLTS AT EXP. BRG.

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



SECTION AT PIER 6



SECTION A-A

TYPE II TFE ELASTOMERIC EXP. BRG.

Notes: After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place.
For anchor bolt installation, see sheet 38 of 62.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	18

BEARING DETAILS

F.A.P. ROUTE 658 - SECTION K(B-1)

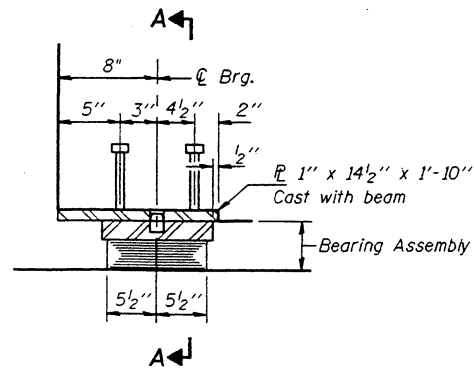
MENARD COUNTY

STATION 756+89.12

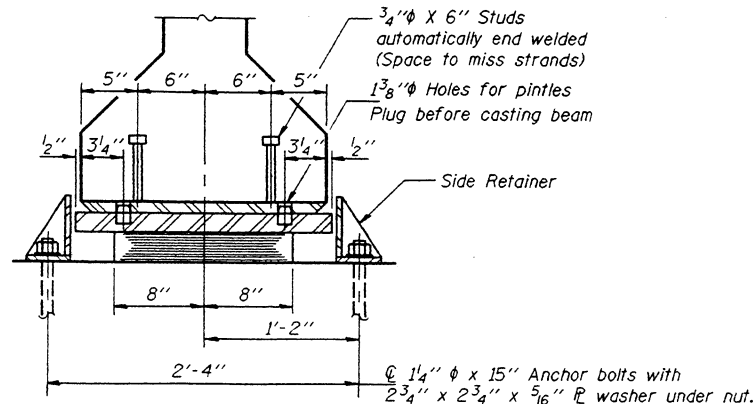
STRUCTURE NO. 065-0501

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	NO.	SHEET NO. 34
FAP 658	K(B-1)	MENARD	198	67	62 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

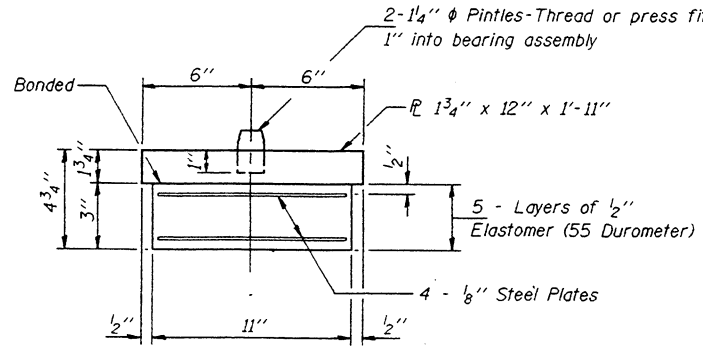


SECTION AT PIERS 1, 3, 7 & 9



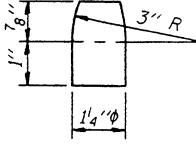
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



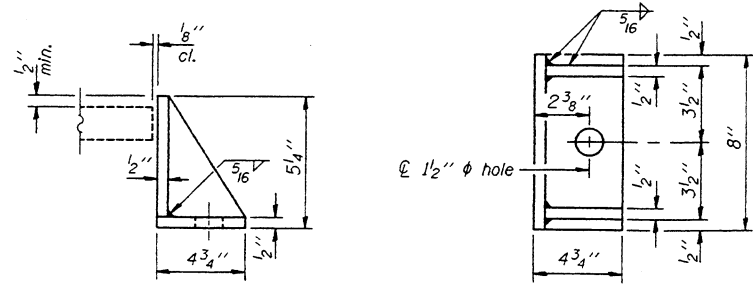
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



PINTLE

Notes: After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. See sheet 38 of 62 for anchor bolt installation.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Furnishing & Erecting Structural Steel.

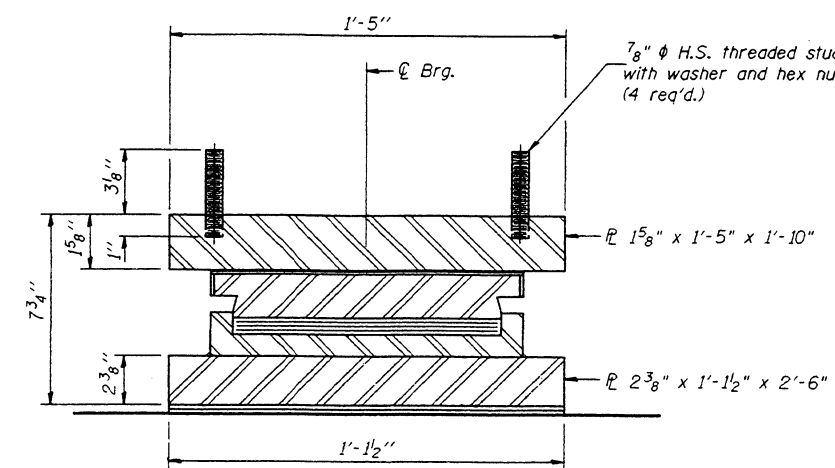
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	42

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

EXAMINED	Thomas J. Donagale
PASSED	Ralph E. Anderson
APPROVED	

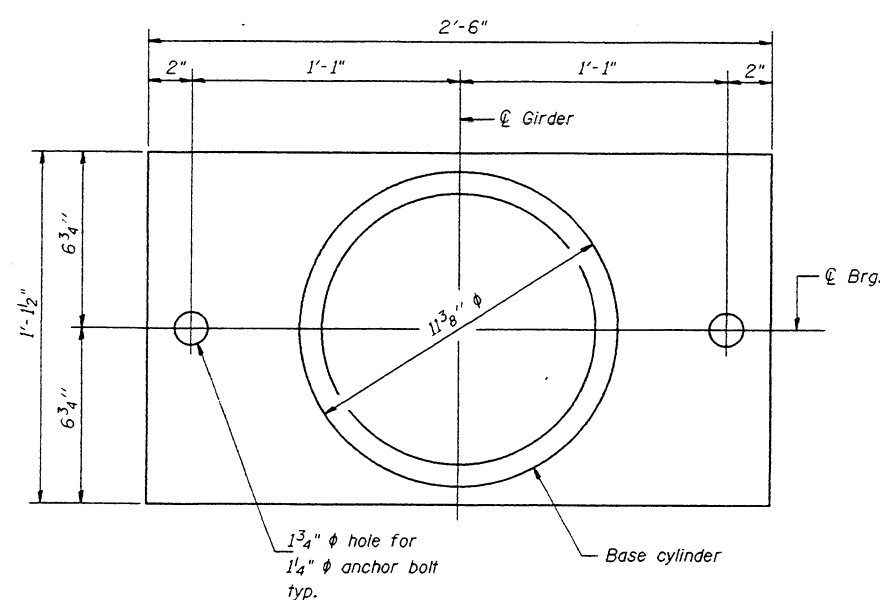
BEARING DETAILS
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501



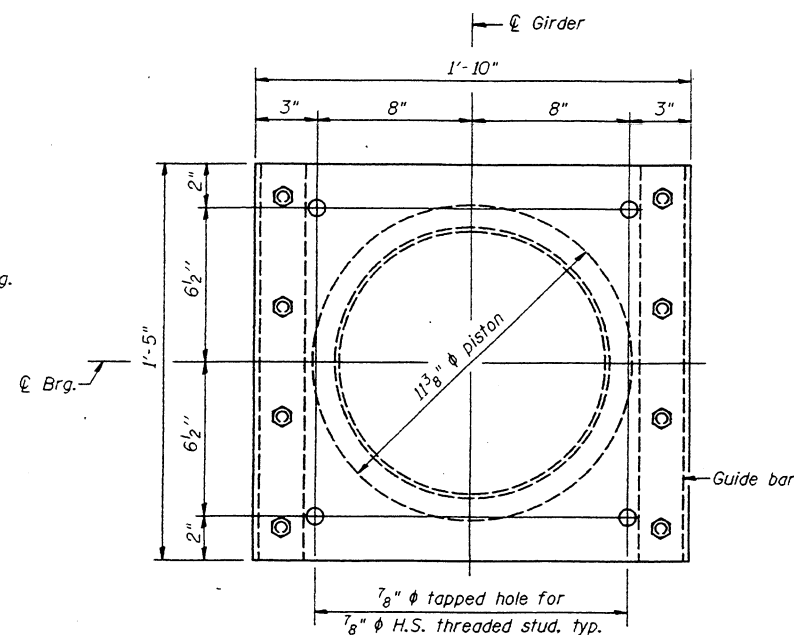
SECTION B-B

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

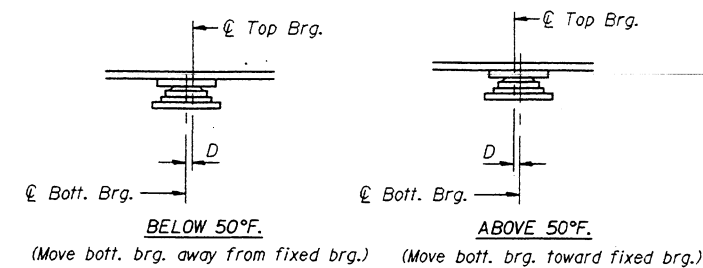
GUIDED EXPANSION FLOATING BEARING



BOTTOM BEARING PL AND
BASE CYLINDER PLAN



TOP BEARING P_L AND
PISTON PLAN



SETTING ANCHOR BOLTS AT EXP. BRG.

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

BEARING DATA		
	Pier 3	Pier 6
Vertical design load	250k	250k
Total required movement	2 3/4"	5 1/2"

BILL OF MATERIAL

Item	Unit	Total
Floating Bearings, Guided Expansion (250 kip)	Each	8

BEARING DETAILS
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	h.t. parsons
CHECKED	MJT/CEH

Feb. 4, 2082

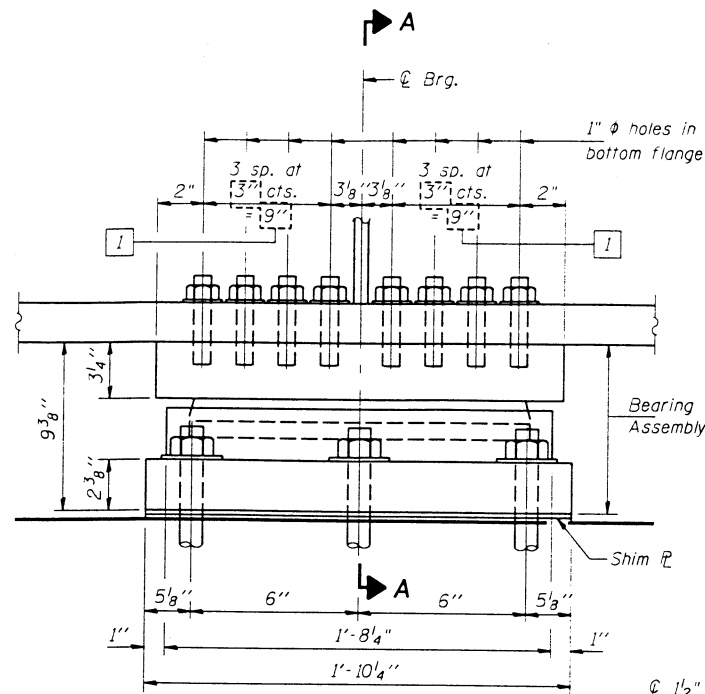
EXAMINED *Thomas J. Donagale*
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Carlson*
ENGINEER OF BRIDGES AND STRUCTURES

Notes: The plates of the Bearing Assembly shall be AASHTO M270, Grade 50.
For anchor bolt installation details, see sheet 38 of 62.

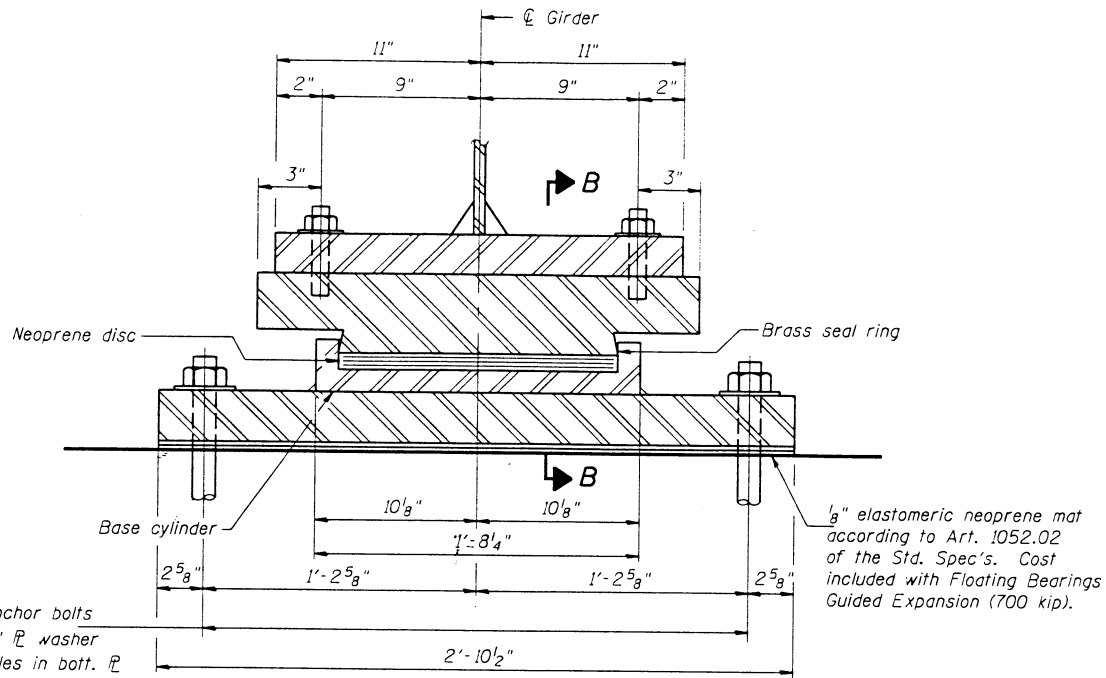
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO.
FAP 658	K(B-1)	MENARD	193	69	36
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			52 SHEETS

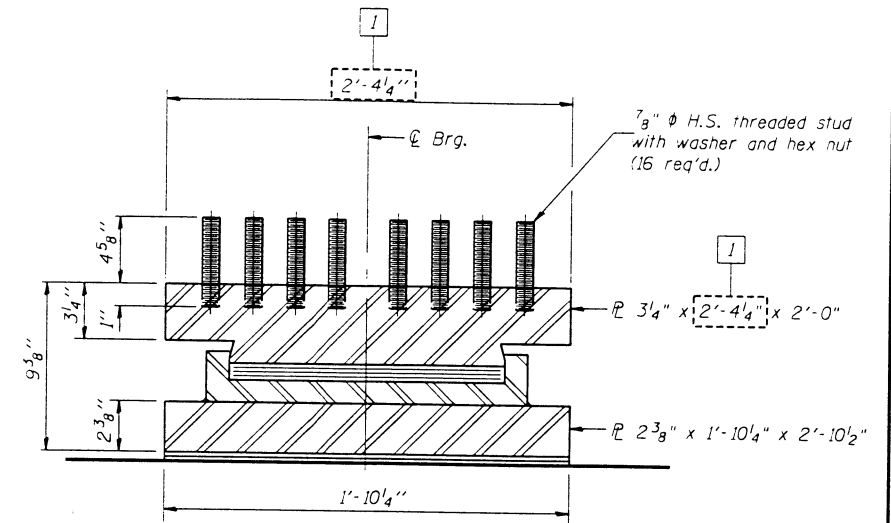


ELEVATION AT PIER 4

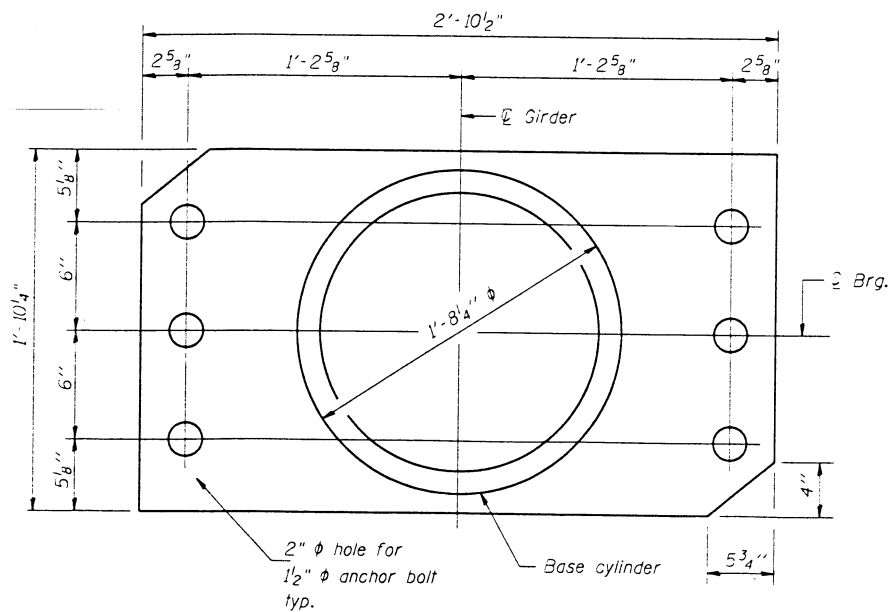
FIXED FLOATING BEARING



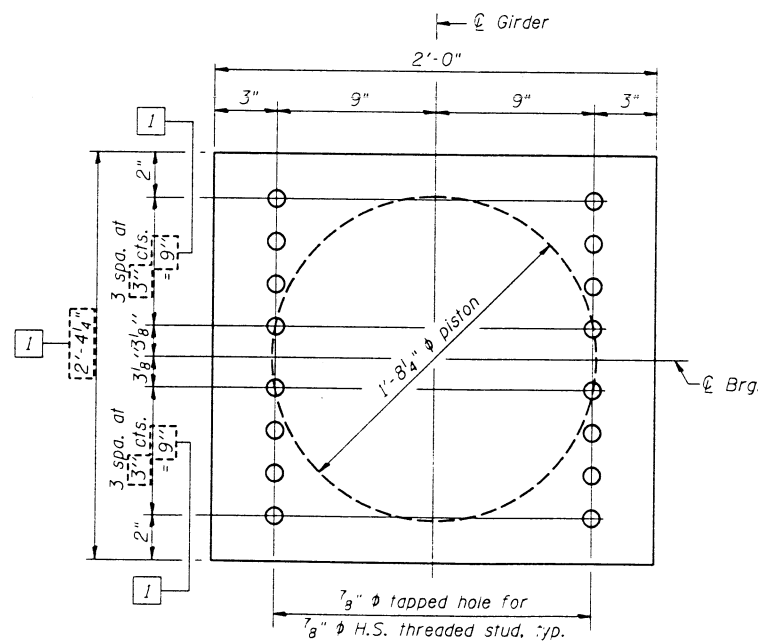
SECTION A-A



SECTION B-B



BOTTOM BEARING & BASE CYLINDER PLAN



TOP BEARING & PISTON PLAN

BEARING DATA	
Vertical design load	Pier 4 700k

BILL OF MATERIAL

Item	Unit	Total
Floating Bearings, Fixed (700 kip)	Each	4

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	n.t. parsons
CHECKED	MJT/CEH

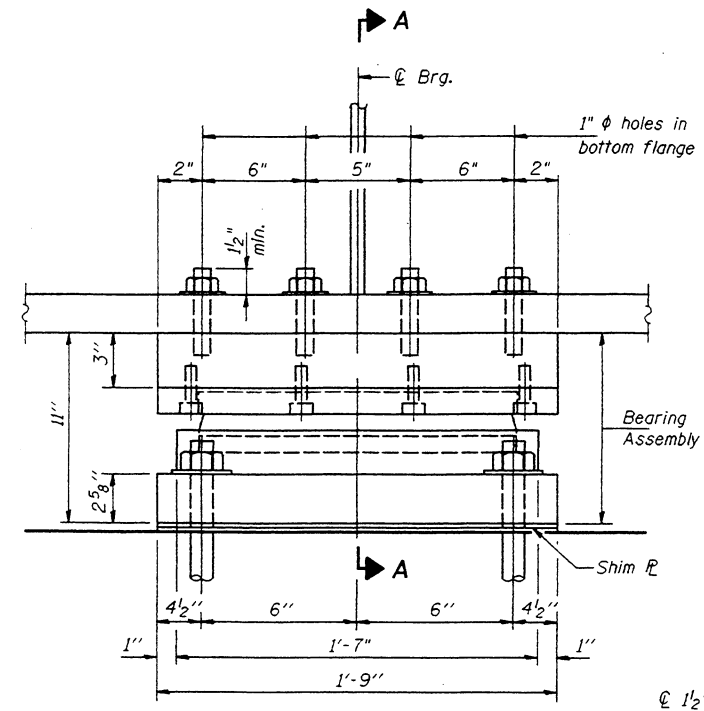
EXAMINED	Thomas J. Domagala
PASSED	Ralph E. Anderson

Notes: The plates of the Bearing Assembly shall be AASHTO M270, Grade 50.
For anchor bolt installation details, see sheet 38 of 62.

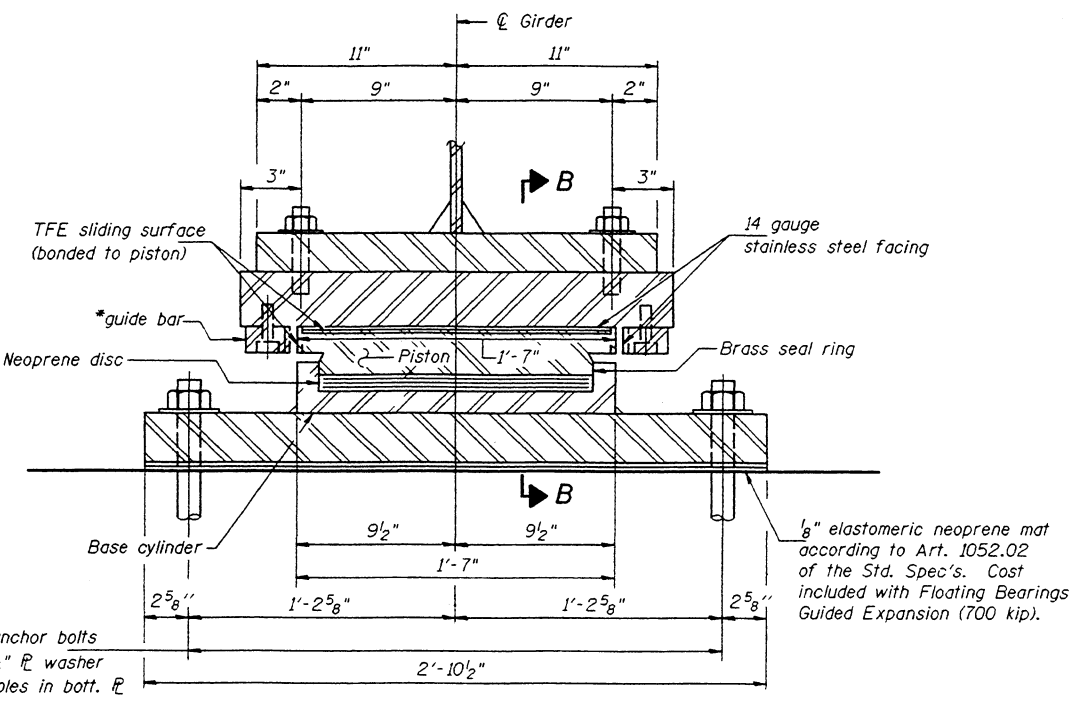
BEARING DETAILS
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

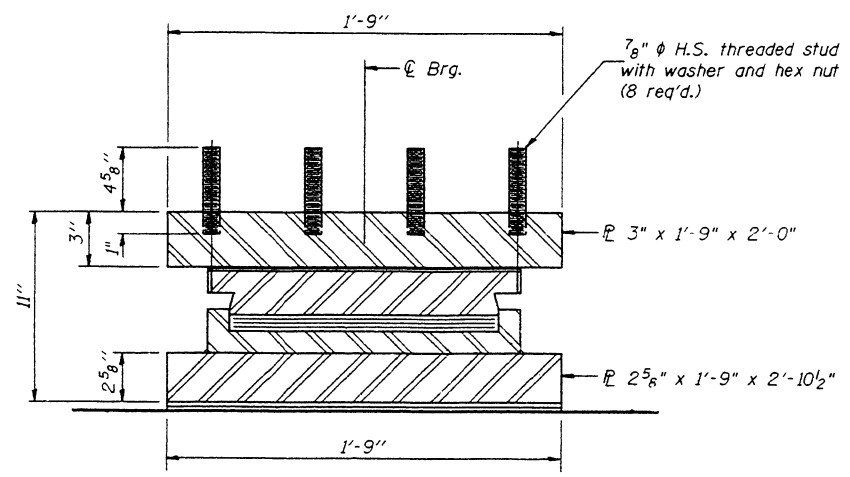
ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
FAP 658	K(B-1)	MENARD	1987	70
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		62 SHEETS



ELEVATION AT PIER 5

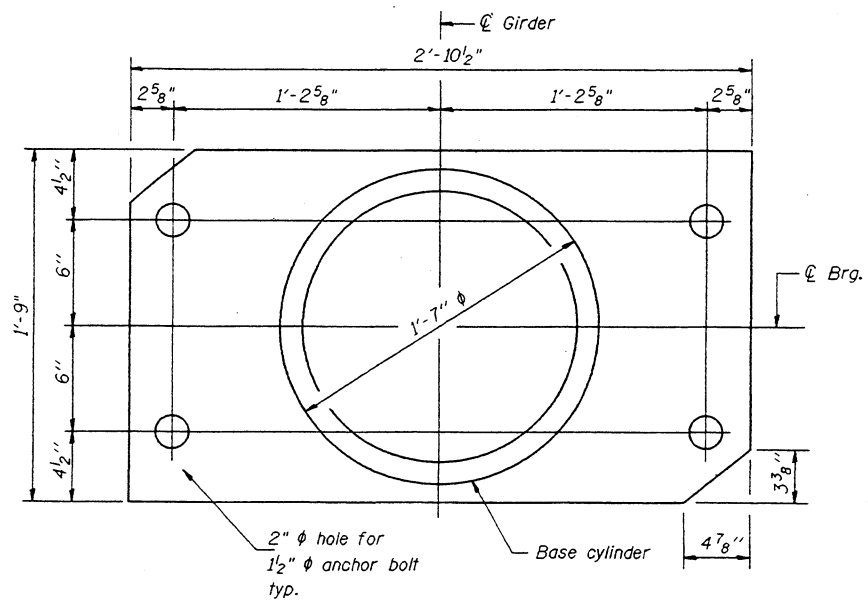


SECTION A-A

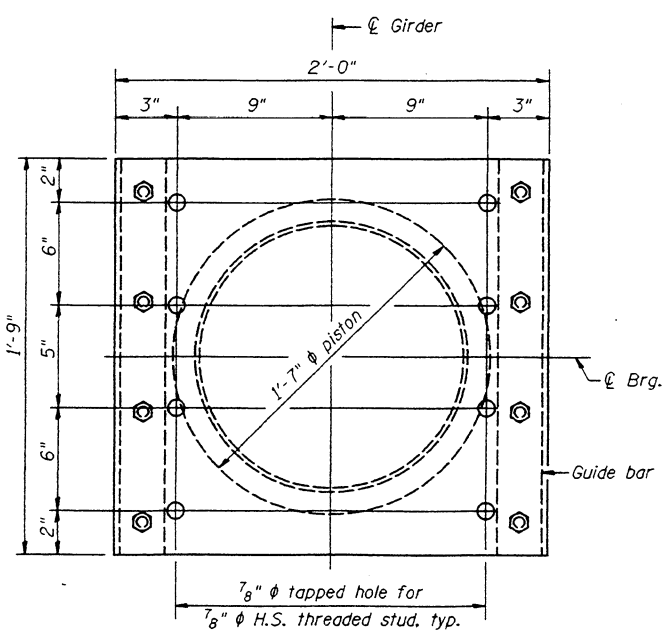


SECTION B-B

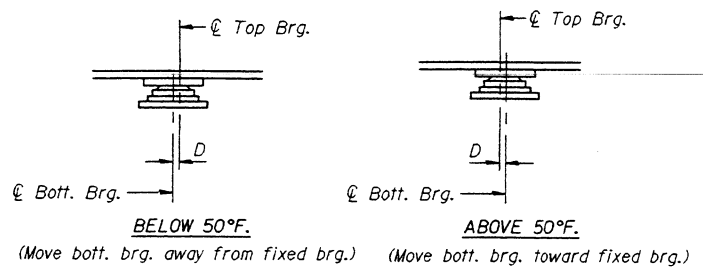
*As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.



BOTTOM BEARING ϕ AND
BASE CYLINDER PLAN



TOP BEARING ϕ AND
PISTON PLAN



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

BEARING DATA	
Vertical design load	Pier 5 700k
Total required movement	3"

BILL OF MATERIAL

Item	Unit	Total
Floating Bearings, Guided Expansion (700 kip)	Each	4

BEARING DETAILS
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	n.t. parsons
CHECKED	MJT/CEH

Feb. 4, 2002
EXAMINED *Thomas J. Domagala*
ENGINEER OF BRIDGE DESIGN
PASSED *Ronald E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

Notes: The plates of the Bearing Assembly shall be AASHTO M270, Grade 50.
For anchor bolt installation details see sheet 38 of 62.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 658	K(B-1)	MENARD	198	72
FED. ROAD DIST. NO. 7	ALLIANCE	FED. AID PROJECT		

SHEET NO. 39

62 SHEETS

PILE DATA

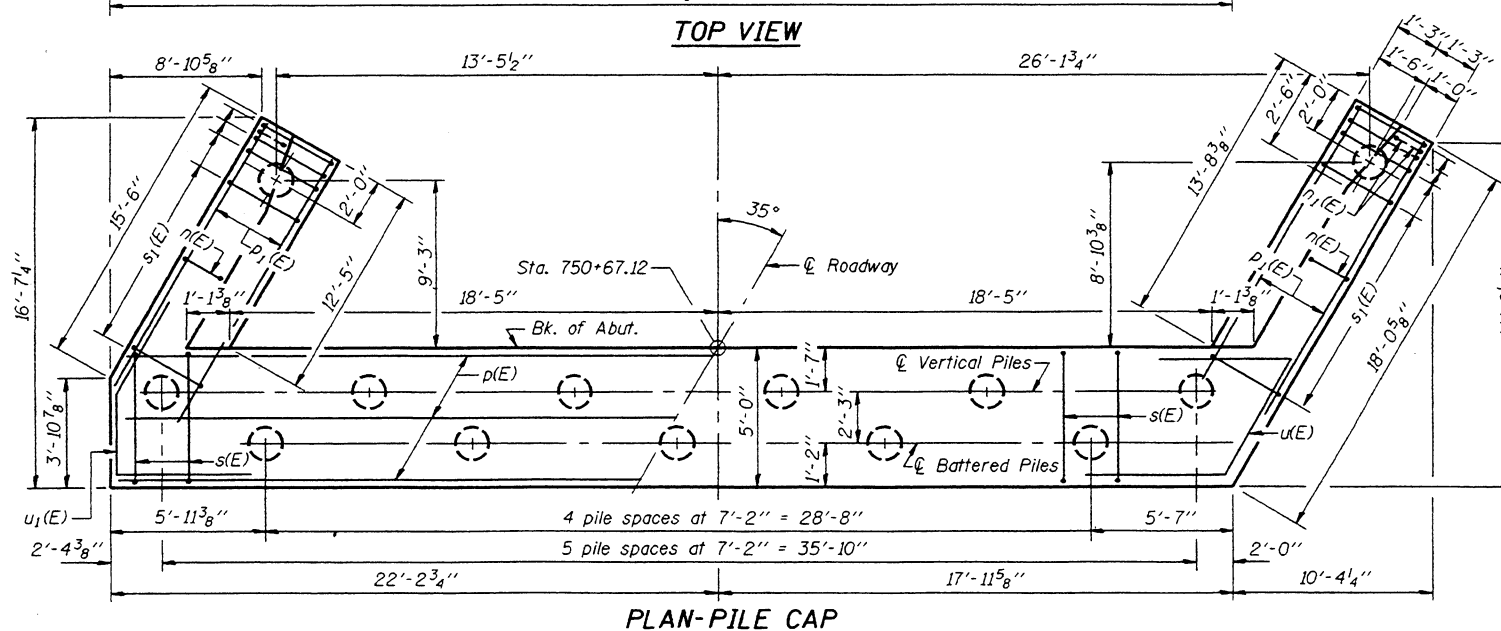
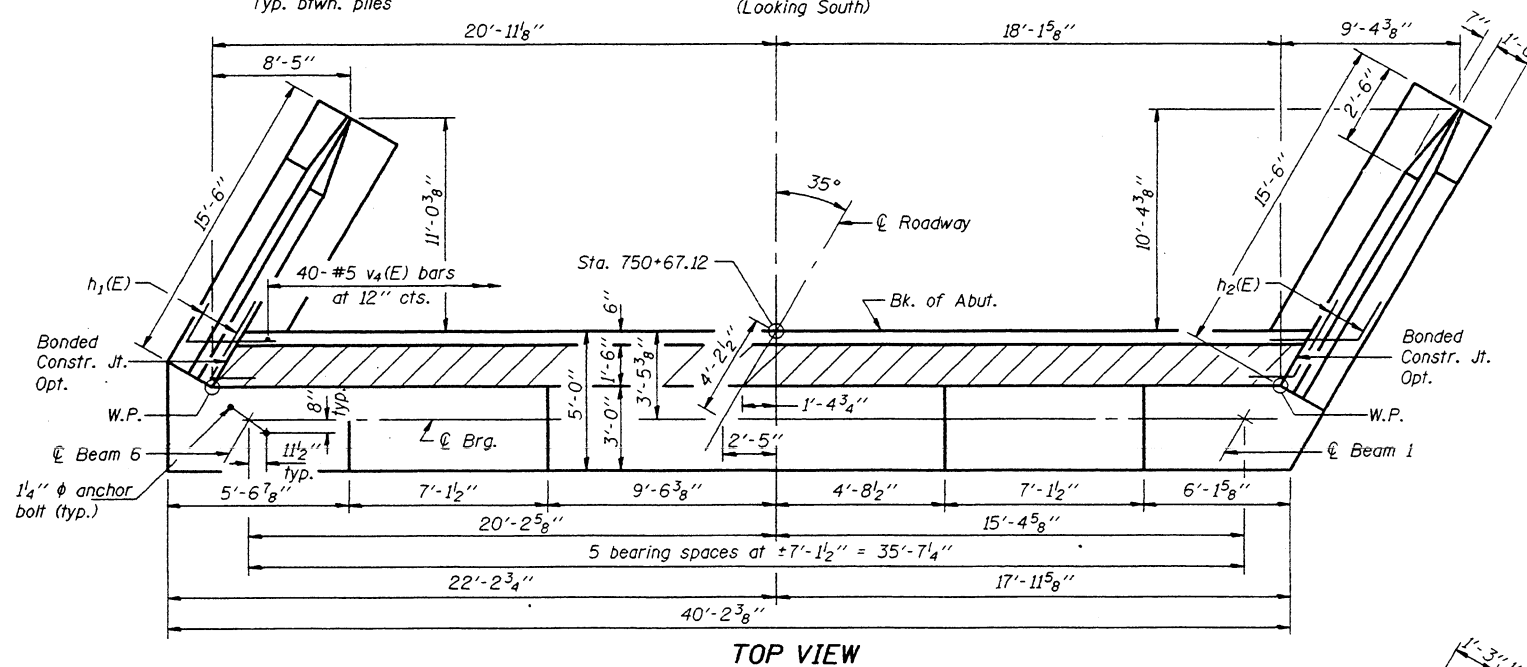
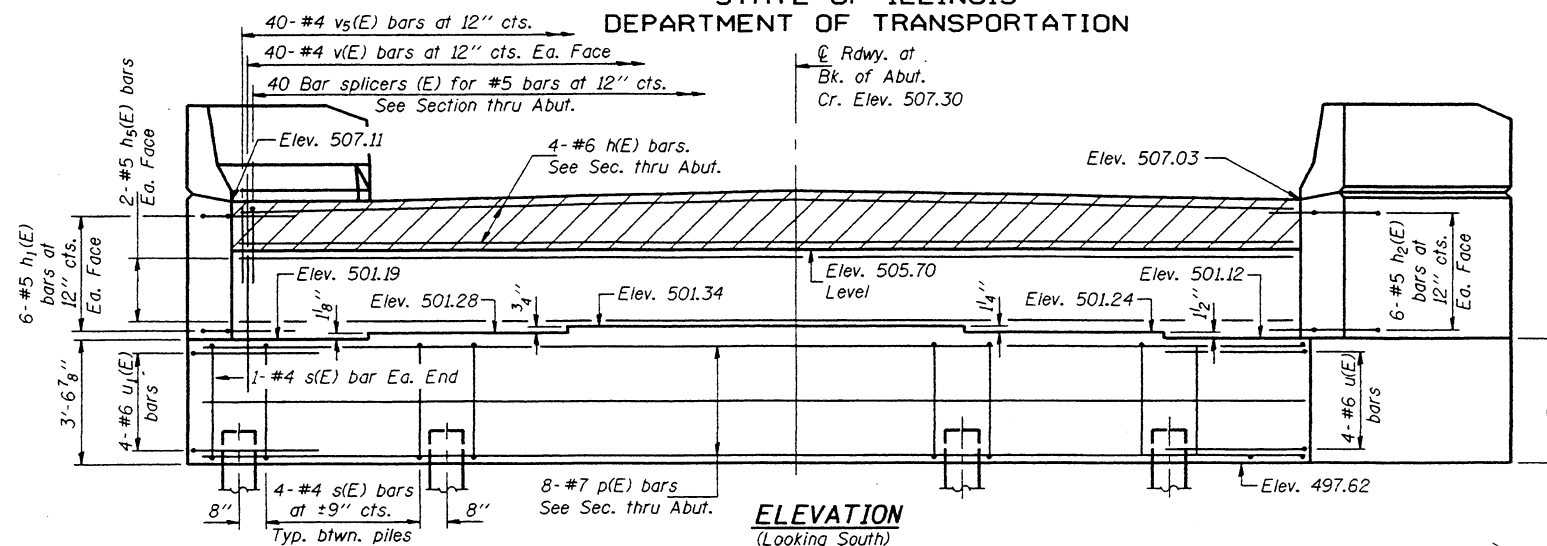
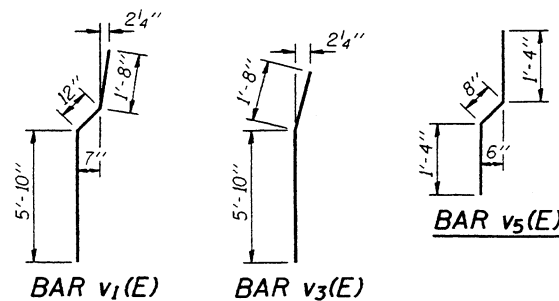
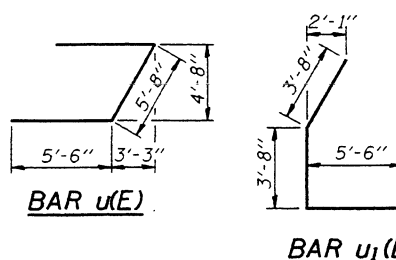
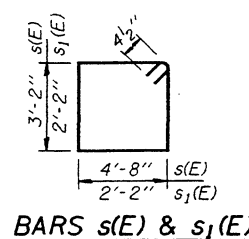
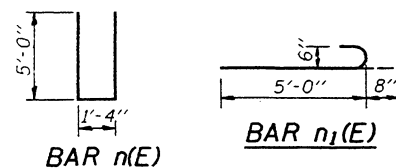
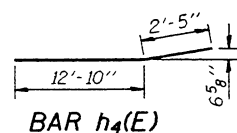
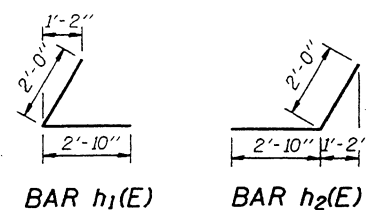
Type: 12" ϕ , $\frac{1}{4}$ " wall Metal Shell
Capacity: 55 Tons
Est. Length: 80'
No. Required: 12 + 1 Test pile

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
n(E)	4	#6	38'-9"	
h ₁ (E)	12	#5	4'-10"	
h ₂ (E)	12	#5	4'-10"	
h ₃ (E)	26	#4	15'-2"	
h ₄ (E)	18	#4	15'-3"	
h ₅ (E)	4	#5	38'-9"	
n(E)	26	#6	11'-4"	
n ₁ (E)	12	#6	5'-8"	
p(E)	8	#7	39'-10"	
p ₁ (E)	12	#7	15'-2"	
s(E)	42	#4	16'-5"	
s ₁ (E)	32	#4	9'-5"	
u(E)	4	#6	16'-8"	
u ₁ (E)	4	#6	12'-10"	
v(E)	80	#4	6'-2"	
v ₁ (E)	26	#6	8'-6"	
v ₂ (E)	32	#6	8'-5"	
v ₃ (E)	6	#6	7'-6"	
v ₄ (E)	40	#5	3'-3"	
v ₅ (E)	40	#4	3'-4"	
Concrete Structures		Cu. Yd.	59.8	
Reinforcement Bars, Epoxy Coated		Pound	4730	
Furnishing Metal Pile Shells 12"		Foot	960	
Driving and Filling Shells		Foot	960	
Test Pile Metal Shells		Each	1	

Reinforcement bars designated (E) shall be epoxy coated.

SOUTH ABUTMENT
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501



DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

Feb. 4, 2002
EXAMINED *Thomas J. Romagosa*
PASSED *Ronald E. Anderson*
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL
FAP 658	K(B-1)	MENARD	198	73
SHEET NO. 40				
62 SHEETS				

PILE DATA

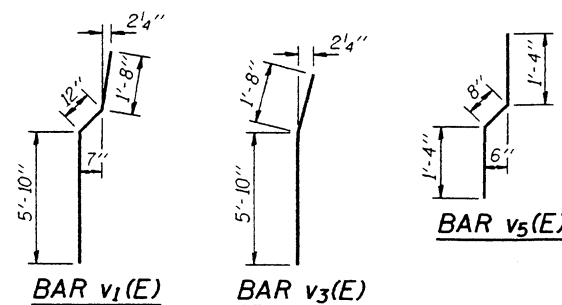
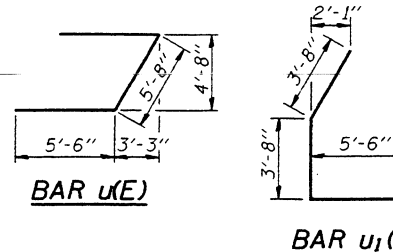
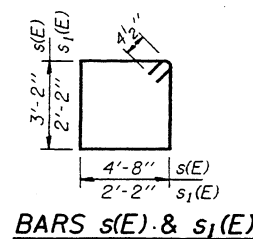
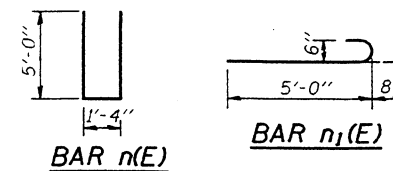
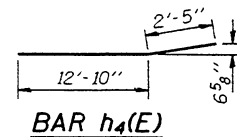
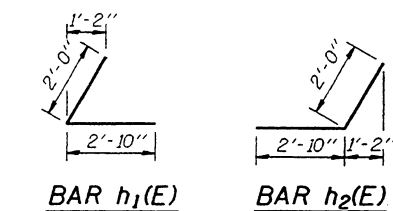
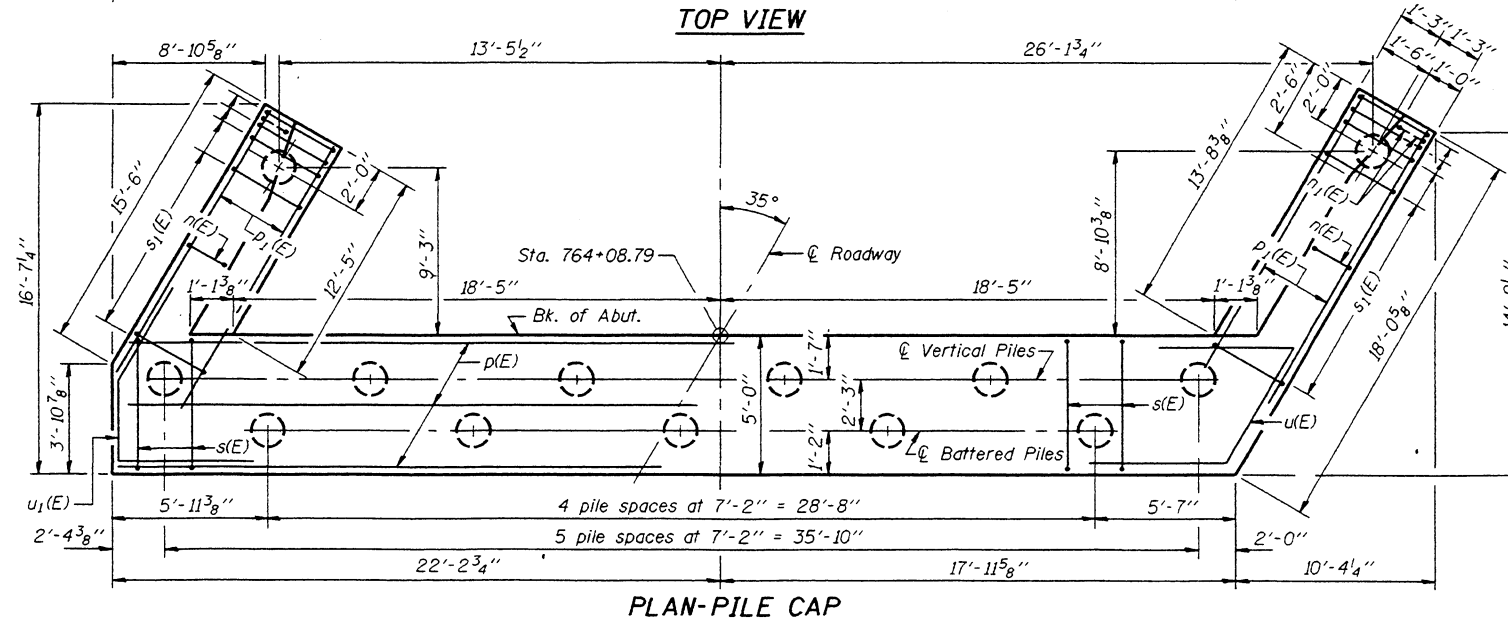
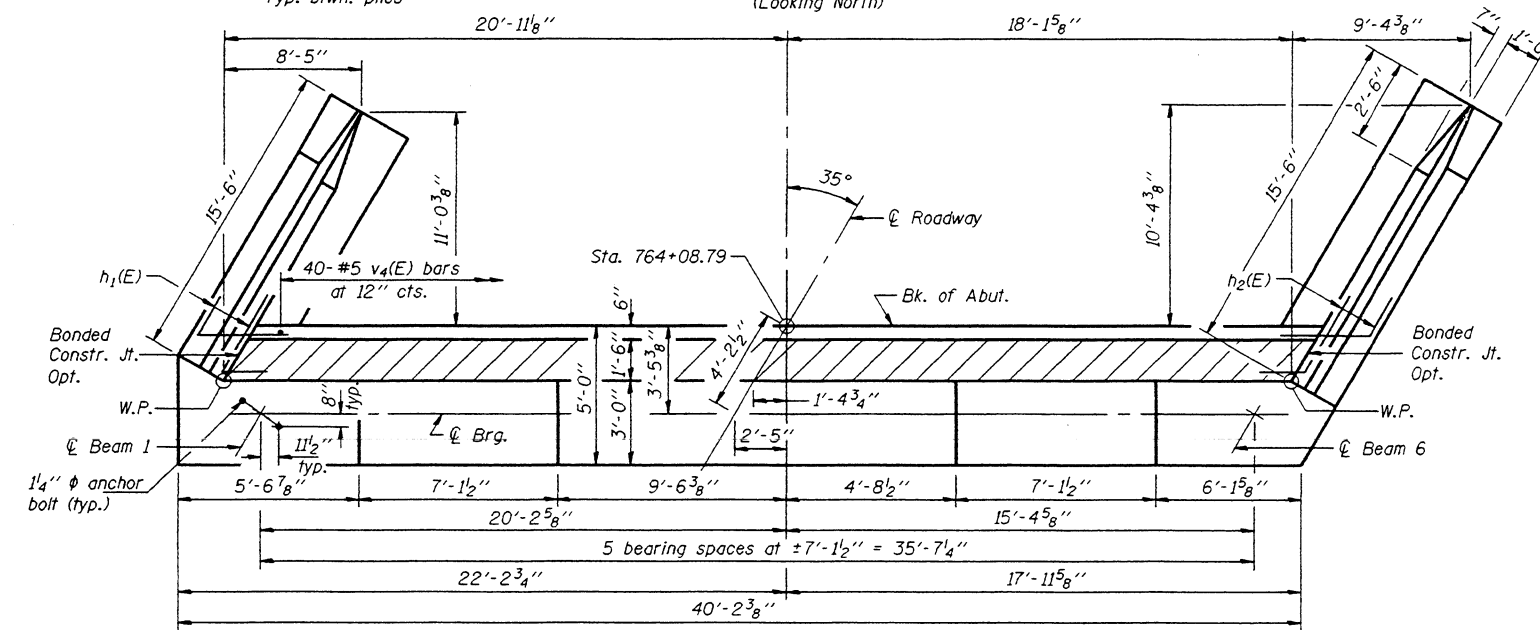
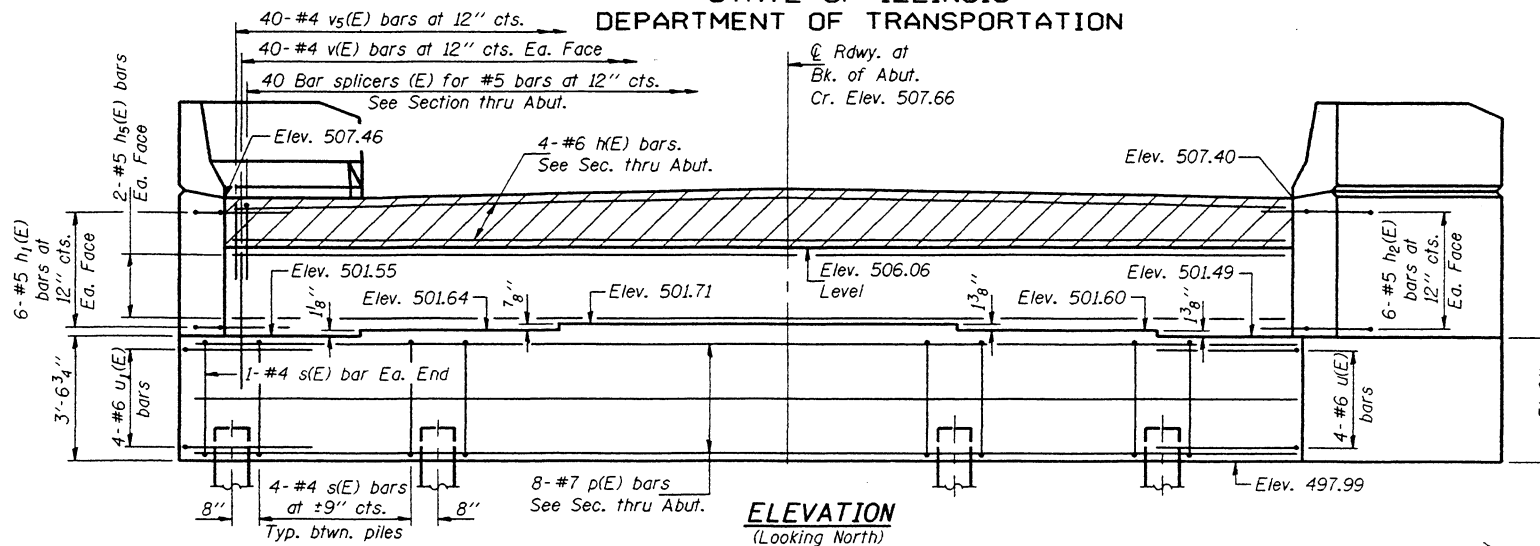
Type: 12" ϕ , 1/4" wall Metal Shell
Capacity: 55 Tons
Est. Length: 71'
No. Required: 12 + 1 test pile

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	4	#6	38'-9"	
h ₁ (E)	12	#5	4'-10"	
h ₂ (E)	12	#5	4'-10"	
h ₃ (E)	26	#4	15'-2"	
h ₄ (E)	18	#4	15'-3"	
h ₅ (E)	4	#5	38'-9"	
n(E)	26	#6	11'-4"	
n ₁ (E)	12	#6	5'-8"	
p(E)	8	#7	39'-10"	
p ₁ (E)	12	#7	15'-2"	
s(E)	42	#4	16'-5"	
s ₁ (E)	32	#4	9'-5"	
u(E)	4	#6	16'-8"	
u ₁ (E)	4	#6	12'-10"	
v(E)	80	#4	6'-2"	
v ₁ (E)	26	#6	8'-6"	
v ₂ (E)	32	#6	8'-5"	
v ₃ (E)	6	#6	7'-6"	
v ₄ (E)	40	#5	3'-3"	
v ₅ (E)	40	#4	3'-4"	
Concrete Structures			Cu. Yd.	59.8
Reinforcement Bars, Epoxy Coated			Pound	4730
Furnishing Metal Pile Shells 12"			Foot	852
Driving and Filling Shells			Foot	852
Test Pile Metal Shells			Each	1

Reinforcement bars designated (E) shall be epoxy coated.

NORTH ABUTMENT
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501



DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH

Feb. 4, 2082
EXAMINED *Thomas J. Damagallo*
PASSED *Rafael A. Anderson*
APPROVED
ENGINEER OF BRIDGES AND STRUCTURES

Technical drawing of a wall section showing construction details, dimensions, and material specifications.

Dimensions:

- Top width: 15'-6"
- Left side height: 5"
- Top left offset: 2'-0"
- Right side height (from top): ±2'-8 1/2"
- Bottom left offset: 2'-0"
- Vertical dimensions on the right (from top to bottom):
 - 3'-6 3/4"
 - 3'-6"
 - 3'-6 7/8"
 - 9'-6 3/8"
 - 9'-7 3/8"
 - 9'-7 1/8"

Construction Details:

- Bonded Const. Joint with 3/4" Notch on outside face.** (Indicated by a dashed line and arrow pointing to the joint).
- Construction Joint** (Indicated by a dashed line and arrow pointing to the joint).
- End Post** (Indicated by a dashed line and arrow pointing to the post).

Material Specifications (Right side):

- N.W. wingwall
- S.W. & N.E. wingwalls
- S.E. wingwall
- S.W. & N.E. wingwalls
- S.E. wingwall
- N.W. wingwall

Section Markers:

- A** (Top right corner)
- A** (Bottom right corner)

[illegible]

Technical drawing of a pile cap cross-section showing reinforcement details. The drawing includes dimensions for bar spacing (12 inches), bar counts (13 #6, 3 #6, 1 #4, 3 pairs #6, 3 #7, 3 #4), and vertical dimensions for concrete cover (3-h3(E), 2-h3(E), 7-h3(E), 7-h4(E)). It also shows the location of the pile and the bend in the field.

Technical drawing of a structural joint, likely a window or door frame, showing dimensions and labels. The drawing is oriented vertically.

Dimensions:

- Top horizontal dimensions: $1'-7''$ (total), $9\frac{3}{4}''$ (left section), $2\frac{1}{4}''$ (right section).
- Left vertical dimensions: $2'-8\frac{1}{2}''$ (total), $2'-9''$ (lower section), $2'-10''$ (upper section).
- Right vertical dimensions: $1'-9''$ (upper section), $10''$ (middle section), $3''$ (lower section), $2'-6''$ (bottom section).
- Bottom horizontal dimensions: $1'-3''$ (left section), $1'-3''$ (right section), $2'-6''$ (total).
- Internal vertical dimensions: $1\frac{1}{2}''$ cl. (top), $1\frac{1}{2}''$ cl. (middle), $11''$ (lower section).
- Internal horizontal dimensions: $1\frac{1}{2}''$ cl. (left), $1\frac{1}{2}''$ cl. (right).
- Other dimensions: $2'-9''$ min. (left), $2''$ cl. (bottom right).

Labels:

- $h_3(E)$ (multiple locations)
- $h_4(E)$ (multiple locations)
- $v_2(E)$
- $v_1(E)$
- $n(E)$
- $p_1(E)$
- $s_1(E)$
- Bonded Constr. Jt. with Notch
- Const. Jt.
- $1'-0\frac{7}{8}''$ S.W. & N.E. wingwalls
- $1'-0\frac{7}{8}''$ S.E. wingwall

ABUTMENT DETAILS
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

Feb. 4, 2082

EXAMINED *Thomas J. Donagale*
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED

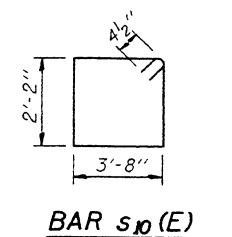
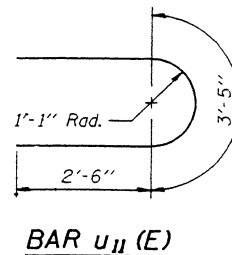
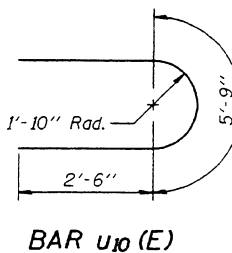
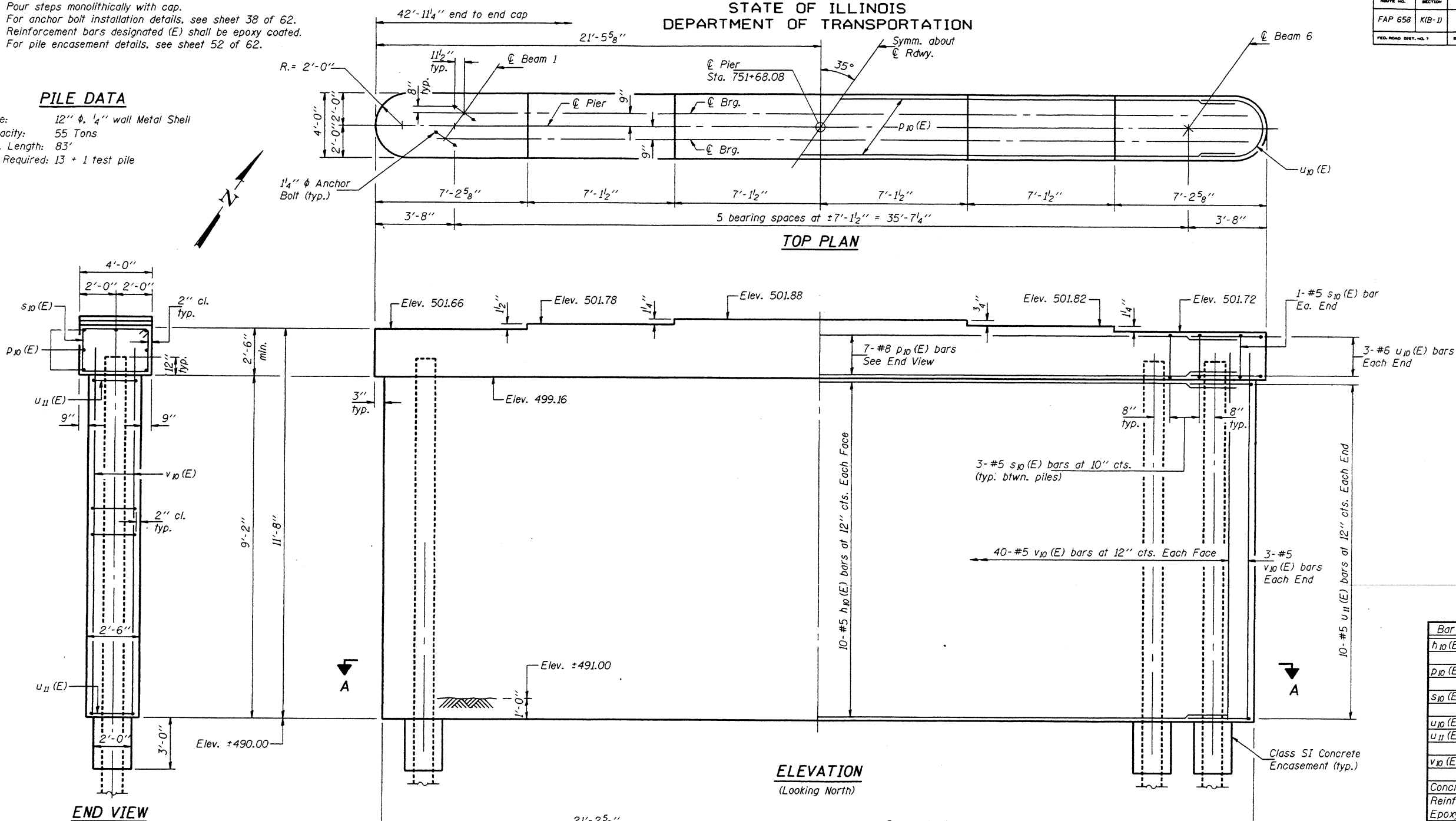
Notes: Space reinforcement in top to miss anchor bolts
 Pour steps monolithically with cap.
 For anchor bolt installation details, see sheet 38 of 62.
 Reinforcement bars designated (E) shall be epoxy coated.
 For pile encasement details, see sheet 52 of 62.

PILE DATA

Type: 12" ϕ , 1/4" wall Metal Shell
 Capacity: 55 Tons
 Est. Length: 83'
 No. Required: 13 + 1 test pile

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO.
FAP 658	K(B-1)	MENARD	198	75	42
FED. ROAD DIST. NO. 1					62 SHEETS



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₁₀ (E)	20	#5	40'-0"	—
p ₁₀ (E)	7	#8	39'-0"	—
s ₁₀ (E)	41	#5	12'-5"	□
u ₁₀ (E)	6	#6	10'-9"	—
u ₁₁ (E)	20	#5	8'-5"	—
v ₁₀ (E)	86	#5	10'-3"	—
Concrete Structures			Cu. Yd.	48.5
Reinforcement Bars, Epoxy Coated			Pound	3290
Furnishing Metal Pile Shells 12"			Foot	1079
Driving and Filling Shells			Foot	1079
Test Pile			Each	1
Class SI Concrete Encasement			Cu. Yd.	5

PIER 1
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

DESIGNED Mike J. Trello
 CHECKED Chad E. Hodel
 DRAWN R. Doty/h.t. parsons
 CHECKED MJT/CEH

EXAMINED *Thomas J. Damagala*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ronald L. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES
 APPROVED

Feb. 4, 2002

SECTION A-A

9909125\http00025\3p50501.docn 02/12/2002 07:48:45 AM

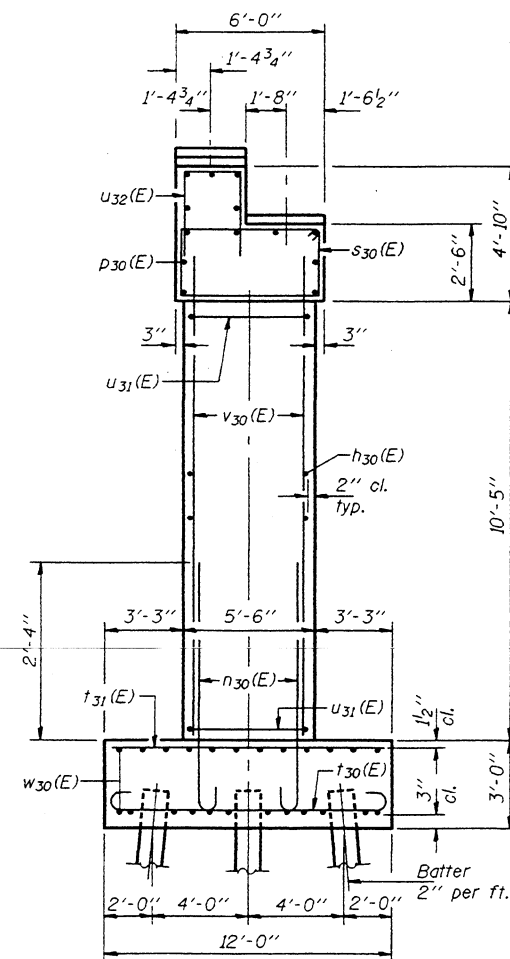
Notes: Space reinforcement in top to miss anchor bolts
 Four steps monolithically with cap.
 For anchor bolt installation details see sheet 38 of 62.
 Reinforcement bars designated (E) shall be epoxy coated.

PILE DATA

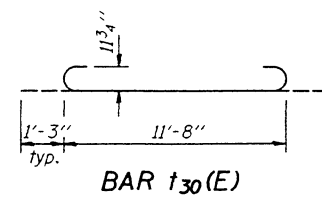
Type: 12" ϕ , 1/4" wall Metal Shell
 Capacity: 35 Tons
 Est. Length: 61'
 No. Required: 39

MIN. BAR LAP

#5 bars = 2'-2"



END VIEW



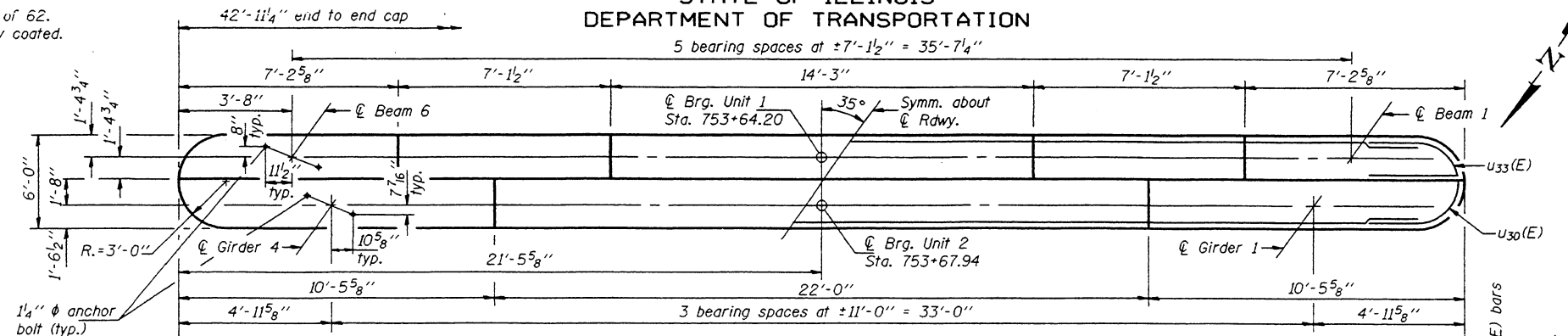
BAR t30(E)

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	h.t. parsons
CHECKED	MJT/CEH

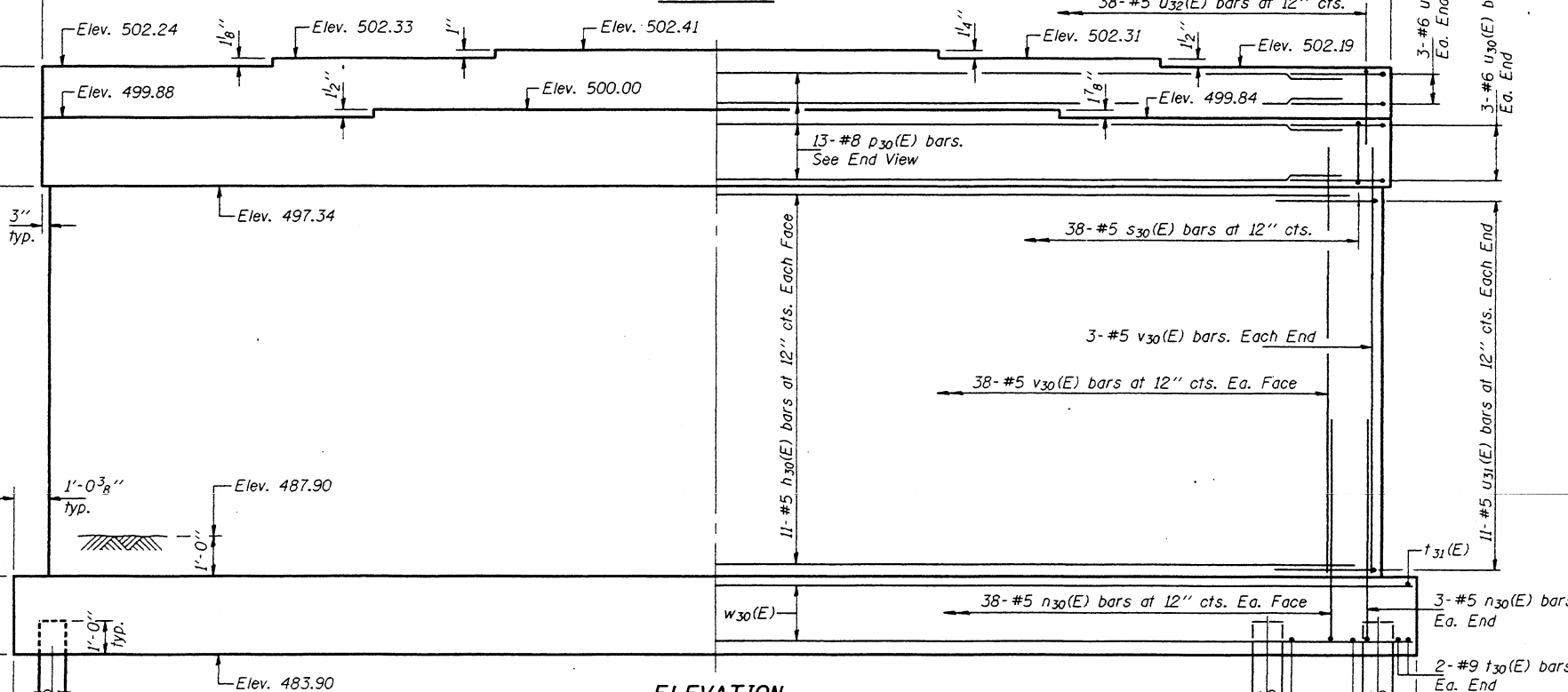
Feb. 4, 2002
 EXAMINED *Thomas J. Damagala*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

5 bearing spaces at $\pm 7'-1\frac{1}{2}" = 35'-7\frac{1}{4}"$

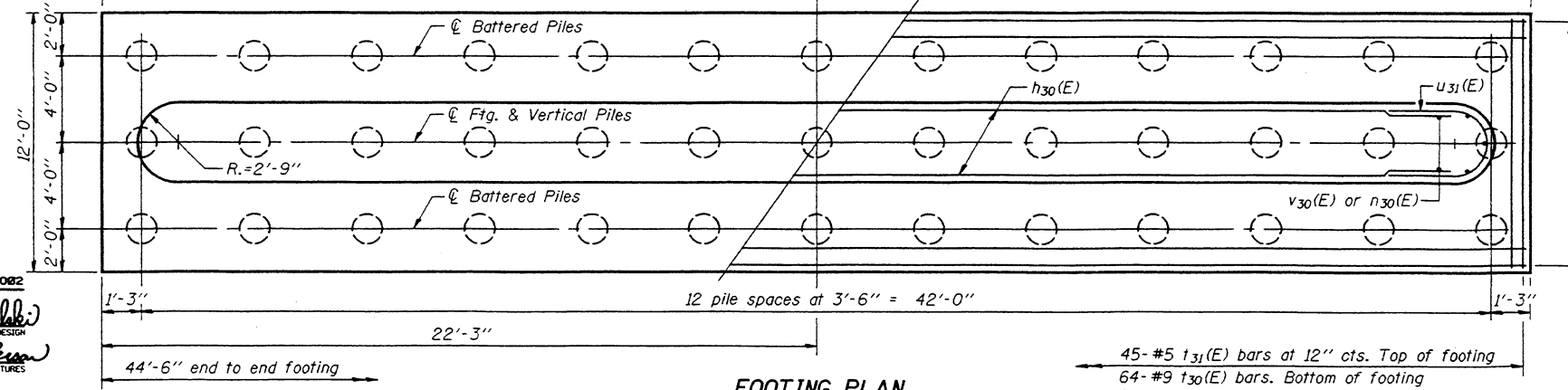


TOP PLAN



ELEVATION

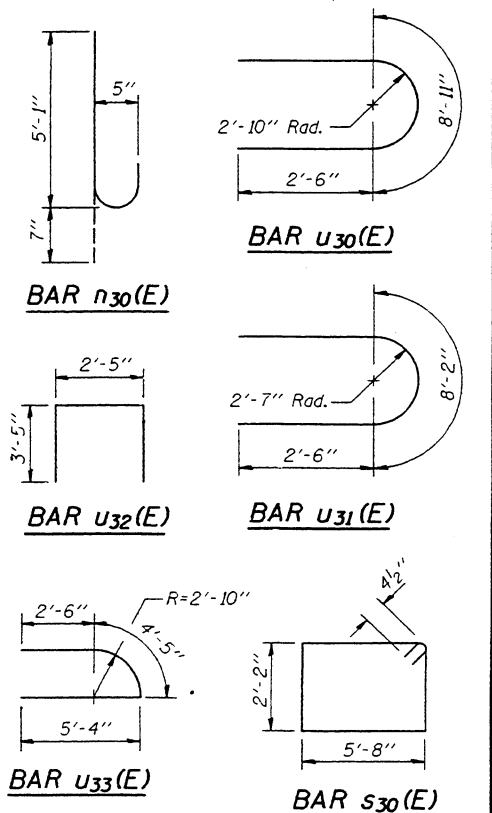
(Looking South)



FOOTING PLAN

45-#5 t31(E) bars at 12" cts. Top of footing
 64-#9 t30(E) bars. Bottom of footing
 (Spaced as shown in elevation)

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO.
FAP 658	K(B-1)	MENARD	198	77	62 SHEETS
FED. ROAD DIST. NO. 7	BLDG. NO.	FED. AID PROJECT			



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h30(E)	22	#5	37'-0"	—
n30(E)	82	#5	5'-8"	—
p30(E)	13	#8	37'-0"	—
s30(E)	38	#5	16'-5"	□
t30(E)	64	#9	14'-2"	—
t31(E)	45	#5	11'-8"	—
u30(E)	6	#6	13'-11"	—
u31(E)	22	#5	13'-2"	—
u32(E)	38	#5	9'-3"	—
u33(E)	6	#6	12'-3"	—
v30(E)	82	#5	11'-6"	—
w30(E)	24	#5	44'-2"	—
Concrete Structures			Cu. Yd.	183.4
Reinforcement Bars, Epoxy Coated			Pound	9890
Furnishing Metal Pile Shells 12"			Foot	2379
Driving and Filling Shells			Foot	2379

PIER 3
 F.A.P. ROUTE 658 - SECTION K(B-1)
 MENARD COUNTY
 STATION 756+89.12
 STRUCTURE NO. 065-0501

PILE DATA

62.
ated.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

42'-11 1/4" end to end cap
21'-5 5/8"

R = 1'-6"

3'-0"
1'-6" 1'-6"

1'-3 7/16"
12"
8 9/16"
37/16"
8 3/8"
1'-1 5/16"

10'-5 5/8"

4'-11 5/8"

3 bearing spaces at ±11'-0" = 33'-0"

22'-0"

10'-5 5/8"

4'-11 5/8"

TOP PLAN

u40(E)

Labels:
Girder 1
Girder 4
Pier Sta. 755+69.12
Pier & Brg.
Symm. about
Rdwy.
35°
1/2" φ Anchor Bolt (typ.)

Technical drawing of a U-bollet. The drawing includes the following dimensions and specifications:

- Overall height: 9'-3"
- Height of the straight section: 1'-3"
- Radius of the U-bend: 1'-4" Rad.
- Width of the straight section: 2'-6"
- Width of the U-bend: 4'-2"
- Material specification: BAR u₄₀(E)

Technical drawings of two structural bars:

- BAR S40(E)**: A square bar with a height of 2'-2" and a width of 2'-8". A diagonal dimension of 4" is shown.
- BAR U41(E)**: A U-shaped bar with a horizontal leg of 2'-6" and a curved end with a radius of 1'-1" and a height of 3'-5".

BILL OF MATERIAL

Technical drawing of a bridge pier cross-section. The drawing shows a rectangular pier with a central column and a base. Key dimensions and labels include:

- Top Section:**
 - Overall width: 3'-0"
 - Inner width: 1'-6"
 - Reinforcement: $p_{40}(E)$ (top bars), $s_{40}(E)$ (stirrups)
 - Clearance: 2" cl.
- Column Section:**
 - Overall height: 21'-9"
 - Clearance from top: 3"
 - Reinforcement: $u_{41}(E)$ (vertical bars), $v_{41}(E)$ (stirrups)
 - Clearance from bottom: 3"
- Base Section:**
 - Overall width: 13'-0"
 - Overall height: 6'-0"
 - Clearance from column: 5'-3"
 - Inner width: 2'-6"
 - Reinforcement: $n_{40}(E)$ (top bars), $u_{41}(E)$ (vertical bars), $t_{40}(E)$ (bottom bars), $w_{40}(E)$ (stirrups)
 - Clearance from column: 1'-3"
 - Clearance from bottom: 3'-6"
 - Clearance from side: 3"
 - Clearance from bottom: 1'-3"
 - Clearance from side: 3'-6"
 - Clearance from bottom: 3'-6"
 - Clearance from side: 1'-3"
 - Clearance from bottom: 2" per ft. (Batter)
- Other Labels:**
 - $h_{40}(E)$ (height of column)
 - 2" cl. typ. (typical clearance)

END VIEW

MIN. BAR LAPS

#5 bars = 2'-2"
#9 bars = 5'-9"

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	h.t. parsons
CHECKED	MJT/CEH

Feb. 4, 2002

EXAMINED *Thomas J. Donagall*
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

Feb. 4, 2002

Plan view of the footing showing pile layout, dimensions, and reinforcement details. The footing is 44'-6" long and 13'-0" wide. It contains 14 pile spaces at 3'-0" intervals, totaling 42'-0". The layout includes battered piles, vertical piles, and a central footing. Reinforcement details include 45-#5 $t_{41}(E)$ bars at 12" cts. top of footing and 74-#9 $t_{40}(E)$ bars bottom of footing. Other labels include $R_s = 1'-3"$, $h_{40}(E)$, $v_{40}(E)$, $v_{41}(E)$ or $n_{40}(E)$, and $U_{41}(E)$.

13- #5 w40(E)
bars at
12" cts. Top
13- #5 w40(E)
bars. Bott.
(Spaced as
shown in
End View)

PIER 4
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

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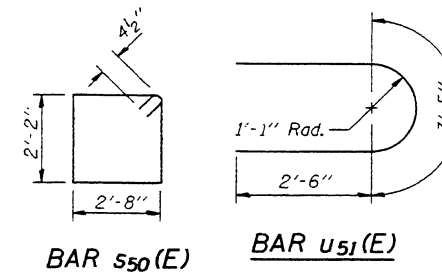
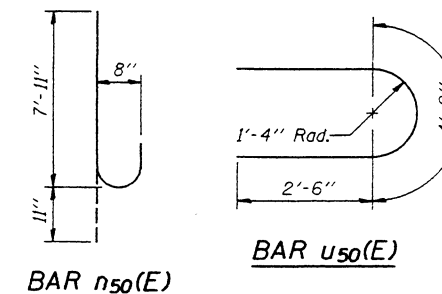
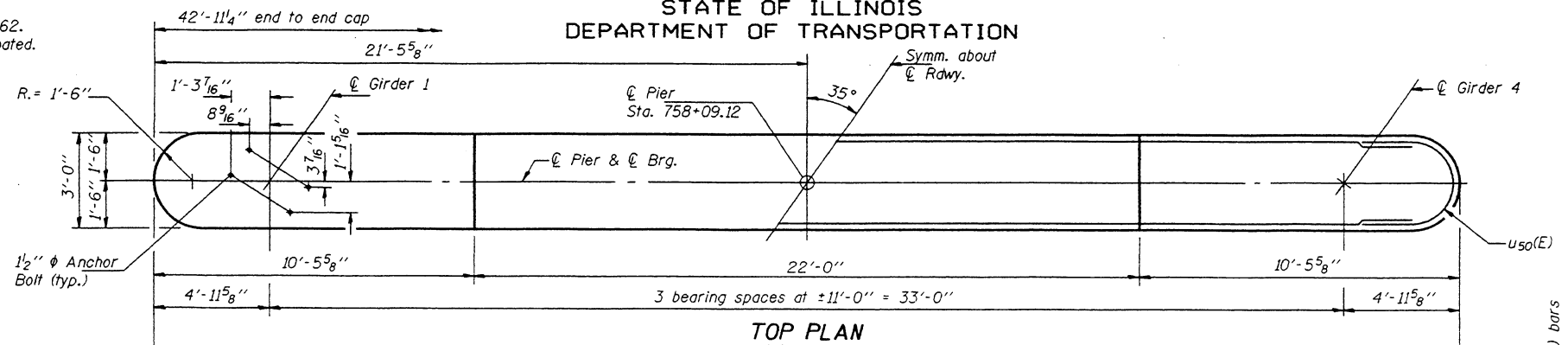
Notes: Space reinforcement in top to miss anchor bolts
 Pour steps monolithically with cap.
 For anchor bolt installation details see sheet 38 of 62.
 Reinforcement bars designated (E) shall be epoxy coated.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
FAP 658	K(B-1)	MENARD	198	79
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		62 SHEETS

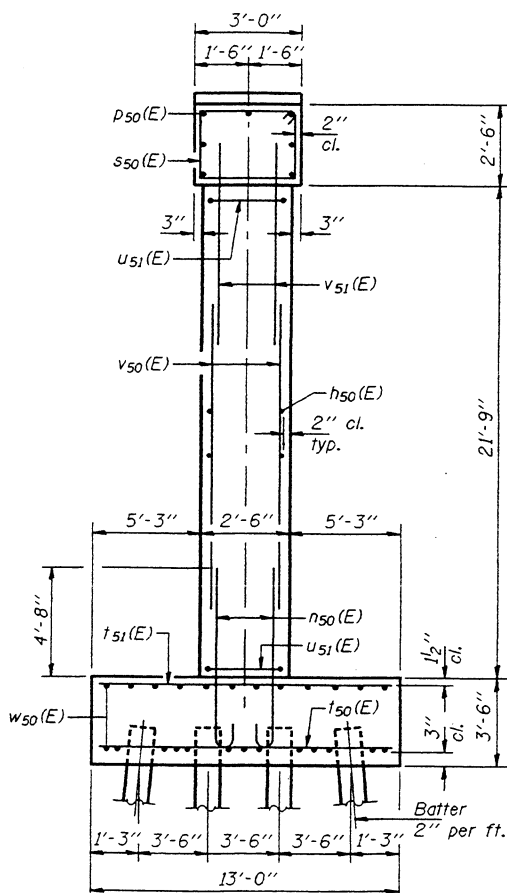
PILE DATA

Type: 12" ϕ , 1/4" wall Metal Shell
 Capacity: 45 Tons
 Est. Length: 60'
 No. Required: 59 + 1 test pile



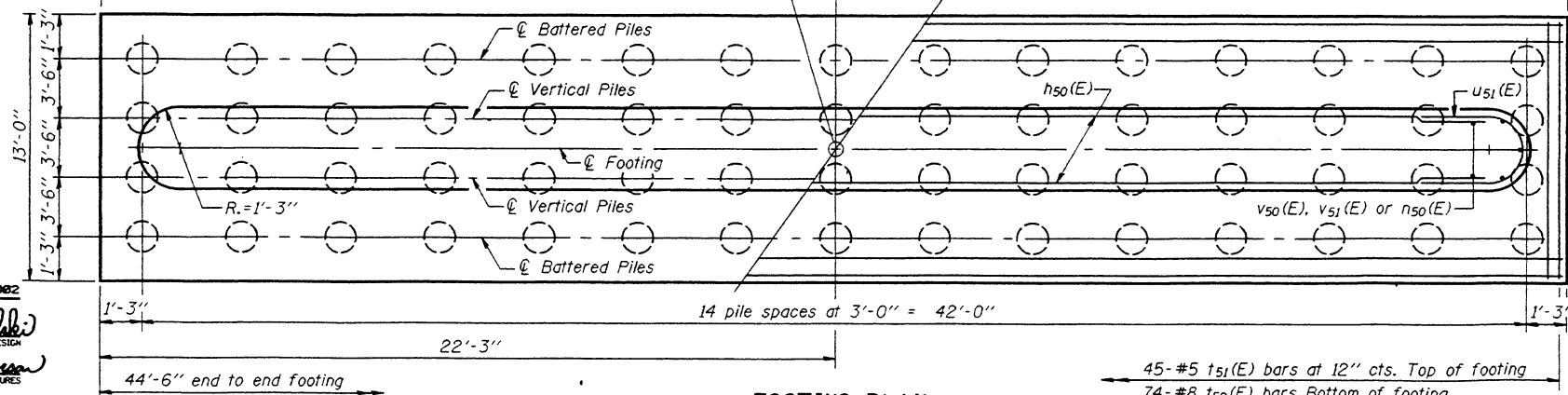
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h50(E)	44	#5	40'-0"	—
n50(E)	166	#8	8'-10"	U
p50(E)	7	#8	40'-0"	—
s50(E)	44	#5	10'-5"	□
t50(E)	74	#8	12'-8"	—
t51(E)	45	#5	12'-8"	—
u50(E)	6	#6	9'-2"	U
u51(E)	44	#5	8'-5"	U
v50(E)	166	#8	14'-0"	—
v51(E)	166	#5	11'-2"	—
w50(E)	26	#5	44'-2"	—
Concrete Structures		Cu. Yd.	171.0	
Reinforcement Bars, Epoxy Coated		Pound	19880	
Furnishing Metal Pile Shells 12"		Foot	3540	
Driving and Filling Shells		Foot	3540	
Test Pile Metal Shell		Each	1	
Seal Coat Concrete		Cu. Yd.	122.2	
Cofferdam (Pier 5)		Each	1	
Cofferdam Excavation		Cu. Yd.	632.1	



MIN. BAR LAPS

#5 bars = 2'-2"
 #8 bars = 4'-6"



PIER 5
 F.A.P. ROUTE 658 - SECTION K(B-1)
 MENARD COUNTY
 STATION 756+89.12
 STRUCTURE NO. 065-0501

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	h.t. parsons
CHECKED	MJT/CEH

Feb. 4, 2002
 EXAMINED *Thomas J. Donaghy*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Rafael E. Carmona*
 ENGINEER OF BRIDGES AND STRUCTURES

Notes: Space reinforcement in top to miss anchor bolts
 Pour steps monolithically with cap.
 For anchor bolt installation details see sheet 38 of 62.
 Reinforcement bars designated (E) shall be epoxy coated.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
FAP 658	K(B-1)	MENARD	198	80
PED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

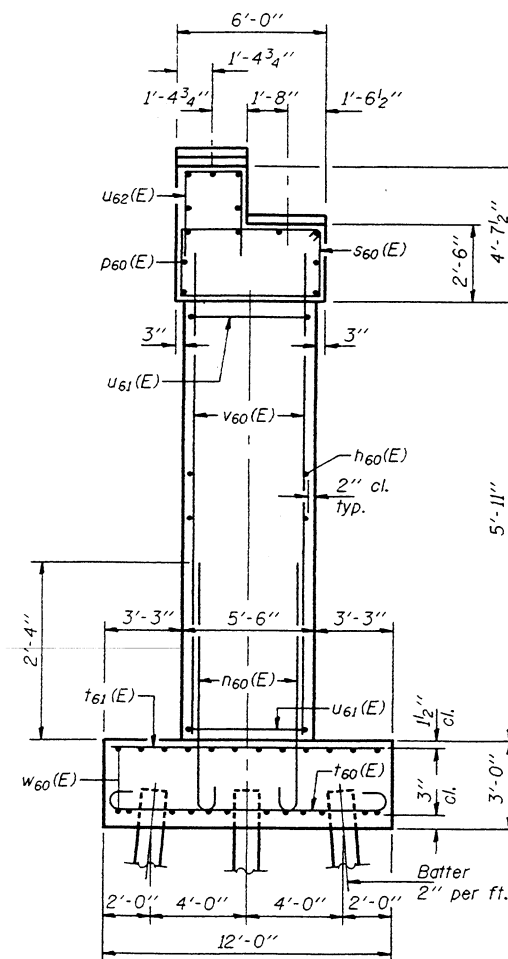
SHEET NO. 47
62 SHEETS

PILE DATA

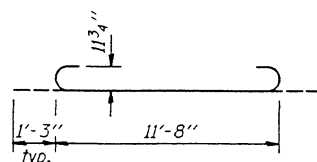
Type: 12" ϕ , 1/4" wall Metal Shell
 Capacity: 35 Tons
 Est. Length: 43'
 No. Required: 39

MIN. BAR LAP

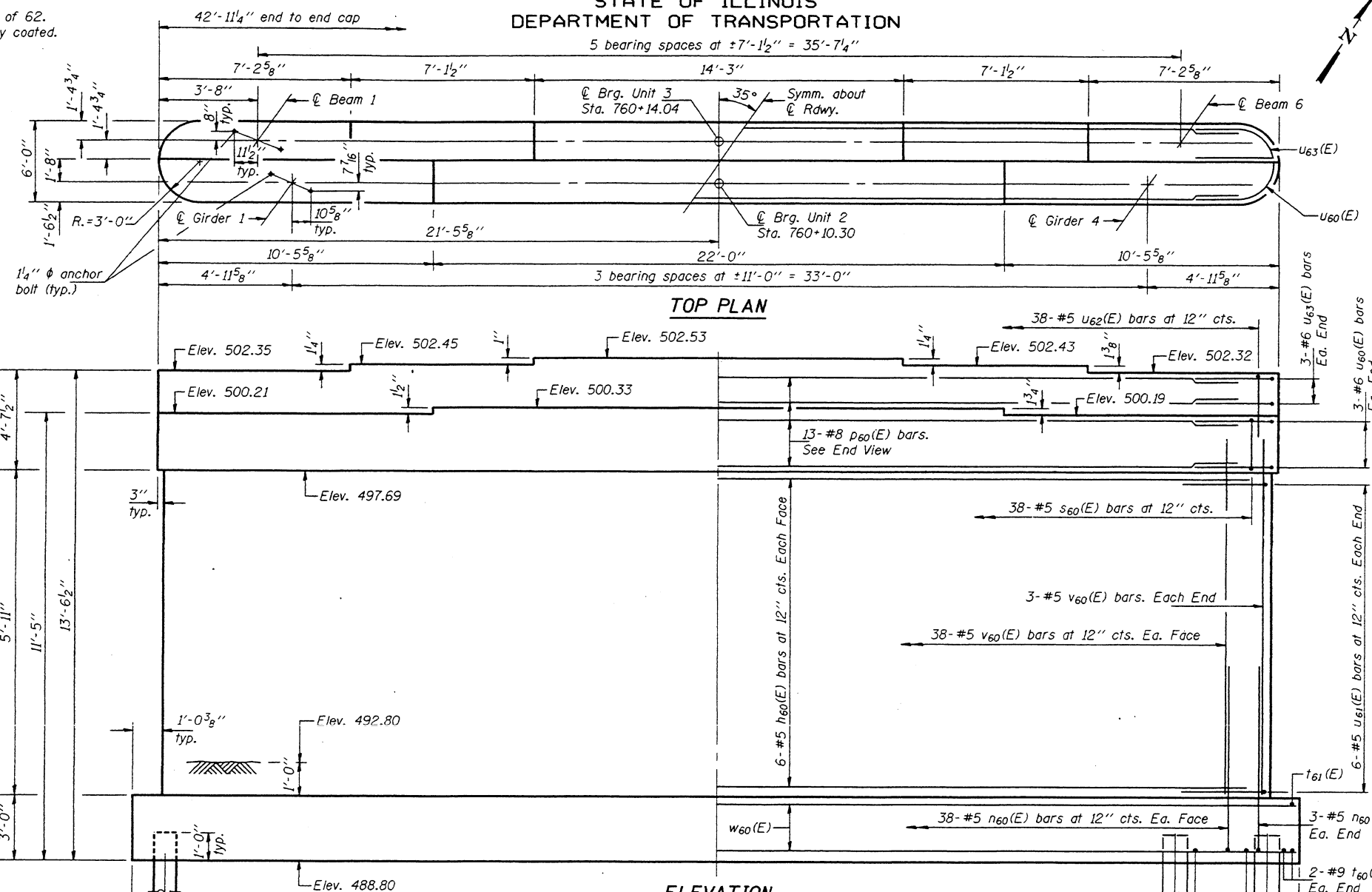
#5 bars = 2'-2"



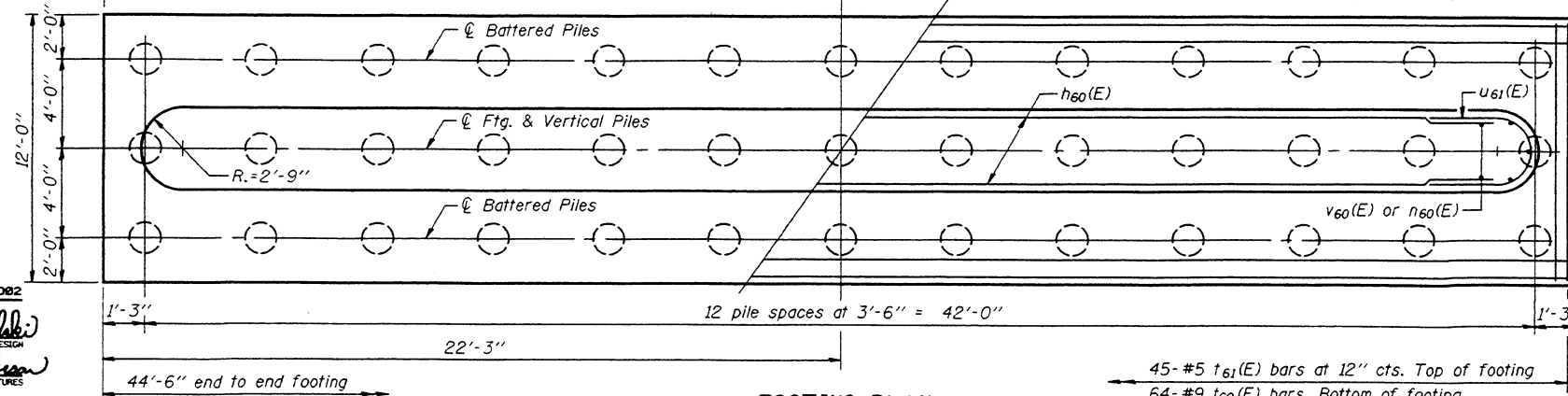
END VIEW



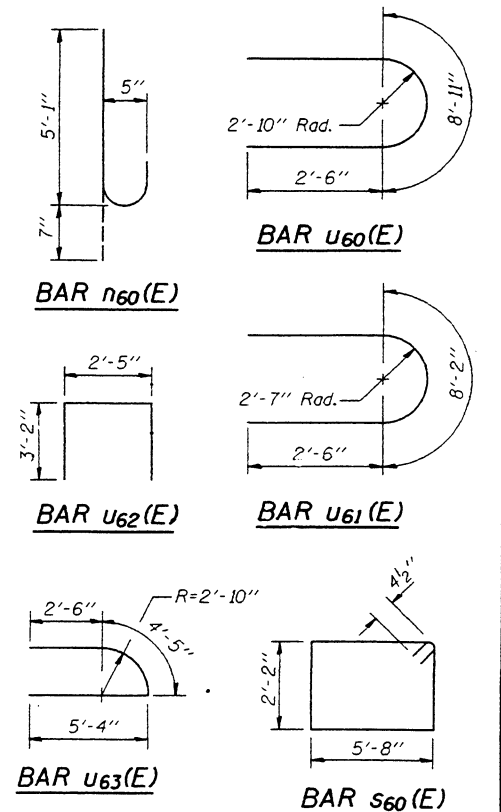
BAR t60(E)



ELEVATION
 (Looking North)



FOOTING PLAN



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h60(E)	12	#5	37'-0"	—
n60(E)	82	#5	5'-8"	—
p60(E)	13	#8	37'-0"	—
s60(E)	38	#5	16'-5"	—
t60(E)	64	#9	14'-2"	—
t61(E)	45	#5	11'-8"	—
u60(E)	6	#6	13'-11"	—
u61(E)	12	#5	13'-2"	—
u62(E)	38	#5	8'-9"	—
u63(E)	6	#6	12'-3"	—
v60(E)	82	#5	7'-0"	—
w60(E)	24	#5	44'-2"	—
Concrete Structures			Cu. Yd.	144.5
Reinforcement Bars, Epoxy Coated			Pound	8960
Furnishing Metal Pile Shells 12"			Foot	1677
Driving and Filling Shells			Foot	1677

PIER 6
 F.A.P. ROUTE 658 - SECTION K(B-1)
 MENARD COUNTY
 STATION 756+89.12
 STRUCTURE NO. 065-0501

DESIGNED	Mike J. Trello
CHECKED	Chad E. Model
DRAWN	h.t. parsons
CHECKED	MJT/CEH

Feb. 4, 2002
 EXAMINED *Thomas J. Demagala*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Robert E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

Notes: Space reinforcement in top to miss anchor bolts
Four steps monolithically with cap.
For anchor bolt installation details, see sheet 38 of 62.
Reinforcement bars designated (E) shall be epoxy coated.
For pile encasement details, see sheet 52 of 62.

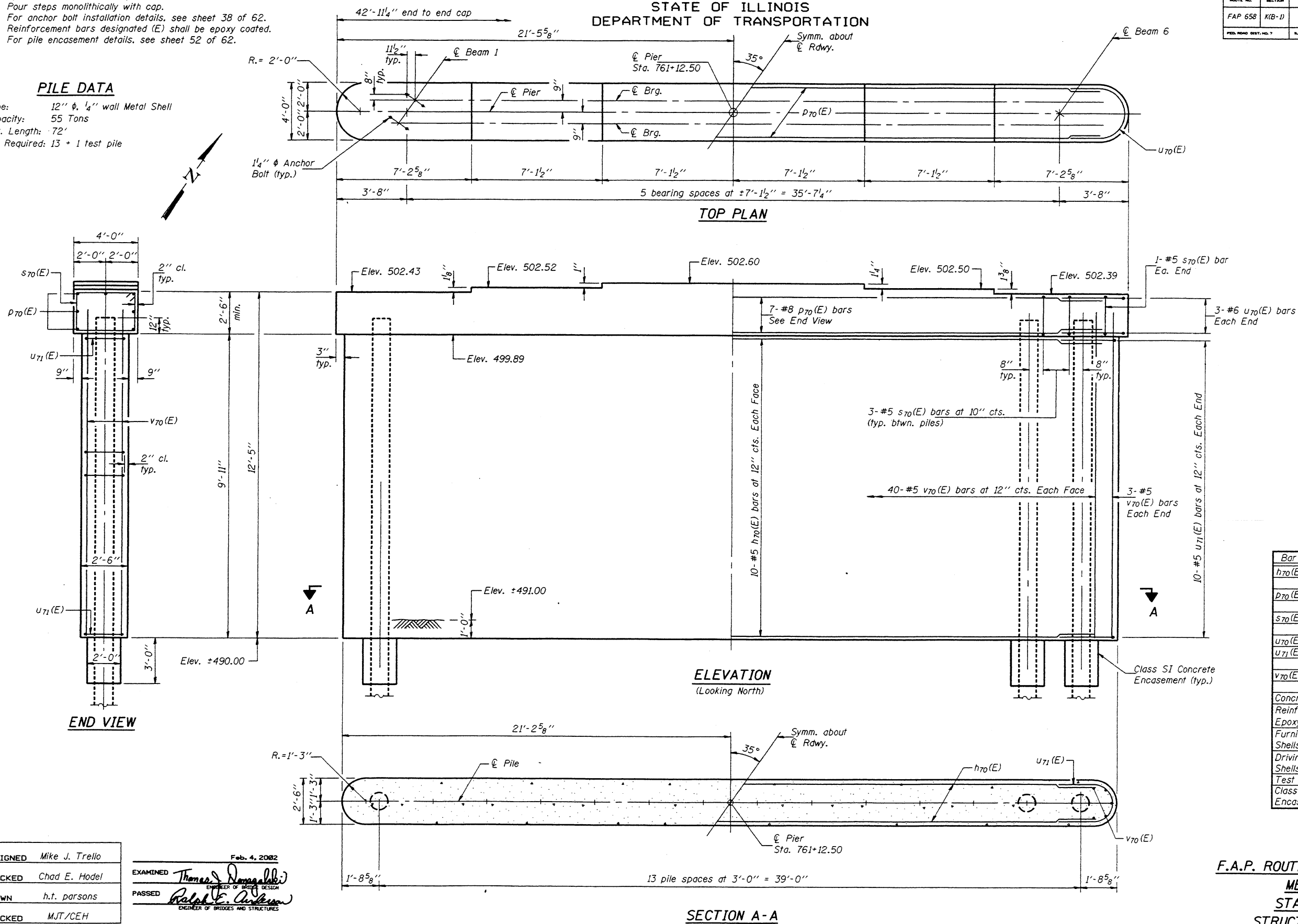
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 658	K(B-1)	MENARD	198	81
PRI. ROAD DIST. NO. 7	SURPOSE	FED. AID PROJECT		

SHEET NO. 48
62 SHEETS

PILE DATA

Type: 12" ϕ , $\frac{1}{4}$ " wall Metal Shell
Capacity: 55 Tons
Est. Length: 72'
No. Required: 13 + 1 test pile



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h70(E)	20	#5	40'-0"	—
p70(E)	7	#8	39'-0"	—
s70(E)	41	#5	12'-5"	□
u70(E)	6	#6	10'-9"	U
u71(E)	20	#5	8'-5"	U
v70(E)	86	#5	11'-0"	—
Concrete Structures		Cu. Yd.	51.1	
Reinforcement Bars, Epoxy Coated		Pound	3350	
Furnishing Metal Pile Shells 12"		Foot	936	
Driving and Filling Shells		Foot	936	
Test Pile		Each	1	
Class SI Concrete Encasement		Cu. Yd.	5	

PIER 7
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	h.t. parsons
CHECKED	MJT/CEH

Feb. 4, 2002
EXAMINED *Thomas J. Romagallo*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

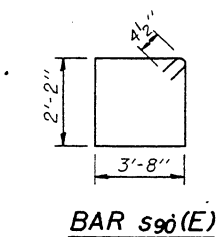
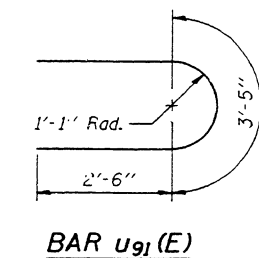
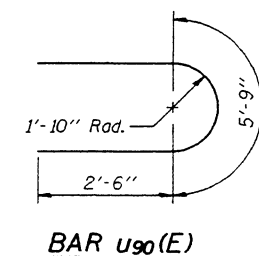
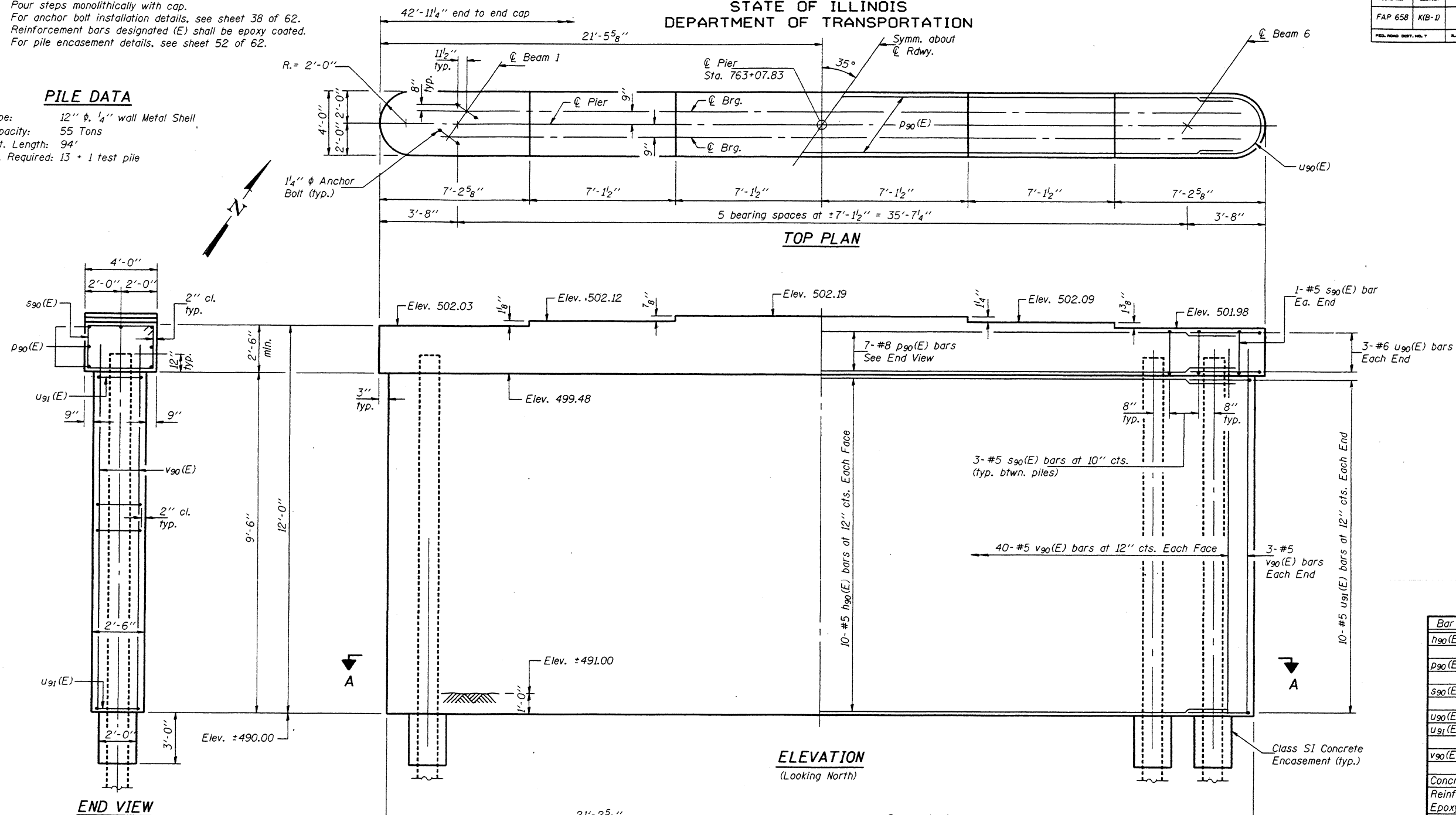
11- #5 w₈₀(E)
bars at
12" cts. Top
10- #5 w₈₀(E)
bars. Bott.
(Spaced as
shown in
End View)

PILE DATA

Type: 12" ϕ , $\frac{1}{4}$ " wall Metal Shell
Capacity: 55 Tons
Est. Length: 94'
No. Required: 13 + 1 test pile

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 658	K(B-D)	MENARD	198	83
FED. ROAD DIST. NO. 7	ILLINOIS		FED. AID PROJECT -	

SHEET NO. 50
62 SHEETS



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_{90}(E)$	20	#5	40'-0"	—
$p_{90}(E)$	7	#8	39'-0"	—
$s_{90}(E)$	41	#5	12'-5"	□
$u_{90}(E)$	6	#6	10'-9"	⌢
$u_{91}(E)$	20	#5	8'-5"	⌢
$v_{90}(E)$	86	#5	10'-7"	—
Concrete Structures			Cu. Yd.	49.7
Reinforcement Bars, Epoxy Coated			Pound	3320
Furnishing Metal Pile Shells 12"			Foot	1222
Driving and Filling Shells			Foot	1222
Test Pile			Each	1
Class SI Concrete Encasement			Cu. Yd.	5

PIER 9
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	h.t. parsons
CHECKED	MJT/CEH

Feb. 4, 2002

EXAMINED *Thomas J. Domagala*
ENGINEER OF BRIDGE DESIGN

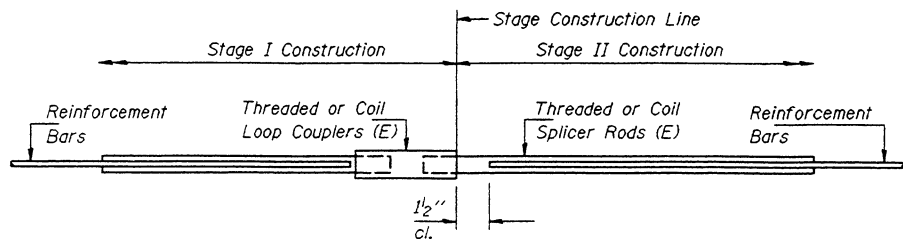
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

ELEVATION
(Looking North)

SECTION A-A

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 51
FAP 658	K(B-1)	MENARD	190	04	62 SHEETS
FED. ROAD DIST. NO. 7	SURF.	FED. AID PROJECT			



SPLICER DETAIL

Bar Size	No. Assemblies Required	Location
#5	40	S. Abut.
#5	40	N. Abut.

The diameter of this part is the same as the diameter of the bar spliced.

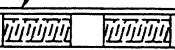
The diameter of this part is equal or larger than the diameter of bar spliced.

ROLLED THREAD DOWEL BAR



**** ONE PIECE**

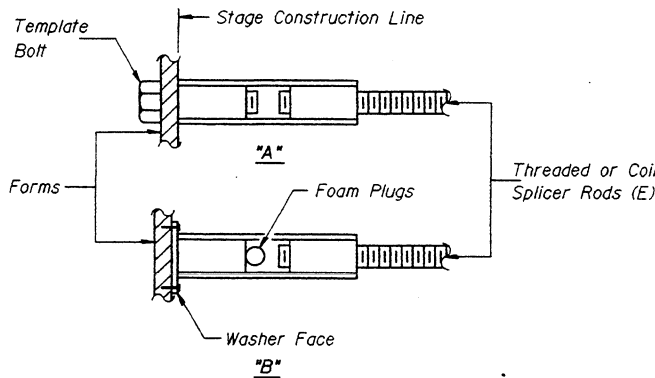
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



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.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_s$
- Minimum *Pull-out Strength (Tension in kips) = $1.25 \times f_{allow} \times A_s$

Where f_y = Yield strength of lapped reinforcement bars in ksi.

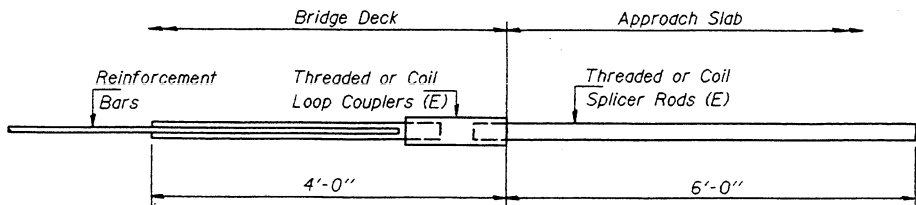
f_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)

A_s = Tensile stress area of lapped reinforcement bars.

* = 28 day concrete

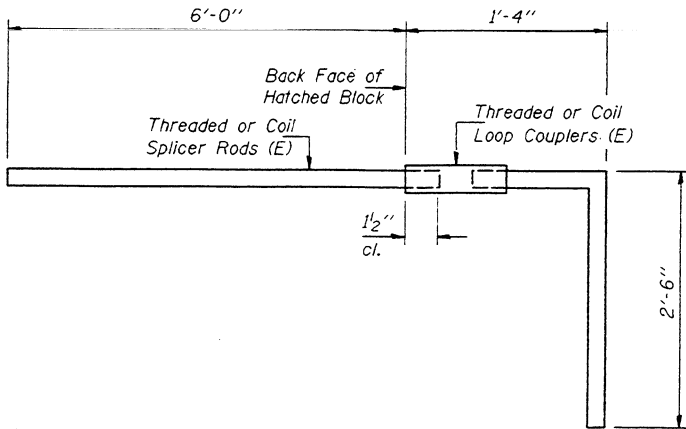
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



**INTEGRAL ABUTMENT
BAR SPLICER ASSEMBLY DETAIL
FOR #5 BAR**

Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



**BAR SPLICER ASSEMBLY DETAIL
FOR #5 BAR AT ABUTMENT**

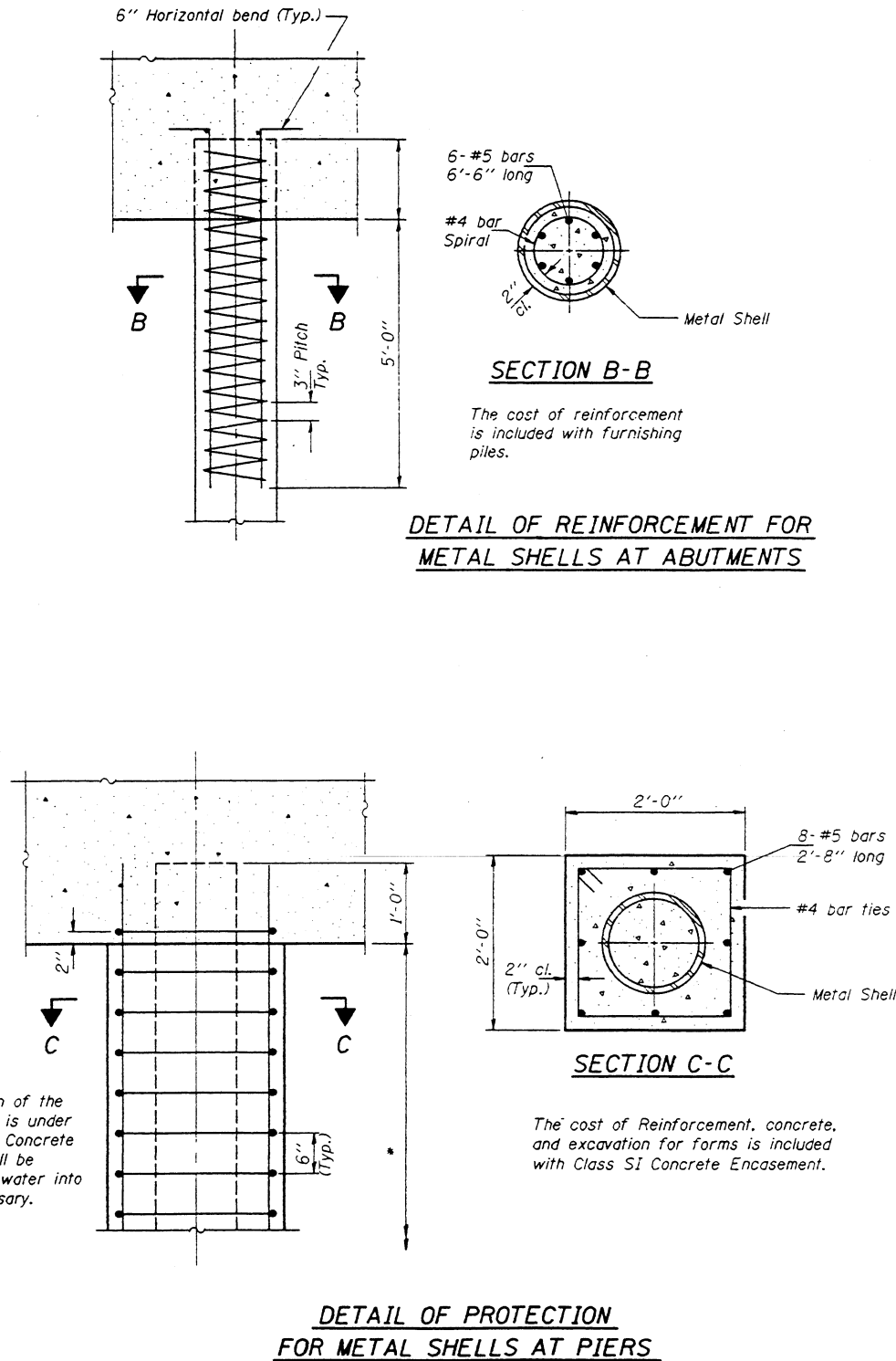
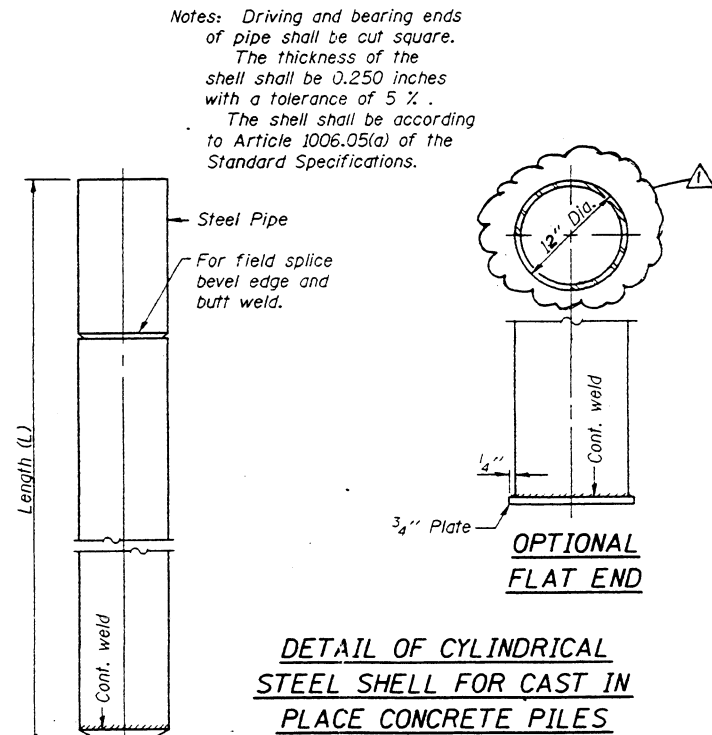
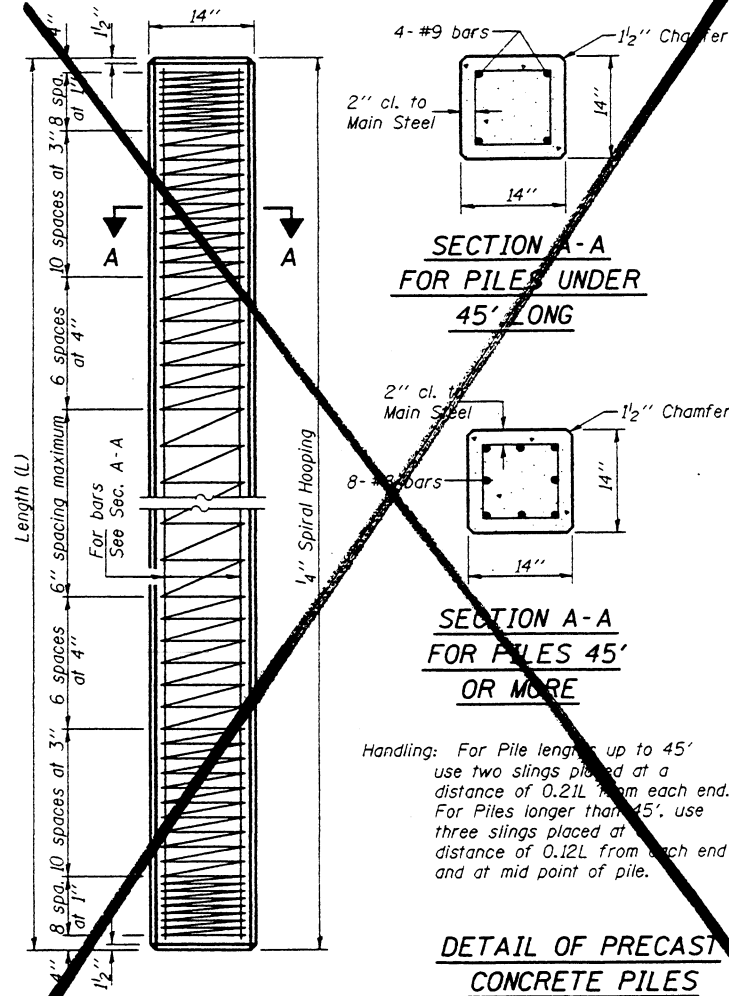
**BAR SPLICER ASSEMBLY DETAILS
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501**

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/h.t. parsons
CHECKED	MJT/CEH
BSD-1	4-30-99

EXAMINED	Thomas J. Romagosa
PASSED	Rafael E. Anderson
APPROVED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. 52
FAP 658	K(B-1)	MENARD	198	85	62 SHEETS
FEB. 1988 REV. 10-7					



DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	R. Doty/H. Parsons
CHECKED	MJT/CEH

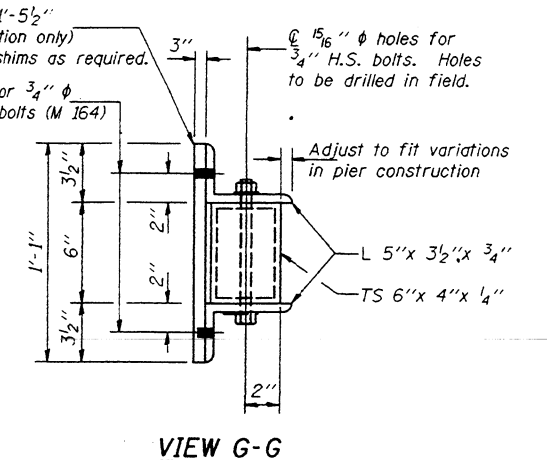
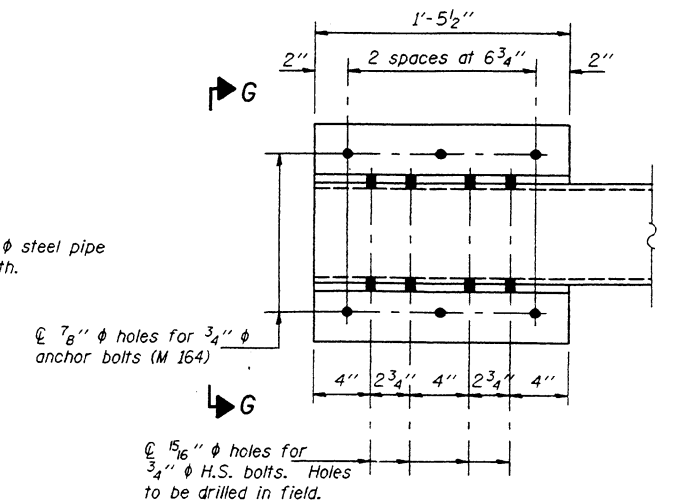
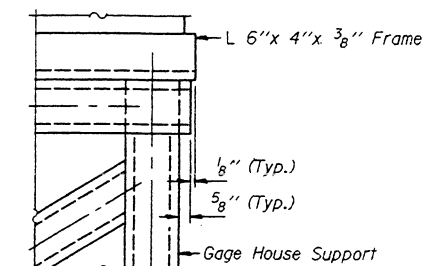
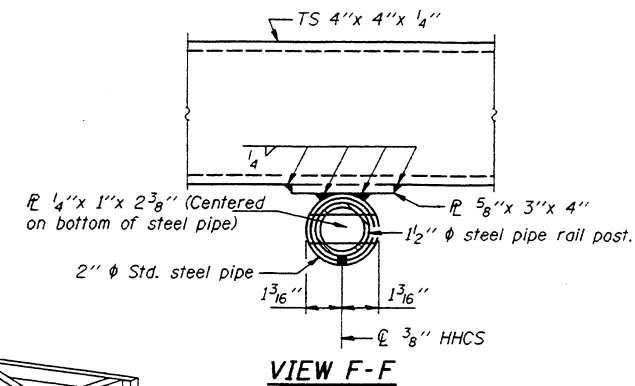
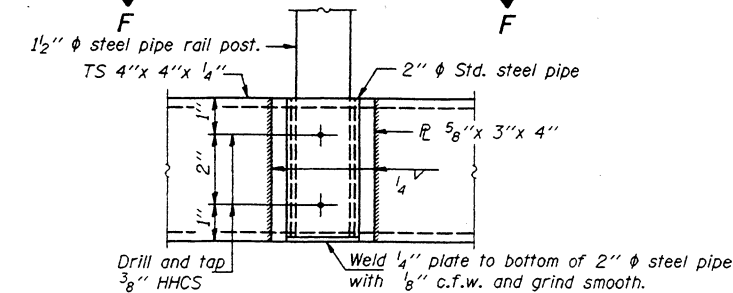
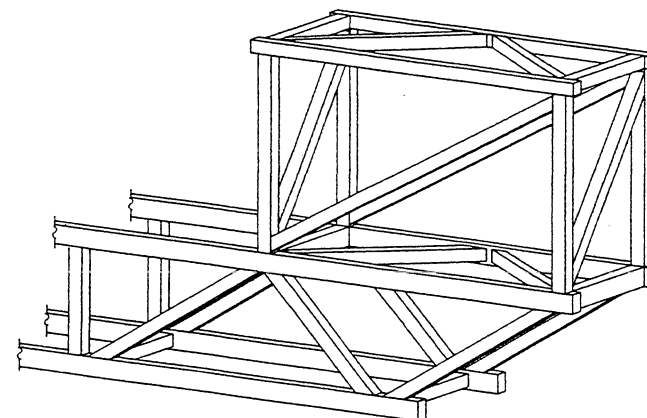
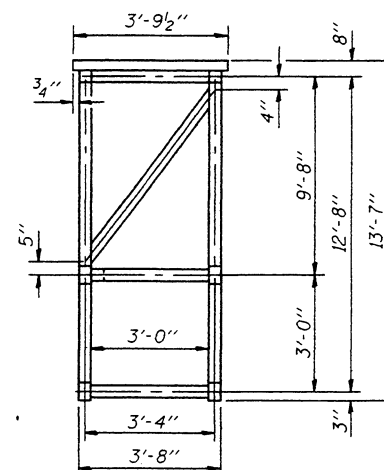
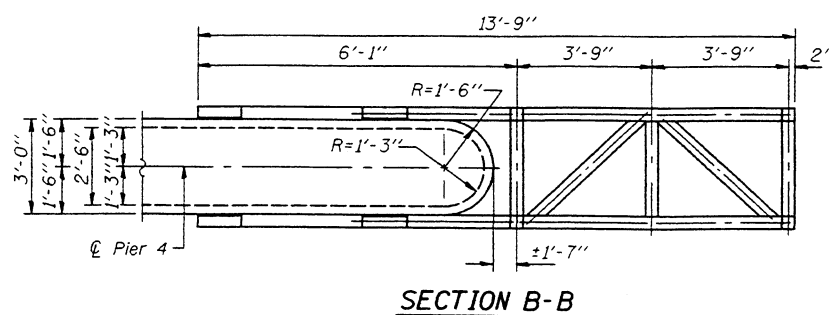
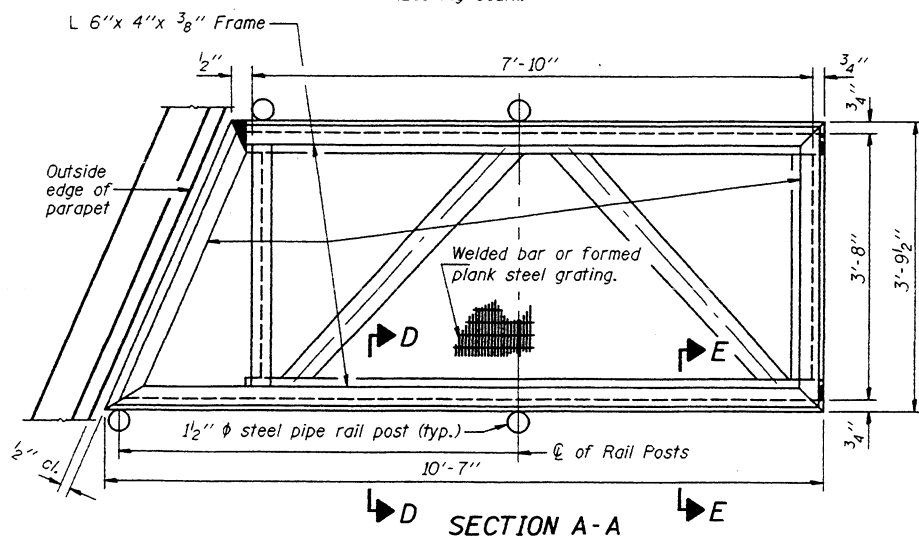
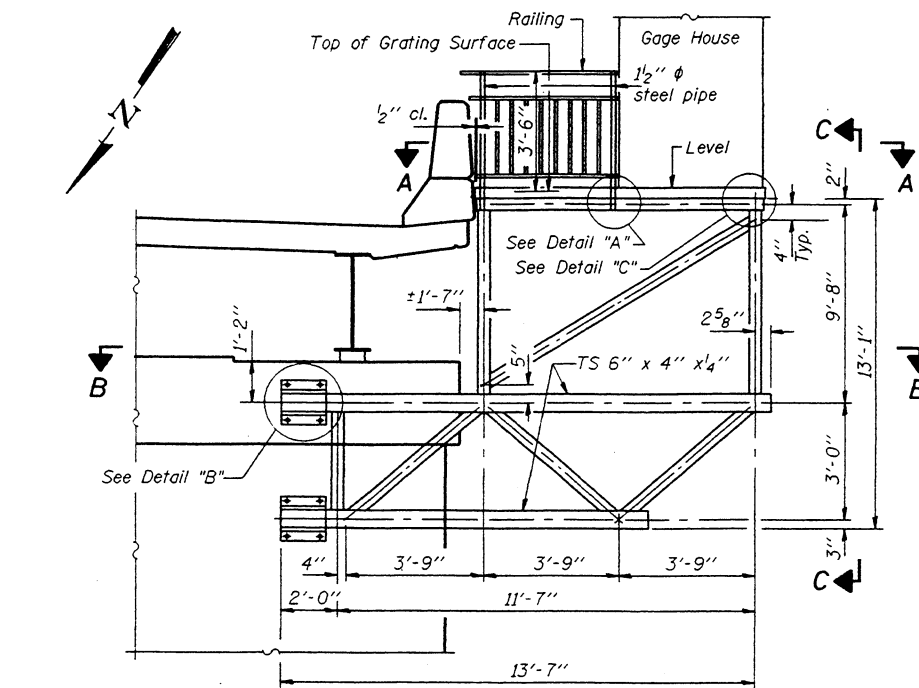
EXAMINED	Thomas J. Damagala
PASSED	Ralph E. Anderson
APPROVED	

CONCRETE PILE DETAILS
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

Revised 2/26/02

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO.
FAP 658	KIB-1	MENARD	198	86	53
62 SHEETS					



Notes:

- Hollow structural steel tubing shall conform to the requirements of ASTM designation A500, Grade B, structural steel tubing.
- All steel grating, plates, shapes and pipe shall be hot dip galvanized after shop fabrication according to AASHTO M111 and ASTM A385. Painting is not permitted.
- Bolts, nuts and washers shall be galvanized according to AASHTO M 232.
- The steel railing shall be according to Article 510.03 and 510.04 of the Standard Specifications, except as noted.
- All members shall be TS 4" x 4" x 1/4" unless otherwise noted.
- All welds shall be 1/4" fillet or groove welds.
- The railing shall be 1" diameter structural steel pipe, unless otherwise noted.
- All structural steel pipe shall be ASTM A53 Grade B with a minimum yield of 35 ksi, or A500 Grade B or C with a minimum yield of 46 ksi. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and the wall thickness shall be greater than or equal to A53.
- Steel rails and balusters shall be spaced such that a sphere with a diameter of 4" cannot pass through any opening.
- The Contractor shall install standard force-fit end caps or weld 1/4" end plates using 1/8" c.f.w. and grind smooth.
- (All rail ends).
- The Alternate Formed Plank Grating shall have a nominal depth of 2 1/2" (±1/2"); perforated or expanded steel sheet with a non-skid surface (non-serrated) and shall have a concentrated load capacity of 495 lb. with a 6'-6" clear span.
- The Gage House, Gage House support, connections and railings are included with "Gage House and Access". See Special Provisions.
- Calculated mass of structural steel = 2492 lb (A500 Gr. B)
- Calculated mass of structural steel = 992 lb (M270 Gr. 36)
- (Mass of gage house and railing is not included.)
- See sheet 54 of 62 for Gage House details, Section D-D and E-E.
- Space reinforcement in cap to miss anchor bolts.
- For anchor bolt installation details see sheet 38 of 62.

**GAGE HOUSE AND ACCESS
AT PIER 4**

F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	h.t. parsons
CHECKED	MJT/CEH

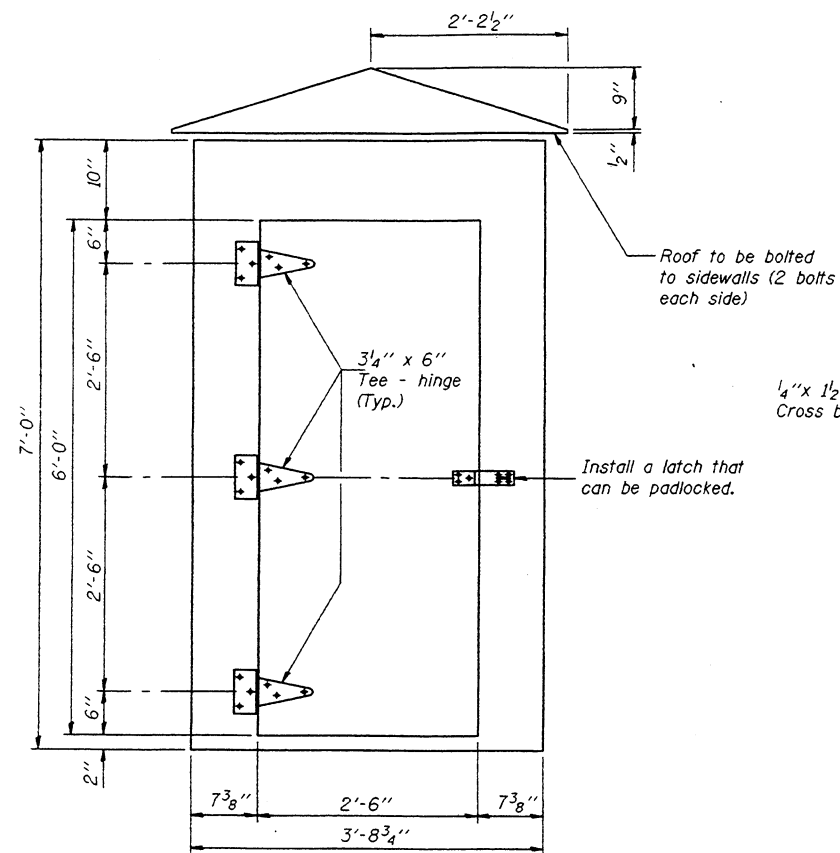
EXAMINED	Thomas J. Demagala
PASSED	Ralph E. Anderson

Feb. 4, 2002

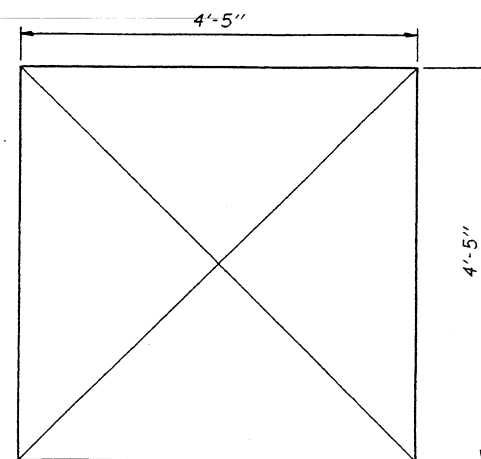
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FAP 658	K(B-1)	MENARD	198	87
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

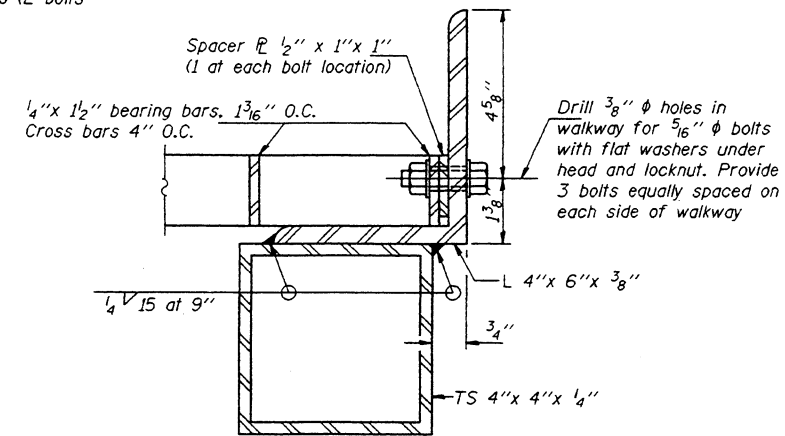
SHEET NO. 54
62 SHEETS



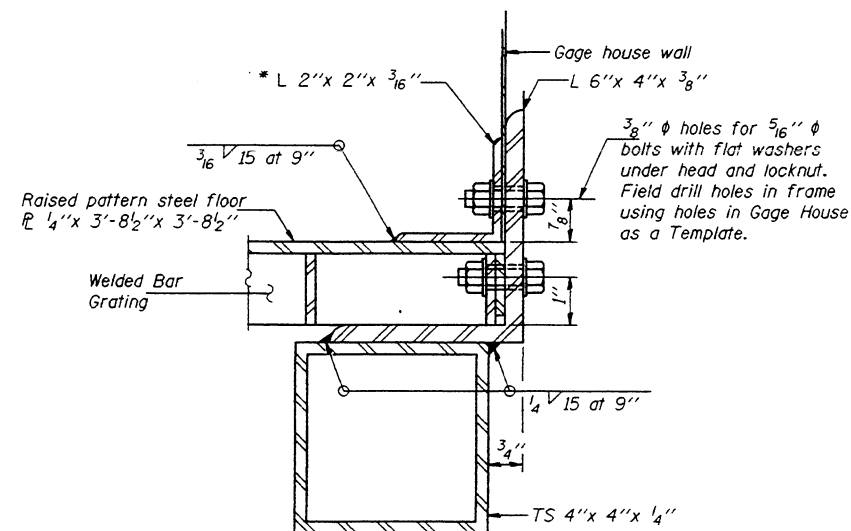
FRONT VIEW



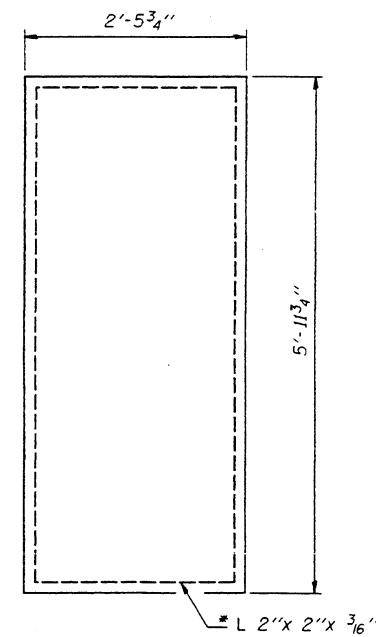
TOP VIEW - ROOF



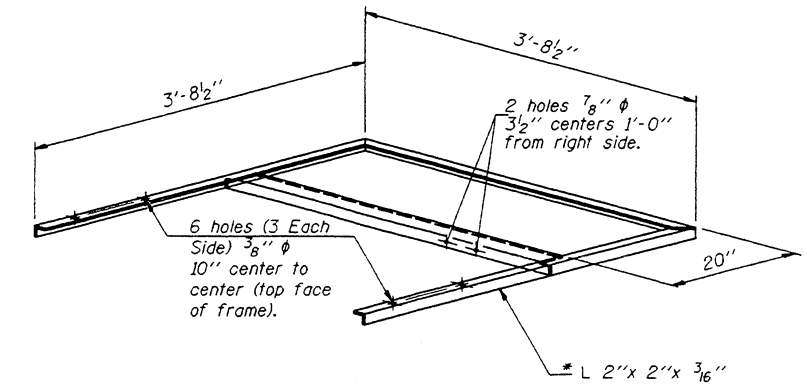
SECTION D-D
(Showing welded bar grating detail.)



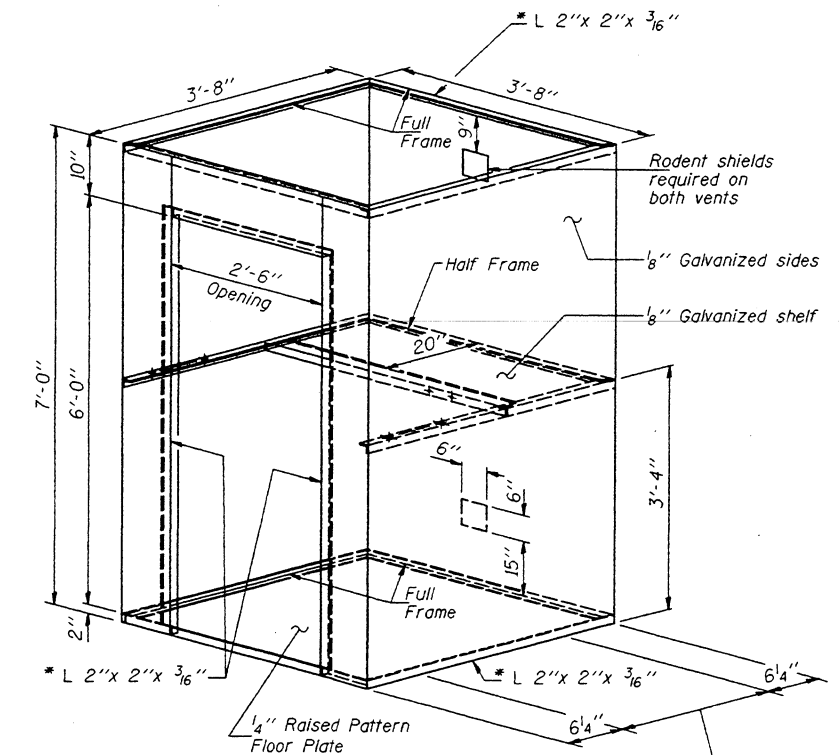
SECTION E-E
(Showing gage house anchorage.)



DOOR



HALF FRAME DETAIL



4-3/8" holes for 5/16" bolts.
(Typ. both sides and back of gage house)
See Section E-E.

*Siding shall be attached to the gage house frame with sheet metal fasteners and rubber washers.

GAGE HOUSE & ACCESS
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 756+89.12
STRUCTURE NO. 065-0501

DESIGNED	Mike J. Trello
CHECKED	Chad E. Hodel
DRAWN	h.t. parsons
CHECKED	MJT/CEH

EXAMINED	Feb. 4, 2002
PASSED	Thomas J. Damagala ENGINEER OF BRIDGE DESIGN Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
FAP 658	KIB-1	MENARD	198	88
SHEET NO. 55				
62 SHEETS				

Illinois Department of Transportation
Division of Highways
State Department of Transportation

SOIL BORING LOG

Page 1 of 3

Date 8/12/00

ROUTE FAP 658 (IL 29) DESCRIPTION IL 29 over Salt Creek LOGGED BY M. Tappan

SECTION KIB-1 LOCATION NW 14, SEC. 1, TWP. 19 N. R. 10 E. W. 3 PM

COUNTY Menard DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 065-0501
Station 759+89

BORING NO. 1 S. Abert
Station 759+27
Offset 26.00ft Left
Ground Surface Elev. 493.2 ft

DEPTH (ft)	SOIL DESCRIPTION	WATER	TEMP (°F)	WATER	TEMP (°F)
0	SAND				
1	Grey Fine Grained SAND w/ Some Fine Gravel				
2	Brown Wet Coarse Grained SAND				
3	Grey Clean Medium Grained SANDY GRAVEL				
4	Grey Medium Grained Clean SAND w/ Some 1/4" Gravel				
5	Grey Medium Grained Clean SANDY GRAVEL				
6	Grey Wet SILT				
7	Washed				

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 T298)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
State Department of Transportation

SOIL BORING LOG

Page 2 of 3

Date 8/12/00

ROUTE FAP 658 (IL 29) DESCRIPTION IL 29 over Salt Creek LOGGED BY M. Tappan

SECTION KIB-1 LOCATION NW 14, SEC. 1, TWP. 19 N. R. 10 E. W. 3 PM

COUNTY Menard DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 065-0501
Station 759+89

BORING NO. 1 S. Abert
Station 759+27
Offset 26.00ft Left
Ground Surface Elev. 493.2 ft

DEPTH (ft)	SOIL DESCRIPTION	WATER	TEMP (°F)	WATER	TEMP (°F)
0	Grey Wet SILT				
1	Washed (continued)				
2	Washed				
3	Washed				
4	Washed				
5	Washed				
6	Washed				
7	Washed				
8	Washed				
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99	Washed				
100	Washed				

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 T298)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
State Department of Transportation

SOIL BORING LOG

Page 3 of 3

Date 8/12/00

ROUTE FAP 658 (IL 29) DESCRIPTION IL 29 over Salt Creek LOGGED BY M. Tappan

SECTION KIB-1 LOCATION NW 14, SEC. 1, TWP. 19 N. R. 10 E. W. 3 PM

COUNTY Menard DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 065-0501
Station 759+89

BORING NO. 1 S. Abert
Station 759+27
Offset 26.00ft Left
Ground Surface Elev. 493.2 ft

DEPTH (ft)	SOIL DESCRIPTION	WATER	TEMP (°F)	WATER	TEMP (°F)
0	Grey Fine Grained Clean SAND				
1	Washed (continued)				
2	Grey Medium to Coarse Grained Clean SAND				
3	Washed				
4	Washed				
5	Washed				
6	Washed				
7	Washed				
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9	Washed				
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100	Washed				

Boring Completed

* Surface Water Elevation on 08/22/00 498.3'. Salt Creek water level above normal at time of determination; surface water at time of boring unknown.

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 T298)
BBS, from 137 (Rev. 8-99)

BORING 1
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 759+89.12
STRUCTURE NO. 065-0501

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 658	K(B-1)	MENARD	198	89
FED. ROAD DIST. NO. 7		BLINDS	FED. AID PROJECT-	

SHEET NO. 56
62 SHEETS

Illinois Department of Transportation Division of Highways Illinois Department of Transportation		SOIL BORING LOG		Page 2 of 2																																							
ROUTE <u>FAP 659 (IL 20)</u> DESCRIPTION <u>IL 20 over Salt Creek</u>		LOGGED BY <u>M. Tappen</u>																																									
SECTION <u>KIB-II</u>	LOCATION <u>NW 14, SEC. 1, TWP. 19 N, RNG. 6 W, 3 P</u>																																										
COUNTY <u>Menard</u>	DRILLING METHOD <u>HSA</u>	HAMMER TYPE <u>140 # Auto</u>																																									
STRUCT. NO. <u>005-0001</u> Station <u>756+89</u> BORING NO. <u>2 Fly</u> Station <u>752+57</u> Offset <u>34.50N Left</u> Ground Surface Elev. <u>489.4</u> ft	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">D</td><td style="width: 5%;">B</td><td style="width: 5%;">U</td><td style="width: 5%;">M</td></tr> <tr> <td>P</td><td>L</td><td>C</td><td>O</td></tr> <tr> <td>T</td><td>O</td><td>S</td><td>I</td></tr> <tr> <td>H</td><td>W</td><td>I</td><td>S</td></tr> <tr> <td>S</td><td>O</td><td>Q</td><td>T</td></tr> </table>	D	B	U	M	P	L	C	O	T	O	S	I	H	W	I	S	S	O	Q	T	Surface Water Elev. <u>+</u> ft Stream Bed Elev. <u>No Data</u> ft Groundwater Elev.: First Encounter <u>480.9</u> ft Upon Completion <u>Washed</u> ft After <u>Hrs.</u> <u>Plugged</u> ft	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">D</td><td style="width: 5%;">B</td><td style="width: 5%;">U</td><td style="width: 5%;">M</td></tr> <tr> <td>L</td><td>L</td><td>C</td><td>O</td></tr> <tr> <td>P</td><td>O</td><td>S</td><td>I</td></tr> <tr> <td>T</td><td>W</td><td>I</td><td>S</td></tr> <tr> <td>H</td><td>S</td><td>Q</td><td>T</td></tr> </table>	D	B	U	M	L	L	C	O	P	O	S	I	T	W	I	S	H	S	Q	T
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T	W	I	S																																								
H	S	Q	T																																								
Grey Very Moist SILT Washed (continued)	(ft) (4") (in) (%)	Grey Silty Sample 2-2 Grey Very Fine to Fine Grained Clean SAND (continued)	(ft) (4") (in) (%)																																								
448.50 Grey Very Fine Grained SAND Grain Size Sample 2-1 Washed	2 5 4	Grey Medium Grained Clean SAND Washed	1 1 3																																								
443.80 Grey Wet SILT Washed	0 1 0.0 30 1 SLURRY 50	Medium to Coarse Grained SANDY GRAVEL Washed	10 20 70																																								
Washed	1 3 0.0 24 5 SLURRY 50	Medium Grained Clean SAND w/ Some Coarse Gravel Washed	12 22 78																																								
432.80 Grey Very Fine to Fine Grained Clean SAND	3 4 5	Medium to Coarse Grained Clean SAND Washed	10 20 27																																								
Washed	5	Washed	27																																								

The Unconfined Compressive Strength (UCS) Fellure Made 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. 5-99)

[illegible]

BORING 2
F.A.P. ROUTE 658 - SECTION K(B-I)
MENARD COUNTY
STATION 759+89.12
STRUCTURE NO. 065-0501

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 658	K18-11	MENARD	198	90
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 57
62 SHEETS

 Illinois Department of Transportation Division of Highways Illinois Department of Transportation		SOIL BORING LOG		Page <u>2</u> of <u>3</u>	
ROUTE <u>FAP 609 (IL 20)</u> DESCRIPTION <u>IL 20 over Salt Creek</u>		LOGGED BY <u>M. Tappen</u>		Date <u>6/20/00</u>	
SECTION <u>E(B-1)</u>		LOCATION <u>NW 1/4, SEC. 1, TWP. 19 N, RANG. 6 W, 3 PM</u>			
COUNTY <u>Monroe</u>		DRILLING METHOD <u>NSA</u>		HAMMER TYPE <u>100 # Auto</u>	
STRUCT. NO. <u>065-0001</u> Station <u>756 + 89</u>	D E P T H S	B L O W S O N	U C S O N T (F) (6") (in) (%)	Surface Water Elev. <u> </u> ft Stream Bed Elev. <u>No Data</u> Groundwater Elev.: First Encounter <u>479.8</u> ft Upon Completion <u>Washed</u> After <u>Hrs.</u> <u>Plugged</u> ft	D E P T H S O N T (ft) (6") (in) (%)
BORING NO. <u>3 Pier</u> Station <u>753 + 34</u> Offset <u>33.000 Left</u> Ground Surface Elev. <u>489.3</u> ft				Grey Fine Grained Clean SAND Washed (continued)	
Grey Wet SILT Washed					
Washed					
Washed					
Washed					
Grey Fine Grained Clean SAND Washed					
Washed					
Washed					
Grey Fine Grained Clean SAND Washed					
Washed					
Washed					
Washed					
Washed					
Washed					
Washed					
Washed					
Washed					
Washed					
Washed					
Washed					
Washed					
Washed					

 Illinois Department of Transportation Division of Highways Illinois Department of Transportation		SOIL BORING LOG		Page <u>2</u> of <u>2</u>
		Date <u>6-6-00</u>		
ROUTE <u>FAP 608 (B, 29)</u>		DESCRIPTION <u>IL 29 over Salt Creek</u>		
SECTION <u>K(B-1)</u>		LOCATION <u>NW 14, SEC. 1, TWP. 19 N, RNG. 6 W, 3 PM</u>		
COUNTY <u>Monard</u>		LOGGED BY <u>M. Tappan</u>		
DRILLING METHOD <u>HSA</u>		HAMMER TYPE <u>140 # Auto</u>		
STRUCT. NO. <u>085-0001</u>	D E L U M	Surface Water Elev. <u> </u> * ft		
Station <u>756+88</u>	C O I S	Stream Bed Elev. <u> </u> No Data ft		
BORING NO. <u>3 Pier</u>	T W S	Groundwater Elev.: <u> </u> ft		
Station <u>755+34</u>	H S	First Encounter <u>479.8</u> ft		
Offset <u>33.000' Left</u>		Upon Completion <u> </u> ft		
Ground Surface Elev. <u>488.3</u> ft	(ft) (in) (mm) (%)	After <u> </u> Hrs. <u> </u> Plugged ft		
Boring Completed * Surface Water Elevation on 08/29/00 488.9'. Salt Creek water level above normal at time of determination; surface water at time of boring unknown.				

BORING 3
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 759+89.12
STRUCTURE NO. 065-0501

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 658	K(8-1)	MENARD	198	91
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 58

62 SHEETS

[illegible]

 Illinois Department of Transportation Division of Highways Illinois Department of Transportation		SOIL BORING LOG		Page <u>3</u> of <u>3</u>								
ROUTE <u>FAP 658 (IL 29)</u>		DESCRIPTION <u>IL 29 over Salt Creek</u>		Date <u>6/200</u>								
SECTION <u>K(B-1)</u>		LOCATION <u>NW 1/4, SEC. 1, TWP. 19 N, RANG. 6 W, 3 PM</u>		LOGGED BY <u>M. Tappan</u>								
COUNTY <u>Maize</u>	DILLING METHOD <u>HSA</u>	HAMMER TYPE <u>140 # Auto</u>										
STRICT. NO. <u>065-0901</u> Station <u>756+59</u> BORING NO. <u>4 Pier</u> Station <u>754+25</u> Offset <u>34.50ft Left</u> Ground Surface Elev. <u>487.5</u> ft	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">D E P T H</td> <td style="text-align: center;">B L O W S</td> <td style="text-align: center;">U C S</td> <td style="text-align: center;">M O I S T</td> </tr> <tr> <td style="text-align: center;">H S</td> <td style="text-align: center;">Q_u</td> <td style="text-align: center;">(pcf)</td> <td style="text-align: center;">(%)</td> </tr> </table>	D E P T H	B L O W S	U C S	M O I S T	H S	Q _u	(pcf)	(%)	Surface Water Elev. _____ ft Stream Bed Elev. _____ ft Groundwater Elev.: First Encounter _____ ft Upon Completion _____ ft After _____ Hrs. _____ ft		
D E P T H	B L O W S	U C S	M O I S T									
H S	Q _u	(pcf)	(%)									
Washed Gray Very Fine Grained Clean SAND w/2" Some Gray SILT Washed (continued)	19											
Coarse Grained Clean SAND Washed	7 24 402.00											
Boring Completed												
* Surface Water Elevation on 062200 480.5'. Salt Creek water level above normal at time of determination; surface water at time of boring unknown.												

BORING 4
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 759+89.12
STRUCTURE NO. 065-0501

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 59 62 SHEETS
FAP 658	K(B-1)	MENARD	198	92	
PED. ROAD DIST. NO. 7		BLT/HSB	PED. AID PROJECT -		

[illegible]

BORING 5
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 759+89.12
STRUCTURE NO. 065-0501

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 658	K(B-D)	MENARD	198	93
FED. ROAD DIST. NO. ?		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 60
62 SHEETS

[illegible]

Illinois Department of Transportation Division of Highway Maintenance and Transportation		SOIL BORING LOG		Page <u>3</u> of <u>3</u>	
ROUTE <u>FAP 608 (IL 23)</u> DESCRIPTION <u>IL 23 over Salt Creek</u>		LOGGED BY <u>M. Tappan</u>		Date <u>6/2/00</u>	
SECTION <u>K(B-3)</u>		LOCATION <u>NW 1/4, SEC. 1 TWP. 18 N, RNG. 6 W, 3 PM</u>			
COUNTY	<u>Manard</u>	DRILLING METHOD	<u>HSA</u>	HAMMER TYPE <u>140 # Auto</u>	
STRUCT. NO. <u>08C-0001</u> Station <u>766+89</u>					
BORING NO. <u>6 Flat</u> Station <u>790+64</u> Offset <u>36.00R Left</u> Ground Surface Elev. <u>462.8</u> ft					
		D E P T H S (ft)	U L C S W S O u (soil)	M O I S T U R (%)	Surface Water Elev. <u> </u> * ft Stream Bed Elev. <u>No Data</u> ft Groundwater Elev.: First Encounter <u>463.8</u> ft Upon Completion <u>Washed</u> ft After <u>Hrs.</u> <u>Plugged</u> ft
Grey Very Fine Grained Clean SAND (continued)		3			
Washed		1			
		2			
		2			
Grey Medium Grained Clean SANDY GRAVEL					
Washed		6			
		7			
		9			
		15			
		23			
		31			
Boring Completed		397.30			
* Surface Water Elevation on 06/22/00 463.97; Salt Creek water level above normal at time of determination; surface water at time of boring unknown.					
		-100			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetration)

The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208)

HSE Form 127 (Rev. 8-97)

BORING 6
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 759+89.12
STRUCTURE NO. 065-0501

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 658	KIB-D	MENARD	198	94
FED. ROAD DIST. NO. 7		S.L. 1088	FED. AID PROJECT -	

SHEET NO. 61
62 SHEETS

[illegible][illegible]

BORING 7
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 759+89.12
STRUCTURE NO. 065-0501

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 658	K(B-1)	MENARD	198	95
FED. ROAD DIST. NO. 7		BLINDS	FED. AID PROJECT-	

SHEET NO. 62
62 SHEETS

Illinois Department of Transportation Division of Highways Mainline Department of Transportation		SOIL BORING LOG		Page <u>2</u> of <u>2</u>																																																																																																
ROUTE <u>FAP 609 (E. 25)</u> DESCRIPTION <u>IL 29 over Salt Creek</u>		LOGGED BY <u>M. Taguen</u>		Date <u>8/23/00</u>																																																																																																
SECTION <u>K(B-1)</u>		LOCATION <u>NW 1/4 SEC. 12, TWP. 19 N., RANG. 8 W., 3 PM</u>																																																																																																		
COUNTY <u>Manitowish</u>	DILLING METHOD <u>NSA</u>	HAMMER TYPE <u>140 # Auto</u>																																																																																																		
STRUCT. NO. <u>005-0001</u> Station <u>794+89</u> BORING NO. <u>8 N. Abet</u> Station <u>794+05</u> Offset <u>34.80N Left</u> Ground Surface Elev. <u>493.8</u> ft	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>D</th><th>U</th><th>M</th></tr> <tr> <td>DESCRIPTION</td><td>COL</td><td>TEST</td></tr> <tr> <td>7</td><td></td><td></td></tr> <tr> <td>11</td><td></td><td></td></tr> <tr> <td>3</td><td></td><td></td></tr> <tr> <td>8</td><td></td><td></td></tr> <tr> <td>8</td><td></td><td></td></tr> <tr> <td>3</td><td></td><td></td></tr> <tr> <td>8</td><td></td><td></td></tr> <tr> <td>11</td><td></td><td></td></tr> <tr> <td>3</td><td></td><td></td></tr> <tr> <td>8</td><td></td><td></td></tr> <tr> <td>10</td><td></td><td></td></tr> <tr> <td>1</td><td></td><td></td></tr> <tr> <td>3</td><td></td><td></td></tr> <tr> <td>10</td><td></td><td></td></tr> </table>	D	U	M	DESCRIPTION	COL	TEST	7			11			3			8			8			3			8			11			3			8			10			1			3			10			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Surface Water Elev.</td><td style="text-align: right;">- ft</td></tr> <tr> <td>Stream Bed Elev.</td><td style="text-align: right;">No Data ft</td></tr> <tr> <td colspan="2">Groundwater Elev.:</td></tr> <tr> <td>First Encounter</td><td style="text-align: right;">491.8 ft</td></tr> <tr> <td>Upon Completion</td><td style="text-align: right;">Washed ft</td></tr> <tr> <td>After</td><td style="text-align: right;">Plugged ft</td></tr> </table>		Surface Water Elev.	- ft	Stream Bed Elev.	No Data ft	Groundwater Elev.:		First Encounter	491.8 ft	Upon Completion	Washed ft	After	Plugged ft	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>D</th><th>U</th><th>M</th></tr> <tr> <td>DESCRIPTION</td><td>COL</td><td>TEST</td></tr> <tr> <td>7</td><td></td><td></td></tr> <tr> <td>11</td><td></td><td></td></tr> <tr> <td>5</td><td></td><td></td></tr> <tr> <td>3</td><td></td><td></td></tr> <tr> <td>2</td><td></td><td></td></tr> <tr> <td>3</td><td></td><td></td></tr> <tr> <td>2</td><td></td><td></td></tr> <tr> <td>2</td><td></td><td></td></tr> <tr> <td>6</td><td></td><td></td></tr> <tr> <td>8</td><td></td><td></td></tr> </table>	D	U	M	DESCRIPTION	COL	TEST	7			11			5			3			2			3			2			2			6			8		
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Washed		Coarse Grained																																																																																																		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetration)

The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T298)

BES. from 137 (Rev. 8-89)

 Illinois Department of Transportation Division of Highway Maintenance Department of Transportation		SOIL BORING LOG		Page <u>3</u> of <u>3</u>		
ROUTE <u>FAP 693 (E. 25)</u> DESCRIPTION <u>M. 29 over Salt Creek</u>		LOGGED BY <u>MA Toppin</u>		Date <u>6/19/05</u>		
SECTION <u>E(B-1)</u>	LOCATION <u>NW 1/4, SEC. 1, TWP. 19 N, RING. 6 W, 3 PM</u>					
COUNTY <u>Monroe</u>	DRILLING METHOD <u>HSA</u>	HAMMER TYPE <u>140 # Auto</u>				
STRUCT. NO. <u>005-0001</u> Station <u>758+59</u>		D E P T H S (ft)	B L O W S (blows)	U C S (psi)	M O I S T (%)	Surface Water Elev. <u> </u> ft Stream Bed Elev. <u> </u> ft Groundwater Elev.: First Encounter <u>481.8</u> ft Upon Completion <u> </u> ft After Hrs. <u> </u> ft
BORING NO. <u>2 N. Abut</u> Station <u>764+05</u> Offset <u>34.80 ft Left</u> Ground Surface Elev. <u>492.8</u> ft		(ft)	(blows)	(psi)	(%)	
Washed <u> </u> <u>412.80</u>		20	29			
Boring Completed <u> </u>		20	29			
* Surface Water Elevation on 08/29/00 489.3'. Salt Creek water level above normal at time of determination; surface water at time of boring unknown.						
Refer Elevations for Borings 1-4 to Chained Square on SE Corner of Existing Structure = 505.9'						
Refer Elevations for Borings 5-6 and Flowline to Illinois Waterways Brass Cap on NE Corner of Existing Structure = 506.6'						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Blade, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T298)

BES, from 137 (Rev. 8-00)

BORING 8
F.A.P. ROUTE 658 - SECTION K(B-1)
MENARD COUNTY
STATION 759+89.12
STRUCTURE NO. 065-0501