

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts.
 Bolts 7/8 in. ϕ , holes 1 1/8 in. ϕ , unless otherwise noted.
 Calculated weight of Structural Steel = 1,343,200 lbs. AASHTO M 270 Grade 50.
 Calculated weight of Structural Steel = 874,980 lbs. AASHTO M 270 Grade 70W.
 No field welding is permitted except as specified in the contract documents.
 Reinforcement bars designated (E) shall be epoxy coated.
 Bearing seal surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
 Concrete Sealer shall be applied to the designated areas of the abutments.
 The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception of the exterior surface and the bottom of the bottom flange of fascia beams, masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Gray, Munsell No. 5B 7/1.
 The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
 The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for field painting of exposed surfaces of large diameter pipe pile. The color of the final finish coat shall be Gray, Munsell No. 5B 7/1.
 The erection of the structural steel shall be accomplished by a steel erection contractor or sub-contractor certified as an Advanced Certified Steel Erector (ACSE) by AISC. See special provision for "Erection of Complex Steel Structures".
 Slipforming of the parapets is not allowed.
 Prior to the placement of the joint block-out, the Contractor shall coordinate with the Modular Joint Manufacturer to ensure that the joint will be properly supported and that the reinforcement bars will not interfere with the joint components. Any necessary adjustments to the reinforcement layout shall be submitted to the Engineer for approval.

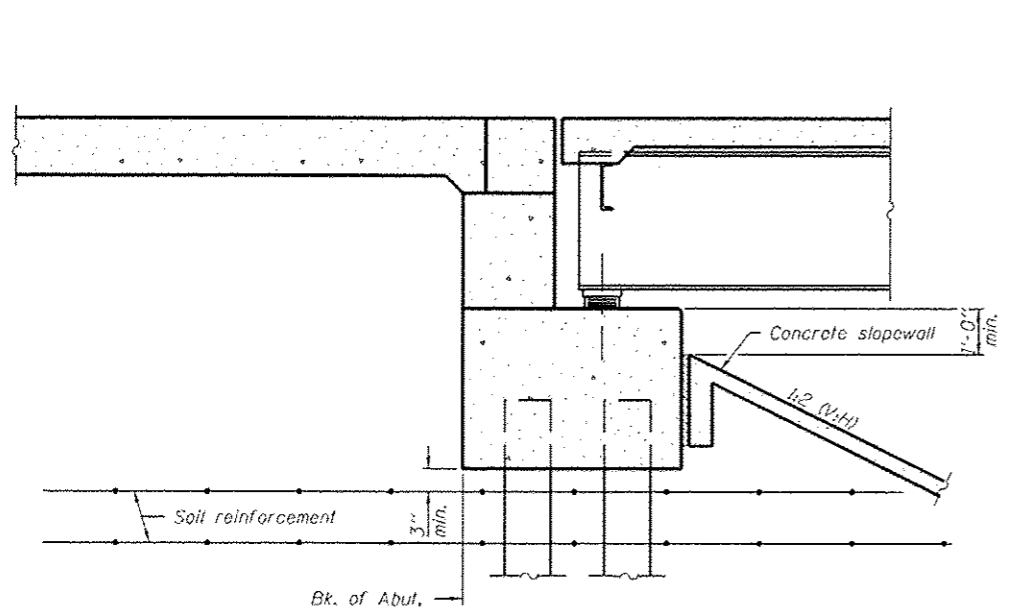
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yd.		351	351
Concrete Structures	Cu. Yd.		933.2	933.2
Concrete Superstructure	Cu. Yd.	1,591.8		1,591.8
Bridge Deck Grooving	Sq. Yd.	4,130		4,130
Protective Coat	Sq. Yd.	5,369		5,369
Precast Concrete Caps	Each		7	7
Furnishing and Erecting Structural Steel	L Sum	0.65		0.65
Stud Shear Connectors	Each	34,067		34,067
Reinforcement Bars, Epoxy Coated	Pound	402,740	194,480	597,220
Bar Splicers	Each		74	74
Mechanical Splicers	Each		286	286
Slope Wall 4 inch	Sq. Yd.		403	403
Furnishing Metal Shell Piles 14" X 0.250"	Foot		3,117	3,117
Driving Piles	Foot		3,117	3,117
Test Pile Metal Shells	Each		2	2
Pile Shoes	Each		24	24
Name Plates	Each			1
Preformed Joint Seal 4"	Foot		34	34
Anchor Bolts, 1 1/2"	Each		168	168
Concrete Sealer	Sq. Ft.		839	839
Geocomposite Wall Drain	Sq. Yd.		34	34
High Load Multi-Rotational Bearings, Guided Expansion, 200 K	Each	12		12
High Load Multi-Rotational Bearings, Fixed, 400 K	Each	6		6
High Load Multi-Rotational Bearings, Fixed, 450 K	Each	30		30
High Load Multi-Rotational Bearings, Fixed, 550 K	Each	6		6
Granular Backfill for Structures	Cu. Yd.		77	77
Drainage Scuppers, DS-II	Each		3	3
Modular Expansion Joint - Swivel 6"	Foot		76	76
Pipe Underdrains for Structures 4"	Foot		46	46
Furnishing Metal Large Diameter Pipe Piles 60" X 1.00"	Foot		1,427	1,427
Driving Large Diameter Pipe Piles	Foot		1,427	1,427
Test Pile Large Diameter Pipe	Each		2	2
Pile Shoes, Large Diameter Pipe	Each		14	14
Bar Terminator	Each		252	252
High Strength Non-Shrink Grout	Cu. Ft.		1,048	1,048

* Quantity includes Textured Epoxy Coated Reinforcement bars. See sheets 29, 31, 34, 36, 38, and 40 of 97.

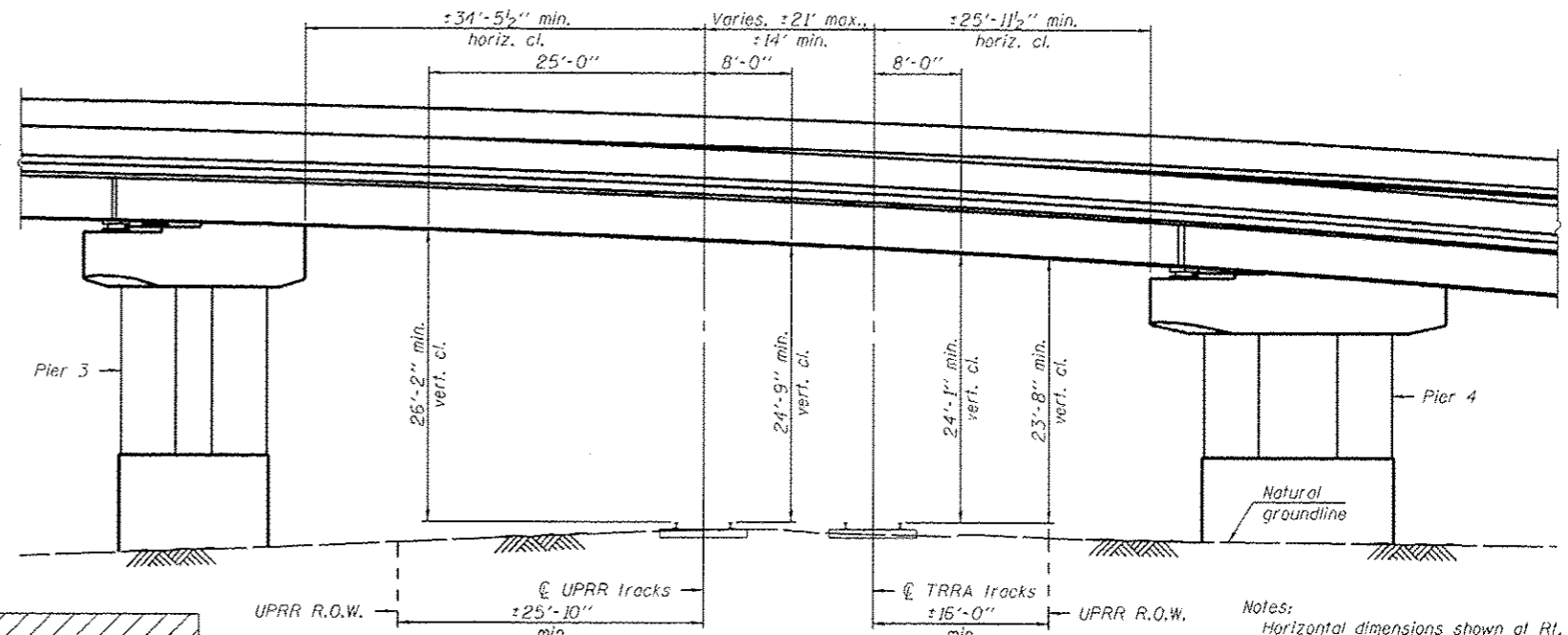
INDEX OF SHEETS

- 1.-2. General Plan and Elevation
- 3.-5. General Data
- 6.-7. Footing Layout
- 8. Suggested Erection Sequence
- 9.-10. Top of Slab Elevations - Diagrammatic Plan
- 11.-16. Top of Slab Elevations - Tables
- 17. Top of West Approach Slab Elevations
- 18. Top of Approach Slab 1 Elevations
- 19. Top of Approach Slab 2 Elevations
- 20. Top of Approach Slab 3 Elevations
- 21. Top of Approach Slab 4 Elevations
- 22. Superstructure Details - Plan, Spans 1 & 2
- 23. Superstructure Details - Plan, Spans 3 & 4
- 24. Superstructure Details - Plan, Spans 5 & 6
- 25. Superstructure Details - Plan, Spans 7 & 8
- 26. Superstructure Details - Section & Pouring Sequence
- 27.-28. Superstructure Details - Parapet Details
- 29. Superstructure Details
- 30.-31. West Bridge Approach Slab Details
- 32.-34. Bridge Approach Slab 1 Details
- 35.-36. Bridge Approach Slab 2 Details
- 37.-38. Bridge Approach Slab 3 Details
- 39.-40. Bridge Approach Slab 4 Details
- 41.-42. Expansion Device
- 43. Drainage Scupper Details
- 44.-53. Structural Steel Details
- 54.-55. Bearing Details
- 56. West Abutment
- 57. West Abutment Details
- 58. South Abutment
- 59.-60. South Abutment Details
- 61. Pier 1
- 62. Pier 2
- 63. Pier 3
- 64. Pier 4
- 65. Pier 5
- 66. Pier 6
- 67. Pier 7
- 68. Precast Concrete Cap Details
- 69. Approach Support 1
- 70. Approach Support 2
- 71. Approach Support 3
- 72. Approach Support 4
- 73. Large Diameter Pipe Pile Details
- 74. Metal Shell Pile Details
- 75. Bar Splicer and Mechanical Splicer Details
- 76.-97. Boring Logs



SECTION THRU WEST ABUTMENT

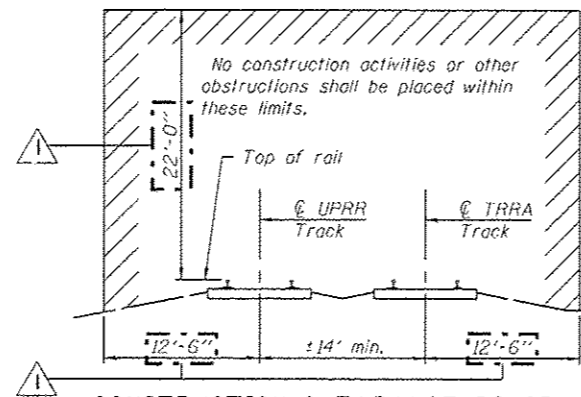
Notes:
Soil reinforcement shown is for MSE wall that parallels the MLK Connector.
For MSE wall details, see S.N. 082-W314.



PART ELEVATION

(Looking North along $\text{\textcircled{C}}$ tracks, showing Span 4)

Notes:
Horizontal dimensions shown at Rt. L's to $\text{\textcircled{C}}$ tracks.
Horizontal dimensions from $\text{\textcircled{C}}$ tracks to UPRR R.O.W. are measured near Piers 3 and 4.



CONSTRUCTION CLEARANCE DIAGRAM

(Horiz. dim. $\text{\textcircled{C}}$ Rt. L's to $\text{\textcircled{C}}$ tracks)

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
14681+00.00	418.65	14682+00.00	418.80	14683+00.00	418.81	14684+00.00	418.98	14685+00.00	419.48	14686+00.00	419.64	14687+00.00	419.59	14688+00.00	419.71
14689+00.00	419.80	14690+00.00	419.93	14691+00.00	420.05	14692+00.00	420.57	14693+00.00	421.27	14694+00.00	422.37	14695+00.00	423.49	14696+00.00	424.69
14697+00.00	425.75	14698+00.00	426.43	14699+00.00	426.67	14700+00.00	426.91	14701+00.00	426.93	14702+00.00	426.82	14703+00.00	425.18		

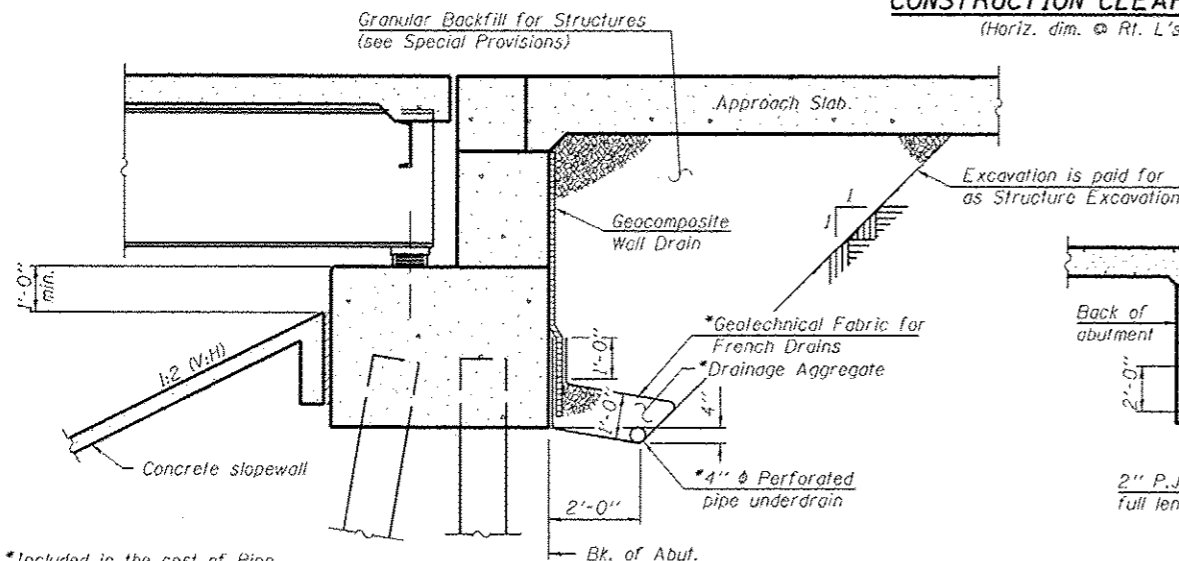
PROFILE GRADE

(Along UPRR Tracks)

Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
14681+00.00	418.61	14682+00.00	418.76	14683+00.00	418.70	14684+00.00	418.80	14685+00.00	419.00	14686+00.00	419.00	14687+00.00	419.10	14688+00.00	419.40
14689+00.00	419.58	14690+00.00	419.69	14691+00.00	419.94	14692+00.00	420.48	14693+00.00	421.38	14694+00.00	422.33	14695+00.00	423.53	14696+00.00	424.60
14697+00.00	425.60	14698+00.00	426.41	14699+00.00	426.66	14700+00.00	426.49	14701+00.00	426.47	14702+00.00	426.93	14703+00.00	427.48		

PROFILE GRADE

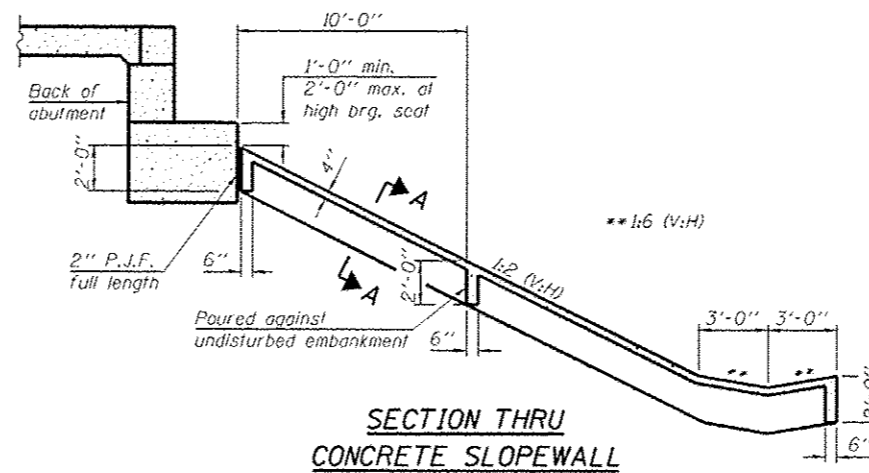
(Along TRRA tracks)



SECTION THRU SOUTH ABUTMENT

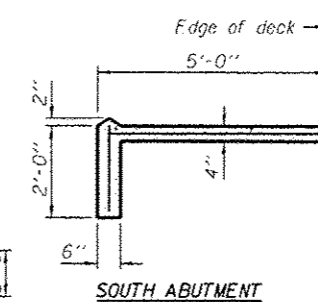
*Included in the cost of Pipe Underdrains for Structures.

Note:
All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls or 2'-0" from the end of the wingwalls when the wings are parallel to the abutment. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. The pipes shall drain into concrete headwalls.
(See Article 601.05 of the Standard Specifications and Highway Standard 601101).



SECTION THRU CONCRETE SLOPEWALL

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



SOUTH ABUTMENT



WEST ABUTMENT

SECTION A-A

FILE NAME: X:\1304488-MLK\CD\S\08203	DESIGNED - E.M. Logemann	REVISION 1/15/2015 E.M.L.
USER NAME: elagemann	CHECKED - T.S. Friederich	REVISION
PLOT SCALE:	DRAWN - C.A. Buettner	REVISION
PLOT DATE: 1/15/2015	CHECKED - E.M. Logemann	REVISION

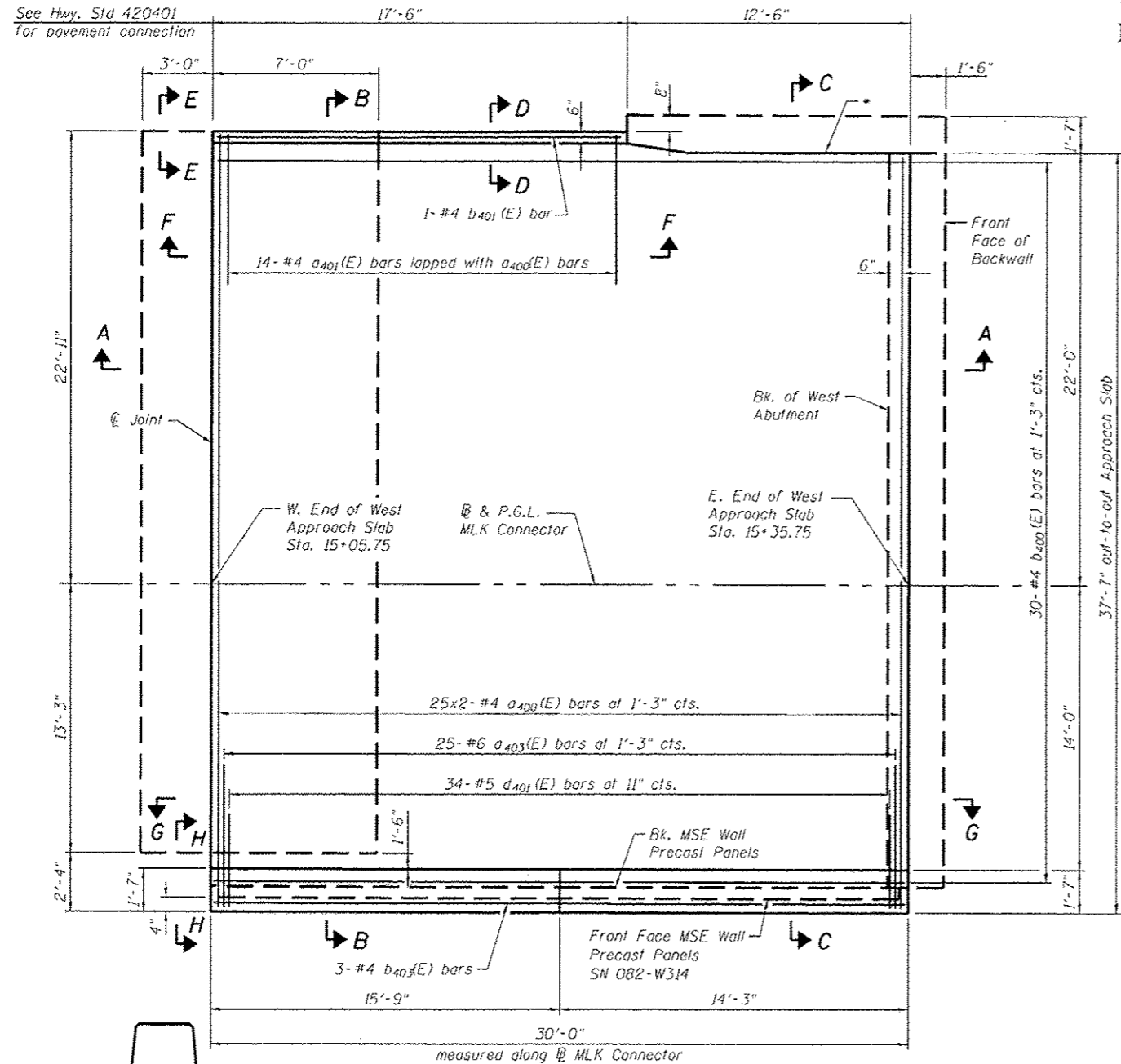
DESIGNED - E.M. Logemann	REVISION 1/15/2015 E.M.L.
CHECKED - T.S. Friederich	REVISION
DRAWN - C.A. Buettner	REVISION
CHECKED - E.M. Logemann	REVISION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS
STRUCTURE NO. 082-0349
SHEET NO. 4 OF 97 SHEETS

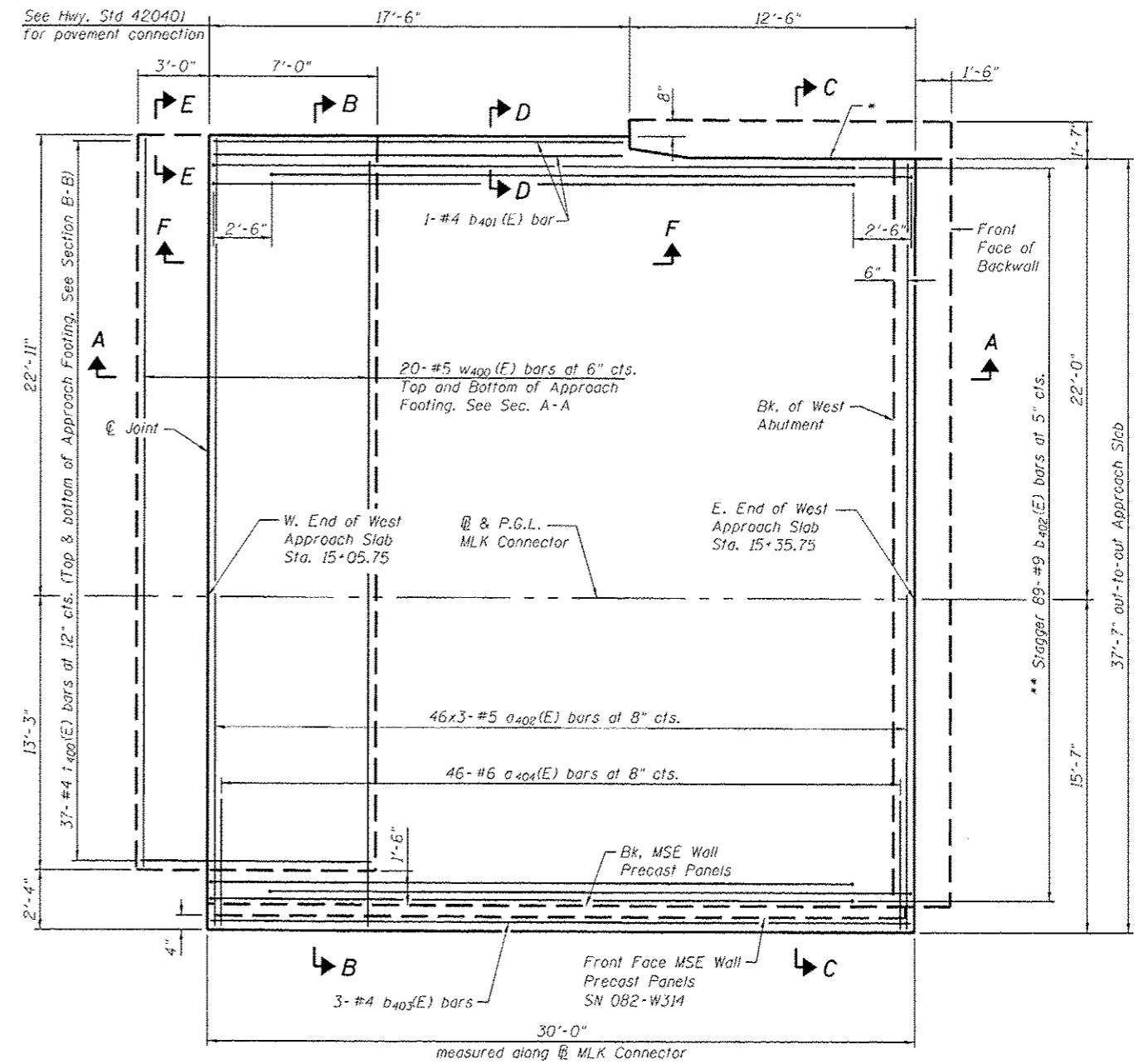
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-11,418-1	ST. CLAIR	406	99
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	

Notes:
See sheet 31 of 97 for Sections A-A, B-B, C-C and Views D-D, E-E & F-F.



PLAN VIEW

(Showing Top of Slab Reinforcement)



PLAN VIEW

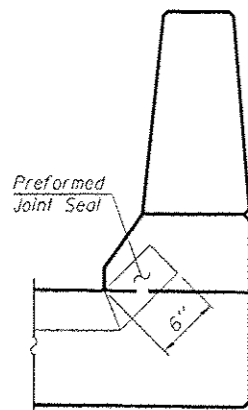
(Showing Bottom of Slab Reinforcement)

MINIMUM BAR LAP

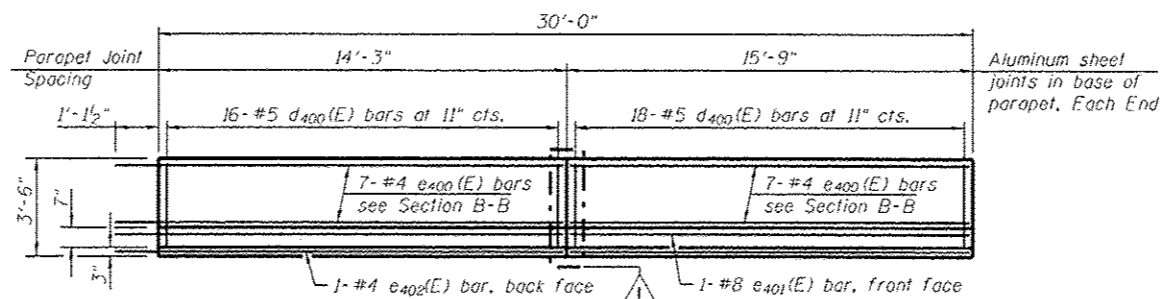
#4 bar = 2'-0"
#5 bar = 2'-6"

* 1/2" Preformed Joint Filler according to Article 1051 of the Standard Specifications; full depth of slab, full length of parapet.

** Till #9 b402(E) bars as required to maintain clearance



VIEW H-H



VIEW G-G

FILE NAME: J:\2015\10\MLK\CON\082\034\082-034-03.dwg - 12/15/2015



USER NAME: elagermann
Illinois Design Firm Number 184.001670
PLOT SCALE: 1/8" = 1'-0"
PLOT DATE: 1/15/2015

DESIGNED - BB
CHECKED - JD
DRAWN - WS
CHECKED - CJF

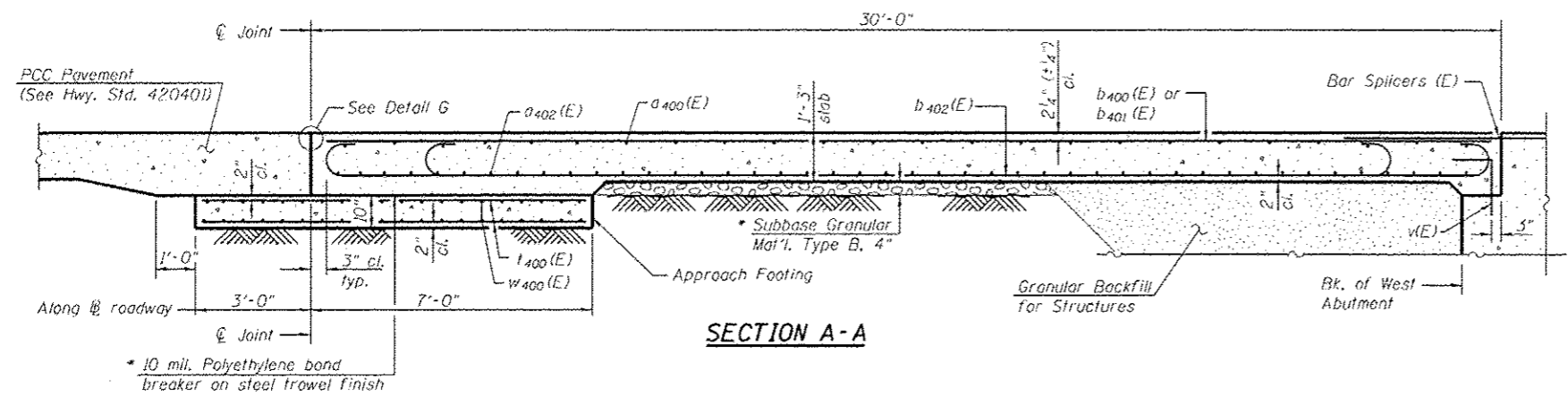
REVISED 1/15/2015 H&S
REVISED
REVISED
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

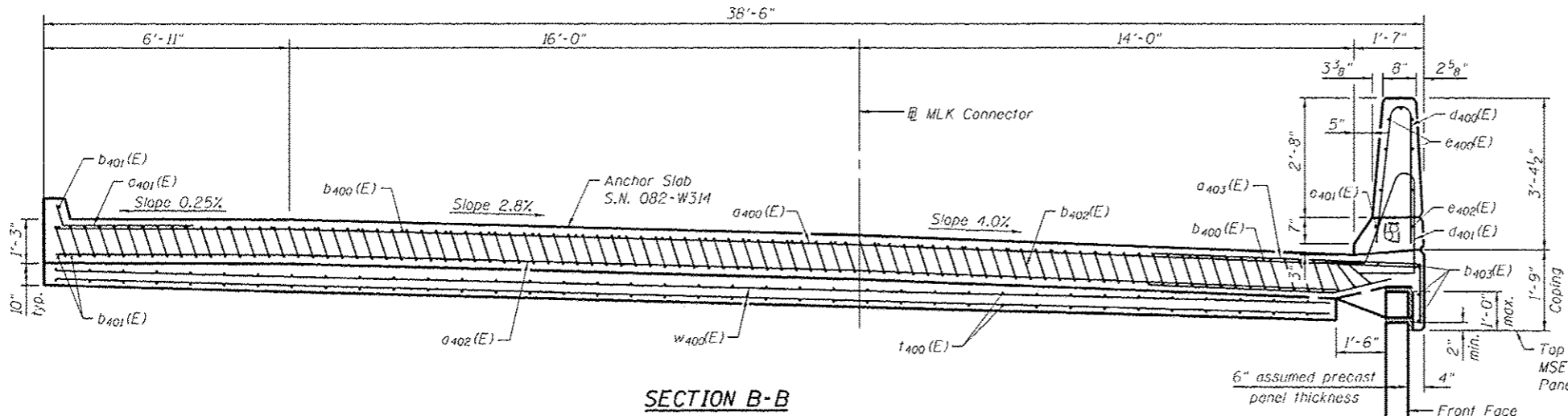
WEST APPROACH SLAB DETAILS
STRUCTURE NO. 082-0349

SHEET NO. 39 OF 97 SHEETS

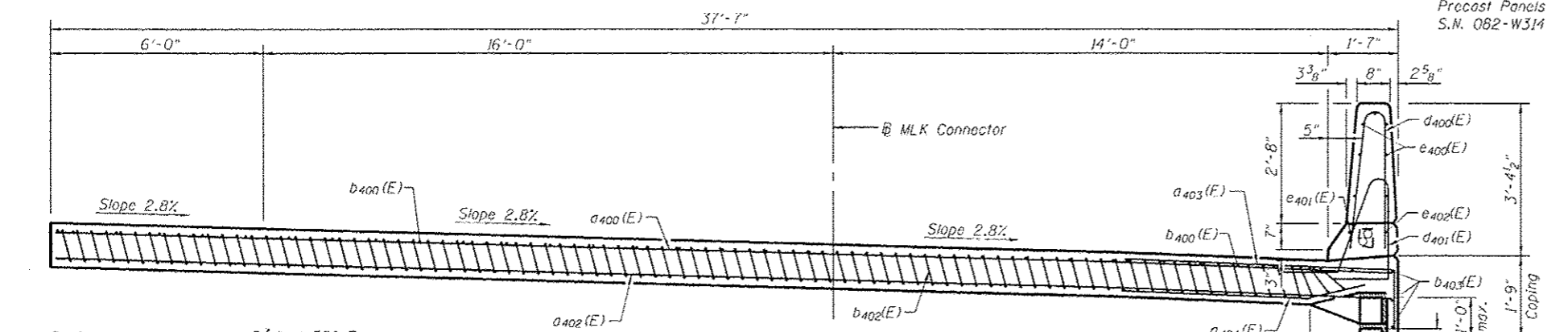
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-11,4B-1	ST. CLAIR	406	125
CONTRACT NO. 76609				
ILLINOIS FED. AID PROJECT				



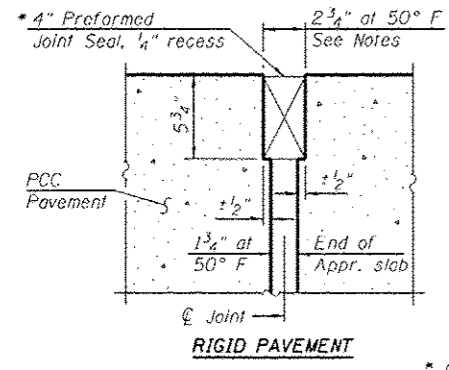
SECTION A-A



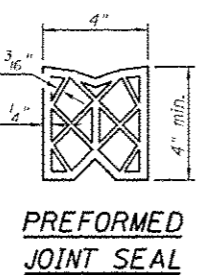
SECTION B-B



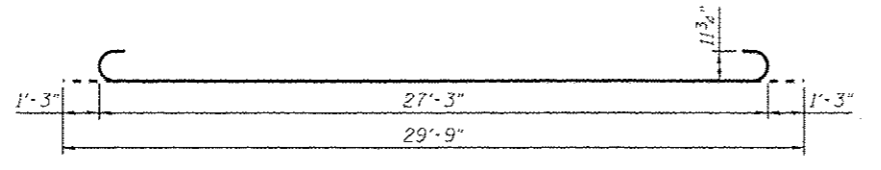
SECTION C-C



DETAIL G

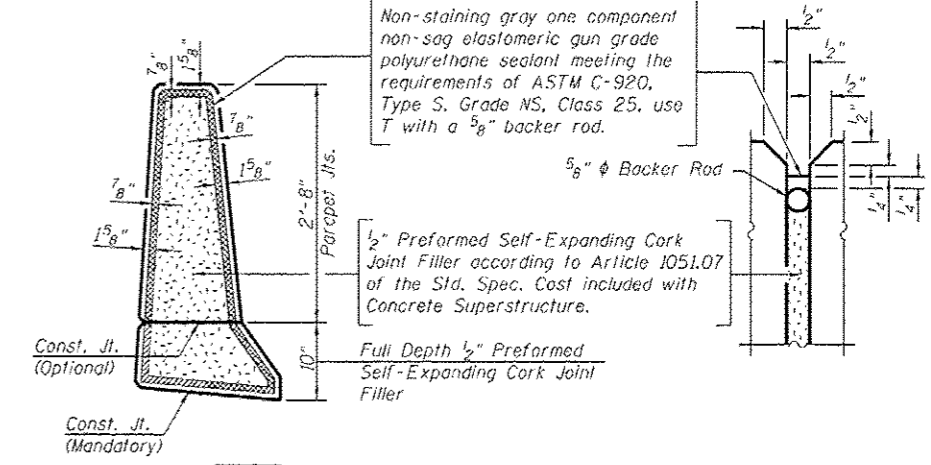


PREFORMED JOINT SEAL

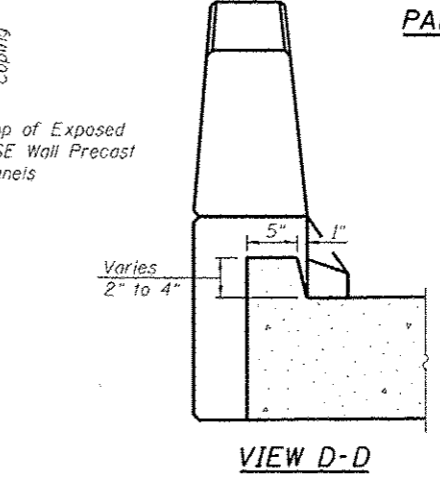


BAR b402(E)

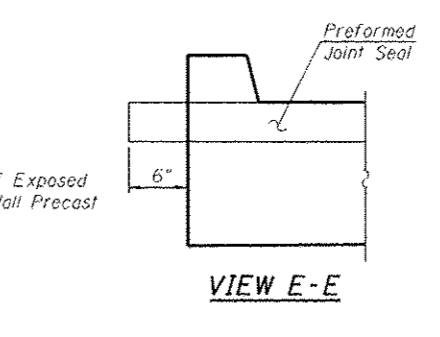
Notes:
 Approach Slab concrete shall be paid for as Concrete Superstructure.
 Approach Footing shall be paid for as Concrete Structures.
 The Approach Footing maximum applied service bearing pressure (0max) = 2.0 Ksf.
 See sheet 75 of 97 for Bar Splicer Details.
 Cost of excavation for Approach Footing included with Concrete Structures.
 See sheet 75 of 97 for v(E) Bar Details.
 See sheet 4 of 97 for Granular Backfill for Structures and Drainage Treatment Details.
 The joint opening shall be determined per Article 520.04 of the Standard Specifications for Road and Bridge Construction. The minimum dimension shall be 1 1/2" for installation purposes.
 See sheet 34 of 97 for additional Bar Bend Details.



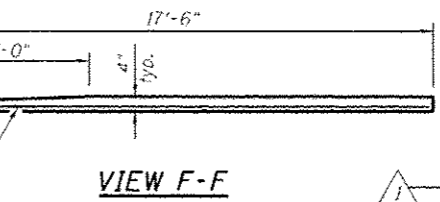
PARAPET JOINT DETAILS



VIEW D-D



VIEW E-E



VIEW F-F

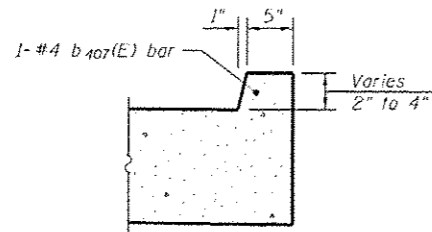
**WEST APPROACH SLAB
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a400(E)	50	#4	20'-2"	—
a401(E)	14	#4	6'-10"	—
a402(E)	138	#5	14'-5"	—
a403(E)	25	#6	7'-9"	—
a404(E)	46	#5	7'-1"	—
b400(E)	30	#4	29'-9"	—
b401(E)	3	#4	17'-3"	—
b402(E)	89	#9	29'-9"	—
b403(E)	3	#4	31'-3"	—
d400(E)	34	#5	6'-10"	—
d401(E)	34	#5	6'-10"	—
e400(E)	14	#4	15'-6"	—
e401(E)	2	#8	15'-5"	—
e402(E)	2	#4	15'-5"	—
l400(E)	74	#4	9'-8"	—
w400(E)	40	#5	35'-11"	—
Concrete Superstructure		Cu. Yd.		60.1
Concrete Structures		Cu. Yd.		11.2
Reinforcement Bars, Epoxy Coated		Pound		15,850

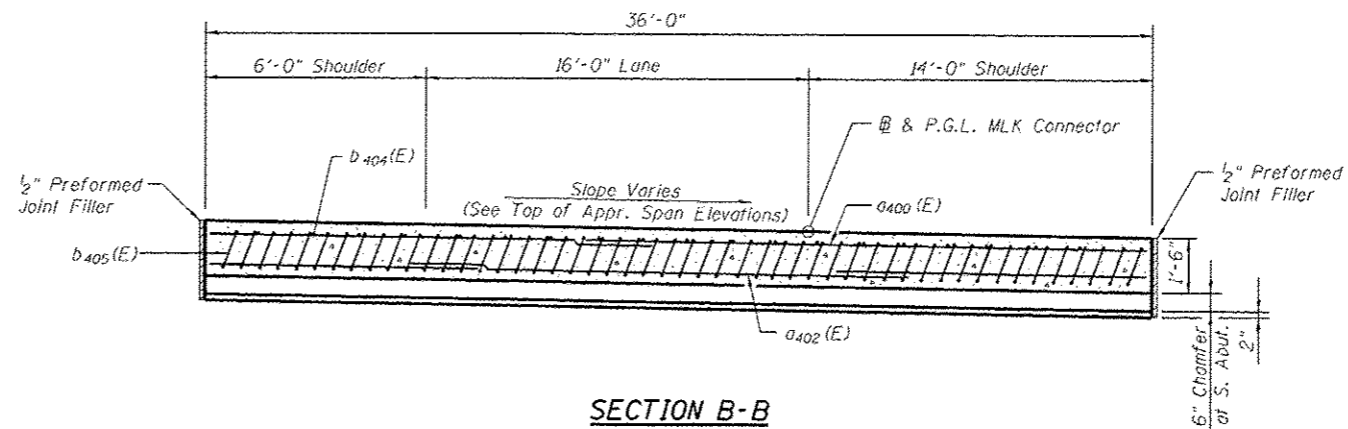
* Textured Epoxy Coated Reinforcement bars. See Special Provision.

FILE NAME: X:\2015\100-MLK\082-148-1\10-15-15\10-15-15.dwg - AutoCAD 2015

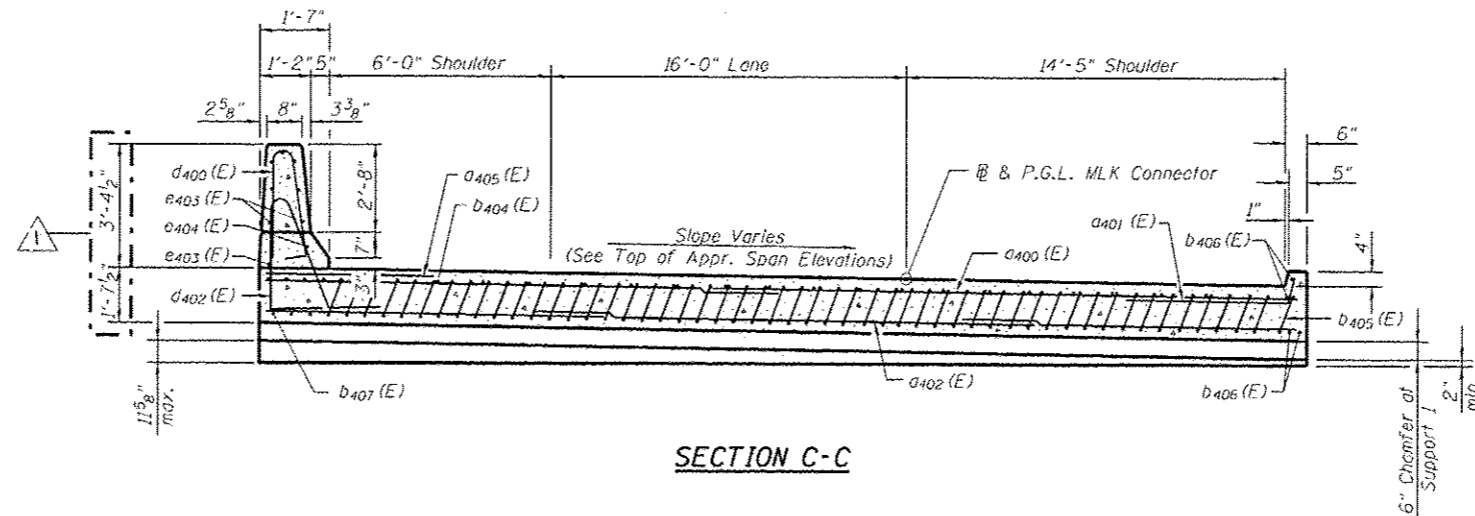
<p>1525 S. BRASLER AVE. PROY. BLVD. #100 PROY. BLVD. #100</p>	USER NAME: elagorova	DESIGNED: BB	REVISED: 1/9/2015 H&S	<p>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p> <p>WEST APPROACH SLAB DETAILS STRUCTURE NO. 082-0349</p> <p>SHEET NO. 31 OF 97 SHEETS</p>	F.A.I. RTE. 64	SECTION 82-(1,4)B-1	COUNTY ST. CLAIR	TOTAL SHEETS 406	SHEET NO. 126
	Illinois Design Firm Number 184.001670	CHECKED: JD	REVISED:		CONTRACT NO. 76G09				
	PLOT SCALE: 1/4" = 1'-0"	DRAWN: WS	REVISED:						
	PLOT DATE: 1/19/2015	CHECKED: CJF	REVISED:						



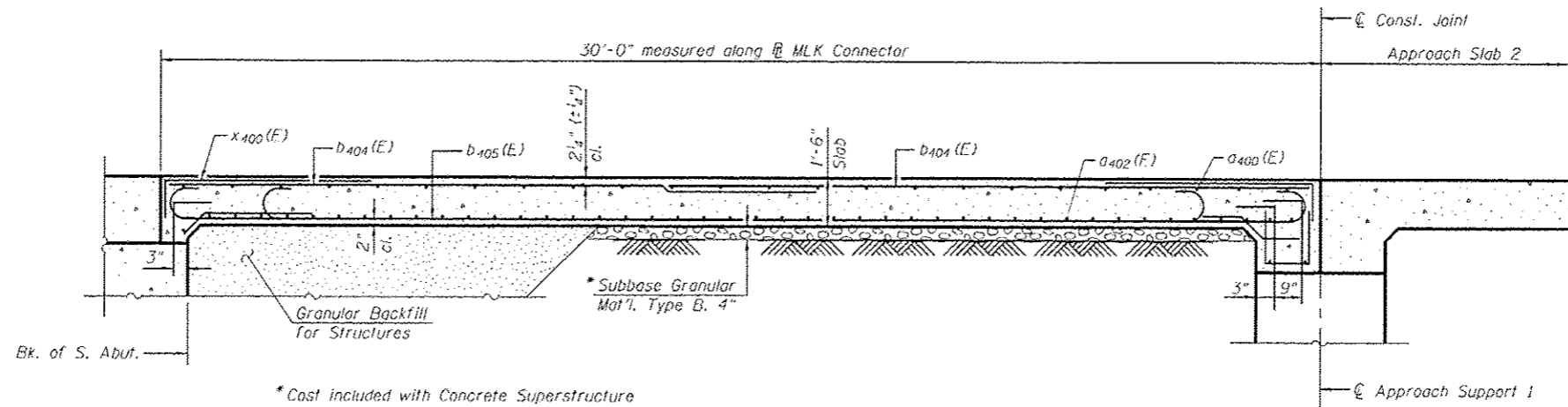
VIEW A-A



SECTION B-B



SECTION C-C



SECTION D-D

FILE NAME: X:\109460-MX\Coast\082-0349-16609 - Admin\dwg



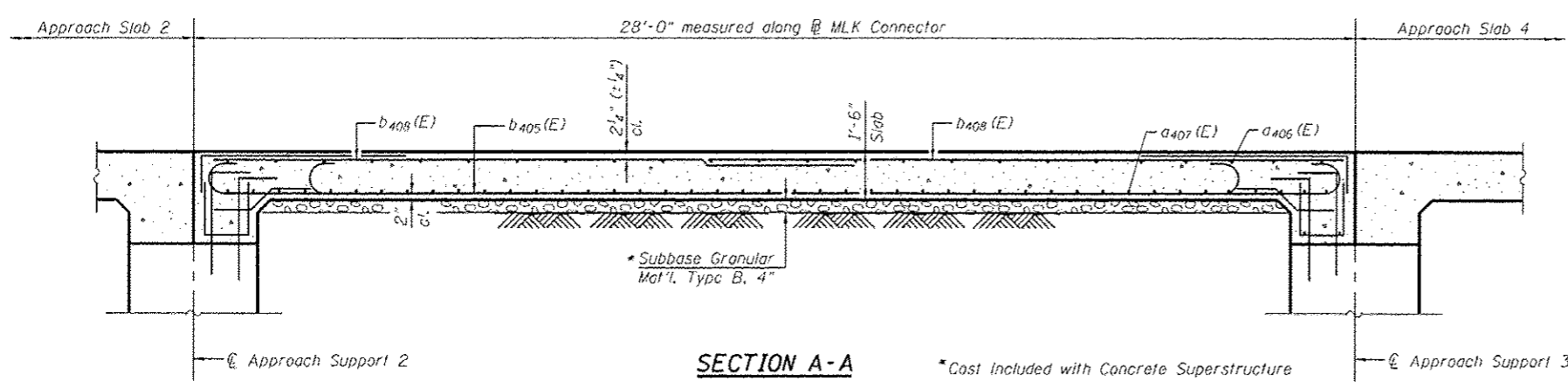
USER NAME = elagorona
 Illinois Design Firm Number 184.001670
 PLOT SCALE =
 PLOT DATE = 1/15/2015

DESIGNED - BB	REVISED - 1/15/2015 H&S
CHECKED - JD	REVISED
DRAWN - WS	REVISED
CHECKED - CJF	REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

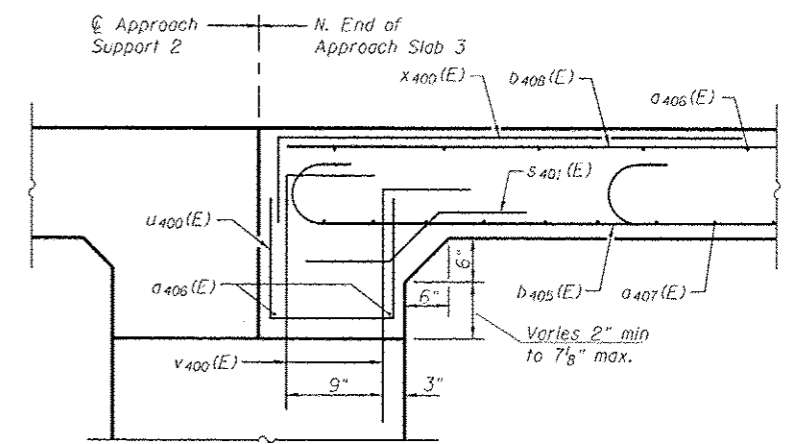
APPROACH SLAB 1 DETAILS
 STRUCTURE NO. 082-0349
 SHEET NO. 33 OF 97 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	02-11,41B-1	ST. CLAIR	406	128
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				

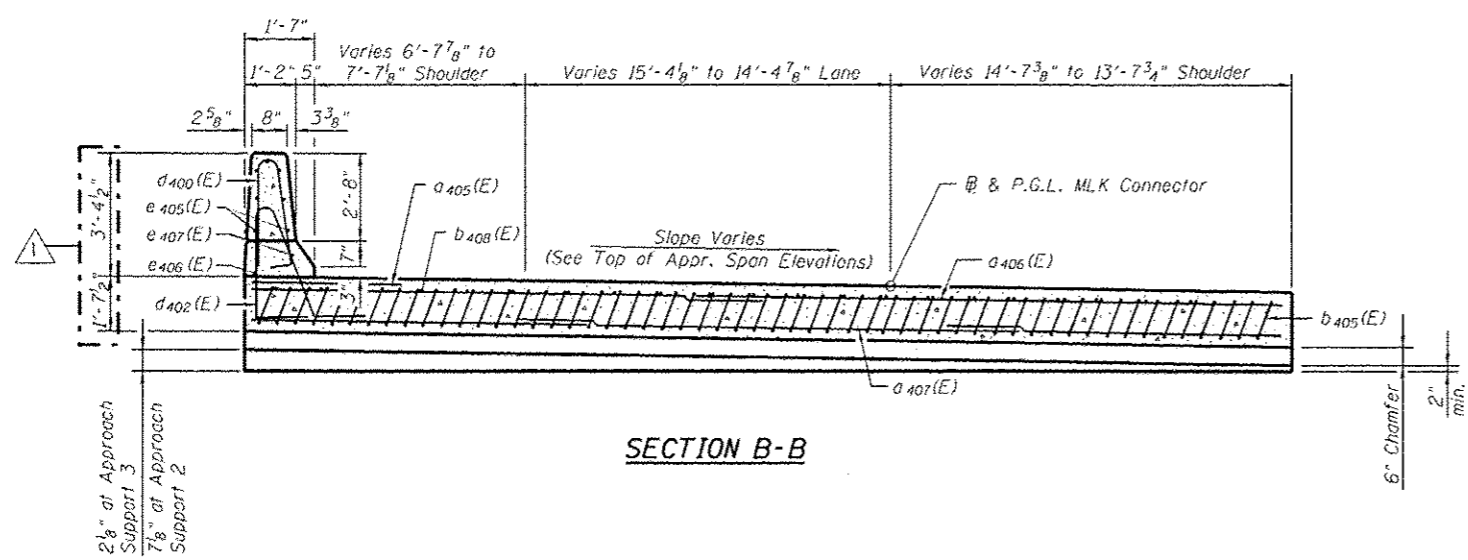


SECTION A-A

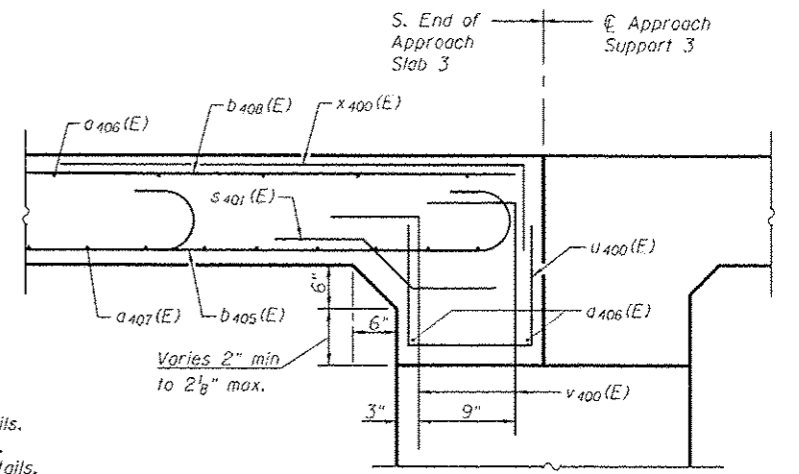
* Cost Included with Concrete Superstructure



VIEW D-D

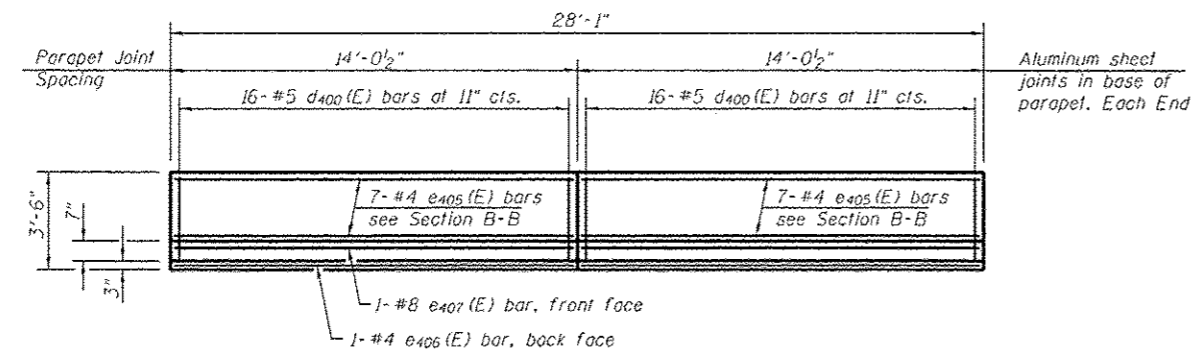


SECTION B-B



VIEW E-E

Notes:
 See sheet 69 of 97 for v400 (E) Bar Details.
 See sheet 34 of 97 for Bar Bend Details.
 See sheet 36 of 97 for Parapet Joint Details.



VIEW C-C

**APPROACH SLAB 3
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d405(E)	23	#6	6'-6"	—
d406(E)	56	#4	20'-0"	—
d407(E)	129	#5	14'-4"	—
b405(E)	77	#10	30'-8"	—
b408(E)	64	#4	14'-11"	—
d400(E)	32	#5	6'-10"	—
d402(E)	32	#5	8'-9"	—
e405(E)	14	#4	13'-9"	—
e406(E)	2	#4	13'-9"	—
e407(E)	2	#8	13'-9"	—
s401(E)	77	#5	4'-0"	—
u400(E)	77	#5	4'-4"	—
x400(E)	62	#5	8'-10"	—
Concrete Superstructure		Cu. Yd.	65.7	
Reinforcement Bars, Epoxy Coated		Pound	15,690	

Textured Epoxy Coated Reinforcement bars. See Special Provision.

FILE NAME: X:\1209\00-MLK-Cos\02\01\97\6609 - A.dwg

LOCHMUELLER GROUP
 1200 N. BRADLEY ST. SUITE 1000
 PROY. KILMOROCK ILL. 60131
 PHONE: 630-841-1100

USER NAME: estager@lln
 Illinois Design Firm Number 184.001670
 PLOT SCALE: 1/8" = 1'-0"
 PLOT DATE: 1/15/2015

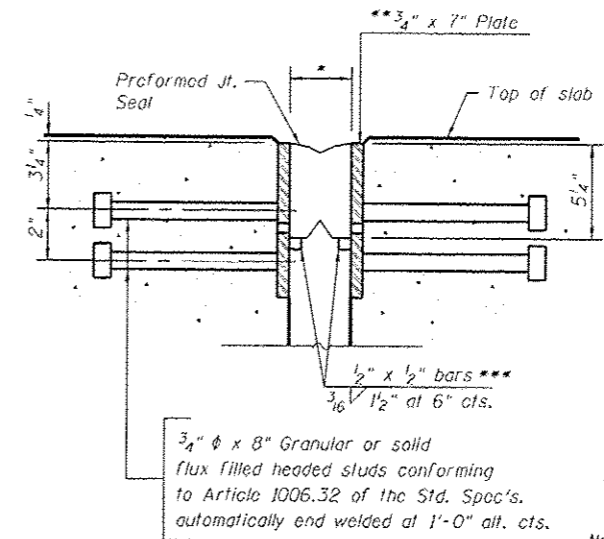
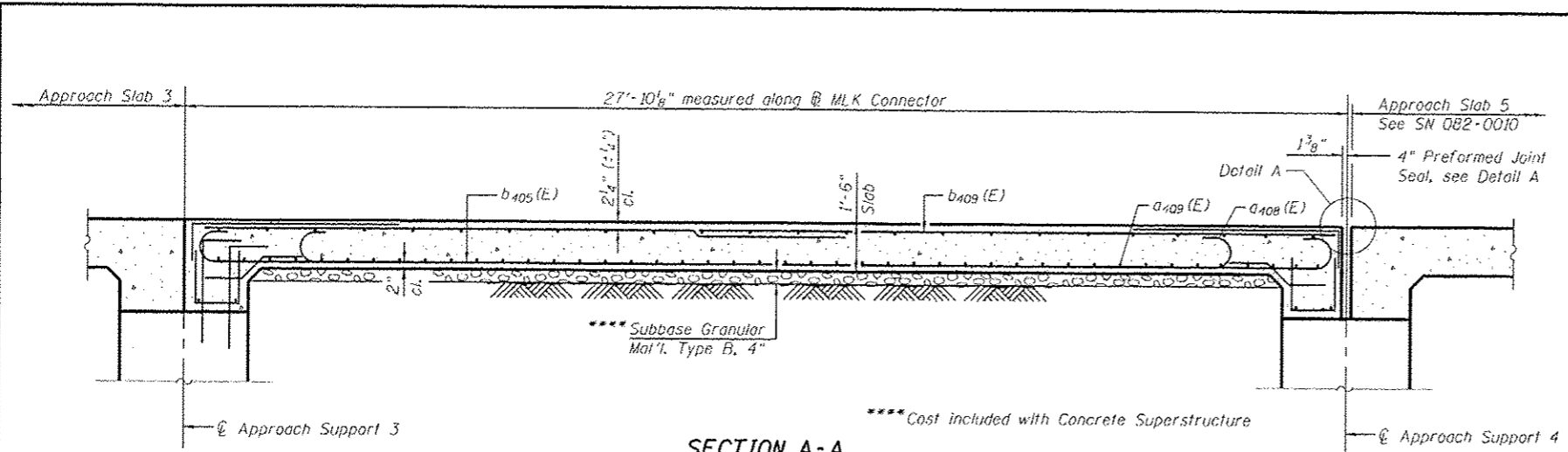
DESIGNED - BB	REVISOR 1/9/2015 H&S
CHECKED - JD	REVISOR 1/15/2015 H&S
DRAWN - WS	REVISOR
CHECKED - CJF	REVISOR

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**APPROACH SLAB 3 DETAILS
 STRUCTURE NO. 082-0349**

SHEET NO. 38 OF 97 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	133
				CONTRACT NO. 76609
ILLINOIS FED. AID PROJECT				



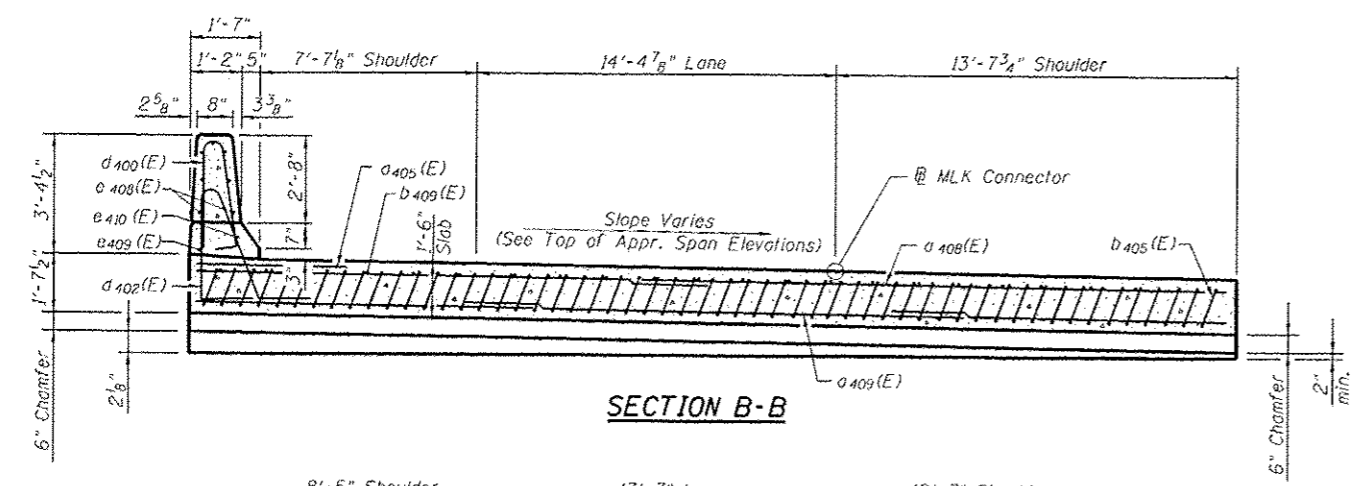
PREFORMED JOINT SEAL

- 2 3/4" at 50° F at rt. L's
- ** Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be 3/16". Seal space with Silicone Sealant suitable for Structural Steel.
- *** Cut retainer bars 6" short of End of Slab.

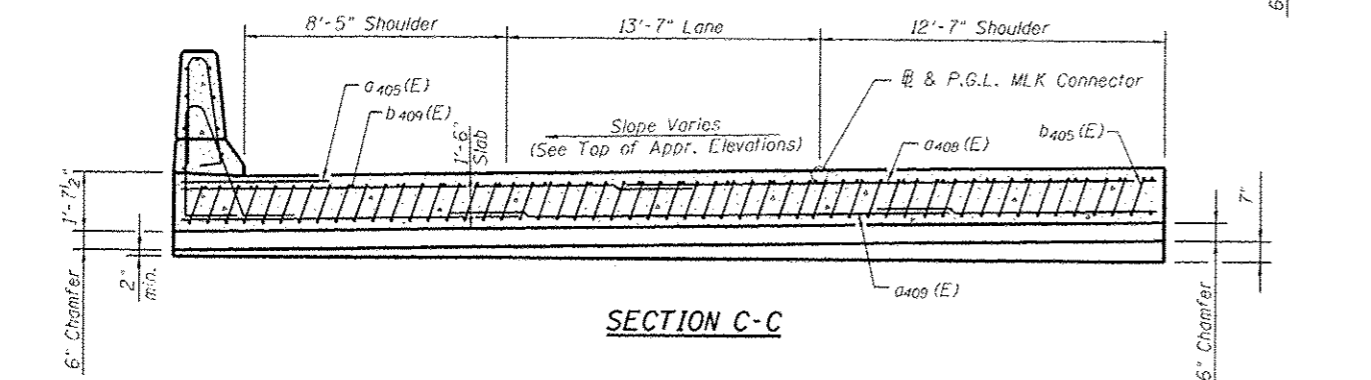
Note:
After fabrication all surfaces of the steel plates shall be given one shop coat of paint specified for Structural Steel. No field painting required.

MINIMUM BAR LAP

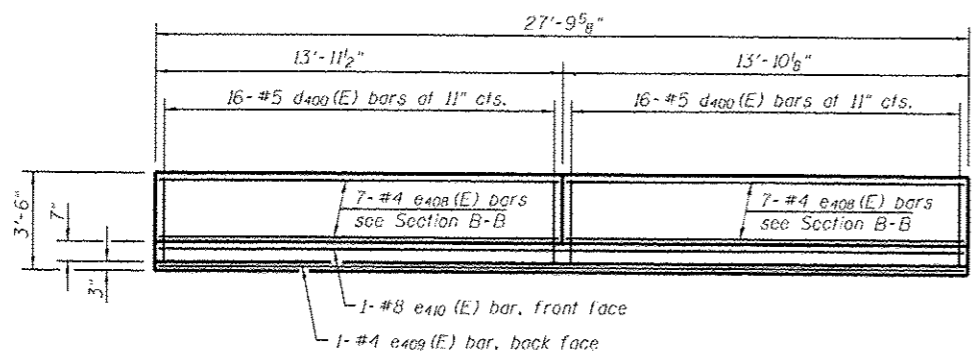
- #4 bar = 2'-0"
- #5 bar = 2'-6"



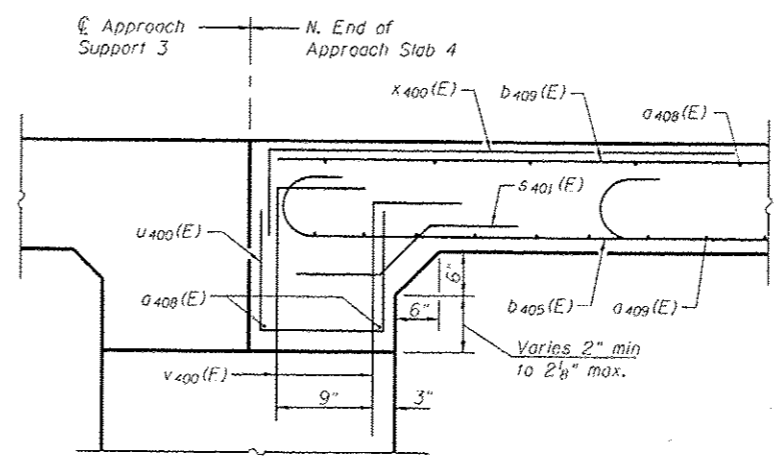
SECTION B-B



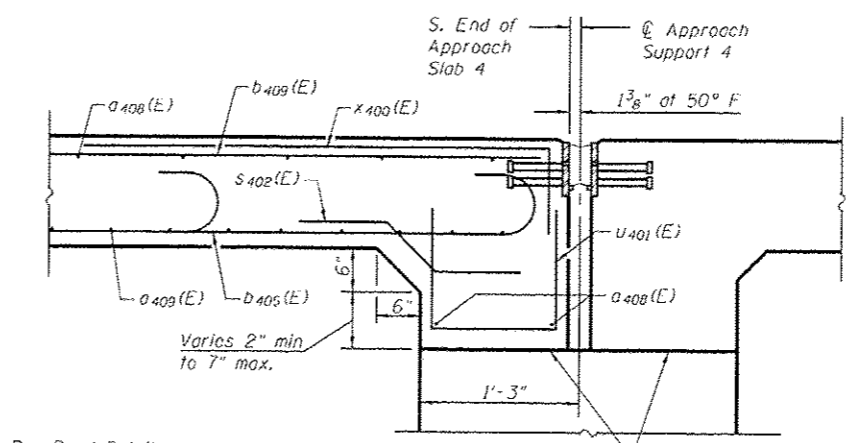
SECTION C-C



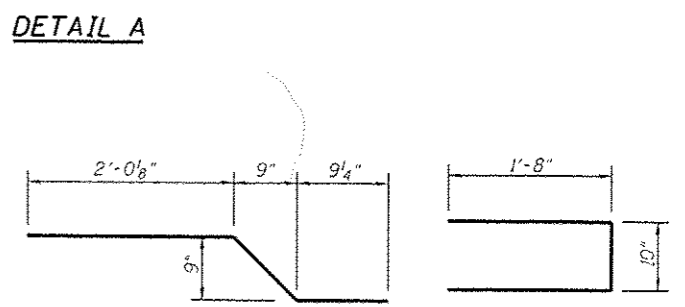
VIEW D-D



VIEW E-E



VIEW F-F



BAR S402(E)

BAR U401(E)

**APPROACH SLAB 4
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a405(E)	23	#6	6'-6"	—
a408(E)	56	#4	19'-6"	—
a409(E)	129	#5	14'-0"	—
b405(E)	75	#10	30'-8"	—
b409(E)	62	#4	14'-10"	—
d400(E)	32	#5	6'-10"	—
d402(E)	32	#5	8'-9"	—
e409(E)	14	#4	13'-8"	—
e408(E)	1	#4	27'-7"	—
e410(E)	1	#8	27'-7"	—
s401(E)	38	#5	4'-0"	—
s402(E)	37	#5	3'-10"	—
u400(E)	38	#5	4'-4"	—
u401(E)	37	#5	4'-2"	—
x400(E)	60	#5	8'-10"	—
Concrete Superstructure	Cu. Yd.		63.6	
Preformed Joint Seal 4"	Foot		34	
Reinforcement Bars, Epoxy Coated	Pound		15,290	

***** Textured Epoxy Coated Reinforcement bars. See Special Provision.

Notes:
See sheet 34 of 97 for Bar Bend Details.
See sheet 36 of 97 for Parapet Joint Details.

10 mil Polyethylene bond breaker on steel trowl finish. Cost included with Concrete Superstructure.

FILE NAME: I:\2014\08\04\02\03\082-0349-1\082-0349.dwg

LOCHMUELLER GROUP
1801 BILKOWSKI DRIVE
BOSTON, MA 02118
PHONE 617-552-1200

USER NAME: elaysharan
Illinois Design Firm Number 184,001670
PLOT SCALE: 1/8" = 1'-0"
PLOT DATE: 1/17/2015

DESIGNED - BB	REVISION 1/9/2015 H&S
CHECKED - JD	REVISION
DRAWN - WS	REVISION
CHECKED - CJF	REVISION

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**APPROACH SLAB 4 DETAILS
STRUCTURE NO. 082-0349**
SHEET NO. 40 OF 97 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-11,41B-1	ST. CLAIR	406	135

CONTRACT NO. 76G09
ILLINOIS FED. AID PROJECT