

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAGE 1 of 1
DATE 7/2/2010
LOGGED BY RJ
GSI JOB No. 10098

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Westfield Court, Suite 204
Naperville, Illinois 60563
(630) 255-1100

SOIL BORING LOG

ROUTE F.A.I. RTE. 55 DESCRIPTION Central Avenue Over Interstate 55 Ramp Reconstruction
SECTION 9H, HB & SBR-1 LOCATION SEC. 4 & 5, TWP. 38 N., RNG. 13 E., 3rd P.M., Stickney Township
COUNTY Cook DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1307
Station 402+64 to 404+99
BORING NO. RW-18
Station 402+89
Offset 60.0' Left
Ground Surface Elev. 599.4

Description	D (ft)	B (6")	U (tsf)	M (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter	Upon Completion	After	Hrs.	D (ft)	B (6")	U (tsf)	M (%)	
																AS
CRUSHED STONE & BRICK-dense (Fill)	597.4	10			n/a	n/a						3			108	
		17										6				
		18	NP	9								7	2.3B		21	
CLAY LOAM-dark gray-stiff (Fill)		6		97								4			108	
		6										5				
	594.4	-5	6	1.6B	18							-25	7	2.2B	21	
CLAY-gray-stiff to very stiff (A-6)																
CINDERS & SAND-dark brown & black-loose (Fill)	591.4			45								3			98	
		3										4				
		2										7	1.1B		27	
SILTY LOAM-brown & gray-very loose (A-4)	588.9											3			101	
		1										1				
		-10	2	NP	21							-30	6	1.6B	25	
CLAY-brown & gray-medium stiff to stiff (A-6)		2		95												
		3														
		4	1.3B	28												
		3		101								5			121	
		5										7				
	583.9	-15	5	0.8B	25							564.4	-35	10	3.5B	15
CLAY-gray-stiff to very stiff (A-6)																
			ST	1.0P	16											
		3		107												
		5														
		-20	6	1.3B	22							-40				

End Of Boring @ -35.0
Hollow Stem Augers To -10.0'
Rotary Drilling To Completion
CME Automatic Hammer

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

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DATE 7/8/2010
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ROUTE F.A.I. RTE. 55 DESCRIPTION Central Avenue Over Interstate 55 Ramp Reconstruction
SECTION 9H, HB & SBR-1 LOCATION SEC. 4 & 5, TWP. 38 N., RNG. 13 E., 3rd P.M., Stickney Township
COUNTY Cook DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1307
Station 402+64 to 404+99
BORING NO. RW-19
Station 403+39
Offset 59.5' Left
Ground Surface Elev. 600.2

Description	D (ft)	B (6")	U (tsf)	M (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter	Upon Completion	After	Hrs.	D (ft)	B (6")	U (tsf)	M (%)	
																AS
CRUSHED STONE-dense (Fill)	597.7	21			n/a	n/a						5			110	
		27										6				
		15	NP	5								10	1.9B		20	
CLAY LOAM with Cinders & Stone-very stiff (Fill)	595.2	6		92								3			103	
		8										5				
		-5	8	2.2B	22							-25	7	0.2B	23	
SILTY CLAY-dark gray-loose (Fill) Wet	592.2	3		78								4			104	
		3										6				
		3	0.5P	43								7	0.4B		23	
SILTY LOAM-brown & gray-very loose (A-4)	589.7															
		1										1				
		-10	2	NP	22							-30	ST		22	
SILTY CLAY-gray-stiff (A-6)	584.7	5		108												
		4														
		3	1.25B	21												
		3		99								4			100	
		5										5				
		-15	7	1.5B	26							565.2	-35	5	0.4B	24
CLAY-gray-stiff (A-6)																
		3		108												
		5														
		6	1.5B	21												
		4														
		5														
		-20	8		26							-40				

End Of Boring @ -35.0
Hollow Stem Augers To -10.0'
Rotary Drilling To Completion
CME Automatic Hammer

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

BORING LOGS 2
STRUCTURE NO. 016-1307

TYLIN INTERNATIONAL	DESIGNED -	REVISIONS		SHEET NO. 9	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	601	
	DRAWN -				11 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAGE 1 of 1
DATE 7/8/2010
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SOIL BORING LOG

ROUTE F.A.I. RTE. 55 DESCRIPTION Central Avenue Over Interstate 55 Ramp Reconstruction
SECTION 9(H, HB & SB)R-1 LOCATION SEC. 4 & 5, TWP. 38 N., RNG. 13 E., 3rd P.M., Stickney Township
COUNTY Cook DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1307
Station 402+64 to 404+99
BORING NO. RW-20
Station 403+89
Offset 57.5' Left
Ground Surface Elev. 600.5

Description	D E P T H S (ft)	B L O W S (6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation: First Encounter Upon Completion After Hrs.	D E P T H S (ft)	B L O W S (6")	U C S Qu (tsf)	M O I S T (%)	
												AS
CRUSHED STONE & ASPHALT-dense (Fill)	598.5	11						5			108	
		17						5				
		22	NP	8				6	1.8B		21	
		5		101								
SILTY CLAY with Cinders-brown & gray-medium stiff to very stiff (Fill)		8										
		-5	8	3.25B	18			-25	ST	1.75P	20	
		4						3			109	
		4						7				
		5	0.7B	33				9	1.4B		20	
		1						3			102	
SANDY LOAM-brown-very loose (A-2)	590.0	1						4				
		-10	2	NP	20			-30	7	1.6B	24	
		7										
		8										
		6		NR								
CLAY-brown & gray-soft to medium stiff (A-6)		4		90				2			117	
		4						4				
		-15	7	0.4B	24			565.5	-35	7	1.4B	16
		2		121								
		4										
		4	0.8B	15								
		3		108								
CLAY-gray-stiff (A-6)		4										
		-20	7	1.9B	21			-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelly Tube Sample VS-Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

PAGE 1 of 1
DATE 7/9/2010
LOGGED BY DR
GSI JOB No. 10098

SOIL BORING LOG

ROUTE F.A.I. RTE. 55 DESCRIPTION Central Avenue Over Interstate 55 Ramp Reconstruction
SECTION 9(H, HB & SB)R-1 LOCATION SEC. 4 & 5, TWP. 38 N., RNG. 13 E., 3rd P.M., Stickney Township
COUNTY Cook DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1307
Station 402+64 to 404+99
BORING NO. RW-21
Station 404+44
Offset 56.5' Left
Ground Surface Elev. 601.2

Description	D E P T H S (ft)	B L O W S (6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation: First Encounter Upon Completion After Hrs.	D E P T H S (ft)	B L O W S (6")	U C S Qu (tsf)	M O I S T (%)	
												AS
Clayey SAND, STONE & BRICK-dense (Fill)	598.2	13						2			115	
		33						4				
		14	NP	9				5	1.6B		17	
		6										
CLAY-gray-medium stiff to very stiff (A-6)		8						2			108	
		-5	9	4.5+P	16			-25	6	2.3B	21	
		10						3			117	
CINDERS, SAND & STONE-dark gray-medium dense (Fill)	593.2	7						6				
		4						6	1.4B		16	
		1						2			98	
SANDY LOAM-black-very loose (A-2)	590.7	1						3				
		-10	1	NP	38			-30	4	1.4B	27	
		3										
SILTY LOAM-brown & gray-medium dense (A-4)	588.2	5										
		5	NP	20								
		3		103				3			116	
		5						5				
		-15	6	2.75B	24			566.2	-35	6	1.8B	17
CLAY-brown & gray-very stiff (A-6)		3		102								
		3										
		5	3.0B	24								
		3										
		5										
		3										
CLAY-gray-medium stiff to very stiff (A-6)		4										
		-20	7	1.75P	20			-40				

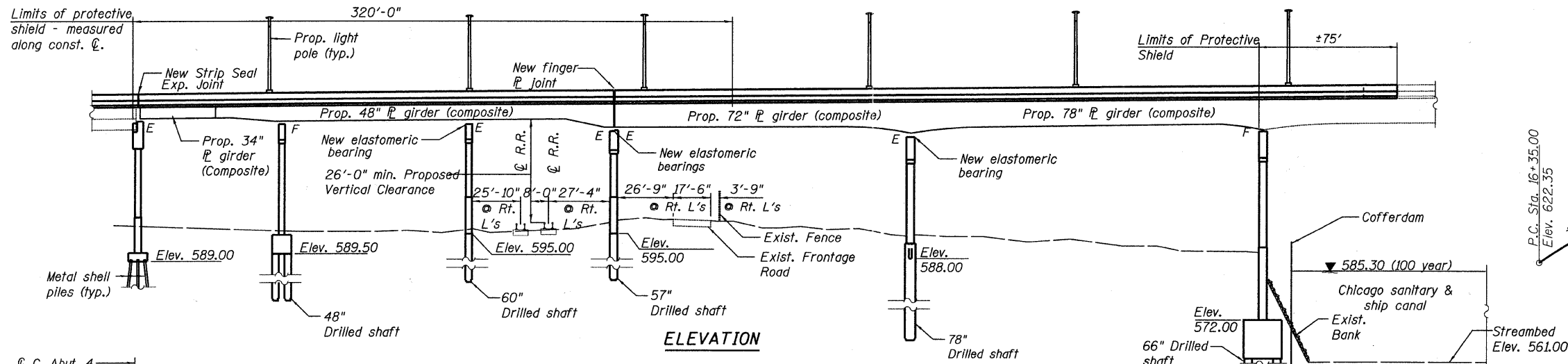
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelly Tube Sample VS-Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

BORING LOGS 3
STRUCTURE NO. 016-1307

TYLIN INTERNATIONAL	DESIGNED -	REVISIONS		SHEET NO. 10	F.A.I. RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS 741	SHEET NO. 602
	CHECKED - AMD,	NAME	DATE						
	DRAWN -								
	CHECKED - AMD,								
	DATE - 03/25/2011								
11 SHEETS					CONTRACT NO. 60999				
					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

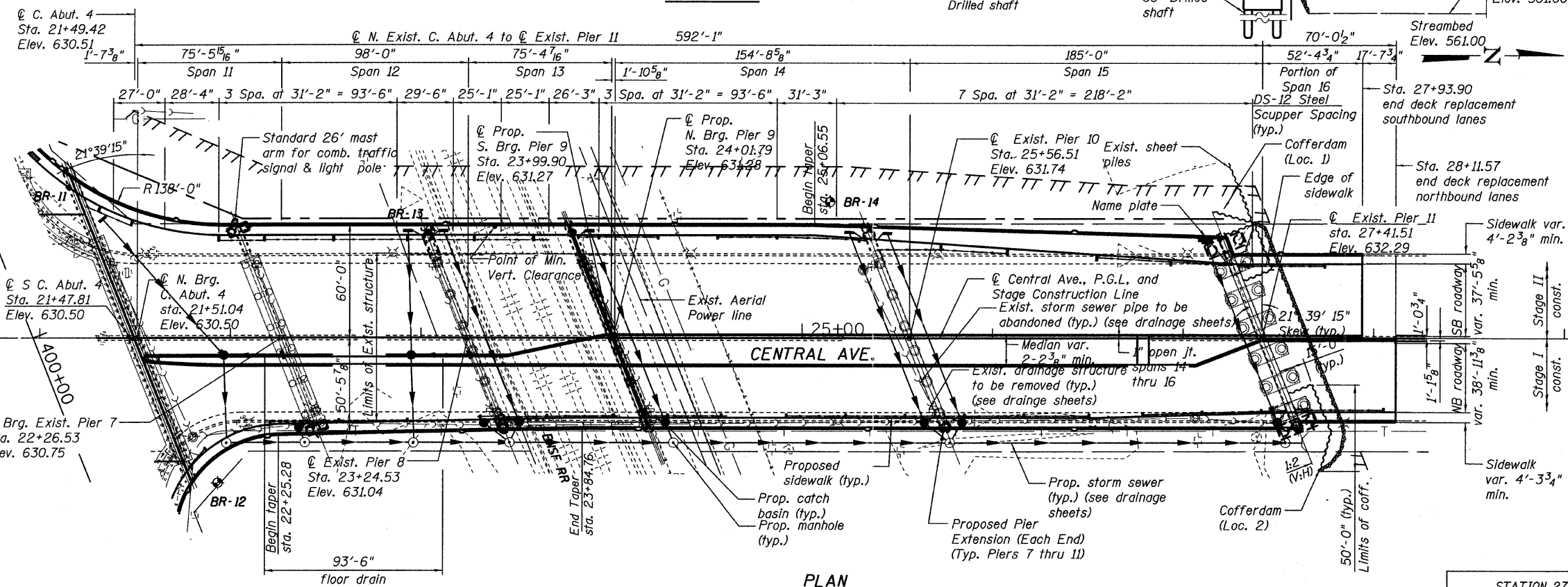
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



- SCOPE OF WORK**
- Widen the existing superstructure and substructure
 - Remove and replace the existing deck with a 7 1/2" deck.
 - Clean and paint the existing structural steel.
 - Remove and replace diaphragms located at expansion joints.
 - Reconstruct and widen existing Pier #9 above the crashwall.
 - Construct new pier extensions.
 - Perform formed concrete repairs on piers.
 - Replace existing expansion bearings with elastomeric bearings.
 - Install new expansion joints.
 - Remove and replace the drainage system.

NOTE:
For C. Abut. 4 details, see plans for S.N. 016-0724



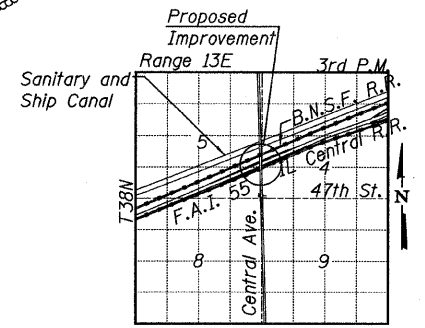
APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Anna M. Dukes
ENGINEER OF BRIDGES AND STRUCTURES

Signed *Anna M. Dukes*
Anna M. Dukes, S.E. Il. Lic. No. 081-005598
Expires 11-30-2012

Date **March 25, 2011**

STATE OF ILLINOIS
ANNA M. DUKES
081-005598
CHICAGO
ILLINOIS
LICENSED STRUCTURAL ENGINEER



STATION 27+11.65
REBUILT 200. BY
STATE OF ILLINOIS
FAI ROUTE 55
SEC. 0711.2R & 1011.1BR
LOADING HS20-44
STR. NO. 016-3240

NAME PLATE
(See Std. 515001)*
* The existing Name Plate shall be cleaned and relocated next to the new Name Plate. Cost is included with Name Plates.

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 016-3240

BORING LOCATIONS

No.	Station	**Offset
BR-11	21+15.0	79.3' LT
BR-12	21+93.5	76.6' RT
BR-13	23+04.6	56.3' LT
BR-14	25+14.6	71.6' LT

** Offset From @ Central Avenue

LEGEND
◆ Boring Location

TYLIN INTERNATIONAL

DESIGNED	BY	LS	REVISIONS	
CHECKED	BY	LS	NAME	DATE
DRAWN	BY	LS		
CHECKED	BY	LS		
DATE				

SHEET NO. 1	F.A.I. RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS 741	SHEET NO. 604
73 SHEETS	FED. ROAD DIST. NO. 1 ILLINOIS		CONTRACT NO. 60999		
FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOTAL BILL OF MATERIAL

GENERAL NOTES

- Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 1/2-in. φ, holes 5/8-in. φ, unless otherwise noted.
- Calculated weight of Structural Steel =
Grade 50 = 589,460 lbs. **
Grade 36 = 130,850 lbs. **
- 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 that the exterior surfaces and bottom of the bottom flange of the fascia beams, masked off connection surfaces, and field installed fasteners, all of which shall be touched up and finish coated 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 Reddish Brown, Munsell No. 2.5YR 3/4. See Special Provision for "Cleaning and Painting New Metal Structures".
- No field welding is permitted except as specified in the contract documents.
- Anchor bolts shall be set before bolting diaphragms and cross frames over supports.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.
- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
- Concrete Sealer shall be applied to the designated areas of the all new exposed surfaces of pier 9.
- Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.
- Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All beams, bearings, and other structural steel within 5 ft (measured along the beam) on either side of the proposed deck joints shall be cleaned per Near White Blast Cleaning - SSPC-SP10. The exterior surfaces and the bottom flange of the fascia beams shall be cleaned per Commercial Grade Power Tool Cleaning - SSPC - SP15. All remaining structural steel shall be cleaned per Power Tool Cleaning - Modified SSPC-SP3.

** Structural steel furnished under a separate contract shall be erected under pay item Erecting Structural Steel. The listed weights include structural steel framing comprised of girders, diaphragms, fill plates, connection plates, bolts and steel extensions.

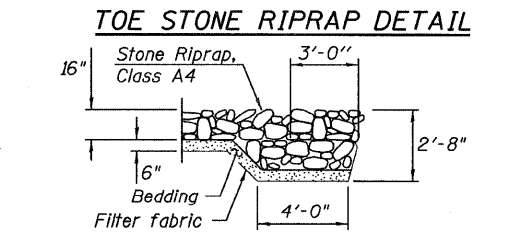
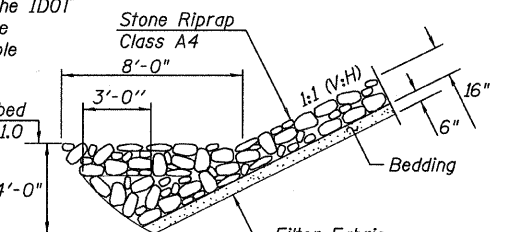
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- The designated areas cleaned per Near White Blast Cleaning and per Commercial Grade Power Tool Cleaning shall be painted according to the requirements of Paint System 1 - OZ/E/U. The designated areas cleaned per Power Tool Cleaning - Modified SSPC-SP3 shall be painted according to the requirements of Paint System 2 - PS/EM/U. 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 Reddish Brown, Munsell No. 2.5YR 3/4.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- Any reinforcement bars that are damaged during concrete removal operations for piers shall be repaired or replaced using approved bar splicer or anchorage system. Cost included to "Concrete Removal".
- All information (layout, details, quantities) for C. Abut. 4 is included in plans for S.N. 016-0724.
- Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.
As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.
Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
- Details and quantity for the Strip Seal Joint at C. Abut. 4 are presented in Central Ave./I-55 Mainline (S.N. 016-0724).
- Reinforcement bars designated (E) shall be epoxy coated.
- If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each if these additional bracket locations.
- Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
- The Contractor shall test the existing welds by non-destructive methods within 2 ft. of the end of the existing cover plates for cracks after removal of the existing concrete deck. Dye penetrant (PT), magnetic particle (MT), or other approved testing method shall be performed by qualified personnel approved by the Engineer. If cracks are found, report them to the Bureau of Bridges and Structures for disposition. The cost of testing is included in Removal of Existing Concrete Deck. The cost of crack repair, if necessary, will be paid for according to Article 109.04 of the Standard Specifications.
- Stripforming of the parapets is not allowed.

ITEM	NORTH APPROACH			TOTAL
	UNIT	SUPER	SUB	
STONE RIPRAP, CLASS A4	SQ YD		278	278
FILTER FABRIC	SQ YD		306	306
PROTECTIVE COAT	SQ YD	8,375		8,375
CONCRETE REMOVAL	CU YD	10.8	171.6	182.4
BRIDGE RAIL REMOVAL	FOOT	1,292.4		1,292.4
REMOVAL OF EXISTING BEARINGS	EACH	30		30
PROTECTIVE SHIELD	SQ YD	3,886.3		3,886.3
STRUCTURE EXCAVATION	CU YD		196.8	196.8
COFFERDAM EXCAVATION	CU YD		368.3	368.3
COFFERDAM (LOCATION-1)	EACH		1	1
COFFERDAM (LOCATION-2)	EACH		1	1
CONCRETE STRUCTURES	CU YD		616.5	616.5
CONCRETE SUPERSTRUCTURE	CU YD	2,242.7		2,242.7
BRIDGE DECK GROOVING	SQ YD	5,800		5,800
ERECTING STRUCTURAL STEEL	L SUM	0.11		0.11
STUD SHEAR CONNECTORS	EACH	9,533		9,533
STRUCTURAL STEEL REMOVAL	L SUM	0.55		0.55
CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1.0		1.0
CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1.0		1.0
REINFORCEMENT BARS, EPOXY COATED	POUND	465,830	221,170	687,000
BAR SPLICERS	EACH	770		770
ALUMINUM RAILING, TYPE L	FEET	1,334.3		1,334.3
NAME PLATES	FOOT	1		1
FINGER PLATE EXPANSION JOINT, 6" (ERECT ONLY)	FOOT	116.0		116.0
DRILLED SHAFT IN SOIL	CU YD		611.9	611.9
ERECTING ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	46		46
ERECTING ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	20		20
ERECTING ELASTOMERIC BEARING ASSEMBLY, TYPE III	EACH	17		17
HIGH LOAD MULTI-ROTATIONAL BEARINGS, GUIDED EXPANSION, 450 K (ERECT ONLY)	EACH	17		17
ANCHOR BOLTS, 1"	EACH	132		132
ANCHOR BOLTS, 1 1/4"	EACH	8		8
ANCHOR BOLTS, 1 1/2"	EACH	76		76
CONCRETE SEALER	SQ FT		4,368.0	4,368.0
EPOXY CRACK INJECTION	FEET		66.0	66.0
DRAINAGE SCUPPERS, DS-12	EACH	26		26
STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT		88.0	88.0
DRAINAGE SYSTEM	L SUM	0.54		0.54
REMOVAL OF EXISTING CONCRETE DECK NO. 2	EACH	1		1
JACK AND REMOVE EXISTING BEARINGS	EACH	31		31
JACKING EXISTING SUPERSTRUCTURE	L SUM	0.45		0.45
DRAINAGE SCUPPER, DS-II	EACH	3		3
DRAINAGE SCUPPER, DS-33	EACH	12		12
FIELD MEASUREMENTS	L SUM		0.52	0.52
DRILLED SHAFT IN ROCK	CU YD		8.1	8.1
MECHANICAL SPLICERS	EACH		34	34

23. The Contractor shall retain the services of an engineering firm prequalified in the consultant selection category of Highway Bridges Complex, for preparation of the Structural Assessment Report. Contractor's pre-approval shall not be applicable for this project. See Special Provisions.
Current Ratings on File for Existing Structure
Inventory: HS 20 Operating: HS 27.3
Live Load Restrictions: No
Inventory and Operating Ratings and Live Load Restrictions are provided for information only. Inventory and Operating Ratings are based on HS loading and configuration. Live Load Restrictions are based on Illinois legal loads and configurations. The Ratings and Live Load Restrictions are not necessarily representative of capacities to support the Contractor's equipment.



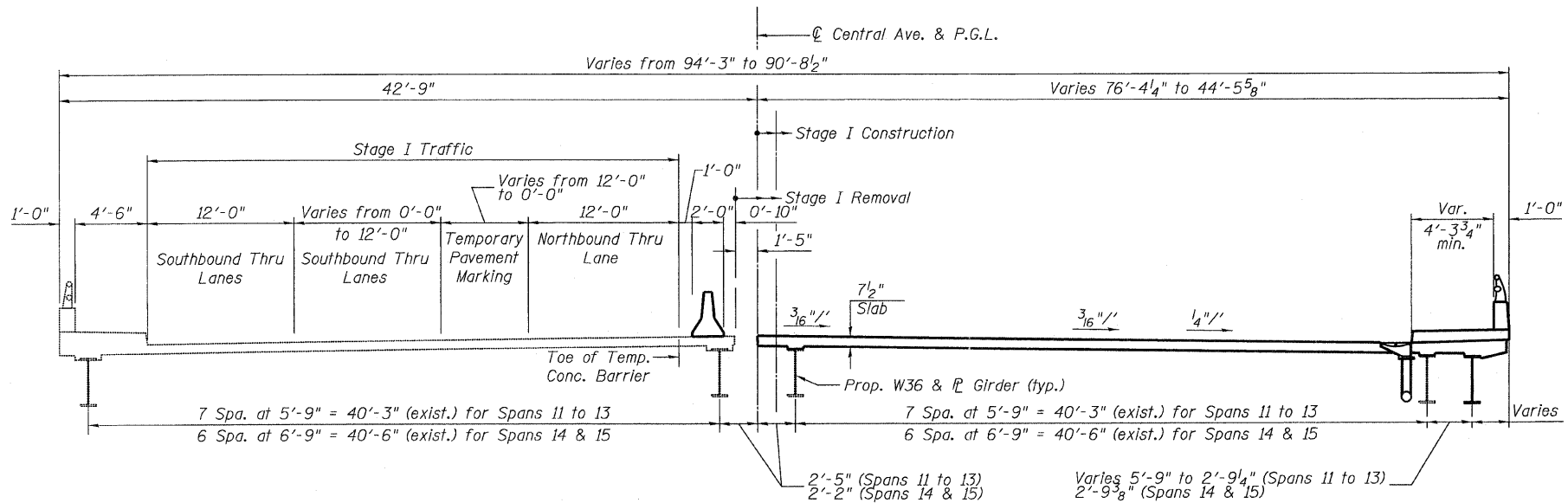
GENERAL NOTES, INDEX OF SHEETS AND BILL OF MATERIAL
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL

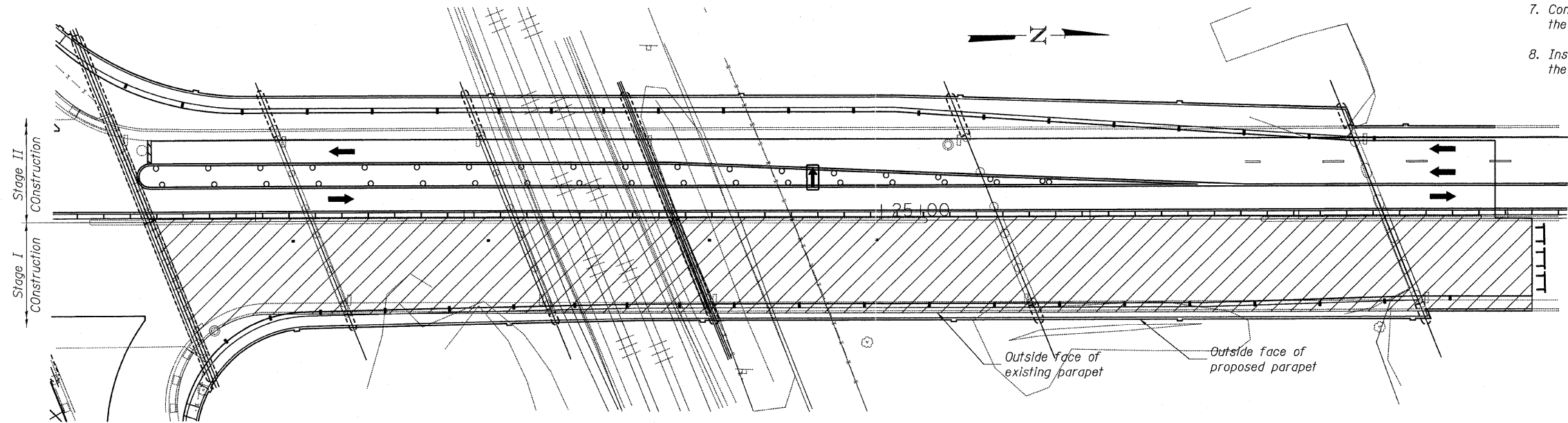
DESIGNED - DY, LS	REVISIONS	
CHECKED - AMD, LS	NAME	DATE
DRAWN - DY, LS		
CHECKED - AMD, LS		
DATE - 03/25/2011		

SHEET NO. 2	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	605
73 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STAGE I CONSTRUCTION
(North Approach Looking North)



PLAN
(Stage I Construction)

STAGE I REMOVAL

1. Install temporary concrete barrier as shown and divert traffic to the existing Southbound bridge.
2. Remove the existing concrete deck within the limits of Stage I.
3. Remove C. Abutment 4 concrete above the crash wall within the limits of Stage I.
4. Remove pier 9 concrete above the crashwall.
5. Remove existing structural steel diaphragms at existing expansion joints.

STAGE I CONSTRUCTION:

1. Construct widened portion of Piers 7, 8, 10 and 11.
2. Reconstruct and widen Pier 9 and C. Abutment 4 within limits of Stage I.
3. Replace existing expansion bearings.
4. Paint existing structural steel beams and diaphragms within limits of Stage I.
5. Erect new structural steel cross frames and diaphragms to replace the removed existing cross frames and diaphragms at existing expansion joints.
6. Erect new structural steel beams and girders (NG7-NG10 and NG13), cross frames and diaphragms within the limits of Stage I.
7. Construct new concrete deck, sidewalk and parapet within the limits of Stage I.
8. Install expansion joints at Pier 9 and C. Abutment 4 within the limits of Stage I.

LEGEND

Stage I Removal

NOTES

1. Installation of expansion joint at C. Abut. 4 shall be performed after the Stage I deck for the Central Ave./I-55 Mainline (S.N. 016-0724) has been completed.
2. For C. Abut. 4 Details, see sheets 191 thru 194 of Central Ave./I-55 Mainline (S.N. 016-0724).

STAGE I CONSTRUCTION
STRUCTURE NO. 016-3240

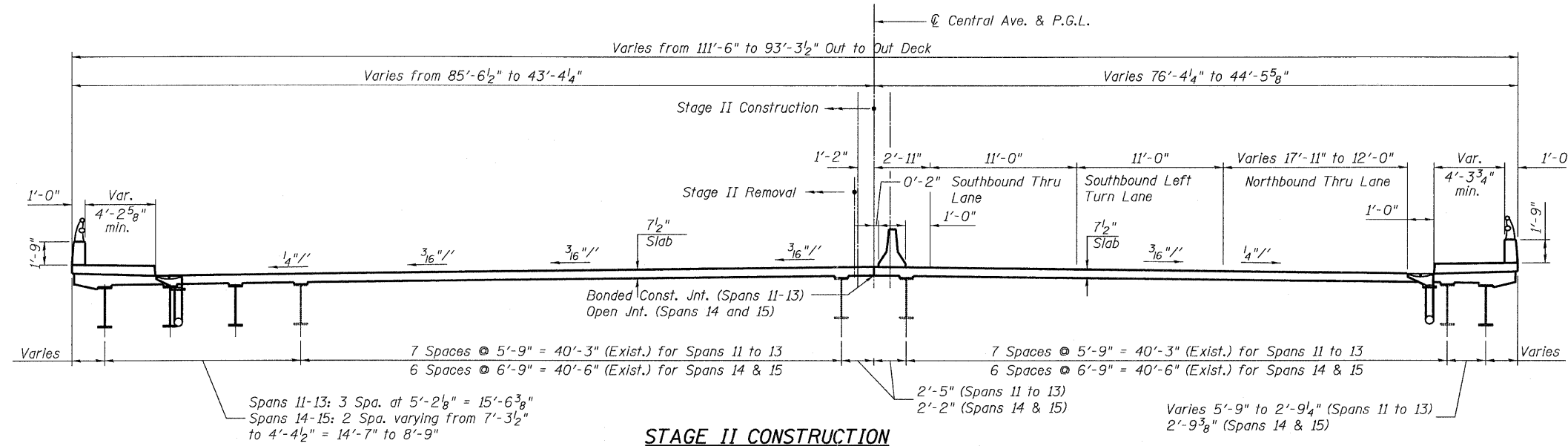
TYLIN INTERNATIONAL

DESIGNED - DY, LS		REVISIONS	
NAME	DATE	NAME	DATE
CHECKED - AMD, LS			
DRAWN - DY, LS			
CHECKED - AMD, LS			
DATE - 03/25/2011			

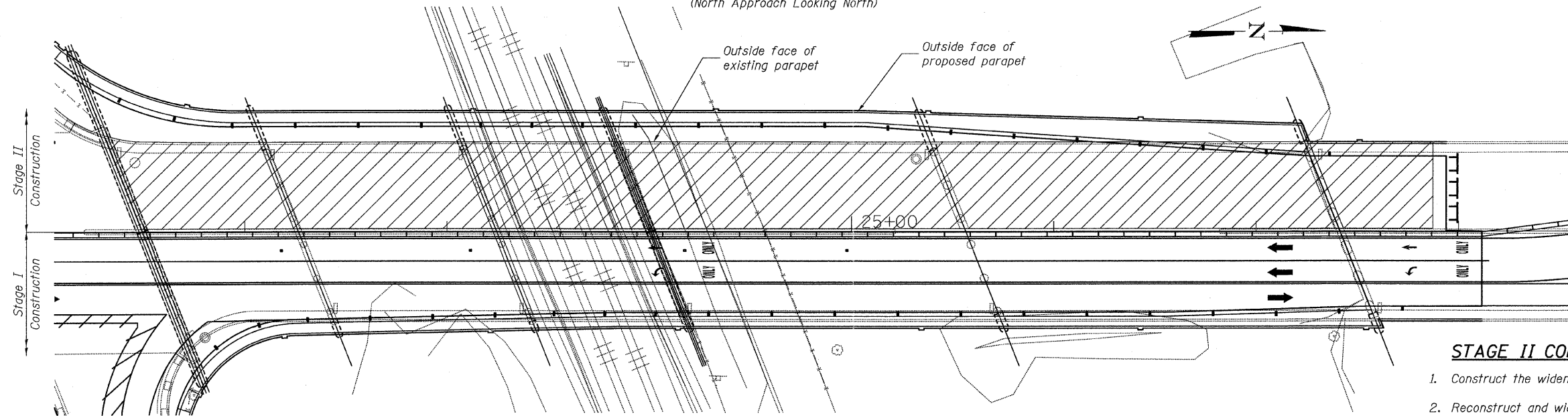
SHEET NO. 3	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	606
73 SHEETS			CONTRACT NO. 60999		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STAGE II CONSTRUCTION
(North Approach Looking North)



PLAN
(Stage II Construction)

STAGE II CONSTRUCTION:

1. Construct the widened portion of pier 7, 8, 10 and 11.
2. Reconstruct and widen remainder of pier 9 and C- Abutment 4.
3. Replace remainder of existing expansion bearings.
4. Paint the remainder of existing structural steel beams and cross frames.
5. Erect new structural steel cross frames and diaphragms to replace the removed existing cross frames and diaphragms at existing expansion joints.
6. Erect new structural steel beams and girders (NG-1 through NG-6, NG-11, and NG-12).
7. Construct remainder of new concrete deck, sidewalk and parapet.
8. Install expansion joints at pier 9 and C-Abutment 4.

STAGE II REMOVAL

1. Install temporary concrete barrier and divert traffic to the constructed portion of the new bridge.
2. Remove the remainder of existing concrete deck.
3. Remove remainder of pier 9 and C- Abutment 4 above the crashwall.
4. Remove remainder existing structural diaphragms at existing expansion joints.

NOTES

1. Installation of expansion joint at C. Abut. 4 shall be performed after the Stage II deck for the Central Ave./I-55 Mainline (S.N. 016-0724) has been completed.
2. For C. Abut. 4 Details, see sheets 191 thru 194 of Central Ave./I-55 Mainline (S.N. 016-0724).

LEGEND

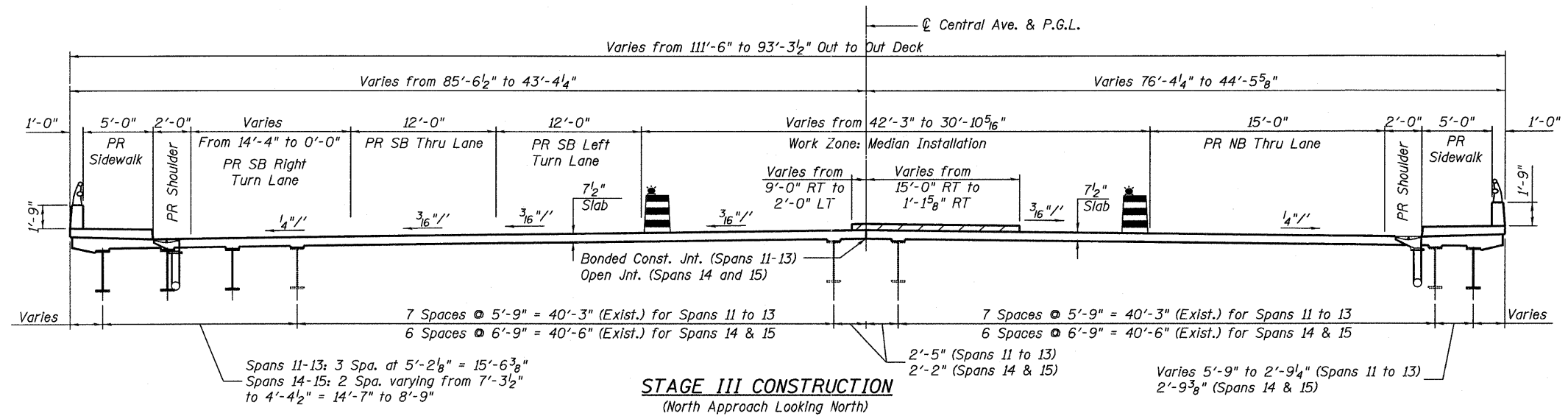
Stage II Removal

STAGE II CONSTRUCTION
STRUCTURE NO. 016-3240

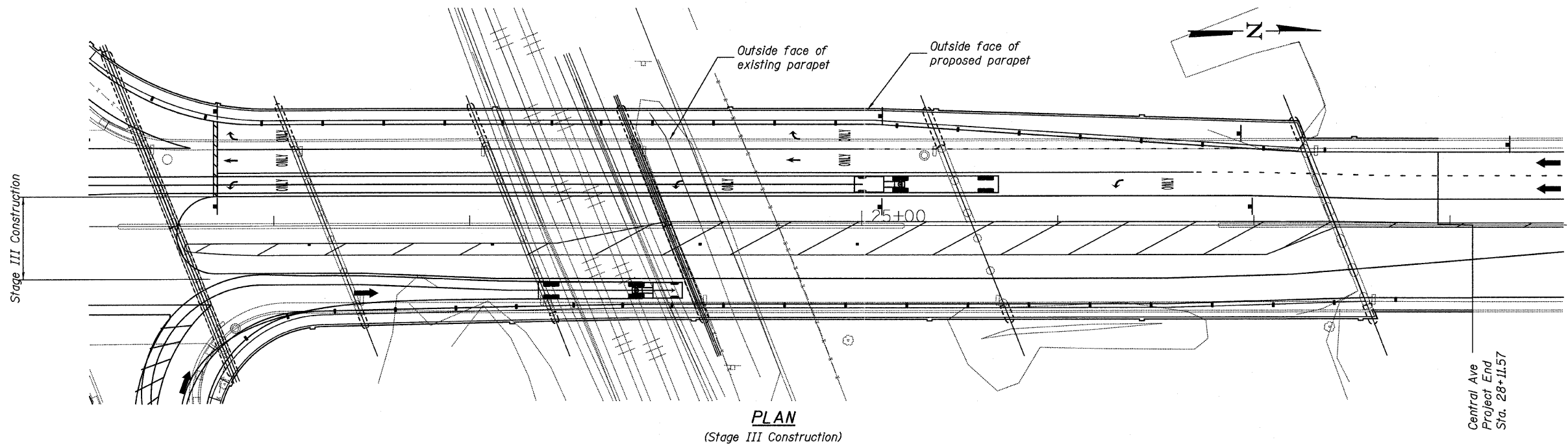
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	CHECKED - AMD, LS	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	607	
	DRAWN - DY, LS				CONTRACT NO. 60999					
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

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STAGE III CONSTRUCTION
(North Approach Looking North)





PLAN
(Stage III Construction)

NOTES

1. Installation of expansion joint at C. Abut. 4 shall be performed after the Stage II deck for the Central Ave./I-55 Mainline (S.N. 016-0724) has been completed.
2. For C. Abut. 4 Details, see sheets 191 thru 194 of Central Ave./I-55 Mainline (S.N. 016-0724).

LEGEND

-  Stage III Median Installation
-  Drum with mono-directional steady burning light

STAGE III CONSTRUCTION:

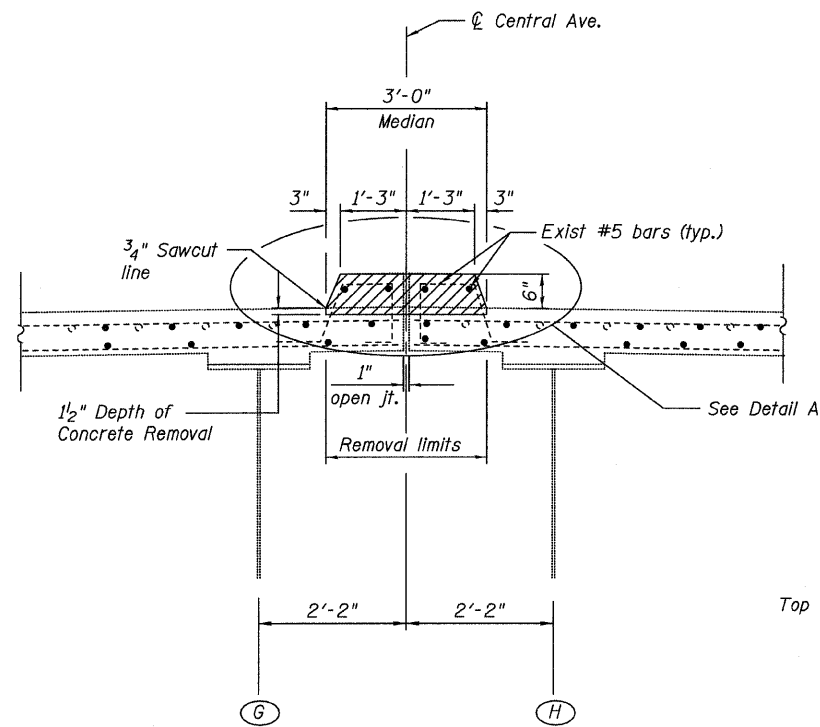
1. Install drums with mono-directional steady burning lights and divert traffic
2. Construct center median

STAGE III CONSTRUCTION
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 4A	F.A.I. RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS 741	SHEET NO. 607A
	CHECKED - AMD, LS	NAME	DATE						
	DRAWN - DY, LS								
	CHECKED - AMD, LS								
	DATE - 03/25/2011								
73 SHEETS					CONTRACT NO. 60999				
					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

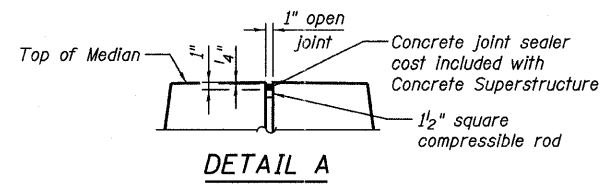
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

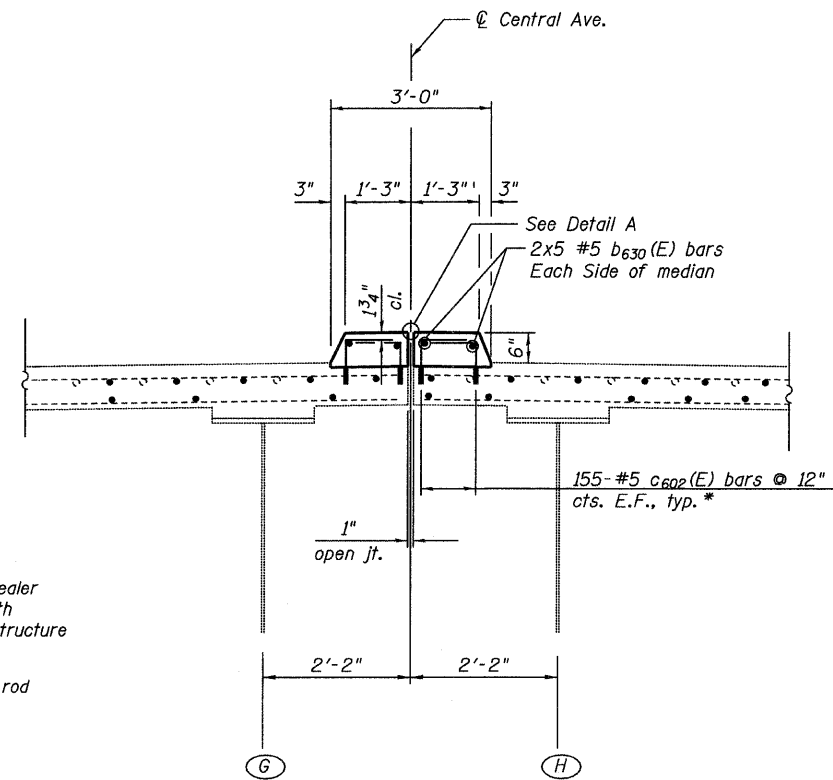


EXISTING SECTION AT MEDIAN LOOKING NORTH

(Applies Sta. 28+11.55 to 29+66.00)
(Existing median to be removed during Pre-Stage work, See Roadway Plans)



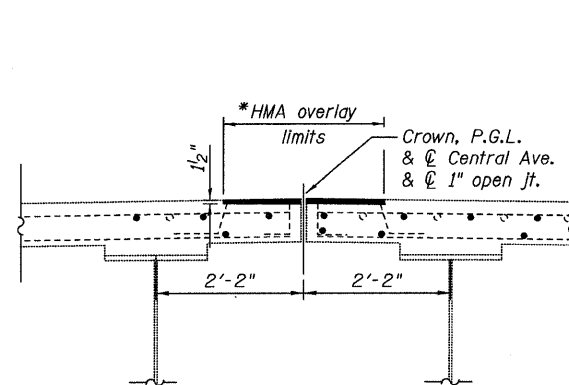
DETAIL A



PROPOSED SECTION AT MEDIAN LOOKING NORTH

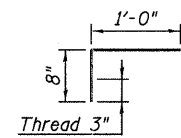
(Applies Sta. 28+11.55 to 29+66.00)
(To be built during Stage III Construction)

* Bottom leg of c602(E) bars shall be cored and set according to article 509.06 of the Standard Specifications. Cored holes shall be roughened or scored per Manufacturer's Recommendations, maximum depth of cored hole shall not exceed 4".



DETAIL A

* HMA overlay included in the pay item "Hot-Mix Asphalt Surface Course, Mix "D", N70" and the HMA removal is included in the pay item "Hot-Mix Asphalt Paved Shoulder Removal"



BAR c602(E)

NOTES:

- 3) After construction stage is complete, remove HMA overlay.
- 4) Install reinforcement and pour center median concrete. Any damage or loose deck concrete at the open joint shall be removed and reconstructed in the median concrete. Included in the pay item "Concrete Superstructure".

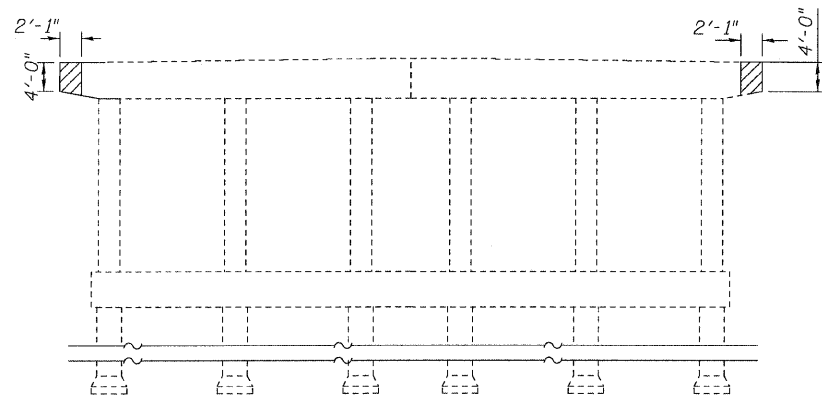
BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
b630(E)	20	#5	33'-6"	—	
c602(E)	232	#5	1'-10"	┌	
Concrete Removal				CU YD	10.8
Concrete Superstructure				CU YD	8.4
Reinforcement Bars, Epoxy Coated				POUND	1,780

**MAINTAINING OF TRAFFIC
CROSSOVER DETAILS
STRUCTURE NO. 016-3240**

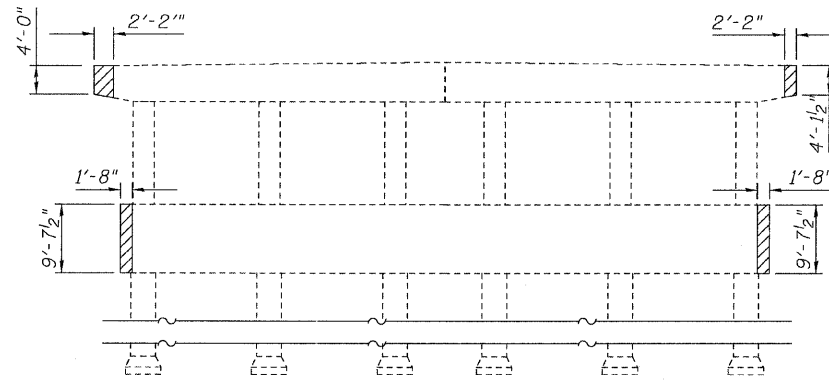
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	DRAWN - DY, LS				CONTRACT NO. 60999					
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



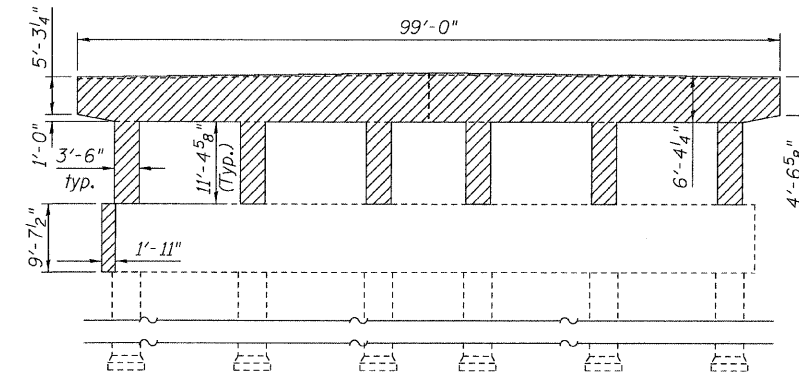
PIER 7

Existing longitudinal reinforcement in pier cap shall be cleaned and incorporated into new construction. Cost included with Concrete Removal.



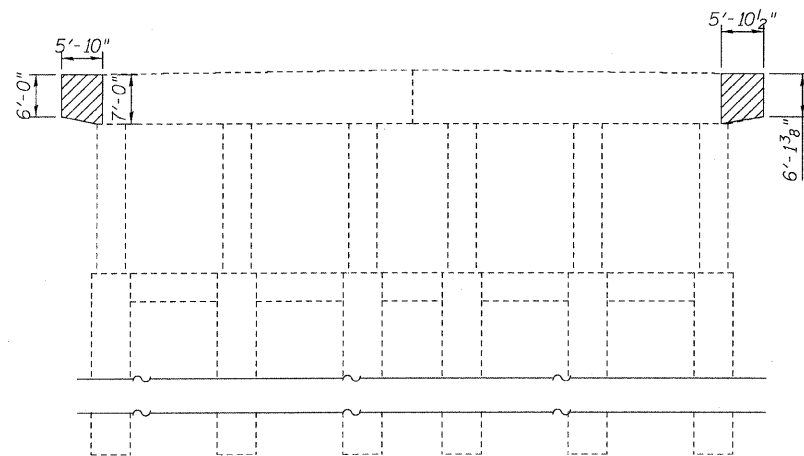
PIER 8

Existing longitudinal reinforcement in pier cap and crashwall shall be cleaned and incorporated into new construction. Cost included with Concrete Removal.



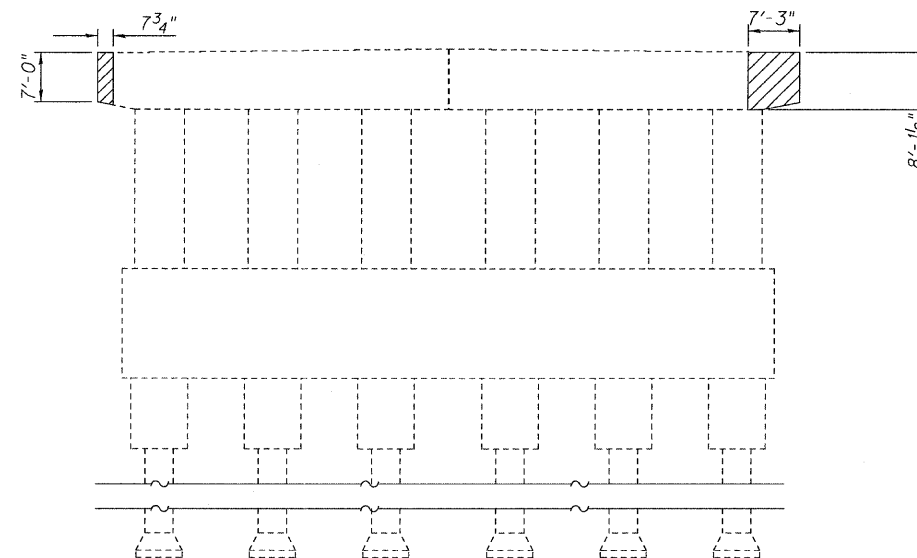
PIER 9

Existing vertical reinforcement in pier columns shall be cleaned and incorporated into new construction. Cost included with Concrete Removal.



PIER 10

Existing longitudinal reinforcement in pier cap shall be cleaned and incorporated into new construction. Cost included with Concrete Removal.



PIER 11

Existing longitudinal reinforcement in pier cap & vertical reinforcement in column shall be cleaned and incorporated into new construction. Cost included with Concrete Removal.

REMOVAL QUANTITIES

STRUCTURE	UNIT	QUANTITY
Pier 7	CU YD	4.0
Pier 8	CU YD	6.4
Pier 9	CU YD	138.8
Pier 10	CU YD	12.4
Pier 11	CU YD	9.7
* Existing Concrete Deck No. 2	CU YD	1,515.2

* For information only. Existing Concrete Deck No. 2 includes Deck, Sidewalk, Median & Parapet & Bridge Rail

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	CU YD	171.6
Removal of Existing Concrete Deck No. 2	EACH	1

NOTE:

- For C - Abutment 4 removal, see plans for S.N. 016-0724 (sheet 11).
- Elevations are looking north.

LEGEND

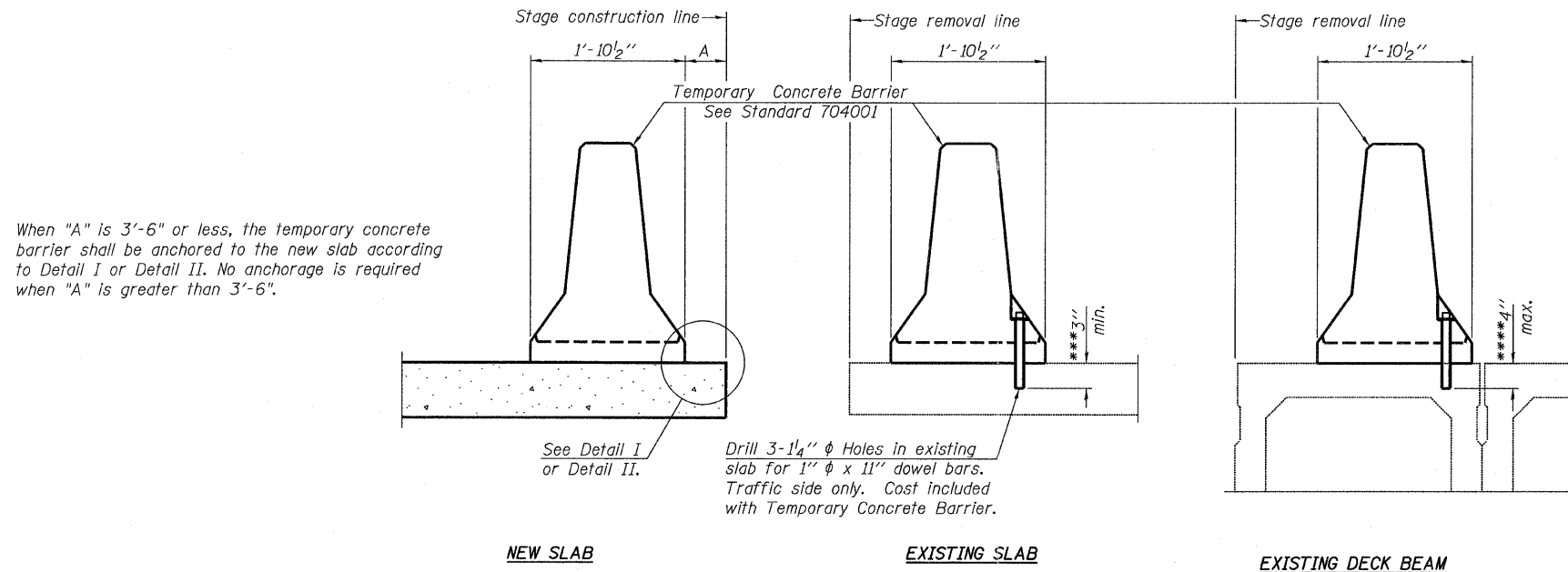


Concrete Removal

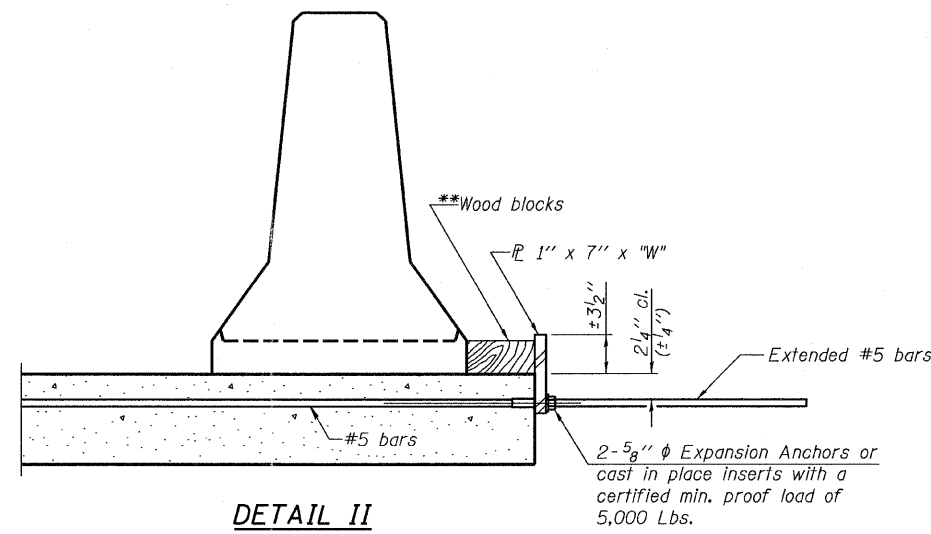
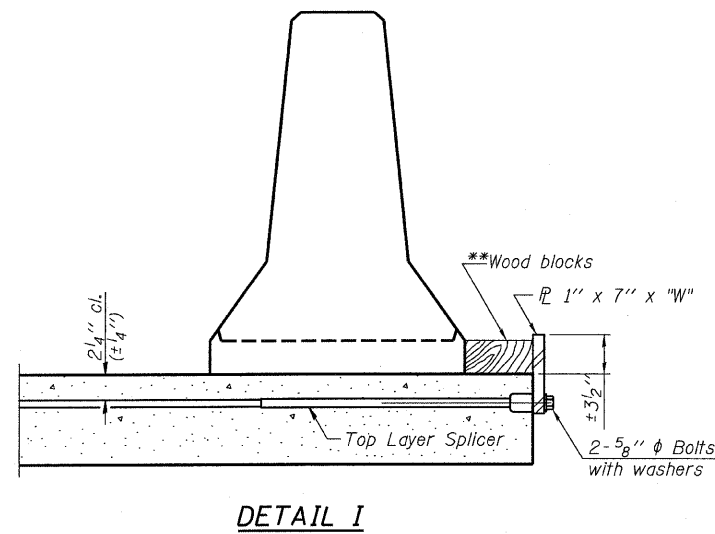
**REMOVAL PLAN
STRUCTURE NO. 016-3240**

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 6	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD, LS	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	609
	DRAWN - DY, LS				73 SHEETS	CONTRACT NO. 60999			
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/25/2011								

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTIONS THRU SLAB OR DECK BEAM



** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

NOTES

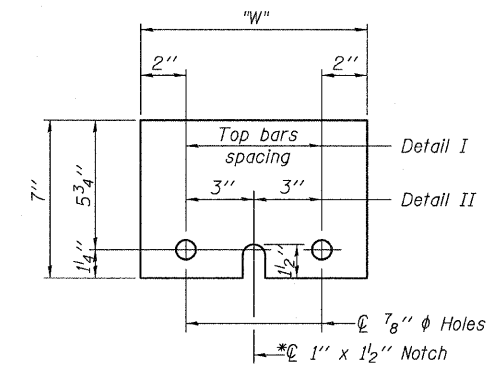
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{P} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{P} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place Inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



STEEL RETAINER \bar{P} 1" x 7" x 10"
* Required only with Detail II

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
STRUCTURE NO. 016-3240

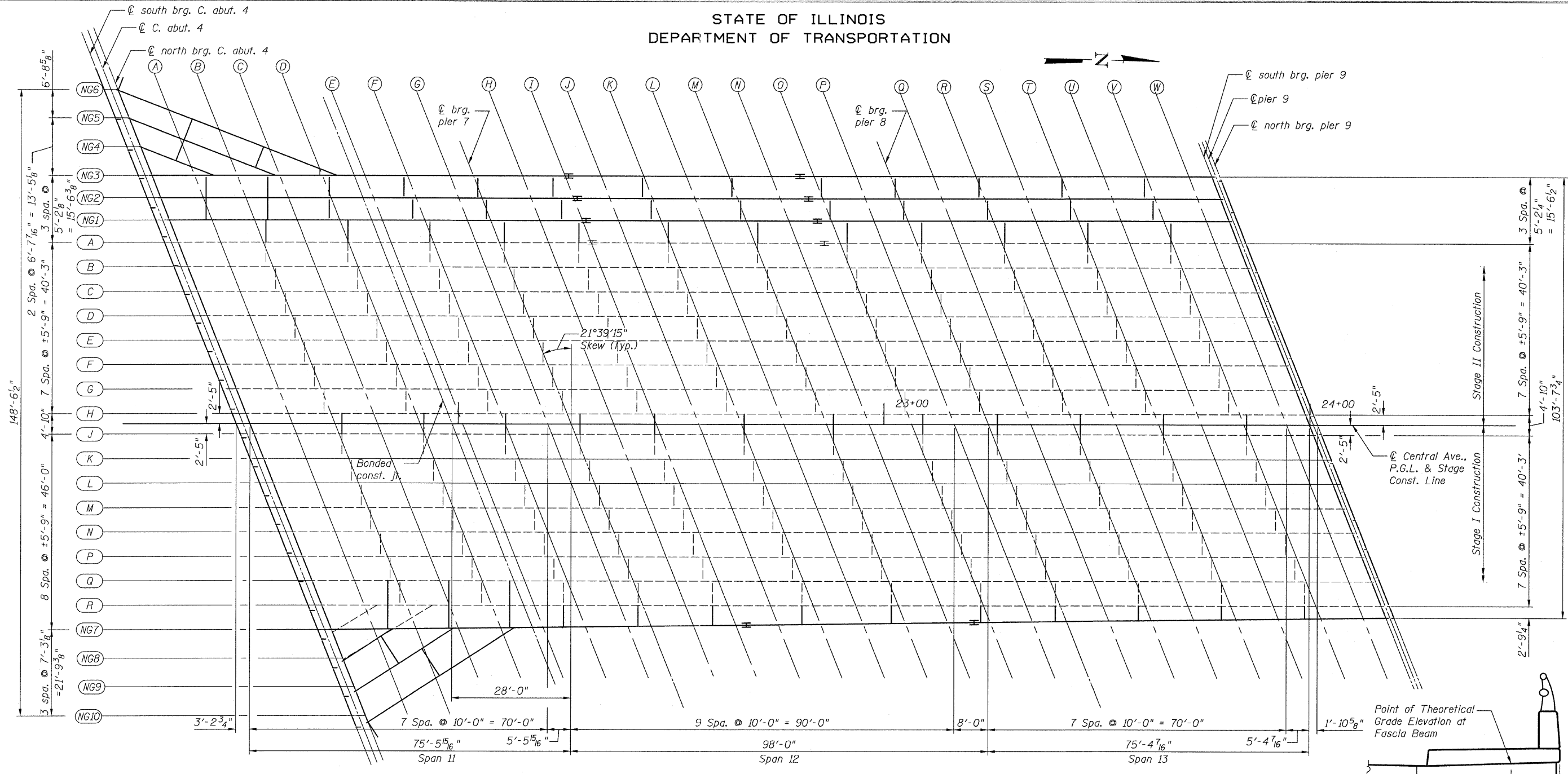
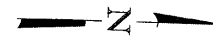
R-27

11-1-09

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 7	F.A.I. RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS 741	SHEET NO. 610
	CHECKED - AMD, LS	NAME	DATE						
	DRAWN - DY, LS								
	CHECKED - AMD, LS								
	DATE - 03/25/2011								
				73 SHEETS	CONTRACT NO. 60999		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		

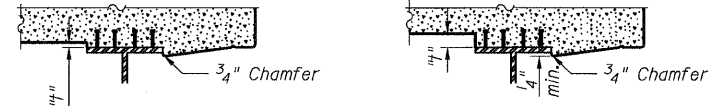
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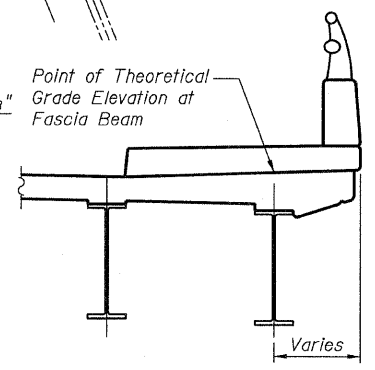


PLAN

To determine "h": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheets 11 thru 19, minus slab thickness, equals the fillet heights "h" above the top flange of beams.



At Minimum Fillet
At Maximum Fillet
FILLET HEIGHTS



SECTION THRU PARAPET

TOP OF SLAB ELEVATIONS
LAYOUT SPANS 11, 12 & 13
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL

DESIGNED - DY, LS	REVISIONS	
CHECKED - AMD, LS	NAME	DATE
DRAWN - DY, LS		
CHECKED - AMD, LS		
DATE - 03/25/2011		

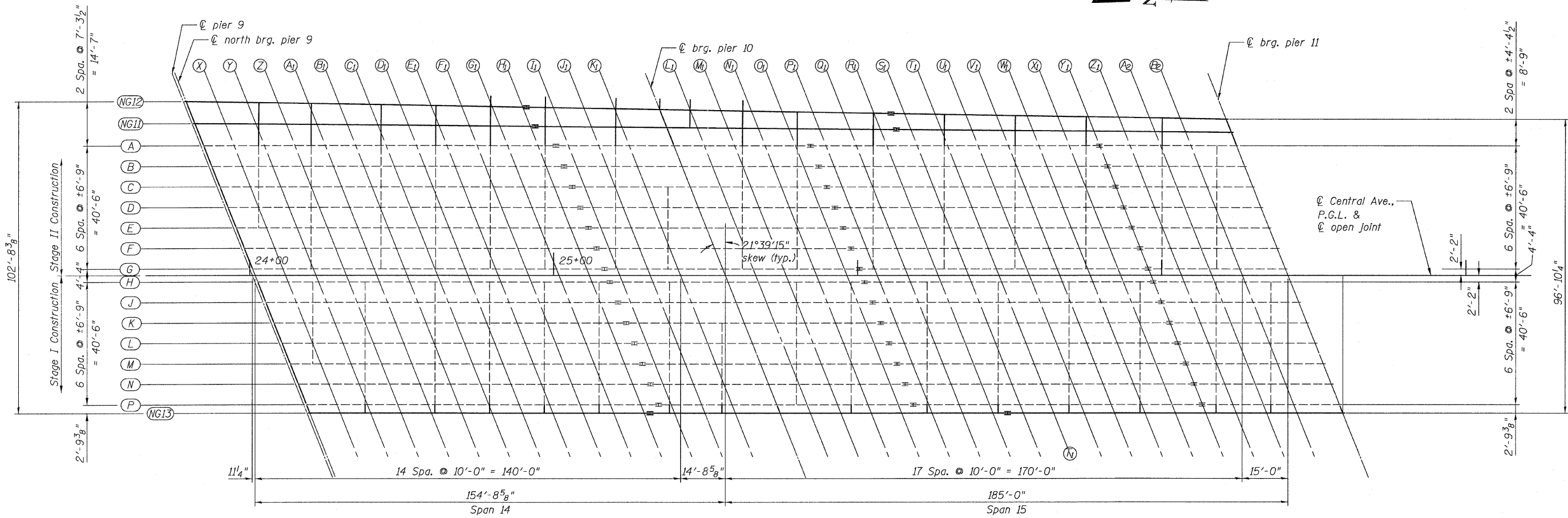
SHEET NO. 8	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 60999		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

4/28/2011

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PLAN

TOP OF SLAB ELEVATIONS
LAYOUT SPANS 14 & 15
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS	
	CHECKED - AMD, LS	NAME	DATE
	DRAWN - DY, LS		
	CHECKED - AMD, LS		
	DATE - 03/25/2011		

SHEET NO. 9	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	612
73 SHEETS		CONTRACT NO. 60999			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

4/28/2011

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GIRDER A

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL Brg. Pier 11	27+24.57	-42.66	631.65	631.65
C2	27+34.57	-42.66	631.68	631.73
D2	27+44.57	-42.66	631.71	631.80
E2	27+54.57	-42.66	631.74	631.88
F2	27+64.57	-42.66	631.77	631.94
G2	27+74.57	-42.66	631.80	632.01
H2 End of deck	27+83.92	-42.66	631.83	632.07

GIRDER B

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL Brg. Pier 11	27+27.25	-35.91	631.67	631.67
C2	27+37.25	-35.91	631.70	631.75
D2	27+47.25	-35.91	631.73	631.82
E2	27+57.25	-35.91	631.76	631.90
F2	27+67.25	-35.91	631.79	631.97
G2	27+77.25	-35.91	631.82	632.03
H2 End of deck	27+84.48	-35.91	631.84	632.08

GIRDER C

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL Brg. Pier 11	27+29.93	-29.16	631.81	631.81
C2	27+39.93	-29.16	631.84	631.89
D2	27+49.93	-29.16	631.87	631.97
E2	27+59.93	-29.16	631.90	632.04
F2	27+69.93	-29.16	631.93	632.11
G2	27+79.93	-29.16	631.96	632.17
H2 End of deck	27+83.92	-29.16	631.97	632.22

GIRDER D

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL Brg. Pier 11	27+32.61	-22.41	631.93	631.93
C2	27+42.61	-22.41	631.96	632.01
D2	27+52.61	-22.41	631.99	632.09
E2	27+62.61	-22.41	632.02	632.16
F2	27+72.61	-22.41	632.05	632.23
G2	27+82.61	-22.41	632.08	632.29
H2 End of deck	27+83.92	-22.41	632.09	632.33

GIRDER E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL Brg. Pier 11	27+35.29	-15.66	632.04	632.04
C2	27+45.29	-15.66	632.07	632.12
D2	27+55.29	-15.66	632.10	632.20
E2	27+65.29	-15.66	632.13	632.27
F2	27+75.29	-15.66	632.16	632.34
G2 End of deck	27+83.92	-15.66	632.19	632.40

GIRDER F

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL Brg. Pier 11	27+37.97	-8.92	632.15	632.15
C2	27+47.97	-8.92	632.18	632.23
D2	27+57.97	-8.92	632.21	632.30
E2	27+67.97	-8.92	632.24	632.38
F2	27+77.97	-8.92	632.27	632.45
G2 End of deck	27+83.92	-8.92	632.29	632.50

GIRDER G

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL Brg. Pier 11	27+40.65	-2.17	632.26	632.26
C2	27+50.65	-2.17	632.29	632.34
D2	27+60.65	-2.17	632.32	632.41
E2	27+70.65	-2.17	632.35	632.49
F2	27+80.65	-2.17	632.38	632.56
G2 End of deck	27+83.92	-2.17	632.39	632.60

PGL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL Brg. Pier 11	27+41.51	0.00	632.29	632.29
C2	27+51.51	0.00	632.32	632.37
D2	27+61.51	0.00	632.35	632.45
E2	27+71.51	0.00	632.38	632.52
F2	27+81.51	0.00	632.41	632.59
G2	27+91.51	0.00	632.44	632.66
H2	28+01.51	0.00	632.47	632.72
J2 End of deck	28+11.57	0.00	632.50	632.77

GIRDER H

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL Brg. Pier 11	27+42.37	2.17	632.26	632.26
C2	27+52.37	2.17	632.29	632.34
D2	27+62.37	2.17	632.32	632.42
E2	27+72.37	2.17	632.35	632.49
F2	27+82.37	2.17	632.38	632.56
G2	27+92.37	2.17	632.41	632.63
H2 End of deck	28+01.57	2.17	632.44	632.68

GIRDER J

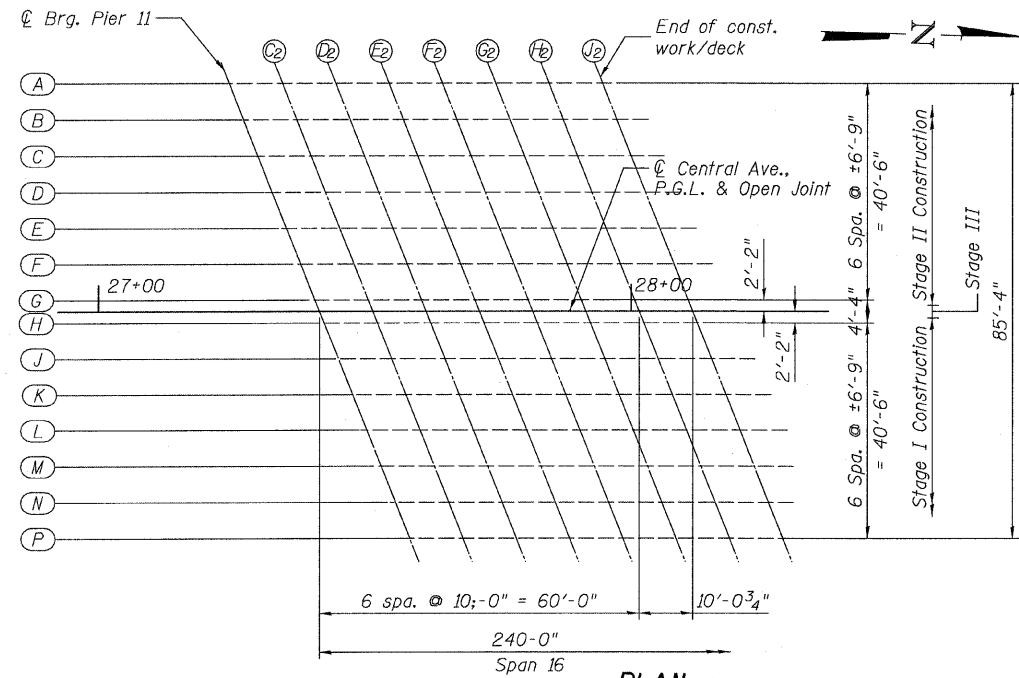
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL Brg. Pier 11	27+45.05	8.92	632.17	632.17
C2	27+55.05	8.92	632.20	632.25
D2	27+65.05	8.92	632.23	632.33
E2	27+75.05	8.92	632.26	632.40
F2	27+85.05	8.92	632.29	632.47
G2	27+95.05	8.92	632.32	632.53
H2 End of deck	28+01.57	8.92	632.34	632.58

GIRDER M

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL Brg. Pier 11	27+53.08	29.16	631.88	631.88
C2	27+63.08	29.16	631.91	631.96
D2	27+73.08	29.16	631.94	632.04
E2	27+83.08	29.16	631.97	632.11
F2	27+93.08	29.16	632.00	632.18
G2 End of deck	28+01.57	29.16	632.03	632.24

GIRDER N

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL Brg. Pier 11	27+55.76	35.91	631.75	631.75
C2	27+65.76	35.91	631.78	631.83
D2	27+75.76	35.91	631.81	631.91
E2	27+85.76	35.91	631.84	631.98
F2	27+95.76	35.91	631.87	632.05
G2 End of deck	28+01.57	35.91	631.89	632.10



GIRDER K

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL Brg. Pier 11	27+47.73	15.66	632.08	632.08
C2	27+57.73	15.66	632.11	632.16
D2	27+67.73	15.66	632.14	632.23
E2	27+77.73	15.66	632.17	632.31
F2	27+87.73	15.66	632.20	632.38
G2	27+97.73	15.66	632.23	632.44
H2 End of deck	28+01.57	15.66	632.24	632.48

GIRDER L

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL Brg. Pier 11	27+50.40	22.41	631.99	631.99
C2	27+60.40	22.41	632.02	632.06
D2	27+70.40	22.41	632.05	632.14
E2	27+80.40	22.41	632.08	632.21
F2	27+90.40	22.41	632.11	632.28
G2	28+00.40	22.41	632.14	632.35
H2 End of deck	28+01.57	22.41	632.14	632.38

GIRDER P

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
CL Brg. Pier 11	27+58.44	42.66	631.75	631.75
C2	27+68.44	42.66	631.78	631.83
D2	27+78.44	42.66	631.81	631.91
E2	27+88.44	42.66	631.84	631.98
F2	27+98.44	42.66	631.87	632.05
G2 End of deck	28+01.57	42.66	631.88	632.10

**TOP OF SLAB ELEVATIONS
LAYOUT SPAN 16
STRUCTURE NO. 016-3240**

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 10	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	613	
	DRAWN - DY, LS				73 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

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STATE OF ILLINOIS
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GIRDER NG6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ C. Abut. 4	21+18.02	-79.09	628.94	628.94
☉ N. Brg. C. Abut. 4	21+19.94	-78.34	629.05	629.05
A	21+31.78	-73.70	629.25	629.34
B	21+43.62	-69.06	629.41	629.57
C	21+55.47	-64.42	629.52	629.75
D	21+67.31	-59.77	629.60	629.86

GIRDER NG5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ C. Abut. 4	21+20.69	-72.38	629.09	629.09
☉ N. Brg. C. Abut. 4	21+22.60	-71.63	629.11	629.11
A	21+34.45	-66.99	629.24	629.36
B	21+46.29	-62.34	629.38	629.59

GIRDER NG4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ C. Abut. 4	21+23.36	-65.66	629.23	629.23
☉ N. Brg. C. Abut. 4	21+25.27	-64.92	629.25	629.25
A	21+37.11	-60.27	629.39	629.51

GIRDER NG3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ C. Abut. 4	21+26.32	-58.20	629.39	629.39
☉ N. Brg. C. Abut. 4	21+27.93	-58.20	629.40	629.40
A	21+37.93	-58.20	629.43	629.56
B	21+47.93	-58.20	629.46	629.70
C	21+57.93	-58.20	629.50	629.79
D	21+67.93	-58.20	629.58	629.86
E	21+77.93	-58.20	629.68	629.89
F	21+87.93	-58.20	629.74	629.87
G	21+97.93	-58.20	629.78	629.82
☉ Brg. Pier 7	22+03.43	-58.20	629.80	629.80
H	22+13.43	-58.20	629.83	629.78
I	22+23.43	-58.20	629.86	629.79
J	22+33.43	-58.20	629.89	629.81
K	22+43.43	-58.20	629.92	629.85
L	22+53.43	-58.20	629.95	629.89
M	22+63.43	-58.20	629.98	629.94
O	22+73.43	-58.20	630.01	629.98
N	22+83.43	-58.20	630.04	630.02
P	22+93.43	-58.20	630.07	630.06
☉ Brg. Pier 8	23+01.43	-58.20	630.09	630.09
Q	23+11.43	-58.20	630.12	630.14
R	23+21.43	-58.20	630.15	630.19
S	23+31.43	-58.20	630.18	630.24
T	23+41.43	-58.20	630.21	630.27
U	23+51.43	-58.20	630.24	630.30
V	23+61.43	-58.20	630.27	630.31
W	23+71.43	-58.20	630.30	630.32
☉ S. Brg. Pier 9	23+76.80	-58.20	630.32	630.32
☉ Pier 9	23+78.68	-58.20	630.33	630.32

GIRDER NG2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ C. Abut. 4	21+28.38	-53.02	629.50	629.50
☉ N. Brg. C. Abut. 4	21+29.99	-53.02	629.51	629.51
A	21+39.99	-53.02	629.54	629.56
B	21+49.99	-53.02	629.57	629.62
C	21+59.99	-53.02	629.61	629.65
D	21+69.99	-53.02	629.64	629.68
E	21+79.99	-53.02	629.67	629.70
F	21+89.99	-53.02	629.71	629.72
G	21+99.99	-53.02	629.74	629.74
☉ Brg. Pier 7	22+05.48	-53.02	629.76	629.76
H	22+15.48	-53.02	629.79	629.80
I	22+25.48	-53.02	629.82	629.85
J	22+35.48	-53.02	629.85	629.90
K	22+45.48	-53.02	629.88	629.94
L	22+55.48	-53.02	629.91	629.98
M	22+65.48	-53.02	629.94	630.00
N	22+75.48	-53.02	629.97	630.02
O	22+85.48	-53.02	630.00	630.03
P	22+95.48	-53.02	630.03	630.04
☉ Brg. Pier 8	23+03.48	-53.02	630.06	630.06
Q	23+13.48	-53.02	630.09	630.09
R	23+23.48	-53.02	630.12	630.13
S	23+33.48	-53.02	630.15	630.17
T	23+43.48	-53.02	630.18	630.21
U	23+53.48	-53.02	630.21	630.24
V	23+63.48	-53.02	630.24	630.26
W	23+73.48	-53.02	630.27	630.27
☉ S. Brg. Pier 9	23+78.85	-53.02	630.28	630.28
☉ Pier 9	23+80.74	-53.02	630.29	630.29

GIRDER NG1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ C. Abut. 4	21+30.43	-47.84	629.61	629.61
☉ N. Brg. C. Abut. 4	21+32.04	-47.84	629.62	629.62
A	21+42.04	-47.84	629.65	629.68
B	21+52.04	-47.84	629.68	629.73
C	21+62.04	-47.84	629.72	629.76
D	21+72.04	-47.84	629.75	629.79
E	21+82.04	-47.84	629.78	629.81
F	21+92.04	-47.84	629.82	629.83
G	22+02.04	-47.84	629.85	629.85
☉ Brg. Pier 7	22+07.54	-47.84	629.87	629.87
H	22+17.54	-47.84	629.90	629.91
I	22+27.54	-47.84	629.93	629.96
J	22+37.54	-47.84	629.96	630.01
K	22+47.54	-47.84	629.99	630.05
L	22+57.54	-47.84	630.02	630.09
M	22+67.54	-47.84	630.05	630.11
O	22+77.54	-47.84	630.08	630.13
N	22+87.54	-47.84	630.11	630.14
P	22+97.54	-47.84	630.14	630.15
☉ Brg. Pier 8	23+05.54	-47.84	630.16	630.16
Q	23+15.54	-47.84	630.19	630.20
R	23+25.54	-47.84	630.22	630.24
S	23+35.54	-47.84	630.25	630.28
T	23+45.54	-47.84	630.28	630.32
U	23+55.54	-47.84	630.31	630.35
V	23+65.54	-47.84	630.34	630.37
W	23+75.54	-47.84	630.37	630.38
☉ S. Brg. Pier 9	23+80.91	-47.84	630.39	630.39
☉ Pier 9	23+82.79	-47.84	630.40	630.40

TOP OF SLAB ELEVATIONS !
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 11 73 SHEETS	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	614	
	DRAWN - DY, LS				CONTRACT NO. 60999					
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ C. Abut. 4	21+49.42	0.00	630.51	630.51
☉ N. Brg. C. Abut. 4	21+51.04	0.00	630.51	630.51
A	21+61.04	0.00	630.54	630.58
B	21+71.04	0.00	630.57	630.64
C	21+81.04	0.00	630.60	630.68
D	21+91.04	0.00	630.63	630.70
E	22+01.04	0.00	630.67	630.71
F	22+11.04	0.00	630.70	630.72
G	22+21.04	0.00	630.73	630.73
☉ Brg. Pier 7	22+26.53	0.00	630.75	630.75
H	22+36.53	0.00	630.78	630.79
I	22+46.53	0.00	630.81	630.84
J	22+56.53	0.00	630.84	630.89
K	22+66.53	0.00	630.87	630.94
L	22+76.53	0.00	630.90	630.98
M	22+86.53	0.00	630.93	631.00
O	22+96.53	0.00	630.96	631.01
N	23+06.53	0.00	630.99	631.02
P	23+16.53	0.00	631.02	631.03
☉ Brg. Pier 8	23+24.53	0.00	631.04	631.04
Q	23+34.53	0.00	631.07	631.08
R	23+44.53	0.00	631.10	631.12
S	23+54.53	0.00	631.13	631.17
T	23+64.53	0.00	631.16	631.21
U	23+74.53	0.00	631.19	631.24
V	23+84.53	0.00	631.22	631.26
W	23+94.53	0.00	631.25	631.27
☉ S. Brg. Pier 9	23+99.90	0.00	631.27	631.27
☉ Pier 9	24+01.79	0.00	631.28	631.28

GIRDER NG7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ C. Abut. 4	21+68.65	48.42	629.73	629.73
☉ N. Brg. C. Abut. 4	21+70.27	48.42	629.73	629.73
A	21+80.27	48.30	629.77	629.90
B	21+90.27	48.18	629.80	630.04
C	22+00.27	48.06	629.84	630.13
D	22+10.27	47.94	629.87	630.15
E	22+20.27	47.82	629.97	630.19
F	22+30.27	47.70	630.02	630.15
G	22+40.27	47.58	630.06	630.10
☉ Brg. Pier 7	22+45.76	47.52	630.08	630.08
H	22+55.76	47.40	630.11	630.07
I	22+65.76	47.28	630.15	630.08
J	22+75.76	47.16	630.19	630.11
K	22+85.76	47.04	630.22	630.15
L	22+95.76	46.92	630.26	630.20
M	23+05.76	46.80	630.29	630.25
O	23+15.76	46.68	630.33	630.30
N	23+25.76	46.56	630.37	630.35
P	23+35.76	46.44	630.40	630.39
☉ Brg. Pier 8	23+43.76	46.34	630.43	630.43
Q	23+53.76	46.22	630.47	630.49
R	23+63.76	46.10	630.50	630.54
S	23+73.76	45.98	630.54	630.59
T	23+83.76	45.86	630.57	630.63
U	23+93.76	45.74	630.60	630.66
V	24+03.76	45.62	630.63	630.67
W	24+13.76	45.50	630.66	630.67
☉ S. Brg. Pier 9	24+19.13	45.44	630.68	630.68
☉ Pier 9	24+21.02	45.42	630.56	630.56

GIRDER NG8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ C. Abut. 4	21+71.86	56.52	629.58	629.58
☉ N. Brg. C. Abut. 4	21+73.15	55.68	629.60	629.60
A	21+81.10	50.52	629.73	629.86

GIRDER NG9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ C. Abut. 4	21+74.75	63.78	629.44	629.44
☉ N. Brg. C. Abut. 4	21+76.03	62.94	629.46	629.46
A	21+83.98	57.78	629.59	629.71
B	21+91.93	52.62	629.72	629.95

GIRDER NG10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ C. Abut. 4	21+77.63	71.04	629.31	629.31
☉ N. Brg. C. Abut. 4	21+78.91	70.20	629.37	629.37
A	21+86.86	65.04	629.59	629.65
B	21+94.81	59.88	629.74	629.87
C	22+02.76	54.72	629.85	630.03
D	22+10.71	49.55	629.91	630.14

TOP OF SLAB ELEVATIONS 2
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 12 73 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	615	
	DRAWN - DY, LS				CONTRACT NO. 60999					
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

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STATE OF ILLINOIS
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GIRDER A

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Center Pier 9	23+83.92	-42.66	630.50	630.50
Center N. Brg. Pier 9	23+84.86	-42.66	630.51	630.51
X	23+94.86	-42.66	630.54	630.61
Y	24+04.86	-42.66	630.57	630.71
Z	24+14.86	-42.66	630.60	630.80
A1	24+24.86	-42.66	630.63	630.87
B1	24+34.86	-42.66	630.66	630.94
C1	24+44.86	-42.66	630.69	630.99
D1	24+54.86	-42.66	630.72	631.02
E1	24+64.86	-42.66	630.75	631.04
F1	24+74.86	-42.66	630.78	631.04
G1	24+84.86	-42.66	630.81	631.02
H1	24+94.86	-42.66	630.84	631.00
I1	25+04.86	-42.66	630.87	630.98
J1	25+14.86	-42.66	630.90	630.97
K1	25+24.86	-42.66	630.93	630.97
Center Brg. Pier 10	25+39.58	-42.66	630.97	630.98
L1	25+49.58	-42.66	631.00	631.01
M1	25+59.58	-42.66	631.03	631.04
N1	25+69.58	-42.66	631.06	631.07
O1	25+79.58	-42.66	631.09	631.12
P1	25+89.58	-42.66	631.12	631.16
Q1	25+99.58	-42.66	631.15	631.17
R1	26+09.58	-42.66	631.18	631.22
S1	26+19.58	-42.66	631.21	631.24
T1	26+29.58	-42.66	631.24	631.26
U1	26+39.58	-42.66	631.27	631.28
V1	26+49.58	-42.66	631.30	631.29
W1	26+59.58	-42.66	631.33	631.33
X1	26+69.58	-42.66	631.36	631.30
Y1	26+79.58	-42.66	631.40	631.33
Z1	26+89.58	-42.66	631.46	631.38
A2	26+99.58	-42.66	631.51	631.45
B2	27+09.58	-42.66	631.57	631.52
Center Brg. Pier 11	27+24.58	-42.66	631.65	631.65

GIRDER B

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Center Pier 9	23+86.60	-35.91	630.65	630.65
Center N. Brg. Pier 9	23+87.54	-35.91	630.65	630.65
X	23+97.54	-35.91	630.68	630.75
Y	24+07.54	-35.91	630.71	630.85
Z	24+17.54	-35.91	630.74	630.94
A1	24+27.54	-35.91	630.77	631.02
B1	24+37.54	-35.91	630.80	631.08
C1	24+47.54	-35.91	630.83	631.13
D1	24+57.54	-35.91	630.86	631.16
E1	24+67.54	-35.91	630.89	631.18
F1	24+77.54	-35.91	630.92	631.19
G1	24+87.54	-35.91	630.95	631.18
H1	24+97.54	-35.91	630.98	631.15
I1	25+07.54	-35.91	631.01	631.13
J1	25+17.54	-35.91	631.04	631.11
K1	25+27.54	-35.91	631.07	631.11
Center Brg. Pier 10	25+42.26	-35.91	631.11	631.13
L1	25+52.26	-35.91	631.14	631.15
M1	25+62.26	-35.91	631.17	631.18
N1	25+72.26	-35.91	631.20	631.22
O1	25+82.26	-35.91	631.23	631.26
P1	25+92.26	-35.91	631.26	631.30
Q1	26+02.26	-35.91	631.29	631.31
R1	26+12.26	-35.91	631.32	631.36
S1	26+22.26	-35.91	631.35	631.38
T1	26+32.26	-35.91	631.38	631.42
U1	26+42.26	-35.91	631.41	631.43
V1	26+52.26	-35.91	631.44	631.45
W1	26+62.26	-35.91	631.47	631.47
X1	26+72.26	-35.91	631.50	631.45
Y1	26+82.26	-35.91	631.53	631.47
Z1	26+92.26	-35.91	631.56	631.49
A2	27+02.26	-35.91	631.59	631.53
B2	27+12.26	-35.91	631.62	631.58
Center Brg. Pier 11	27+27.26	-35.91	631.67	631.67

GIRDER C

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Center Pier 9	23+89.28	-29.16	630.79	630.79
Center N. Brg. Pier 9	23+90.22	-29.16	630.79	630.79
X	24+00.22	-29.16	630.82	630.90
Y	24+10.22	-29.16	630.85	630.99
Z	24+20.22	-29.16	630.88	631.08
A1	24+30.22	-29.16	630.91	631.16
B1	24+40.22	-29.16	630.94	631.22
C1	24+50.22	-29.16	630.97	631.27
D1	24+60.22	-29.16	631.00	631.31
E1	24+70.22	-29.16	631.03	631.32
F1	24+80.22	-29.16	631.06	631.33
G1	24+90.22	-29.16	631.09	631.32
H1	25+00.22	-29.16	631.12	631.31
I1	25+10.22	-29.16	631.15	631.29
J1	25+20.22	-29.16	631.18	631.27
K1	25+30.22	-29.16	631.21	631.26
Center Brg. Pier 10	25+44.94	-29.16	631.26	631.26
L1	25+54.94	-29.16	631.29	631.27
M1	25+64.94	-29.16	631.32	631.29
N1	25+74.94	-29.16	631.35	631.32
O1	25+84.94	-29.16	631.38	631.36
P1	25+94.94	-29.16	631.41	631.41
Q1	26+04.94	-29.16	631.44	631.44
R1	26+14.94	-29.16	631.47	631.45
S1	26+24.94	-29.16	631.50	631.50
T1	26+34.94	-29.16	631.53	631.53
U1	26+44.94	-29.16	631.56	631.55
V1	26+54.94	-29.16	631.59	631.56
W1	26+64.94	-29.16	631.62	631.58
X1	26+74.94	-29.16	631.65	631.59
Y1	26+84.94	-29.16	631.68	631.61
Z1	26+94.94	-29.16	631.71	631.63
A2	27+04.94	-29.16	631.74	631.67
B2	27+14.94	-29.16	631.77	631.72
Center Brg. Pier 11	27+29.94	-29.16	631.81	631.81

GIRDER D

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Center Pier 9	23+91.96	-22.41	630.91	630.91
Center N. Brg. Pier 9	23+92.90	-22.41	630.91	630.91
X	24+02.90	-22.41	630.94	631.02
Y	24+12.90	-22.41	630.97	631.11
Z	24+22.90	-22.41	631.00	631.20
A1	24+32.90	-22.41	631.03	631.28
B1	24+42.90	-22.41	631.06	631.34
C1	24+52.90	-22.41	631.09	631.39
D1	24+62.90	-22.41	631.12	631.43
E1	24+72.90	-22.41	631.15	631.44
F1	24+82.90	-22.41	631.18	631.45
G1	24+92.90	-22.41	631.21	631.44
H1	25+02.90	-22.41	631.24	631.43
I1	25+12.90	-22.41	631.27	631.41
J1	25+22.90	-22.41	631.30	631.39
K1	25+32.90	-22.41	631.33	631.38
Center Brg. Pier 10	25+47.62	-22.41	631.38	631.38
L1	25+57.62	-22.41	631.41	631.39
M1	25+67.62	-22.41	631.44	631.41
N1	25+77.62	-22.41	631.47	631.44
O1	25+87.62	-22.41	631.50	631.48
P1	25+97.62	-22.41	631.53	631.53
Q1	26+07.62	-22.41	631.56	631.56
R1	26+17.62	-22.41	631.59	631.57
S1	26+27.62	-22.41	631.62	631.62
T1	26+37.62	-22.41	631.65	631.65
U1	26+47.62	-22.41	631.68	631.67
V1	26+57.62	-22.41	631.71	631.68
W1	26+67.62	-22.41	631.74	631.70
X1	26+77.62	-22.41	631.77	631.71
Y1	26+87.62	-22.41	631.80	631.73
Z1	26+97.62	-22.41	631.83	631.75
A2	27+07.62	-22.41	631.86	631.79
B2	27+17.62	-22.41	631.89	631.84
Center Brg. Pier 11	27+32.62	-22.41	631.93	631.93

TOP OF SLAB ELEVATIONS 6
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL

DESIGNED - DY, LS	REVISIONS	
	NAME	DATE
CHECKED - AMD, LS		
DRAWN - DY, LS		
CHECKED - AMD, LS		
DATE - 03/25/2011		

SHEET NO. 16	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	73	55	0711.2R & 1011.1BR	COOK	741 619
CONTRACT NO. 60999					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GIRDER E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier 9	23+94.63	-15.66	631.02	631.02
☉ N. Brg. Pier 9	23+95.58	-15.66	631.02	631.02
X	24+05.58	-15.66	631.05	631.13
Y	24+15.58	-15.66	631.08	631.22
Z	24+25.58	-15.66	631.11	631.31
A1	24+35.58	-15.66	631.14	631.39
B1	24+45.58	-15.66	631.17	631.45
C1	24+55.58	-15.66	631.20	631.50
D1	24+65.58	-15.66	631.23	631.54
E1	24+75.58	-15.66	631.26	631.55
F1	24+85.58	-15.66	631.29	631.56
G1	24+95.58	-15.66	631.32	631.55
H1	25+05.58	-15.66	631.35	631.54
I1	25+15.58	-15.66	631.38	631.52
J1	25+25.58	-15.66	631.41	631.50
K1	25+35.58	-15.66	631.44	631.49
☉ Brg. Pier 10	25+50.30	-15.66	631.49	631.49
L1	25+60.30	-15.66	631.52	631.50
M1	25+70.30	-15.66	631.55	631.52
N1	25+80.30	-15.66	631.58	631.55
O1	25+90.30	-15.66	631.61	631.59
P1	26+00.30	-15.66	631.64	631.64
Q1	26+10.30	-15.66	631.67	631.67
R1	26+20.30	-15.66	631.70	631.68
S1	26+30.30	-15.66	631.73	631.73
T1	26+40.30	-15.66	631.76	631.76
U1	26+50.30	-15.66	631.79	631.78
V1	26+60.30	-15.66	631.82	631.79
W1	26+70.30	-15.66	631.85	631.81
X1	26+80.30	-15.66	631.88	631.82
Y1	26+90.30	-15.66	631.91	631.84
Z1	27+00.30	-15.66	631.94	631.86
A2	27+10.30	-15.66	631.97	631.90
B2	27+20.30	-15.66	632.00	631.95
☉ Brg. Pier 11	27+35.30	-15.66	632.04	632.04

GIRDER F

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier 9	23+97.31	-8.92	631.13	631.13
☉ N. Brg. Pier 9	23+98.26	-8.92	631.13	631.13
X	24+08.26	-8.92	631.16	631.23
Y	24+18.26	-8.92	631.19	631.33
Z	24+28.26	-8.92	631.22	631.42
A1	24+38.26	-8.92	631.25	631.50
B1	24+48.26	-8.92	631.28	631.56
C1	24+58.26	-8.92	631.31	631.61
D1	24+68.26	-8.92	631.34	631.64
E1	24+78.26	-8.92	631.37	631.66
F1	24+88.26	-8.92	631.40	631.67
G1	24+98.26	-8.92	631.43	631.66
H1	25+08.26	-8.92	631.46	631.65
I1	25+18.26	-8.92	631.49	631.63
J1	25+28.26	-8.92	631.52	631.61
K1	25+38.26	-8.92	631.55	631.60
☉ Brg. Pier 10	25+52.97	-8.92	631.60	631.60
L1	25+62.97	-8.92	631.63	631.61
M1	25+72.97	-8.92	631.66	631.63
N1	25+82.97	-8.92	631.69	631.66
O1	25+92.97	-8.92	631.72	631.70
P1	26+02.97	-8.92	631.75	631.75
Q1	26+12.97	-8.92	631.78	631.78
R1	26+22.97	-8.92	631.81	631.79
S1	26+32.97	-8.92	631.84	631.84
T1	26+42.97	-8.92	631.87	631.86
U1	26+52.97	-8.92	631.90	631.88
V1	26+62.97	-8.92	631.93	631.90
W1	26+72.97	-8.92	631.96	631.91
X1	26+82.97	-8.92	631.99	631.93
Y1	26+92.97	-8.92	632.02	631.95
Z1	27+02.97	-8.92	632.05	631.97
A2	27+12.97	-8.92	632.08	632.01
B2	27+22.97	-8.92	632.11	632.06
☉ Brg. Pier 11	27+37.97	-8.92	632.15	632.15

GIRDER G

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier 9	23+99.99	-2.17	631.24	631.24
☉ N. Brg. Pier 9	24+00.93	-2.17	631.24	631.24
X	24+10.93	-2.17	631.27	631.34
Y	24+20.93	-2.17	631.30	631.44
Z	24+30.93	-2.17	631.33	631.53
A1	24+40.93	-2.17	631.36	631.61
B1	24+50.93	-2.17	631.39	631.67
C1	24+60.93	-2.17	631.42	631.72
D1	24+70.93	-2.17	631.45	631.75
E1	24+80.93	-2.17	631.48	631.77
F1	24+90.93	-2.17	631.51	631.78
G1	25+00.93	-2.17	631.54	631.77
H1	25+10.93	-2.17	631.57	631.75
I1	25+20.93	-2.17	631.60	631.74
J1	25+30.93	-2.17	631.63	631.72
K1	25+40.93	-2.17	631.66	631.71
☉ Brg. Pier 10	25+55.65	-2.17	631.70	631.70
L1	25+65.65	-2.17	631.73	631.72
M1	25+75.65	-2.17	631.76	631.74
N1	25+85.65	-2.17	631.79	631.77
O1	25+95.65	-2.17	631.82	631.81
P1	26+05.65	-2.17	631.85	631.85
Q1	26+15.65	-2.17	631.88	631.89
R1	26+25.65	-2.17	631.91	631.90
S1	26+35.65	-2.17	631.94	631.95
T1	26+45.65	-2.17	631.97	631.97
U1	26+55.65	-2.17	632.00	631.99
V1	26+65.65	-2.17	632.03	632.01
W1	26+75.65	-2.17	632.06	632.02
X1	26+85.65	-2.17	632.09	632.04
Y1	26+95.65	-2.17	632.12	632.06
Z1	27+05.65	-2.17	632.15	632.08
A2	27+15.65	-2.17	632.18	632.12
B2	27+25.65	-2.17	632.21	632.17
☉ Brg. Pier 11	27+40.65	-2.17	632.26	632.26

GIRDER H

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier 9	24+01.72	2.17	631.24	631.24
☉ N. Brg. Pier 9	24+02.66	2.17	631.25	631.25
X	24+12.66	2.17	631.28	631.35
Y	24+22.66	2.17	631.31	631.45
Z	24+32.66	2.17	631.34	631.54
A1	24+42.66	2.17	631.37	631.61
B1	24+52.66	2.17	631.40	631.68
C1	24+62.66	2.17	631.43	631.73
D1	24+72.66	2.17	631.46	631.76
E1	24+82.66	2.17	631.49	631.78
F1	24+92.66	2.17	631.52	631.78
G1	25+02.66	2.17	631.55	631.77
H1	25+12.66	2.17	631.58	631.76
I1	25+22.66	2.17	631.61	631.74
J1	25+32.66	2.17	631.64	631.72
K1	25+42.66	2.17	631.67	631.71
☉ Brg. Pier 10	25+57.38	2.17	631.71	631.71
L1	25+67.38	2.17	631.74	631.72
M1	25+77.38	2.17	631.77	631.75
N1	25+87.38	2.17	631.80	631.78
O1	25+97.38	2.17	631.83	631.81
P1	26+07.38	2.17	631.86	631.86
Q1	26+17.38	2.17	631.89	631.89
R1	26+27.38	2.17	631.92	631.91
S1	26+37.38	2.17	631.95	631.95
T1	26+47.38	2.17	631.98	631.98
U1	26+57.38	2.17	632.01	632.00
V1	26+67.38	2.17	632.04	632.01
W1	26+77.38	2.17	632.07	632.03
X1	26+87.38	2.17	632.10	632.04
Y1	26+97.38	2.17	632.13	632.06
Z1	27+07.38	2.17	632.16	632.09
A2	27+17.38	2.17	632.19	632.12
B2	27+27.38	2.17	632.22	632.17
☉ Brg. Pier 11	27+42.38	2.17	632.26	632.26

**TOP OF SLAB ELEVATIONS 7
STRUCTURE NO. 016-3240**

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 17	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.				
	CHECKED - AMD, LS	NAME	DATE		55					0711.2R & 1011.1BR	COOK	741	620
	DRAWN - DY, LS				73								
	CHECKED - AMD, LS				CONTRACT NO. 60999								
DATE - 03/25/2011				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT									

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GIRDER J

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier 9	24+04.39	8.92	631.15	631.15
☉ N. Brg. Pier 9	24+05.34	8.92	631.15	631.15
X	24+15.34	8.92	631.18	631.26
Y	24+25.34	8.92	631.21	631.35
Z	24+35.34	8.92	631.24	631.44
A1	24+45.34	8.92	631.27	631.52
B1	24+55.34	8.92	631.30	631.58
C1	24+65.34	8.92	631.33	631.63
D1	24+75.34	8.92	631.36	631.67
E1	24+85.34	8.92	631.39	631.68
F1	24+95.34	8.92	631.42	631.69
G1	25+05.34	8.92	631.45	631.68
H1	25+15.34	8.92	631.48	631.67
I1	25+25.34	8.92	631.51	631.65
J1	25+35.34	8.92	631.54	631.63
K1	25+45.34	8.92	631.57	631.62
☉ Brg. Pier 10	25+60.05	8.92	631.62	631.62
L1	25+70.05	8.92	631.65	631.63
M1	25+80.05	8.92	631.68	631.65
N1	25+90.05	8.92	631.71	631.68
O1	26+00.05	8.92	631.74	631.72
P1	26+10.05	8.92	631.77	631.77
Q1	26+20.05	8.92	631.80	631.80
R1	26+30.05	8.92	631.83	631.81
S1	26+40.05	8.92	631.86	631.86
T1	26+50.05	8.92	631.89	631.89
U1	26+60.05	8.92	631.92	631.91
V1	26+70.05	8.92	631.95	631.92
W1	26+80.05	8.92	631.98	631.94
X1	26+90.05	8.92	632.01	631.95
Y1	27+00.05	8.92	632.04	631.97
Z1	27+10.05	8.92	632.07	631.99
A2	27+20.05	8.92	632.10	632.03
B2	27+30.05	8.92	632.13	632.08
☉ Brg. Pier 11	27+45.05	8.92	632.17	632.17

GIRDER K

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier 9	24+07.07	15.66	631.06	631.06
☉ N. Brg. Pier 9	24+08.01	15.66	631.06	631.06
X	24+18.01	15.66	631.09	631.16
Y	24+28.01	15.66	631.12	631.26
Z	24+38.01	15.66	631.15	631.35
A1	24+48.01	15.66	631.18	631.43
B1	24+58.01	15.66	631.21	631.49
C1	24+68.01	15.66	631.24	631.54
D1	24+78.01	15.66	631.27	631.57
E1	24+88.01	15.66	631.30	631.59
F1	24+98.01	15.66	631.33	631.60
G1	25+08.01	15.66	631.36	631.59
H1	25+18.01	15.66	631.39	631.57
I1	25+28.01	15.66	631.42	631.56
J1	25+38.01	15.66	631.45	631.54
K1	25+48.01	15.66	631.48	631.52
☉ Brg. Pier 10	25+62.73	15.66	631.52	631.52
L1	25+72.73	15.66	631.55	631.54
M1	25+82.73	15.66	631.58	631.56
N1	25+92.73	15.66	631.61	631.59
O1	26+02.73	15.66	631.64	631.63
P1	26+12.73	15.66	631.67	631.67
Q1	26+22.73	15.66	631.70	631.71
R1	26+32.73	15.66	631.73	631.72
S1	26+42.73	15.66	631.76	631.77
T1	26+52.73	15.66	631.79	631.79
U1	26+62.73	15.66	631.82	631.81
V1	26+72.73	15.66	631.85	631.83
W1	26+82.73	15.66	631.88	631.84
X1	26+92.73	15.66	631.91	631.86
Y1	27+02.73	15.66	631.94	631.88
Z1	27+12.73	15.66	631.97	631.90
A2	27+22.73	15.66	632.00	631.94
B2	27+32.73	15.66	632.03	631.98
☉ Brg. Pier 11	27+47.73	15.66	632.08	632.08

GIRDER L

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier 9	24+09.75	22.41	630.96	630.96
☉ N. Brg. Pier 9	24+10.69	22.41	630.97	630.97
X	24+20.69	22.41	631.00	631.07
Y	24+30.69	22.41	631.03	631.17
Z	24+40.69	22.41	631.06	631.26
A1	24+50.69	22.41	631.09	631.33
B1	24+60.69	22.41	631.12	631.40
C1	24+70.69	22.41	631.15	631.45
D1	24+80.69	22.41	631.18	631.48
E1	24+90.69	22.41	631.21	631.50
F1	25+00.69	22.41	631.24	631.50
G1	25+10.69	22.41	631.27	631.50
H1	25+20.69	22.41	631.30	631.48
I1	25+30.69	22.41	631.33	631.46
J1	25+40.69	22.41	631.36	631.44
K1	25+50.69	22.41	631.39	631.43
☉ Brg. Pier 10	25+65.41	22.41	631.43	631.43
L1	25+75.41	22.41	631.46	631.44
M1	25+85.41	22.41	631.49	631.47
N1	25+95.41	22.41	631.52	631.50
O1	26+05.41	22.41	631.55	631.53
P1	26+15.41	22.41	631.58	631.58
Q1	26+25.41	22.41	631.61	631.61
R1	26+35.41	22.41	631.64	631.63
S1	26+45.41	22.41	631.67	631.67
T1	26+55.41	22.41	631.70	631.70
U1	26+65.41	22.41	631.73	631.72
V1	26+75.41	22.41	631.76	631.74
W1	26+85.41	22.41	631.79	631.75
X1	26+95.41	22.41	631.82	631.76
Y1	27+05.41	22.41	631.85	631.78
Z1	27+15.41	22.41	631.88	631.81
A2	27+25.41	22.41	631.91	631.84
B2	27+35.41	22.41	631.94	631.89
☉ Brg. Pier 11	27+50.41	22.41	631.99	631.98

GIRDER M

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☉ Pier 9	24+12.43	29.16	630.86	630.86
☉ N. Brg. Pier 9	24+13.37	29.16	630.86	630.86
X	24+23.37	29.16	630.89	630.97
Y	24+33.37	29.16	630.92	631.06
Z	24+43.37	29.16	630.95	631.15
A1	24+53.37	29.16	630.98	631.23
B1	24+63.37	29.16	631.01	631.29
C1	24+73.37	29.16	631.04	631.34
D1	24+83.37	29.16	631.07	631.38
E1	24+93.37	29.16	631.10	631.39
F1	25+03.37	29.16	631.13	631.40
G1	25+13.37	29.16	631.16	631.39
H1	25+23.37	29.16	631.19	631.38
I1	25+33.37	29.16	631.22	631.36
J1	25+43.37	29.16	631.25	631.34
K1	25+53.37	29.16	631.28	631.33
☉ Brg. Pier 10	25+68.09	29.16	631.33	631.33
L1	25+78.09	29.16	631.36	631.34
M1	25+88.09	29.16	631.39	631.36
N1	25+98.09	29.16	631.42	631.39
O1	26+08.09	29.16	631.45	631.43
P1	26+18.09	29.16	631.48	631.48
Q1	26+28.09	29.16	631.51	631.51
R1	26+38.09	29.16	631.54	631.52
S1	26+48.09	29.16	631.57	631.57
T1	26+58.09	29.16	631.60	631.60
U1	26+68.09	29.16	631.63	631.62
V1	26+78.09	29.16	631.66	631.63
W1	26+88.09	29.16	631.69	631.65
X1	26+98.09	29.16	631.72	631.66
Y1	27+08.09	29.16	631.75	631.68
Z1	27+18.09	29.16	631.78	631.70
A2	27+28.09	29.16	631.81	631.74
B2	27+38.09	29.16	631.84	631.79
☉ Brg. Pier 11	27+53.09	29.16	631.88	631.88

TOP OF SLAB ELEVATIONS 8
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 18	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.						
	CHECKED - AMD, LS	NAME	DATE							73 SHEETS	0711.2R & 1011.1BR	COOK	741	621	
	DRAWN - DY, LS														CONTRACT NO. 60999
	CHECKED - AMD, LS														
	DATE - 03/25/2011														

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GIRDER N

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier 9	24+15.11	35.91	630.73	630.73
⊙ N. Brg. Pier 9	24+16.05	35.91	630.73	630.73
X	24+26.05	35.91	630.76	630.84
Y	24+36.05	35.91	630.79	630.94
Z	24+46.05	35.91	630.82	631.03
A1	24+56.05	35.91	630.85	631.10
B1	24+66.05	35.91	630.88	631.17
C1	24+76.05	35.91	630.91	631.22
D1	24+86.05	35.91	630.94	631.25
E1	24+96.05	35.91	630.97	631.27
F1	25+06.05	35.91	631.00	631.27
G1	25+16.05	35.91	631.03	631.26
H1	25+26.05	35.91	631.06	631.25
I1	25+36.05	35.91	631.09	631.23
J1	25+46.05	35.91	631.12	631.21
K1	25+56.05	35.91	631.15	631.20
⊙ Brg. Pier 10	25+70.77	35.91	631.20	631.20
L1	25+80.77	35.91	631.23	631.21
M1	25+90.77	35.91	631.26	631.24
N1	26+00.77	35.91	631.29	631.27
O1	26+10.77	35.91	631.32	631.30
P1	26+20.77	35.91	631.35	631.35
Q1	26+30.77	35.91	631.38	631.38
R1	26+40.77	35.91	631.41	631.40
S1	26+50.77	35.91	631.44	631.44
T1	26+60.77	35.91	631.47	631.47
U1	26+70.77	35.91	631.50	631.49
V1	26+80.77	35.91	631.53	631.50
W1	26+90.77	35.91	631.56	631.52
X1	27+00.77	35.91	631.59	631.53
Y1	27+10.77	35.91	631.62	631.55
Z1	27+20.77	35.91	631.65	631.58
A2	27+30.77	35.91	631.68	631.61
B2	27+40.77	35.91	631.71	631.66
⊙ Brg. Pier 11	27+55.77	35.91	631.75	631.75

GIRDER P

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊙ Pier 9	24+17.79	42.66	630.63	630.63
⊙ N. Brg. Pier 9	24+18.73	42.66	630.63	630.63
X	24+28.73	42.66	630.66	630.74
Y	24+38.73	42.66	630.69	630.83
Z	24+48.73	42.66	630.72	630.92
A1	24+58.73	42.66	630.75	631.00
B1	24+68.73	42.66	630.78	631.06
C1	24+78.73	42.66	630.81	631.11
D1	24+88.73	42.66	630.84	631.14
E1	24+98.73	42.66	630.87	631.16
F1	25+08.73	42.66	630.90	631.17
G1	25+18.73	42.66	630.93	631.16
H1	25+28.73	42.66	630.96	631.15
I1	25+38.73	42.66	630.99	631.13
J1	25+48.73	42.66	631.02	631.11
K1	25+58.73	42.66	631.05	631.10
⊙ Brg. Pier 10	25+73.45	42.66	631.10	631.10
L1	25+83.45	42.66	631.13	631.11
M1	25+93.45	42.66	631.16	631.13
N1	26+03.45	42.66	631.19	631.16
O1	26+13.45	42.66	631.22	631.20
P1	26+23.45	42.66	631.25	631.25
Q1	26+33.45	42.66	631.28	631.28
R1	26+43.45	42.66	631.31	631.29
S1	26+53.45	42.66	631.34	631.34
T1	26+63.45	42.66	631.37	631.37
U1	26+73.45	42.66	631.41	631.40
V1	26+83.45	42.66	631.45	631.43
W1	26+93.45	42.66	631.49	631.45
X1	27+03.45	42.66	631.53	631.48
Y1	27+13.45	42.66	631.57	631.51
Z1	27+23.45	42.66	631.61	631.54
A2	27+33.45	42.66	631.65	631.59
B2	27+43.45	42.66	631.69	631.65
⊙ Brg. Pier 11	27+58.45	42.66	631.75	631.75

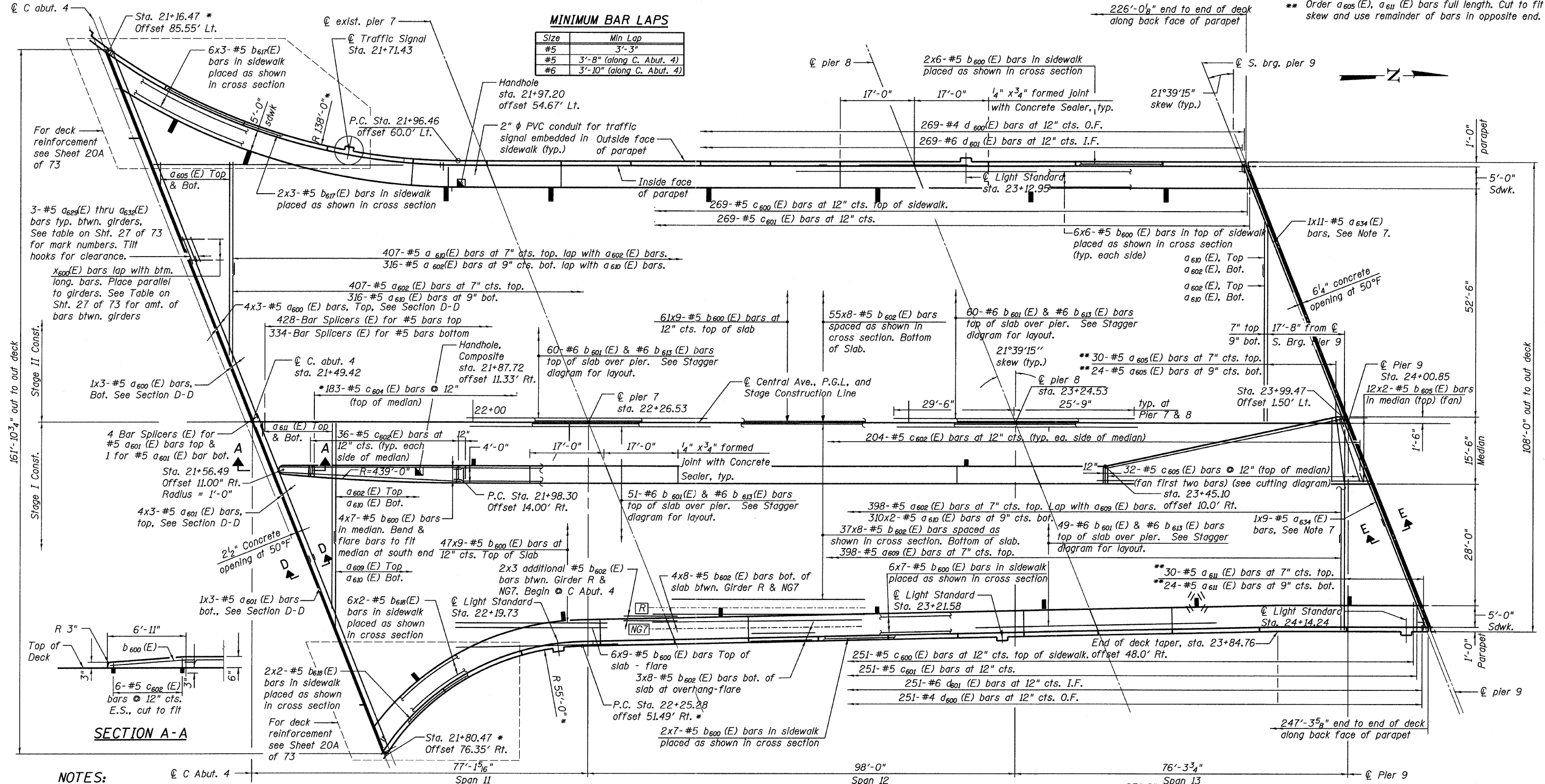
TOP OF SLAB ELEVATIONS 9
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 19	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.						
	CHECKED - AMD, LS	NAME	DATE							73 SHEETS	0711.2R & 1011.1BR	COOK	741	622	
	DRAWN - DY, LS														CONTRACT NO. 60999
	CHECKED - AMD, LS														
DATE - 03/25/2011			FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT										

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* Offsets and Radius measured along back face of parapet.
** Order $a_{605}(E)$, $a_{611}(E)$ bars full length. Cut to fit skew and use remainder of bars in opposite end.



MINIMUM BAR LAPS

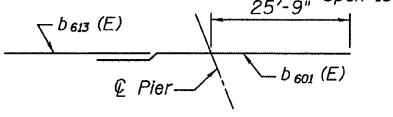
Size	Min Lap
#5	3'-3"
#5	3'-8" (along C. Abut. 4)
#6	3'-10" (along C. Abut. 4)

SECTION A-A

NOTES:

- For superstructure details, see Sheets 27 and 28 of 73. For Bill of Material, see Sheet 27 of 73.
- Bars indicated thus 46 x 8-#5 etc. indicates 46 lines of bars with 8 lengths per line.
- For parapet reinforcement, see Sheet 26 of 73.
- Dimensions at C. Abut. 4 are based on a Rolled Railed Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details shown for the expansion joint on Sheet 78 of 239, S.N. 016-0724.
- For handhole details, see Sheet 28A.
- For locations of scuppers, see Sheet 33 of 73. Cut longitudinal reinforcement to clear scuppers.
- Extend bars through Finger Plate Stools and lap btwn. girders. Cut in field to fit. Min. Lap 3'-3".
- Place $\frac{3}{4}$ " ϕ Galvanized expansion anchors or Ferrule Loop Slab Insert (Proof load 6600 lb) at each $C_{602}(E)$ bar in median. The cost of expansion anchors/inserts is included in the cost of Reinforcement Bars, Epoxy Coated.

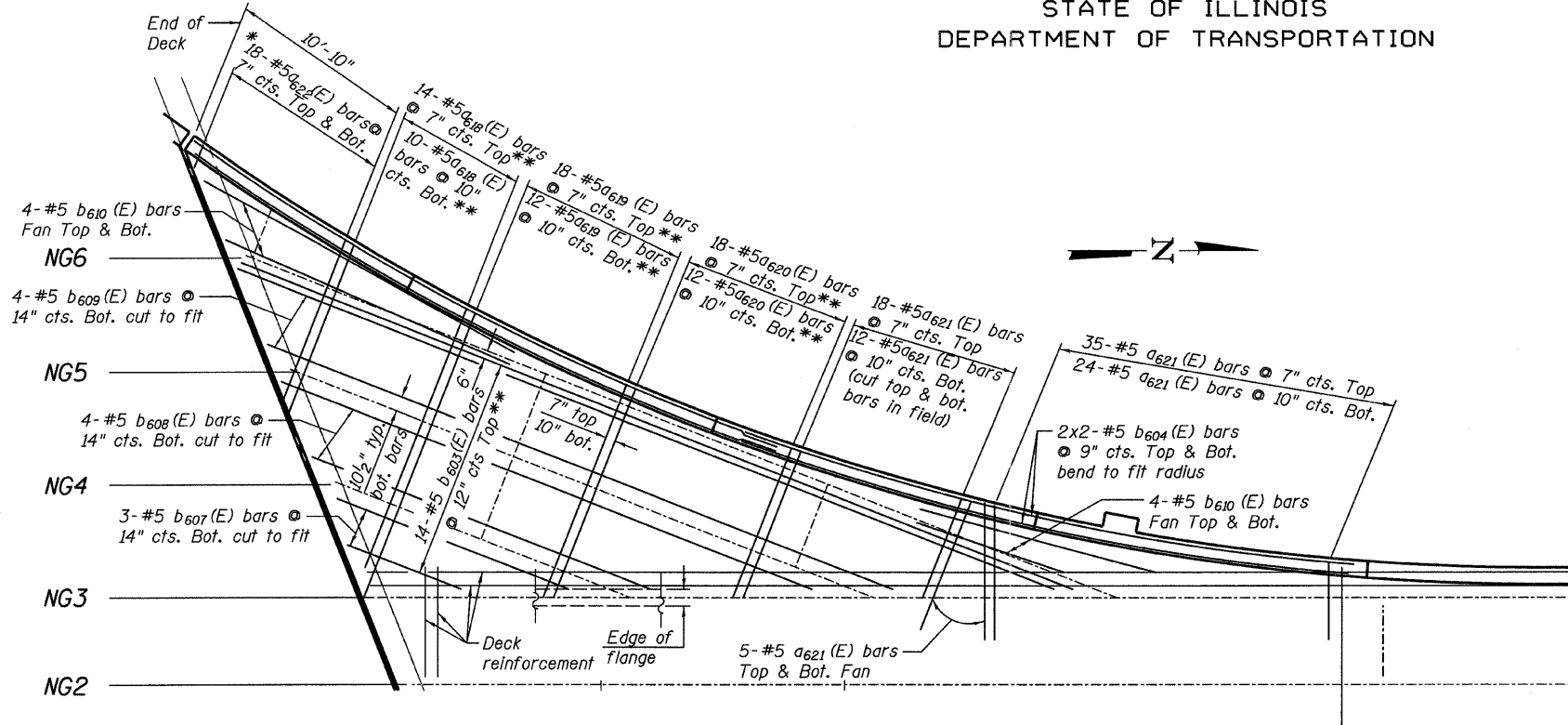
STAGGER DIAGRAM



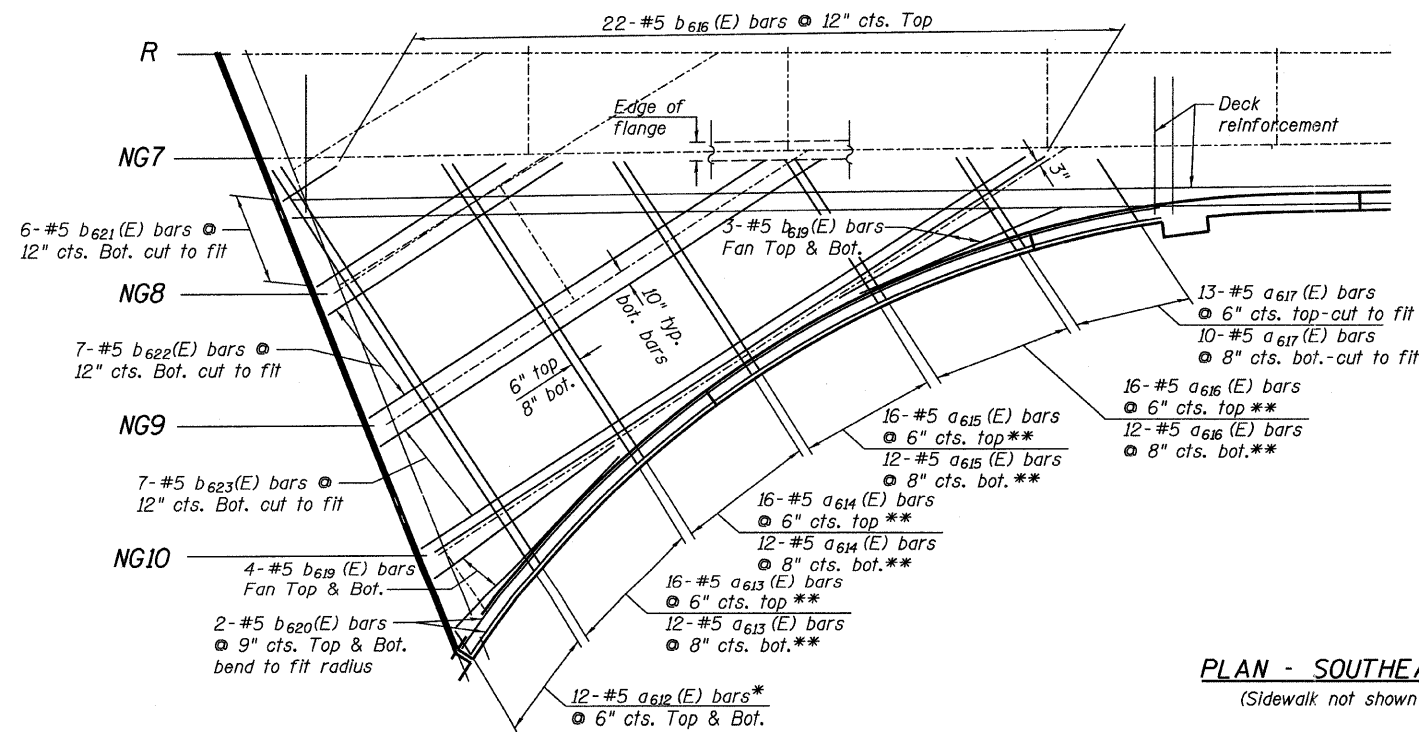
**SUPERSTRUCTURE
SPANS 11, 12 & 13
STRUCTURE NO. 016-3240**

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 20 73 SHEETS	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD, LS	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	623
	DRAWN - DY, LS	CONTRACT NO. 60999							
	CHECKED - AMD, LS	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							
DATE - 03/25/2011									

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN - SOUTHWEST CORNER
(Sidewalk not shown for clarity)



PLAN - SOUTHEAST CORNER
(Sidewalk not shown for clarity)

* Order bars full length. Cut as shown in Bar Cutting Diagram and use remainder of bars in bottom.

** Order bars full length. Cut as shown in Bar Cutting Diagram.

SUPERSTRUCTURE
FLARED DECK
STRUCTURE NO. 016-3241

TYLIN INTERNATIONAL

DESIGNED	DY, LS	REVISIONS	
CHECKED	AMD, LS	NAME	DATE
DRAWN	DY, LS		
CHECKED	AMD, LS		
DATE	03/25/2011		

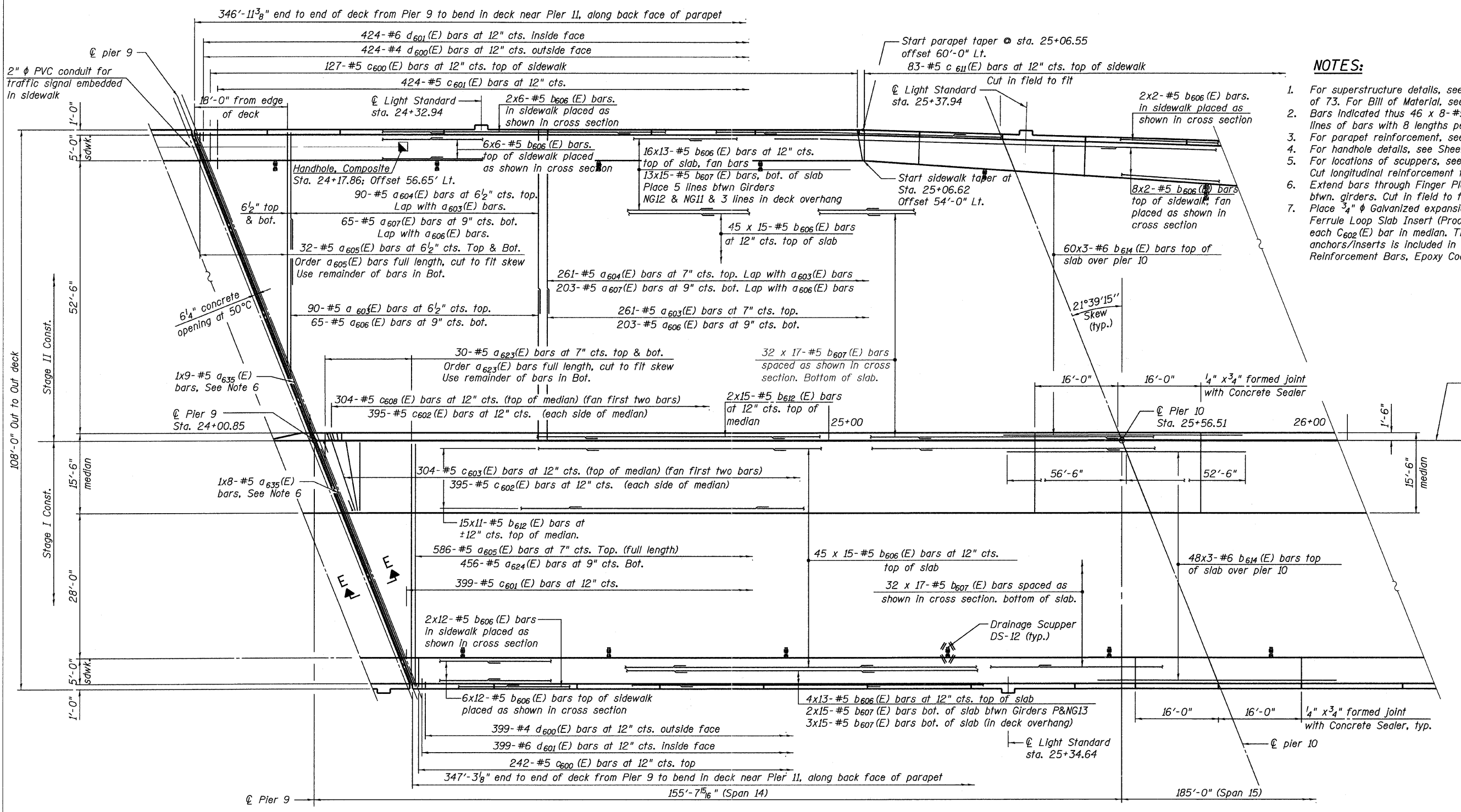
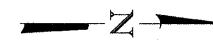
SHEET NO. 20A	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	623A
73 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



NOTES:

1. For superstructure details, see Sheets 27 and 28 of 73. For Bill of Material, see Sheet 27 of 73.
2. Bars indicated thus 46 x 8-#5 etc. indicates 46 lines of bars with 8 lengths per line.
3. For parapet reinforcement, see Sheet 26 of 73.
4. For handhole details, see Sheet 28A.
5. For locations of scuppers, see Sheet 33 of 73. Cut longitudinal reinforcement to clear scuppers.
6. Extend bars through Finger Plate Stools and lap btwn. girders. Cut in field to fit. Min. Lap 3'-3". Place 3/4" Galvanized expansion anchors or Ferrule Loop Slab Insert (Proof load 6600 lb) at each C₆₀₂(E) bar in median. The cost of expansion anchors/inserts is included in the cost of Reinforcement Bars, Epoxy Coated.
- 7.

MINIMUM BAR LAPS

Size	Min Lap
#5	3'-3"
#6	3'-10"

PLAN

**SUPERSTRUCTURE
SPAN 14
STRUCTURE NO. 016-3240**

TYLIN INTERNATIONAL

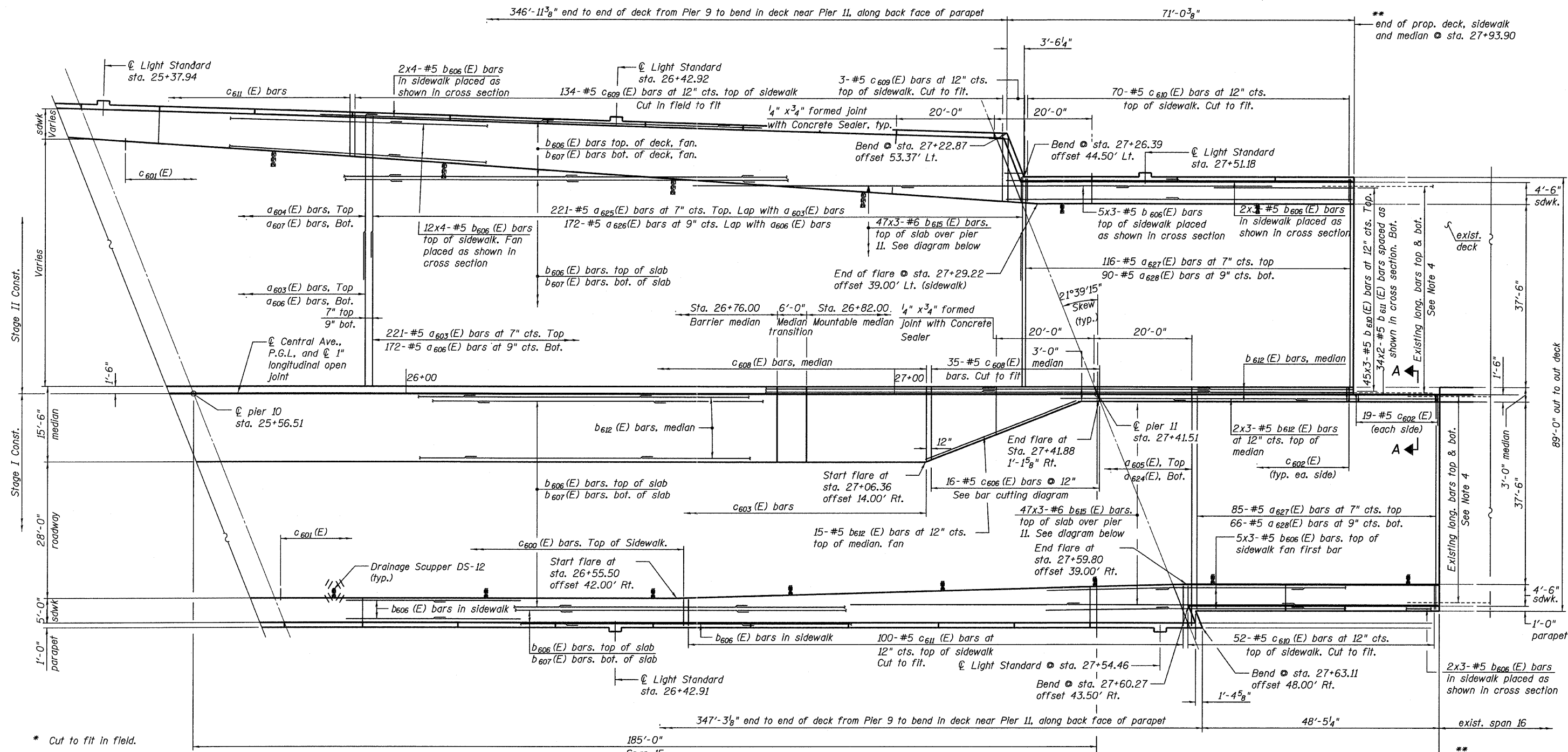
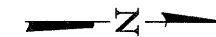
DESIGNED -	DY, LS	REVISIONS	
CHECKED -	AMD, LS	NAME	DATE
DRAWN -	DY, LS		
CHECKED -	AMD, LS		
DATE -	03/25/2011		

SHEET NO. 21	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	624
73 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

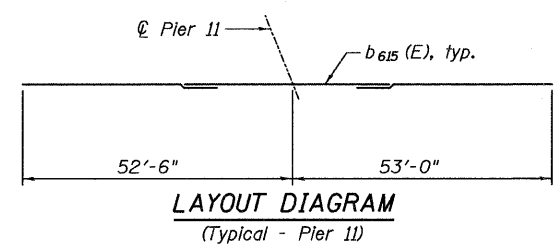
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** Contractor to match and meet existing elevations for top of deck, top of sidewalk and top of median. Cost included in "Concrete Superstructure".



PLAN



LAYOUT DIAGRAM
(Typical - Pier 11)

MINIMUM BAR LAPS

Size	Min Lap
#5	3'-3"
#6	3'-10"

SUPERSTRUCTURE
SPANS 15 & 16
STRUCTURE NO. 016-3240

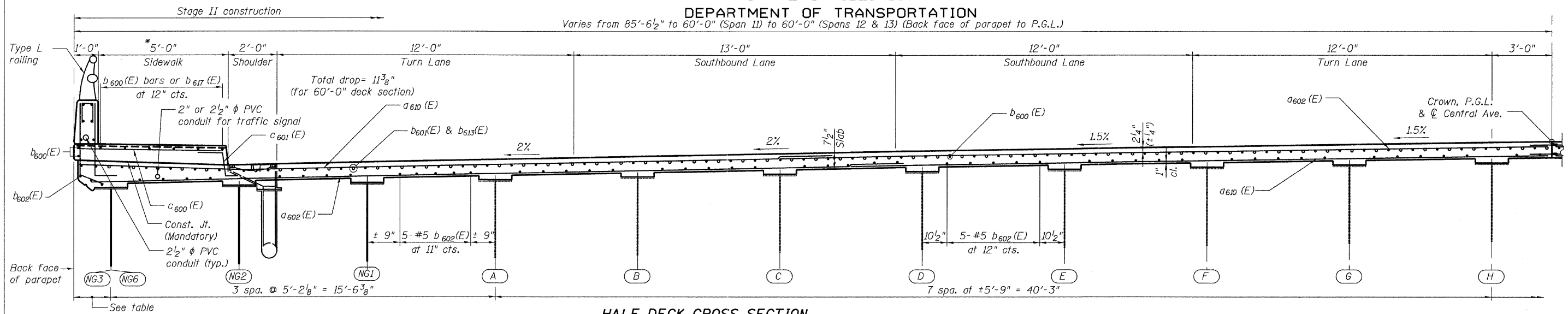
NOTES:

- For superstructure details, see Sheets 27 and 28 of 73. For Bill of Material, see Sheet 27 of 73.
- Bars indicated thus 46 x 8-#5 etc. indicates 46 lines of bars with 8 lengths per line.
- For parapet reinforcement, see Sheet 26 of 73.
- Existing longitudinal deck reinforcement shall be cleaned and incorporated into the new construction. Cost included with Removal of Existing Concrete Deck No. 2.
- For locations of scuppers, see Sheet 33 of 73. Cut longitudinal reinforcement to clear scuppers.
- Place 3/4" ϕ Galvanized expansion anchors or Ferrule Loop Slab Insert (Proof load 6600 lb) at each C₆₀₂(E) bar in median. The cost of expansion anchors/inserts is included in the cost of Reinforcement Bars, Epoxy Coated.
- For Section A-A, see Sheet 28 of 73.

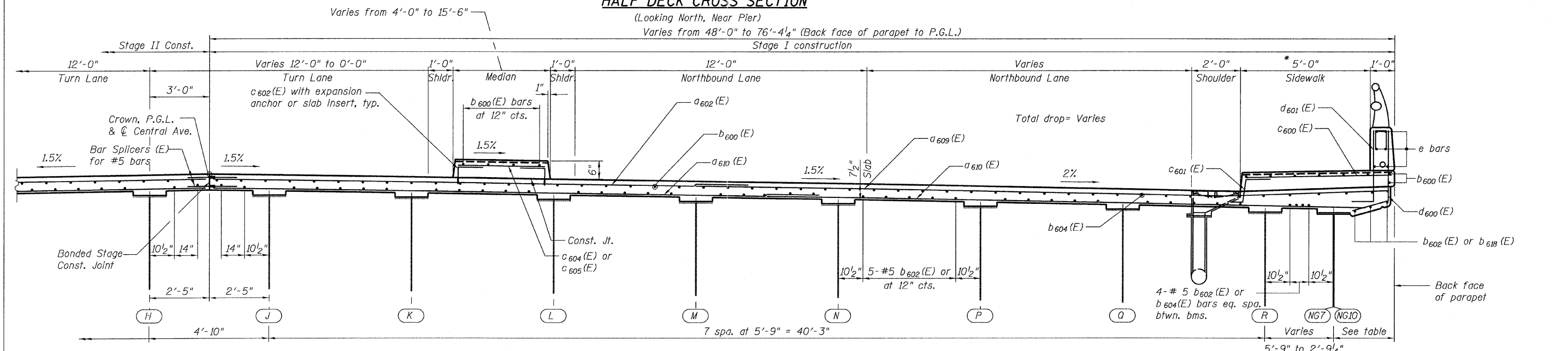
TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 22	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE		73 SHEETS	55	0711.2R & 1011.1BR	COOK	741	625
	DRAWN - DY, LS				CONTRACT NO. 60999					
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



HALF DECK CROSS SECTION
(Looking North, Near Pier)



HALF DECK CROSS SECTION
(Looking North, Near Midspan)

NOTES:

1. Stage III Construction shall consist of median construction.
2. For section thru sidewalk, see sheet 27 of 73.

SLAB OVERHANG WIDTH

Girder	Location	Width
NG6	Span 11	Varies 1'-4" to 4'-1 3/8"
NG3	Span 11	Varies 4'-5 3/8" to 1'-9 5/8"
NG3	Spans 12 & 13	1'-9 5/8"
NG7	Span 11	Varies 5'-2" to 3'-6 1/4"
NG7	Spans 12 & 13	Varies 3'-6 1/4" to 2'-2"
NG10	Span 11	Varies 1'-4" to 5'-1 1/8"

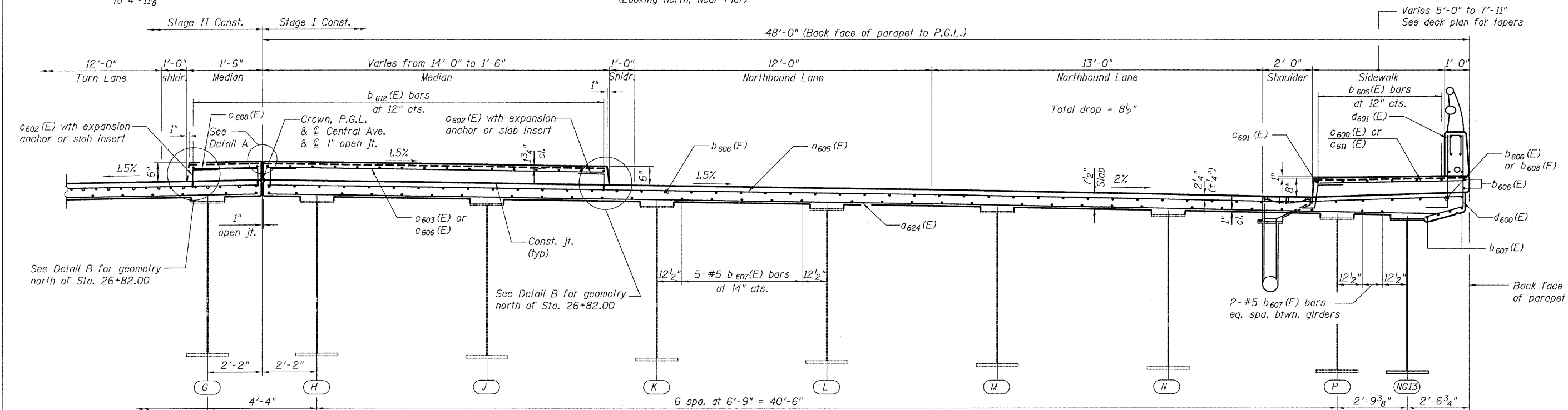
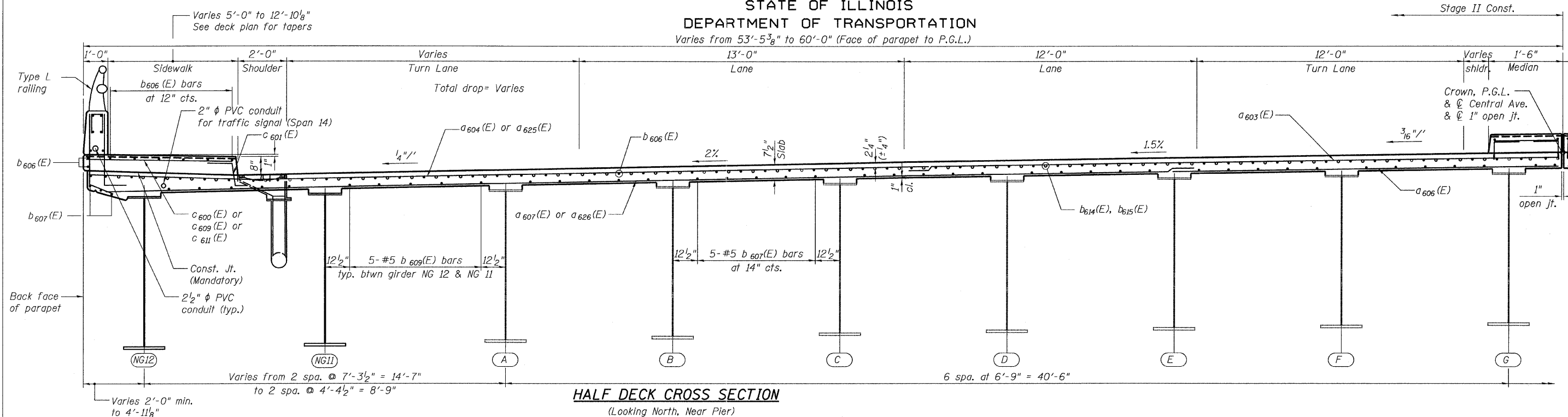
SUPERSTRUCTURE CROSS SECTION SPANS 11, 12 & 13
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL

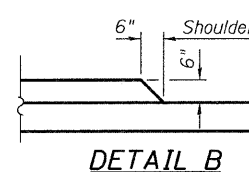
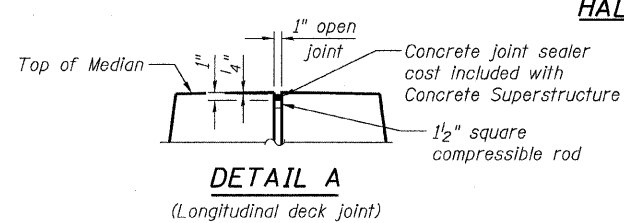
DESIGNED -	DY, LS	REVISIONS	
CHECKED -	AMD, LS	NAME	DATE
DRAWN -	DY, LS		
CHECKED -	AMD, LS		
DATE -	03/25/2011		

SHEET NO. 23	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	626
73 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
Varies from 53'-5³/₈" to 60'-0" (Face of parapet to P.G.L.)



* Measured perpendicular to face of parapet.



NOTES:

1. Stage III Construction shall consist of median construction.
2. For section thru sidewalk, see sheet 27 of 73.

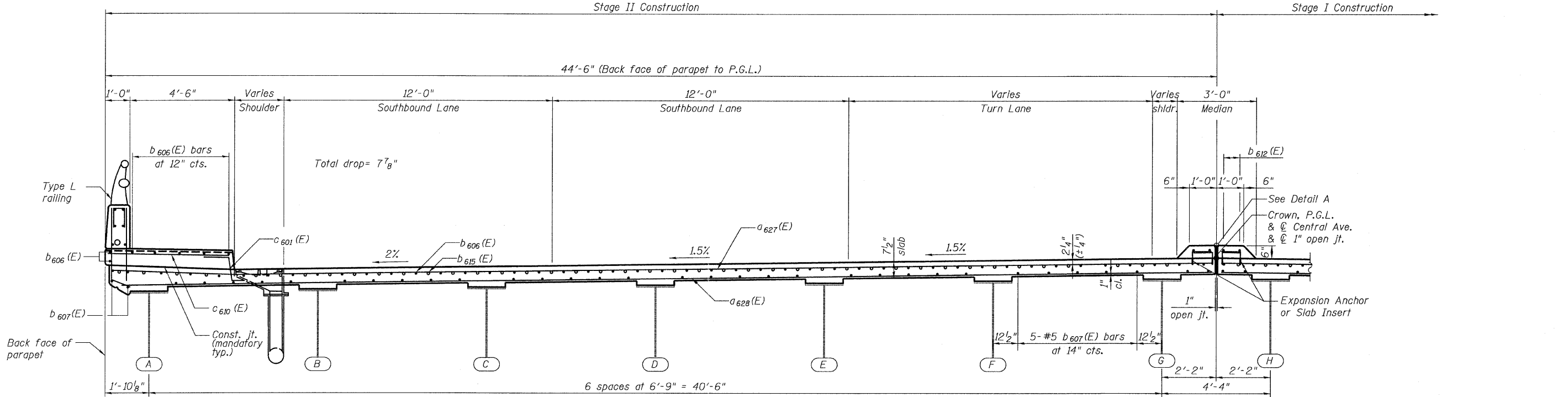
SUPERSTRUCTURE CROSS SECTION SPANS 14 & 15
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS	
	CHECKED - AMD, LS	NAME	DATE
	DRAWN - DY, LS		
	CHECKED - AMD, LS		
	DATE - 03/25/2011		

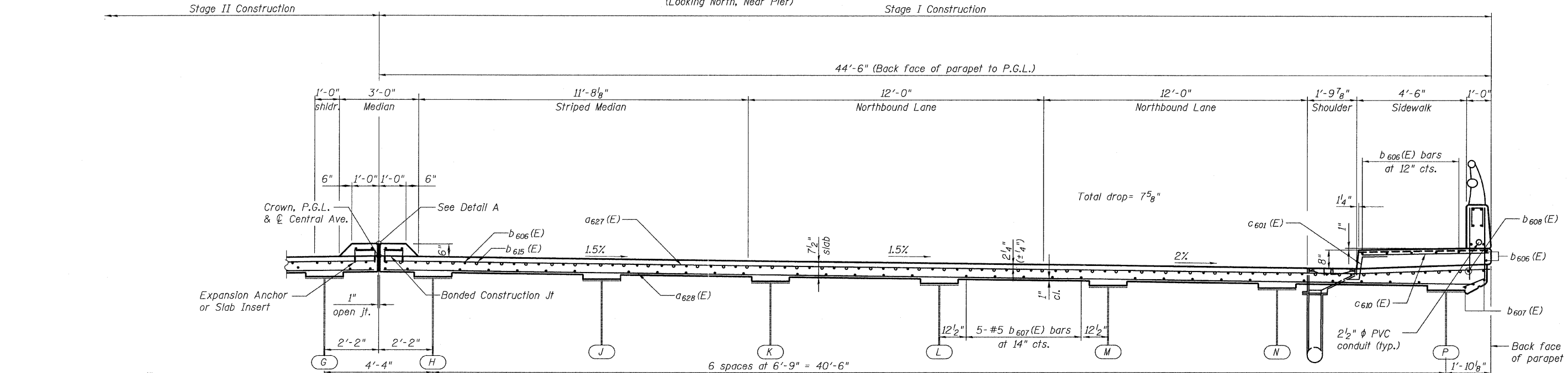
SHEET NO. 24	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	73 SHEETS	55	0711.2R & 1011.1BR	COOK	741 627
FED. ROAD DIST. NO. 1			ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60999					

5/9/2011 9:15:29 AM
016-3240-1563deckssec2.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

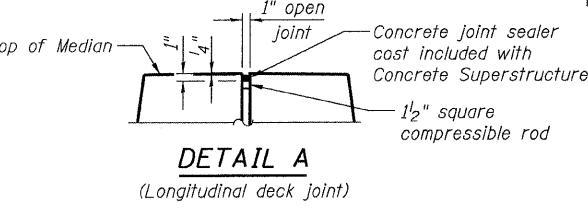


HALF DECK CROSS SECTION
(Looking North, Near Pier)



HALF DECK CROSS SECTION
(Looking North, Near Midspan)

- NOTES:**
1. Stage III Construction shall consist of median construction.
 2. For section thru sidewalk, see sheet 27 of 73.

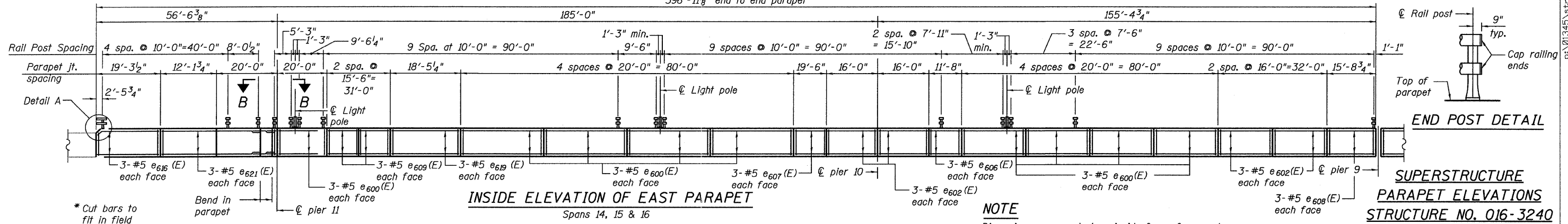
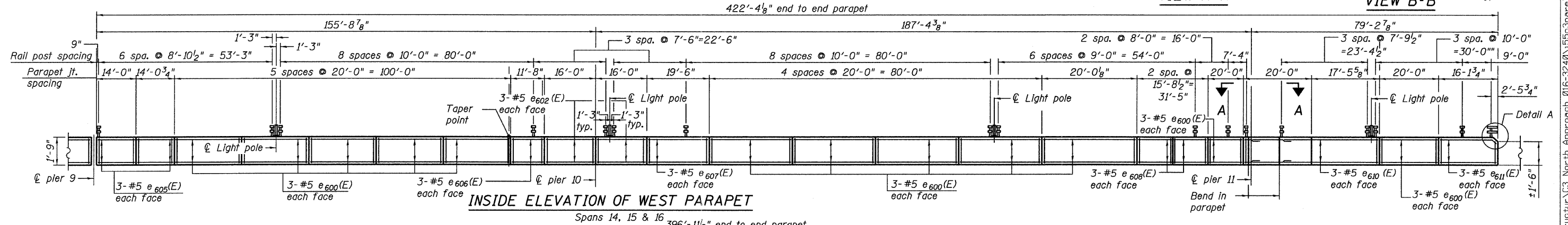
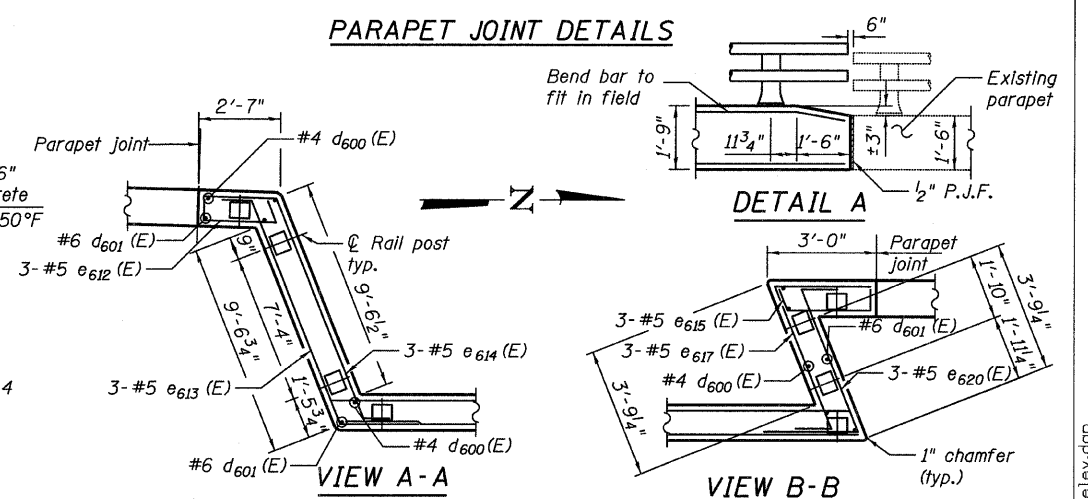
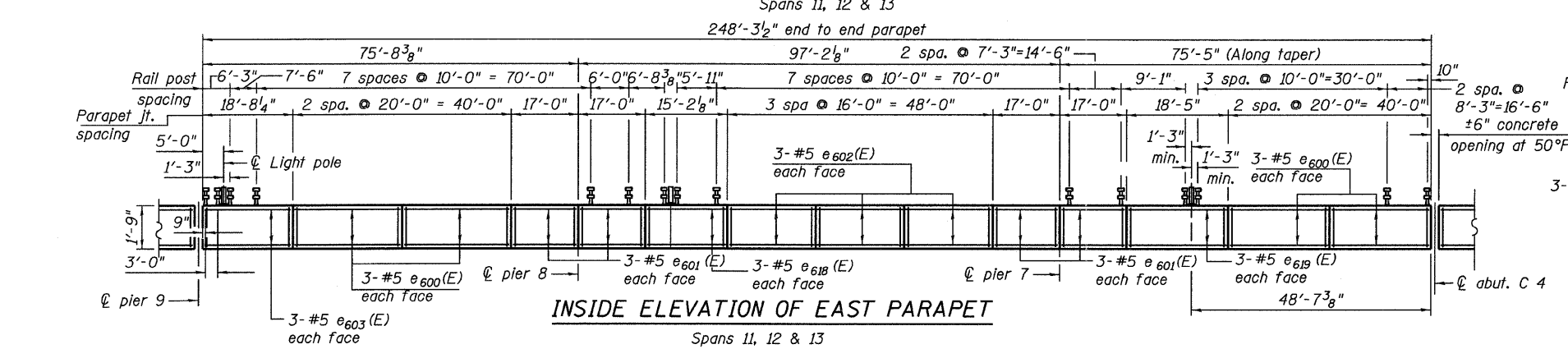
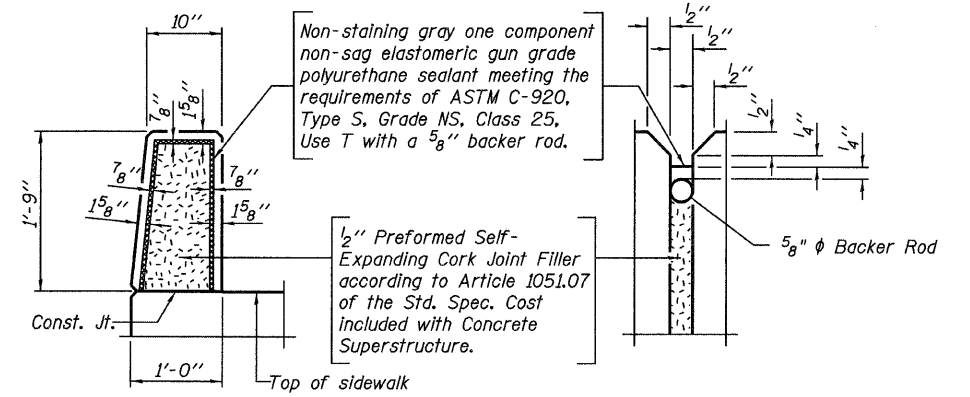
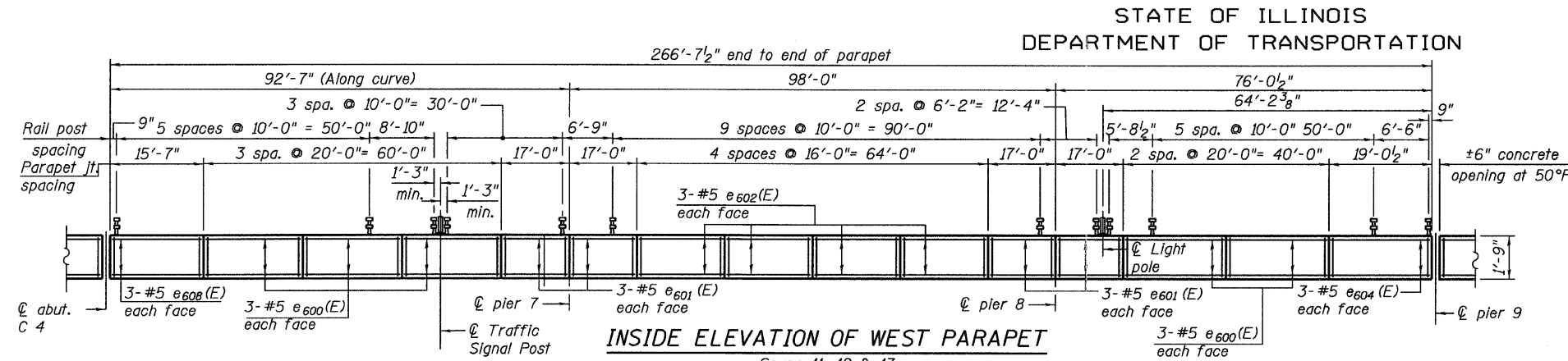


SUPERSTRUCTURE CROSS SECTION SPAN 16
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 25	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	628	
	DRAWN - DY, LS				73 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

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pi:01345\structure\03 North Approach_016-3240\1503decks3.dgn
5/9/2011

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



**SUPERSTRUCTURE
PARAPET ELEVATIONS
STRUCTURE NO. 016-3240**

NOTE
Dimensions measured along inside face of parapet.

TYLIN INTERNATIONAL

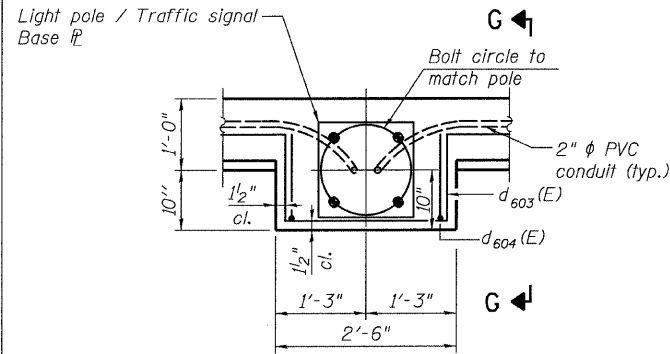
DESIGNED - DY, LS
CHECKED - AMD, LS
DRAWN - DY, LS
CHECKED - AMD, LS
DATE - 03/25/2011

REVISIONS	
NAME	DATE

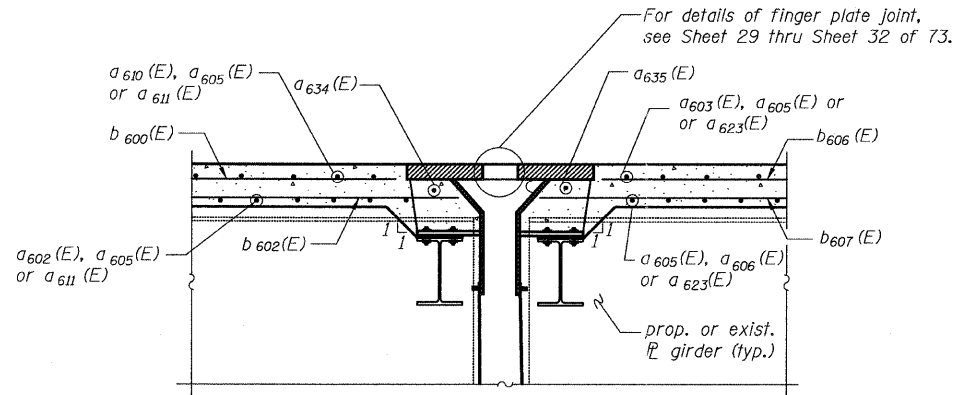
SHEET NO. 26
73 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60999			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	

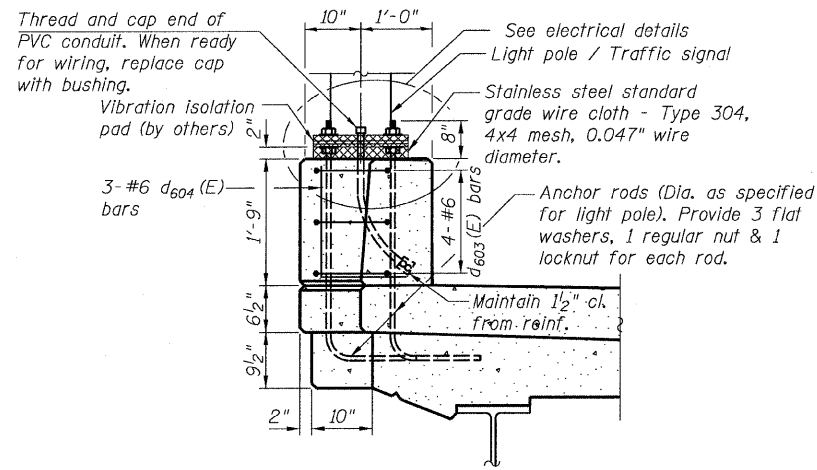
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



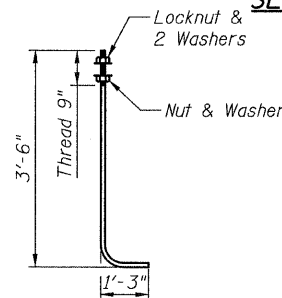
PLAN
LIGHT POLE & TRAFFIC SIGNAL SUPPORT
(MOUNTED ON PARAPET)



SECTION E-E



SECTION G-G



ANCHOR ROD

Diameter as specified for light poles/traffic signal poles (ASTM F 1554 Grade 105)
Cost of anchor bolts & conduit is included with Concrete Superstructure.

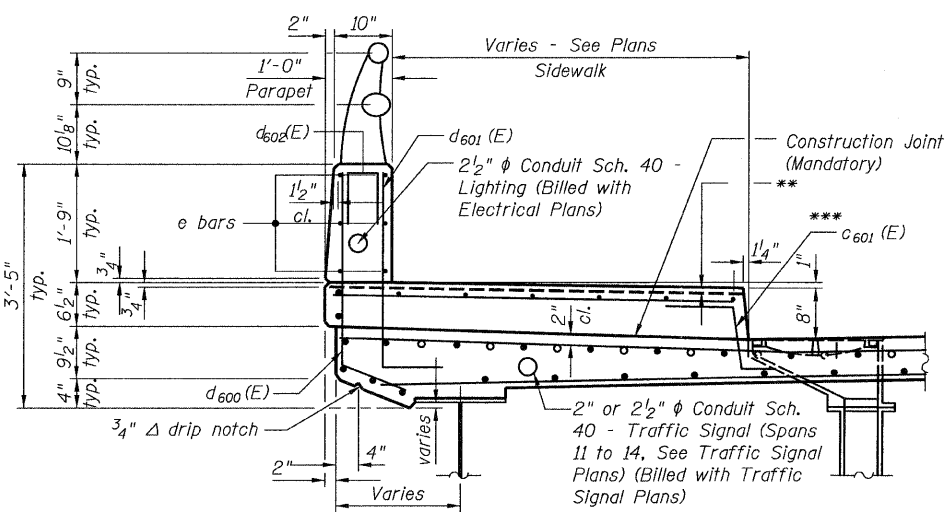
BARS IN EDGE BEAM ALONG C ABUT. 4

BAYS	# of x600(E) Bars/Boy	Bar mark along skew
NG6 to NG5	4	a629(E)
NG5 to NG4	4	
NG4 to NG3	3	a630(E)
NG3 to NG2	5	
NG2 to NG1	5	a631(E)
NG1 to A	5	
A to B thru G to H	4	**
H to J thru R to NG7	5	a631(E)
NG3 to NG2	7	a632(E)
NG2 to NG1		
NG1 to A		

** See Bar Splicer Assembly sheet

DIMENSION "D"

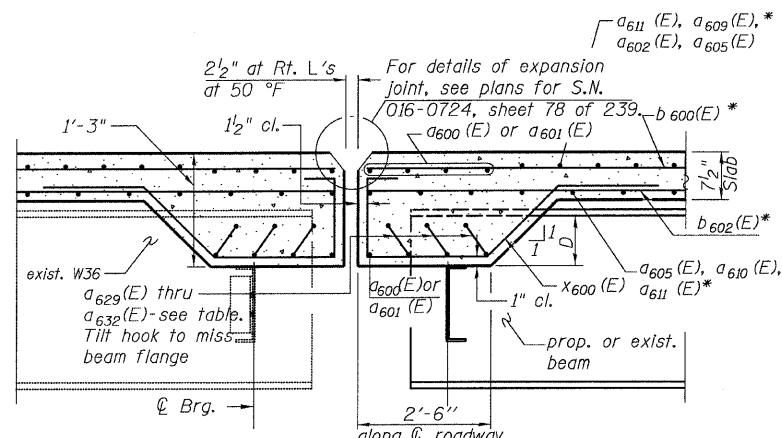
Girder	D
NG1 thru NG3, NG7	5 5/8"
A thru R (max.)	4 3/8"
NG4, NG5, NG8 & NG9	6 1/2"
NG10	6 3/8"
NG6	7"



SECTION THRU SIDEWALK & PARAPET

** 1/4"x3/4" formed joint with concrete sealer (full width along joint-backer rod not required) at piers and either side. See deck plans for locations.

*** In lieu of bottom leg c601(E) bars may be cored and set according to article 509.06 of the Standard Specifications. Cored holes shall be roughened or scored per Manufacturer's Recommendations, maximum depth of cored hole shall not exceed 5 1/2".



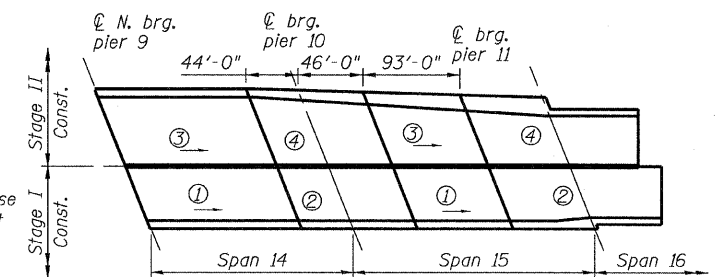
SECTION D-D

*Longitudinal & transverse bars in flared deck regions not shown for clarity

NOTES:

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 of the following are met:

1. At least 72 hours shall have elapsed from the end of the previous pour.
2. The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.



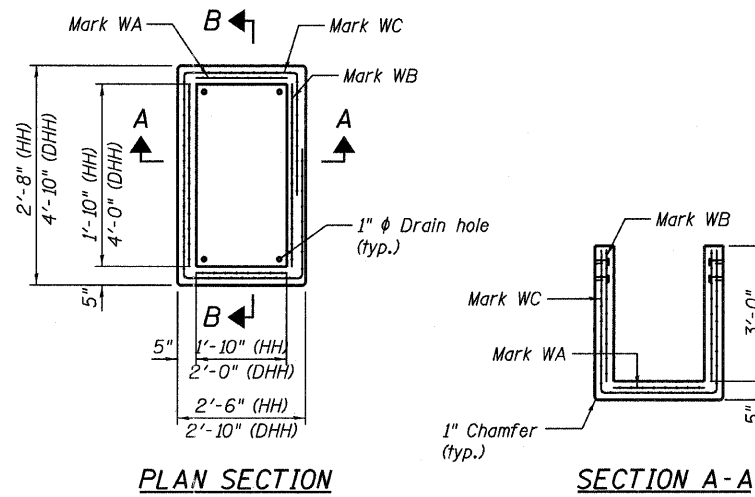
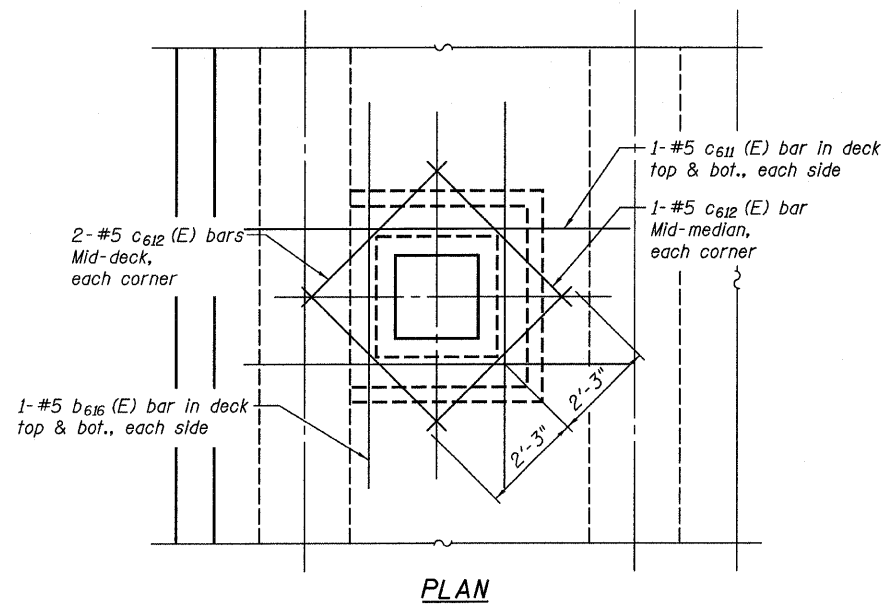
POURING SEQUENCE
(Spans 14, 15 & 16)

SUPERSTRUCTURE
DETAILS 1

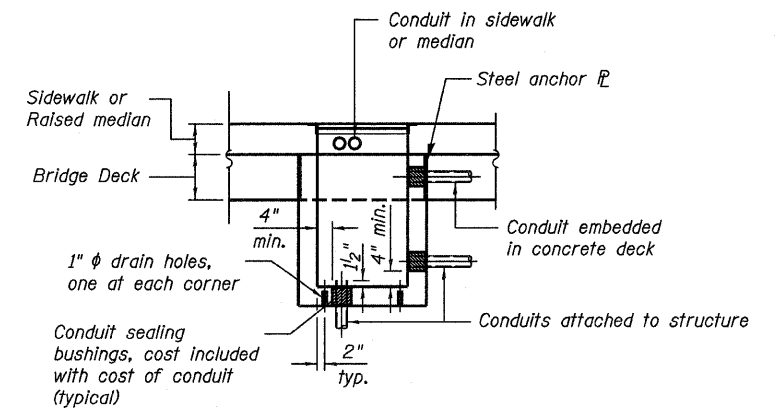
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 27	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE		73 SHEETS	55	0711.2R & 1011.1BR	COOK	741	630
	DRAWN - DY, LS					CONTRACT NO. 60999				
	CHECKED - AMD, LS					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/25/2011									

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PRECAST CONCRETE HH & DHH DETAILS

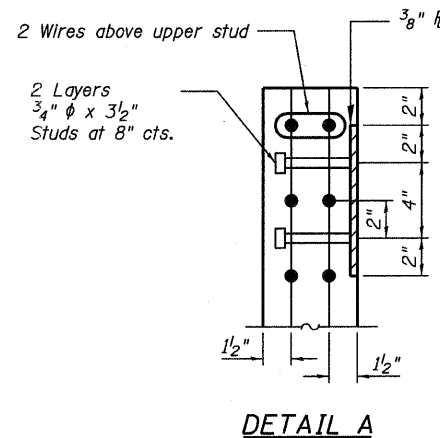
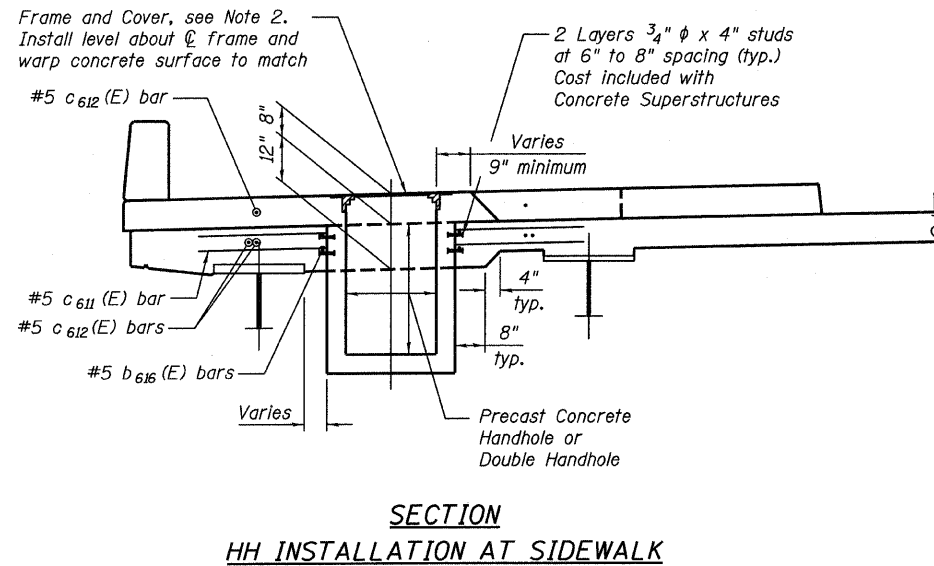


CONDUIT DETAILS & HANDHOLES

- Holes for conduit penetration must be cast in or cored in shop. Min. clear spacing between conduit holes shall be 5 in.
- Conduit holes shall be compatible with Fabricator's Conduit Sealing System.
- The contractor shall coordinate the sizes & locations of the conduits with the conduit installation plan, and include the sizes & locations of the conduit holes in the shop drawings for fabrication of the handholes. The conduit installation plan shall be submitted for information with the Handhole shop drawings.

NOTES:

- Frame and cover shall be Neenah R6662-GP for single handhole, and R6663-KH for double handhole; or approved equal. Cost included with Handhole (Special).
- For concrete handhole locations, see Sheet 20.
- Cost of handhole concrete, reinforcement, embedded studs and $\frac{3}{8}$ " \bar{L} shall be included in Handhole (Special).
- For bar list and bar details, see Sheet 28.



Note:
Work this sheet with Traffic Signal and Lighting Plans.

MARK	WWR	HH		DHH	
		L [ft]	T [ft]	L [ft]	T [ft]
WA	*	8'-2"	1'-11"	10'-4"	2'-1"
WB	*	8'-6"	1'-11"	8'-8"	4'-1"
WC	*	10'-0"	3'-4"	14'-8"	3'-4"

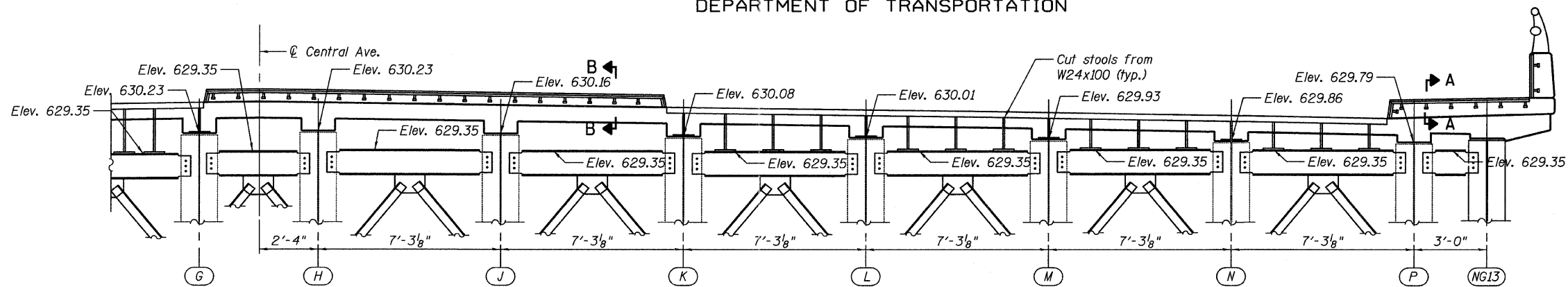
* All WWR shall be epoxy coated 4" x 4" - MW26xMW26. All bend radii 1". Min. lap 6".

STRUCTURE-MOUNTED
HANDHOLE DETAILS
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - MMB	REVISIONS		SHEET NO. 28A	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

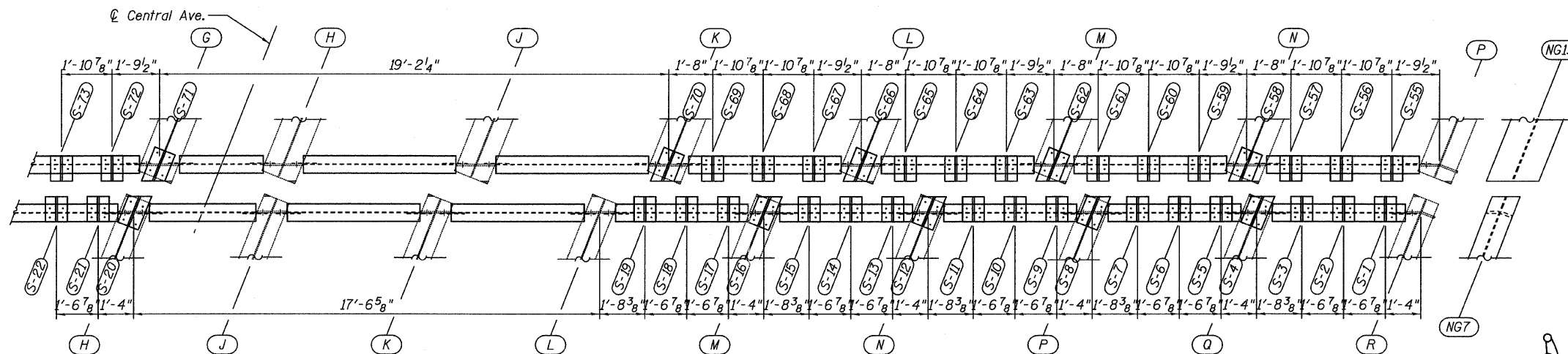
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

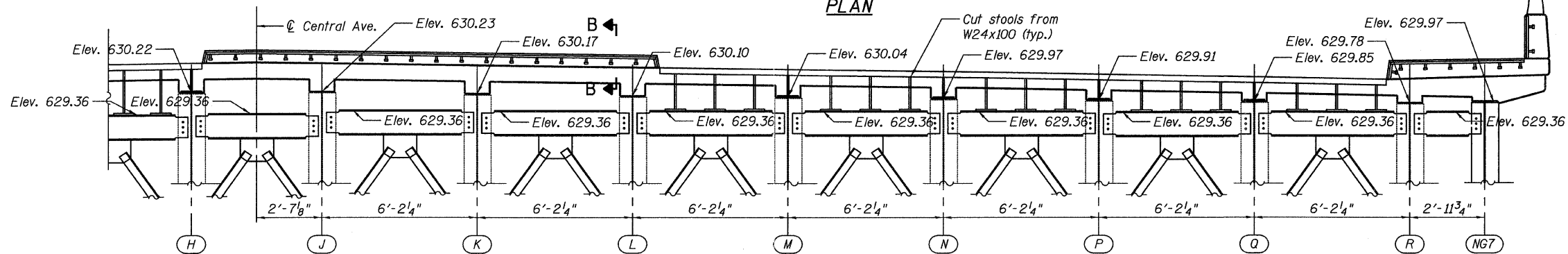


CROSS FRAME DIAPHRAGMS AT PIER 9

(Span 14, Looking North)



PLAN

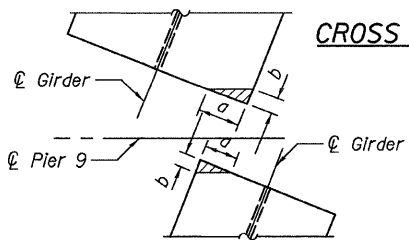


CROSS FRAME DIAPHRAGMS AT PIER 9

(Span 13, Looking North)

BEAM CLIPPING DIMENSIONS

Girder	Span	a	b
A thru R	11 thru 13	3 3/4"	1 1/2"
A thru P	14 thru 15	4 1/2"	1 3/4"



BEAM CLIPPING DIAGRAM

NOTES:

1. For Section A-A and B-B see sheet 32.
2. Holes in new cross frame connection plates are to be field drilled using the holes in the existing connection as a template.
3. According to existing plans, the end cross frame is level.
4. The ends of the proposed girders are cut parallel to the skew.

**FINGER PLATE PLAN &
SECTIONS - EAST
STRUCTURE NO. 016-3240**

TYLIN INTERNATIONAL

DESIGNED	BY	LS	REVISIONS	
CHECKED	BY	LS	NAME	DATE
DRAWN	BY	LS		
CHECKED	BY	LS		
DATE				

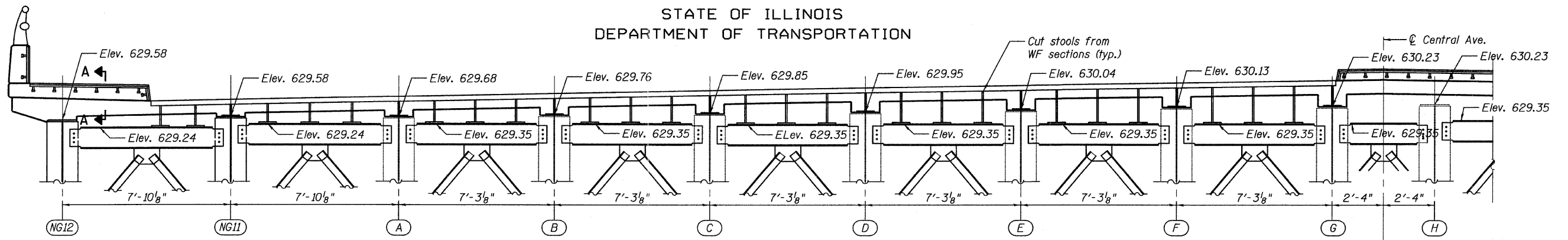
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			CONTRACT NO. 60999		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

4/28/2011

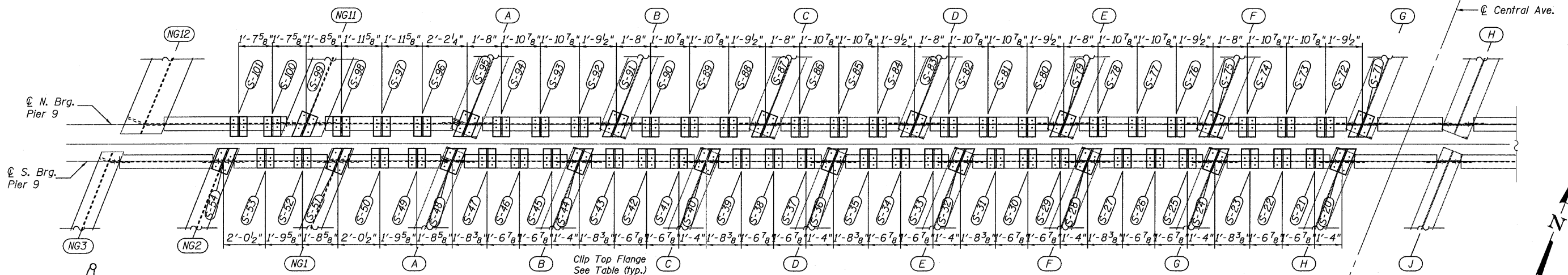
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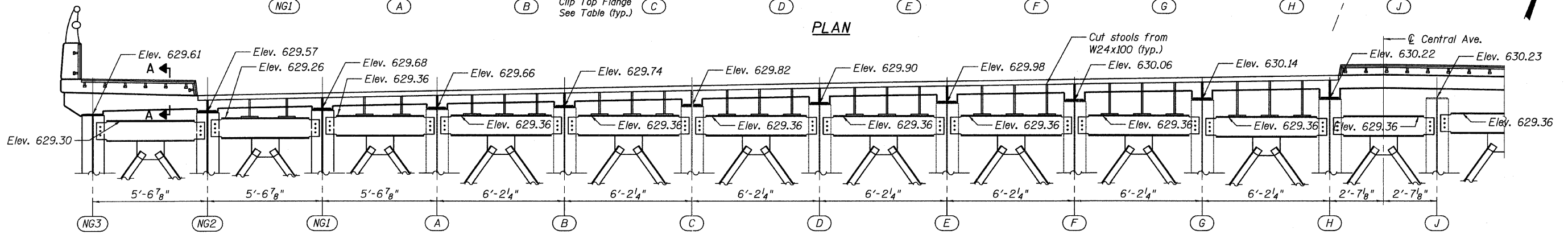
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



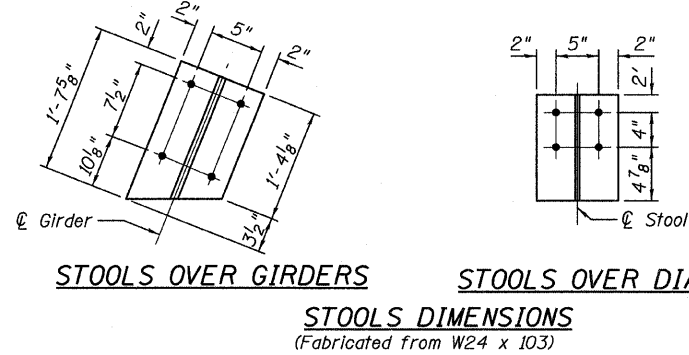
CROSS FRAME DIAPHRAGMS AT PIER 9



PLAN



CROSS FRAME DIAPHRAGMS AT PIER 9
(Span 13, Looking North)



NOTES:

1. For Section A-A and B-B see sheet 32.
2. Holes in new cross frame connection plates are to be field drilled using the holes in the existing connection as a template.
3. According to existing plans, the end cross frame is level.
4. The ends of the proposed girders are cut parallel to the skew.

FINGER PLATE PLAN &
SECTIONS - WEST
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL

	DESIGNED - DY, LS	REVISIONS	
		NAME	DATE
CHECKED - AMD, LS			
DRAWN - DY, LS			
CHECKED - AMD, LS			
DATE - 03/25/2011			

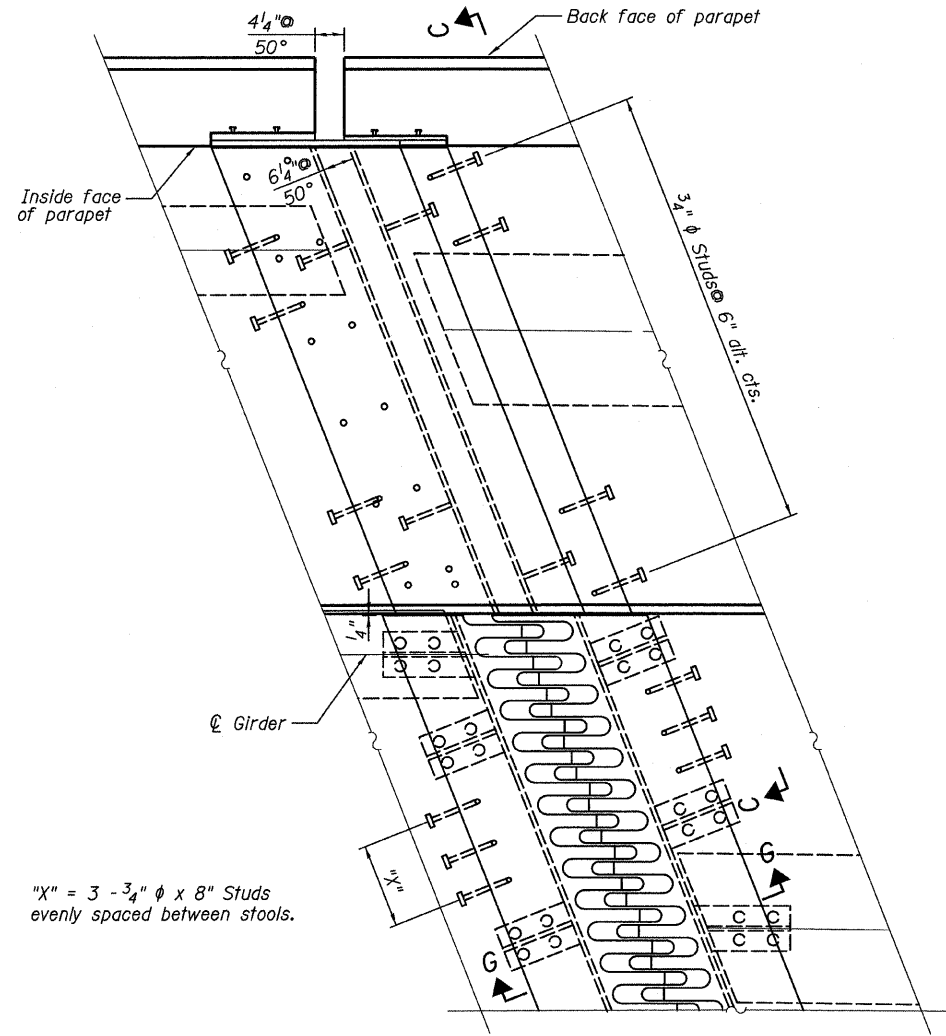
SHEET NO. 30 73 SHEETS	F.A.I. RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS 741	SHEET NO. 633
	CONTRACT NO. 60999			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	

4/28/2011 2:27:39 PM E:\01345\structure\016-3240\5563\finderwest.dgn

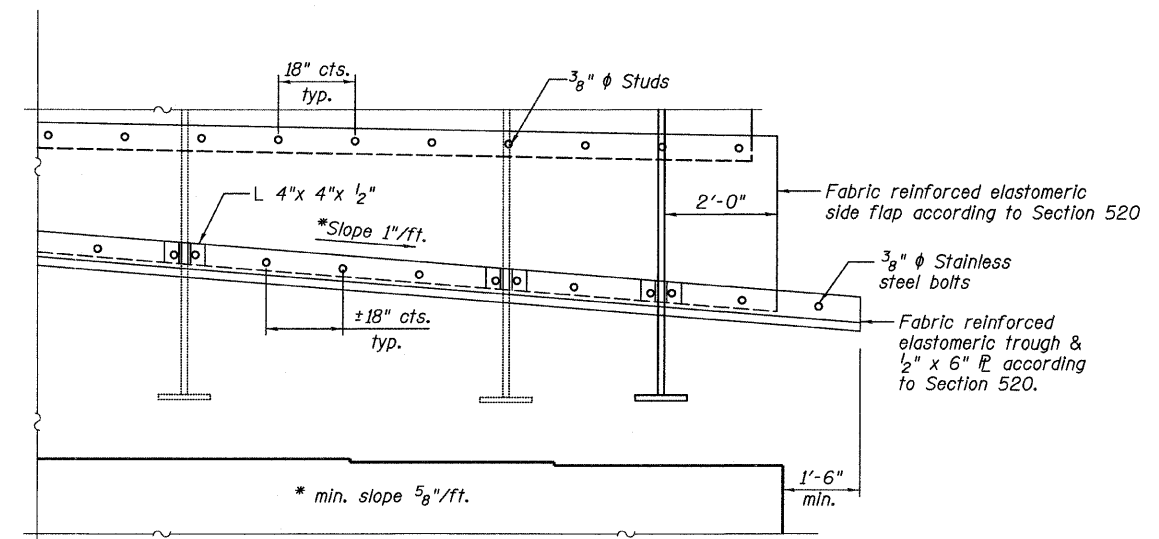
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STOOL DIMENSIONS

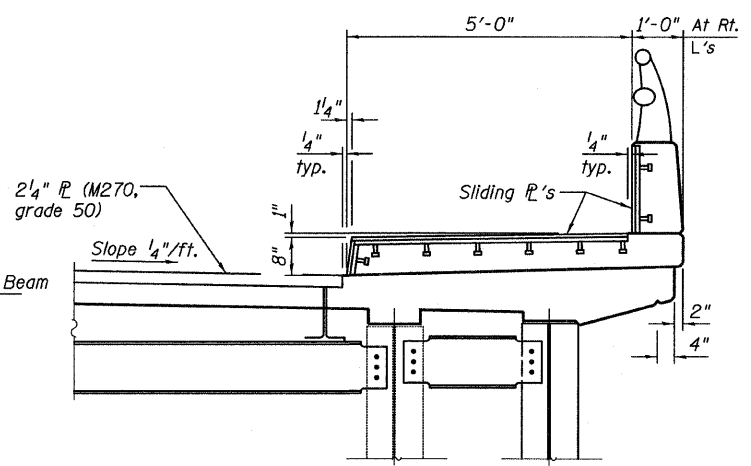
(South Side)		(North Side)	
Stool	Ht. (in)	Stool	Ht. (in)
S-1	12 7/8	S-55	13 3/4
S-2	13 1/4	S-56	13 3/4
S-3	13 5/8	S-57	14 1/8
S-4	8 1/8	S-58	8 1/4
S-5	14 1/4	S-59	14 1/4
S-6	14 3/8	S-60	15 1/8
S-7	14 1/8	S-61	15 1/2
S-8	8 5/8	S-62	8 7/8
S-9	15 1/2	S-63	16 1/4
S-10	15 7/8	S-64	16 1/2
S-11	16 1/8	S-65	16 1/8
S-12	9 1/8	S-66	9 1/4
S-13	16 3/8	S-67	17 3/8
S-14	16 1/8	S-68	17 1/4
S-15	17 1/8	S-69	18
S-16	9 1/4	S-70	9 1/2
S-17	17 5/8	S-71	9 7/8
S-18	17 1/8	S-72	20 1/8
S-19	18 1/8	S-73	19 3/4
S-20	9 1/8	S-74	19 3/8
S-21	20	S-75	9 3/4
S-22	19 3/8	S-76	18 1/4
S-23	19 3/8	S-77	18 1/2
S-24	9 3/4	S-78	18 1/8
S-25	18 1/8	S-79	9 1/2
S-26	18 1/2	S-80	17 1/2
S-27	18 1/4	S-81	17 1/8
S-28	9 1/2	S-82	16 3/4
S-29	17 3/4	S-83	9 3/8
S-30	17 1/2	S-84	16 1/8
S-31	17 1/8	S-85	15 3/4
S-32	9 3/8	S-86	15 3/8
S-33	16 3/8	S-87	9
S-34	16 3/8	S-88	14 5/8
S-35	16	S-89	14 1/8
S-36	9 1/4	S-90	13 3/4
S-37	15 3/8	S-91	8 3/8
S-38	15 1/8	S-92	12 1/8
S-39	14 3/4	S-93	12 1/2
S-40	8 3/4	S-94	12
S-41	14	S-95	7 3/4
S-42	13 5/8	S-96	12 3/8
S-43	13 1/4	S-97	12 1/2
S-44	8 1/4	S-98	12
S-45	12 5/8	S-99	7
S-46	12 1/4	S-100	11
S-47	11 1/8	S-101	10 1/8
S-48	7 1/4		
S-49	11		
S-50	10 5/8		
S-51	6 1/4		
S-52	10 1/8		
S-53	10 1/2		
S-54	6 1/4		



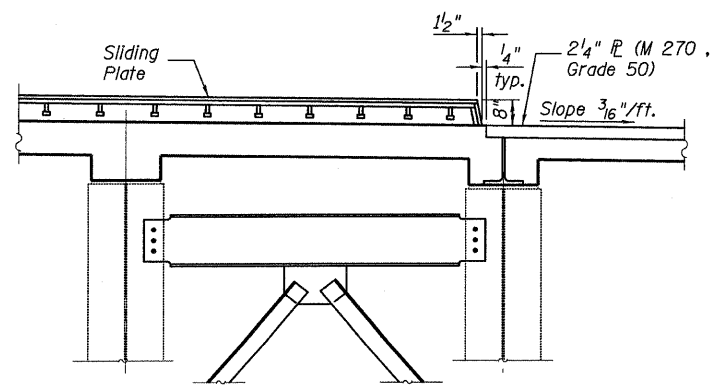
PLAN AT PIER 9
(at 50°)



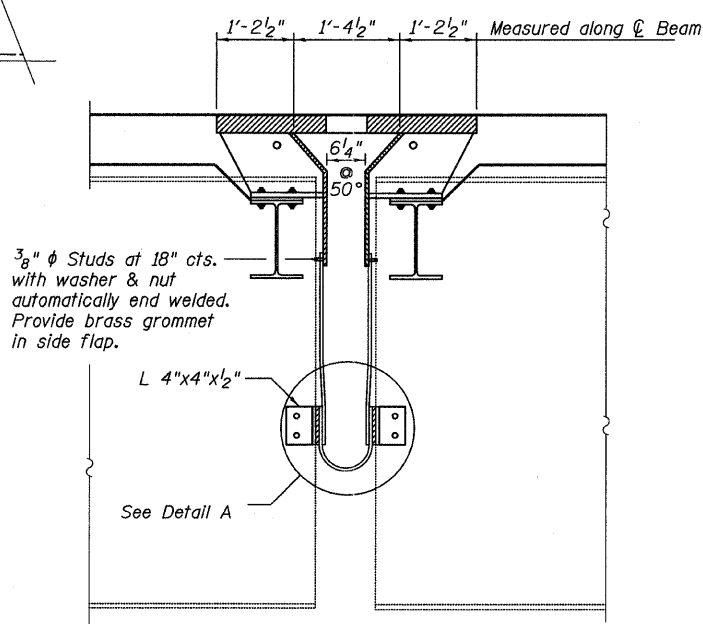
SECTION C-C



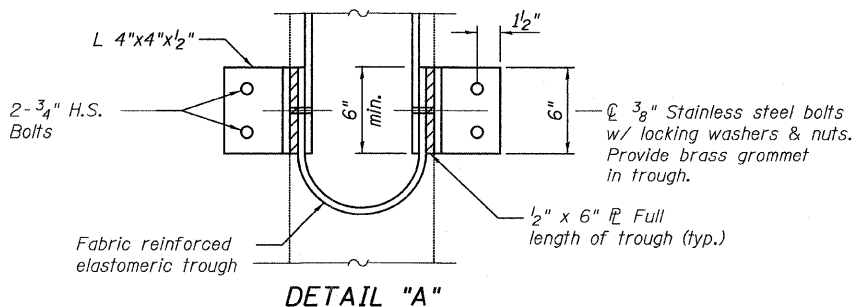
SIDEWALK AND PARAPET
(East Side Looking North - showing sliding plates)



RAISED MEDIAN
(Looking North - Showing Sliding Plates)



SECTION G-G THRU PIER 9
(Looking West)

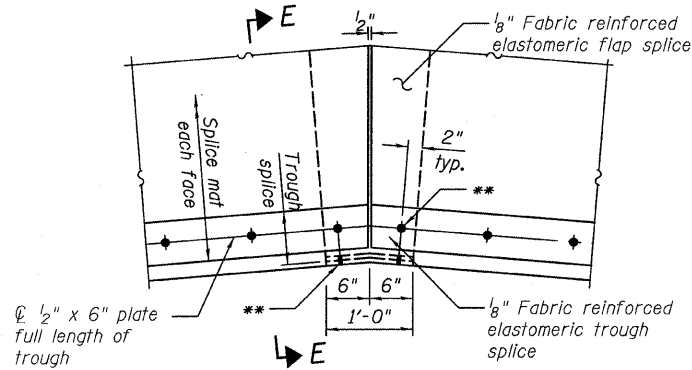


DETAIL "A"

**FINGER PLATE
DETAILS I
STRUCTURE NO. 016-3240**

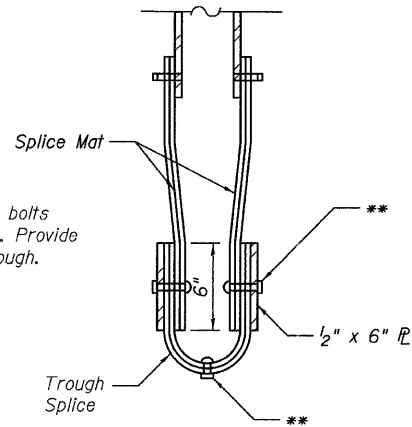
TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 31	F.A.I. RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS 741	SHEET NO. 634
	CHECKED - AMD, LS	NAME	DATE						
	DRAWN - DY, LS								
	CHECKED - AMD, LS								
	DATE - 03/25/2011								
				73 SHEETS	CONTRACT NO. 60999		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

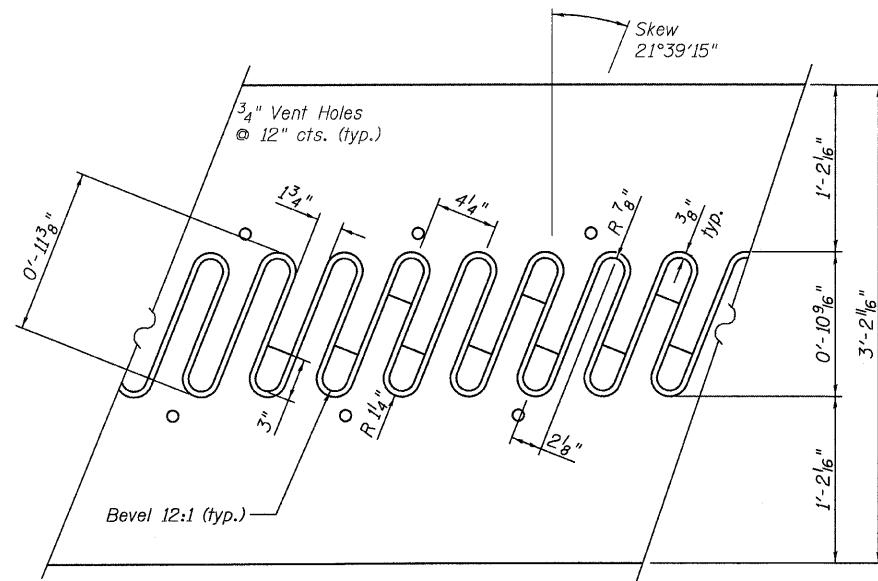


TROUGH SPLICE DETAIL

** 3/8" ϕ Stainless steel bolts with washers & nuts. Provide brass grommet in trough.



SECTION E-E



FLAME CUTTING DIAGRAM

Cut from \mathbb{P} 2 1/4" x 3'-2 1/16" x 57'-8 1/16" for West Side
& \mathbb{P} 2 1/4" x 3'-2 1/16" x 31'-4 5/16" for East Side

NOTES

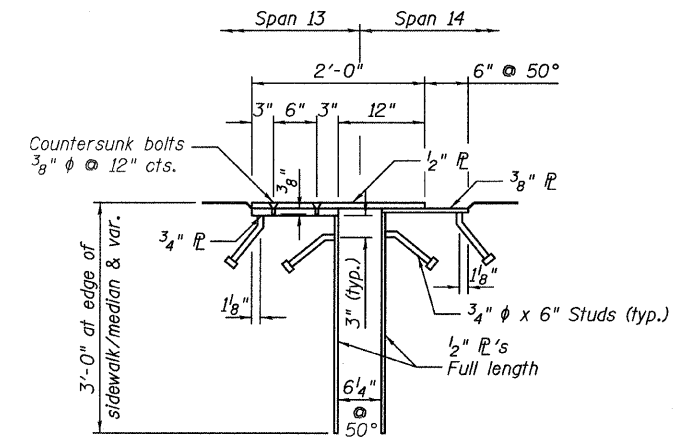
1. For stool locations, see sheet 29 & 30.
2. See sheets 44 & 45 for cross frame details.
3. Finger plate expansion joints shall be assembled in their final relative position with the ends in place for shop inspection and acceptance.
4. M 270 Grade 50 steel shall be used for the finger plates and attachments.
5. Steel members for the finger plate expansion joint including 1/2" shim, two 1/4" shims, one 1/8" and one 1/16" for height adjustments are furnished under a separate contract. Installation of these items is included in the cost of "Finger Plate Expansion Joint, 6" (Erect Only).

LEGEND

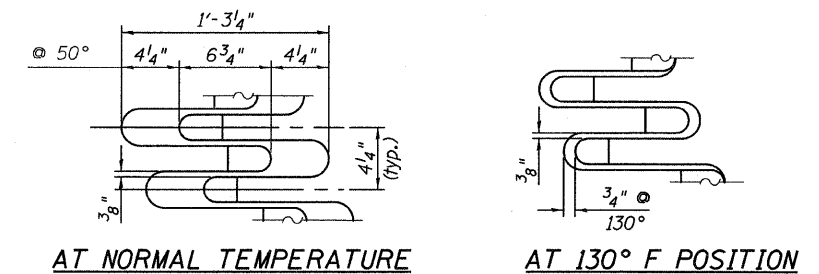
E.S. - Denotes Each Side
F.F. - Denotes Front Face

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Finger Plate Expansion Joint, 6" (Erect Only)	FOOT	116.0



**SECTION A-A & B-B
SIDEWALK/MEDIAN PLATE ASSEMBLY DETAIL**

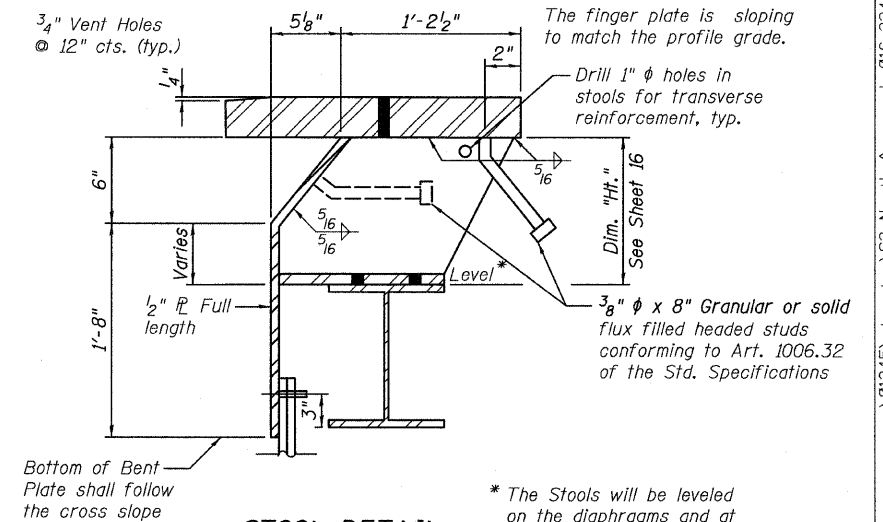


AT NORMAL TEMPERATURE

AT 130° F POSITION

FINGER PLATE DETAILS

Temperature Range = -30° to 130°
with 50° = Normal
Coeff. of Linear Expansion = 0.0000065/° F



STOOL DETAIL

**FINGER PLATE
DETAILS 2
STRUCTURE NO. 016-3240**

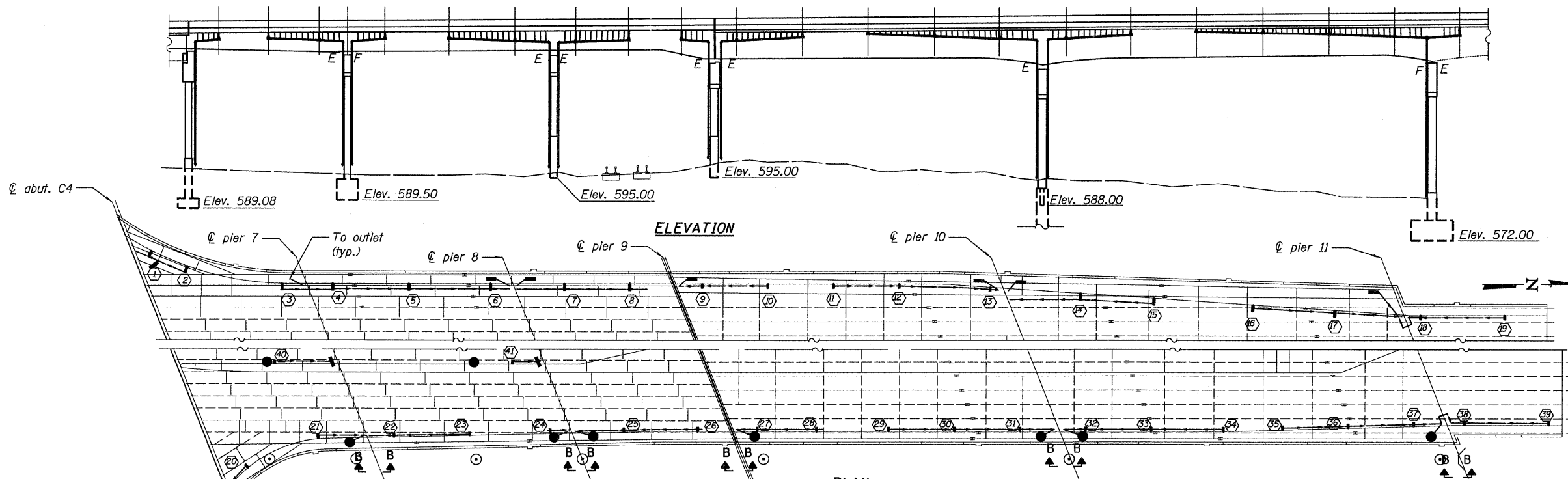
TYLIN INTERNATIONAL

DESIGNED - DY, LS	REVISIONS	
	NAME	DATE
CHECKED - AMD, LS		
DRAWN - DY, LS		
CHECKED - AMD, LS		
DATE - 03/25/2011		

SHEET NO. 32	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	635
73 SHEETS	CONTRACT NO. 60999				
	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

4/28/2011

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION

PLAN

SCUPPER LOCATION TABLE

Scupper No.	Type	Station	Offset	Lt/Rt
1	DS-33	21+31.75	69.36	Lt
2	DS-33	21+48.64	62.17	Lt
3	DS-33	21+93.74	54.02	Lt
4	DS-33	22+17.77	54.00	Lt
5	DS-33	22+54.01	54.00	Lt
6	DS-33	22+92.78	54.00	Lt
7	DS-33	23+27.88	54.00	Lt
8	DS-33	23+58.88	54.00	Lt
9	DS-12	23+93.24	54.00	Lt
10	DS-12	24+24.41	54.00	Lt
11	DS-12	24+55.58	54.00	Lt
12	DS-12	24+86.75	54.00	Lt
13	DS-12	25+30.04	52.42	Lt
14	DS-33	25+72.87	49.54	Lt
15	DS-33	26+07.79	47.18	Lt
16	DS-33	26+54.69	44.02	Lt
17	DS-33	26+93.60	41.40	Lt
18	DS-12	27+34.22	39.00	Lt
19	DS-12	27+74.22	39.00	Rt
20	DS-12	21+87.61	59.47	Rt
21	DS-12	22+20.95	45.73	Rt
22	DS-12	22+57.01	44.79	Rt
23	DS-11	22+92.91	44.01	Rt
* 24	DS-12	23+31.16	42.84	Rt
25	DS-12	23+66.16	42.41	Rt
26	DS-12	24+01.16	42.00	Rt
27	DS-12	24+29.45	42.00	Rt
28	DS-12	24+57.62	42.00	Rt
29	DS-12	24+91.79	42.00	Rt
30	DS-12	25+22.96	42.00	Rt
31	DS-12	25+54.13	42.00	Rt
32	DS-12	25+85.29	42.00	Lt
33	DS-12	26+16.46	42.00	Rt
34	DS-12	26+50.63	42.00	Rt
35	DS-12	26+78.80	41.33	Rt
36	DS-12	27+09.95	40.33	Rt
37	DS-12	27+41.11	39.54	Rt
38	DS-12	27+65.17	39.00	Rt
39	DS-12	28+05.18	39.00	Rt
40	DS-11	22+00.20	10.00	Rt
41	DS-11	23+13.25	10.00	Rt

Offsets are measured from the ± of Central Ave. to the intersection of the ± of scupper with face of curb.

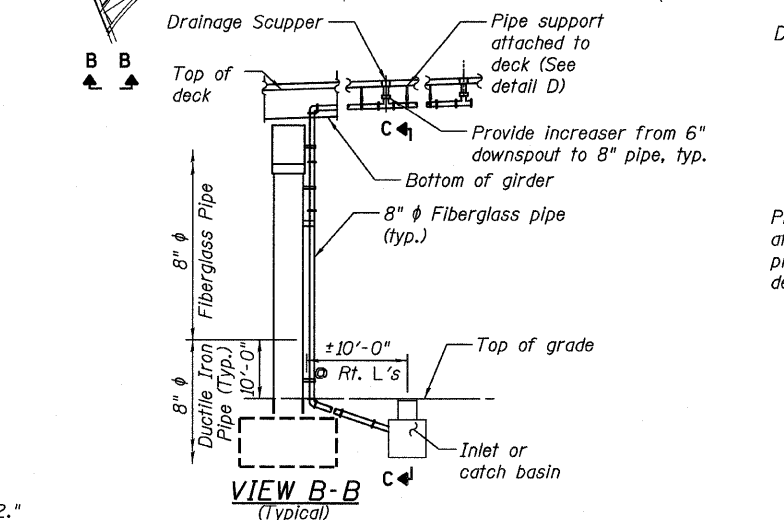
*Offset is to edge of scupper, placed 4" from face of curb.

BILL OF MATERIAL

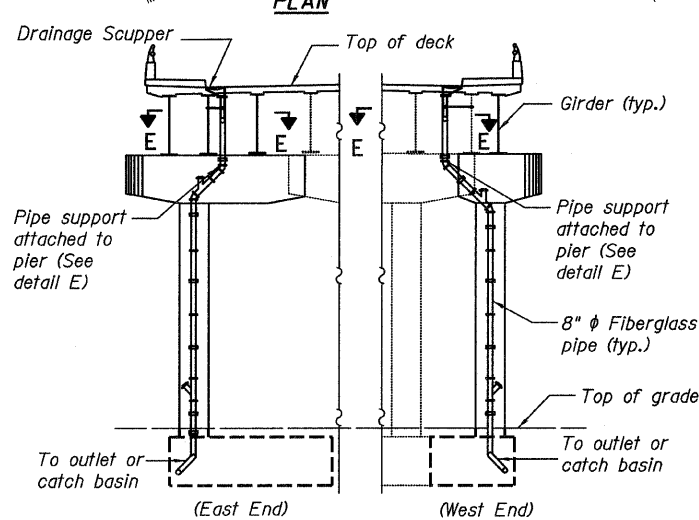
ITEM	UNIT	TOTAL
Drainage System	L. SUM	0.54

NOTES:

- See Special Provisions for additional information.
- Contractor to provide shop drawings for Drainage System.
- The cost for the removal of the existing drainage system is included with the cost of "Removal of Existing Concrete Deck No. 2."
- The cost of the ductile iron pipe, connection to proposed catch basin, trenching and backfilling shall be included in Drainage System.

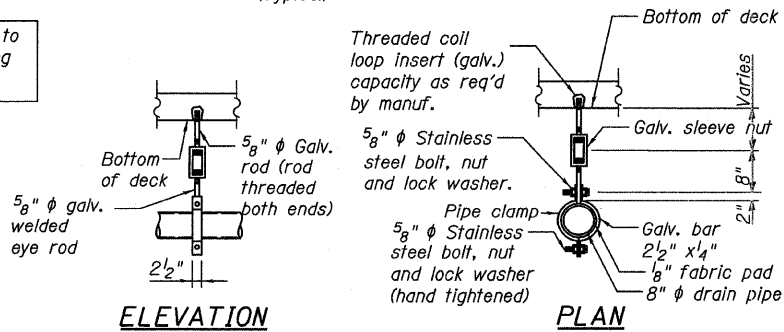


VIEW B-B (Typical)



VIEW C-C (Typical)

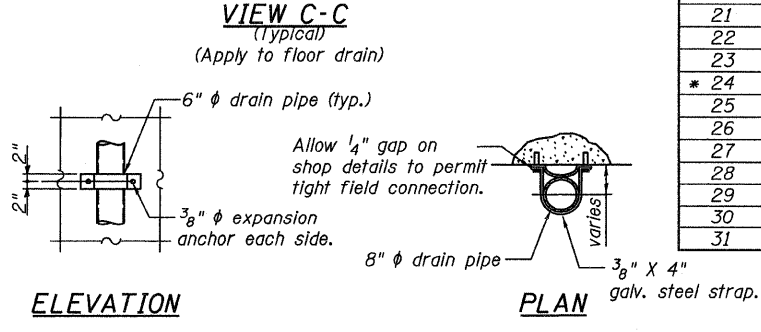
(Apply to floor drain)



ELEVATION

PLAN

PIPE SUPPORT DETAIL AT DECK - DETAIL D



ELEVATION

PLAN

PIPE SUPPORT DETAIL AT ABUTMENT & PIERS - DETAIL E

DRAINAGE SYSTEM
STRUCTURE NO. 016-3240

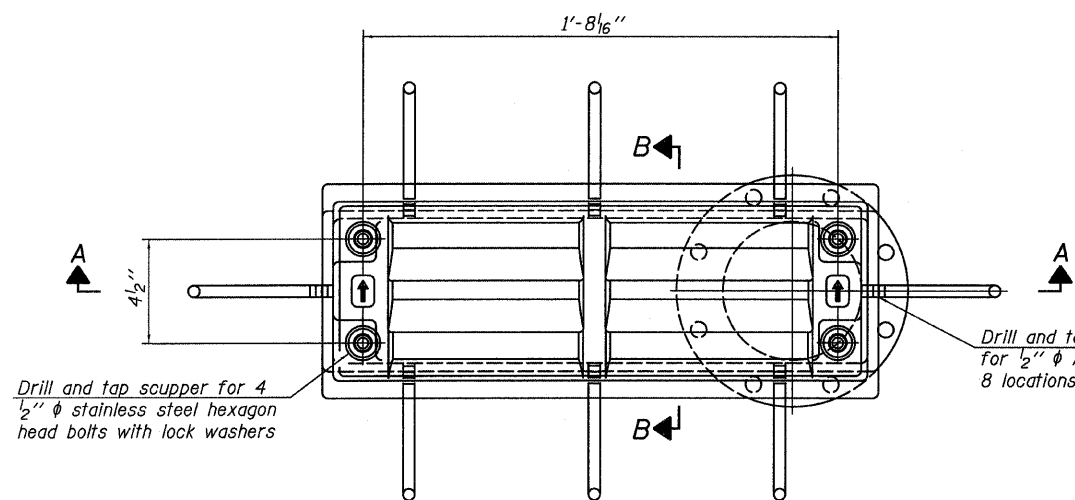
TYLIN INTERNATIONAL

	REVISIONS	
	NAME	DATE
DESIGNED - DY, LS		
CHECKED - AMD, LS		
DRAWN - DY, LS		
CHECKED - AMD, LS		
DATE - 03/25/2011		

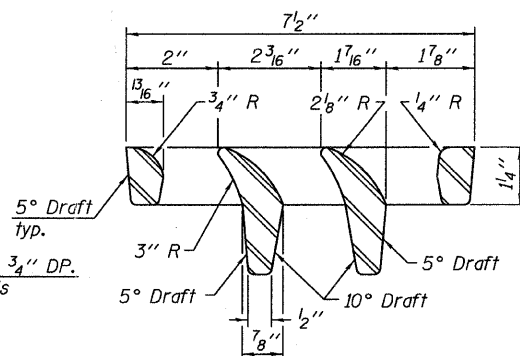
SHEET NO. 33	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	73 SHEETS	55	0711.2R & 1011.1BR	COOK	741 636
			CONTRACT NO. 60999		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

P:\01345\structure\016-3240\15563e\ain.dgn 2:27:42 PM 4/28/2011

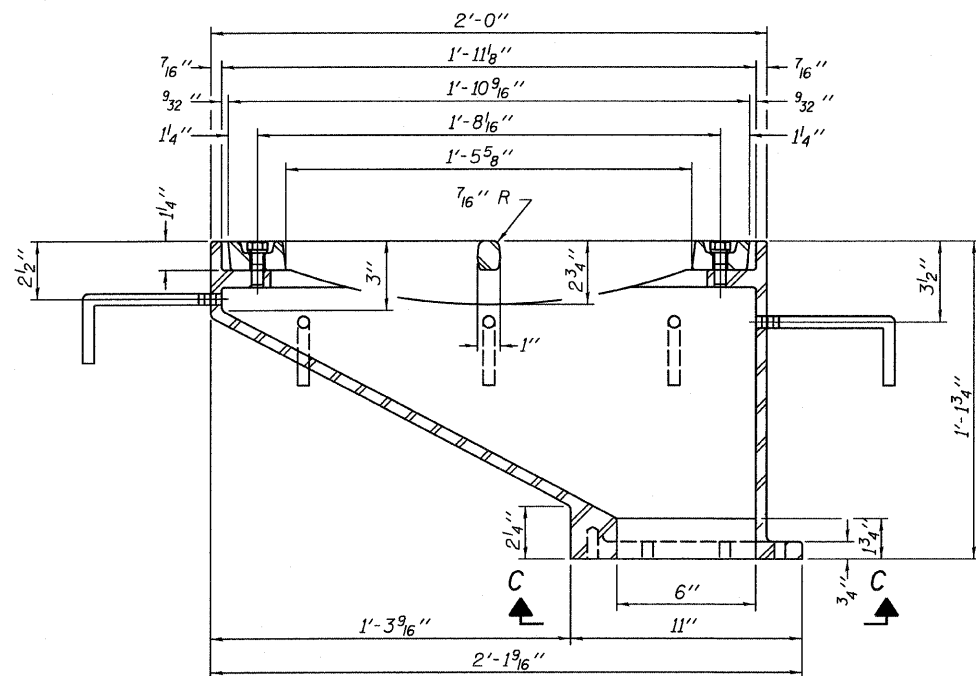
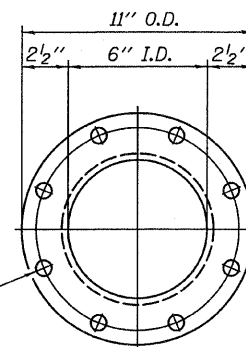
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

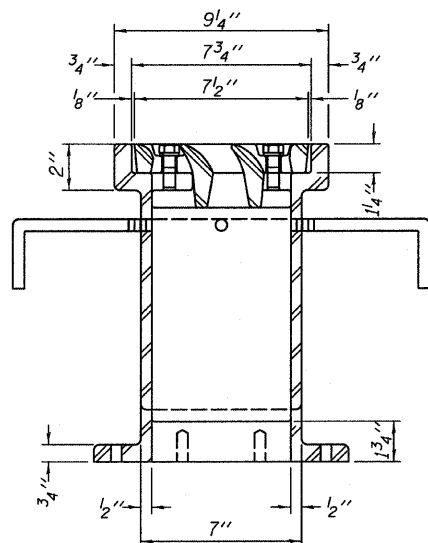


VANE GRATE DETAIL

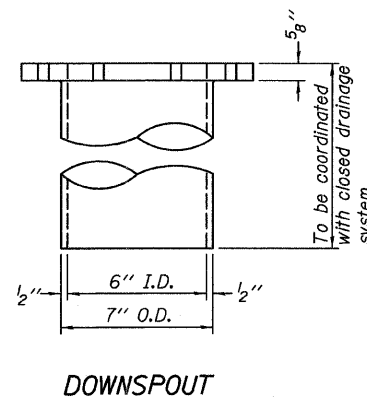


SECTION A-A

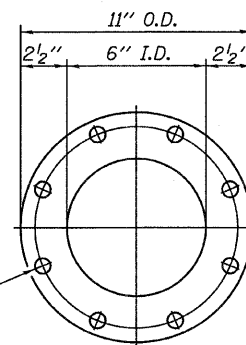
See sheet of for scupper location relative to parapet.



SECTION B-B



DOWNSPOUT



VIEW C-C

Drill and tap 8 holes for 1/2"-13 bolts on a 9 1/2" bolt circle. (2 blind holes are 1/4" deep, 6 thru holes)

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.

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.

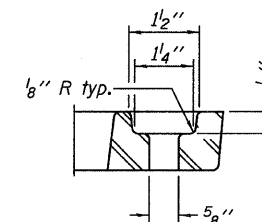
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

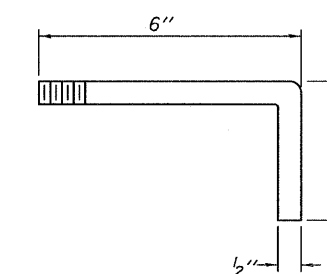
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

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 Scupper, DS-12.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



BOLT HOLE DETAIL



ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12	Each	26

DRAINAGE SCUPPER, DS-12
STRUCTURE NO. 016-3240

DS-12

7-1-10

TYLIN INTERNATIONAL

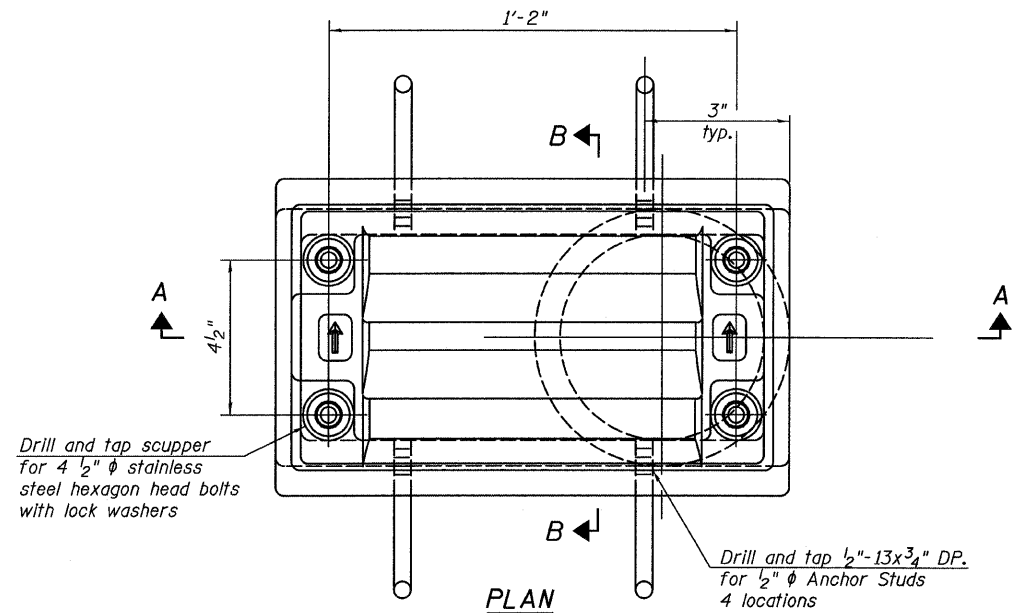
DESIGNED - DY, LS		REVISIONS	
NAME	DATE		
CHECKED - AMD, LS			
DRAWN - DY, LS			
CHECKED - AMD, LS			
DATE - 03/25/2011			

SHEET NO. 34	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
73 SHEETS	55	0711.2R & 1011.1BR	COOK	741	637
			CONTRACT NO. 60999		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

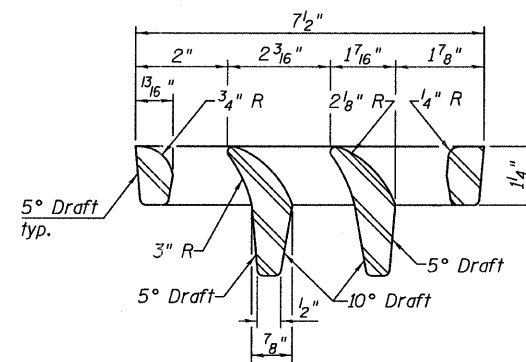
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:

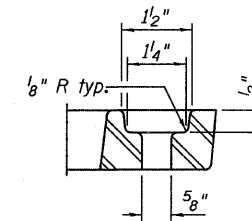
All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
Downspouts located on the exterior side of a painted steel fascia 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 the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.
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 Scupper, DS-11.
Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



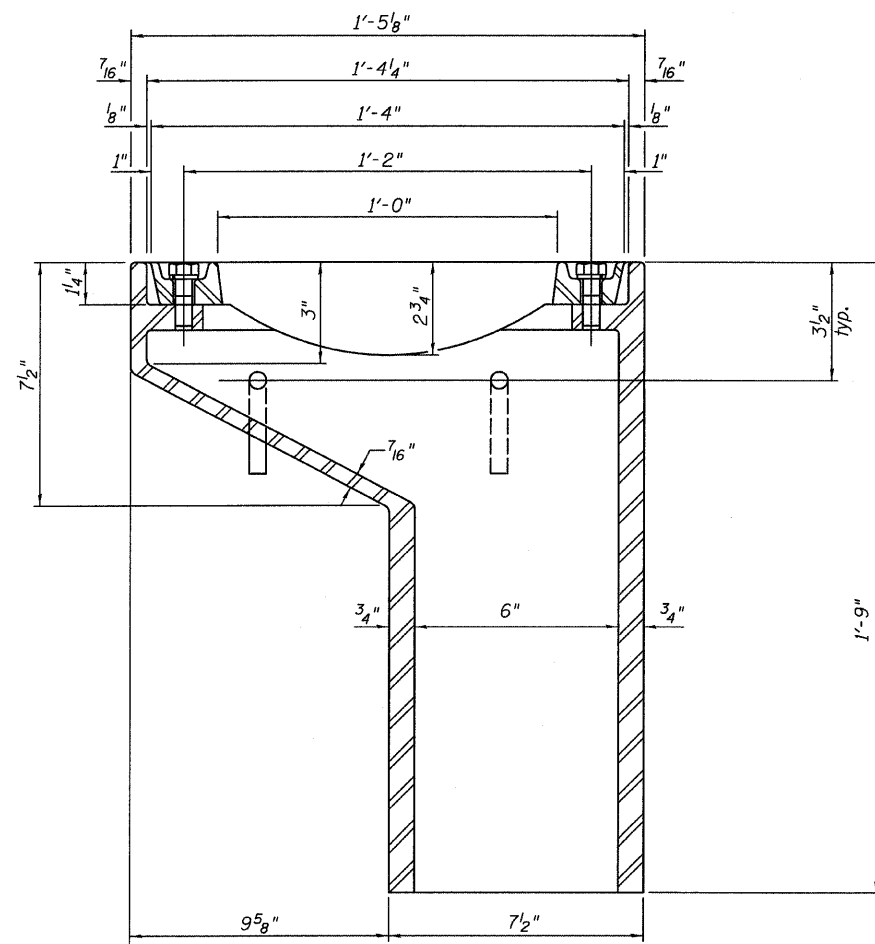
PLAN



VANE GRATE DETAIL

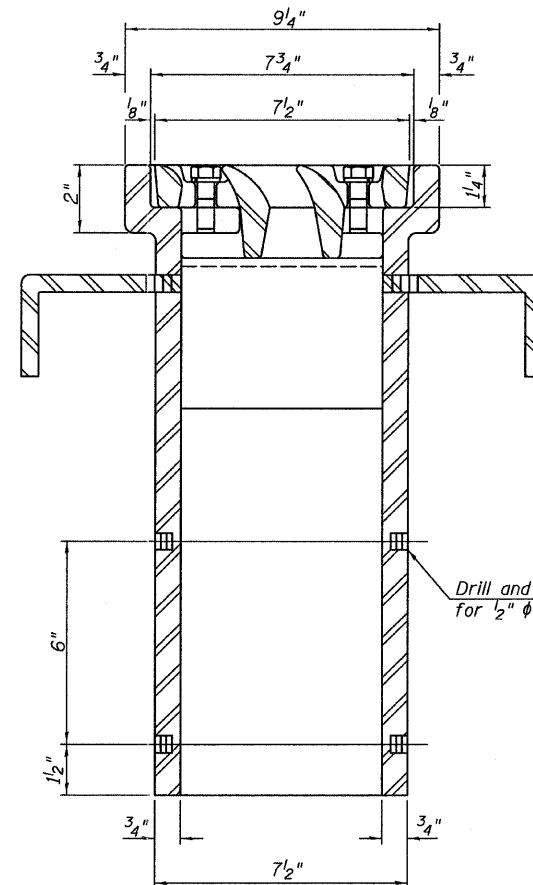


BOLT HOLE DETAIL

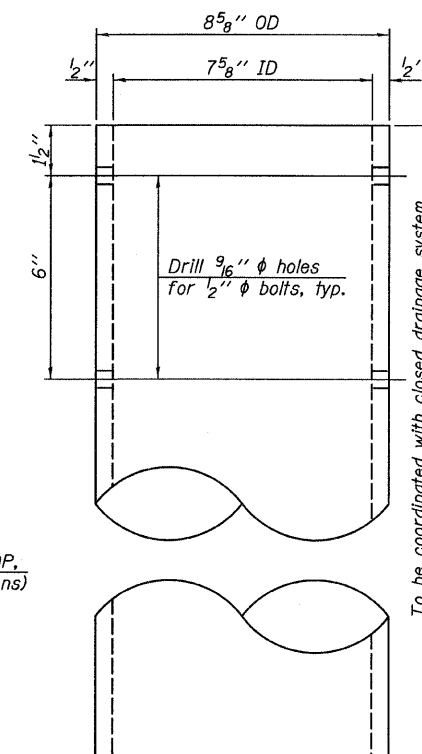


SECTION A-A

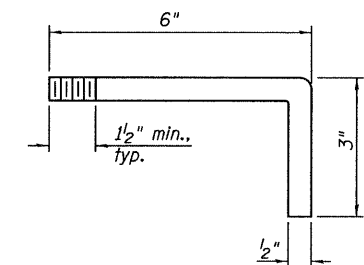
See sheet of for scupper location relative to parapet.



SECTION B-B



DOWNSPOUT



ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	3

DRAINAGE SCUPPER, DS-11
STRUCTURE NO. 016-3240

DS-11

7-1-10

TYLIN INTERNATIONAL

DESIGNED - DY, LS
CHECKED - AMD, LS
DRAWN - DY, LS
CHECKED - AMD, LS
DATE - 03/25/2011

REVISIONS

NAME	DATE

SHEET NO. 34A
73 SHEETS

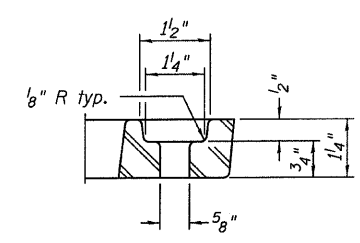
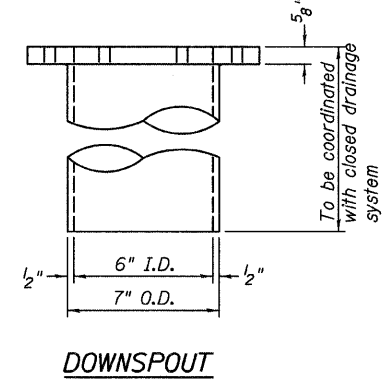
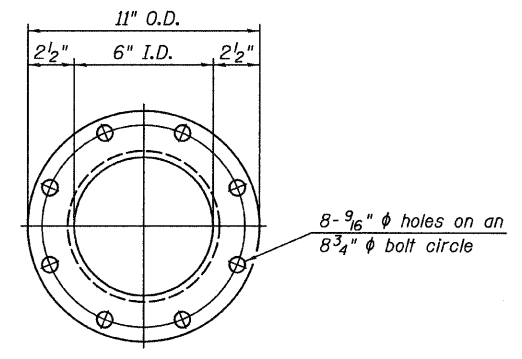
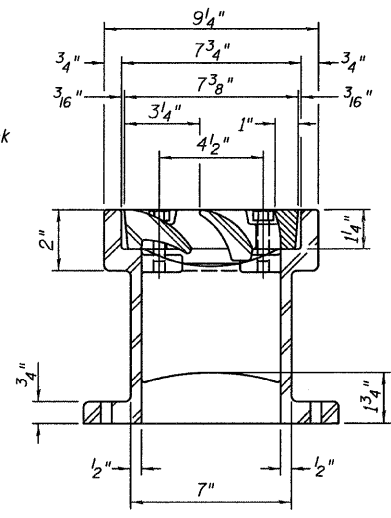
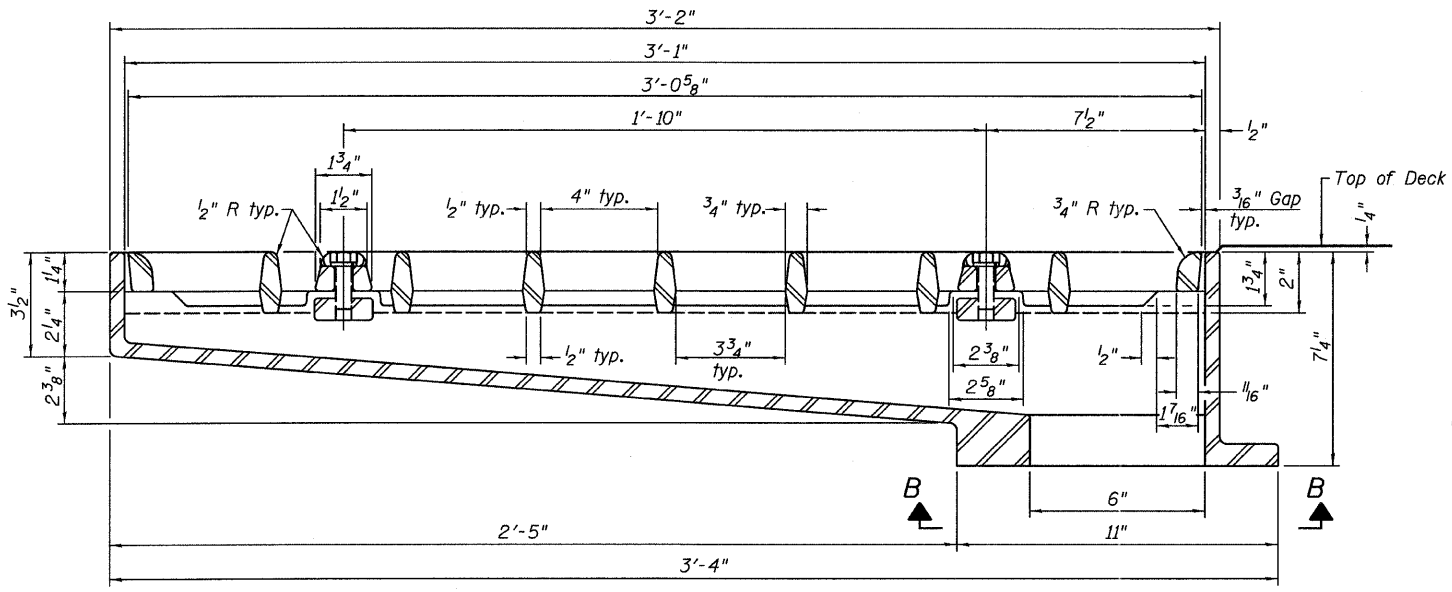
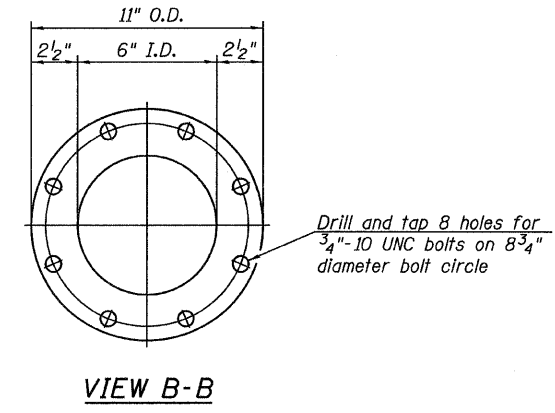
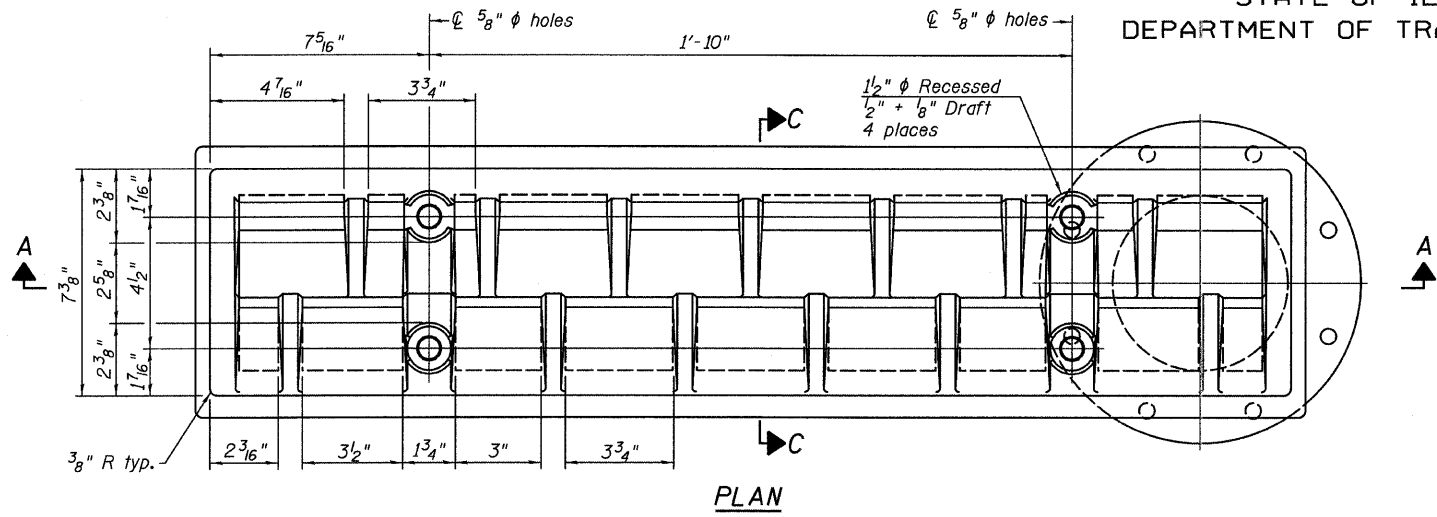
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	0711.2R & 1011.1BR	COOK	741	637A
CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

5/9/2011

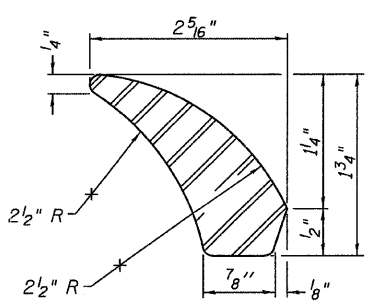
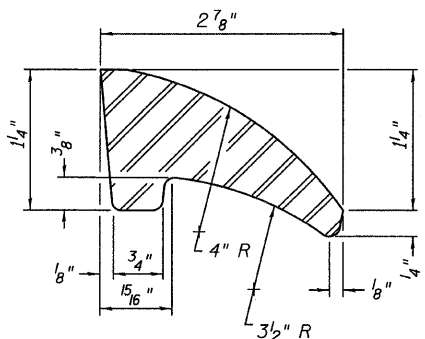
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9:15:34 AM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION A-A
See sheet of for scupper location relative to parapet.



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.
 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.
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 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 Scupper, DS-33.
 Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-33	Each	12

DRAINAGE SCUPPER, DS-33
STRUCTURE NO. 016-3240

DS-33 7-1-10
 TYLIN INTERNATIONAL

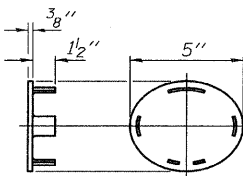
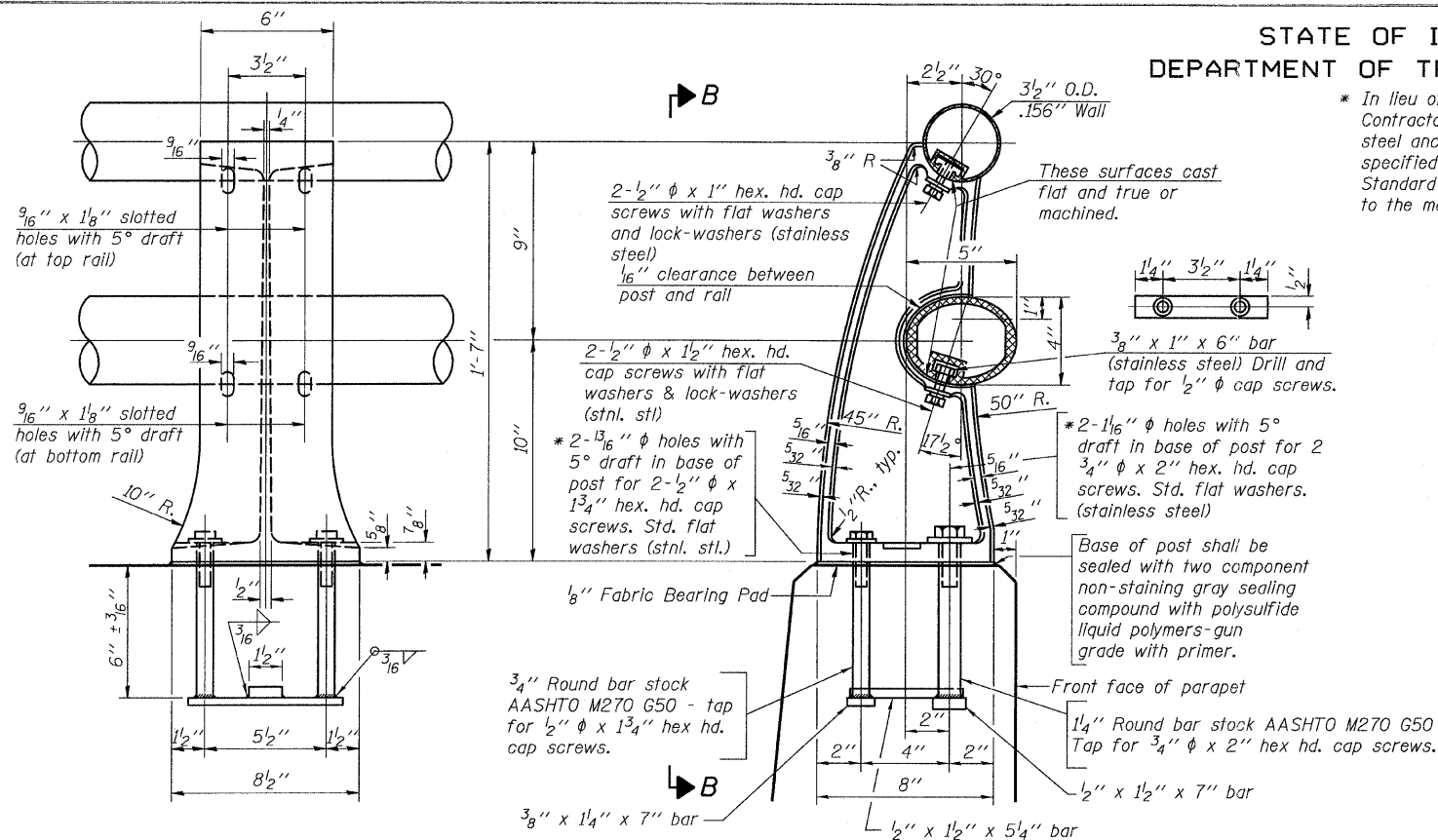
DESIGNED	BY	LS	REVISIONS
CHECKED	BY	AMD, LS	NAME
DRAWN	BY	DY, LS	DATE
CHECKED	AMD, LS		
DATE	03/25/2011		

SHEET NO. 34B	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
73 SHEETS	55	0711.2R & 1011.1BR	COOK	741	637B
CONTRACT NO. 60999					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

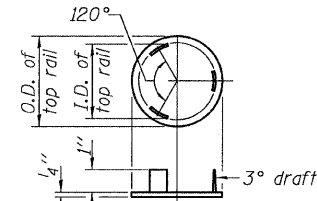
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

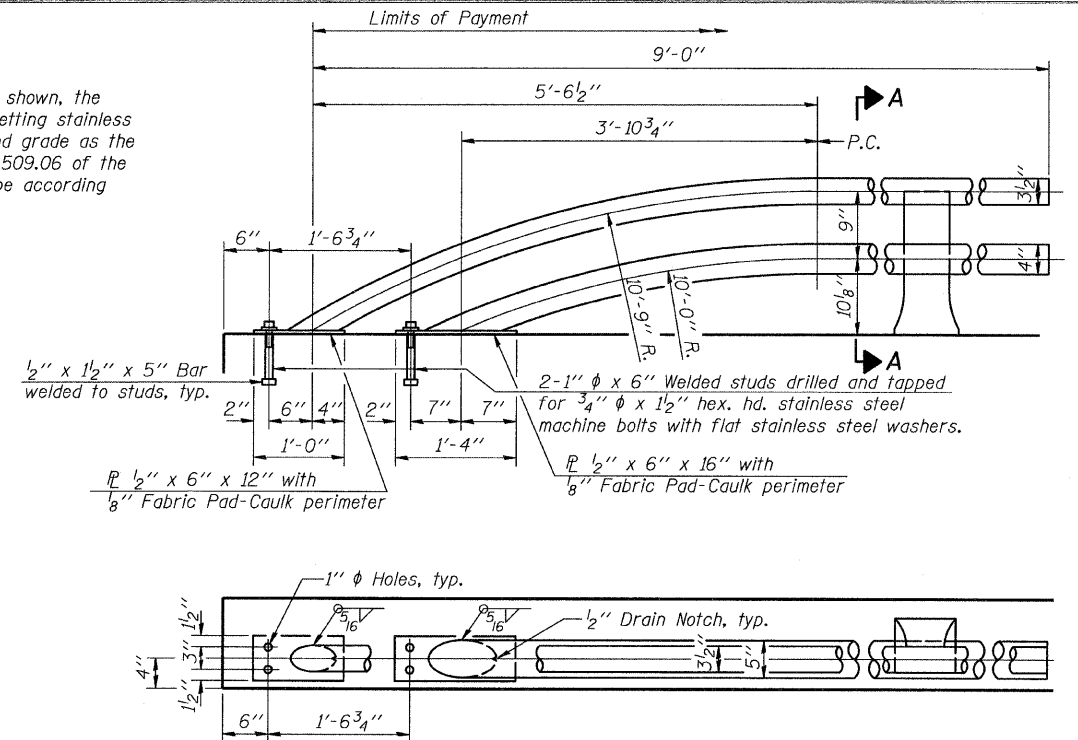
* In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting stainless steel anchor rods of the same diameter and grade as the specified cap screws according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



CAST END CAP
For bottom rail
DRIVE FIT TYPE

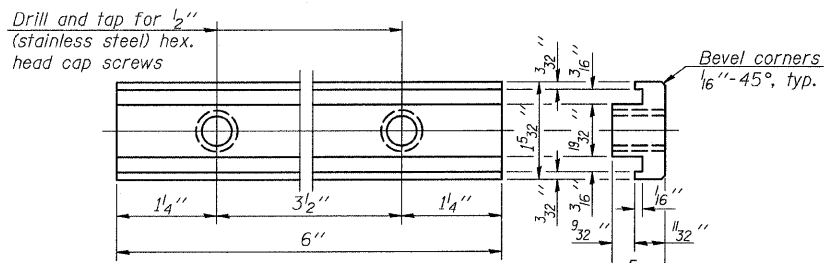


CAST END CAP
For top rail

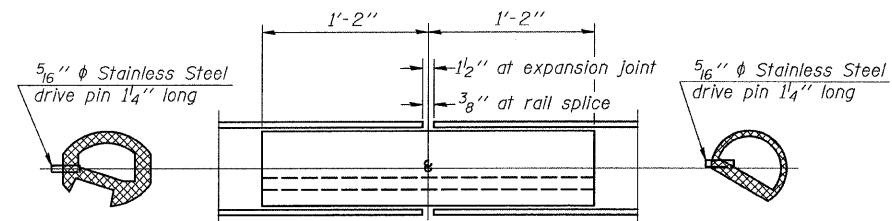


RAIL TERMINAL SECTION

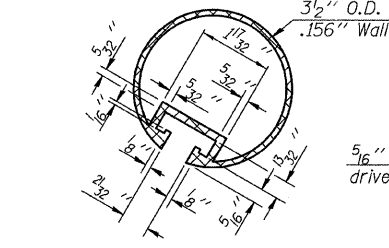
Note:
The end rail post shall be set back as required for the terminal rail section.



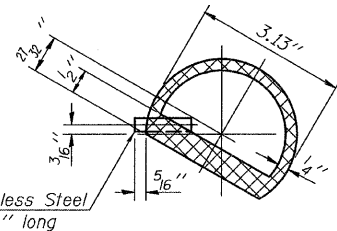
RAIL POST CLAMP BAR
For Top Rail



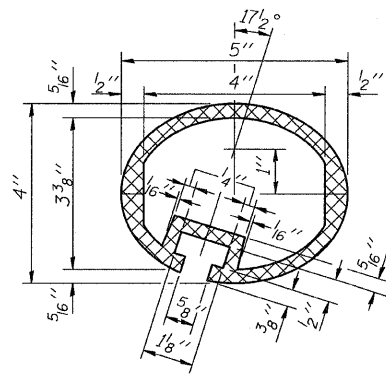
RAIL SPLICE



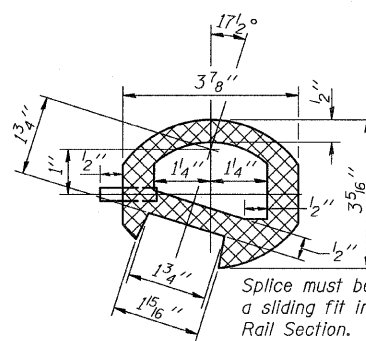
SECTION THRU TOP RAIL



SECTION THRU SPLICE
For Top Rail



SEC. THRU ELLIPTICAL
RAIL SECTION



SEC. THRU SPLICE

RAIL END TREATMENT FOR
TYPE 5 AND 6 TERMINAL

Notes:
All Posts shall be normal to parapet.
All joints in rail shall be spliced per detail.
All exposed rail ends shall be capped per detail.
Provide 1-1/8" and 2-1/16" Aluminum Shimms for 25% of the Posts. Rail elements shall be parallel to Grade-high spots will be ground and low spots shimmed.
See sheet 26 of 73 for rail post spacing.

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Railing, Type L	Foot	1,334.3

ALUMINUM RAILING, TYPE L
STRUCTURE NO. 016-3240

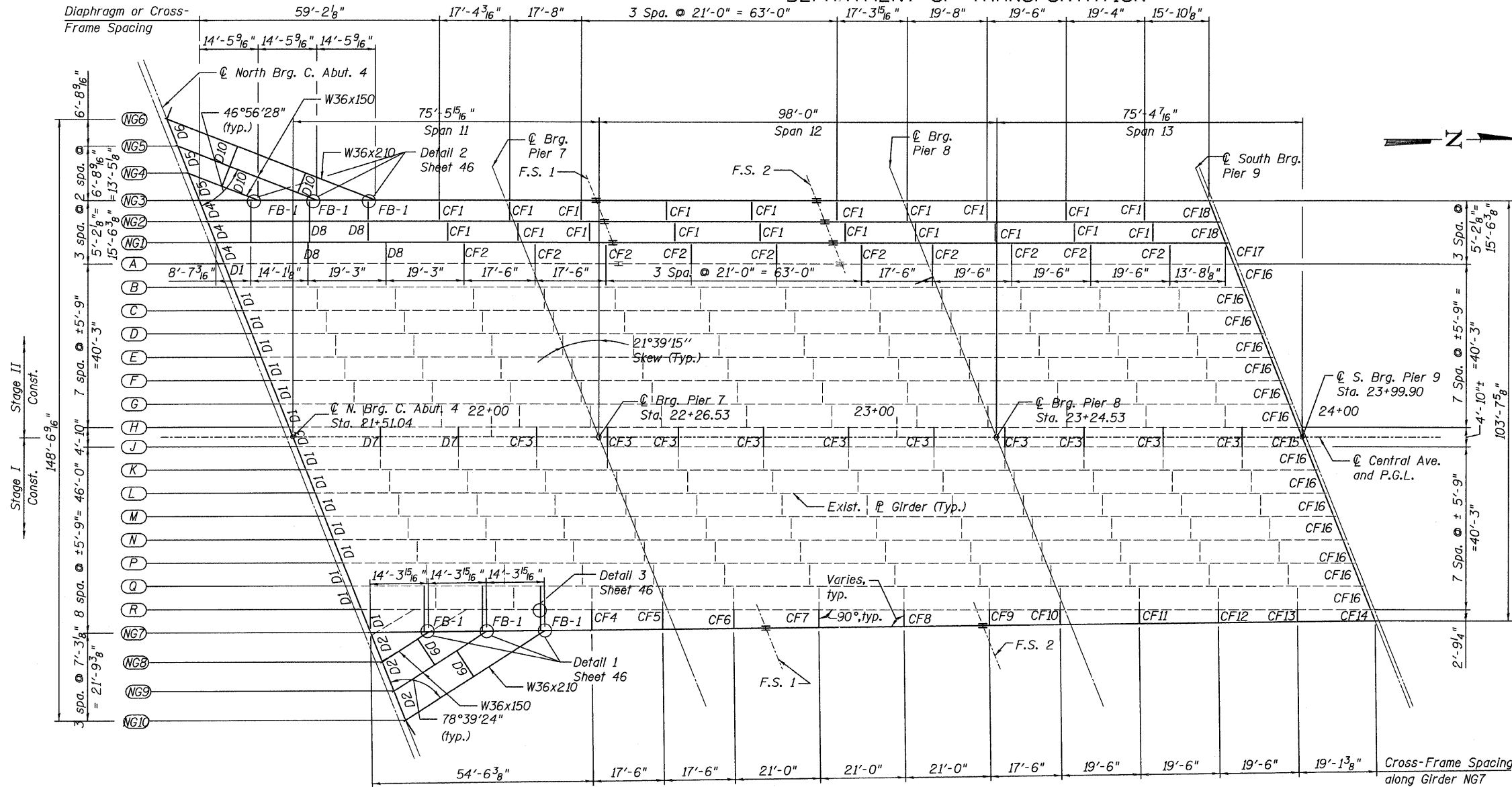
R-20 11-1-09 (7'-0" to 10'-0" Post spacing)

TYLIN INTERNATIONAL

DESIGNED	BY	LS	REVISIONS	
CHECKED	AMD	LS	NAME	DATE
DRAWN	DY	LS		
CHECKED	AMD	LS		
DATE	03/25/2011			

SHEET NO. 35 73 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	638
CONTRACT NO. 60999					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN

TOP OF BEAM & WEB ELEVATIONS

Beam	℄ N. Brg. C. Abut. 4	℄ Brg. Pier 7	Field Splice 1	Field Splice 2	℄ Brg. Pier 8	℄ S.Brg. Pier 9
NG6	628.31	-	-	-	-	-
NG5	628.38	-	-	-	-	-
NG4	628.53	-	-	-	-	-
NG3	628.56	628.81	628.96	629.17	629.22	629.55
NG2	628.67	628.89	628.92	629.13	629.23	629.51
NG1	628.78	629.00	629.03	629.24	629.34	629.62
NG7	628.90	629.12	629.26	629.49	629.56	629.91
NG8	628.88	-	-	-	-	-
NG9	628.74	-	-	-	-	-
NG10	628.64	-	-	-	-	-

* For Fabrication Only

FIELD SPLICE LAYOUT

(Measured from ℄ Brg.)

Girder	F.S. 1	F.S. 2
NG7	97'-5 7/8"	53'-6 7/8"
NG1	97'-10 7/8"	54'-3 7/8"
NG2	97'-10 7/8"	54'-3 7/8"
NG3	97'-10 7/8"	54'-3 7/8"

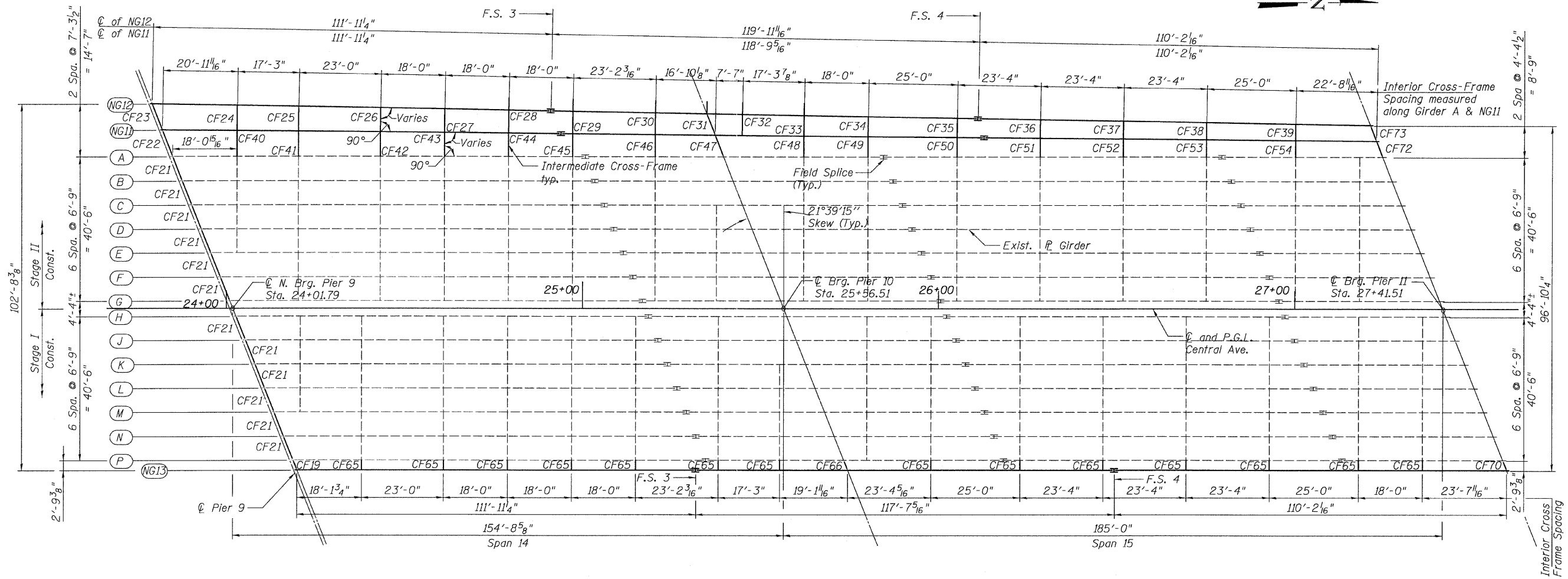
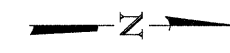
NOTES:

- Structural steel for girders, splices and diaphragms marked "FB" and associated connection plates shall conform to the requirements of AASHTO M270 Grade 50. All other structural steel shall conform to the requirements of AASHTO M270 Grade 36.
- All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts. Individual cross frames or diaphragms at support may be temporarily disconnected to install bearing anchor rods.
- Existing end diaphragms, bent plates and bolts to be removed as indicated. See Jacking Details Sheet 54 for details cost included with structural steel removal.
- For Bill of Material, see Sheet 2.
- For Girder Elevations, see Sheets 39 thru 40.
- For Diaphragms lengths, spacing and details, see Sheet 43.
- For Cross Frame Details, see Sheet 44.
- For Field Splice Details, see Sheet 47.
- For Shear Stud Details, see Section A-A on Sheet 43.
- F.S. - denotes girder Field Splice.
- E.G.- denotes Existing Girder.

FRAMING PLAN
SPANS 11, 12 & 13
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 36	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE		73 SHEETS	55	0711.2R & 1011.1BR	COOK	741	639
	DRAWN - DY, LS				CONTRACT NO. 60999					
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

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DEPARTMENT OF TRANSPORTATION



FRAMING PLAN

1. For Bill of Material, see Sheet 2.
2. For Girder Elevations, see Sheet 41.
3. For Cross Frame Details, see Sheet 45.
4. For Field Splice Details, see Sheet 48.
5. For Shear Stud Details, see Sheet 43.
6. F.S. - denotes girder Field Splice.
7. E.G.- denotes Existing Girder.

TOP OF WEB ELEVATIONS*

Beam	¢ N. Brg. Pier 9	Field Splice 3	¢ Brg. Pier 10	Field Splice 4	¢ Brg. Pier 11
NG11	629.49	629.68	629.92	630.41	630.89
NG12	629.49	629.60	629.91	630.52	630.83
NG13	629.72	630.08	630.27	630.65	630.90

* For Fabrication Only

**BEARING SEAT ELEVATIONS
"FOR INFORMATION ONLY"**

Girder Line	¢ brg. N. pier 9	¢ brg. pier 10	¢ brg. pier 11
NG12	622.47	620.75	619.71
NG11	622.47	620.76	619.64
A	622.58	620.13	618.11
B	622.67	620.23	618.21
C	622.76	620.32	618.30
D	622.86	620.42	618.40
E	622.95	620.51	618.49
F	623.05	620.60	618.58
G	623.14	620.70	618.68
H	623.14	620.70	618.68
J	623.07	620.63	618.61
K	623.00	620.55	618.53
L	622.92	620.48	618.46
M	622.85	620.40	618.38
N	622.77	620.33	618.31
P	622.70	621.16	619.65
NG13	622.70	621.16	619.65

**FRAMING PLAN
SPANS 14 & 15
STRUCTURE NO. 016-3240**

TYLIN INTERNATIONAL

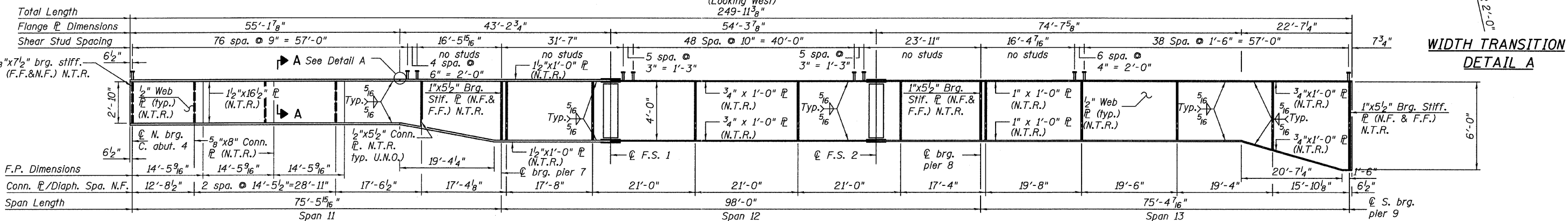
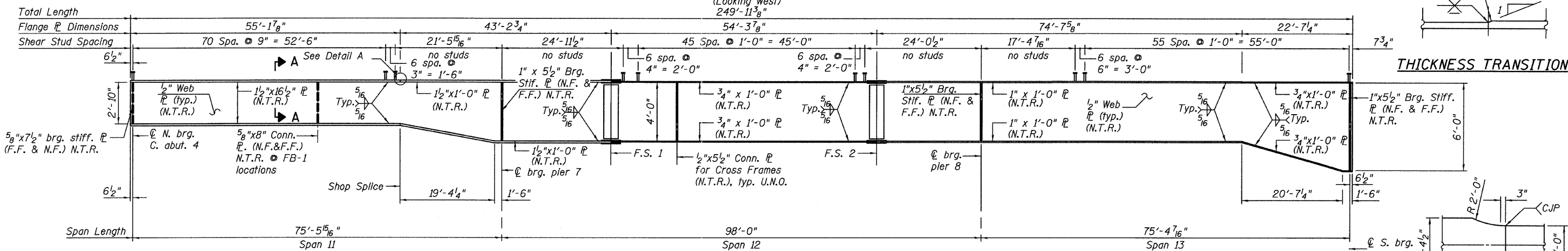
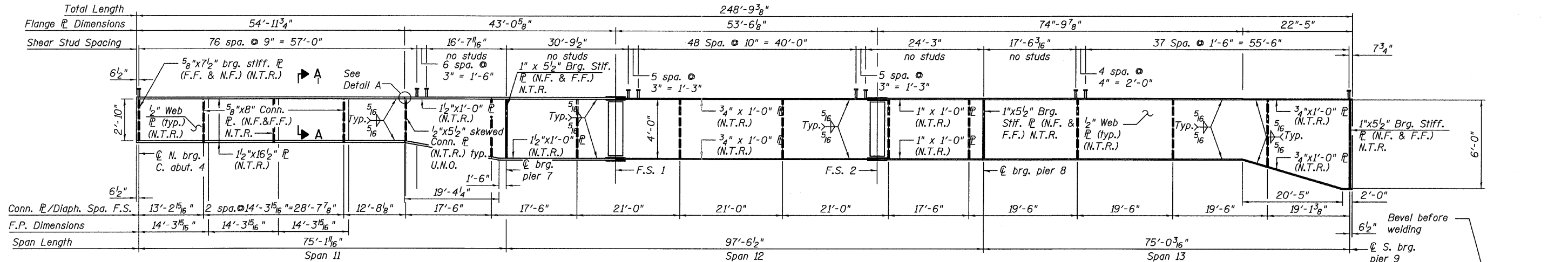
DESIGNED	REVISIONS
- DY, LS	NAME DATE
CHECKED - AMD, LS	
DRAWN - DY, LS	
CHECKED - AMD, LS	
DATE - 03/25/2011	

SHEET NO. 37	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	640
73 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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248'-9³/₈"



NOTES:

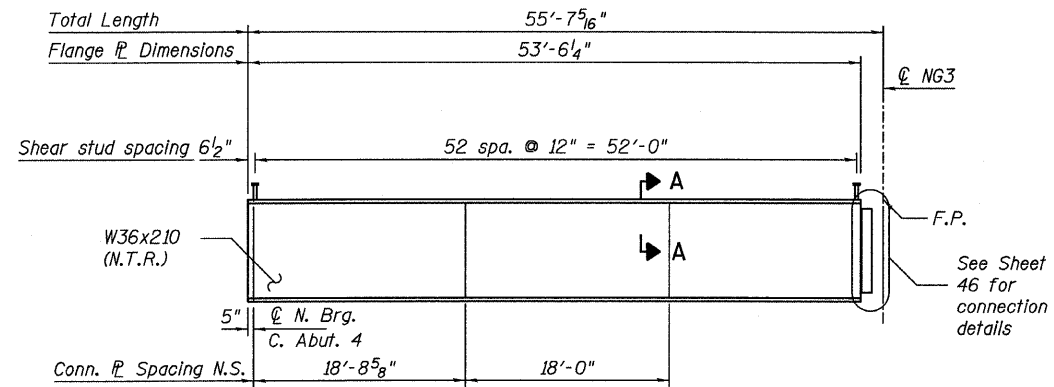
- All structural steel on this sheet shall conform to the requirements of AASHTO M270 Grade 50.
- For Top of Beam/Web Elevations and Camber Diagram, see Sheets 36 & 49.
- For Bearing Stiffener Detail, Intermediate Stiffener Detail and Connection Plate Detail, see Sheets 43 thru 46.
- Load carrying components designated "N.T.R." shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
- For Field Splices 1 and 2 details, see Sheet 47.
- For Section A-A, see Sheet 43.
- N.F. Denotes Near Face.
- F.F. Denotes Far Face.
- U.N.O. Denotes Unless Noted Otherwise.

GIRDER ELEVATIONS - I
SPANS 11, 12 & 13
STRUCTURE NO. 016-3240

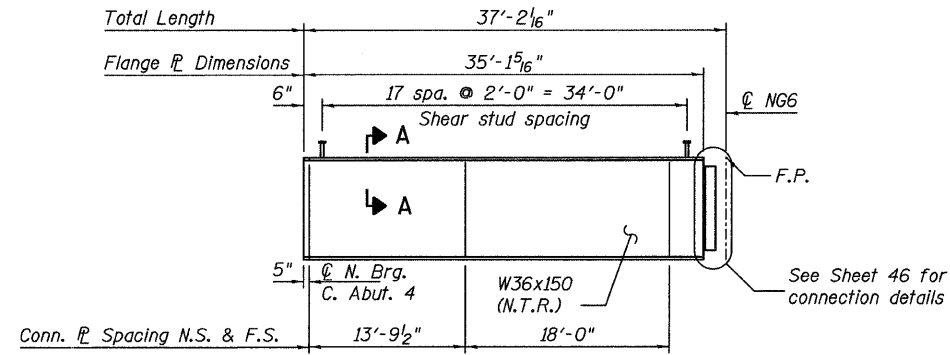
TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 39	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.				
	CHECKED - AMD, LS	NAME	DATE		55					0711.2R & 1011.1BR	COOK	741	642
	DRAWN - DY, LS				73 SHEETS					CONTRACT NO. 60999			
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT								
	DATE - 03/25/2011												

5/9/2011 016-3240-Struct-11.dwg North Approach 016-3240-5503FramedI1.dwg

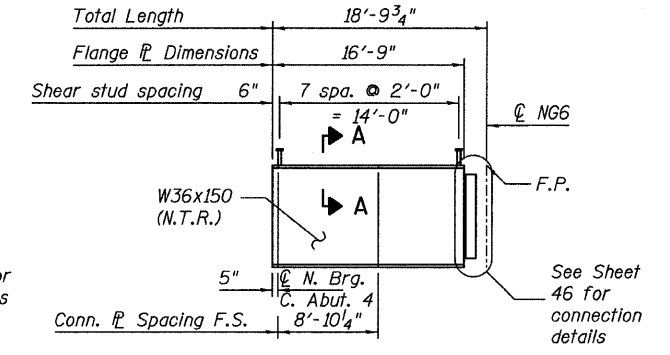
STATE OF ILLINOIS
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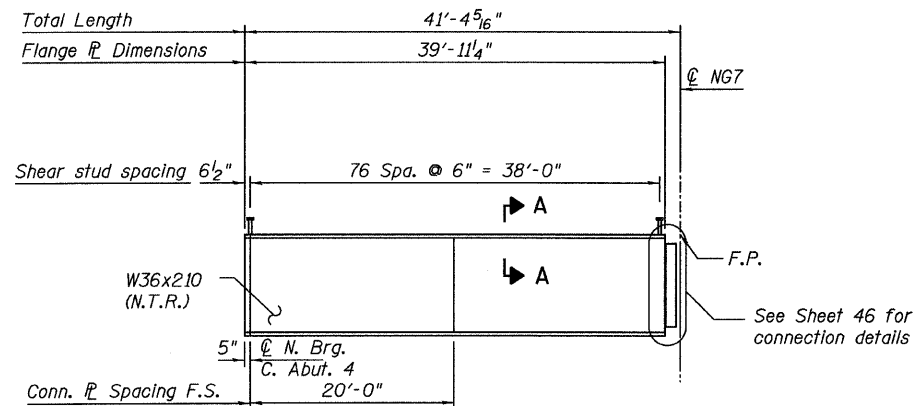
GIRDER ELEVATION - NG6
(Looking West)



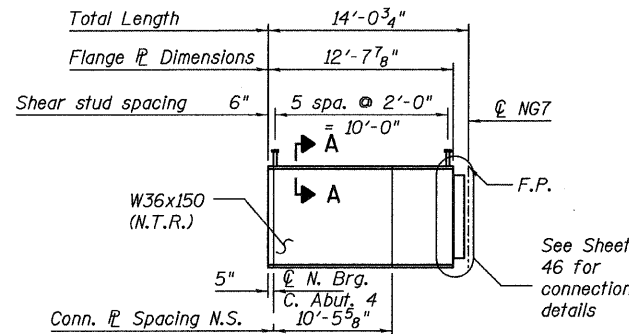
GIRDER ELEVATION - NG5
(Looking West)



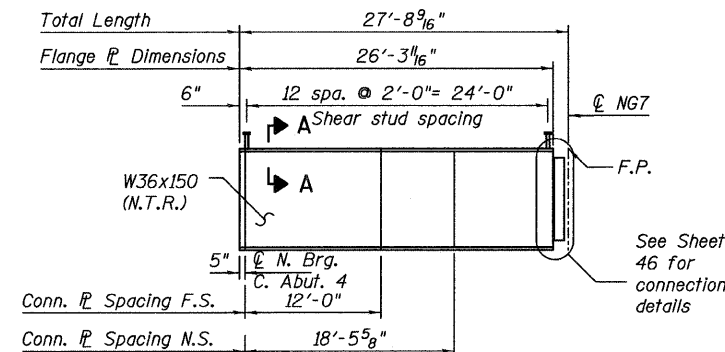
GIRDER ELEVATION - NG4
(Looking West)



GIRDER ELEVATION - NG10
(Looking West)



GIRDER ELEVATION - NG8
(Looking West)



GIRDER ELEVATION - NG9
(Looking West)

NOTES:

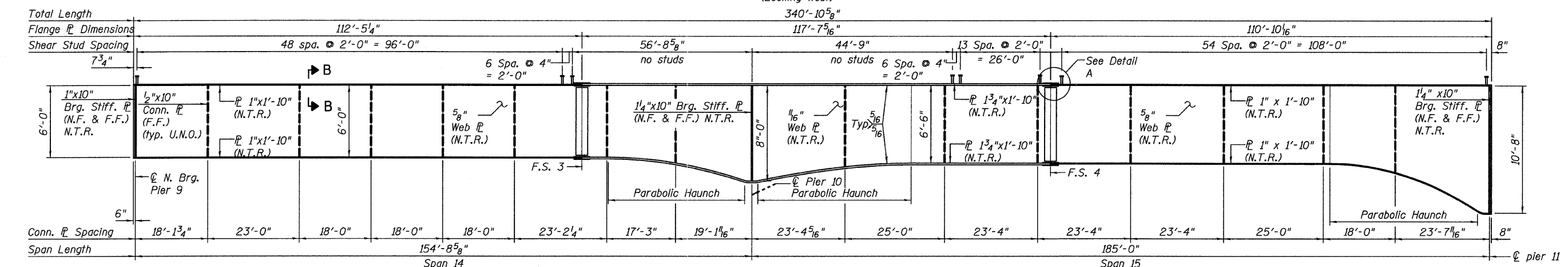
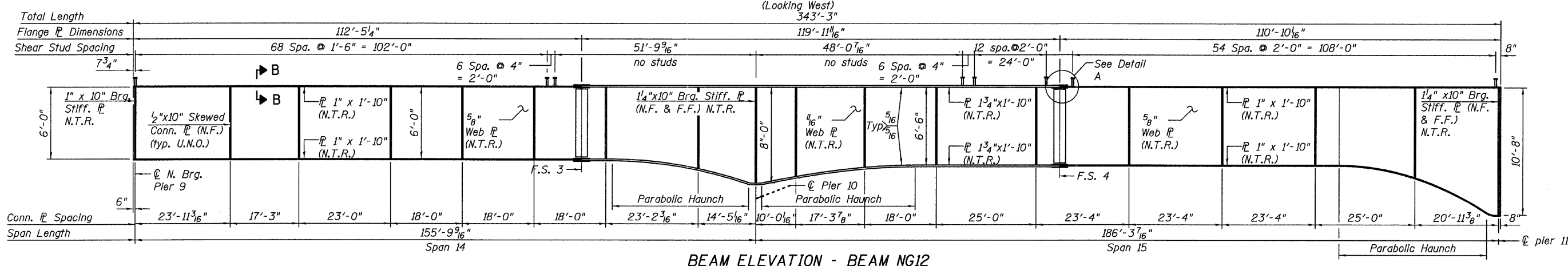
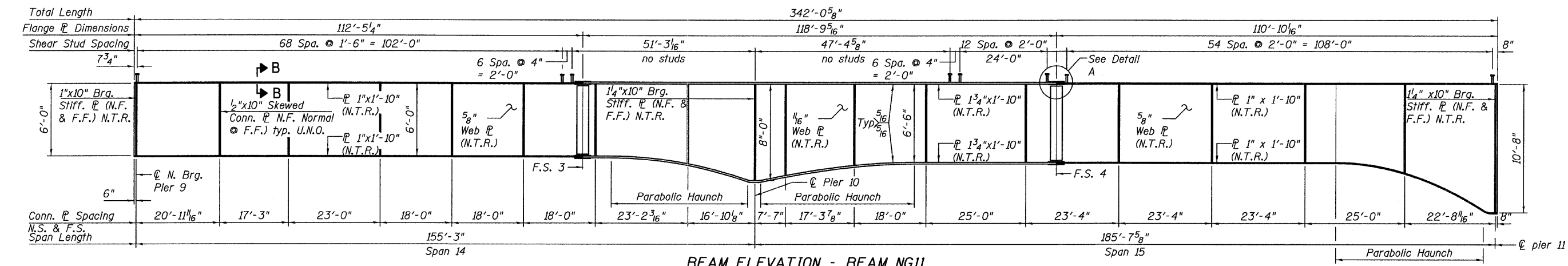
- All structural steel on this sheet shall conform to the requirements of AASHTO M270 Grade 50.
- Load carrying components designated "N.T.R." shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
- For Connections details, see Sheet 46.
- For Section A-A, see Sheet 43.
- F.S. - denotes Far Side.
- N.S. - denotes Near Side
- F.P. - denotes Framing Point.

GIRDER ELEVATIONS-II
SPANS 11, 12 & 13
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 40	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	643	
	DRAWN - DY, LS				CONTRACT NO. 60999					
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

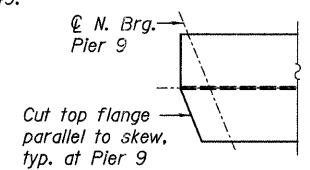
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STATE OF ILLINOIS
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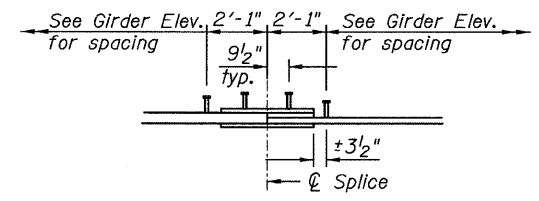


NOTES:

- All structural steel on this sheet shall conform to the requirements of AASHTO M 270 Grade 50.
- For Top of Web Elevations and Camber Diagram, see Sheets 37 & 49.
- For Bearing Stiffener Detail, Intermediate Stiffener Detail and Connection Plate Detail, see Sheets 44 & 45.
- Load carrying components designated "N.T.R." shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
- For Field Splice 3 and 4 details, see Sheet 48.
- For Parabolic Haunch Details, see Sheet 49.
- For Section B-B, see Sheet 43.
- U.N.O. Denotes Unless Noted Otherwise.
- N.F. Denotes Near Face.
- F.F. Denotes Far Face.



PLAN - N. BRG. PIER 9



DETAIL A

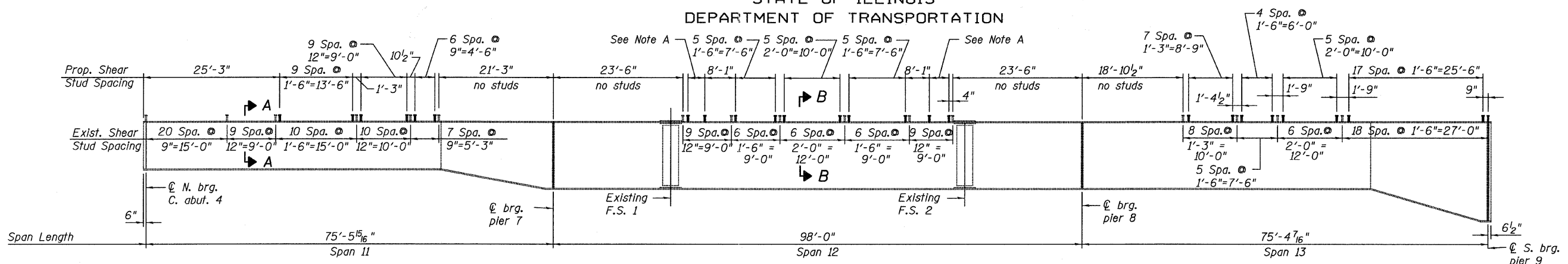
GIRDER ELEVATIONS
SPANS 14 & 15
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS	
	CHECKED - AMD, LS	NAME	DATE
	DRAWN - DY, LS		
	CHECKED - AMD, LS		
	DATE - 03/25/2011		

SHEET NO. 41	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	73 SHEETS	55	0711.2R & 1011.1BR	COOK	741 644
			CONTRACT NO. 60999		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

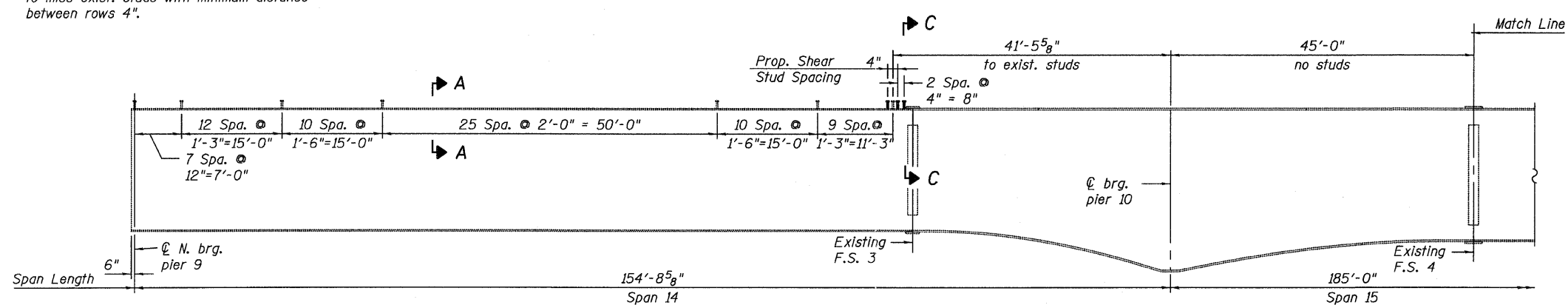
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STATE OF ILLINOIS
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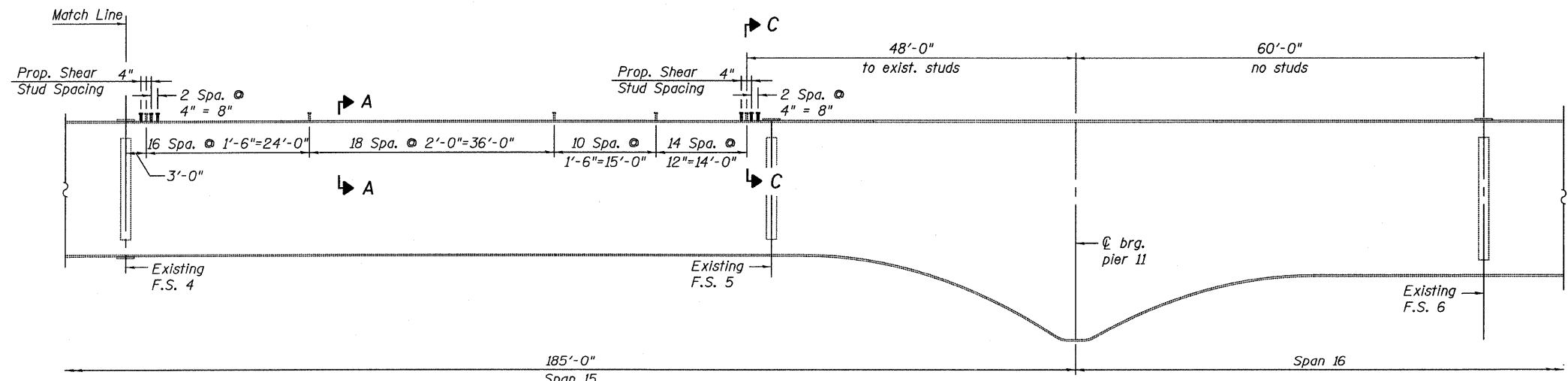


Note A:
Place 4 rows of studs at 4\"/>

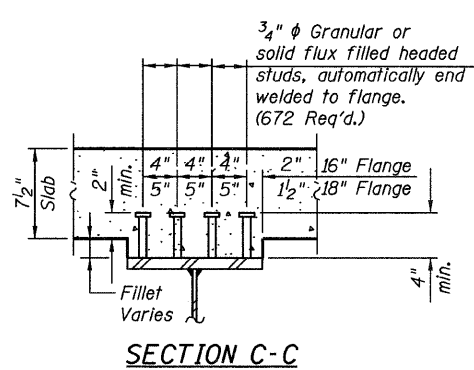
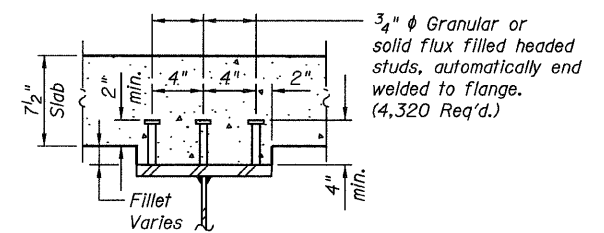
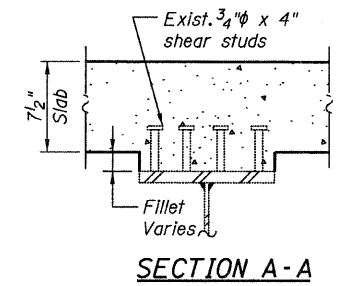
GIRDER ELEVATION- A THRU R - SPAN 11, 12, & 13
(Looking West)



GIRDER PARTIAL ELEVATION- A THRU P - SPAN 14 & 15
(Looking West)



GIRDER PARTIAL ELEVATION- A THRU P - SPAN 15 & 16



BILL OF MATERIAL

Item	Unit	Total
Stud Shear Connectors	Each	4,992

(For Existing Beams)

EXISTING GIRDER ELEVATIONS
SPANS 11, 12, 13, 14, 15 & 16
STRUCTURE NO. 016-3240

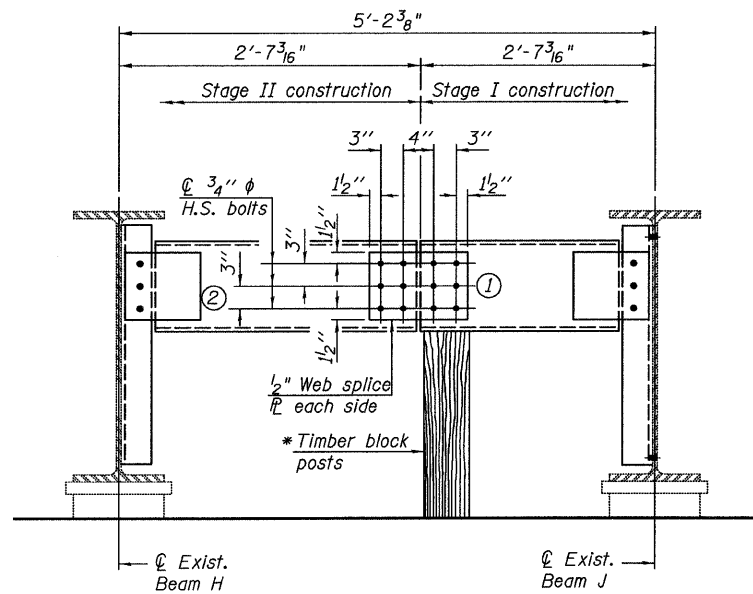
TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS	
	CHECKED - AMD, LS	NAME	DATE
	DRAWN - DY, LS		
	CHECKED - AMD, LS		
	DATE - 03/25/2011		

SHEET NO. 42	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	73 SHEETS	55	0711.2R & 1011.1BR	COOK	741 645
			CONTRACT NO. 60999		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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* Cost of Timber Block Posts is included with "Erecting Structural Steel."

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



END DIAPHRAGM - D3
(At stage construction line, looking north)

CONSTRUCTION SEQUENCE

- 1.) Order diaphragm in two sections.
- 2.) Attach section ① of diaphragm to girder H
- 3.) Place timber block posts between section ① of diaphragm and abutment bearing seat.
- 4.) Attach section ② of diaphragm to beam J and section ① of diaphragm during stage II construction with splice plates.
- 5.) Remove timber block posts.

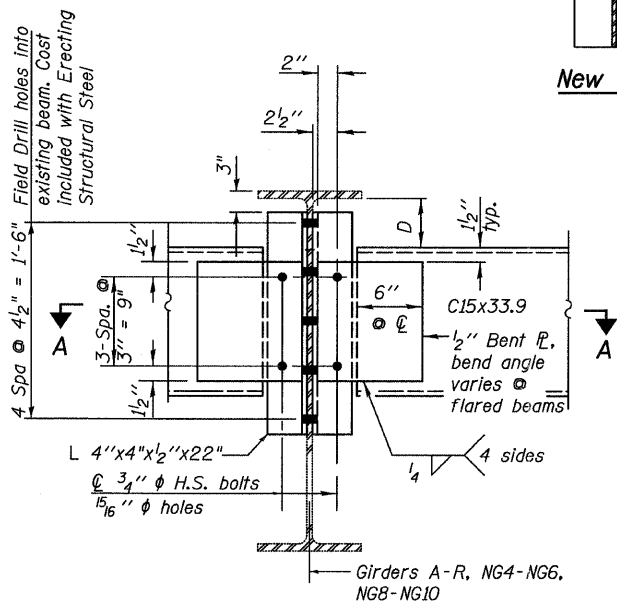
TABLE OF DIAPHRAGM DIMENSIONS

Diaphragm	** Length	Section	No. Req'd.
D1	6'-2 1/4"		15
D2	7'-9 3/4"		3
D3	5'-2 3/8"		1
D4	5'-6 15/16"		3
D5	7'-2 1/6"		2
D6	7'-2 1/6"		1
D7	4'-10"		2
D8	5'-2 7/8"		2
D9	7'-7 7/8"		2
D10	5'-3 5/16"		3

** Length determined from ϕ girder to ϕ girder

DIMENSION "D"

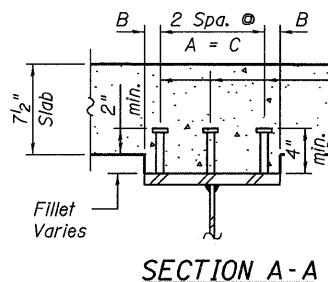
Girder	D
NG1 thru NG3, NG7	5 5/8"
A thru R (max.)	4 3/8"
NG4, NG5, NG8 & NG9	6 1/4"
NG10	6 3/8"
NG6	7"



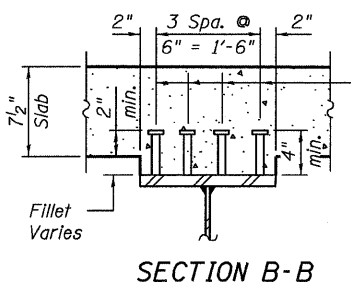
END DIAPHRAGM (D1-D2, D4-D6)

(At new and existing girders)
(24 required)

Note:
Two hardened washers required for each set of oversized holes.



SECTION A-A



SECTION B-B

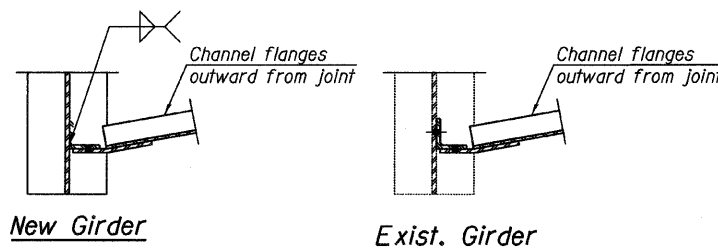
DIMENSIONS A, B AND C

Girder	A	B	C
W36 x 150	4 1/2"	1 1/2"	9"
W36 x 210	4 1/2"	1 5/8"	9"
P Girder	5 1/4"	3"	10 1/2"

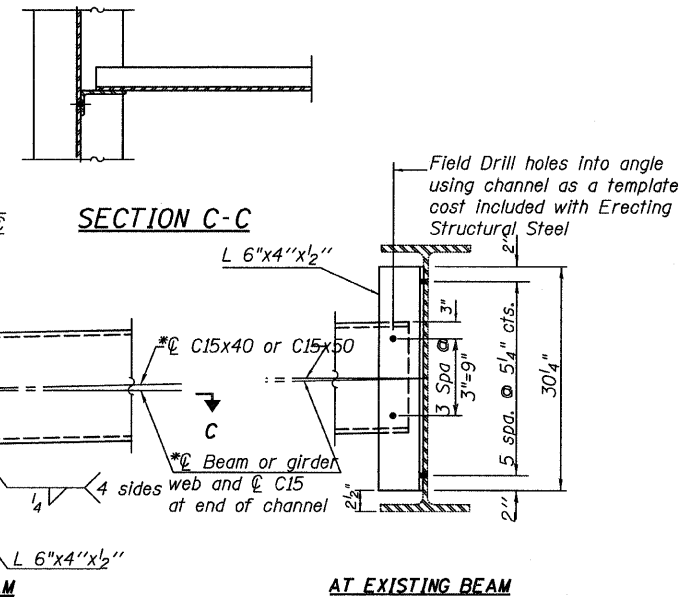
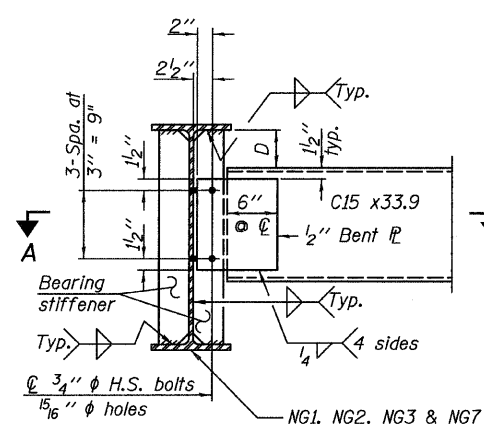
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stud Shear Connectors	EACH	4,541

(For Proposed Beams)



SECTION A-A



INTERIOR DIAPHRAGMS (D7 THRU D10)

(At new and existing girders)
(9 required)

Note:
*Alternate channels (C15 X 50) are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
3/4" ϕ HS bolts, 1 5/16" ϕ holes.

SUGGESTED SEQUENCE OF CONSTRUCTION FOR INTERIOR DIAPHRAGMS (D7) AT STAGE CONSTRUCTION

1. Install D7 prior to Stage II deck pour.
2. Holes in L6x4x1/2" shall be long slots 1 3/16" x 1 7/8".

NOTES:

1. Two hardened washers shall be required over all oversize holes for diaphragms.
2. Provide 1 5/16" ϕ holes for all H.S. bolted connections.
3. Cost of Field Drilling is included with "Erecting Structural Steel."

DIAPHRAGMS SPAN 11
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL

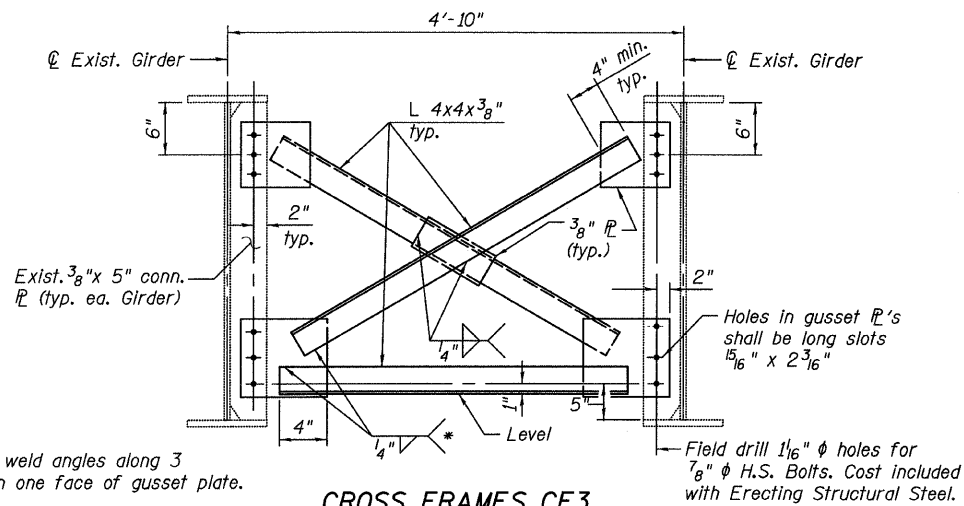
DESIGNED	DY, LS	REVISIONS	NAME	DATE
CHECKED	AMD, LS			
DRAWN	DY, LS			
CHECKED	AMD, LS			
DATE	03/25/2011			

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
73	55	0711.2R & 1011.1BR	COOK	741	646
CONTRACT NO. 60999					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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*** Cost of Timber Block Posts is included with
"Erecting Structural Steel."

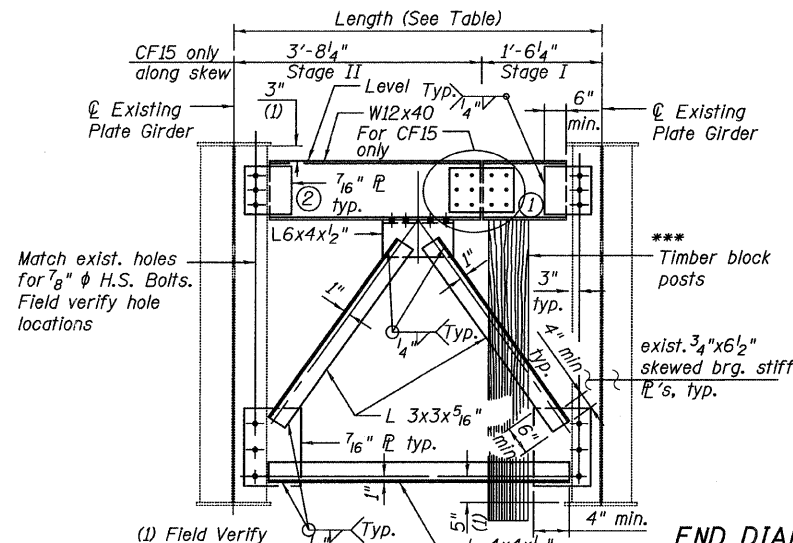


CROSS FRAMES CF3

(10 Required) Place prior to Stage II deck pour

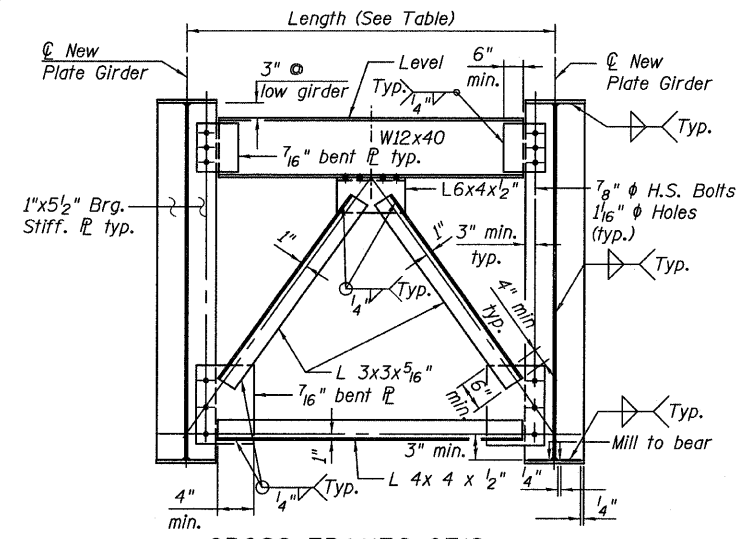
NOTE:

Provide Crossframes CF3 at the location of the
existing stiffeners. (Field verify the existing
stiffener locations)



CROSS FRAMES CF15 & CF16

(At Pier 9) (15 Required)



CROSS FRAMES CF18

(At Pier 9)
(2 Required)

**END DIAPHRAGM STAGE
CONSTRUCTION SEQUENCE**

1. Order diaphragm in two sections.
2. Attach section ① of diaphragm to girder.
3. Place timber block posts between section ① of diaphragm and pier bearing seat.
4. Attach section ② of diaphragm to both girder and section ① of diaphragm during stage II construction with splice plates.
5. Remove timber block posts.
6. Install lower portion of cross frame.

TABLE OF CROSS FRAMES DIMENSIONS

See Detail A

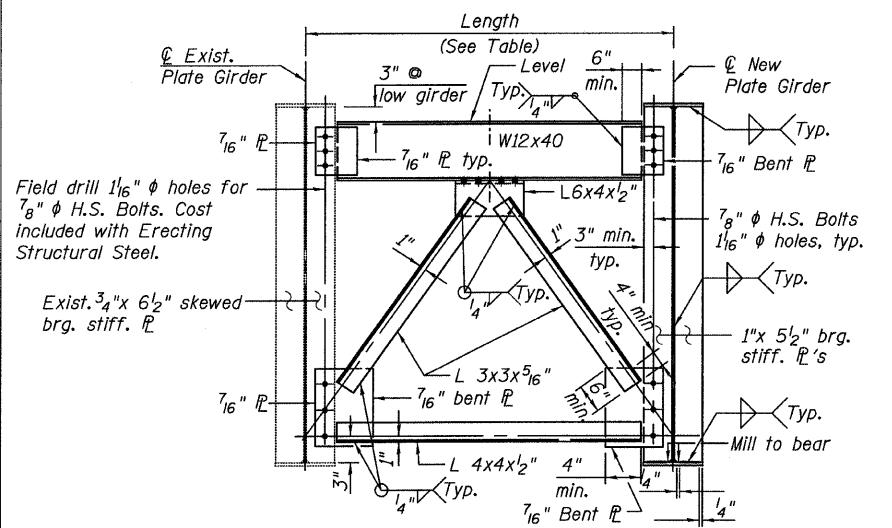
Cross Frame	Length	No. Req'd.	Angle "A"	Angle "B"
CF1	5'-2 1/8"	20	90°0'0"	90°0'0"
CF2	*5'-2 1/8"	10	90°0'0"	90°0'0"
CF3	*4'-10"	10	90°0'0"	90°0'0"
CF4	*5'-1 1/8"	1	90°41'27"	90°0'0"
CF5	*4'-10 5/8"	1	90°41'27"	90°0'0"
CF6	*4'-8 1/16"	1	90°41'27"	90°0'0"
CF7	*4'-5 1/16"	1	90°41'27"	90°0'0"
CF8	*4'-2"	1	90°41'27"	90°0'0"
CF9	*3'-10 5/16"	1	90°41'27"	90°0'0"
CF10	*3'-8 1/16"	1	90°41'27"	90°0'0"
CF11	*3'-5 5/8"	1	90°41'27"	90°0'0"
CF12	*3'-2 15/16"	1	90°41'27"	90°0'0"
CF13	*2'-11 15/16"	1	90°41'27"	90°0'0"
CF14	*2'-11 3/4"	1	-	-
CF15	5'-2 3/8"	1	-	-
CF16	6'-2 1/4"	14	-	-
CF17	*5'-6 13/16"	1	-	-
CF18	5'-6 13/16"	2	-	-

* Field verify lengths and locations
prior to steel fabrication.

NOTES:

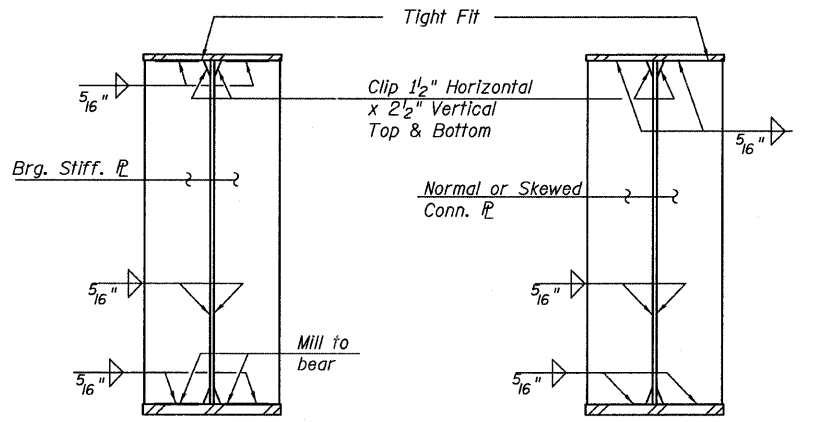
1. Two hardened washers required for each set of oversized holes.
2. O.F. denotes outside face.
3. I.F. denotes inside face.
4. N.F. denotes near face.
5. F.F. denotes far face.

**CROSS FRAMES
SPANS 11, 12 & 13
STRUCTURE NO. 016-3240**



CROSS FRAMES CF14 & CF17

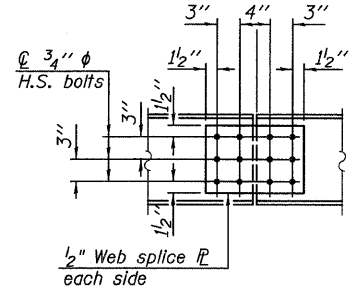
(At Pier 9) (2 Required)



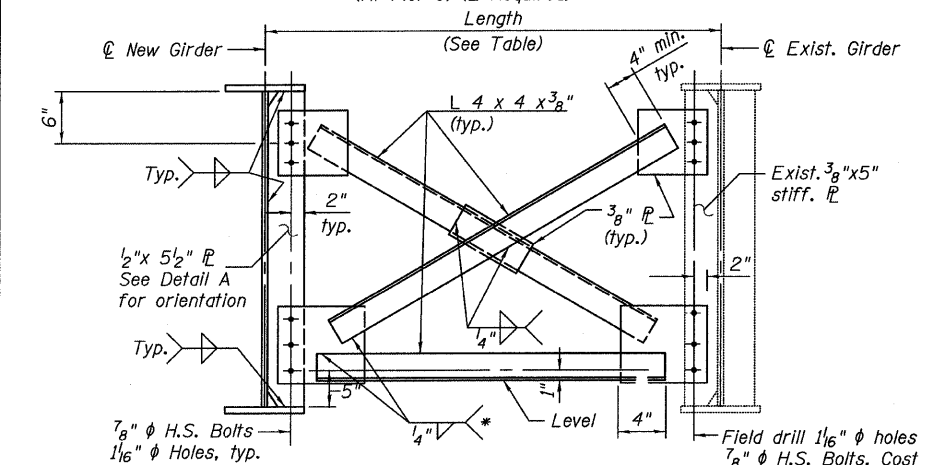
****BEARING STIFFENER**

**For size, location and skew see
Girder Elevation Details.

**** INTERIOR CONNECTION PLATE**

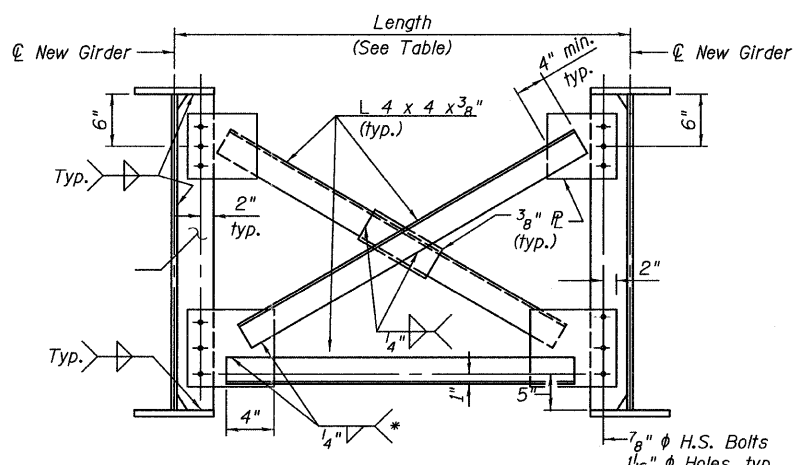


SPLICE PLATE DETAIL



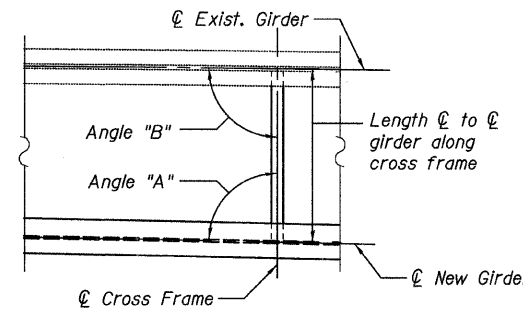
CROSS FRAMES CF2 & CF4 THRU CF13

(20 Required)



CROSS FRAMES CF1

(20 Required)



DETAIL A

TYLIN INTERNATIONAL

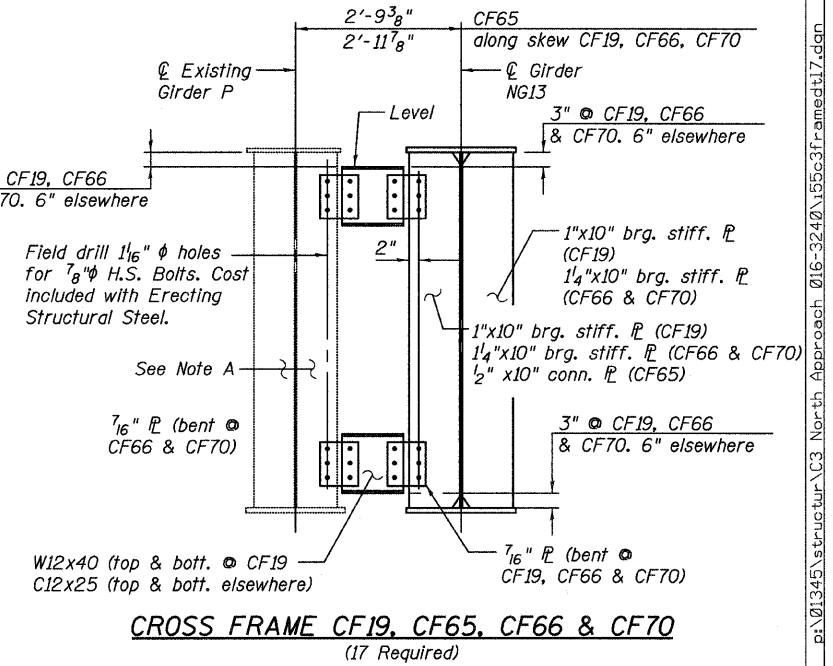
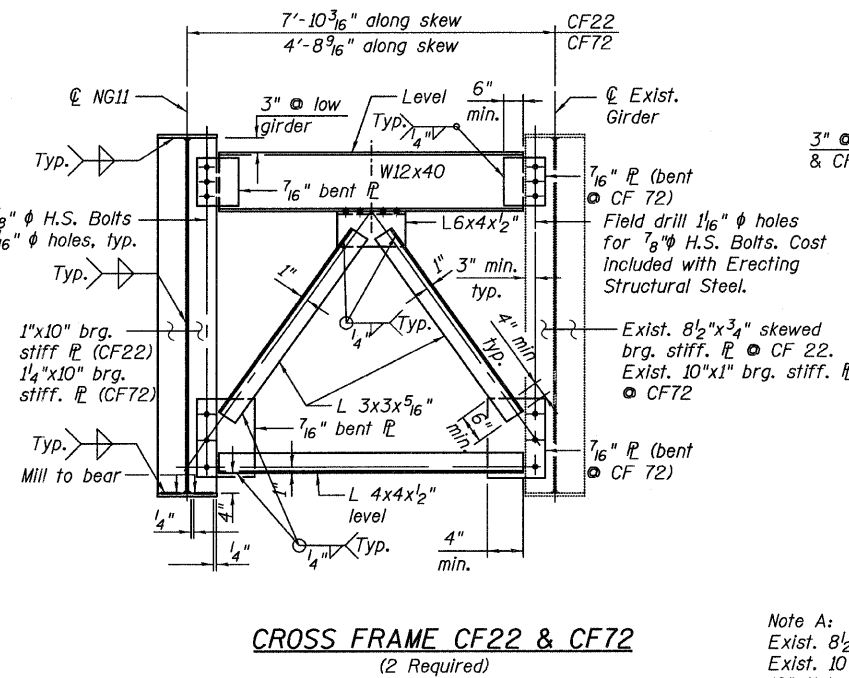
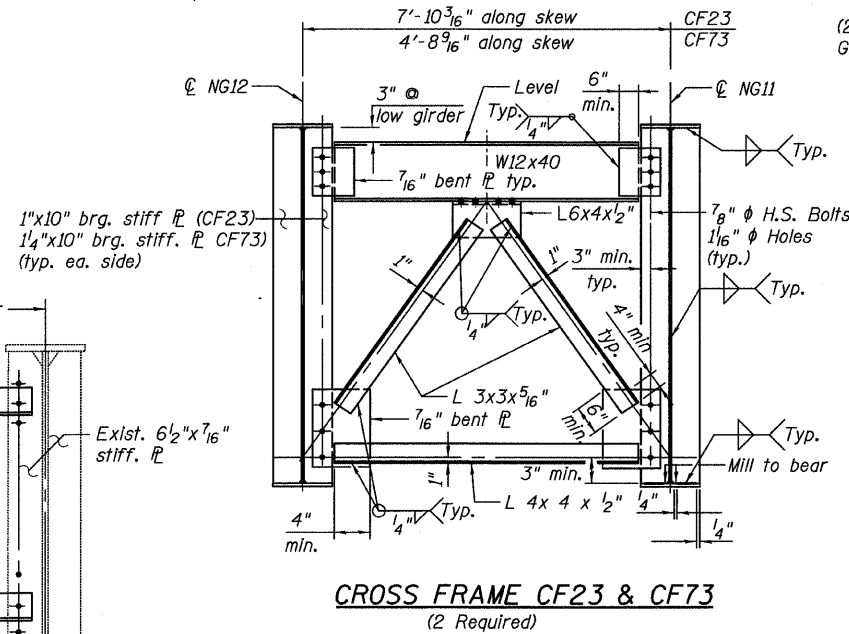
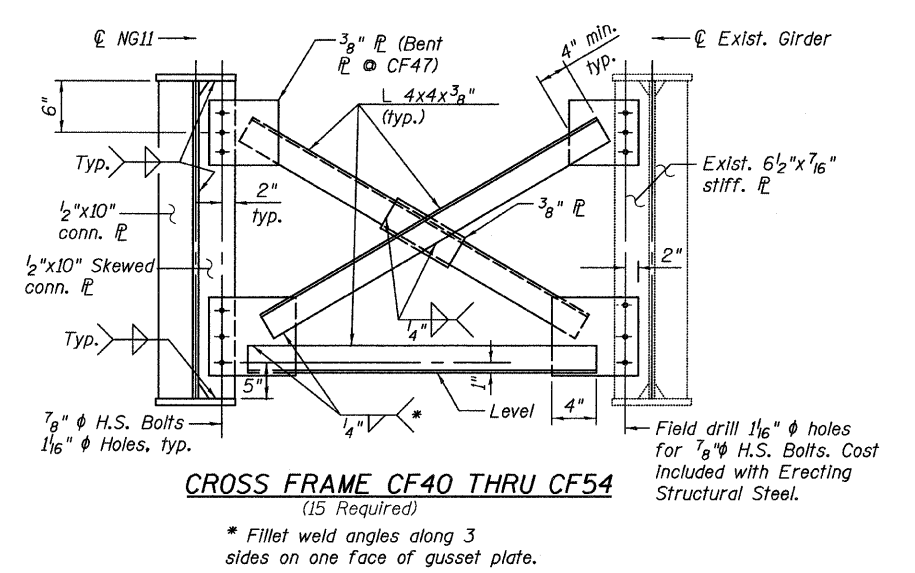
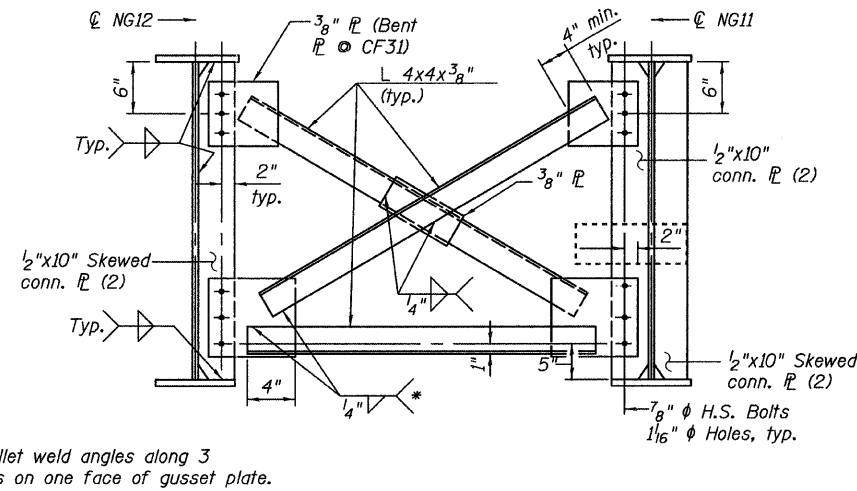
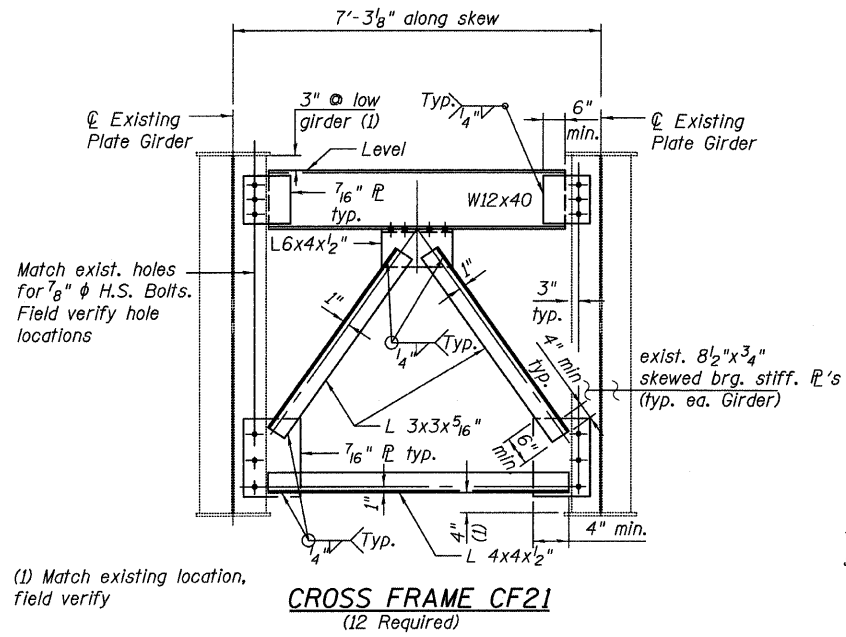
DESIGNED - DY, LS
CHECKED - AMD, LS
DRAWN - DY, LS
CHECKED - AMD, LS
DATE - 03/25/2011

REVISIONS	
NAME	DATE

SHEET NO. 44	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	73 SHEETS	55	0711.2R & 1011.1BR	COOK	741 647
CONTRACT NO. 60999					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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5/9/2011

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NOTES:

1. Install temporary horizontal L4x4x3/8" members prior to casting deck. Bolts shall be finger tight.
2. Temporary L4x4x3/8" members shall be removed after the deck has cured at least five (5) days or reached a minimum compressive strength of 3,500 psi.
3. Type CF40 thru CF 54 Cross Frames shall be installed at Type D11 Cross Frame locations once temporary L4x4x3/8" members have been removed.
4. For details not shown, see "Cross Frame CF40 thru CF54" for additional information.

NOTES:

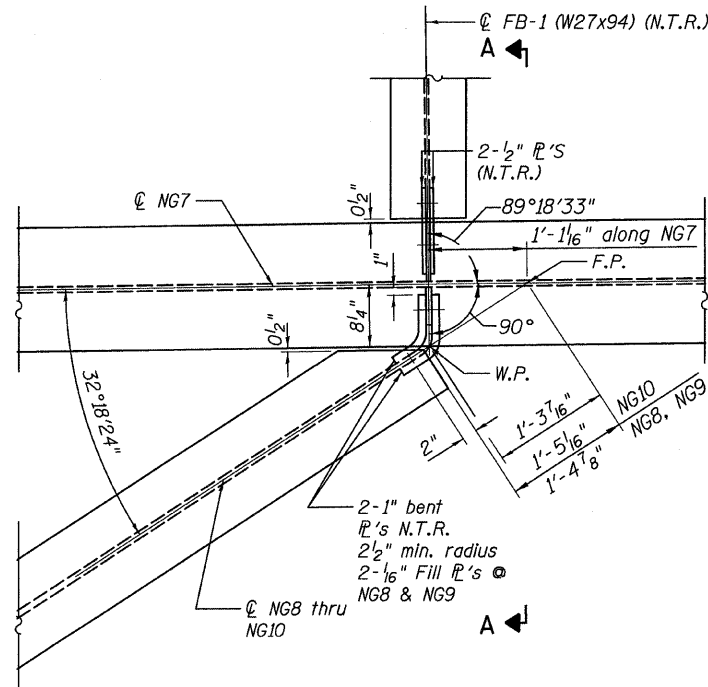
1. Two hardened washers shall be required for each set of oversized holes.
2. N.F. denotes Near Face
3. F.F. denotes Far Face.

**CROSS FRAMES
SPANS 14 & 15
STRUCTURE NO. 016-3240**

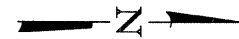
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	DRAWN - DY, LS				CONTRACT NO. 60999					
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

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 5/9/2011

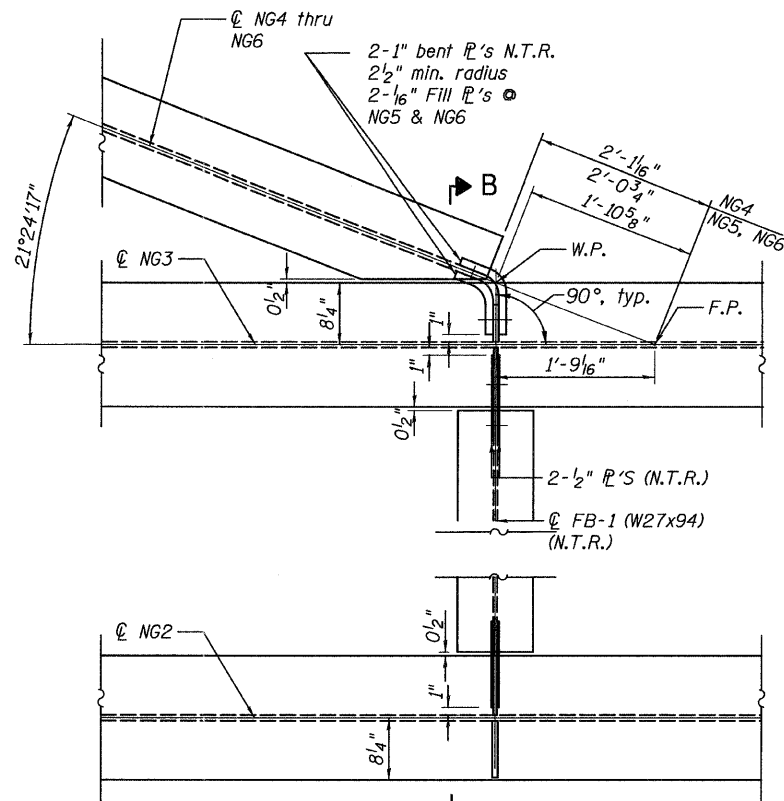
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



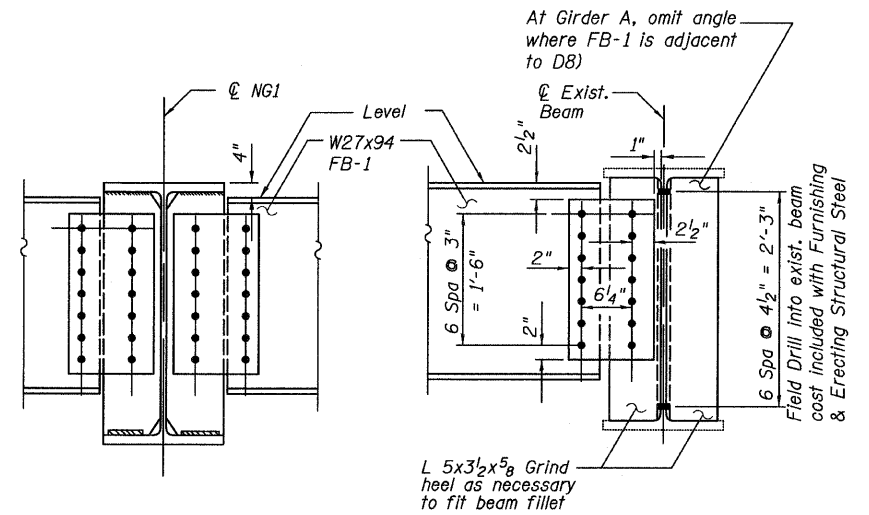
DETAIL 1



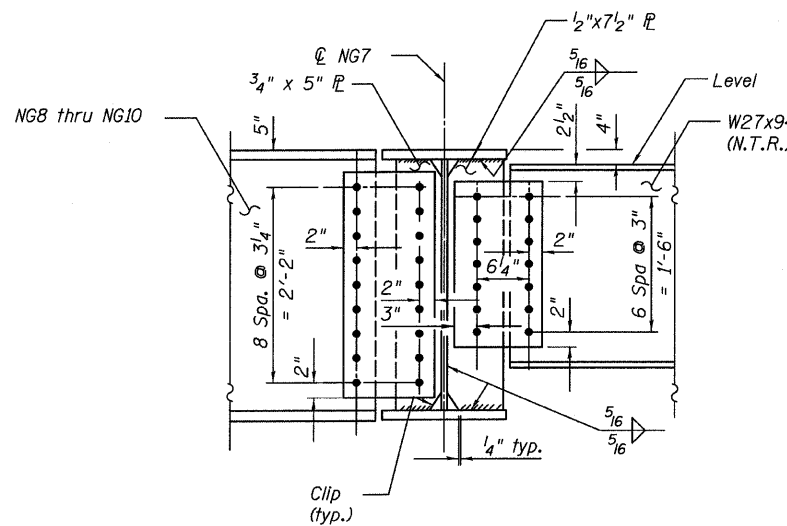
TYPICAL CLIPPING
DETAIL



DETAIL 2



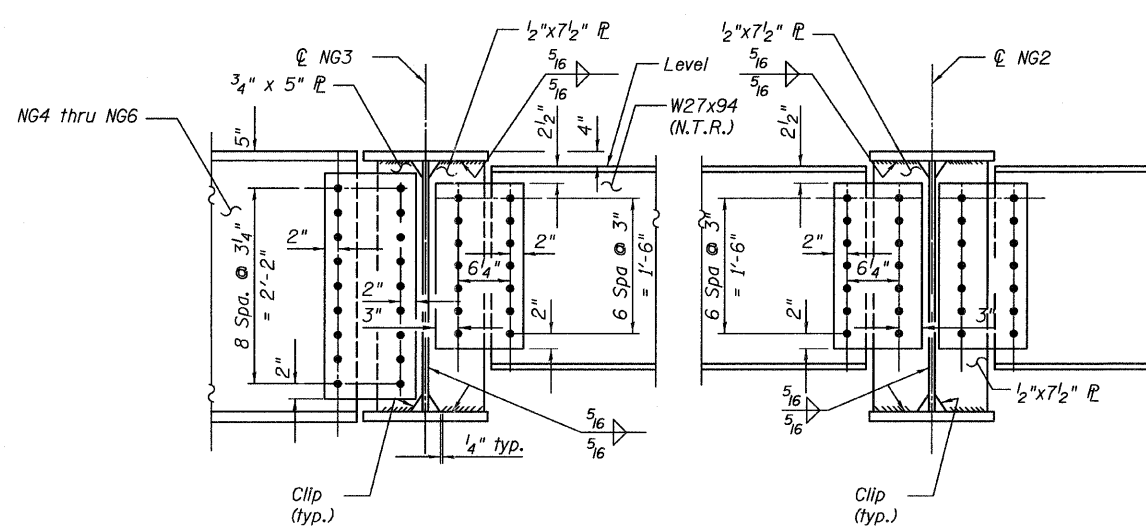
AT EXISTING BEAM
(Girder A shown, Girder R & Q similar)



SECTION A-A

All bolts shall be 7/8" ϕ . Holes shall be 15/16" ϕ in framing of NG7 with NG10. Holes shall be 1 1/16" ϕ in framing of NG7 with FB-1.

Two hardened washers required for each set of oversized holes.



SECTION B-B

All bolts shall be 7/8" ϕ . Holes shall be 15/16" ϕ in framing of NG3 with NG4. Holes shall be 1 1/16" ϕ in framing of NG3 with FB-1.

Two hardened washers required for each set of oversized holes.

NOTES:

- Structural Steel shall conform to the requirements of AASHTO M 270 Grade 50.
- For shear stud location see girder elevations.
- Load carrying components designated 'N.T.R.' shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
- N.F. - denotes near face.
- F.F. - denotes far face.
- Work this sheet with sheets 36 & 40.
- F.P. - denotes framing point.

FRAMING DETAILS
CONNECTIONS
STRUCTURE NO. 016-3240

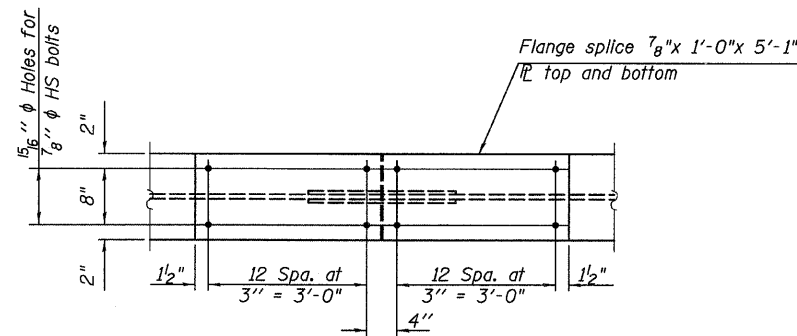
TYLIN INTERNATIONAL

DESIGNED	DY, LS	REVISIONS	
CHECKED	AMD, LS	NAME	DATE
DRAWN	DY, LS		
CHECKED	AMD, LS		
DATE	03/25/2011		

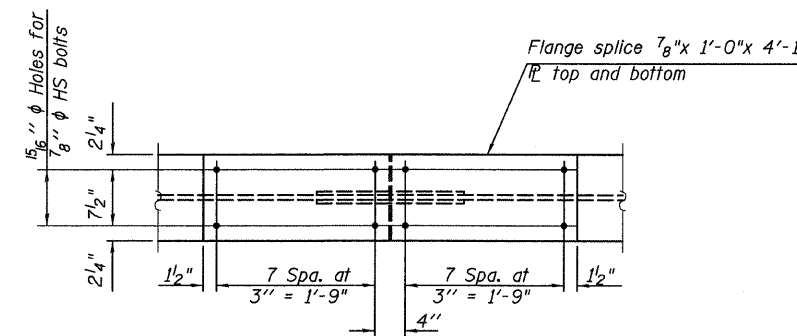
SHEET NO. 46	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	73 SHEETS	55	0711.2R & 1011.1BR	COOK	741 649
			CONTRACT NO. 60999		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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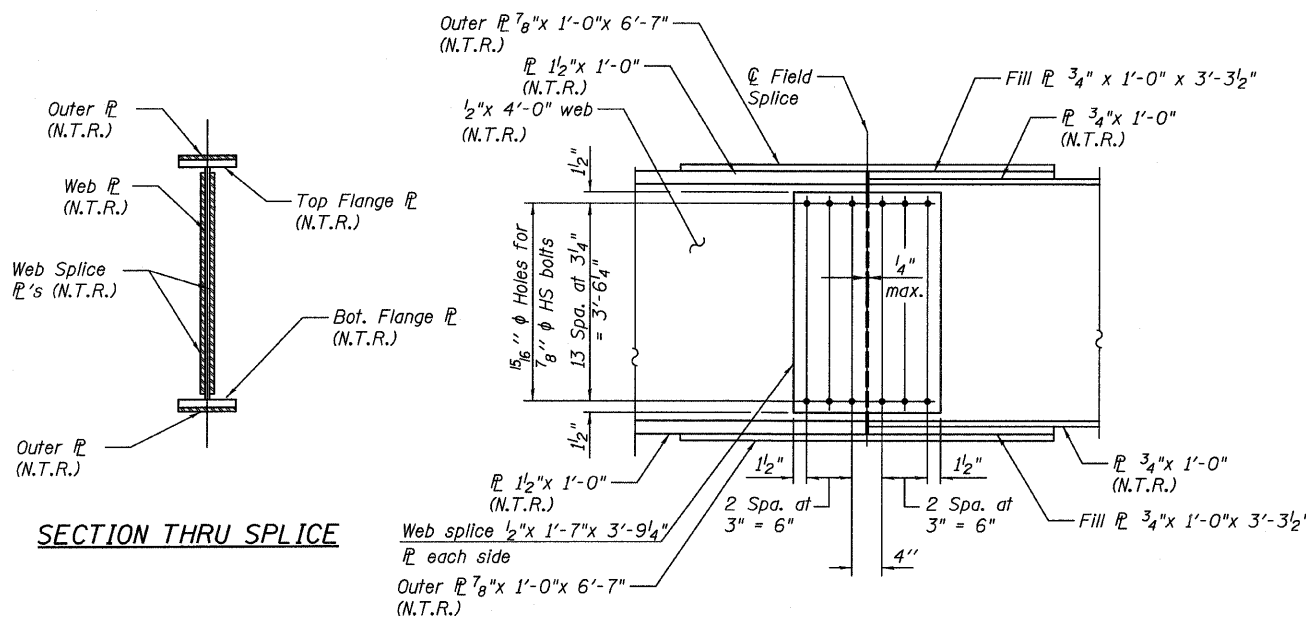
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN



PLAN

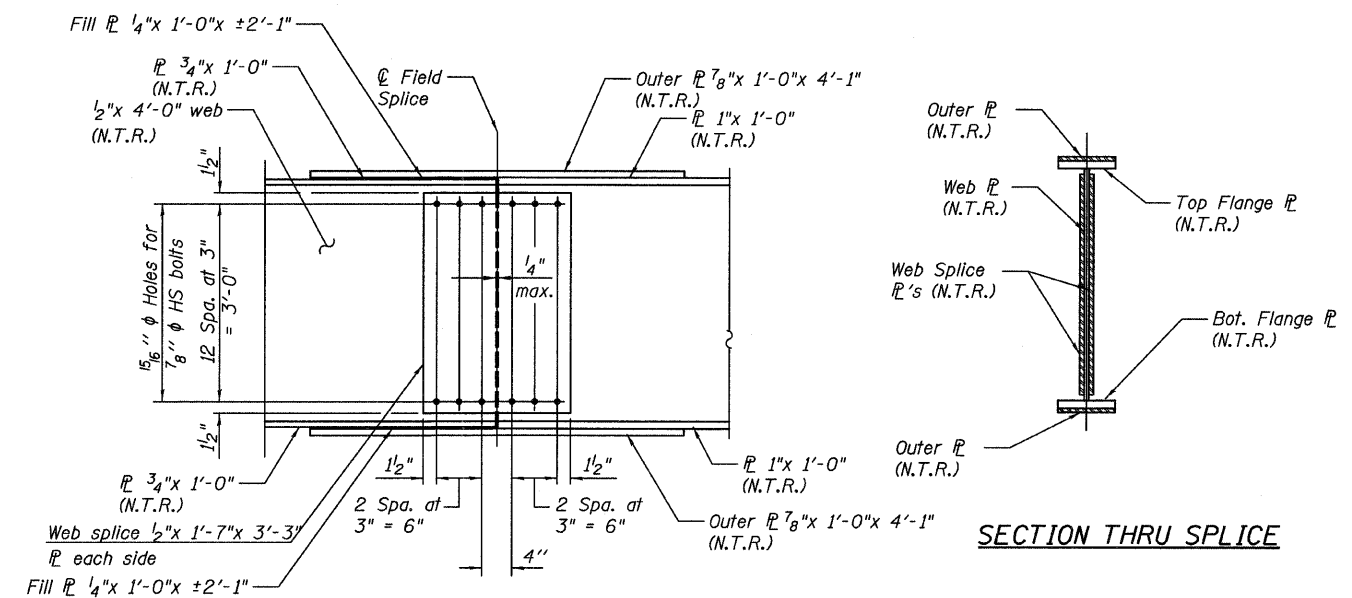


SECTION THRU SPLICE

ELEVATION

FIELD SPLICE - 1 DETAIL

(4 Required)



SECTION THRU SPLICE

ELEVATION

FIELD SPLICE - 2 DETAIL

(4 Required)

NOTES:

1. All structural steel shall be AASHTO M 270 Grade 50.
2. Load carrying components designated "N.T.R." shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

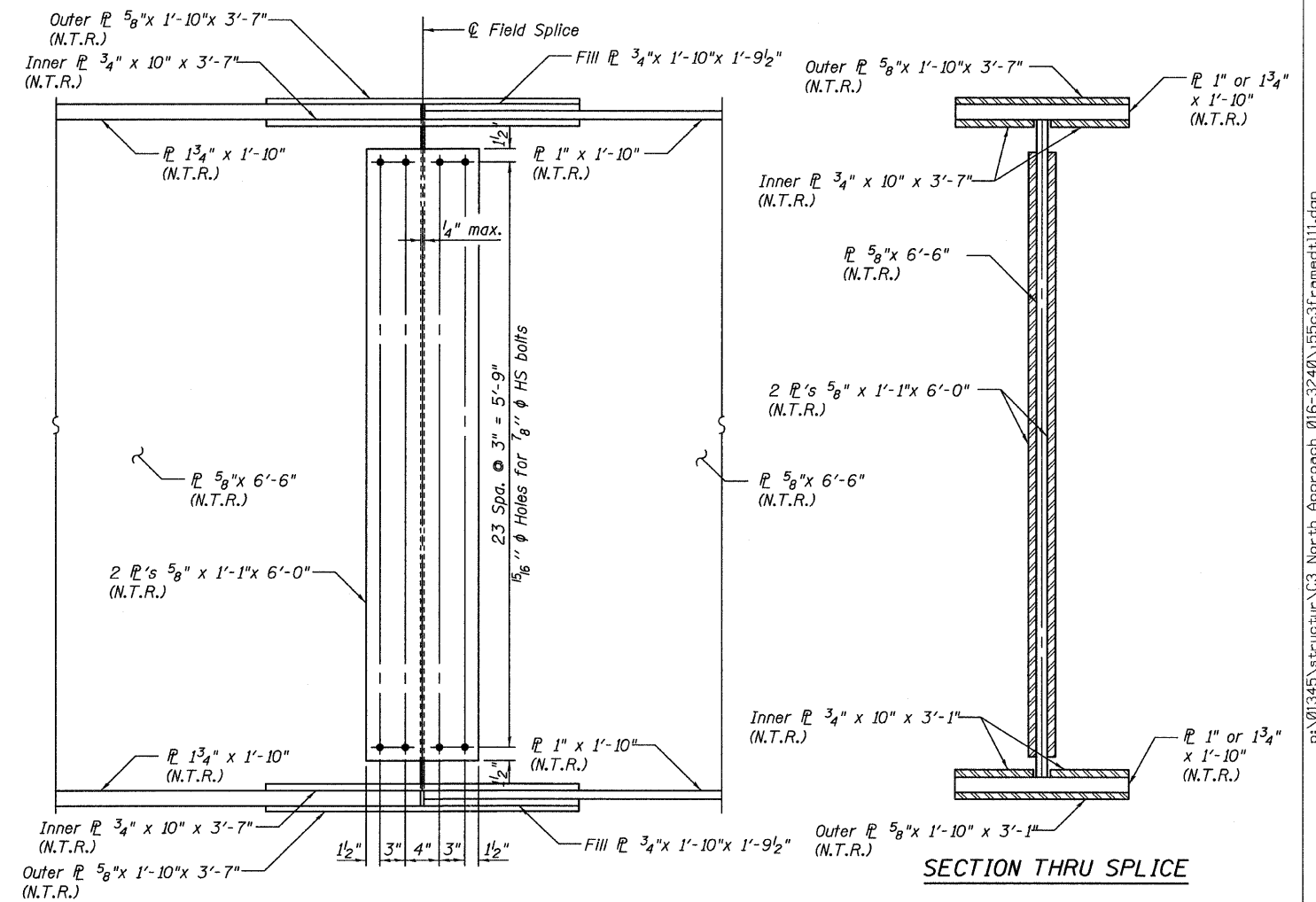
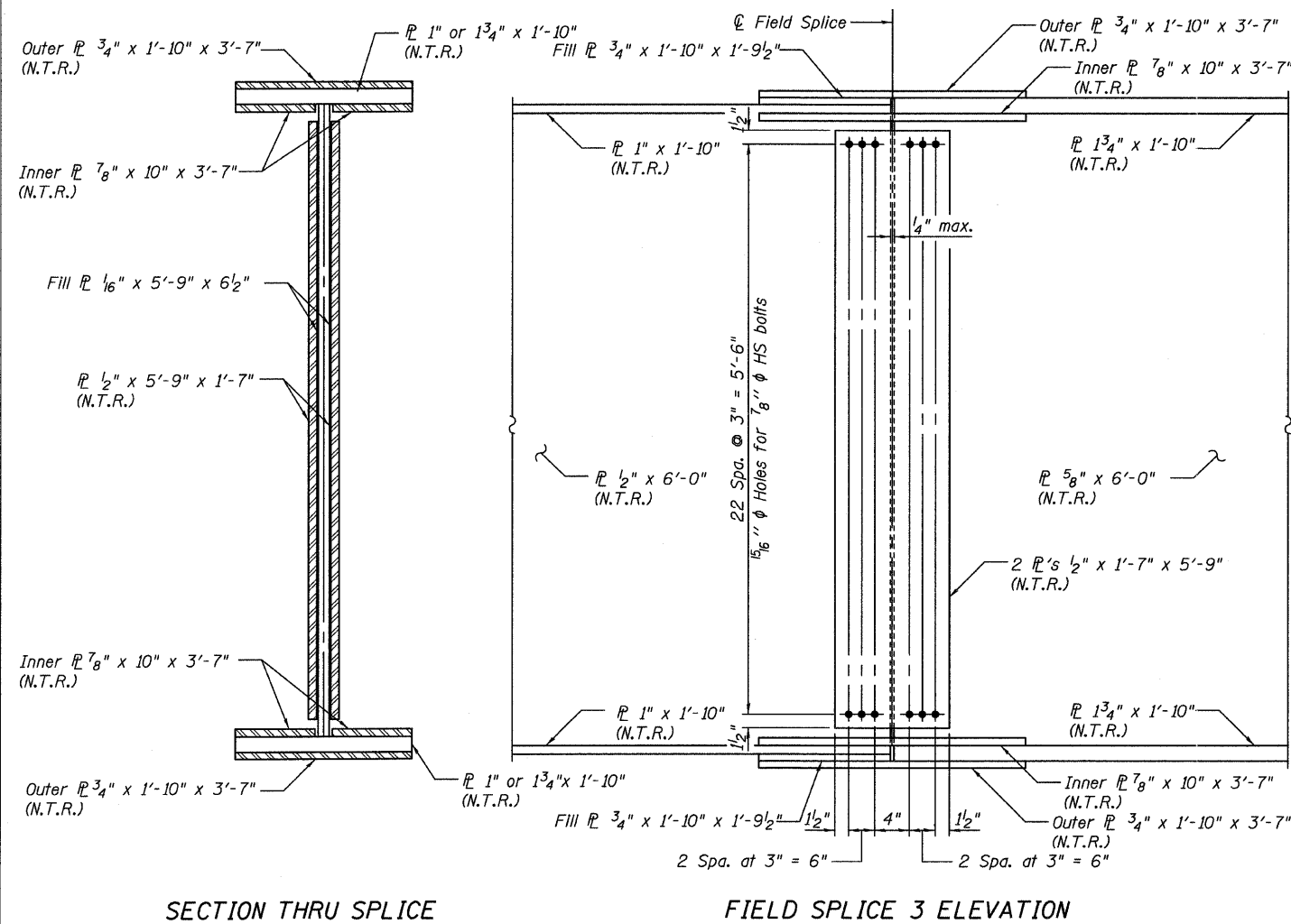
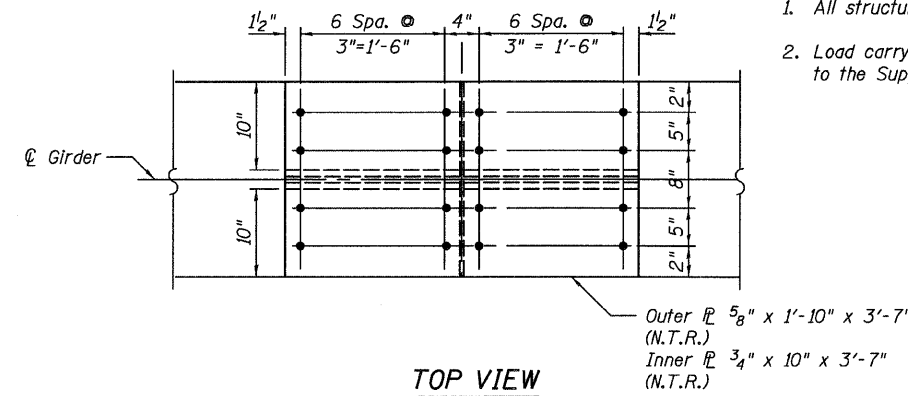
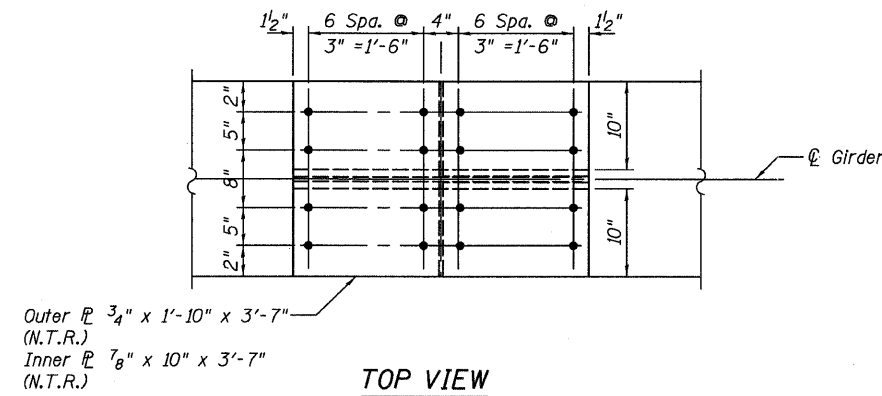
FRAMING DETAILS
FIELD SPLICES 1 & 2
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 47	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	650	
	DRAWN - DY, LS				CONTRACT NO. 60999					
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOTES:

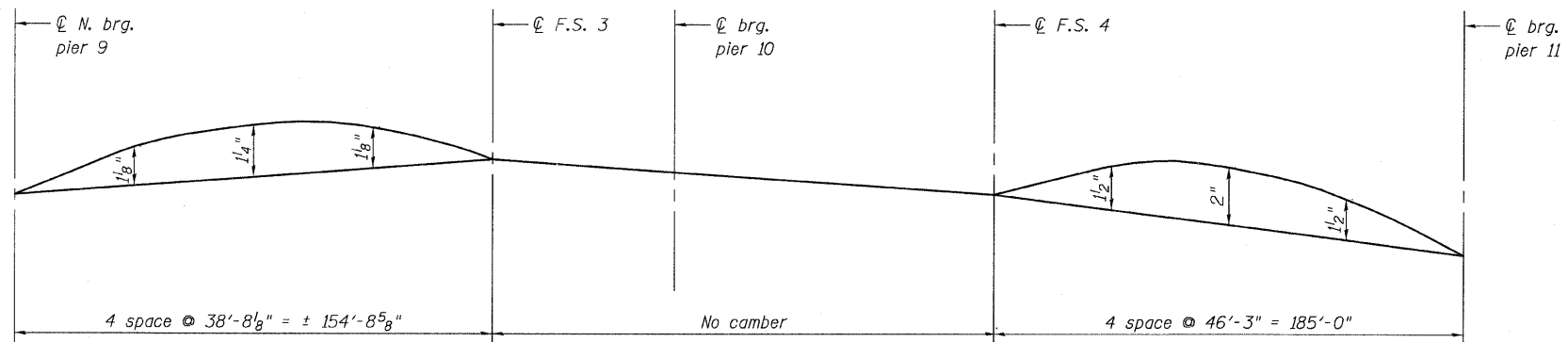
- All structural steel shall be AASHTO M 270 Grade 50.
- Load carrying components designated 'N.T.R.' shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.



FRAMING DETAILS
FIELD SPLICES 3 & 4
STRUCTURE NO. 016-3240

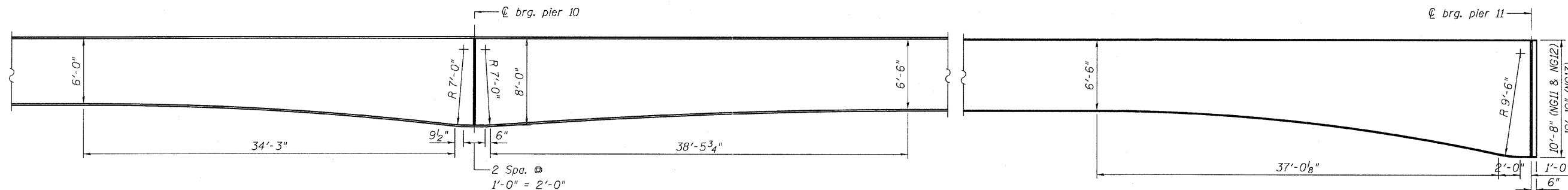
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	CHECKED - AMD, LS	NAME	DATE						
	DRAWN - DY, LS								
	CHECKED - AMD, LS								
	DATE - 03/25/2011				CONTRACT NO. 60999				
						FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

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NOTE
No camber for girders NG1 thru NG10.

CAMBER DIAGRAM
(NG11, NG12 & NG13)



PARABOLIC HAUNCH DETAIL
(NG11, NG12 & NG13)

**CAMBER DIAGRAMS
& PARABOLIC HAUNCH DETAILS**
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL

	DESIGNED - DY, LS	REVISIONS	
		NAME	DATE
CHECKED - AMD, LS			
DRAWN - DY, LS			
CHECKED - AMD, LS			
DATE - 03/25/2011			

SHEET NO. 49	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	652
73 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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BEARING DIMENSION TABLE

Bearing Location	Beams	Type	No. Req'd.	T _h in.	Elastomer					Top Plate					Bottom Plate			Anchor Bolts			Pintles/Pin			Side Retainers								
					W _e in.	L _e in.	T _e in.	T _p in.	N _p	T _s in.	N _s	W _t in.	L _t in.	T _{td} in.	T _{tu} in.	R _t in.	W _b in.	L _b in.	T _b in.	D _a in.	L _a in.	R _b in.	H _b in.	W _p in.	D _p in.	D _s in.	H _p in.	y in.	z in.	t in.	h in.	v in.
C. Abut. 4, N. Brgs.	NG4,NG5,NG8,NG9,NG6,NG10	I	6	3 ⁵ / ₁₆	7	12	15 ¹ / ₁₆	3 ³ / ₈	3	3 ³ / ₃₂	2	8	14	2	2	4	-	-	-	1	12	10 ¹ / ₂	-	2 ¹ / ₄	-	-	-	2 ¹ / ₈	4	2	1 ¹ / ₄	3 ¹ / ₂
C. Abut. 4, N. Brgs.	NG1,NG2,NG3,NG7	I	4	5 ¹ / ₄	10	14	3 ¹ / ₄	3 ¹ / ₈	6	1 ¹ / ₈	5	11	16 ¹ / ₂	2	2	7	-	-	-	1	12	9 ¹ / ₄	-	2 ¹ / ₄	-	-	-	2 ¹ / ₈	4	2	1 ¹ / ₄	5 ¹ / ₄
C. Abut. 4, N. Brgs.	A-R	I	16	5 ³ / ₁₆	9	12	3 ³ / ₁₆	3 ³ / ₈	7	3 ³ / ₃₂	6	10	14	2	2	6	-	-	-	1	12	9 ¹ / ₄	-	2 ¹ / ₄	-	-	-	2 ¹ / ₈	4	2	1 ¹ / ₄	5 ³ / ₁₆
Pier 7	NG1,NG2,NG3,NG7	Fix	4	3	-	-	-	-	-	-	-	10	14	1 ¹ / ₈	1 ¹ / ₈	-	10 ³ / ₄	22 ¹ / ₄	1 ¹ / ₈	1 ¹ / ₈	1 ¹ / ₈	1 ¹ / ₈	1 ¹ / ₈	1 ¹ / ₈	1 ¹ / ₈	-	-	-	-	-		
Pier 7	A-R	Fix	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Pier 8	NG1,NG2,NG3,NG7	I	4	6 ⁵ / ₈	13	20	3 ⁷ / ₈	5 ⁵ / ₈	5	3 ¹ / ₁₆	4	14	22	2 ³ / ₄	2 ³ / ₄	10	-	-	-	1	12	13 ¹ / ₄	-	2 ¹ / ₄	-	-	-	2 ¹ / ₈	4	2	1 ¹ / ₄	6 ⁵ / ₈
Pier 8	A-R	I	16	6 ⁵ / ₈	13	20	3 ⁷ / ₈	5 ⁵ / ₈	5	3 ¹ / ₁₆	4	14	22	2 ³ / ₄	2 ³ / ₄	10	-	-	-	1	12	13 ¹ / ₄	-	2 ¹ / ₄	-	-	-	2 ¹ / ₈	4	2	1 ¹ / ₄	6 ⁵ / ₈
Pier 9, S. Brgs.	NG1,NG2,NG3,NG7	II	4	8 ¹ / ₈	9	12	4 ¹ / ₁₆	3 ³ / ₈	7	3 ³ / ₃₂	6	11	14	2	2	7	10	22 ¹ / ₄	2	1	12	9 ¹ / ₄	1 ¹ / ₂	2 ¹ / ₄	-	-	2 ¹ / ₈	4	2	1 ¹ / ₄	6 ¹ / ₄	
Pier 9, S. Brgs.	A-R	II	16	8 ¹ / ₈	9	12	4 ¹ / ₁₆	3 ³ / ₈	7	3 ³ / ₃₂	6	11	14	2	2	7 ¹ / ₂	10	22 ¹ / ₄	2	1	12	9 ¹ / ₄	1 ¹ / ₂	2 ¹ / ₄	-	-	2 ¹ / ₈	4	2	1 ¹ / ₄	6 ¹ / ₄	
Pier 9, N. Brgs.	NG11, NG12, NG13	III	3	8 ¹ / ₁₆	11	16	3 ¹ / ₄	1 ¹ / ₂	4	1 ¹ / ₈	3	14	22	3	3	9	12	33 ¹ / ₄	2 ³ / ₈	1 ¹ / ₂	18	13 ¹ / ₈	2	3	1 ¹ / ₂	2	2 ³ / ₄	2 ³ / ₄	5 ¹ / ₂	5 ¹ / ₈	1 ³ / ₄	6 ¹ / ₄
Pier 9, N. Brgs.	A-P	III	14	8 ¹ / ₁₆	11	16	3 ¹ / ₄	1 ¹ / ₂	4	1 ¹ / ₈	3	14	20	3	3	9	12	31 ¹ / ₄	2 ³ / ₈	1 ¹ / ₂	18	12 ¹ / ₈	2	3	1 ¹ / ₂	2	2 ³ / ₄	2 ³ / ₄	5 ¹ / ₂	5 ¹ / ₈	1 ³ / ₄	6 ¹ / ₄
Pier 11	NG11, NG12, NG13, P	Fix	4	6	-	-	-	-	-	-	14	23 ¹ / ₂	3	3	-	15	33	3	1 ¹ / ₂	20	-	2	3	1 ³ / ₄	1 ⁷ / ₈	1 ⁷ / ₈	-	-	-	-	-	
Pier 11	A-N	Fix	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers and other steel members required for the bearing assembly are furnished under a separate contract. Installation of these items is included in the cost of "Erecting Elastomeric Bearing Assembly, Type I".
The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 36. Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

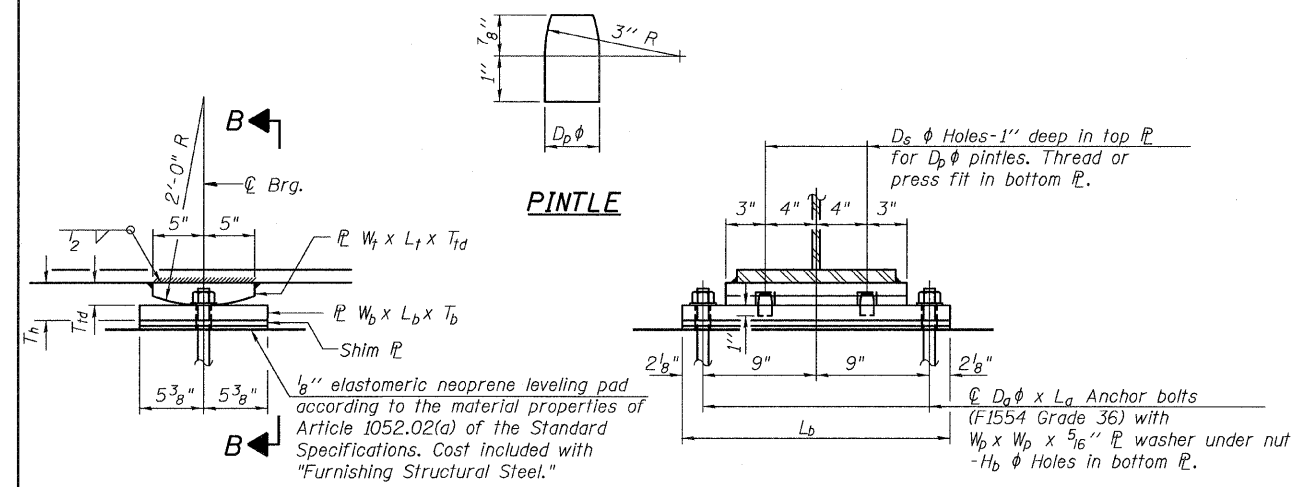
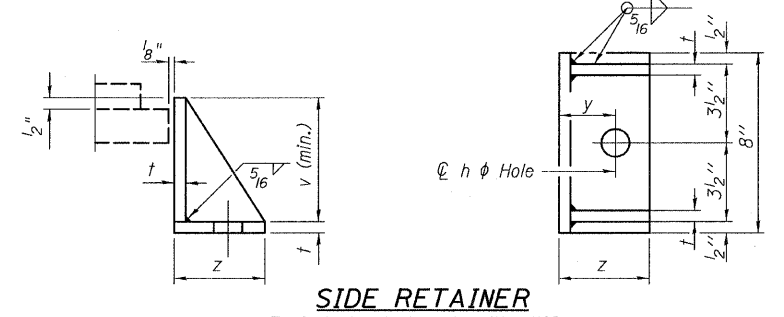
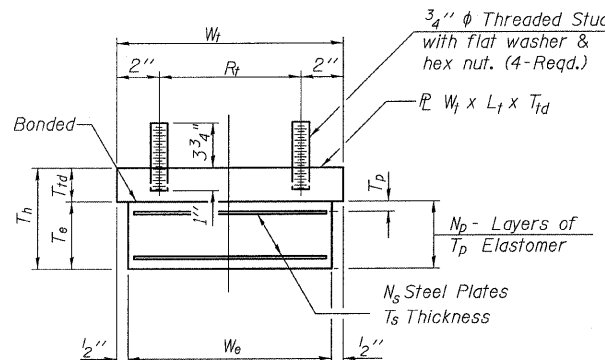
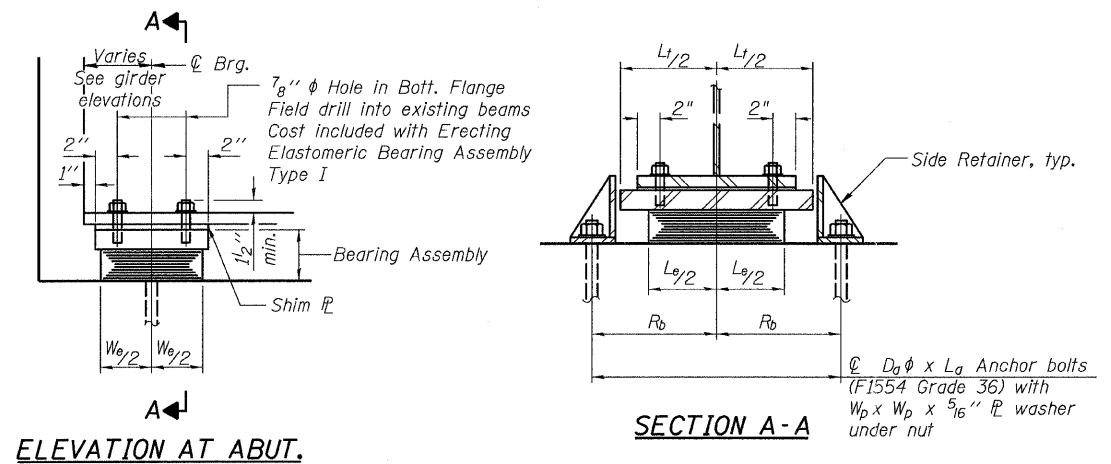
BILL OF MATERIAL

Item	Unit	Total
Erecting Elastomeric Bearing Assembly Type I	Each	46
Anchor Bolts, 1"	Each	92
Anchor Bolts, 1 1/4"	Each	8

SHIM PLATE THICKNESS TABLE

(Provided in addition to 1/8" adjusting shims)

Beam	Abut. 4C, N. Brg.	Pier 9, S. Brg.
M	3/8"	--
N	5/8"	--
Q	1/4"	--
R	1/4"	--
NG3	3/8"	1/2"



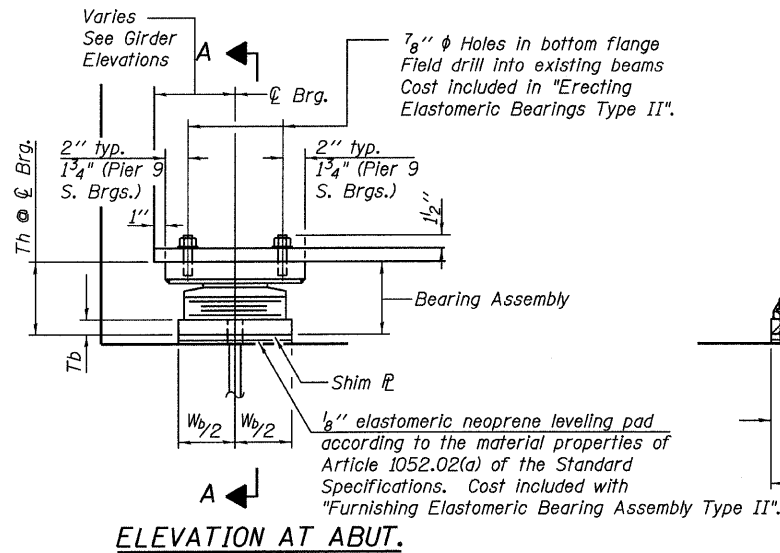
Note:
Shim plates shall not be placed under Bearing Assembly.

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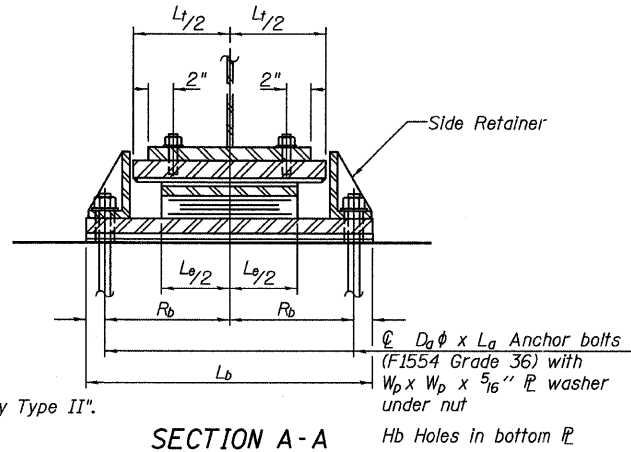
TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 50	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	653	
	DRAWN - DY, LS				73 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD, LS					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/25/2011									

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5/10/2011

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DEPARTMENT OF TRANSPORTATION

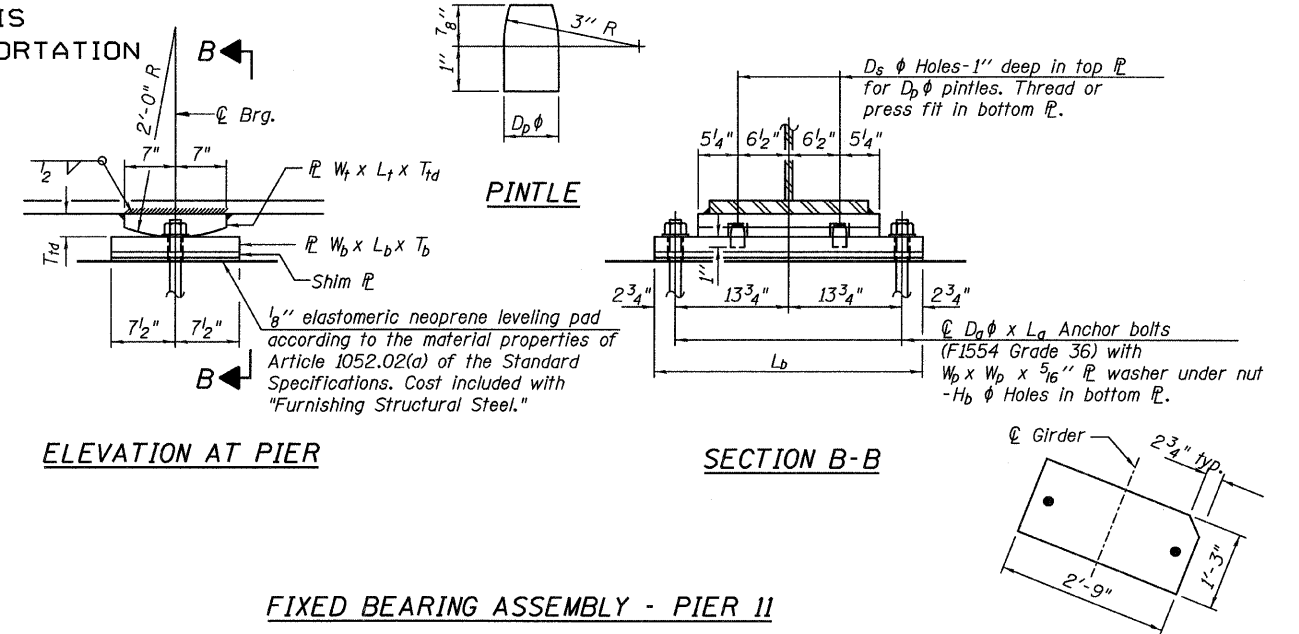


ELEVATION AT ABUT.



SECTION A-A

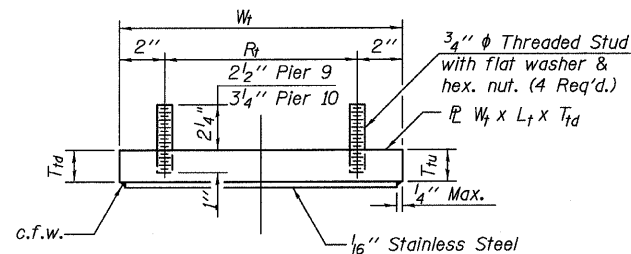
TYPE II ELASTOMERIC EXP. BRG.



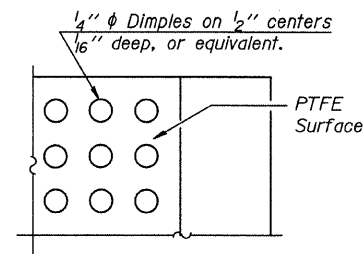
FIXED BEARING ASSEMBLY - PIER II

CLIPPING OF BOT. \bar{P}

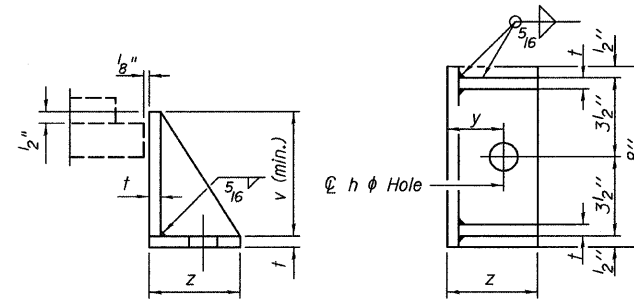
(At Girders P & NG13, Girder P shown)



TOP BEARING ASSEMBLY



PLAN-PTFE SURFACE



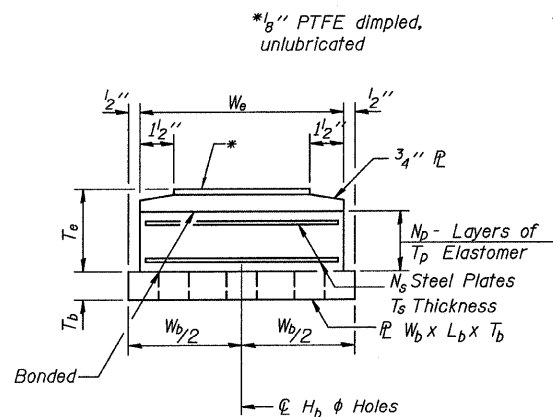
SIDE RETAINER - PIER 9 (SOUTH & NORTH)

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

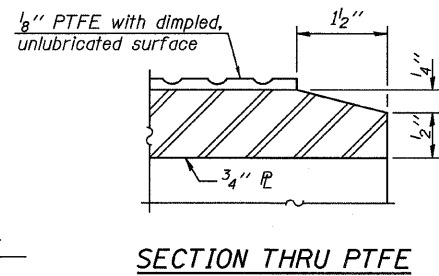
Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers and other steel members required for the bearing assembly are furnished under a separate contract. Installation of these items is included in the cost of "Erecting Elastomeric Bearing Assembly, Type II".
The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 36.

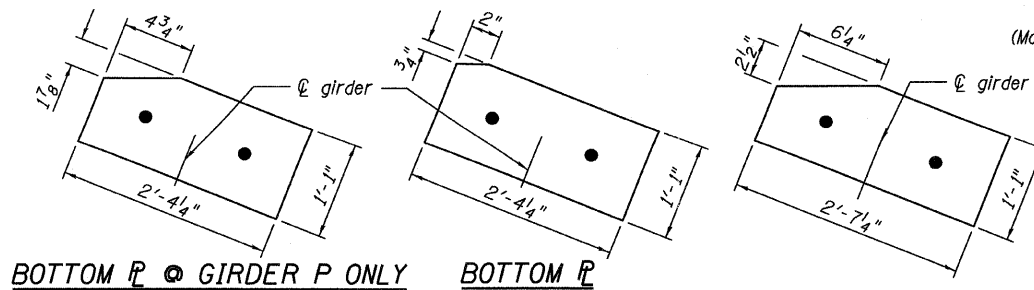
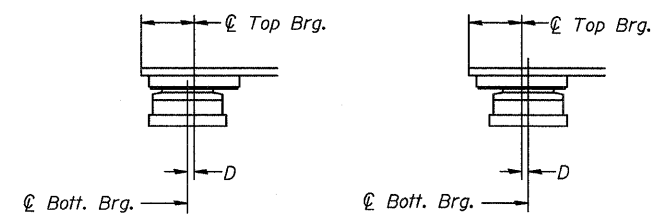
For bearing dimensions refer to the table on sheet 50.



BOTTOM BEARING ASSEMBLY



SECTION THRU PTFE



BOTTOM \bar{P} ϕ GIRDER P ONLY

BOTTOM \bar{P}

CLIPPING \bar{P} 'S ϕ S. PIER 9

CLIPPING \bar{P} 'S ϕ N. PIER 9

BILL OF MATERIAL

Item	Unit	Total
Erecting Elastomeric Bearing Assembly Type II	Each	20
Anchor Bolts, 1"	Each	40
Anchor Bolts, 1/2"	Each	8

ELASTOMERIC BEARING TYPE II
STRUCTURE NO. 016-3240

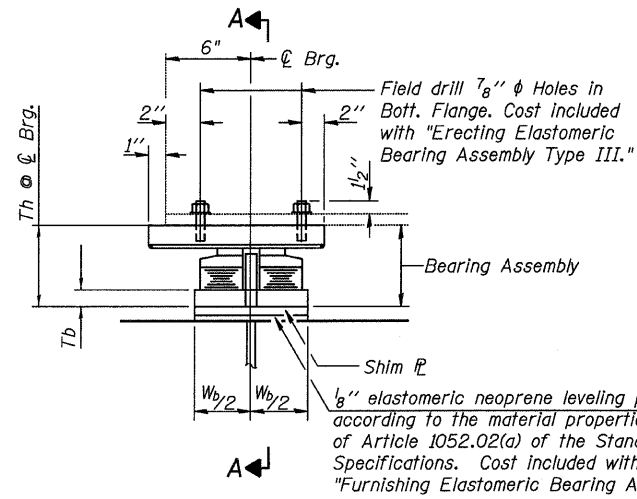
TYLIN INTERNATIONAL

DESIGNED	DY, LS	REVISIONS	
CHECKED	AMD, LS	NAME	DATE
DRAWN	DY, LS		
CHECKED	AMD, LS		
DATE	03/25/2011		

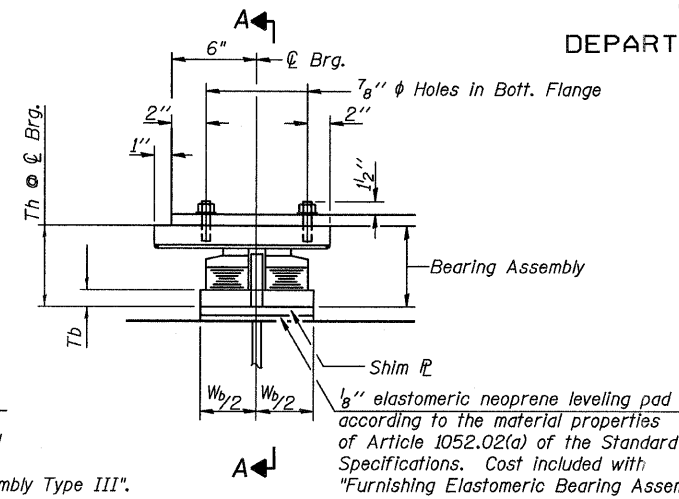
SHEET NO.	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
51	55	0711.2R & 1011.1BR	COOK	741	654
CONTRACT NO. 60999					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

5/9/2011 9:20:43 AM p:\01345\structur\03_North Approach_016-3240\156c3\tae2.dgn

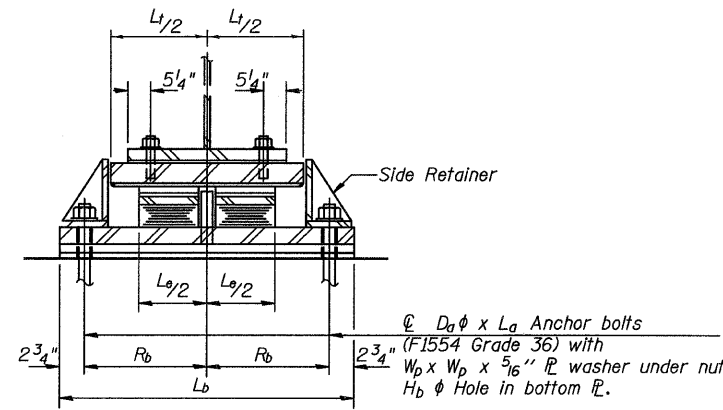
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION AT PIER 9 N. BRGS.
(At existing beams)

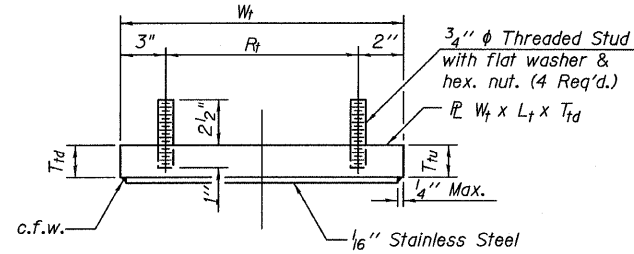


ELEVATION AT PIER 9 N. BRGS.
(At proposed beams)

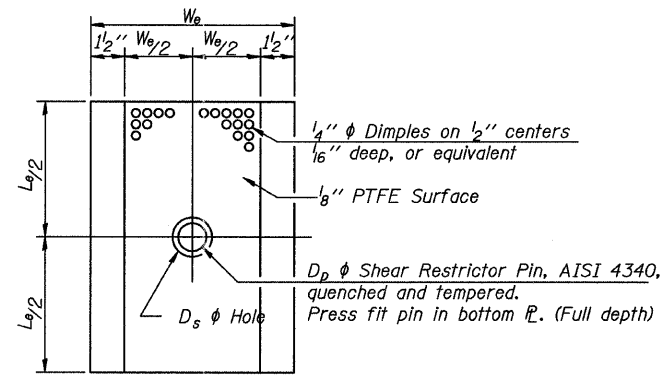


SECTION A-A

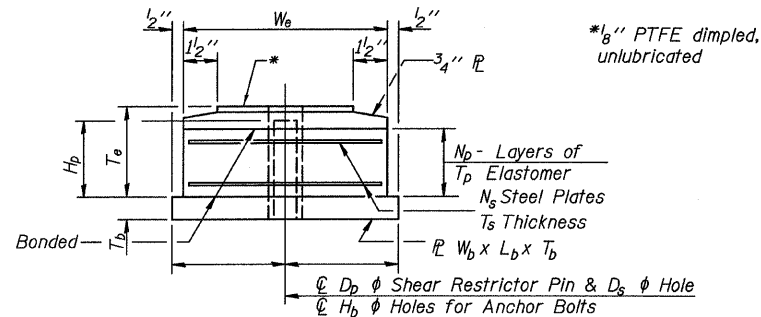
TYPE III ELASTOMERIC EXP. BRG.



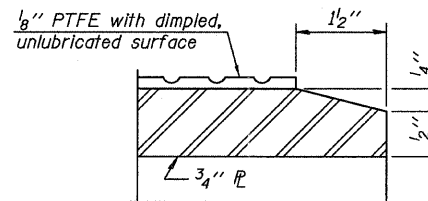
TOP BEARING ASSEMBLY



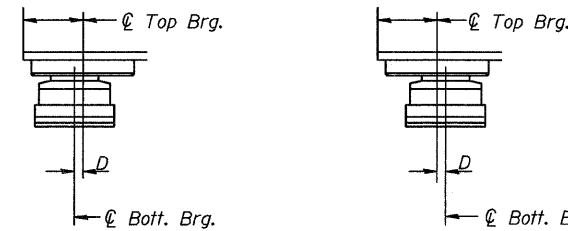
PLAN-PTFE ELASTOMERIC BRG.



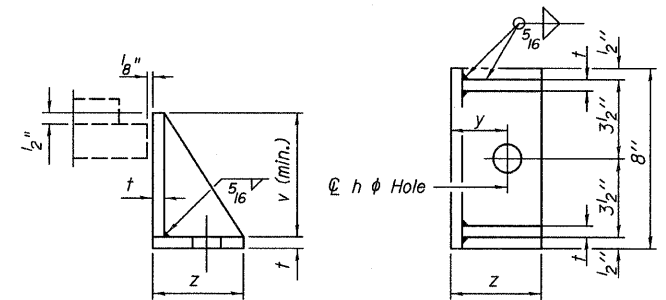
BOTTOM BEARING ASSEMBLY



SECTION THRU PTFE



SETTING ANCHOR BOLTS AT EXP. BRG.
BELOW 50° F. (Move bottom brg. away from fixed brg.) ABOVE 50° F. (Move bottom brg. toward fixed brg.)



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

Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts for Type III bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers and other steel members required for the bearing assembly shall be included in the cost of "Furnishing Elastomeric Bearing Assembly, Type III".
The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 36.
For bearing dimensions refer to the table on sheet 30.

BILL OF MATERIAL

Item	Unit	Total
Furnishing Elastomeric Bearing Assembly Type III	Each	17
Anchor Bolts, 1/2"	Each	34

ELASTOMERIC BEARING TYPE III
STRUCTURE NO. 016-3240

I-2E-3

11-1-09

TYLIN INTERNATIONAL

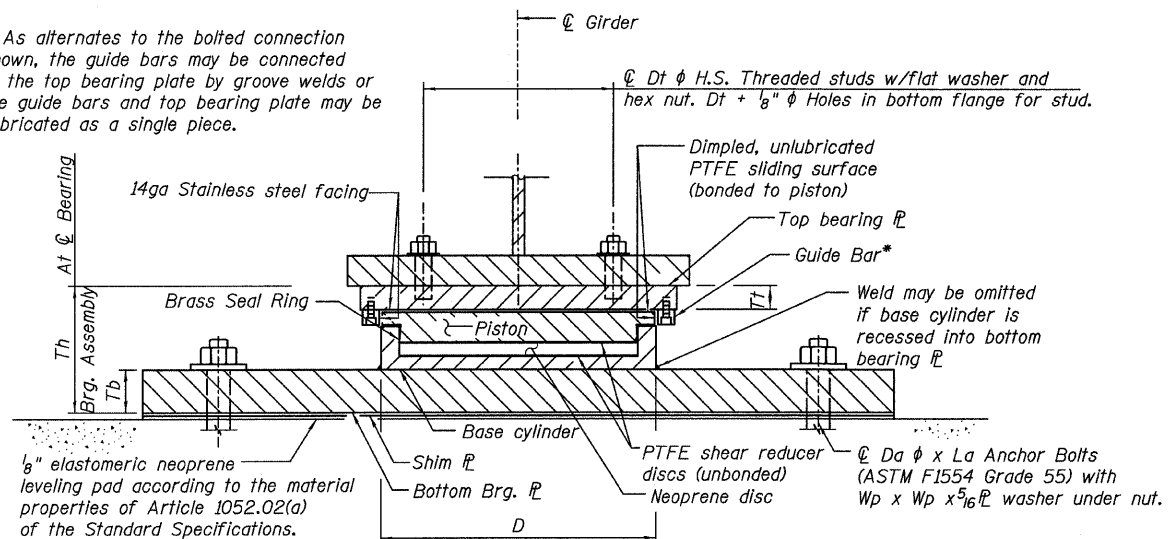
DESIGNED -	DY, LS	REVISIONS	
CHECKED -	AMD, LS	NAME	DATE
DRAWN -	DY, LS		
CHECKED -	AMD, LS		
DATE -	03/25/2011		

SHEET NO. 52	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	73 SHEETS	55	0711.2R & 1011.1BR	COOK	741
FED. ROAD DIST. NO. 1 ILLINOIS			FED. AID PROJECT		

5/9/2011

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 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.



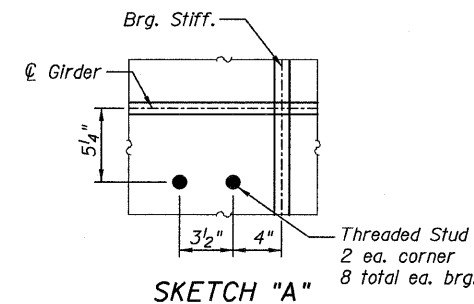
GUIDED EXPANSION HLMR BEARING

BILL OF MATERIAL

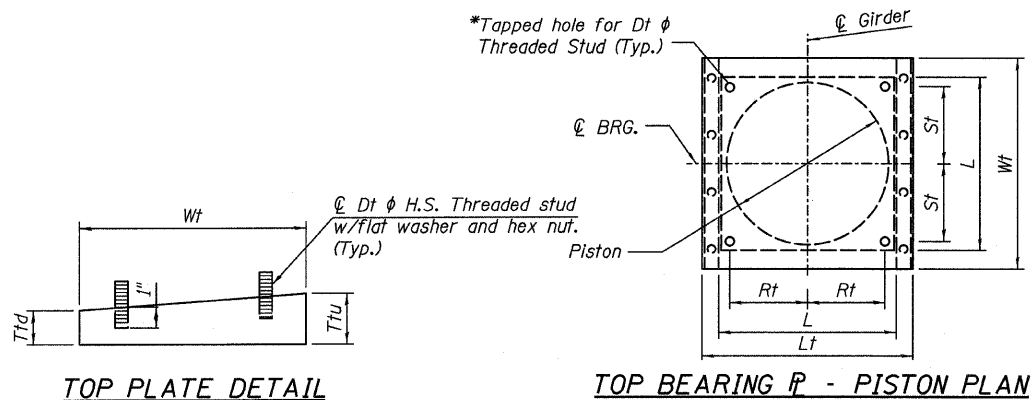
ITEM	UNIT	TOTAL
Erecting HLMR Bearings, Guided Expansion, 450 kips	EACH	17
Anchor Bolts, 1 1/2"	EACH	34

NOTES:

- All structural steel for the top and bottom bearing plates shall conform to the requirements of AASHTO M 270 Grade 50, unless otherwise noted.
- Anchor bolts shall be F1554, Gr. 55.
- Top and bottom bearing plates, $\frac{1}{8}$ " elastomeric neoprene leveling pad, adjusting shims, threaded studs with washers and other items required for the bearing are furnished under a separate contract. Installation of these items is included in the cost of Erecting HLMR Bearings of the type specified.
- Two $\frac{1}{8}$ " adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
- Top plate shall be beveled to match the slope of girder flanges. Work this sheet with top of steel elevation sheets.

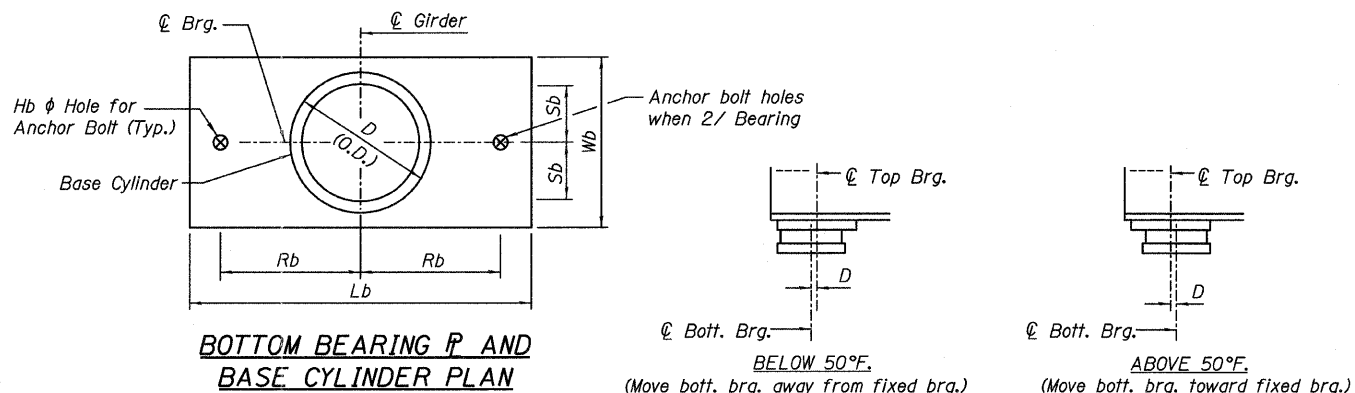


SKETCH "A"



TOP PLATE DETAIL

TOP BEARING ϕ - PISTON PLAN



BOTTOM BEARING ϕ AND BASE CYLINDER 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.

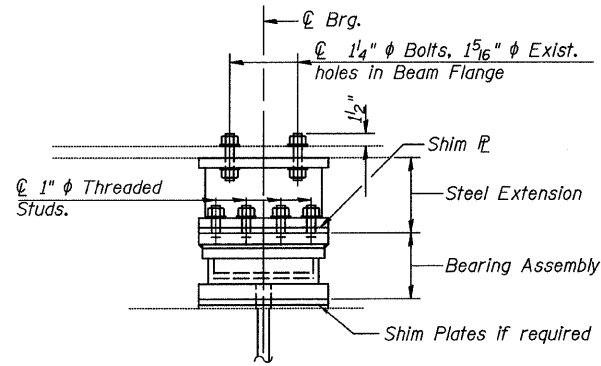
BEARING SCHEDULE

Type	Vertical Capacity (kips)	Lateral Capacity (kips)	Quantity Each	Location	Girders	Total Required Movement (in)	D (in)	L (in)	Th (in)	Top Plate / Bearing Assembly					Masonry Plate				Anchor Bolts				
										Wt (in)	Lt (in)	Tt (in)	Dt (in)	Rt (in)	St (in)	Wb (in)	Lb (in)	Tb (in)	Rb (in)	Hb (in)	Qty per Brg.	Da (in)	La (in)
HLMR Guided Expansion	450	70	14	Pier 10	A - P	2 1/2	14 1/2	14 1/2	8 7/8	19 1/2	22	2	1	Sketch A	15 1/2	33	2 1/2	13 3/4	2	2	1 1/2	18	3
HLMR Guided Expansion	450	70	3	Pier 10	NG11, NG12 and NG13	2 1/2	14 1/2	14 1/2	8 7/8	19 1/2	22	2	1	Sketch A	15 1/2	33	2 1/2	13 3/4	2	2	1 1/2	18	3

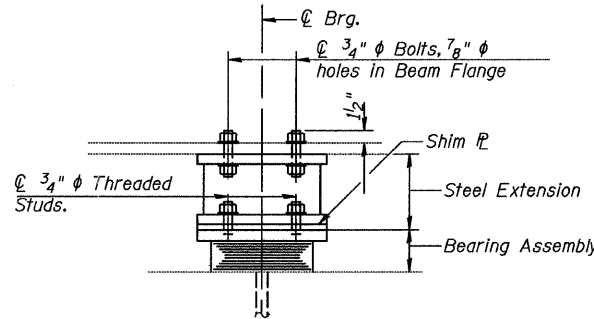
**HIGH LOAD
MULTI-ROTATIONAL
BEARINGS GUIDED EXPANSION
STRUCTURE NO. 016-3240**

TYLIN INTERNATIONAL	DESIGNED - EKH, PK	REVISIONS		SHEET NO. 52A	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		73 SHEETS	55	0711.2R & 1011.1BR	COOK	741	655A
	DRAWN - EKH, PK				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

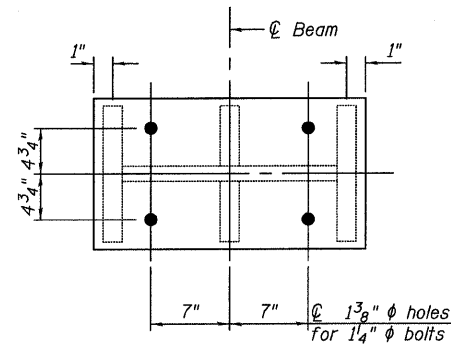
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



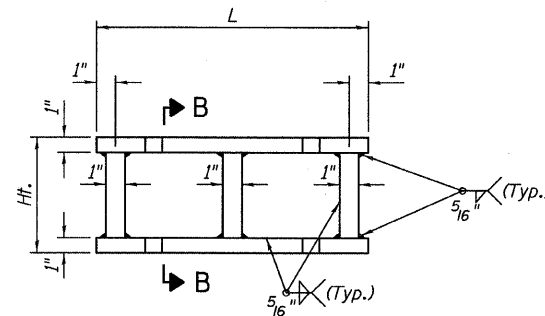
ELEVATION
HLMR GUIDED EXPANSION BRG.



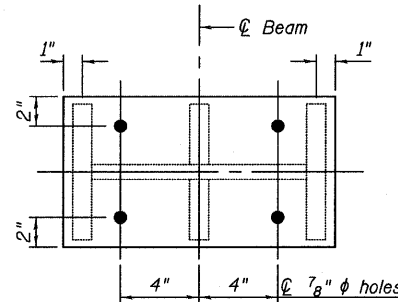
ELEVATION
TYPE I ELASTOMERIC EXP. BRG.



TOP PLAN STEEL EXTENSION
(HLMR BRGS.)

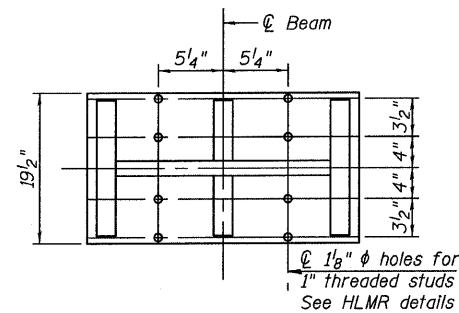


ELEVATION STEEL EXTENSION

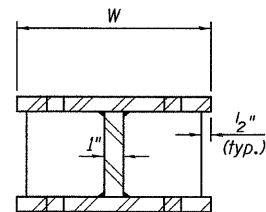


TOP PLAN STEEL EXTENSION
(TYPE I ELASTOMERIC EXP. BRGS.)

Note: Hole pattern same Top & Bottom



BOT PLAN STEEL EXTENSION
(HLMR BRGS.)



SECTION B-B
FABRICATED STEEL EXTENSION

Location	Girder No.	Brg. Type	Fabricated Steel Ext. Top & Bot. Size			
			W	L	Th	Ht.
Pier 8	R	I	14"	22"	1"	9 1/2"
	Q	I	14"	22"	1"	9 1/2"
	P	I	14"	22"	1"	9 1/2"
	N	I	14"	22"	1"	9 1/2"
	M	I	14"	22"	1"	9 1/2"
	L	I	14"	22"	1"	9 1/2"
	K	I	14"	22"	1"	9 1/2"
	J	I	14"	22"	1"	9 1/2"
	H	I	14"	22"	1"	9 1/2"
	G	I	14"	22"	1"	9 1/2"
	F	I	14"	22"	1"	9 1/2"
E	I	14"	22"	1"	9 1/2"	
D	I	14"	22"	1"	9 1/2"	
C	I	14"	22"	1"	9 1/2"	
B	I	14"	22"	1"	9 1/2"	
A	I	14"	22"	1"	9 1/2"	

Location	Girder No.	Brg. Type	Fabricated Steel Ext. Top & Bot. Size			
			W	L	Th	Ht.
Pier 10	P	HLMR	0"	0"	0"	0"
	N	HLMR	19 1/2"	22"	1"	1'-2 1/8"
	M	HLMR	19 1/2"	22"	1"	1'-2 1/8"
	L	HLMR	19 1/2"	22"	1"	1'-2 1/8"
	K	HLMR	19 1/2"	22"	1"	1'-2 1/8"
	J	HLMR	19 1/2"	22"	1"	1'-2 1/8"
	H	HLMR	19 1/2"	22"	1"	1'-2 1/8"
	G	HLMR	19 1/2"	22"	1"	1'-2 1/8"
	F	HLMR	19 1/2"	22"	1"	1'-2 1/8"
	E	HLMR	19 1/2"	22"	1"	1'-2 1/8"
	D	HLMR	19 1/2"	22"	1"	1'-2 1/8"
C	HLMR	19 1/2"	22"	1"	1'-2 1/8"	
B	HLMR	19 1/2"	22"	1"	1'-2 1/8"	
A	HLMR	19 1/2"	22"	1"	1'-2 1/8"	

NOTES

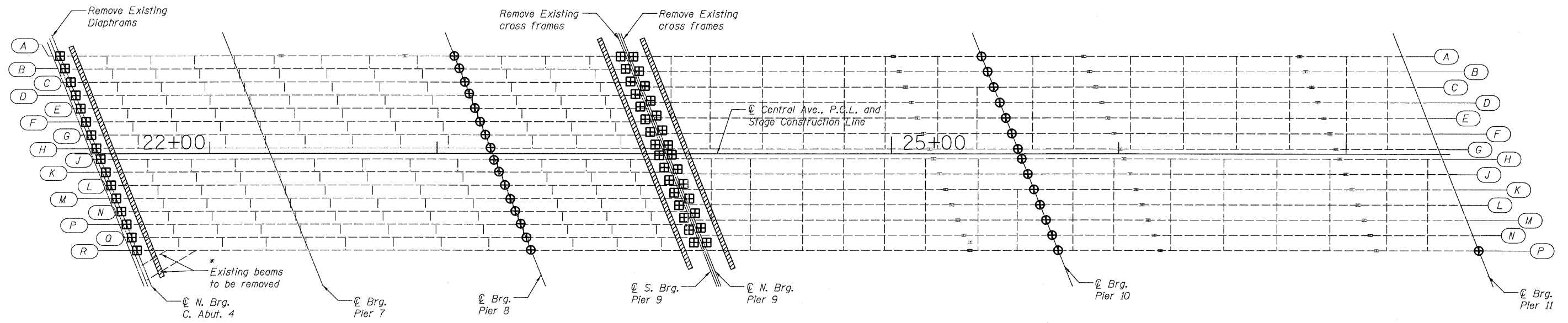
Prior to ordering any materials, the contractor shall verify in the field all bearing height and shim thickness dimensions.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 36.

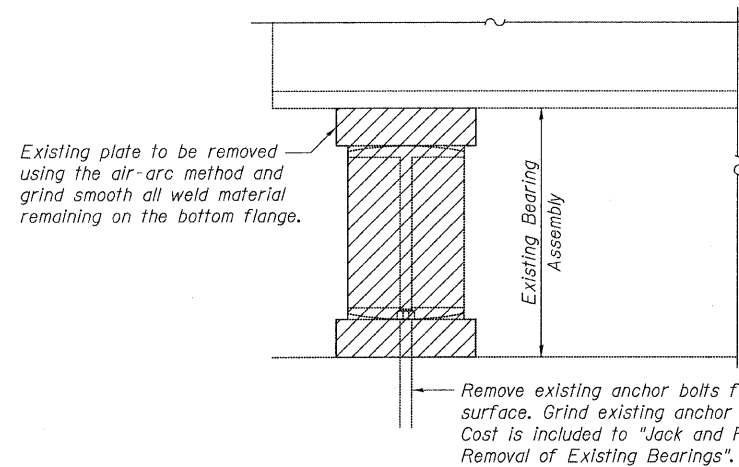
BEARING DETAILS
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 53	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.						
	CHECKED - AMD, LS	NAME	DATE							73 SHEETS	55	0711.2R & 1011.1BR	COOK	741	656
	DRAWN - DY, LS														
	CHECKED - AMD, LS														
	DATE - 03/25/2011														
					CONTRACT NO. 60999										
					FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT								

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN
(Existing Girders Shown Only)



EXISTING BEARING REMOVAL DETAIL

JACK AND REMOVE EXISTING BEARING PROCEDURE

1. The Contractor shall submit for approval by the Engineer, plans for lifting existing girders and installing new bearings prior to commencing any related work. This work shall be done after existing concrete deck is removed and prior to pouring of the new concrete deck. The maximum dead load reaction per girder varies from 6 k to 259 k. The minimum jacking capacity capacity varies from 9 k to 289 k.
2. Prior to ordering any material, the Contractor shall verify steel extension and shim plate thickness required at each bearing.
3. The bottom flange of the existing girder shall be cleaned and receive one coat primer as specified for Structural Steel.
4. The new bearings and steel extensions shall be in place and the jacks shall be lowered before the new concrete deck is poured.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Jack and Remove Existing Bearings	EACH	31
Structural Steel Removal	L SUM	0.55
Jacking Existing Superstructure	LSUM	0.45
Removal of Existing Bearings	EACH	30

** The total estimated weight for Structural Steel Removal is approximately 24,390 lbs.

SUPERSTRUCTURE JACKING PROCEDURE

1. The Contractor shall submit for approval by the Engineer, plans for jacking prior to commencing any work.
2. All work is to be performed under staged construction. See Stage Construction sheets 3 thru 5 for details.
3. Jacking Existing Superstructure shall be performed on the girders after deck removal, and before the new deck poured.
4. The following service dead loads (steel weights only) and jack capacities shall be applicable to each girder at:

N. Brg. C. Abutment 4.	Dead Loads = 5 k Minimum Jack Capacity = 8 k
S. Brg. Pier 9	Dead Loads = 5 k Minimum Jack Capacity = 8 k
N. Brg. Pier 9	Dead Loads = 16 k Minimum Jack Capacity = 24 k
At Pier 8	Dead Loads = 15 k Minimum Jack Capacity = 23 k
At Pier 10	Dead Loads = 52 k Minimum Jack Capacity = 78 k
At Pier 11	* Dead Loads = 140 k Minimum Jack Capacity = 210 k

* This is the weight of the steel with the deck removed to the limits as indicated on the plans.

NOTE

1. The cost for the removal of the bearing plates, pintles and anchor bolts is included in "Jack & Remove Existing Bearings" or "Jacking Existing Superstructure".
2. The cost for removal of existing diaphragms and cross frames is included in "Structural Steel Removal".

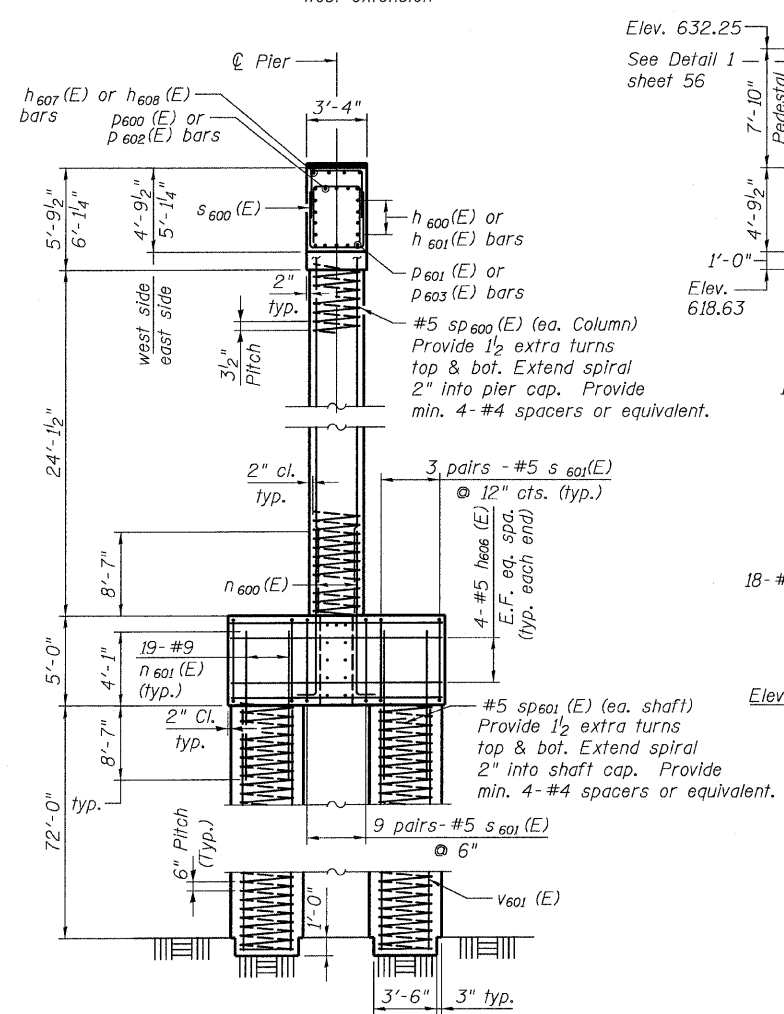
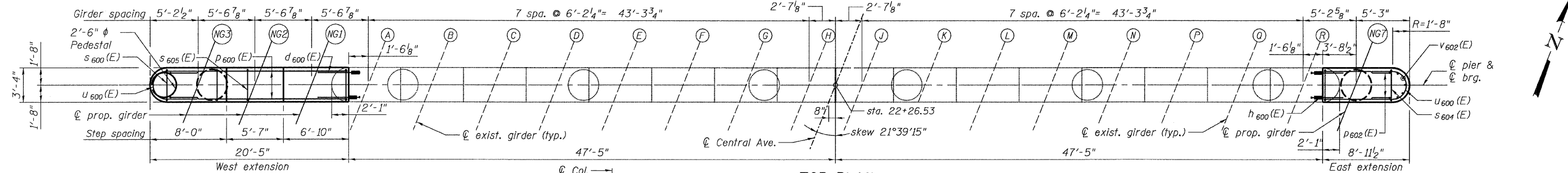
LEGEND

- ⊕ Jack and Remove Existing Bearings
- ⊞ Removal of Existing Bearings
- ▨ Jacking Existing Superstructure

JACKING DETAILS
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 54	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	657	
	DRAWN - DY, LS				CONTRACT NO. 60999					
	CHECKED - AMD, LS, JN				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
DATE - 03/25/2011				73 SHEETS						

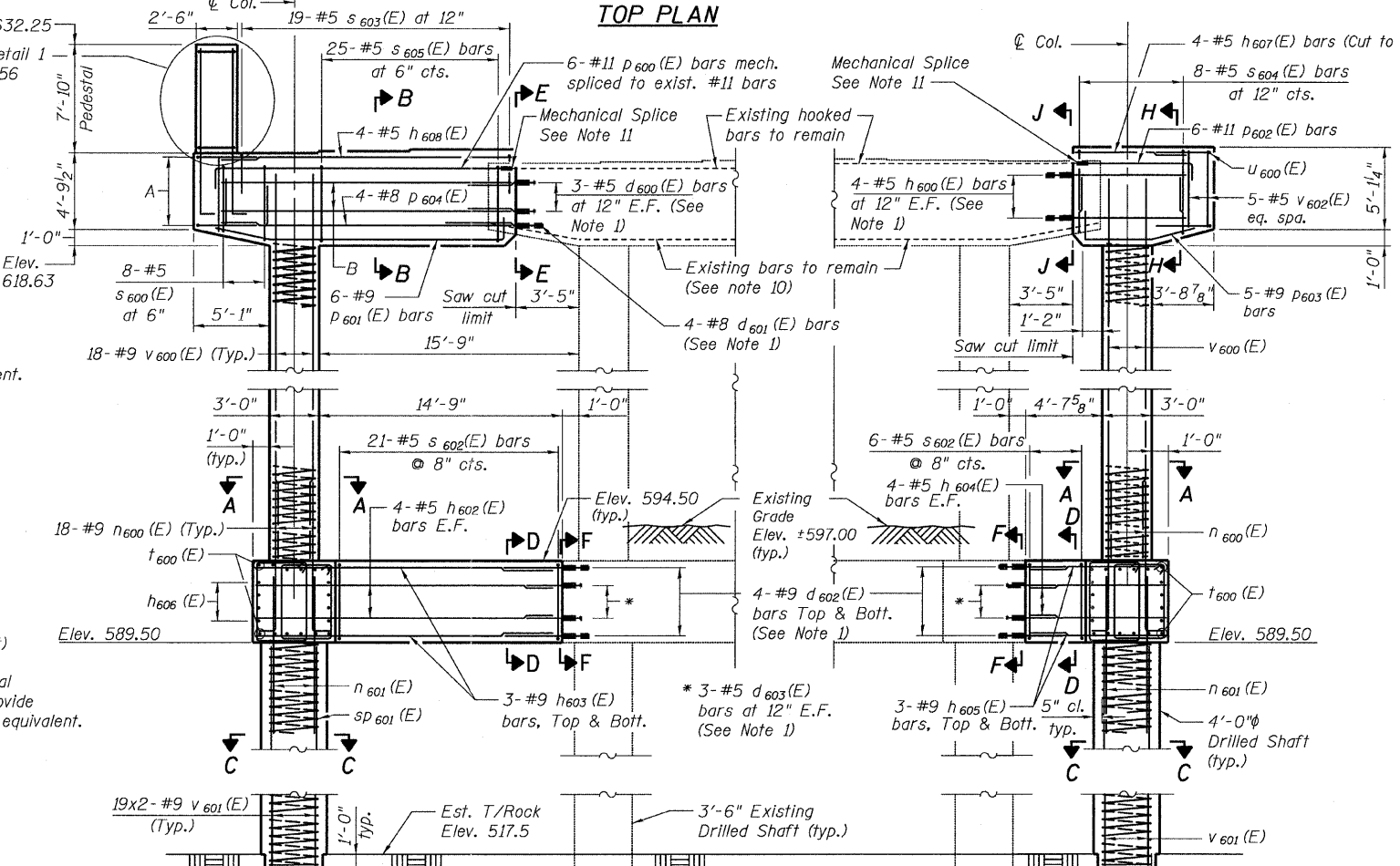
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



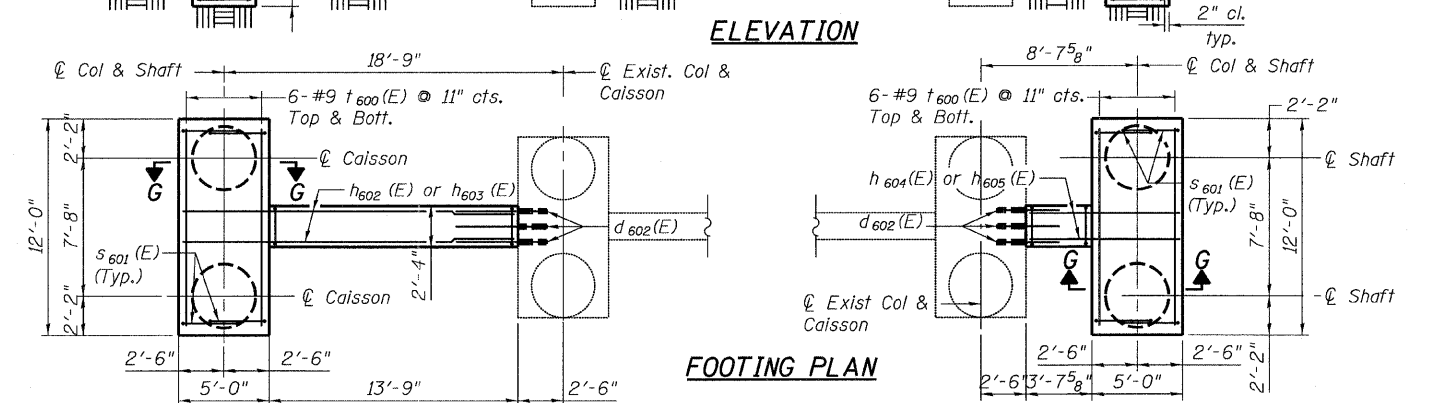
TYPICAL END VIEW

BRIDGE SEAT ELEVATION

Girder Line	Seat Elevation
A	623.63
NG3	624.42
NG2	624.50
NG1	624.61
NG7	624.73



ELEVATION



FOOTING PLAN

MINIMUM DOWEL BAR EMBEDMENT

Size	Embedment
#5 & #6	9"
#8	12"
#9	15"

NOTES

- Epoxy grout $d_{600}(E)$ thru $d_{603}(E)$ bars & $h_{600}(E)$ bars according to Article 584 of the Standard Specifications. Drill to miss existing reinforcement. The epoxy grout and method of application shall be approved by the Engineer. All drilling and grouting of rebar to be included with the cost of "Reinforcement Bars, Epoxy Coated."
- Space reinforcement in pier cap to miss anchor bolts.
- All edges shall have standard $\frac{3}{4}$ " chamfers excepts as noted.
- For Sections A thru J see sheet 56.
- For Bill of Material see sheet 56.
- E.F. - denotes each Face.
- eq. spa. - denotes equally spaced.
- Existing reinforcement shall be cleaned and incorporated into new construction. Cost included with Concrete Removal.
- Existing reinforcement shall be cleaned and incorporated into new construction. Cost included with Concrete Removal.
- Prior to installation of mechanical splice, cut in field hook on existing reinforcement bar to be spliced. Cost included with Mechanical Splitters.

- A: 5-#6 $u_{600}(E)$ bars, Typ. each end
 B: 3-#5 $h_{601}(E)$ bars eq. spa. (E.F.)

**PIER 7 WIDENING
STRUCTURE NO. 016-3240**

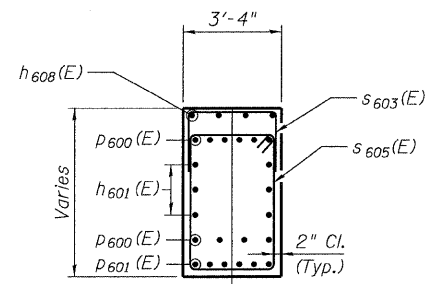
TYLIN INTERNATIONAL

DESIGNED -	DY, LS	REVISIONS	
CHECKED -	AMD, LS	NAME	DATE
DRAWN -	DY, LS		
CHECKED -	AMD, LS		
DATE -	03/25/2011		

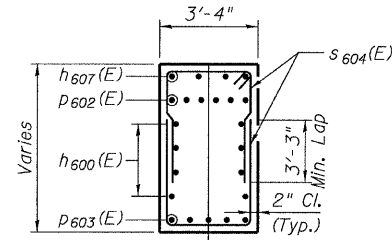
SHEET NO. 55	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	73 SHEETS	55	0711.2R & 1011.1BR	COOK	741 658
			CONTRACT NO. 60999		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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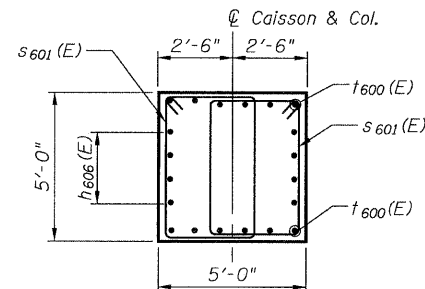
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



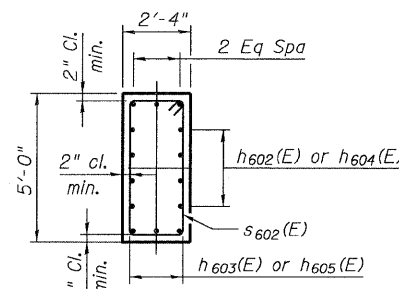
SECTION B-B



SECTION H-H



SECTION G-G



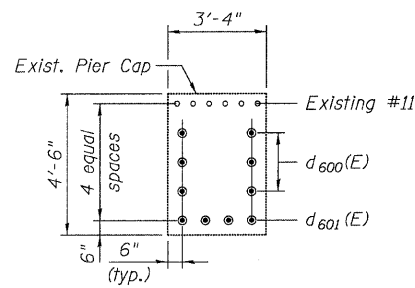
SECTION D-D

MINIMUM BAR LAPS

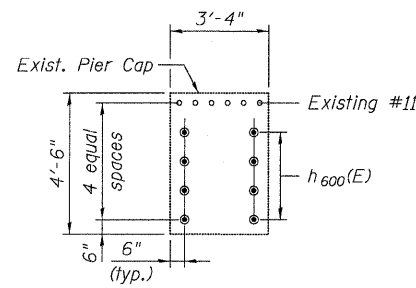
Bar Size	Min. Lap
#5	3'-8"
#6	4'-5"
#9	8'-7"

BILL OF MATERIAL

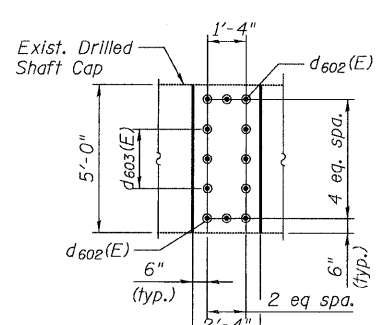
Bar	No.	Size	Length	Shape
d600(E)	10	#5	4'-7"	—
d601(E)	4	#8	7'-11"	—
d602(E)	16	#9	5'-10"	—
d603(E)	12	#5	2'-6"	—
h600(E)	8	#5	8'-1"	—
h601(E)	6	#5	18'-7"	—
h602(E)	8	#5	18'-5"	—
h603(E)	6	#9	18'-5"	—
h604(E)	8	#5	8'-3"	—
h605(E)	6	#9	8'-3"	—
h606(E)	16	#5	11'-8"	—
h607(E)	4	#5	8'-8"	—
h608(E)	4	#5	18'-7"	—
n600(E)	36	#9	15'-0"	—
n601(E)	76	#9	12'-10"	—
p600(E)	6	#11	20'-7"	—
p601(E)	6	#9	19'-11"	—
p602(E)	6	#11	9'-2"	—
p603(E)	5	#9	7'-7"	—
p604(E)	4	#8	18'-7"	—
s600(E)	8	#5	11'-0"	—
s601(E)	60	#5	16'-7"	—
s602(E)	27	#5	14'-3"	—
s603(E)	19	#5	8'-0"	—
s604(E)	8	#5	11'-10"	—
s605(E)	25	#5	16'-3"	—
s606(E)	14	#5	10'-6"	—
sp600(E)	2	#5	24'-7"	—
sp601(E)	2	#5	73'-2"	—
t600(E)	24	#9	11'-8"	—
u600(E)	10	#6	13'-3"	—
v600(E)	36	#9	28'-1"	—
v601(E)	152	#9	40'-2"	—
v602(E)	5	#5	4'-9"	—
v603(E)	14	#9	12'-9"	—
Mechanical Splicers	EACH		12	
Drilled Shaft in Soil	CU YD		134.0	
Drilled Shaft in Rock	CU YD		1.4	
Structure Excavation	CU YD		83.5	
Concrete Structures	CU YD		63.2	
Reinforcement Bars, Epoxy Coated	POUND		41,520	



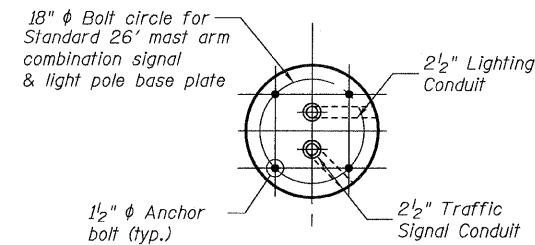
SECTION E-E



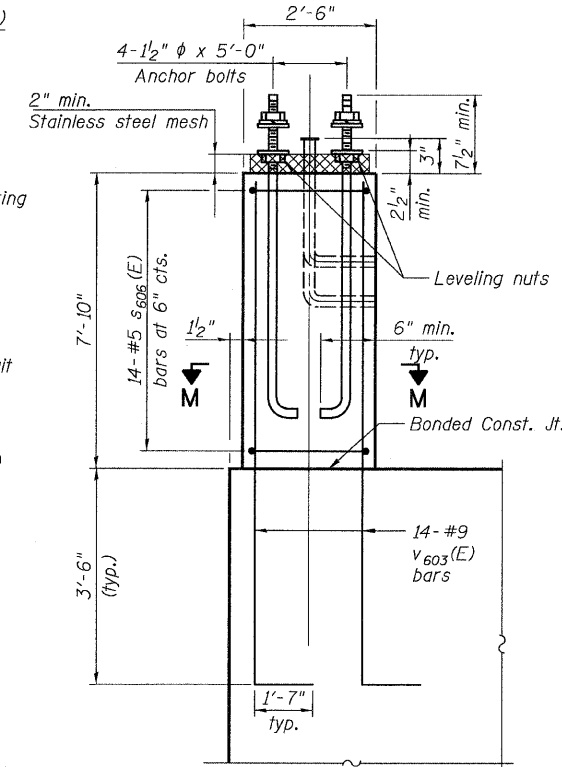
SECTION J-J



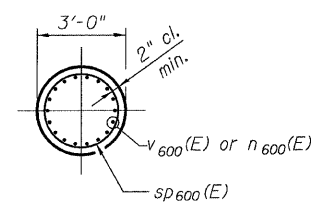
SECTION F-F



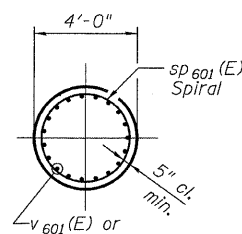
SECTION M-M



DETAIL 1



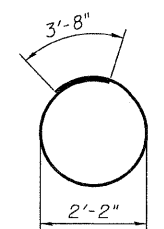
SECTION A-A



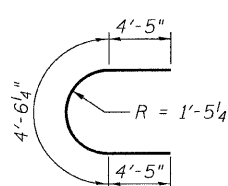
SECTION C-C

Bar	c	d
n600(E)	1'-7"	13'-5"
p600(E)	2'-0"	18'-7"
p602(E)	2'-0"	7'-2"
v603(E)	1'-7"	11'-2"

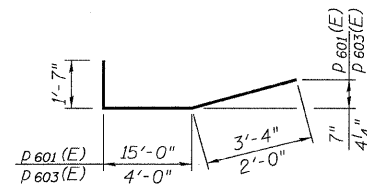
BAR n600(E), p600(E), p602(E), & v603(E)



BAR s606(E)



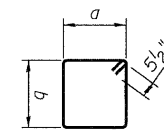
BAR u600(E)



BAR p601(E) & p603(E)

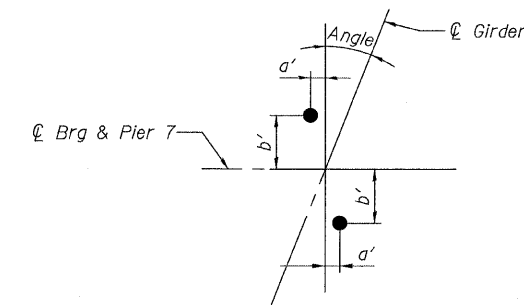
Bar	a	b
s600(E)	3'-0"	4'-0"
s603(E)	3'-0"	2'-6"
s604(E)	3'-0"	4'-6"

BAR s600(E), s603(E), & s604(E)



BAR s601(E), s602(E) & s605(E)

Bar	a	b
s601(E)	3'-2"	4'-8"
s602(E)	2'-0"	4'-8"
s605(E)	3'-0"	4'-8"



ANCHOR BOLT LAYOUT

Beam	Angle	a'	b'
NG7	20°57'48"	8 3/8"	3 1/4"
A Thru R	To Remain		
NG1, NG2 & NG3	21°39'15"	8 3/8"	3 5/8"

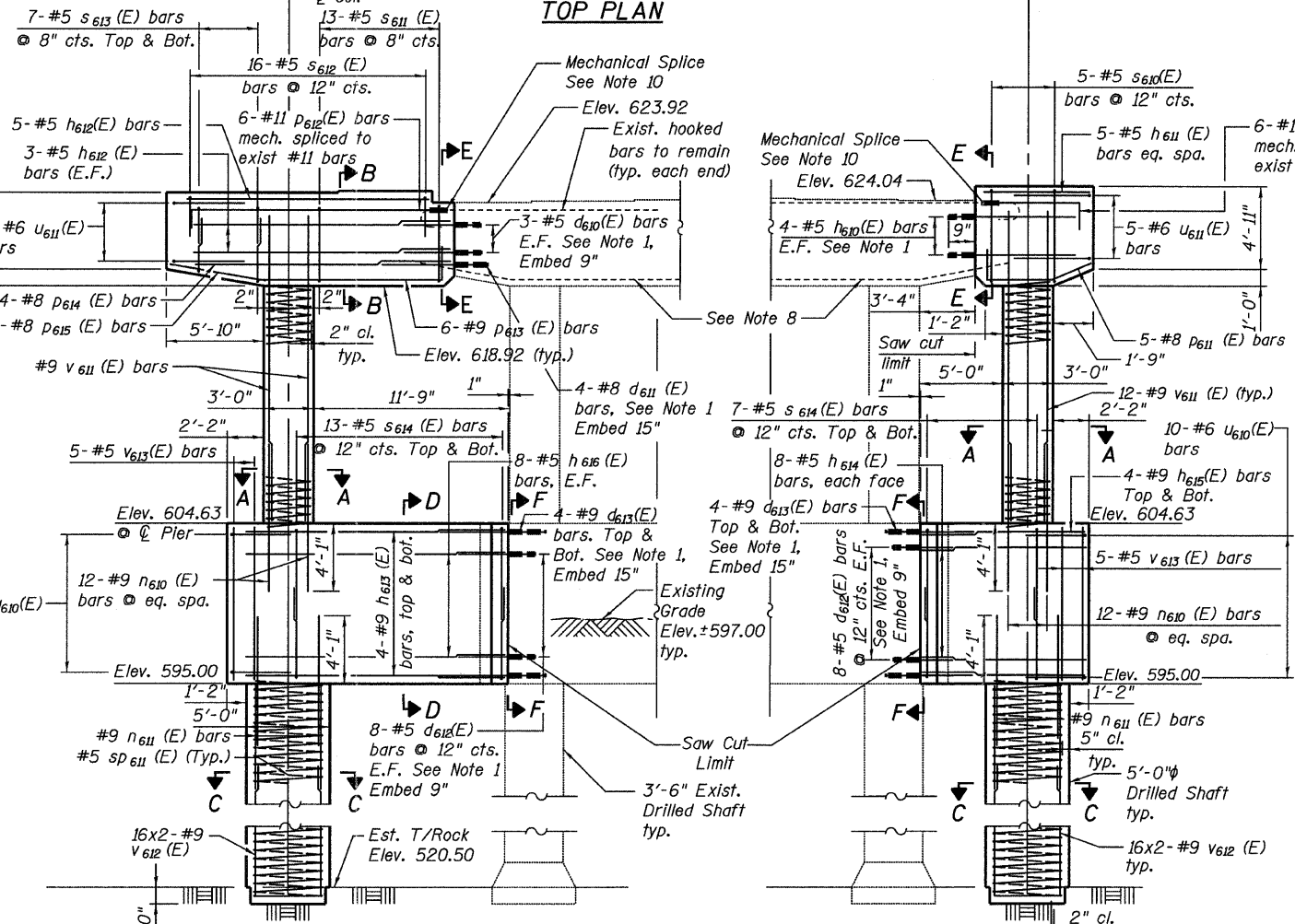
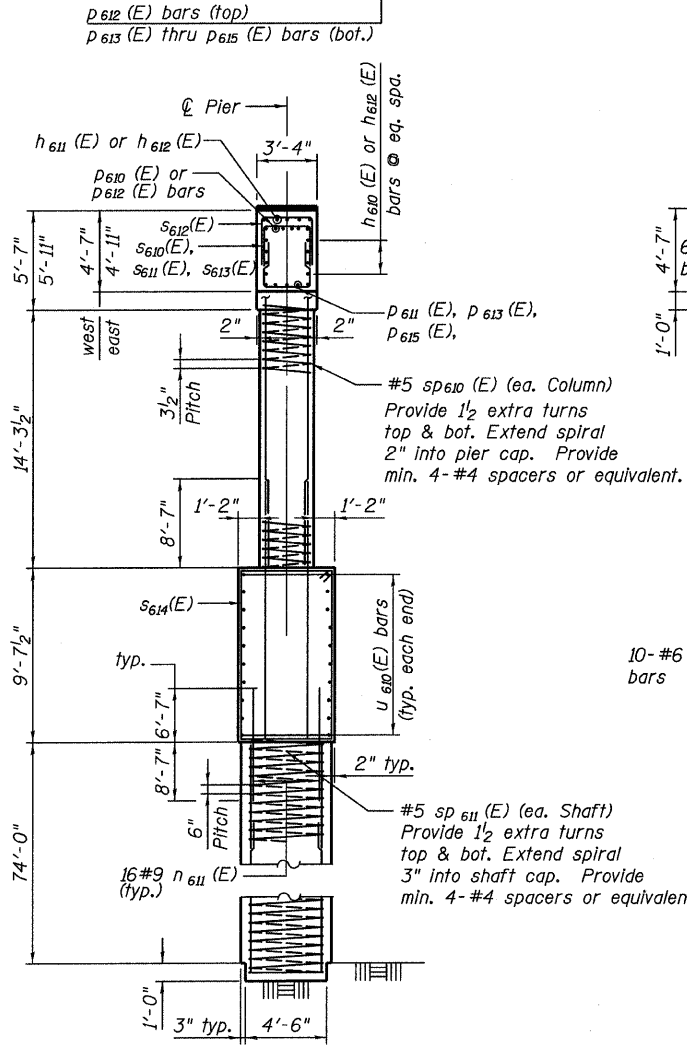
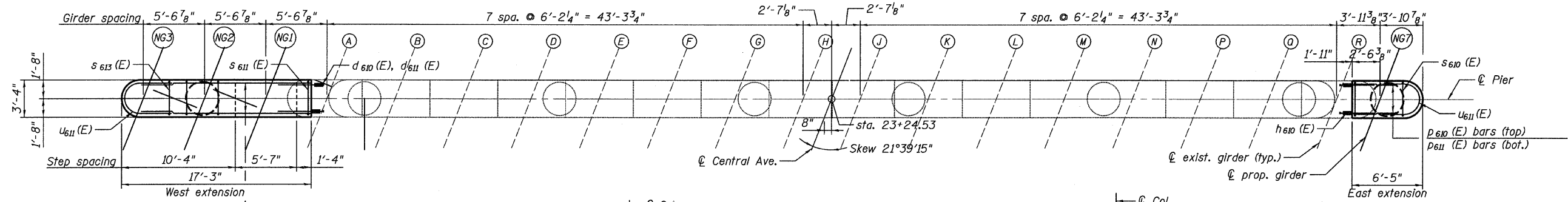
PIER 7 DETAILS
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL

DESIGNED	DY, LS	REVISIONS	NAME	DATE
CHECKED	AMD, LS			
DRAWN	DY, LS			
CHECKED	AMD, LS			
DATE	03/25/2011			

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
56	55	0711.2R & 1011.1BR	COOK	741	659
73 SHEETS					CONTRACT NO. 60999
		FED. ROAD DIST. NO. 1	ILLINOIS		FED. AID PROJECT

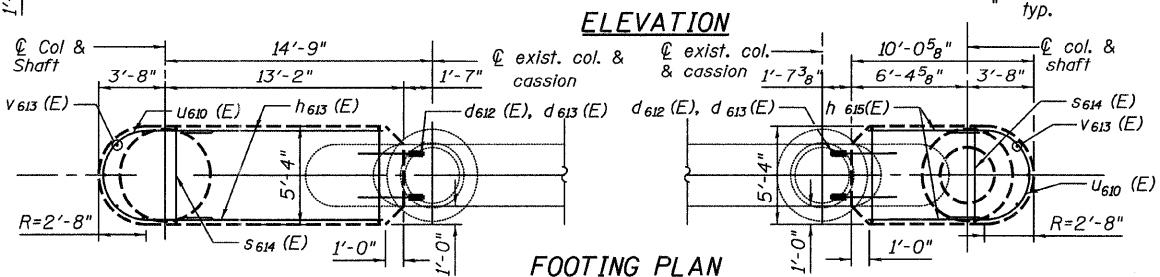
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



- NOTES**
1. Epoxy grout $d_{610}(E)$ bars according to Article 584 of the Standard Specifications. Drill to miss existing reinforcement. The epoxy grout and method of application shall be approved by the Engineer. All drilling and grouting of rebar to be included with the cost of "Reinforcement Bars, Epoxy Coated."
 2. Space reinforcement in pier cap to miss anchor bolts.
 3. All edges shall have standard $\frac{3}{4}$ " chamfers excepts as noted.
 4. For Sections A, B, C, D, E & F see sheet 58.
 5. For Bill of Material see sheet 58.
 6. E.F. - denotes Each Face.
 7. eq. spa. - denotes equally spaced.
 8. Existing reinforcement shall be cleaned and incorporated into new construction. Cost included with Concrete Removal.
 9. Cast steps monolithically with cap.
 10. Prior to installation of Mechanical Splice, cut in field hook on existing reinforcement to be spliced. Cost included with Mechanical Splitters.

BRIDGE SEAT ELEVATION

Girder Line	Seat Elevation
A	623.92
NG3	624.50
NG2	624.51
NG1	624.62
NG7	624.84

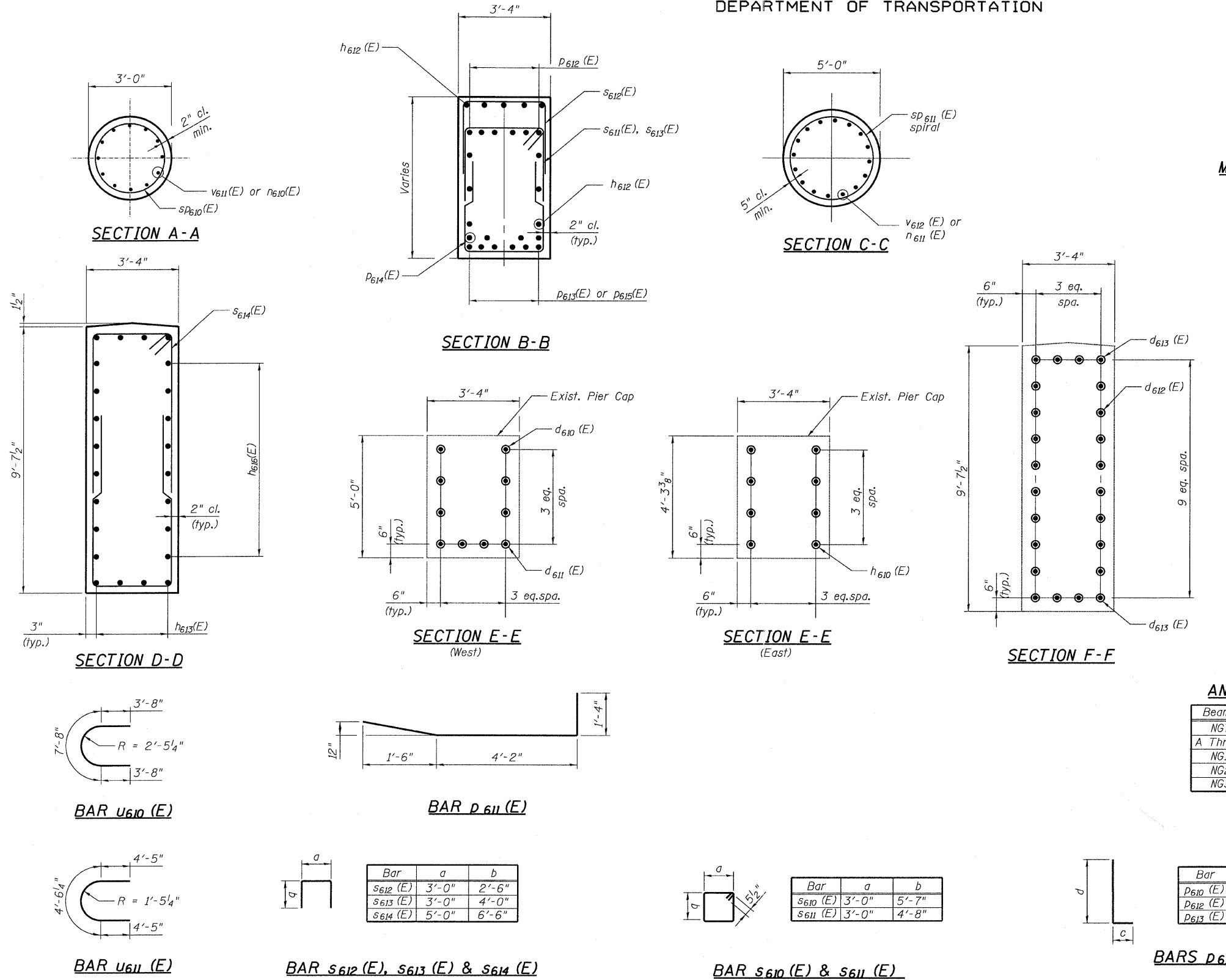


**PIER 8 WIDENING
STRUCTURE NO. 016-3240**

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 57	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE		73 SHEETS	55	0711.2R & 1011.1BR	COOK	741	660
	DRAWN - DY, LS				CONTRACT NO. 60999					
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
DATE - 03/25/2011										

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 5/9/2011
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



MINIMUM BAR LAPS

Bar Size	Min. Lap
#5	3'-3"
#6	3'-1"
#9	6'-10"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d610 (E)	6	#5	5'-4"	—
d611 (E)	4	#8	7'-11"	—
d612 (E)	32	#5	2'-6"	—
d613 (E)	16	#9	5'-7"	—
h610 (E)	8	#5	4'-9"	—
h611 (E)	5	#5	5'-6"	—
h612 (E)	11	#5	15'-5"	—
h613 (E)	8	#9	13'-0"	—
h614 (E)	16	#5	6'-4"	—
h615 (E)	8	#9	6'-4"	—
h616 (E)	16	#5	13'-0"	—
p610 (E)	24	#9	16'-6"	—
p611 (E)	32	#9	15'-2"	—
p610 (E)	6	#11	7'-4"	—
p611 (E)	5	#8	7'-4"	—
p612 (E)	6	#11	17'-5"	—
p613 (E)	6	#9	12'-7"	—
p614 (E)	4	#8	15'-5"	—
p615 (E)	6	#8	5'-6"	—
s610 (E)	5	#5	18'-1"	—
s611 (E)	13	#5	16'-3"	—
s612 (E)	16	#5	8'-0"	—
s613 (E)	14	#5	11'-0"	—
s614 (E)	40	#5	18'-0"	—
* sD610 (E)	2	#5	14'-4"	—
* sD611 (E)	2	#5	75'-3"	—
u610 (E)	11	#6	13'-4"	—
u611 (E)	20	#6	15'-0"	—
v610 (E)	5	#5	4'-8"	—
v611 (E)	24	#9	18'-3"	—
v612 (E)	64	#9	28'-4"	—
v613 (E)	10	#5	9'-4"	—
v615 (E)	5	#5	4'-2"	—
Mechanical Splicers	EACH	12		
Drilled Shaft in Soil	CU YD	108.4		
Drilled Shaft in Rock	CU YD	1.2		
Structure Excavation	CU YD	16.2		
Concrete Structures	CU YD	64.0		
Reinforcement Bars, Epoxy Coated	POUND	20,930		

* Length is height of spiral.

ANCHOR BOLT LAYOUT

Beam	Angle	a'	b'
NG7	20°57'48"	1'-0 ⁵ / ₁₆ "	4 ³ / ₄ "
A Thru R	21°39'15"	1'-0 ⁵ / ₁₆ "	4 ⁷ / ₈ "
NG1	21°39'15"	1'-0 ⁵ / ₁₆ "	4 ⁷ / ₈ "
NG2	21°39'15"	1'-0 ⁵ / ₁₆ "	4 ⁷ / ₈ "
NG3	21°39'15"	1'-0 ⁵ / ₁₆ "	4 ⁷ / ₈ "

BARS D610 (E), D612 (E), D613 (E)

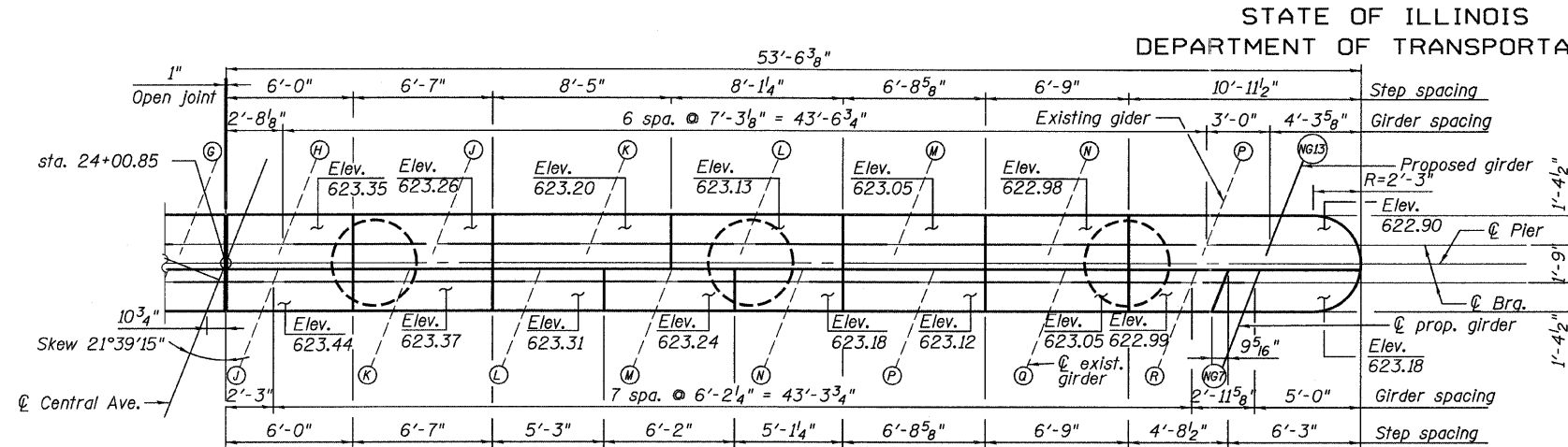
Bar	c	d
D610 (E)	2'-0"	4'-4"
D612 (E)	2'-0"	15'-5"
D613 (E)	1'-4"	11'-3"

PIER 8 DETAILS
STRUCTURE NO. 016-3240

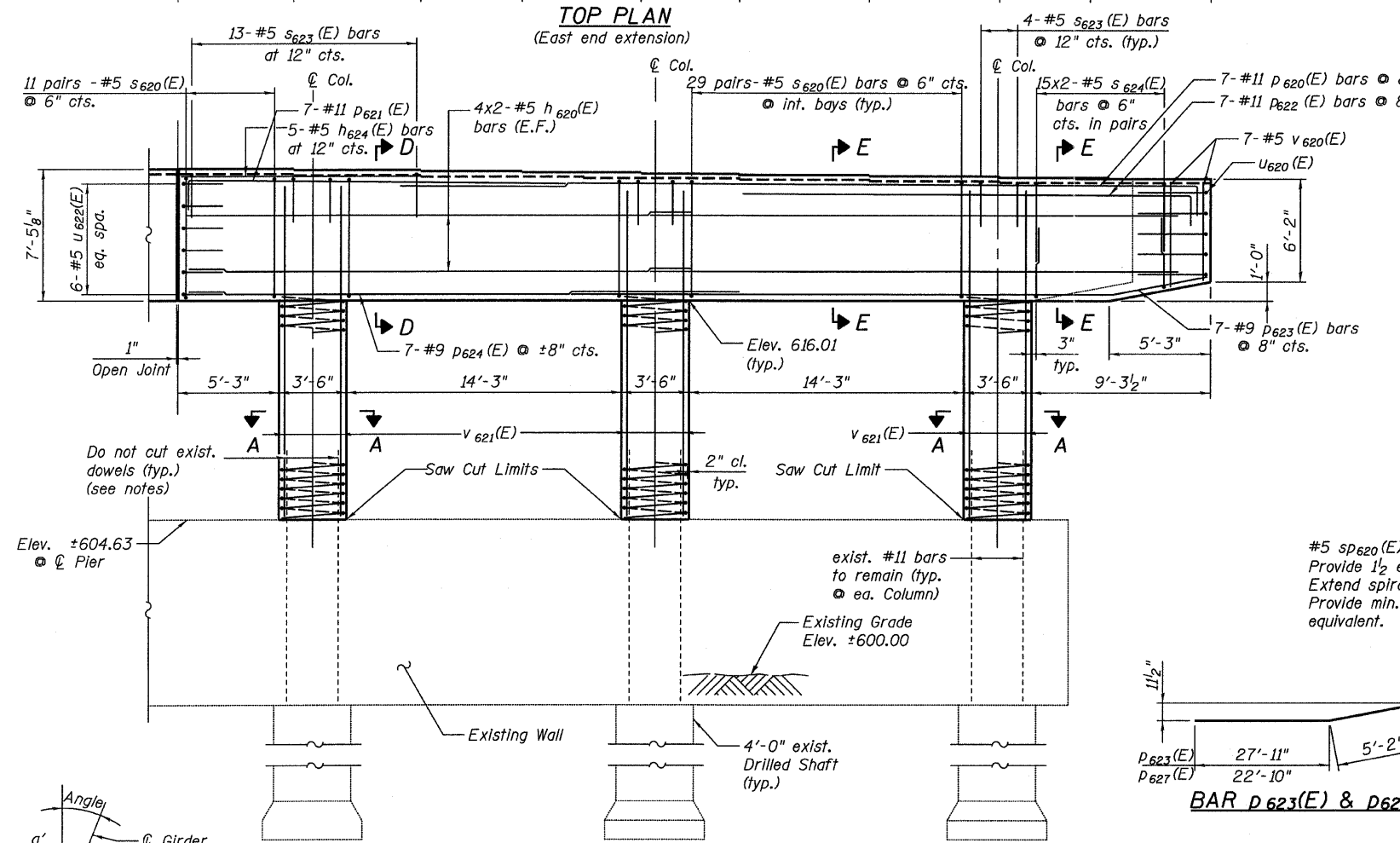
TYLIN INTERNATIONAL DESIGNED - DY, LS CHECKED - AMD, LS DRAWN - DY, LS CHECKED - AMD, LS DATE - 03/25/2011	REVISIONS		SHEET NO. 58 73 SHEETS	F.A.I RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS 741	SHEET NO. 661
	NAME	DATE						
	CONTRACT NO. 60999							
	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



TOP PLAN
(East end extension)

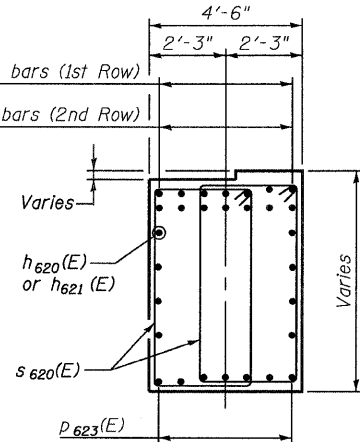


ELEVATION
(East end extension)

MINIMUM BAR LAPS

Bar Size	Min. Lap
#5	3'-3"
#6	3'-1"
#9	6'-10"
#11	10'-8"
#11	12'-1"

Top bars



SECTION E-E

BAR U620(E), & U621(E)

Bar	a	r	b
U620(E)	3'-8"	2'-1/2"	6'-4 5/8"
U621(E)	3'-8"	2'-4"	7'-4"

BAR S623(E) & U622(E)

Bar	c	d
S623(E)	4'-2"	2'-1"
S624(E)	2'-10"	4'-4"
U622(E)	4'-2"	2'-1"

END VIEW

Bar	e	f
P620(E)	2'-0"	41'-10"
P621(E)	2'-0"	20'-5"
P622(E)	2'-0"	24'-1"
P625(E)	2'-0"	39'-0"

BAR P620(E), P621(E), P622(E), & P625(E)

BILL OF MATERIAL

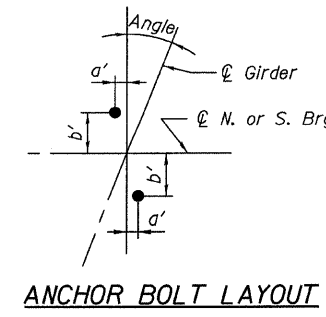
Bar	No.	Size	Length	Shape
d620(E)	24	#6	3'-10"	=====
d621(E)	19	#11	18'-3"	=====
h620(E)	16	#5	27'-3"	=====
h621(E)	16	#5	33'-7"	=====
h622(E)	8	#9	18'-3"	=====
h623(E)	16	#5	16'-7"	=====
h624(E)	5	#5	12'-3"	=====
h625(E)	5	#5	25'-3"	=====
h626(E)	5	#5	18'-11"	=====
h620(E)	19	#11	18'-8"	=====
P620(E)	7	#11	43'-10"	=====
P621(E)	7	#11	22'-4"	=====
P622(E)	7	#11	26'-0"	=====
P623(E)	7	#9	33'-1"	=====
P624(E)	7	#9	28'-11"	=====
P625(E)	14	#11	41'-0"	=====
P626(E)	7	#9	46'-8"	=====
P627(E)	7	#9	28'-0"	=====
S620(E)	138	#5	19'-7"	=====
S621(E)	21	#5	28'-11"	=====
S622(E)	196	#5	19'-3"	=====
S623(E)	89	#5	10'-6"	=====
S624(E)	88	#5	11'-6"	=====
SP620(E)	7	#5	11'-9"	=====
SP621(E)	1	#5	75'-8"	=====
U620(E)	10	#5	13'-9"	=====
U621(E)	10	#5	14'-8"	=====
U622(E)	12	#5	8'-3"	=====
V620(E)	14	#5	5'-3"	=====
V621(E)	133	#11	15'-4"	=====
V622(E)	6	#5	9'-3"	=====
V623(E)	38	#11	42'-11"	=====
Drilled Shaft in Soil		CU YD	48.9	
Drilled Shaft in Rock		CU YD	0.5	
Concrete Sealer		SQ FT	4,368	
Structure Excavation		CU YD	3.3	
Concrete Structures		CU YD	189.7	
Reinforcement Bars, Epoxy Coated		POUND	49,560	

* Cut to fit in field.
** Length is height of spiral.

NOTES

- Epoxy grout d620(E) bars according to Article 584 of the Standard Specifications. Drill to miss existing reinforcement. The epoxy grout and method of application shall be approved by the Engineer. All drilling and grouting of rebar to be included with the cost of "Reinforcement Bars, Epoxy Coated."
- Space reinforcement in pier cap to miss anchor bolts.
- All edges shall have standard 3/4" chamfers except as noted.
- For Sections A, B, C, D & E see sheet 60.
- E.F. - Each Face.
- eq. spa. - denotes equally spaced.
- Existing reinforcement shall be cleaned and incorporated into new construction. Cost included with Concrete Removal.
- Cast steps monolithically with cap.

PIER 9 REPLACEMENT
& WIDENING - EAST
STRUCTURE NO. 016-3240



NORTH

Beam	Angle	a'	b'
NG13	20°57'48"	1'-0 7/8"	5 1/8"
A Thru P	21°39'15"	1'-0"	4 3/4"
NG11	22°08'40"	1'-0 7/8"	5 1/4"
NG12	22°37'52"	1'-0 3/4"	5 3/8"

SOUTH

Beam	Angle	a'	b'
NG7	20°57'48"	8 5/8"	3 1/4"
A thru R & NG1 thru NG3	21°39'15"	8 5/8"	3 3/8"

TYLIN INTERNATIONAL

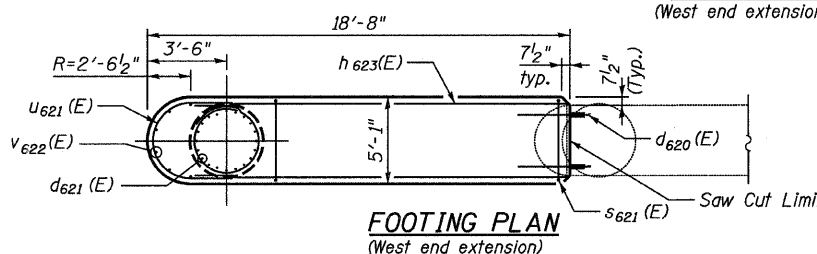
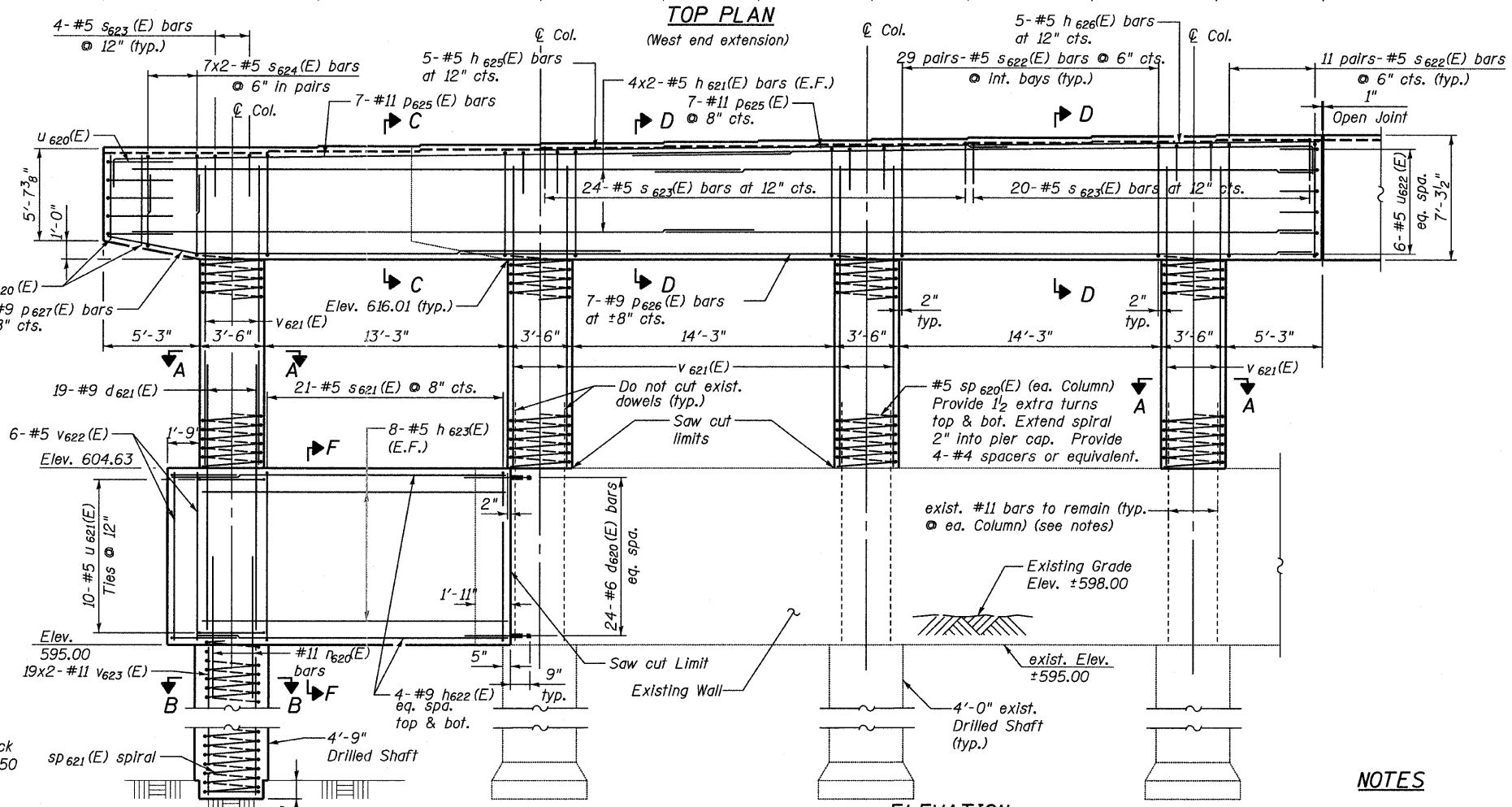
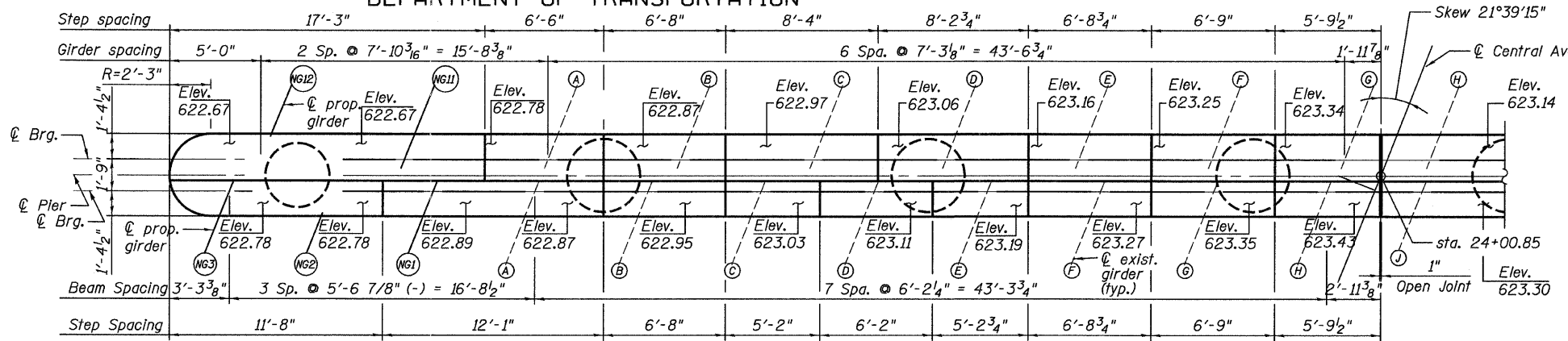
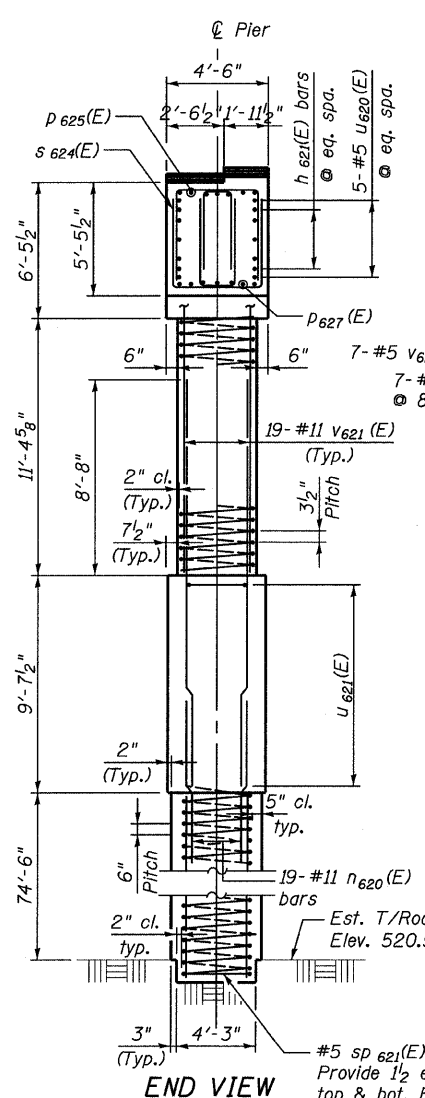
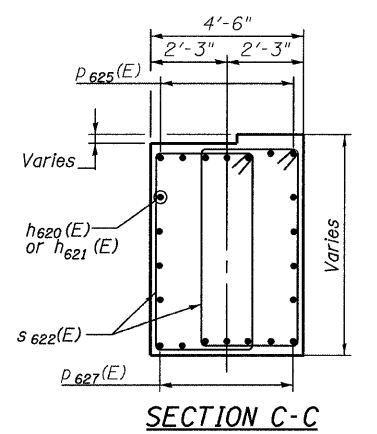
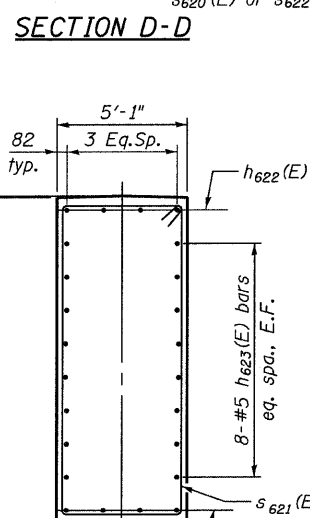
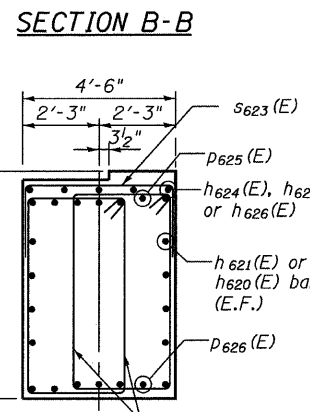
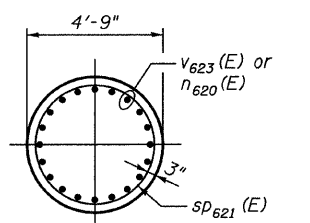
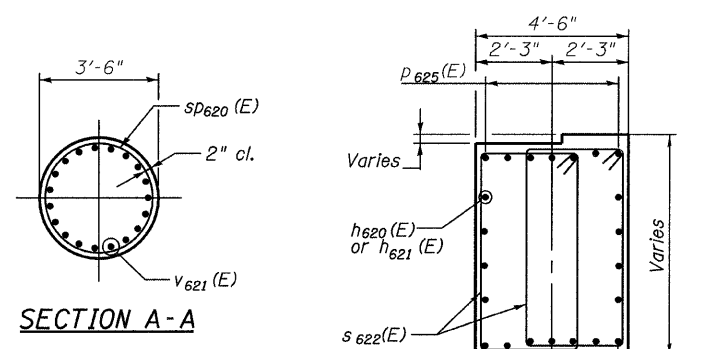
DESIGNED	BY	LS
CHECKED	AMD, LS	
DRAWN	DY, LS	
CHECKED	AMD, LS	
DATE	03/25/2011	

REVISIONS	
NAME	DATE

SHEET NO. 59
73 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	0711.2R & 1011.1BR	COOK	741	662
CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

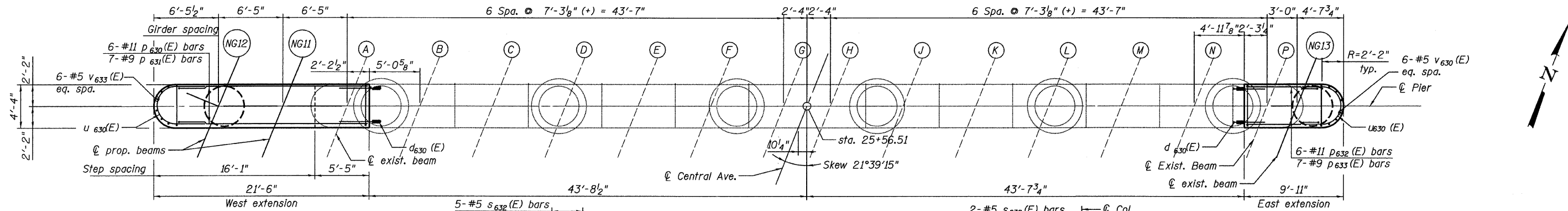


- NOTES**
1. For Bill of Materials see sheet 59.
 2. For additional notes see sheet 59.

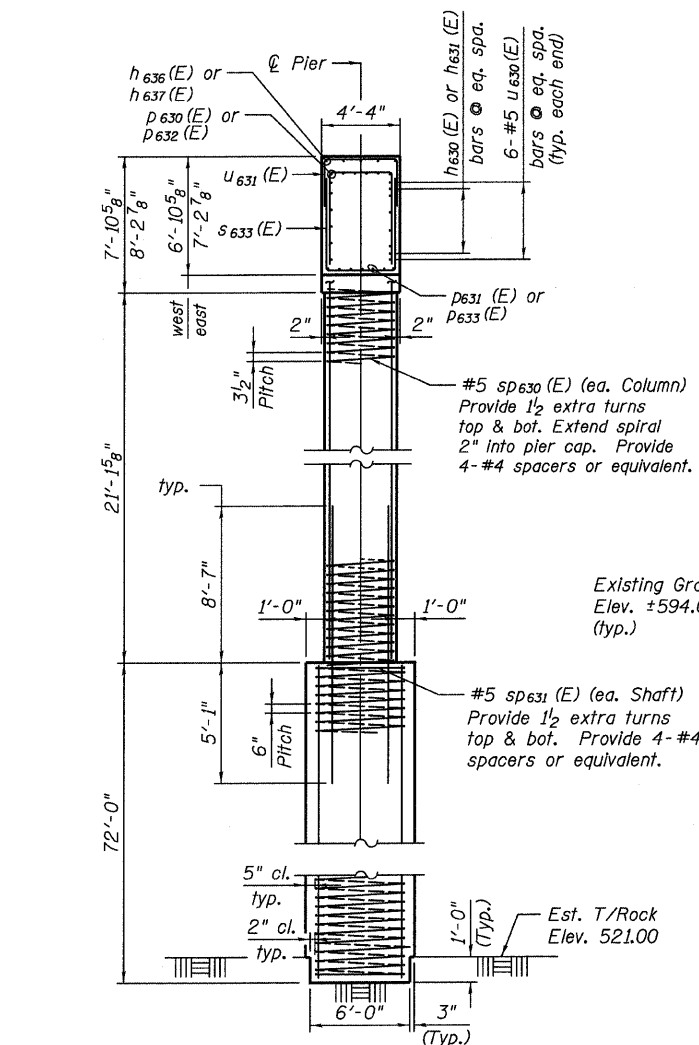
**PIER 9 REPLACEMENT
& WIDENING - WEST
STRUCTURE NO. 016-3240**

TYLIN INTERNATIONAL DESIGNED - DY, LS CHECKED - AMD, LS DRAWN - DY, LS CHECKED - AMD, LS DATE - 03/25/2011	REVISIONS NAME DATE		SHEET NO. 60 73 SHEETS	F.A.I. RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS	SHEET NO.
							741	663
							CONTRACT NO. 60999	
							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	

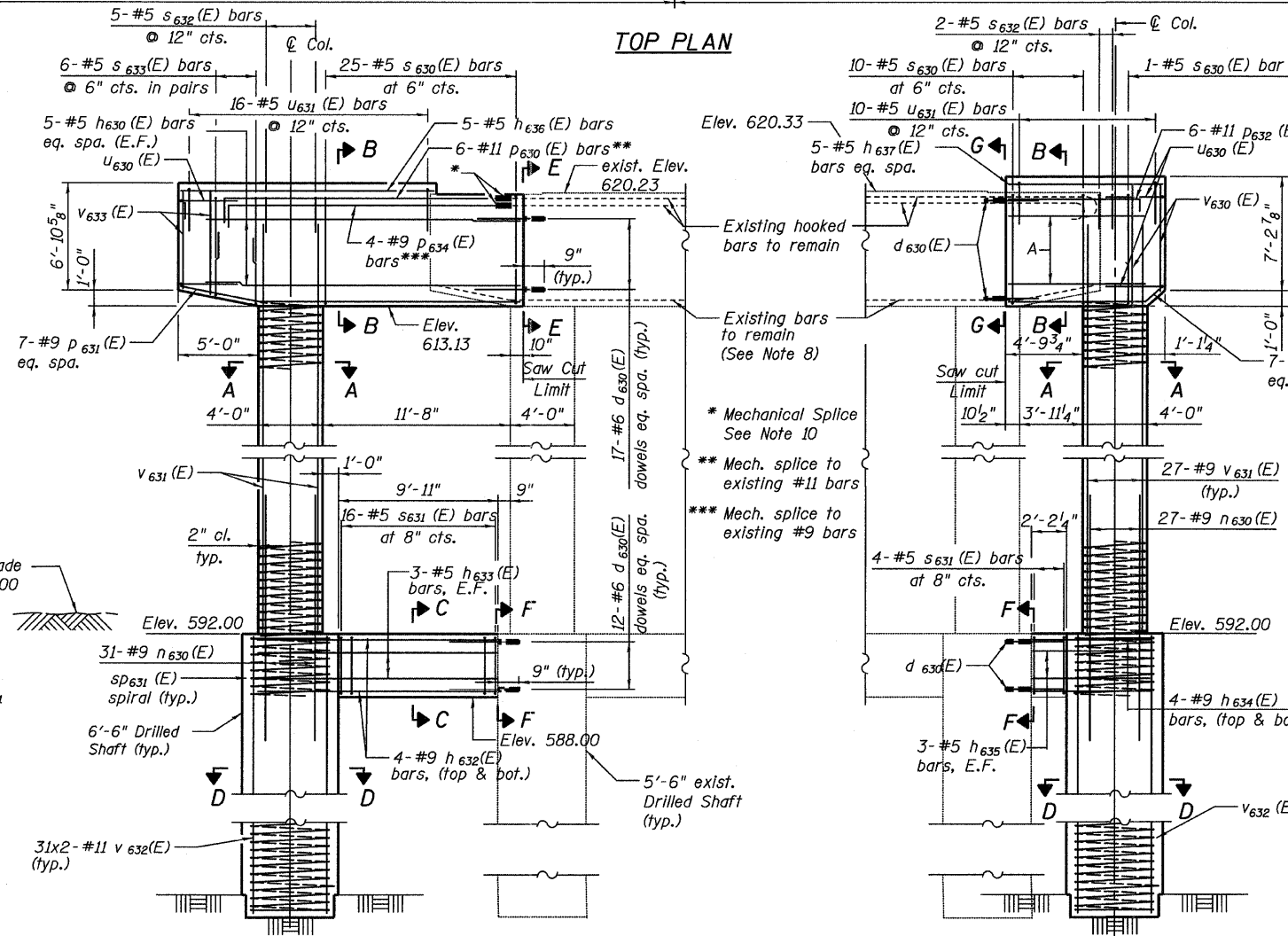
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



TOP PLAN



TYPICAL END VIEW

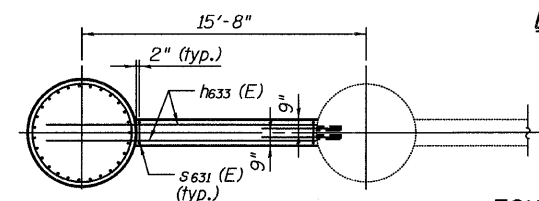


BRIDGE SEAT ELEVATION

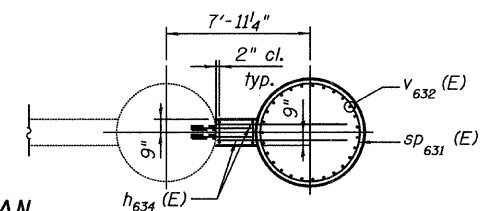
Girder Line	Seat Elevation
NG12	621.02
NG11	621.01
A	620.13
P	621.43
NG13	621.37

NOTES

1. Epoxy grout d630(E) bars according to Article 584 of the Standard Specifications. Drill to miss existing reinforcement. The epoxy grout and method of application shall be approved by the Engineer. All drilling and grouting of rebar to be included with the cost of "Reinforcement Bars, Epoxy Coated."
2. Space reinforcement in cap to miss anchor bolts.
3. All edges shall have standard 3/4" chamfers excepts as noted.
4. For Sections A thru G see sheet 62.
5. For Bill of Materials see sheet 62.
6. E.F. - denotes each face.
7. eq. spa. - denotes equally spaced.
8. Existing reinforcement shall be cleaned and incorporated into new construction. Cost included with Concrete Removal.
9. Cast steps monolithically with cap.
10. Prior to installation of mechanical splice, cut in field hook on existing reinforcement bar to be spliced. Cost included with Mechanical Splicers.



FOUNDATION PLAN



PIER 10 WIDENING
STRUCTURE NO. 016-3240

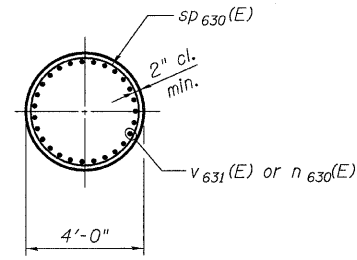
TYLIN INTERNATIONAL

DESIGNED	REVISIONS
- DY, LS	NAME
CHECKED - AMD, LS	DATE
DRAWN - DY, LS	
CHECKED - AMD, LS	
DATE - 03/25/2011	

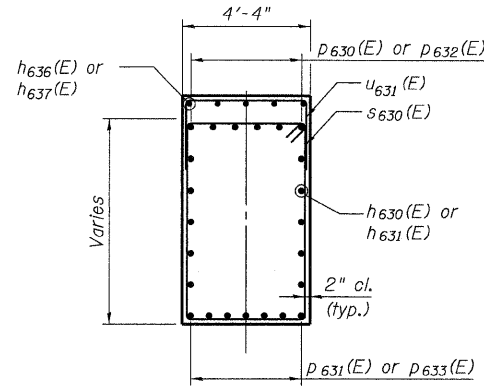
SHEET NO. 61	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
73 SHEETS	55	0711.2R & 1011.1BR	COOK	741	664
CONTRACT NO. 60999					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

9/20/15 4 AM
pi_01345\structure\016-3240\150631er10.dgn

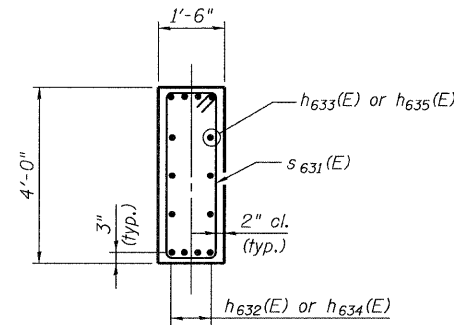
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION A-A



SECTION B-B



SECTION C-C

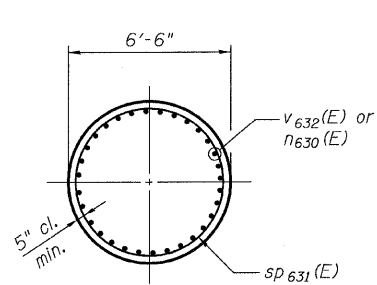
MINIMUM BAR LAPS

Bar Size	Min. Lap
#5	3'-3"
#6	3'-1"
#11	13'-4"

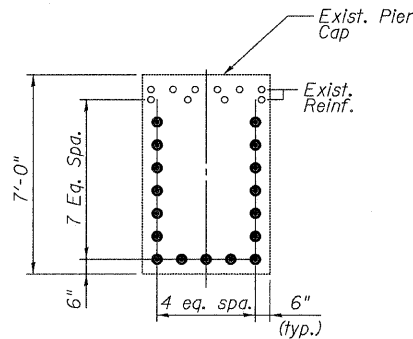
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d 630(E)	63	#6	3'-10"	—
h 630(E)	10	#5	19'-4"	—
h 631(E)	10	#5	7'-9"	—
h 632(E)	8	#9	13'-1"	—
h 633(E)	6	#5	12'-0"	—
h 634(E)	8	#9	5'-2"	—
h 635(E)	6	#5	4'-3"	—
* h 636(E)	5	#5	15'-9"	—
* h 637(E)	5	#5	9'-7"	—
n 630(E)	62	#9	13'-8"	—
p 630(E)	6	#11	21'-2"	—
p 631(E)	7	#9	19'-0"	—
p 632(E)	6	#11	9'-7"	—
* p 633(E)	7	#9	9'-10"	—
p 634(E)	4	#9	20'-9"	—
s 630(E)	36	#5	22'-5"	—
s 631(E)	20	#5	10'-7"	—
s 632(E)	7	#5	8'-4"	—
s 633(E)	12	#5	14'-0"	—
** s p 630(E)	2	#5	21'-6"	—
** s p 631(E)	2	#5	72'-2"	—
u 630(E)	12	#5	12'-8"	—
u 631(E)	26	#5	9'-2"	—
v 630(E)	6	#5	6'-10"	—
v 631(E)	54	#9	25'-3"	—
v 632(E)	124	#11	42'-6"	—
v 633(E)	6	#5	6'-3"	—
Mechanical Splicers	EACH	10		
Drilled Shaft in Soil	CU YD	174.5		
Drilled Shaft in Rock	CU YD	2.1		
Structure Excavation	CU YD	21.6		
Concrete Structures	CU YD	60.3		
Reinforcement Bars, Epoxy Coated	POUND	44,350		

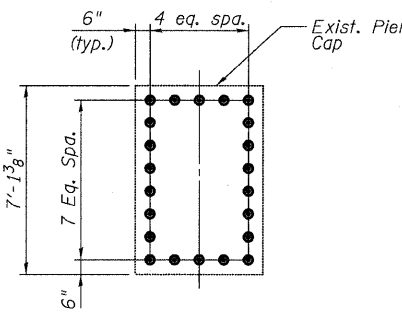
* Cut to fit in field.
** Length is height of spiral.



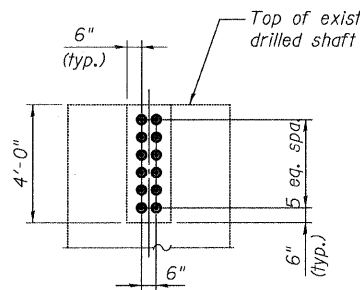
SECTION D-D



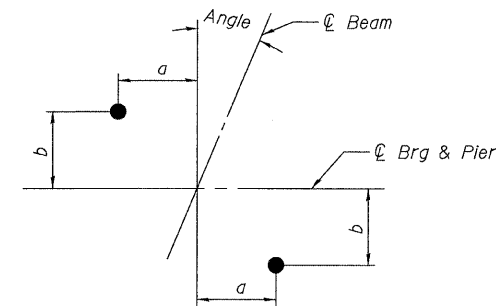
SECTION E-E



SECTION G-G

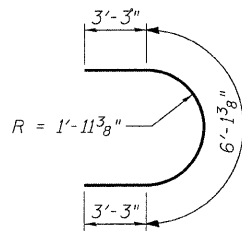


SECTION F-F

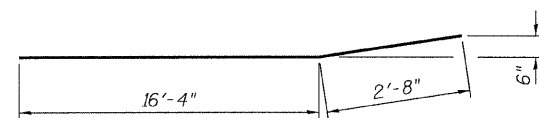


ANCHOR BOLT LAYOUT

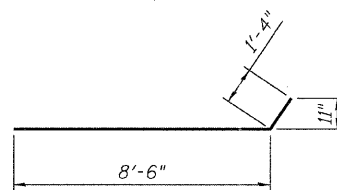
Beam	Angle	a	b
NG13	21°39'15"	1'-0 ³ / ₄ "	5 ¹ / ₆ "
A Thru P	21°39'15"	1'-0 ³ / ₄ "	5 ¹ / ₆ "
NG11	22°8'40"	1'-0 ³ / ₄ "	5 ³ / ₆ "
NG12	22°37'52"	1'-0 ¹ / ₆ "	5 ⁵ / ₆ "



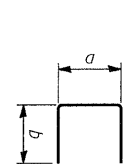
BAR u 630(E)



BAR p 631(E)

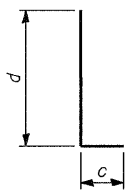


BAR p 633(E)



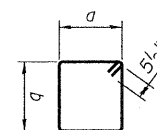
Bar	a	b
s 632(E)	4'-0"	2'-2"
s 633(E)	4'-0"	5'-0"
u 631(E)	4'-0"	2'-7"

BAR s 632(E), s 633(E) & u 631(E)



Bar	c	d
p 630(E)	2'-0"	19'-2"
p 632(E)	2'-0"	9'-8"
p 634(E)	1'-7"	19'-2"

BAR p 630(E), p 632(E) & p 634(E)



Bar	a	b
s 630(E)	4'-0"	6'-9"
s 631(E)	1'-2"	3'-8"

BAR s 630(E) & s 631(E)

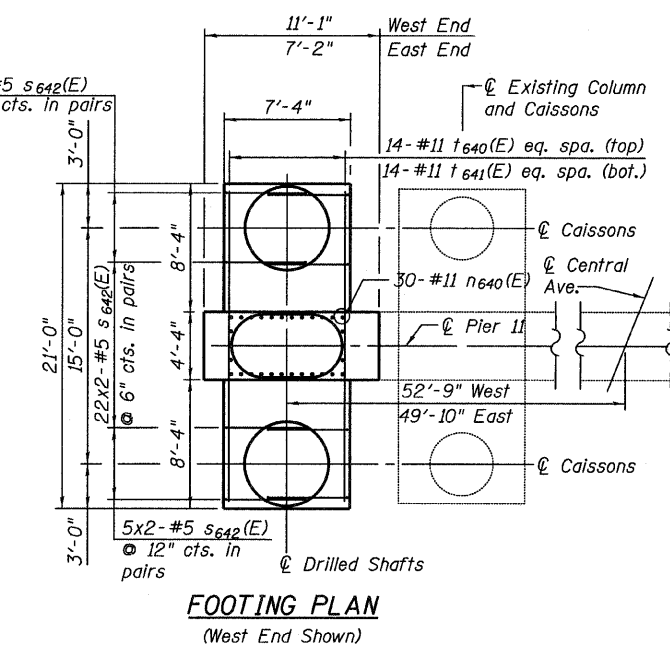
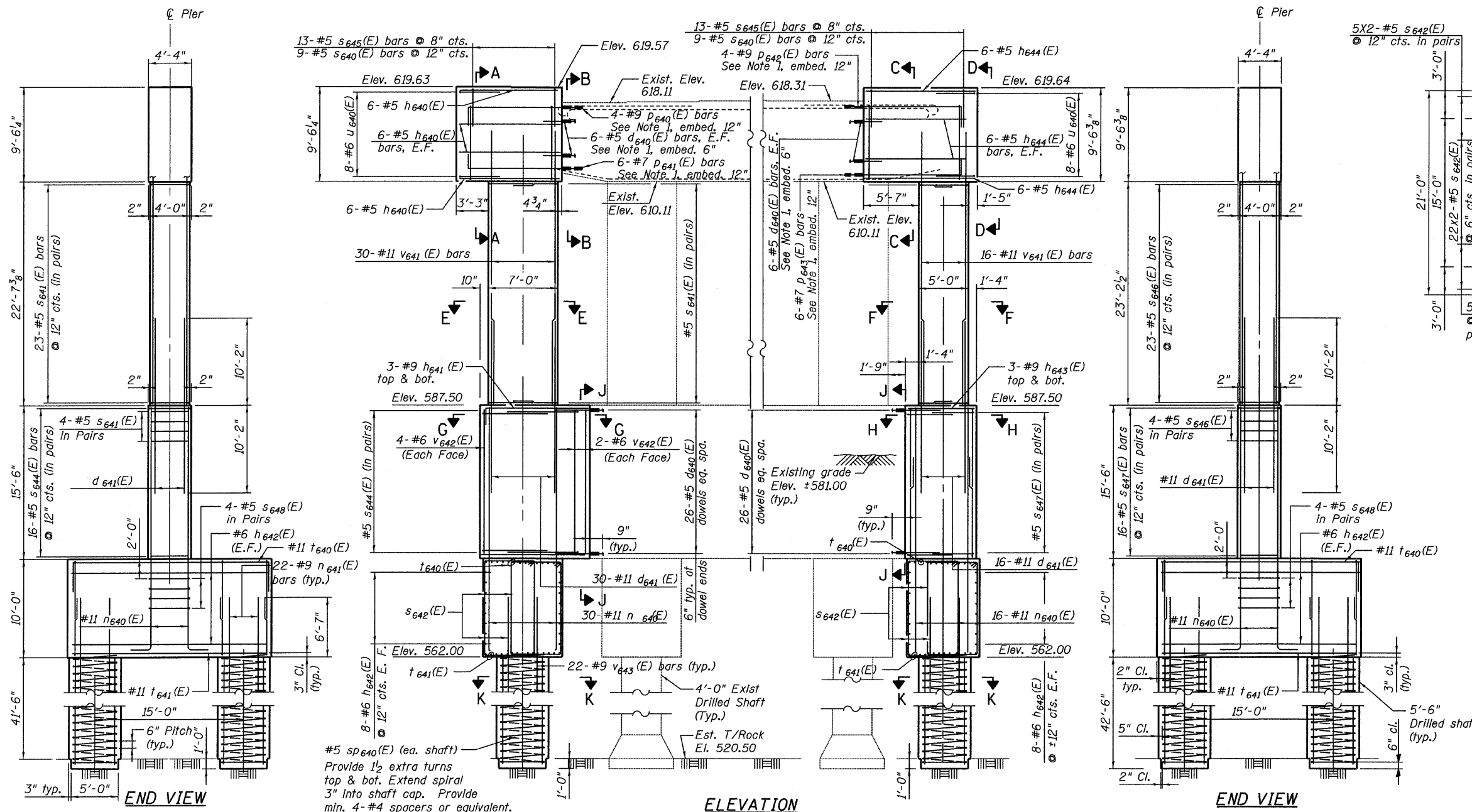
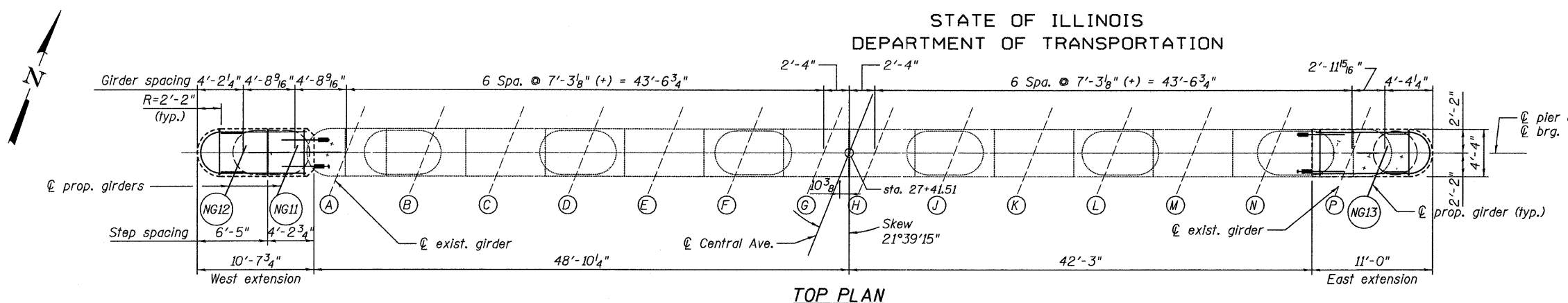
PIER 10 DETAILS
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 62	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.						
	CHECKED - AMD, LS	NAME	DATE							73 SHEETS	55	0711.2R & 1011.1BR	COOK	741	665
	DRAWN - DY, LS									CONTRACT NO. 60999					
	CHECKED - AMD, LS									FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011														

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOTES

1. Epoxy grout $d_{640}(E)$ bars according to Article 584 of the Standard Specifications. Drill to miss existing reinforcement. The epoxy grout and method of application shall be approved by the Engineer. All drilling and grouting of rebar to be included with the cost of "Reinforcement Bars, Epoxy Coated."
2. Space reinforcement in cap to miss anchor bolts.
3. Space bottom reinforcement in footing to miss piles.
4. All edges shall have standard $\frac{3}{4}$ " chamfers excepts as noted.
5. For Sections A, B, C, D, E, F, G, H, J & K see sheet 64.
6. For Bill of Materials see sheet 64.
7. E.F. - denotes Each Face.
8. eq. spa. - denotes equally spaced.
9. Existing reinforcement shall be cleaned and incorporated into new construction. Cost included with Concrete Removal.
10. Cast steps monolithically with cap.



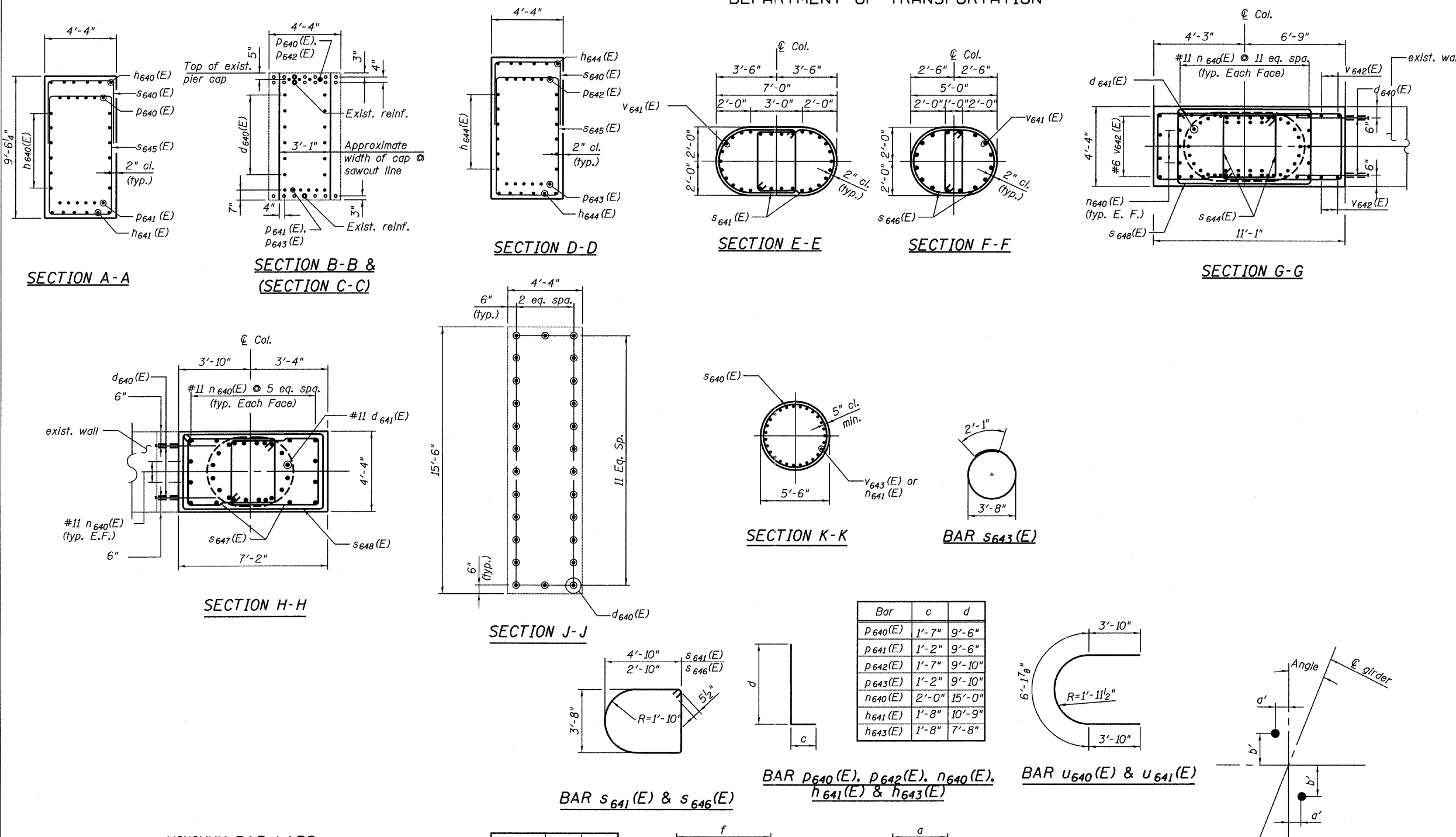
PIER 11 WIDENING
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL DESIGNED - DY, LS CHECKED - AMD, LS DRAWN - DY, LS CHECKED - AMD, LS DATE - 03/25/2011	REVISIONS		SHEET NO. 63 73 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	666	
				CONTRACT NO. 60999					
				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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 5/9/2011

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIAL



Bar	No.	Size	Length	Shape
d ₆₄₀ (E)	76	#5	2'-8"	—
d ₆₄₁ (E)	46	#11	20'-4"	—
h ₆₄₀ (E)	24	#5	8'-0"	—
h ₆₄₁ (E)	6	#9	12'-5"	—
h ₆₄₂ (E)	32	#6	19'-8"	—
h ₆₄₃ (E)	6	#9	9'-4"	—
h ₆₄₄ (E)	24	#5	8'-8"	—
n ₆₄₀ (E)	46	#11	27'-1"	—
n ₆₄₁ (E)	88	#9	15'-2"	—
p ₆₄₀ (E)	4	#9	11'-1"	—
p ₆₄₁ (E)	6	#7	10'-8"	—
p ₆₄₂ (E)	4	#9	11'-5"	—
p ₆₄₃ (E)	6	#7	11'-0"	—
s ₆₄₀ (E)	18	#5	11'-0"	—
s ₆₄₁ (E)	54	#5	16'-5"	—
s ₆₄₂ (E)	256	#5	29'-11"	—
s ₆₄₃ (E)	68	#5	13'-8"	—
s ₆₄₄ (E)	32	#5	23'-11"	—
s ₆₄₅ (E)	26	#5	23'-11"	—
s ₆₄₆ (E)	52	#5	12'-5"	—
s ₆₄₇ (E)	32	#5	20'-9"	—
s ₆₄₈ (E)	8	#5	22'-7"	—
t ₆₄₀ (E)	28	#11	24'-6"	—
t ₆₄₁ (E)	28	#11	20'-8"	—
u ₆₄₀ (E)	16	#6	13'-10"	—
v ₆₄₀ (E)	14	#5	9'-3"	—
v ₆₄₁ (E)	46	#11	29'-5"	—
v ₆₄₂ (E)	12	#6	15'-2"	—
v ₆₄₃ (E)	88	#9	41'-10"	—
*s _{D640} (E)	4	#5	42'-3"	—
Drilled Shaft in Soil	CU YD		146.1	
Drilled Shaft in Rock	CU YD		2.9	
Structure Excavation	CU YD		72.2	
Concrete Structures	CU YD		239.3	
Reinforcement Bars, Epoxy Coated	POUND		64,810	

* Length is height of spiral.

MINIMUM BAR LAPS

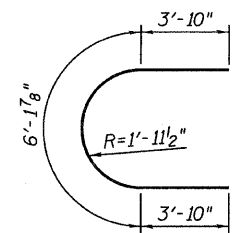
Bar Size	Min. Lap
#6	3'-10"
#9	8'-7"
#11	10'-2"

Bar	e	f
s ₆₄₂ (E)	9'-6"	5'-0"
s ₆₄₄ (E)	4'-0"	7'-6"
s ₆₄₅ (E)	7'-6"	4'-0"
s ₆₄₇ (E)	4'-0"	5'-11"
s ₆₄₈ (E)	4'-0"	6'-10"

BAR s₆₄₂(E), s₆₄₄(E), s₆₄₅(E), s₆₄₇(E) & s₆₄₈(E)

Bar	c	d
p ₆₄₀ (E)	1'-7"	9'-6"
p ₆₄₁ (E)	1'-2"	9'-6"
p ₆₄₂ (E)	1'-7"	9'-10"
p ₆₄₃ (E)	1'-2"	9'-10"
n ₆₄₀ (E)	2'-0"	15'-0"
h ₆₄₁ (E)	1'-8"	10'-9"
h ₆₄₃ (E)	1'-8"	7'-8"

BAR p₆₄₀(E), p₆₄₂(E), n₆₄₀(E), h₆₄₁(E) & h₆₄₃(E)



BAR u₆₄₀(E) & u₆₄₁(E)

ANCHOR BOLT LAYOUT

Girder	Angle	a'	b'
NG13	21°39'15"	1'-0 3/4"	5 1/6"
P	21°39'15"	1'-0 3/4"	5 1/6"
NG11	22°8'40"	1'-0 3/4"	5 3/6"
NG12	22°37'52"	1'-0 1/6"	5 5/6"

PIER 11 DETAILS
STRUCTURE NO. 016-3240

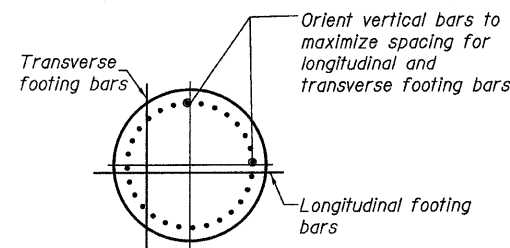
TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 64	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.						
	CHECKED - AMD, LS	NAME	DATE							73 SHEETS	55	0711.2R & 1011.1BR	COOK	741	667
	DRAWN - DY, LS									CONTRACT NO. 60999					
	CHECKED - AMD, LS									FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011														

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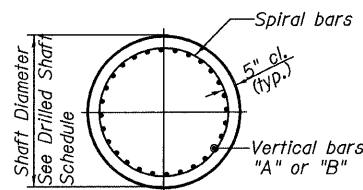
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRILLED SHAFT SCHEDULE

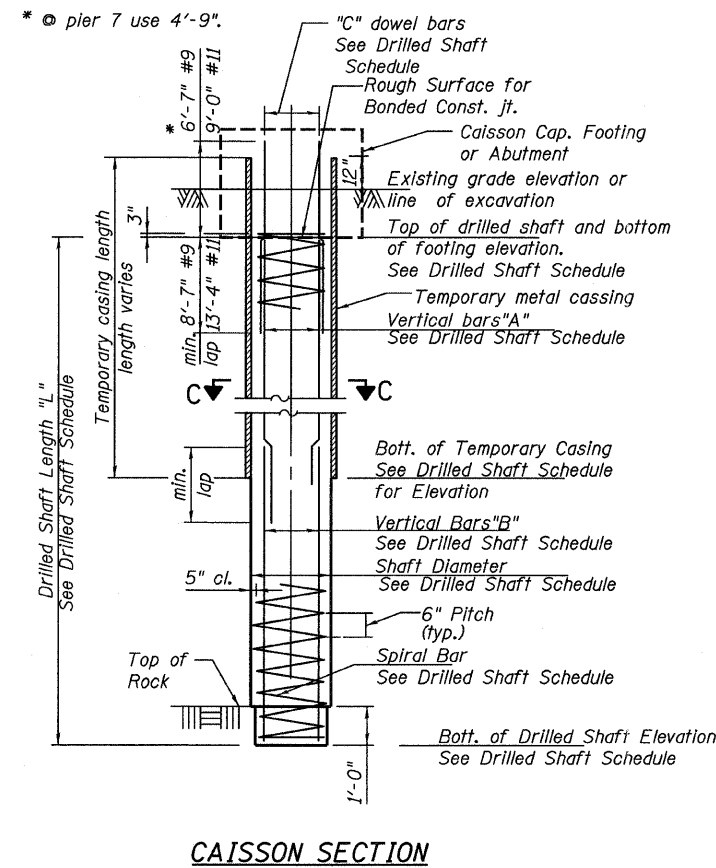
Pier	Size		Reinforcement				Top of Shaft Elevation	Bottom of Shaft Elevation	Allowable Bearing Pressure (tsf)	
	Shaft Diameter	Shaft Length "L"	Vertical Bars "A"	Vertical Bars "B"	Dowel Bars "C"	Spiral Bars			Exlst	New
7	4'-0"	73'-0"	14- #9 v 601(E)	14- #9 v 601(E)	14- #9 n 601(E)	#5 sp 601(E)	589.50	516.50	20.0	15.6
8	5'-0"	75'-6"	16- #9 v 612(E)	16- #9 v 612(E)	16- #9 n 611(E)	#5 sp 611(E)	595.00	519.50	20.0	17.9
9	4'-9"	75'-6"	19- #11 v 623(E)	19- #11 v 623(E)	19- #11 n 620(E)	#5 sp 621(E)	595.00	519.50	20.0	17.6
10	6'-6"	72'-0"	31- #11 v 632(E)	31- #11 v 632(E)	31- #11 n 630(E)	#5 sp 631(E)	592.00	520.00	20.0	16.8
11	5'-6"	42'-6"	22- #9 v 643(E)	--	22- #11 n 641(E)	#5 sp 640(E)	562.00	519.50	20.0	15.8



TOP PLAN
Showing orientation of vertical bars



SECTION C-C



CAISSON SECTION

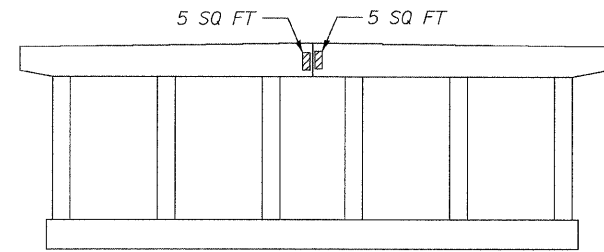
NOTES:

- Drilled shafts shall be installed according to article 516 of the Standard Specifications.
- Elevations, shaft lengths, and reinforcement lengths shown are estimates and should be verified and adjusted in the field as directed by the engineer.
- In constructing the drilled shafts, the Contractor may encounter pavements, fill, foundations, abandoned utilities, boulders, and other obstructions. No separate payment will be made for removal for any such obstructions, and the cost for removing such obstructions shall be included in the contract unit price for caisson shafts.
- Adjacent new caissons may be constructed simultaneously provided that they are not closer than 16.5 feet on centers. At least 36 hours shall have elapsed after the completion of a caisson before excavation for adjacent caissons closer than 16.5 feet on center is started.
- Temporary casing specified to mitigate soil and ground water contamination, and to ensure that adjacent existing caissons and/or piles are not undermined during excavation for new caissons. The Contractor shall submit, for the Engineer's approval, his/her proposed methods, equipment and procedures for the installation and removal of the temporary casing so as not to undermine or damage the existing caissons and piles. The extraction of the casing shall be performed so as not to disturb the caisson reinforcing cage or impair the structural integrity of the constructed caisson.
- If field conditions dictate a shorter shaft length than shown, the Contractor shall cut the reinforcement bars to the required length. If the shaft length is longer than indicated, the Contractor shall extend the reinforcement by providing additional reinforcement of equal size and lapping with the minimum lap length shown.
- The caisson shaft and reinforcement shall be adjusted as required by the Engineer. These additional quantities required by the Engineer and furnished by the Contractor will be paid for at the unit price bid for the work.
- At all locations where reinforcements bar laps are not in direct contact, the Contractor shall provide sufficient spacing between the vertical bars, equal to the size of the largest concrete aggregate plus 1/2".
- For location of drilled shafts See sheets 55 thru 64.
- For Bill of Material see sheets 2.

**DRILLED SHAFTS
STRUCTURE NO. 016-3240**

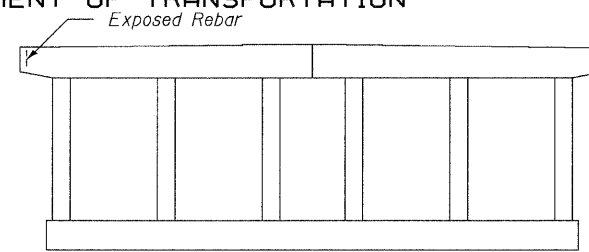
TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 65	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.						
	CHECKED - AMD, LS	NAME	DATE							73 SHEETS	55	0711.2R & 1011.1BR	COOK	741	668
	DRAWN - DY, LS														
	CHECKED - AMD, LS														
	DATE - 03/25/2011				CONTRACT NO. 60999										
					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT										

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

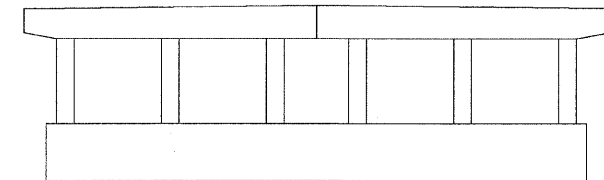


NORTH ELEVATION
(Looking South)

PIER 7

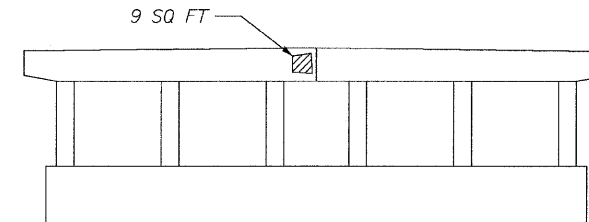


SOUTH ELEVATION
(Looking North)

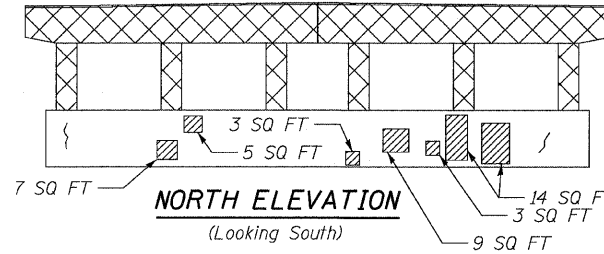


NORTH ELEVATION
(Looking South)

PIER 8

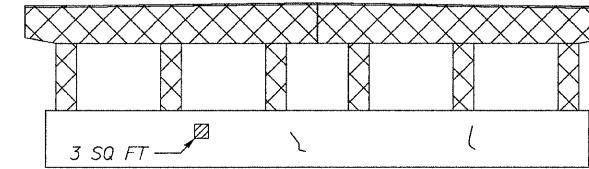


SOUTH ELEVATION
(Looking North)

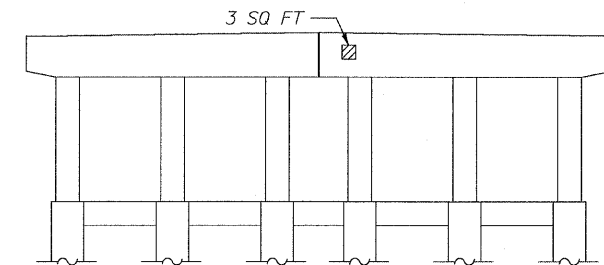


NORTH ELEVATION
(Looking South)

PIER 9

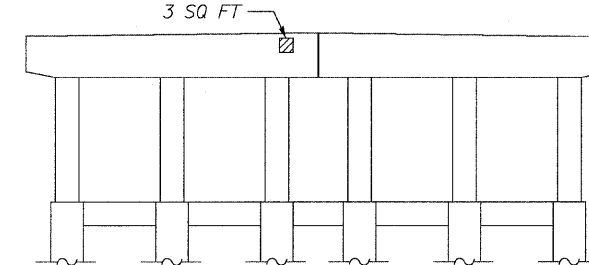


SOUTH ELEVATION
(Looking North)

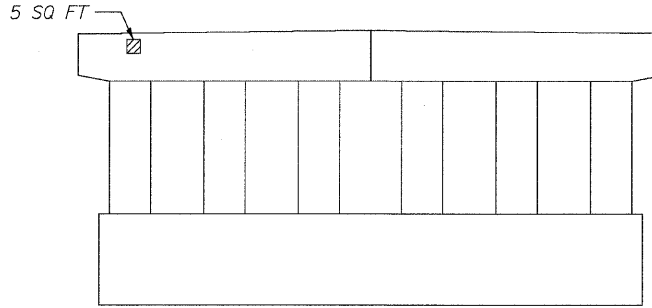


NORTH ELEVATION
(Looking South)

PIER 10

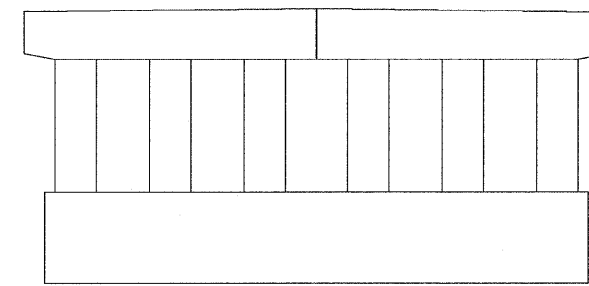


SOUTH ELEVATION
(Looking North)



NORTH ELEVATION
(Looking South)

PIER 11



SOUTH ELEVATION
(Looking North)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Epoxy Crack Injection	FOOT	66
Structural Repair of Concrete (Depth Greater Than 5 inches)	SQ FT	88.0

LEGEND

- Removal
- Indicates Structural Repair of Concrete
- Indicates Epoxy Crack Injection

**SUBSTRUCTURE REPAIRS
STRUCTURE NO. 016-3240**

TYLIN INTERNATIONAL

	DESIGNED - DY, LS	REVISIONS	
		NAME	DATE
CHECKED - AMD, LS			
DRAWN - DY, LS			
CHECKED - AMD, LS			
DATE - 03/25/2011			

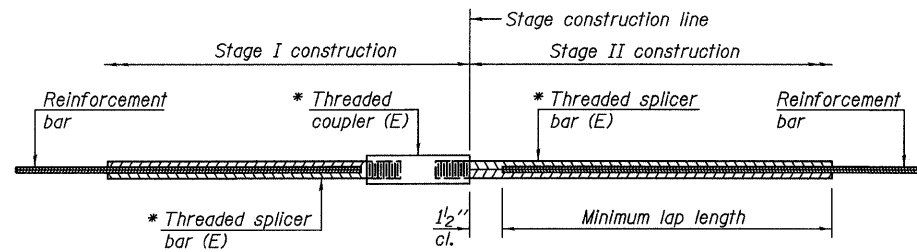
SHEET NO. 66	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	669
73 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT		

4/28/2011

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

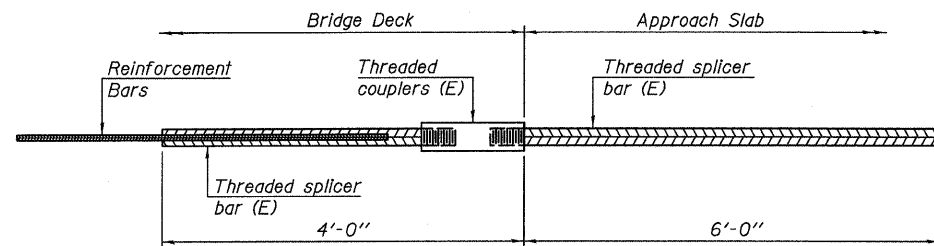
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

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

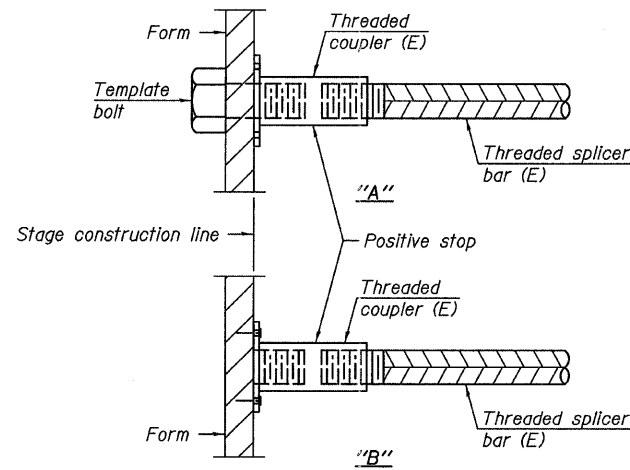
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	5	762	3
Deck-along C. Abut. 4	5	5	4



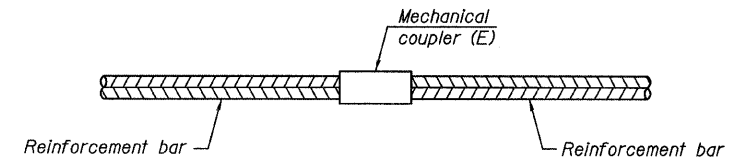
BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



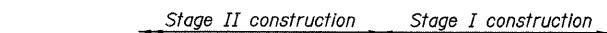
INSTALLATION AND SETTING METHODS

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



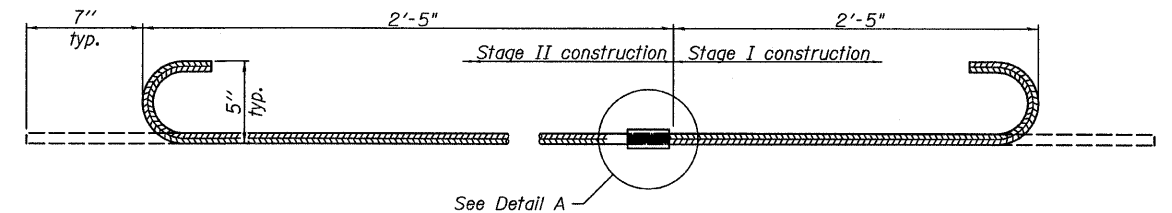
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Pier 7 Cap	#11	12
Pier 8 Cap	#11	12
Pier 10 Cap	#11	6
Pier 10 Cap	#9	4



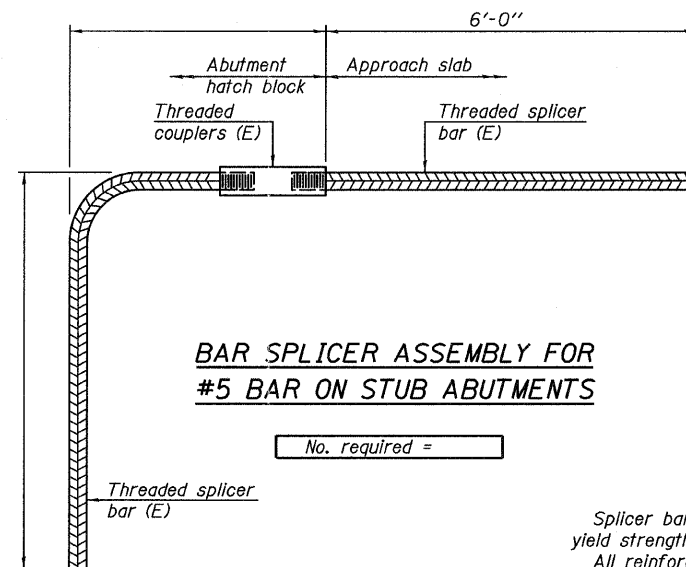
DETAIL A

** The bar splicer assembly shall allow completion of the splice without turning of the hook bars. The stage II splice bar shall be threaded such that the entire coupler can be threaded onto the splice bar.



#5- alpha (E) BAR SPLICER ASSEMBLY FOR EDGE BEAMS AT STAGE CONSTRUCTION JOINT

No. required = 3



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

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

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 016-3240**

BSD-1

7-1-10

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 67	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	670	
	DRAWN - DY, LS				73 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD, LS					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/25/2011									

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
0.0	0.0	182.13	(597.40)	MEDIUM GRAVEL	AU-1 0-1.0		w=3.6%
1.0	1.0			BROWN SILTY CLAY LOAM TRACE FINE SAND MEDIUM STIFF MOIST	SS-2 1.0-2.5 6" R	7 4 4	w=20.9%
1.5	1.5			NO RECOVERY	SS-3 3.5-5.0 R	4 4 5	w=23.0%
6.0	6.0	180.61	(592.40)	SANDY CLAY LOAM WET	SS-4 6.0-7.5 12" R	1 1 1	w=20.9%
8.0	8.0	179.54	(588.90)	GRAY BROWN SILTY CLAY, MOIST	SS-5 8.5-10.0 10" R	1 1 3	w=23.0%
12.0	12.0				SS-6 11.0-12.5 18" R	2 3 6	QU=224 B w=22.0%
14.0	14.0				SS-7 13.5-15.0 18" R	3 5 5	QU=80 B w=21.0%
17.0	17.0				SS-8 16.0-17.5 18" R	1 3 5	QU=161 B w=21.0%
19.0	19.0				SS-9 18.5-20.0 18" R	3 4 5	QU=88 B w=21.2%
6.0	20.0						

DRILLING CONTRACTOR	PATRICK DRILLING	REMARKS	WATER LEVEL (ft.)
DRILLING METHOD	HSA		32
DRILLING EQUIPMENT	CME		32
DRILLING STARTED	6/26/01 ENDED 6/26/01		N.A.

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
20.0	20.0			GRAY SILTY CLAY, TRACE FINE SAND, MOIST, STIFF	SS-10 21.0-22.5 16" R	3 4 5	QU=128 B w=19.1%
23.0	23.0				SS-11 23.5-25.0 18" R	3 3 5	QU=201 B w=24.3%
26.0	26.0				SS-12 26.0-27.5 18" R	2 3 5	QU=153 B w=25.6%
29.0	29.0				SS-13 28.5-30.0 18" R	4 4 5	QU=129 B w=23.3%
31.0	31.0						
34.0	34.0				SS-14 33.5-35.0 " R	2 4 5	QU=161 B w=15.9%
37.0	37.0	171.00	(560.90)	GRAY SILTY LOAM MOIST MEDIUM DENSE	SS-15 38.5-40.0 " R	5 7 7	N=14 NP w=13.5%
40.0	40.0						

DRILLING CONTRACTOR	PATRICK DRILLING	REMARKS	WATER LEVEL (ft.)
DRILLING METHOD	3 1/2" ID HSA		32
DRILLING EQUIPMENT	CME		32
DRILLING STARTED	6/26/01 ENDED 6/26/01		N.A.

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
40.0	40.0	169.7	(556.65)	GRAY SILT, DENSE MOIST TRACE FINE SAND	SS-16 43.5-45.0 18" R	15 20 17	N=37 NP w=13.6%
47.0	47.0	168.11	(551.40)	GRAY SILTY CLAY LOAM, DENSE, MOIST TRACE FINE SAND	SS-17 48.5-50.0 " R	9 10 16	N=26 QU=571 B w=14.9%
51.0	51.0	166.58	(546.40)	GRAY SILTY CLAY, TRACE FINE SAND SLIGHT MOIST, VERY STIFF	SS-18 53.5-55.0 " R	6 8 13	QU=474 B w=18.1%
57.0	57.0	165.06	(541.40)	GRAY SILT DENSE WET, SOME FINE GRAVEL	SS-19 58.5-60.0 " R	8 16 22	w=20.8% N=38 NP
60.0	60.0						

DRILLING CONTRACTOR	PATRICK DRILLING	REMARKS	WATER LEVEL (ft.)
DRILLING METHOD	3 1/2" ID HSA		32.0
DRILLING EQUIPMENT	CME		32.0
DRILLING STARTED	6/26/01 ENDED 6/26/01		N.A.

NOTE:

1. To convert from kPa to psi:
1 kPa = 0.14504 psi

BORING LOGS 1
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS			SHEET NO. 68	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE			55	0711.2R & 1011.1BR	COOK	741	671	
	DRAWN - DY, LS										
	CHECKED - AMD, LS						CONTRACT NO. 60999				
	DATE - 03/25/2011						FED. ROAD DIST. NO. 1 ILLINOIS		FED. AID PROJECT		

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
60.0	61.0	62.0	63.0	GRAY SILT VERY DENSE SLIGHT MOIST	SS-20 63.5-65.0 " R	20 27 28	N=55 NP EDB AT 65' w=12.1%
19.5	64.0	65.0	66.0				
66.0	67.0	68.0	69.0				
69.0	70.0	71.0	72.0				
72.0	73.0	74.0	75.0				
75.0	76.0	77.0	78.0				
78.0	79.0	80.0					
21.0	70.0	71.0	72.0				
72.0	73.0	74.0	75.0				
75.0	76.0	77.0	78.0				
78.0	79.0	80.0					
22.5	75.0	76.0	77.0				
77.0	78.0	79.0	80.0				
80.0							

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
0.0	1.0	2.0	3.0	GRAY SILT AND GRAVEL GRAVEL, BROWN SILTY CLAY LOAM (FILL) BLACK LOAM, LOOSE AND SILTY CLAY LOAM, STIFF MOIST SANDY LOAM, WET VERY LOOSE GRAY-BROWN SILTY CLAY SLIGHTLY MOIST, SOFT TRACE OF FINE SAND GRAY SILTY CLAY, MEDIUM STIFF, SLIGHT MOIST TRACE FINE SAND	AU-1 0-1.0 SS-2 1.0-2.5 2" R SS-3 3.5-5.0 6" R SS-4 6.0-7.5 14" R SS-5 8.5-10.0 14" R SS-6 11.0-12.5 18" R SS-7 13.5-15.0 18" R SS-8 16.0-17.5 18" R SS-9 18.5-20.0 18" R	7 5 5 3 2 1 1 1 1 3 3 1 5 2 3 4	w=3.2% w=16.7% w=31.4% w=23.5% w=25.2% QU=32 B w=27.1% QU=40 B w=19.7% QU=137 B w=21.3% QU=128 B w=20.8%
182.14	597.44	181.54	595.44				
180.77	592.94	179.71	589.44				
177.73	582.94						

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
20.0	21.0	22.0	23.0	GRAY SILTY CLAY, MEDIUM STIFF, SL. MOIST, TRACE FINE SAND DARK GRAY SILTY CLAY, MEDIUM STIFF, MOIST TRACE FINE SAND GRAY SILT, DENSE, SLIGHT MOIST, TRACE FINE SAND	SS-10 21.0-22.5 18" R SS-11 23.5-25.0 18" R SS-12 26.0-27.5 18" R SS-13 28.5-30.0 18" R SS-14 33.5-35.0 18" R SS-15 38.5-40.0 18" R	2 5 3 7 3 4 5 2 4 5 2 4 8 15 22	OU=201 B w=20.7% OU=241 B w=21.7% OU=168 B w=19.6% OU=225 B w=20.5% OU=201 B w=14.7% N=37 NP w=12.7%
173.91	570.44						

NOTE:

1. To convert from kPa to psi:
1 kPa = 0.14504 psi

BORING LOGS 2
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 69	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.					
	CHECKED - AMD, LS	NAME	DATE		55					0711.2R & 1011.1BR	COOK	741	672	
	DRAWN - DY, LS				73 SHEETS					CONTRACT NO. 60999				
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT									
	DATE - 03/25/2011													

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
40.0	41.0	42.0	43.0	GRAY SILT, DENSE, SL. MOIST, TRACE FINE SAND	SS-16 43.5-45.0 18" R	12 21 30	N=51 NP w=14.1%
44.0	45.0	46.0	47.0				
48.0	49.0	50.0	51.0				
15.0	16.5	18.0	19.5	GRAY SILTY CLAY LOAM, MEDIUM DENSE, SLIGHTLY MOIST	SS-17 48.5-50.0 18" R	13 13 18	N=31 NP w=14.7%
52.0	53.0	54.0	55.0				
56.0	57.0	58.0	59.0				
16.5	18.0	19.5	21.0	GRAY SILT, SOME FINE-COARSE SAND, DENSE, SLIGHTLY MOIST	SS-18 53.5-55.0 18" R	10 12 15	QU=740 B w=17.3%
60.0	61.0	62.0	63.0				
64.0	65.0	66.0	67.0				
18.0	19.5	21.0	22.5	GRAY SILT, SL. MOIST, VERY DENSE	SS-20 63.5-65.0 14" R	20 100	N=100 NP w=10%
68.0	69.0	70.0	71.0				
72.0	73.0	74.0	75.0				
21.0	22.5	24.0	25.5	HARD CLAY UNTIL CORE BARREL WENT TO 81' BEFORE HITTING ROCK	SS-21 68.5-70.0 " R	43 100	N=100 NP w=7.9%
76.0	77.0	78.0	79.0				
80.0	81.0	82.0	83.0				
22.5	24.0	25.5	27.0	SS-22 73.5-75.0 " R	42 100	N=100 NP w=14.2%	
84.0	85.0	86.0	87.0				
88.0	89.0	90.0	91.0				
24.0	25.5	27.0	28.5	SS-23 78.5-80.0 " R	NO SPLIT SPOON		
92.0	93.0	94.0	95.0				
96.0	97.0	98.0	99.0				
25.5	27.0	28.5	30.0	SS-24 81.0-86.0 60" R	REC=100% ROD=21%		
100.0	101.0	102.0	103.0				
104.0	105.0	106.0	107.0				

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
60.0	61.0	62.0	63.0	GRAY SILT, SL. MOIST, VERY DENSE	SS-20 63.5-65.0 14" R	20 100	N=100 NP w=10%
64.0	65.0	66.0	67.0				
68.0	69.0	70.0	71.0				
19.5	21.0	22.5	24.0	HARD CLAY UNTIL CORE BARREL WENT TO 81' BEFORE HITTING ROCK	SS-21 68.5-70.0 " R	43 100	N=100 NP w=7.9%
72.0	73.0	74.0	75.0				
76.0	77.0	78.0	79.0				
21.0	22.5	24.0	25.5	SS-22 73.5-75.0 " R	42 100	N=100 NP w=14.2%	
80.0	81.0	82.0	83.0				
84.0	85.0	86.0	87.0				
22.5	24.0	25.5	27.0	SS-23 78.5-80.0 " R	NO SPLIT SPOON		
88.0	89.0	90.0	91.0				
92.0	93.0	94.0	95.0				
24.0	25.5	27.0	28.5	SS-24 81.0-86.0 60" R	REC=100% ROD=21%		
96.0	97.0	98.0	99.0				
100.0	101.0	102.0	103.0				

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
80.0	81.0	82.0	83.0	TOP OF BEDROCK AT 81' 157.75 (517.44) WHITE-LIGHT GRAY LIMESTONE-DOLOMITE, FINE GRAINED FREQUENT HORIZONTAL FRACTURE VERTICAL FRACTURE 83.5'-84.0'	NX-24 81.0-86.0 60" R	REC=100% ROD=21%	
84.0	85.0	86.0	87.0				
88.0	89.0	90.0	91.0				
25.5	27.0	28.5	30.0	END OF BORING AT 86' 156.23 (512.44)			
92.0	93.0	94.0	95.0				
96.0	97.0	98.0	99.0				
27.0	28.5	30.0	31.5				
100.0	101.0	102.0	103.0				
104.0	105.0	106.0	107.0				

NOTE:

1. To convert from kPa to psi:
1 kPa = 0.14504 psi

BORING LOGS 3
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL

DESIGNED - DY, LS	REVISIONS	
	NAME	DATE
CHECKED - AMD, LS		
DRAWN - DY, LS		
CHECKED - AMD, LS		
DATE - 03/25/2011		

SHEET NO. 70	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	673
73 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT)	RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
0.0	1.0	2.0	3.0					
0.0	1.0	2.0	3.0	DK BROWN SILT & FINE GRAVEL 181.88 (596.58)	AU-1 0-1.0		6 5 6	w=4.5%
1.0	2.0	3.0	4.0	BLACK SILTY LOAM - SOME COARSE SAND, MEDIUM DENSE	SS-2 1.0-2.5 10" R			w=21.3%
4.0	4.5	5.0	5.0	180.32 (593.08)	SS-3 3.5-5.0 10" R		2 2 1	w=38.4%
5.0	6.0	7.0	8.0	180.36 (591.58)	SS-4 6.0-7.5 16" R		3 3 2	QU=135 B w=22.5%
8.0	9.0	10.0	11.0	GRAY SILTY CLAY MED. STIFF MOIST, TRACE FINE - COARSE SAND	SS-5 8.5-10.0 18" R		2 2 3	QU=129 B w=23.7%
11.0	12.0	13.0	14.0		SS-6 11.0-12.5 18" R		2 4 5	QU=217 B w=22.7%
14.0	15.0	16.0	17.0		SS-7 13.5-15.0 18" R		1 3 5	QU=113 B w=21.8%
17.0	18.0	19.0	20.0		SS-8 16.0-17.5 18" R		3 3 5	QU=173 B
19.0	20.0				SS-9 18.5-20.0 18" R		2 4 6	QU=241 B w=21.2%

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT)	RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
20.0	21.0	22.0	23.0					
20.0	21.0	22.0	23.0	GRAY SILTY CLAY, MOIST STIFF TRACE FINE SAND	SS-10 21.0-22.5 18" R		2 4 6	QU=201 B w=23.0%
24.0	25.0	26.0	27.0	174.41 (572.08)	SS-11 23.5-25.0 18" R		3 6 6	QU=201 B w=14.8%
26.0	27.0	28.0	29.0	GRAY SILTY CLAY LOAM MOIST, STIFF TRACE FINE SAND	SS-12 26.0-27.5 18" R		2 6 7	QU=193 B w=13.2%
29.0	30.0	31.0	32.0		SS-13 28.5-30.0 18" R		4 5 8	QU=217 B w=15.1%
32.0	33.0	34.0	35.0	172.43 (565.58)	SS-14 33.5-35.0 18" R		5 6 7	N=13 NP
35.0	36.0	37.0	38.0	GRAY SILT, MOIST, DENSE	SS-15 38.5-40.0 18" R		20 25 29	N=54 NP w=19.9%

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT)	RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
40.0	41.0	42.0	43.0					
40.0	41.0	42.0	43.0	GRAY SILT, DENSE MOIST				
44.0	45.0	46.0	47.0	167.86 (550.58)	SS-16 43.5-45.0 18" R		15 25 21	N=46 NP w=14.3%
48.0	49.0	50.0	51.0	GRAY SILTY CLAY LOAM VERY STIFF, SILT MOIST	SS-17 48.5-50.0 18" R		7 9 14	QU=474 B
52.0	53.0	54.0	55.0		SS-18 53.5-55.0 18" R		6 10 14	QU=329 B w=23.2%
56.0	57.0	58.0	59.0	164.96 (541.08)	SS-19 58.5-60.0 10" R		25 56 20	N=76 ROCK IN SPIRIT SPOON w=13.7%

NOTE:

1. To convert from kPa to psi:
1 kPa = 0.14504 psi

BORING LOGS 4
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 71	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	674	
	DRAWN - DY, LS				CONTRACT NO. 60999					
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011				73 SHEETS					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
60.0	61.0	62.0	63.0	GRAY SILT, VERY DENSE, DRY	SS-20 63.5-65.0 18" R	16 18 34	N=52 NP EOB AT 65' w=15.3%
64.0	65.0	66.0	67.0				
68.0	69.0	70.0	71.0				
72.0	73.0	74.0	75.0				
76.0	77.0	78.0	79.0				
80.0							

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
0.0	1.0	2.0	3.0	GRAY-BROWN SILTY CLAY TRACE FINE GRAVEL	SS-2 1.0-2.5 8" R	4 3 5	w=16.8%
4.0	5.0	6.0	7.0				
8.0	9.0	10.0	11.0				
12.0	13.0	14.0	15.0				
16.0	17.0	18.0	19.0				
20.0							

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
20.0	21.0	22.0	23.0	GRAY SILTY CLAY, MOIST STIFF, TRACE FINE-MED. SAND	SS-10 21.0-22.5 18" R	2 3 6	QU=273 B w=20.1%
24.0	25.0	26.0	27.0				
28.0	29.0	30.0	31.0				
32.0	33.0	34.0	35.0				
36.0	37.0	38.0	39.0				
40.0							

NOTE:

1. To convert from kPa to psi:
1 kPa = 0.14504 psi

BORING LOGS 5
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 72	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE		73 SHEETS	55	0711.2R & 1011.1BR	COOK	741	675
	DRAWN - DY, LS				CONTRACT NO. 60999					
	CHECKED - AMD, LS				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EIDI ENVIRONMENTAL DESIGN INTERNATIONAL Inc.		BORING NUMBER BR-14	T.Y. Lin Bascor	SHEET 3 OF 3	
LOGGED BY JOE CORNS		PROJECT & NO. 1236.001	LOCATION 1-55 & Central Avenue		
GROUND ELEVATION 181.24 m (594.46 ft)		STATION AND OFFSET (m) 5+161.9 21.9 Lt (ft) 25+14.6 71.6 L			
DEPTH (m)	DEPTH (FT)	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
40.0	41.0	GRAY SILT, MEDIUM DENSE, SL. MOIST			
	42.0	168.43 (552.46)			
43.0	44.0	GRAY SILTY CLAY STIFF SL. MOIST, TRACE FINE SAND	SS-16 43.5-45.0 18" R	5 8 13	QU=643 B w=14.8%
45.0	46.0				
47.0	48.0	166.91 (547.46)			
49.0	50.0	GRAY SILTY CLAY LOAM, VERY STIFF, SL. MOIST, TRACE OF FINE SAND	SS-17 48.5-50.0 18" R	7 10 14	QU=523 B w=20.3%
51.0	52.0	165.38 (542.46)			
53.0	54.0		SS-18 53.5-55.0 18" R	7 10 14	N=24 NP w=8.9%
55.0	56.0	GRAY SILT, SL. MOIST, DENSE			
57.0	58.0				
59.0	60.0		SS-19 58.5-60.0 2" R	23 30 52	N=82 NP EOB AT 60' w=8.1%
DRILLING CONTRACTOR PATRICK DRILLING		REMARKS		WATER LEVEL (ft.)	
DRILLING METHOD 3 1/2" ID HSA				▽ DRY	
DRILLING EQUIPMENT CME				▽ DRY	
DRILLING STARTED 6/29/01 ENDED 6/29/01				▽ N.A.	

NOTE:

1. To convert from kPa to psi:
1 kPa = 0.14504 psi

BORING LOGS 5
STRUCTURE NO. 016-3240

TYLIN INTERNATIONAL	DESIGNED - DY, LS	REVISIONS		SHEET NO. 73	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, LS	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	676	
	DRAWN - DY, LS				73 SHEETS					
	CHECKED - AMD, LS				CONTRACT NO. 60999					
DATE - 03/25/2011				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT						

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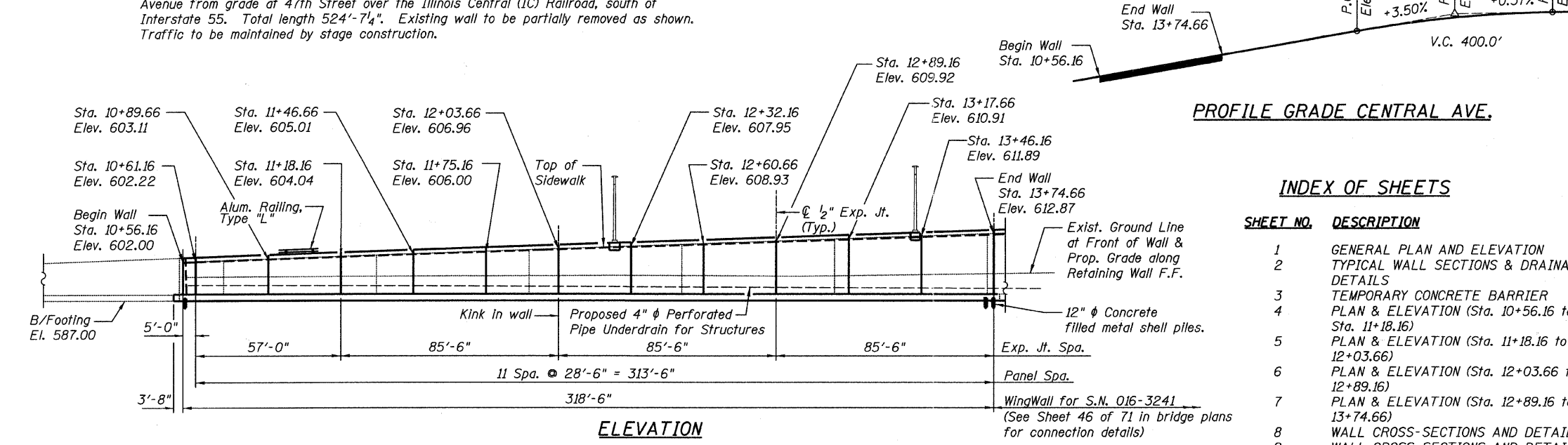
d:\01345\structure\03 North Approach 016-3240\155e3br14.dgn

4/28/2011

Benchmark: N 1874267.729 E 1140141.340 EL. 621.124
Cut square on top of pier at N retaining wall of SE Ramp.
Approx. 1050 Feet E of Central Ave.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Existing Structure: Structure Number 016-3241 built in 1964. Sec. 207-1011.1-C.F.
Reinforced concrete cantilever retaining wall, supported on timber pile footing, adjacent to east side of Central Avenue, south of south approach structure which carries Central Avenue from grade at 47th Street over the Illinois Central (IC) Railroad, south of Interstate 55. Total length 524'-7 1/4". Existing wall to be partially removed as shown. Traffic to be maintained by stage construction.



TOTAL BILL OF MATERIAL

ITEM	UNIT	QTY.
Porous Granular Embankment (Special)	Cu Yd	1,070
Concrete Removal	Cu Yd	113.4
Structure Excavation	Cu Yd	1,023
Concrete Structures	Cu Yd	668.9
Reinforcement Bars, Epoxy Coated	Pound	80,660
Aluminum Railing, Type L	Foot	325
Furnishing Metal Shell Piles, 12"x0.25"	Foot	5,356
Driving Piles	Foot	5,356
Test Pile Metal Shells	Each	2
Geocomposite Wall Drain	Sq Yd	625
Protective Coat	Sq Yd	607
Bridge Rail Removal	Foot	319
Pipe Underdrains for Structures, 4"	Foot	323

DESIGN STRESSES
FIELD UNITS

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

DESIGN SPECIFICATION

2002 AASHTO Standard Specifications for Highway Bridges

GENERAL NOTES

- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.
- Reinforcement bars designated (E) shall be epoxy coated.
- Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- The contractor shall drive 2 concrete test piles in a permanent location, one at each end of retaining wall as directed by the Engineer before ordering the remainder of piles.
- Protective Coat shall be applied to the exposed surfaces of the parapet and front face of the wall above the ground line.

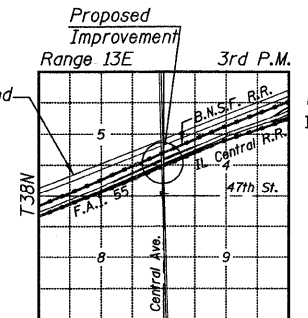
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	GENERAL PLAN AND ELEVATION
2	TYPICAL WALL SECTIONS & DRAINAGE DETAILS
3	TEMPORARY CONCRETE BARRIER
4	PLAN & ELEVATION (Sta. 10+56.16 to Sta. 11+18.16)
5	PLAN & ELEVATION (Sta. 11+18.16 to 12+03.66)
6	PLAN & ELEVATION (Sta. 12+03.66 to 12+89.16)
7	PLAN & ELEVATION (Sta. 12+89.16 to 13+74.66)
8	WALL CROSS-SECTIONS AND DETAILS 1
9	WALL CROSS-SECTIONS AND DETAILS 2
10	WALL CROSS-SECTIONS AND DETAILS 3
11	ALUMINUM RAILING, TYPE L
12	METAL SHELL PILE DETAILS
13	BORING LOGS 1
14	BORING LOGS 2
15	BORING LOGS 3
16	BORING LOGS 4

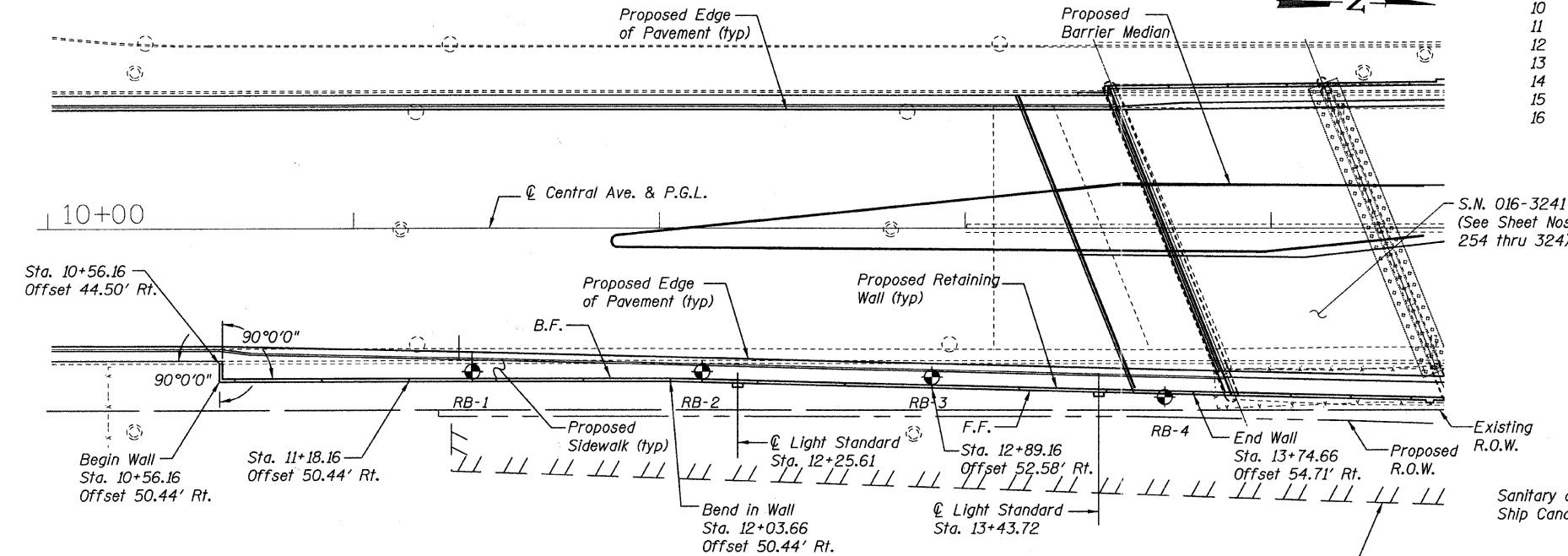
LEGEND

F.F. indicates Front Face
B.F. indicates Back Face

◆ Boring Location



LOCATION SKETCH



GENERAL PLAN

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Michael J. Pappas
ENGINEER OF BRIDGES AND STRUCTURES

Wall offsets are measured from ϕ Central Avenue to front face of wall.

BORING LOCATIONS

No.	Station	*Offset
RB-1	11+37.9	47.3' R
RB-2	12+14.1	47.3 R
RB-3	12+89.2	49.0' R
RB-4	13+65.3	55.6' R

* Offset from ϕ Central Avenue



Signed *Anna M. Dukes*
Anna M. Dukes, S.E. IL Lic. No. 081-005598
Expires 11-30-2012
Date **March 25, 2011**

GENERAL PLAN & ELEVATION
CENTRAL AVENUE RETAINING WALL
F.A.I. RTE. 55 - SEC. 0711.2R & 1011.1BR
COOK COUNTY
STATION 10+56.16 TO STATION 13+74.66
STRUCTURE NO. 016-W821

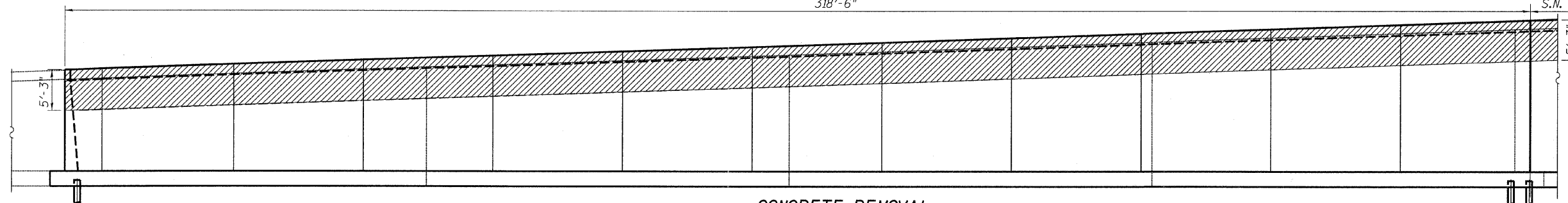
TYLIN INTERNATIONAL	DESIGNED - MMB	REVISIONS		SHEET NO. 1	F.A.I. RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS 741	SHEET NO. 677
	CHECKED - AMD,	NAME	DATE						
	DRAWN - MMB								
	CHECKED - AMD,								
	DATE - 03/25/2011			16 SHEETS	CONTRACT NO. 60999		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		

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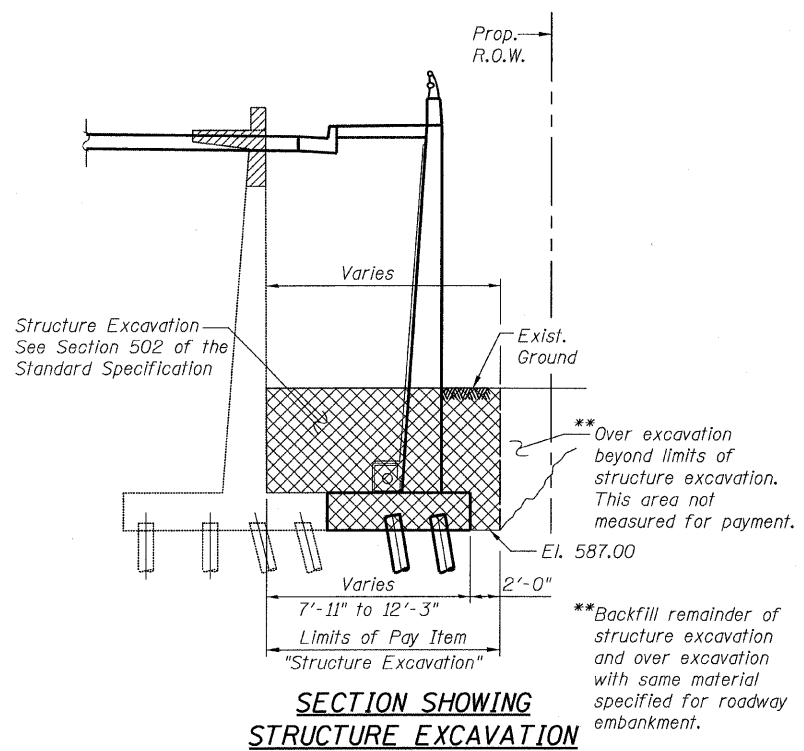
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

318'-6"

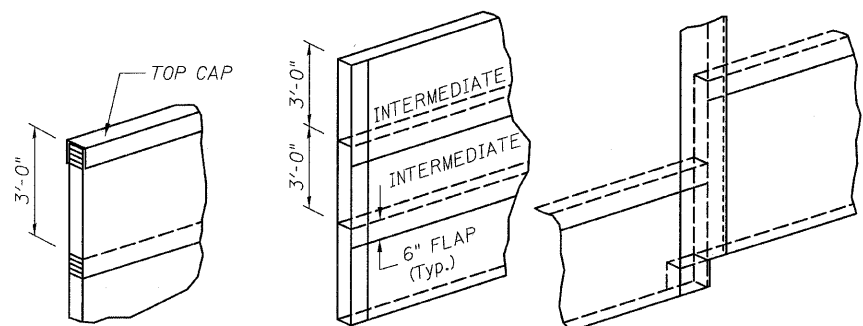
S.N. 016-0724



CONCRETE REMOVAL



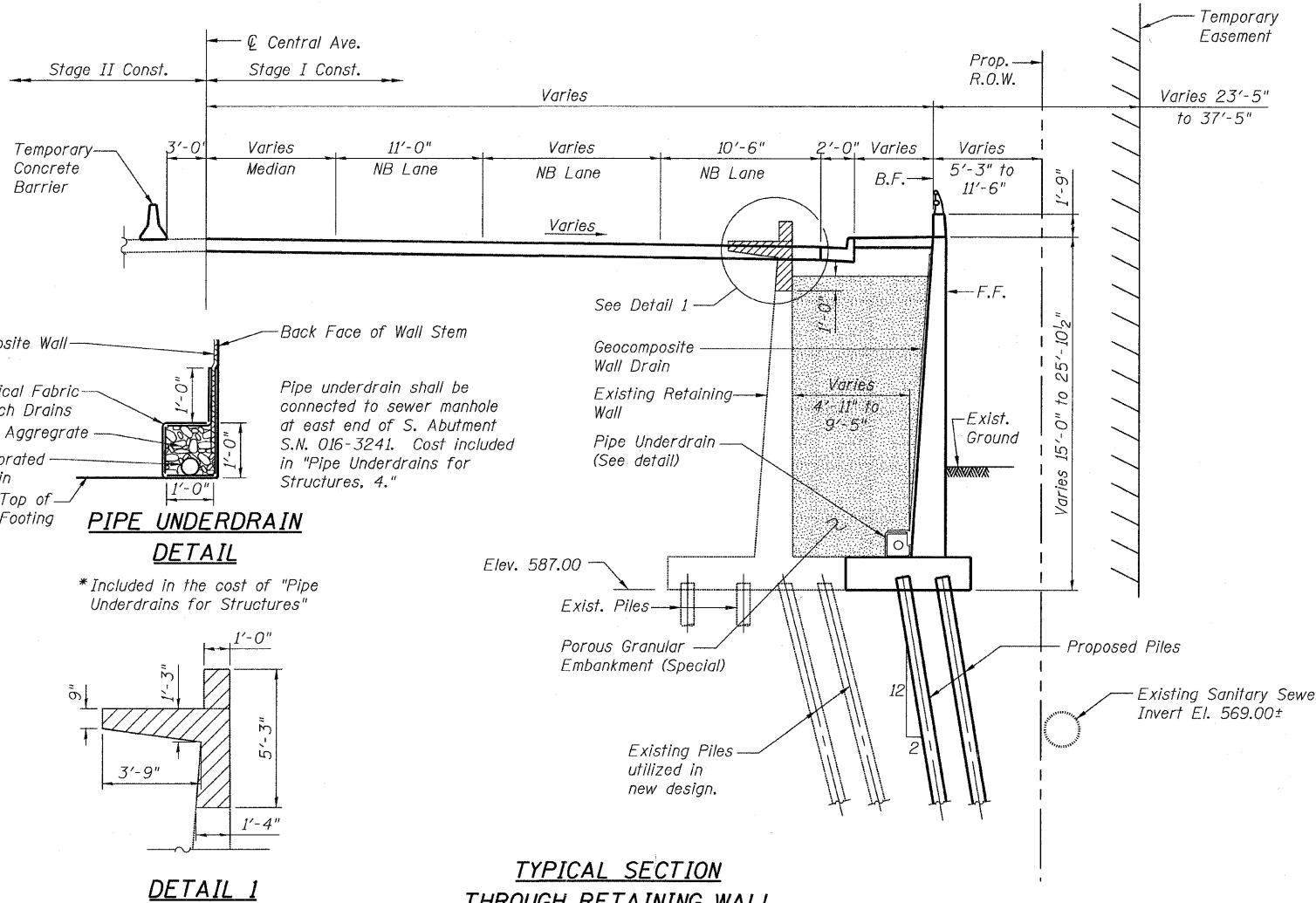
SECTION SHOWING STRUCTURE EXCAVATION



GEOCOMPOSITE WALL DRAIN DETAILS

LEGEND

- Concrete Removal
- Porous Granular Embankment
- Structure Excavation



TYPICAL SECTION THROUGH RETAINING WALL

BILL OF MATERIAL

Item	Unit	TOTAL
Porous Granular Embankment (Special)	CU YD	1,070
Concrete Removal	CU YD	113.4
Structure Excavation	CU YD	1,023
Pipe Underdrains for Structures, 4"	FOOT	323

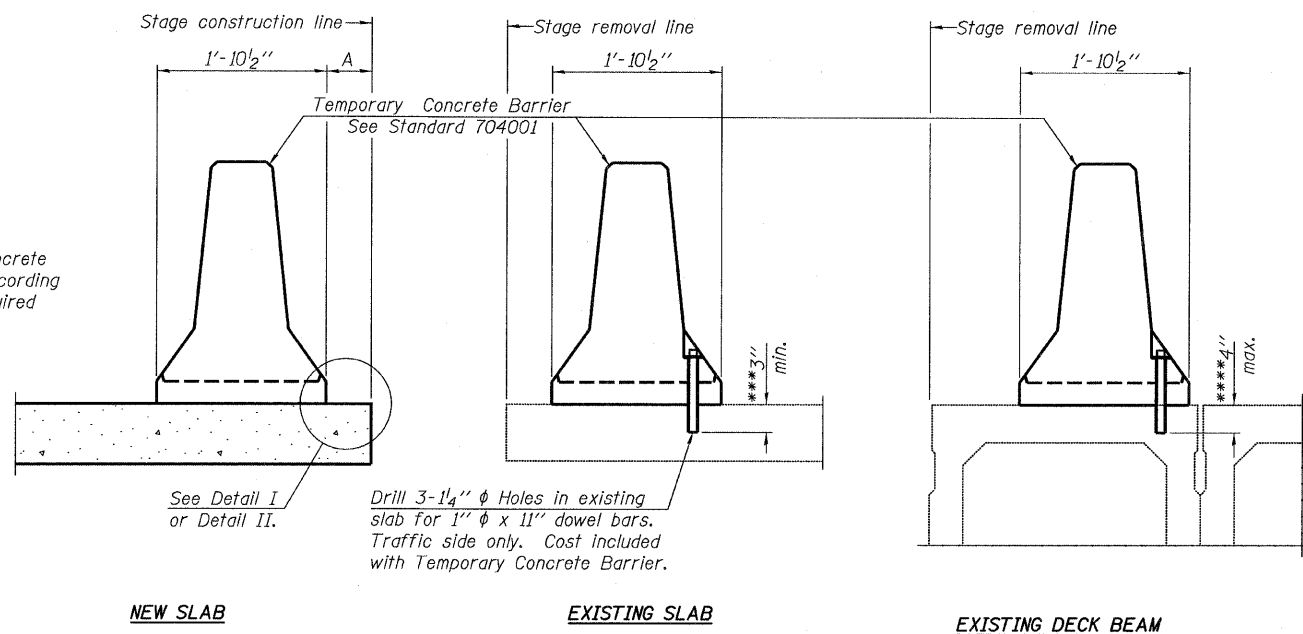
TYPICAL WALL SECTIONS AND DRAINAGE DETAILS
STRUCTURE NO. 016-W821

TYLIN INTERNATIONAL	DESIGNED - MMB	REVISIONS		SHEET NO. 2	F.A.I. RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD,	NAME	DATE					741	678
	DRAWN - MMB							CONTRACT NO. 60999	
	CHECKED - AMD,							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	
	DATE - 03/25/2011			16 SHEETS					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



SECTIONS THRU SLAB OR DECK BEAM

NOTES

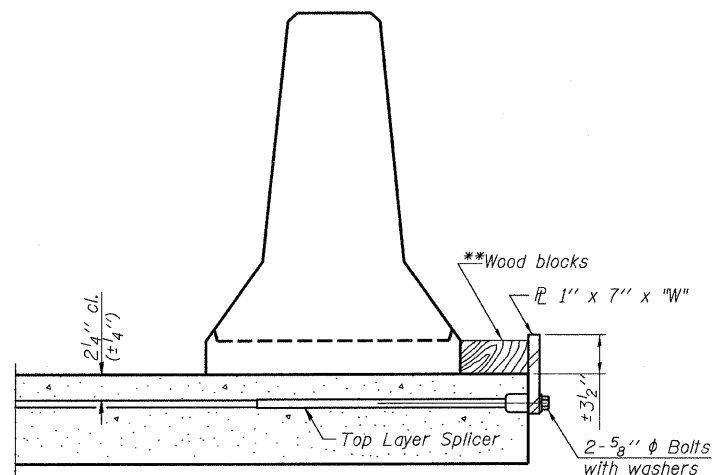
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{L} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

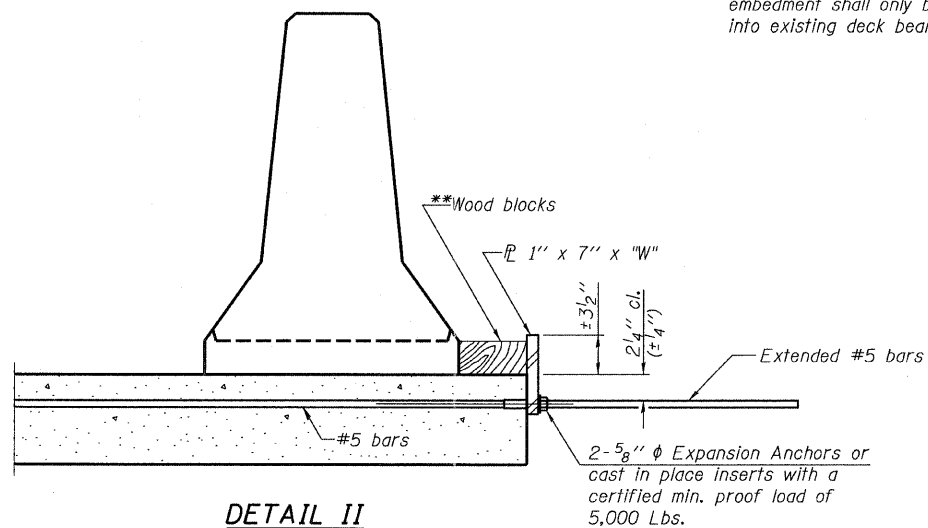
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

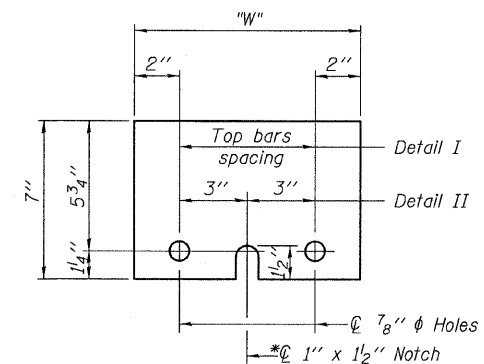
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER \bar{L} 1" x 7" x 10"

* Required only with Detail II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
STRUCTURE NO. 016-W821

TYLIN INTERNATIONAL

		REVISIONS	
CHECKED	DATE	NAME	DATE
DESIGNED - MAU			
CHECKED - AMD,			
DRAWN - MAU			
CHECKED - AMD,			
DATE - 03/25/2011			

SHEET NO. 3	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	679
16 SHEETS	CONTRACT NO. 60999				
	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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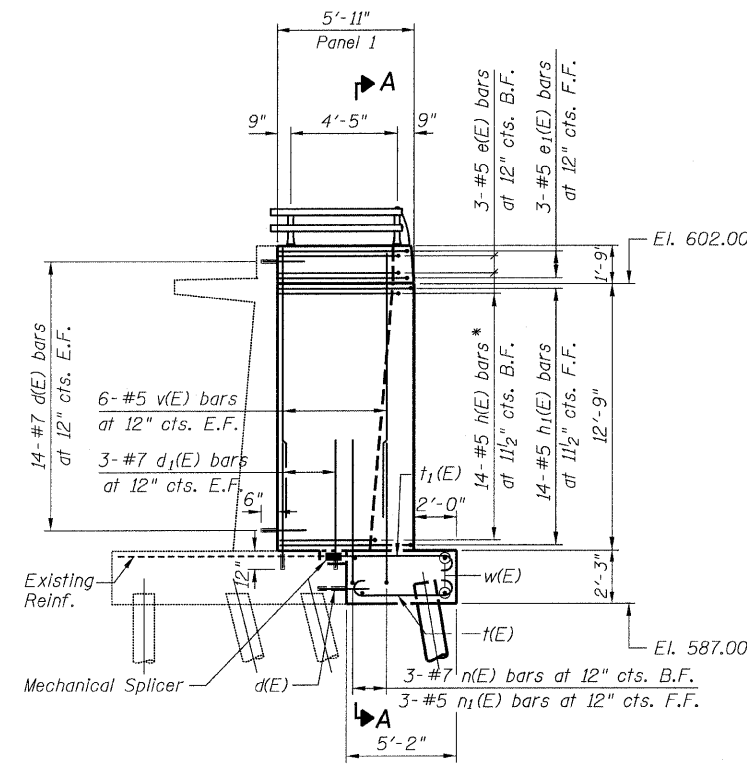
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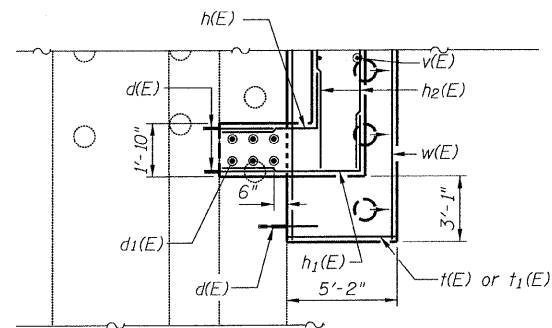
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LEGEND

* Cut to fit in field.
F.F. - denotes Front Face
B.F. - denotes Back Face
E.F. - denotes Each Face



ELEVATION
(End View)



FOOTING PLAN

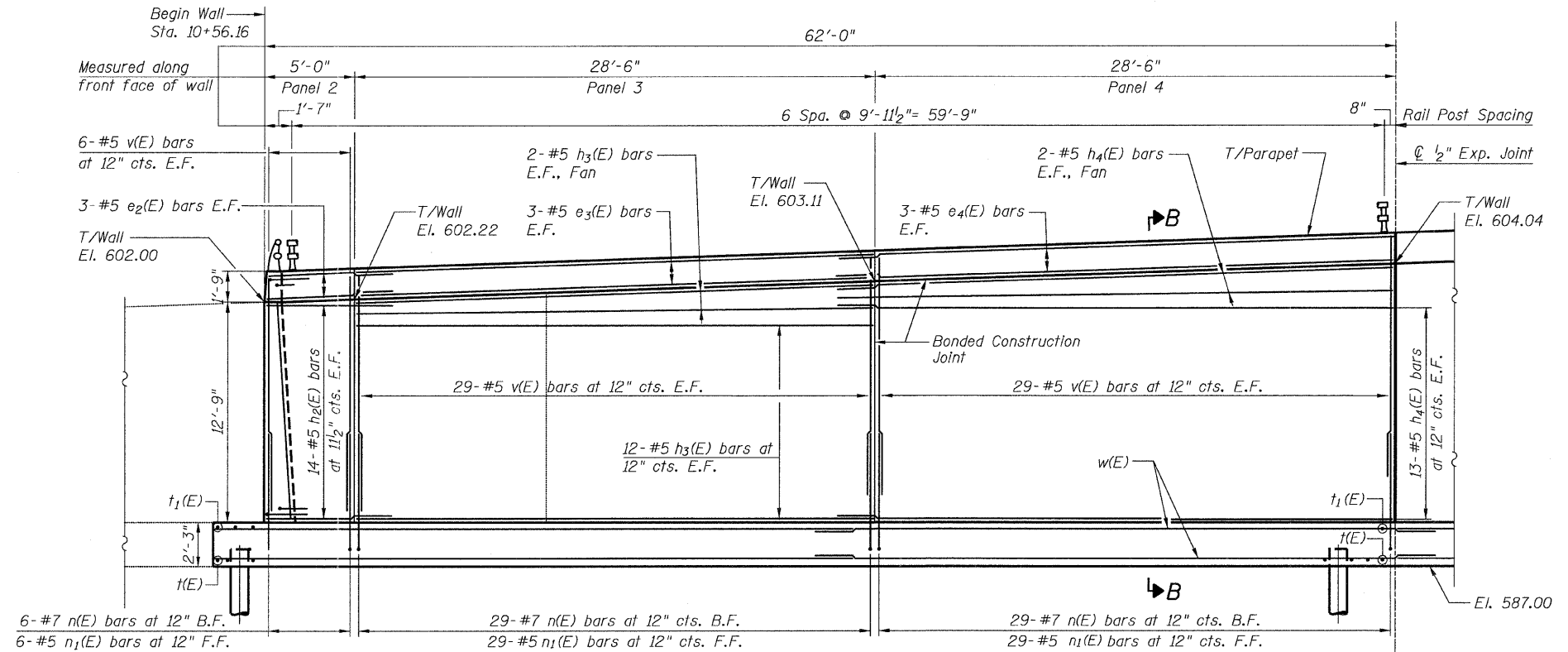
NOTES

1. For expansion and construction joint details, see sheet 8.
2. For minimum bar laps, see sheet 8.
3. For reinforcement bar schedule, see sheet 9.
4. For light pole support details, see sheet 9.
5. Bars indicated thus 12x3-#5 etc., indicates 12 lines of bars with 3 lengths per line.
6. Place bottom reinforcement in wall footing to miss piles.
7. Existing reinforcement shall be cleaned and incorporated into new construction. Cost included with Concrete Removal.

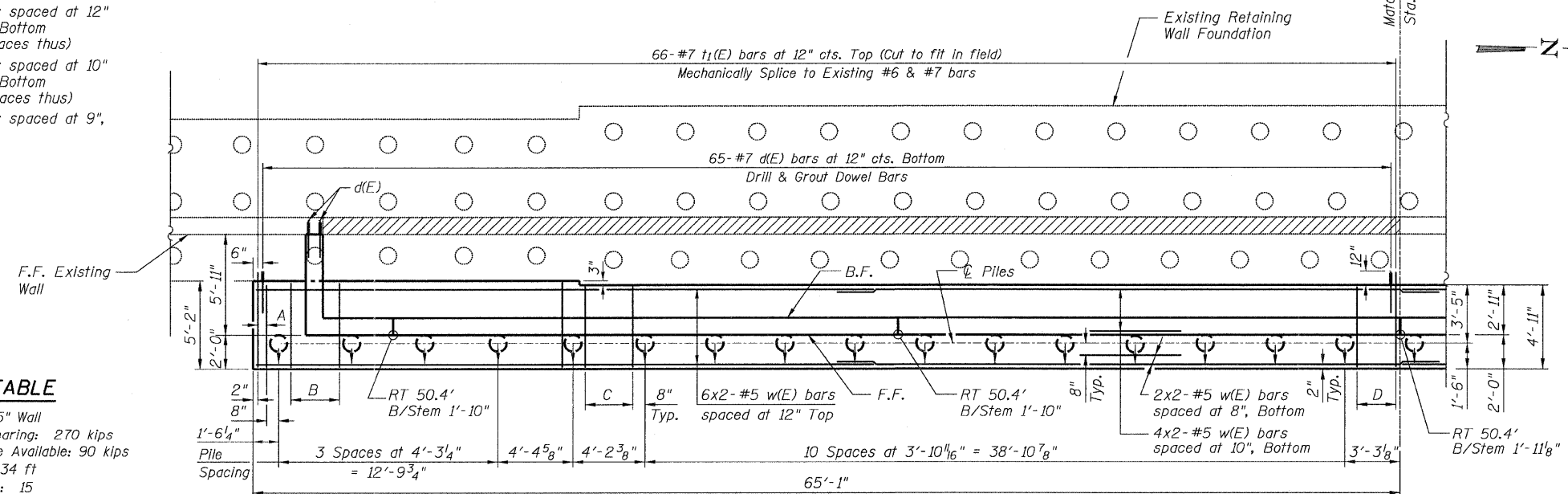
PILE DATA TABLE

Type: 12" ϕ x 0.25" Wall
Nominal Required Bearing: 270 kips
Allowable Resistance Available: 90 kips
Estimated Length: 34 ft
No. Production Piles: 15
No. Test Piles: 1

- Proposed Pile
- Existing Pile



ELEVATION



FOOTING PLAN

PLAN & ELEVATION
STA. 10+56.16 TO 11+18.16
STRUCTURE NO. 016-W821

TYLIN INTERNATIONAL

DESIGNED - MMB	REVISIONS	
	NAME	DATE
CHECKED - AMD,		
DRAWN - MMB		
CHECKED - AMD,		
DATE - 03/25/2011		

SHEET NO. 4 16 SHEETS	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	680
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60999		

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LEGEND



F.F. - denotes Front Face
B.F. - denotes Back Face
E.F. - denotes Each Face

NOTES

1. For pile details, see sheet 12.

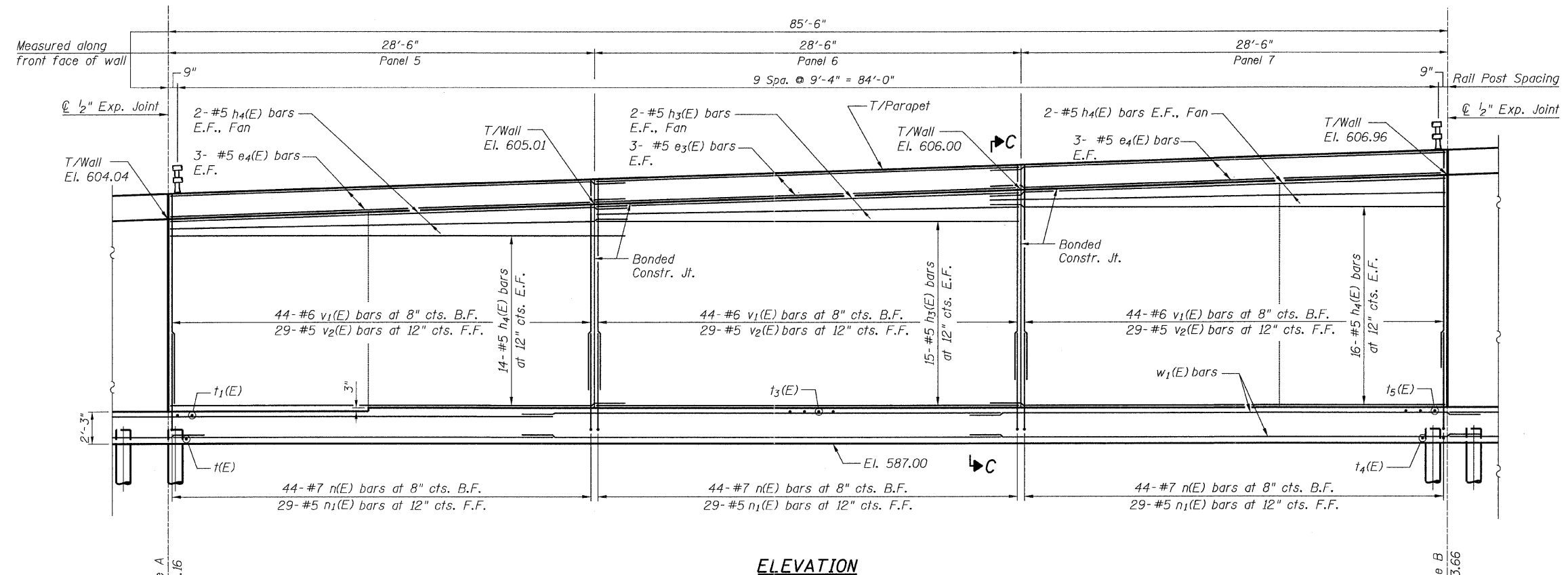
PILE DATA TABLE

Type: 12" ϕ x 0.25" Wall
Nominal Required Bearing: 270 kips
Allowable Resistance Available: 90 kips
Estimated Length: 34 ft
No. Production Piles: 25

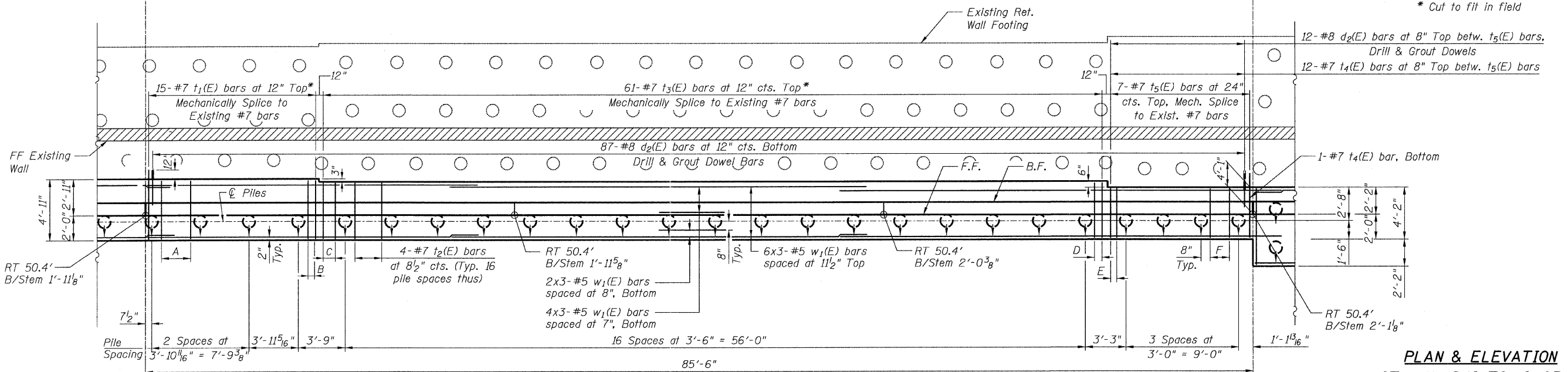
-  Proposed Pile
-  Existing Pile

- A: 4-#7 t(E) bars at 10" cts., Bottom, (Typ. 3 pile spaces thus)
- B: 2-#7 t(E) bars at 9" cts., Bottom
- C: 2-#7 t₂(E) bars at 11" cts., Bottom
- D: 2-#7 t₂(E) bars at 7" cts., Bottom
- E: 2-#7 t₄(E) bars at 7" cts., Bottom
- F: 3-#7 t₄(E) bars at 10" cts., Bottom, (Typ. 3 pile spaces thus)

* Cut to fit in field



ELEVATION



FOOTING PLAN

**PLAN & ELEVATION
STA. 11+18.16 TO 12+03.66
STRUCTURE NO. 016-W821**

TYLIN INTERNATIONAL

DESIGNED	MMB	REVISIONS	
CHECKED	AMD,	NAME	DATE
DRAWN	MMB		
CHECKED	AMD,		
DATE	03/25/2011		

SHEET NO. 5

16 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	0711.2R & 1011.1BR	COOK	741	681
CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

5/10/2011

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LEGEND


F.F. - denotes Front Face
B.F. - denotes Back Face
E.F. - denotes Each Face

NOTES

1. For pile details, see sheet 12.

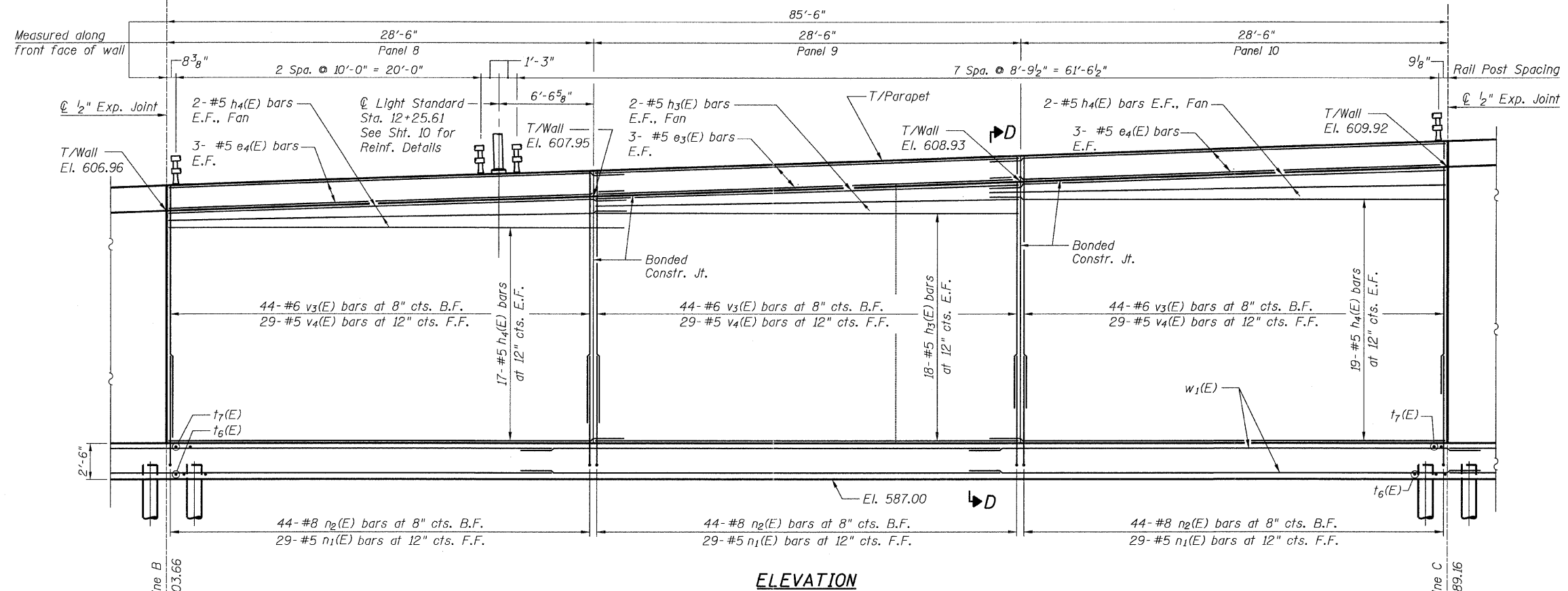
PILE DATA TABLE

Type: 12" ϕ x 0.25" Wall
Nominal Required Bearing: 270 kips
Allowable Resistance Available: 90 kips
Estimated Length: 36 ft
No. Production Piles: 56

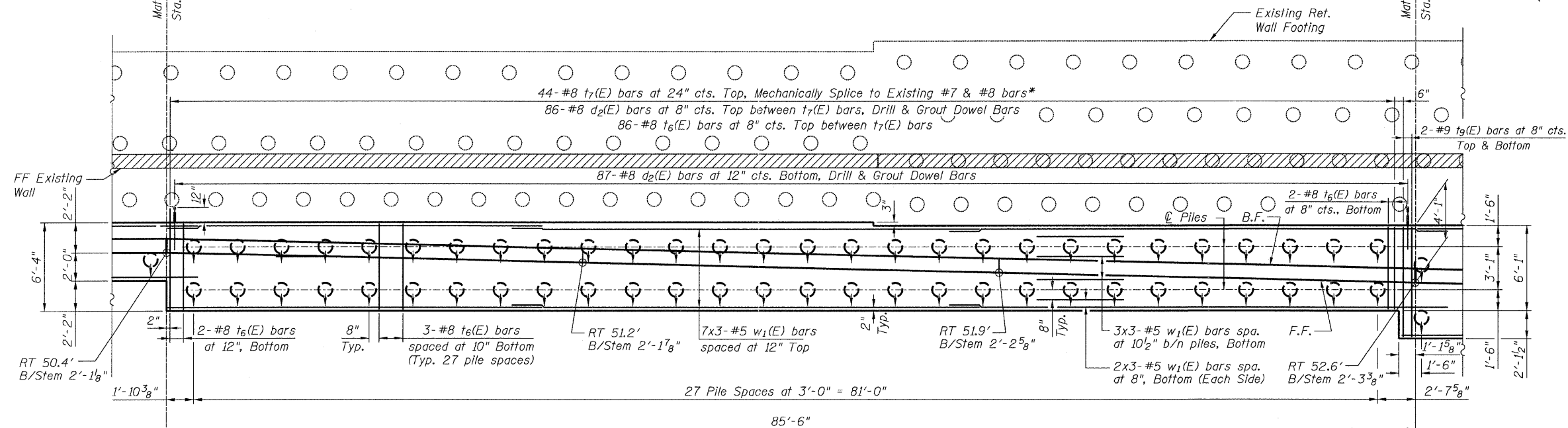
 Proposed Pile

 Existing Pile

* Cut to fit in field



ELEVATION



FOOTING PLAN

**PLAN & ELEVATION
STA. 12+03.66 TO 12+89.16
STRUCTURE NO. 016-W821**

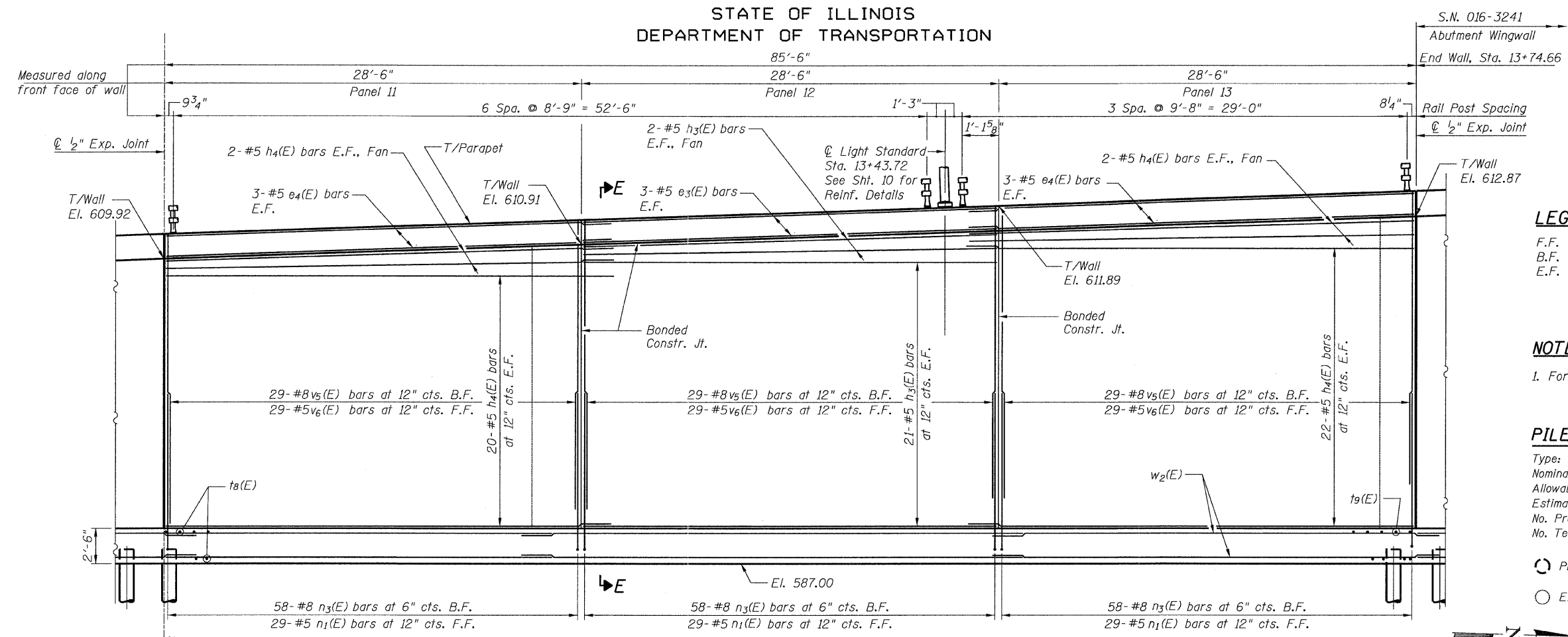
TYLIN INTERNATIONAL	DESIGNED - MMB	REVISIONS		SHEET NO. 6 16 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	682	
	DRAWN - MMB				CONTRACT NO. 60999					
	CHECKED - AMD, DATE - 03/25/2011				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



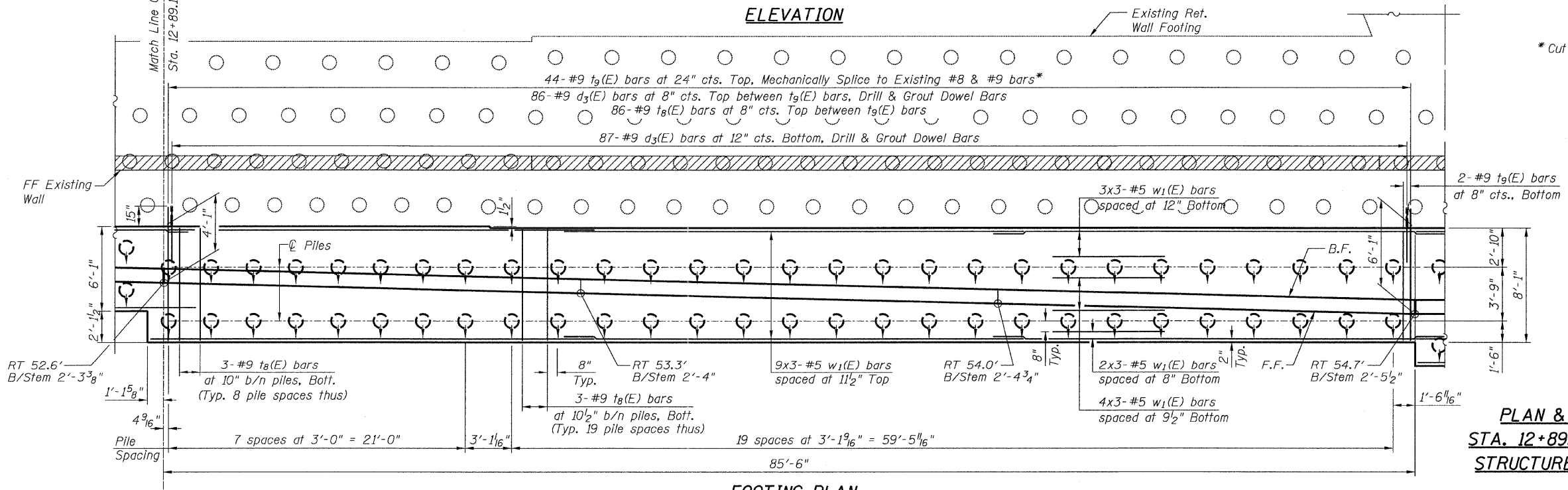
LEGEND
F.F. - denotes Front Face
B.F. - denotes Back Face
E.F. - denotes Each Face

NOTES
1. For pile details, see sheet 12.

PILE DATA TABLE
Type: 12" ϕ x 0.25" Wall
Nominal Required Bearing: 270 kips
Allowable Resistance Available: 90 kips
Estimated Length: 36 ft
No. Production Piles: 55
No. Test Piles: 1

○ Proposed Pile
○ Existing Pile

ELEVATION



* Cut to fit in field

FOOTING PLAN

PLAN & ELEVATION
STA. 12+89.16 TO 13+74.66
STRUCTURE NO. 016-W821

TYLIN INTERNATIONAL

DESIGNED -	MMB	REVISIONS	
CHECKED -	AMD,	NAME	DATE
DRAWN -	MMB		
CHECKED -	AMD,		
DATE -	03/25/2011		

SHEET NO. 7	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	683
16 SHEETS			CONTRACT NO. 60999		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

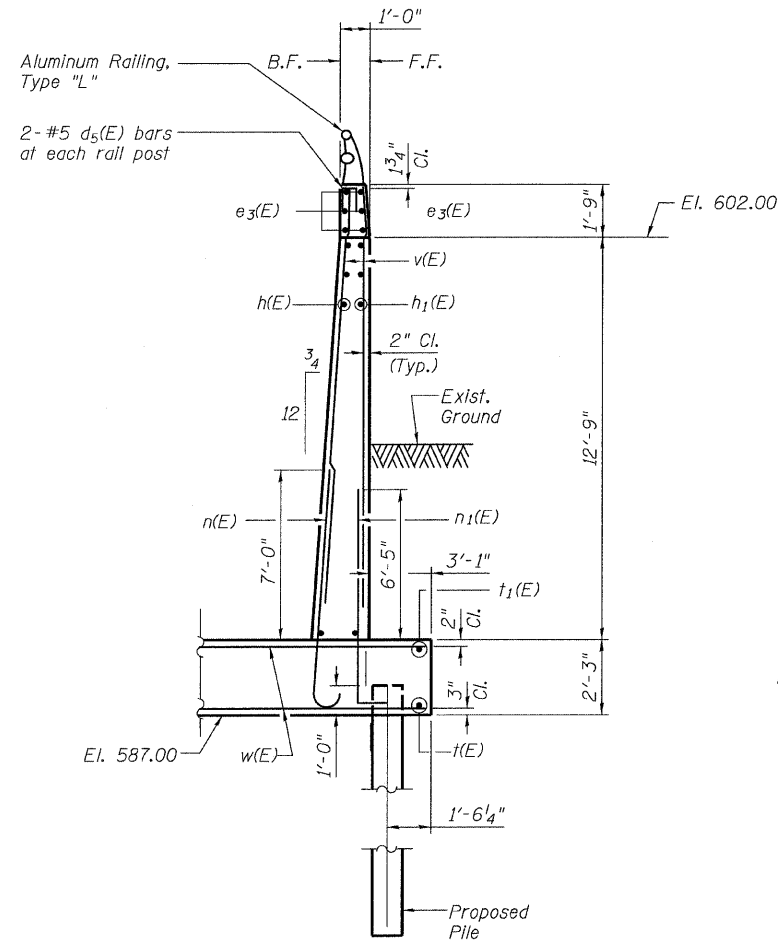
4:25:45 PM 1/16 N p:\01345\structure\Retaining Wall\ret55p\level4.dgn 5/10/2011

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

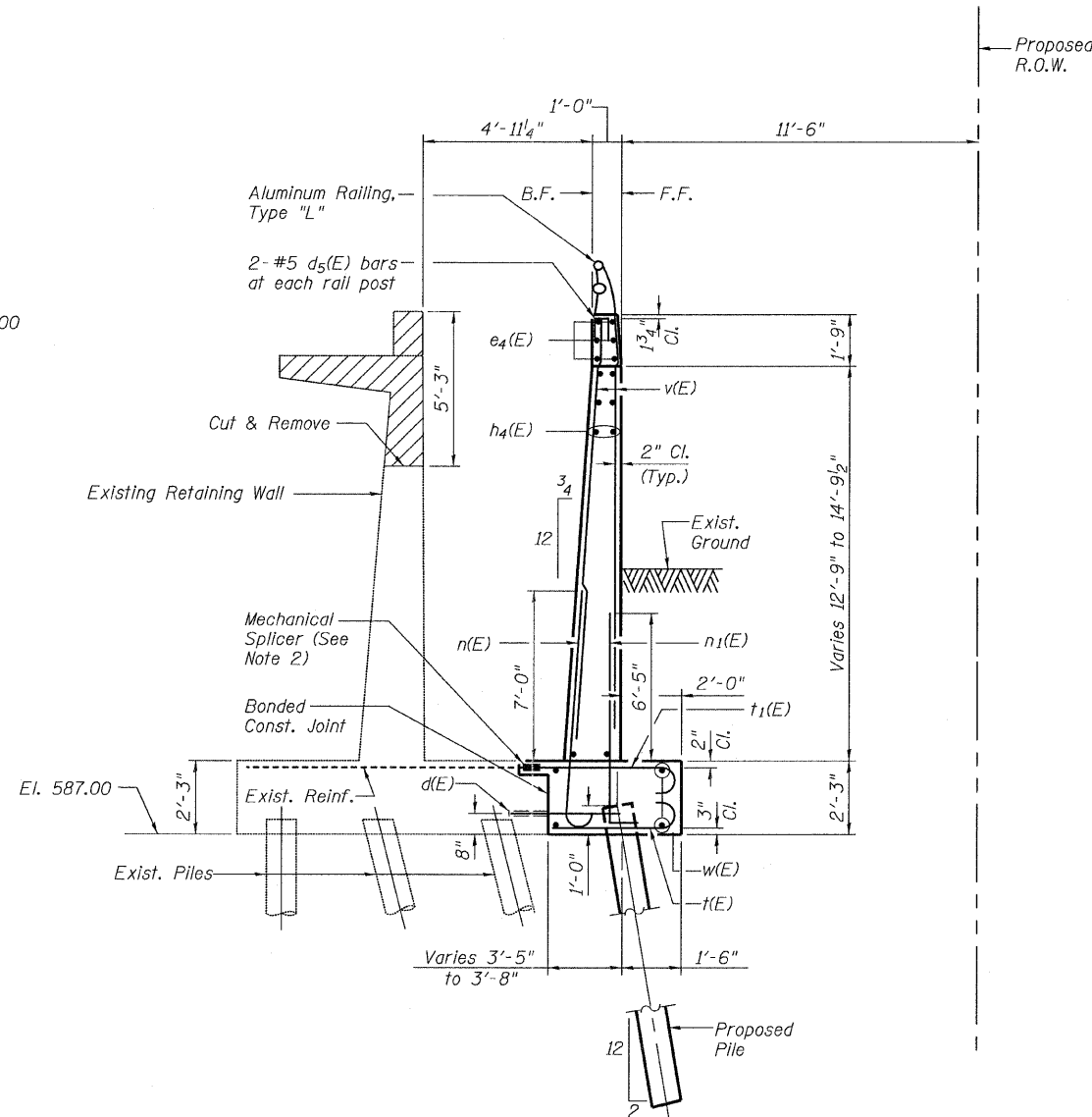
LEGEND

F.F. - denotes Front Face
B.F. - denotes Back Face
E.F. - denotes Each Face

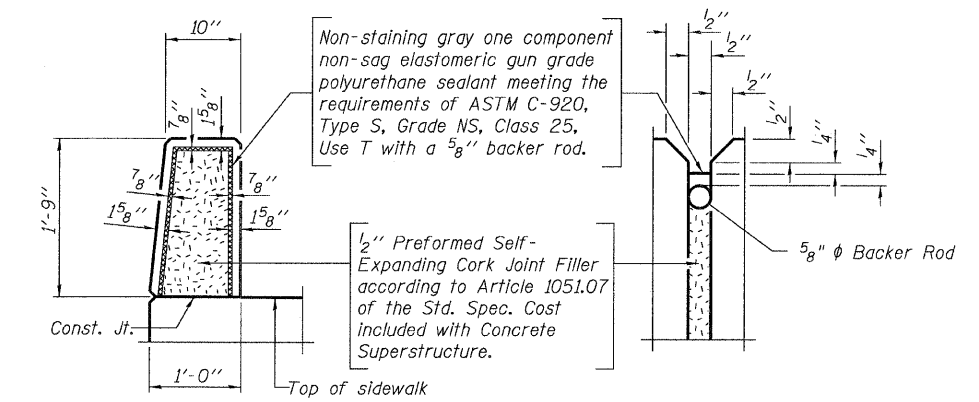
Concrete Removal



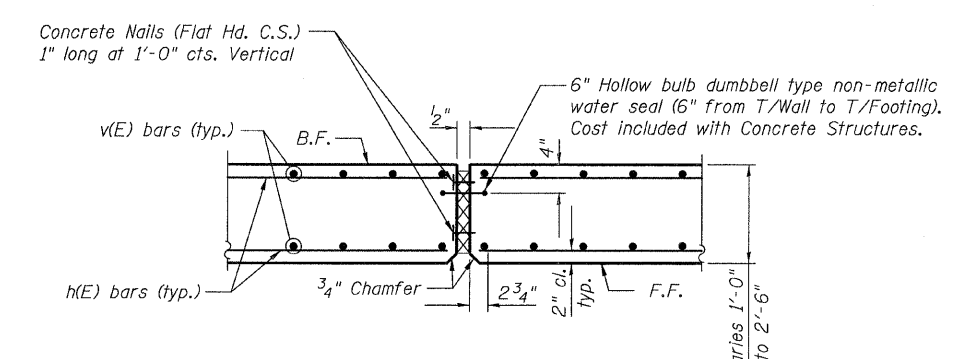
SECTION A-A
Sta. 10+56.16



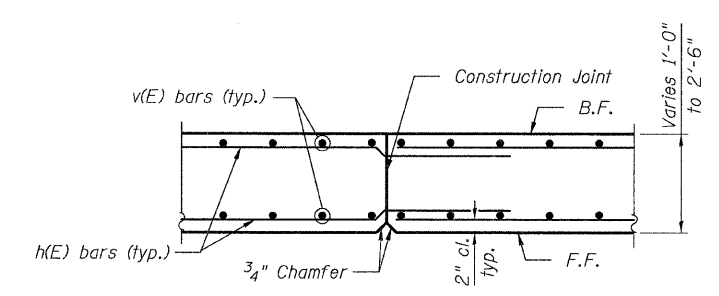
SECTION B-B
Sta. 10+56.16 to Sta. 11+18.16



PARAPET EXPANSION JOINT DETAIL



TYPICAL EXPANSION JOINT DETAIL



CONSTRUCTION JOINT DETAILS

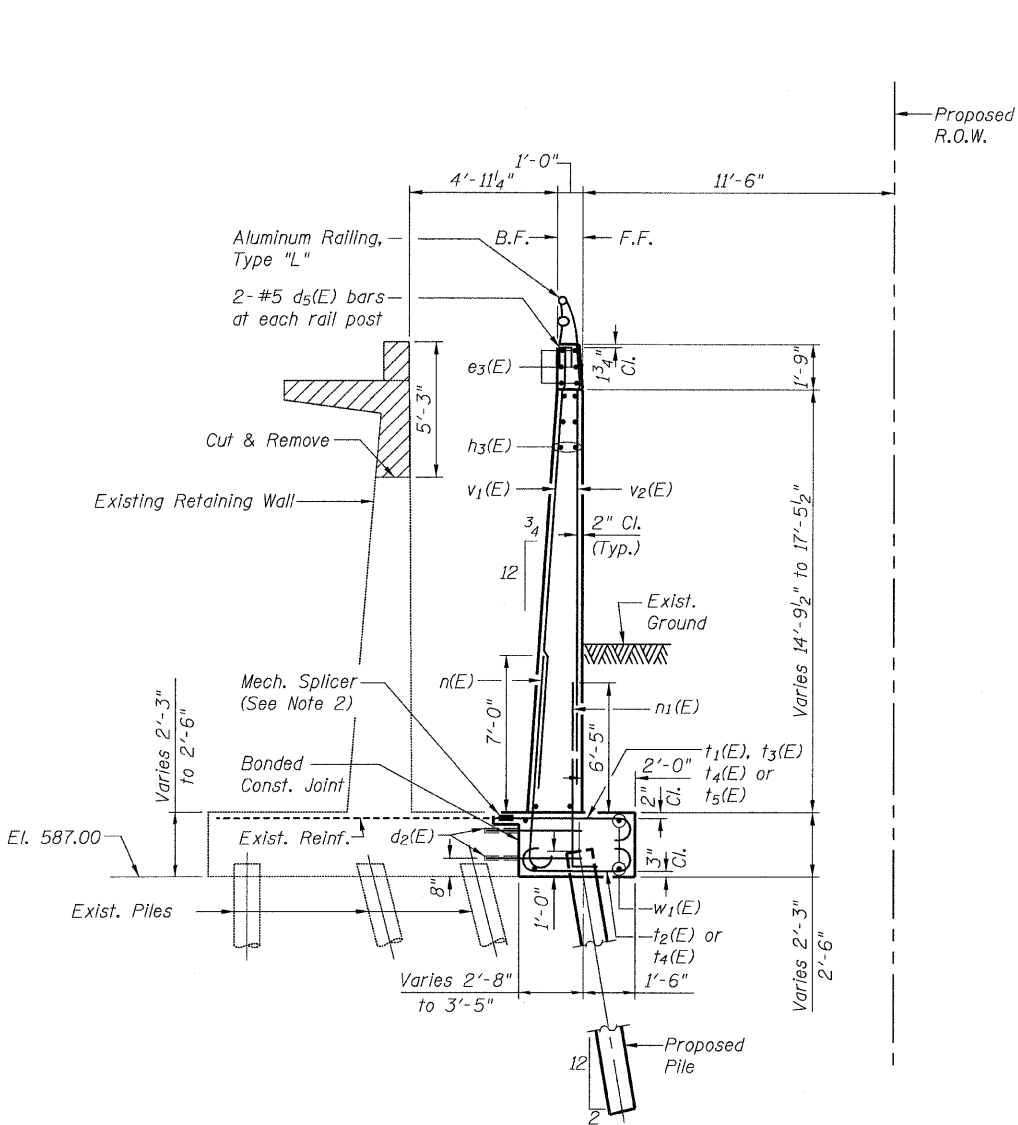
- NOTES**
1. Epoxy grout d(E) bars according to Article 584 of the Standard Specifications. Drill to miss existing reinforcement. The epoxy grout and method of application shall be approved by the Engineer. All work shall be included in the Unit Bid Price for "Reinforcement Bars, Epoxy Coated."
 2. Localized concrete removal as required to permit mechanical splicing of bars shown. Cost included with Concrete Removal.
 3. Existing reinforcement shall be cleaned and incorporated into new construction. Cost included with Concrete Removal.

**WALL CROSS-SECTIONS
AND DETAILS 1
STRUCTURE NO. 016-W821**

TYLIN INTERNATIONAL	DESIGNED - MMB	REVISIONS		SHEET NO. 8	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	684	
	DRAWN - MMB				16 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD,					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/25/2011									

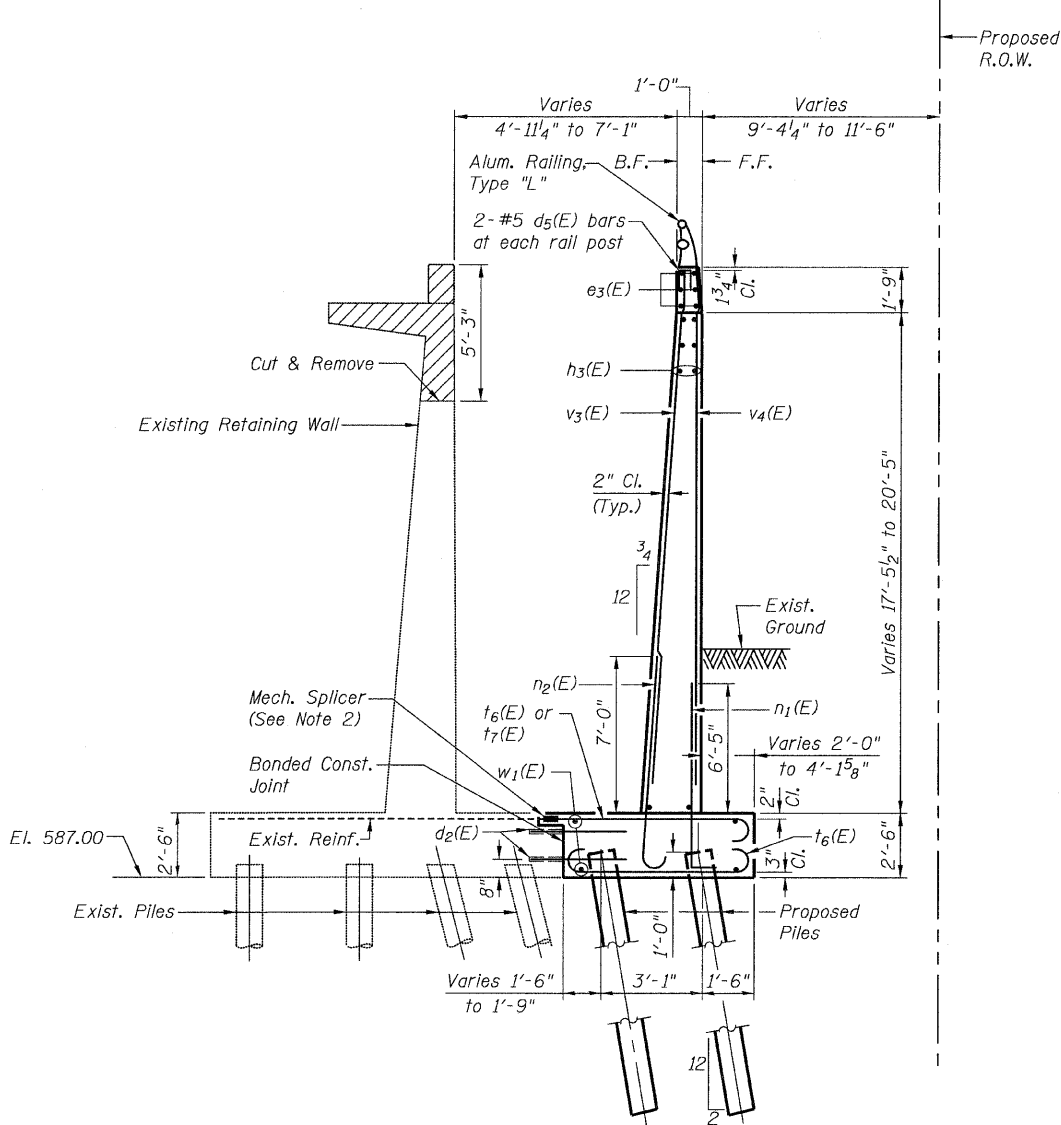
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5/10/2011

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION C-C

Sta.11+18.16 to Sta.12+03.66



SECTION D-D

Sta.12+03.66 to Sta.12+89.16

NOTES

- Epoxy grout $d_2(E)$ bars according to Article 584 of the Standard Specifications. Drill to miss existing reinforcement. The epoxy grout and method of application shall be approved by the Engineer. All work shall be included in the Unit Bid Price for "Reinforcement Bars, Epoxy Coated."
- Localized concrete removal as required to permit mechanical splicing of bars shown. Cost included with Concrete Removal.
- Existing reinforcement shall be cleaned and incorporated into new construction. Cost included with Concrete Removal.

LEGEND

- * Cut to fit in field.
- F.F. - denotes Front Face
- B.F. - denotes Back Face
- E.F. - denotes Each Face
- Concrete Removal

WALL CROSS-SECTIONS
AND DETAILS 2
STRUCTURE NO. 016-W821

TYLIN INTERNATIONAL	DESIGNED - MMB	REVISIONS	
	CHECKED - AMD,	NAME	DATE
	DRAWN - MMB		
	CHECKED - AMD,		
	DATE - 03/25/2011		

SHEET NO. 9	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	685
16 SHEETS			CONTRACT NO. 60999		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

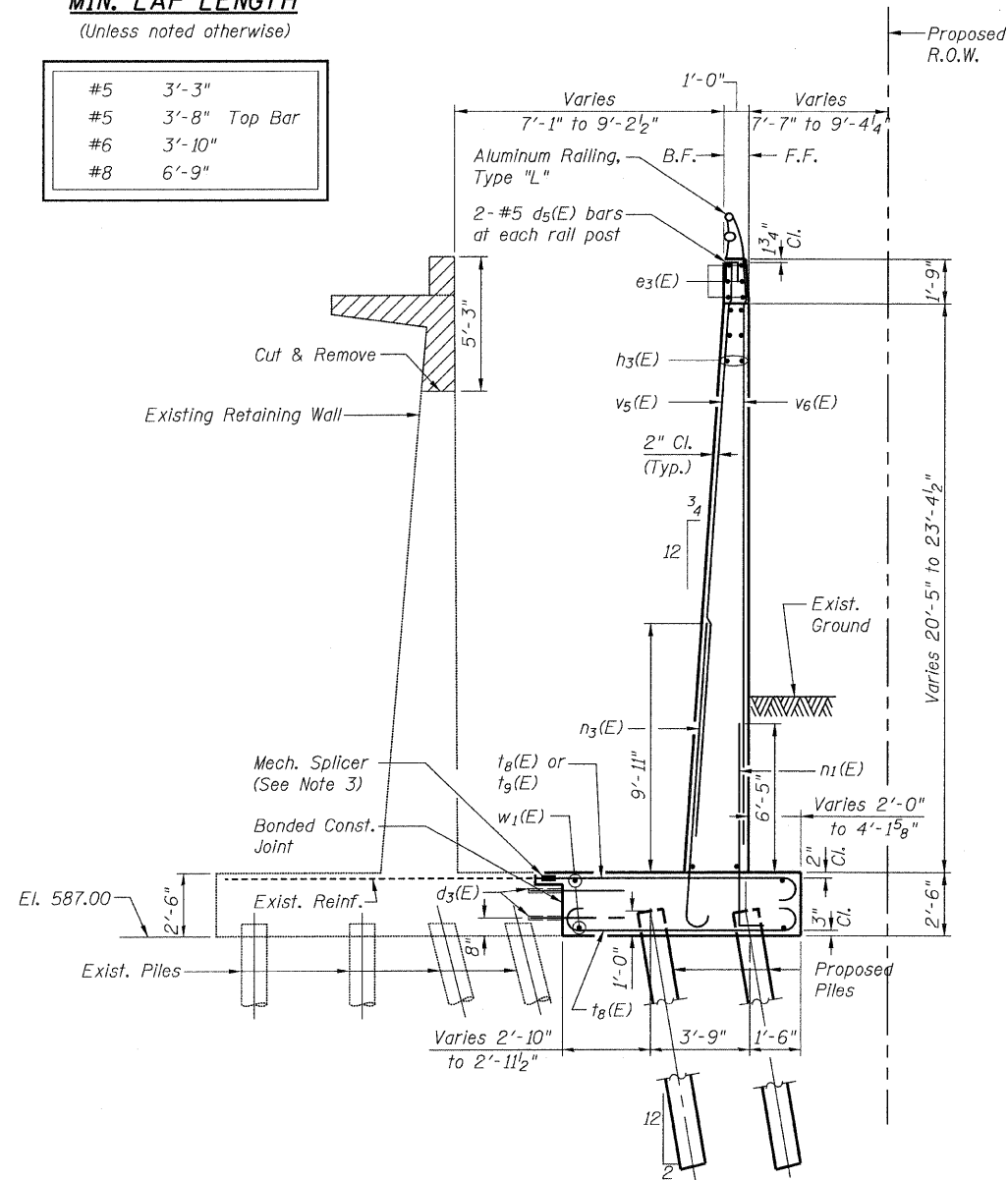
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MIN. LAP LENGTH

(Unless noted otherwise)

#5	3'-3"
#5	3'-8" Top Bar
#6	3'-10"
#8	6'-9"

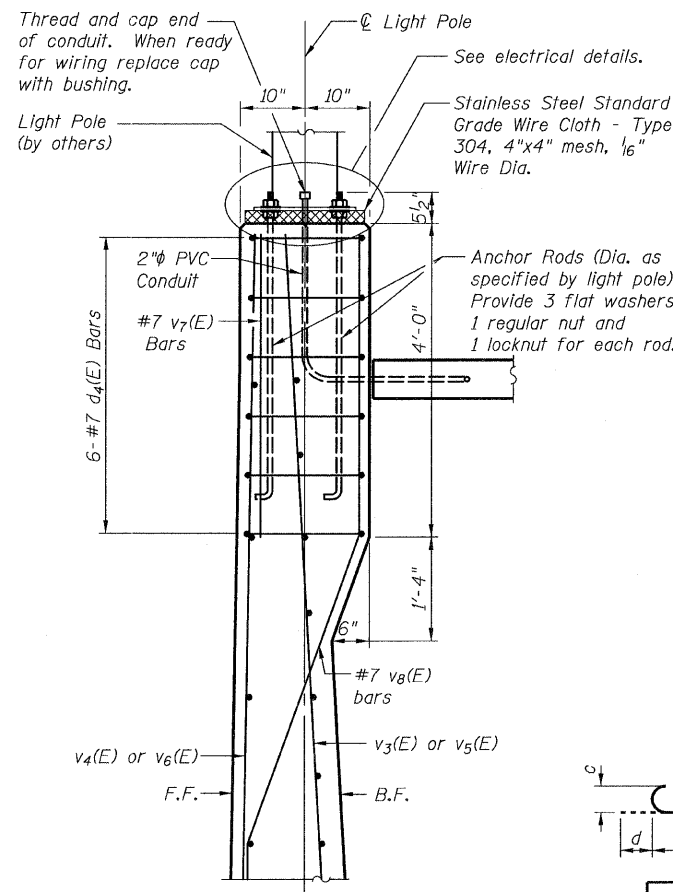


SECTION E-E

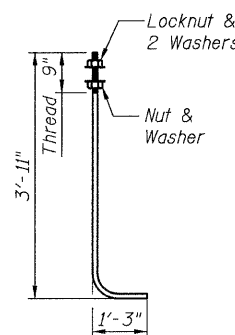
Sta.12+89.16 to Sta.13+74.66

NOTES

- Epoxy grout $d_3(E)$ bars according to Article 584 of the Standard Specifications. Drill to miss existing reinforcement. The epoxy grout and method of application shall be approved by the Engineer. All work shall be included in the Unit Bid Price for "Reinforcement Bars, Epoxy Coated."
- Cost of anchor bolts and conduit is included with concrete superstructure.
- Localized concrete removal as required to permit mechanical splicing of bars shown. Cost included with Concrete Removal.
- Existing reinforcement shall be cleaned and incorporated into new construction. Cost included with Concrete Removal.

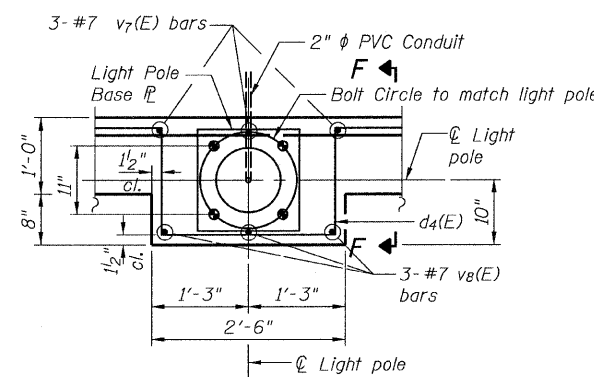


SECTION F-F

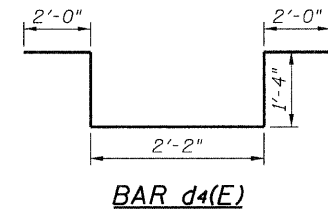


ANCHOR ROD

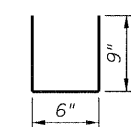
Diameter as specified for light poles (ASTM F 1554 Grade 105)



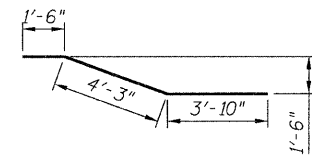
PLAN-LIGHT POLE SUPPORT



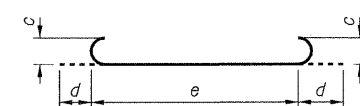
BAR d4(E)



BAR d5(E)

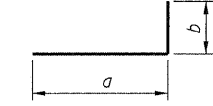


BAR v8(E)



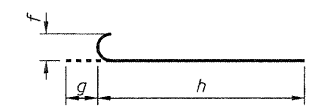
Bar	c	d	e
t(E)	7"	10"	4'-7"
t2(E)	7"	10"	4'-4"
t4(E)	7"	10"	3'-10"
t6(E)	8"	11"	5'-9"
t8(E)	11 3/4"	15"	7'-9"

BAR t(E), t2(E), t4(E), t6(E) & t8(E)



Bar	a	b
e(E)	4'-11"	2'-2"
e1(E)	5'-7"	2'-2"
h(E)	4'-11"	2'-2"
h1(E)	5'-7"	2'-2"
n1(E)	8'-8"	10"

BARS e(E), e1(E), h(E), h1(E) & n1(E)



Bar	f	g	h
n(E)	7"	10"	9'-3"
n2(E)	8"	11"	9'-3"
n3(E)	8"	11"	12'-2"
t1(E)	7"	10"	4'-11"
t3(E)	7"	10"	4'-8"
t5(E)	7"	10"	4'-2"
t7(E)	8"	11"	6'-1"
t9(E)	11 3/4"	15"	8'-1"

BAR n(E), n2(E), n3(E), t1(E), t3(E), t5(E), t7(E) & t9(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	93	#7	3'-5"	—
d1(E)	6	#7	6'-2"	—
d2(E)	272	#8	4'-3"	—
d3(E)	173	#9	5'-4"	—
d4(E)	12	#7	8'-10"	—
d5(E)	82	#5	2'-0"	—
e(E)	3	#5	7'-1"	—
e1(E)	3	#5	7'-9"	—
e2(E)	6	#5	8'-8"	—
e3(E)	24	#5	28'-2"	—
e4(E)	42	#5	32'-0"	—
h(E)	14	#5	7'-1"	—
h1(E)	14	#5	7'-9"	—
h2(E)	28	#5	8'-8"	—
h3(E)	148	#5	28'-2"	—
h4(E)	270	#5	32'-0"	—
n(E)	199	#7	10'-1"	—
n1(E)	328	#5	9'-6"	—
n2(E)	132	#8	10'-2"	—
n3(E)	174	#8	13'-1"	—
t(E)	80	#7	6'-3"	—
t1(E)	81	#7	5'-9"	—
t2(E)	68	#7	6'-0"	—
t3(E)	61	#7	5'-6"	—
t4(E)	24	#7	5'-6"	—
t5(E)	7	#7	5'-0"	—
t6(E)	171	#8	7'-7"	—
t7(E)	44	#8	7'-0"	—
t8(E)	173	#9	10'-3"	—
t9(E)	44	#9	9'-4"	—
v(E)	140	#5	14'-2"	—
v1(E)	132	#6	16'-2"	—
v2(E)	87	#5	16'-2"	—
v3(E)	132	#6	18'-10"	—
v4(E)	87	#5	18'-10"	—
v5(E)	87	#8	21'-10"	—
v6(E)	87	#5	21'-10"	—
v7(E)	6	#7	3'-10"	—
v8(E)	6	#7	9'-7"	—
w(E)	24	#5	36'-2"	—
w1(E)	132	#5	32'-1"	—
Test Pile Metal Shells	Each		2	
Concrete Structures	Cu Yd		668.9	
Reinforcement Bars, Epoxy Coated	Pound		80,660	
Furnishing Metal Pile Shells, 12"x0.25"	Foot		5,356	
Driving Piles	Foot		5,356	
Protective Coat	Sq Yd		607	

LEGEND

- F.F. - denotes Front Face
- B.F. - denotes Back Face
- E.F. - denotes Each Face

Concrete Removal

**WALL CROSS-SECTIONS AND DETAILS 3
STRUCTURE NO. 016-W821**

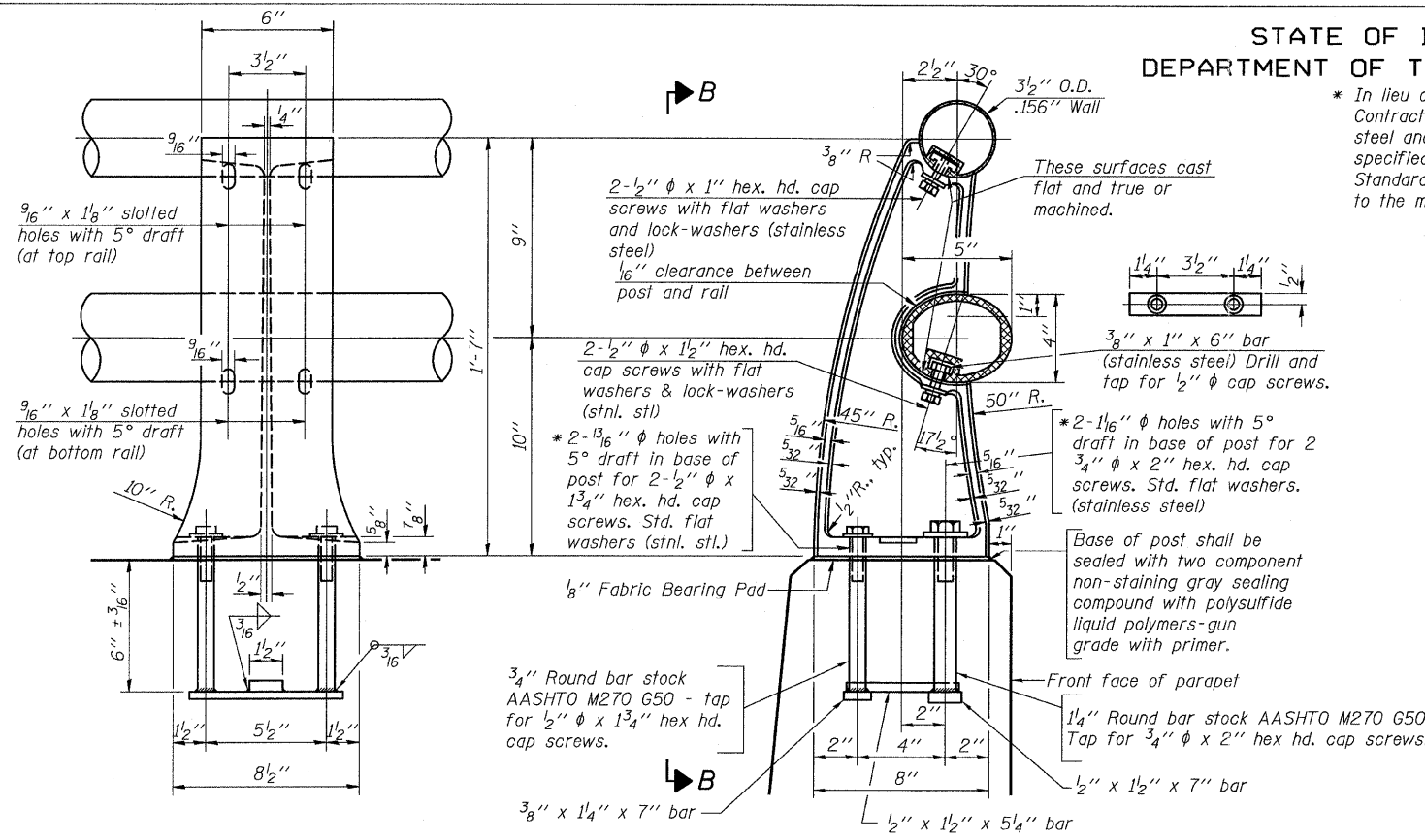
TYLIN INTERNATIONAL	DESIGNED - MMB	REVISIONS	
	CHECKED - AMD,	NAME	DATE
	DRAWN - MMB		
	CHECKED - AMD,		
	DATE - 03/25/2011		

SHEET NO. 10 16 SHEETS	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	686
	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60999	

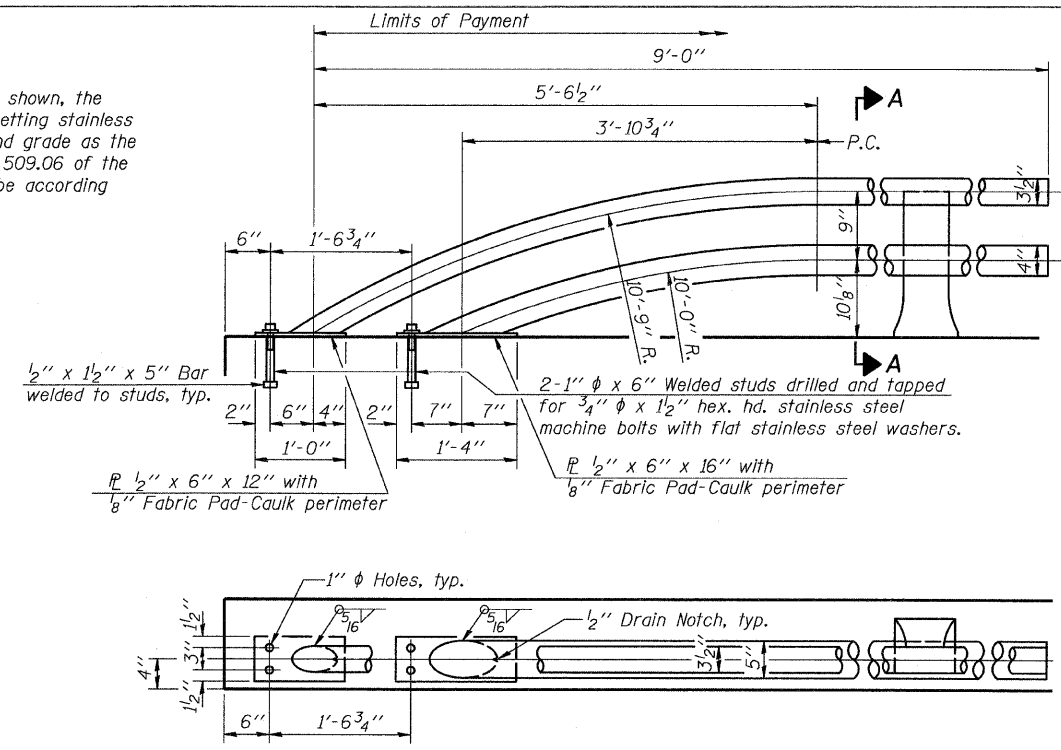
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* In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting stainless steel anchor rods of the same diameter and grade as the specified cap screws according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



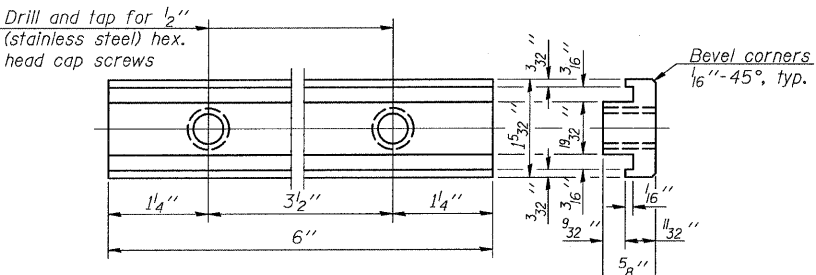
RAIL POST DETAILS



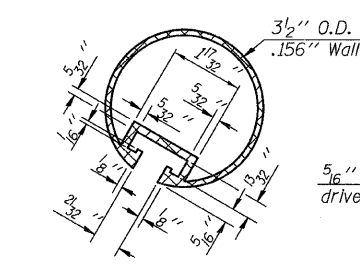
RAIL TERMINAL SECTION

RAIL END TREATMENT FOR TYPE 5 AND 6 TERMINAL

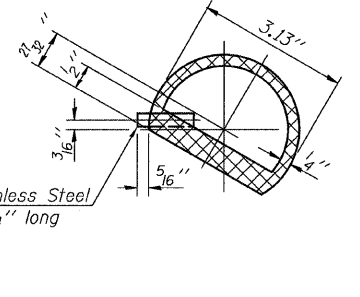
Note:
The end rail post shall be set back as required for the terminal rail section.



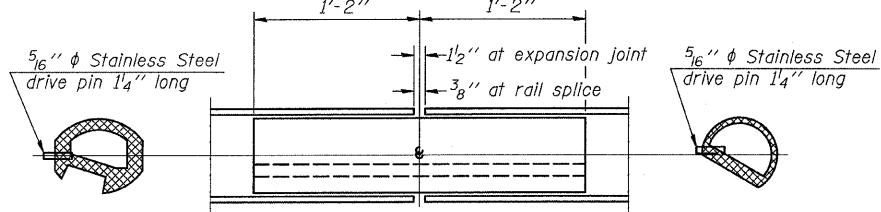
RAIL POST CLAMP BAR



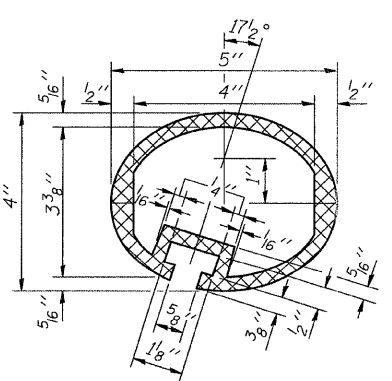
SECTION THRU TOP RAIL



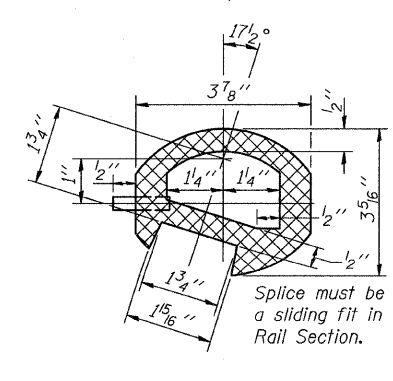
SECTION THRU SPLICE



RAIL SPLICE



SEC. THRU ELLIPTICAL RAIL SECTION



SEC. THRU SPLICE

Notes:
All Posts shall be normal to parapet.
All joints in rail shall be spliced per detail.
All exposed rail ends shall be capped per detail.
Provide 1-1/8" and 2-1/16" Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to Grade-high spots will be ground and low spots shimmed.
See sheets 4 thru 7 for rail post spacing.

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Railing, Type L	Foot	325

ALUMINUM RAILING, TYPE L
STRUCTURE NO. 016-W821

R-20 (M) 4-30-97

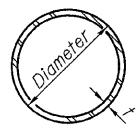
TYLIN INTERNATIONAL

DESIGNED - MAU		CHECKED - AMD,		DRAWN - MAU		CHECKED - AMD,		DATE - 03/25/2011	
REVISIONS		NAME	DATE						

SHEET NO. 11	F.A.I. RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS 741	SHEET NO. 687
16 SHEETS					
CONTRACT NO. 60999					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

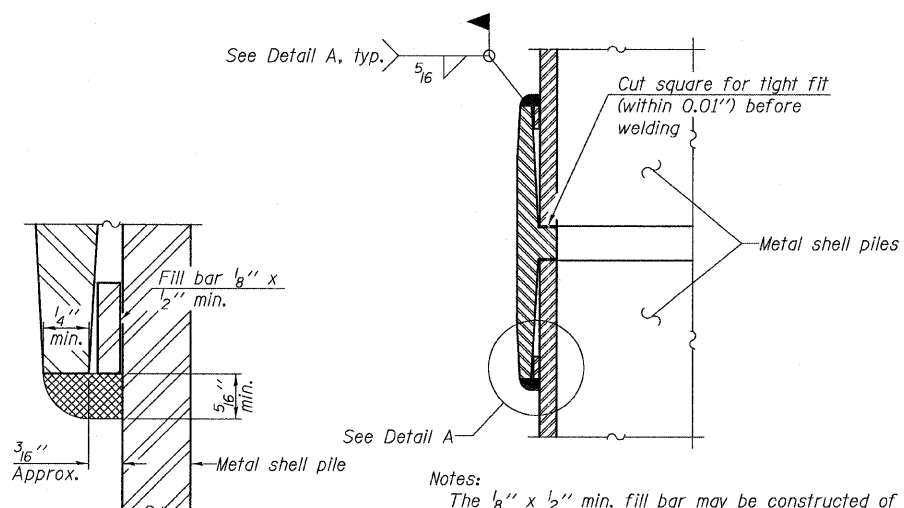
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METAL SHELL PILE TABLE

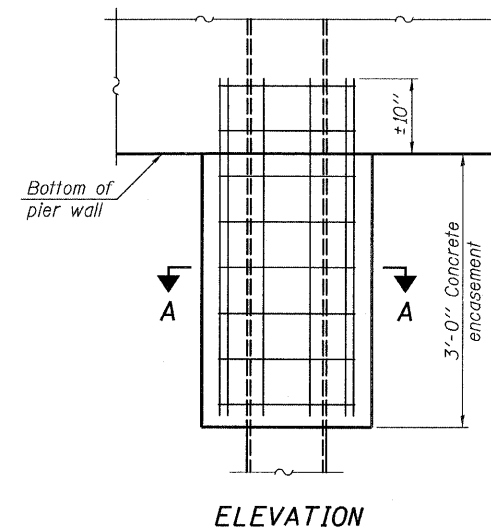
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



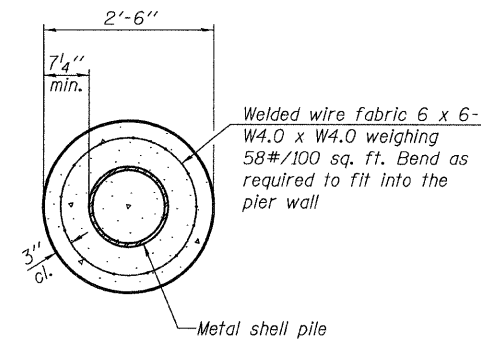
DETAIL A

Notes:
The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE



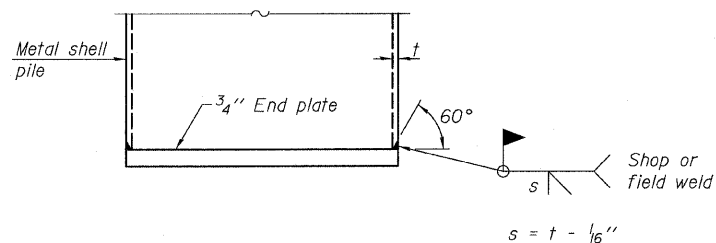
ELEVATION



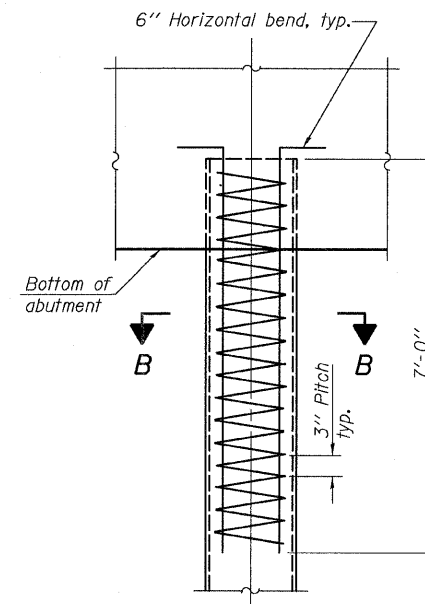
SECTION A-A

Note:
Forms for encasement may be omitted when soil conditions permit.

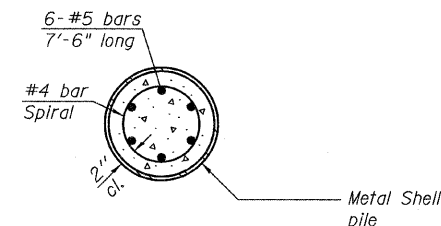
CONCRETE ENCASMENT AT PIERS



END PLATE ATTACHMENT

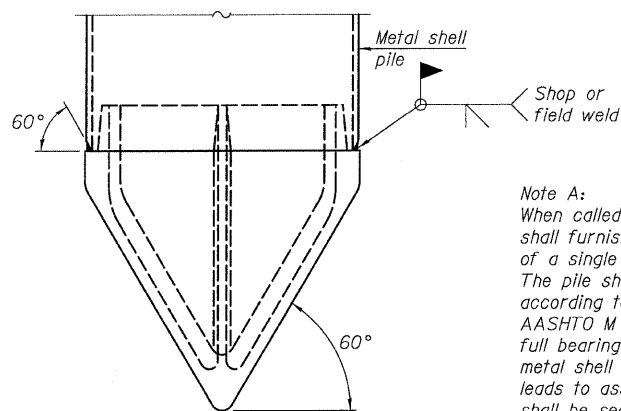


ELEVATION



SECTION B-B

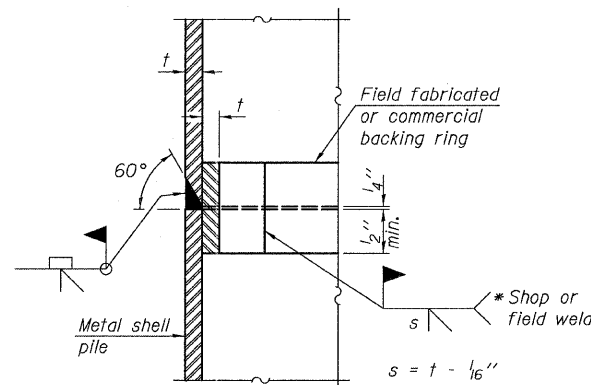
METAL SHELL REINFORCEMENT AT ABUTMENTS



METAL SHELL PILE SHOE ATTACHMENT

(See Note A)

Note A:
When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.



COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.

Note:
The metal shell piles shall be according to ASTM A 252 Grade 3.

**METAL SHELL PILE DETAILS
STRUCTURE NO. 016-W821**

TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS		SHEET NO. 12	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	688
	DRAWN - JMA				16 SHEETS	CONTRACT NO. 60999			
	CHECKED - AMD,					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			
	DATE - 03/25/2011								

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
0.0	0.0	0.0	0.0	SANDY CLAY LOAM, DRY.	AU-1	0-1.0	w = 8.1 %
1.0	1.0	1.0	1.0	STIFF, LITTLE COARSE SAND, GRAY BROWN 181.40 (594.98)			
2.0	2.0	2.0	2.0	LOAM, DARK BROWN, STIFF SOME COARSE SAND, MOIST 180.94 (593.48)	SS-2	1.0-2.5 10" R	w = 13.8 %
3.0	3.0	3.0	3.0	SILTY CLAY, DARK BROWN, LITTLE FINE GRAVEL, MOIST			2" RECOVERY
4.0	4.0	4.0	4.0		SS-3	3.5-5.0 8" R	PIECES OF CONCRETE ENCOUNTERED IN SPOON w = 24 %
5.0	5.0	5.0	5.0	180.18 (590.98)			
6.0	6.0	6.0	6.0	GRAY & BROWN, DK BROWN SILTY CLAY MOIST, LITTLE COARSE FINE SAND SOFT			
7.0	7.0	7.0	7.0		SS-4	6.0-7.5 18" R	QU=40.2 B w = 22 %
8.0	8.0	8.0	8.0				
9.0	9.0	9.0	9.0		SS-5	8.5-10.0 18" R	QU=225 B w = 16.8 %
10.0	10.0	10.0	10.0	178.5 (585.48)			
11.0	11.0	11.0	11.0	NO RECOVERY			NO RECOVERY
12.0	12.0	12.0	12.0		SS-6	11.0-12.5 0" R	
13.0	13.0	13.0	13.0	177.4 (582.98)			
14.0	14.0	14.0	14.0	GRAY SILTY, CLAY, MOIST, TRACE MEDIUM SAND, STIFF	SS-7	13.5-15.0 14" R	QU=160 B w = 19.4 %
15.0	15.0	15.0	15.0	176.98 (580.48)			
16.0	16.0	16.0	16.0	GRAY SILT, MOIST, MED DENSE			
17.0	17.0	17.0	17.0		SS-8	16.0-17.5 16" R	N=11 NP w = 16.6 %
18.0	18.0	18.0	18.0				
19.0	19.0	19.0	19.0		SS-9	18.5-20.0 18" R	N=22 NP w = 15.8 %
20.0	20.0	20.0	20.0				

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
20.0	20.0	20.0	20.0				
21.0	21.0	21.0	21.0	GRAY SILT, SL. MOIST, MED. DENSE			
22.0	22.0	22.0	22.0		SS-10	21.0-22.5 18" R	N=22 NP w=16.7%
23.0	23.0	23.0	23.0	174.69 (572.98)			
24.0	24.0	24.0	24.0		SS-11	23.5-25.0 18" R	QU=273 B w=17.6%
25.0	25.0	25.0	25.0				
26.0	26.0	26.0	26.0		SS-12	26.0-27.5 18" R	QU= 48 B w = 24%
27.0	27.0	27.0	27.0	GRAY SILTY, CLAY SL. MOIST TRACE FINE SAND			
28.0	28.0	28.0	28.0	173.16 (567.98)			
29.0	29.0	29.0	29.0		SS-13	28.5-30.0 18" R	QU=273 B w=15.6%
30.0	30.0	30.0	30.0	GRAY SILTY CLAY LOAM, SL. MOIST TRACE FINE SAND			
31.0	31.0	31.0	31.0	170.10 (564.48)			
32.0	32.0	32.0	32.0				
33.0	33.0	33.0	33.0				
34.0	34.0	34.0	34.0		SS-14	33.5-35.0 14" R	N=33 NP w=11.1%
35.0	35.0	35.0	35.0	GRAY SILT, SL. MOIST, DENSE			
36.0	36.0	36.0	36.0				
37.0	37.0	37.0	37.0				
38.0	38.0	38.0	38.0				
39.0	39.0	39.0	39.0		SS-15	38.5-40.0 18" R	N=54 NP EOB AT 40' w=16.8%
40.0	40.0	40.0	40.0	169.51 (555.98)			

NOTE:

1. To convert from kPa to psi:
1 kPa = 0.14504 psi

BORING LOGS 1
STRUCTURE NO. 016-W821

TYLIN INTERNATIONAL	DESIGNED - MAU	REVISIONS		SHEET NO. 13 16 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	689	
	DRAWN - MAU				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ELEVATION		DEPTH (FT)	STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT)	RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
0.0				DARK GRAY SILTY LOAM, SL. MOIST LITTLE MED.- COARSE SAND	AU-1 0-1.0			w=12%
1.0				DARK GRAY SILTY LOAM, SL. MOIST LITTLE MED.- COARSE SAND	SS-2 1.0-2.5 4" R		5 7 7	w=18.4%
3.0				180.86 (593.21)				
4.0				BROWN SILTY CLAY SL. MOIST TRACE MED. SAND MED. STIFF	SS-3 3.5-5.0 12" R		1 2 3	QU=120 B w=18.2%
6.0				DRK. BROWN SILTY CLAY MOIST, STIFF LITTLE COARSE SAND	SS-4 6.0-7.5 4" R		2 1	w=17.7%
8.0				179.03 (587.21)				
10.0				FINE GRAVEL, SOME COARSE- FINE SAND SATURATED, MED. DENSE	SS-5 8.5-10.0 10" R		8 9 3	w=22.2%
10.5				178.57 (585.71)				N=12 NP
11.0				GRAY SILTY CLAY MED. STIFF, SL. MOIST	SS-6 11.0-12.5 18" R		2 4 4	QU=149 B w=22.6%
13.0				177.80 (583.21)				
14.0				GRAY SILTY CLAY MED. STIFF, SL. MOIST	SS-7 13.5-15.0 18" R		1 3 4	QU=149 B w=22.7%
16.0								
17.0					SS-8 16.0-17.5 18" R		2 3 5	QU=149 w=19.4%
19.0					SS-9 18.5-20.0 16" R		1 5 6	QU=149 w=19.9%

DEPTH (m)		DEPTH (FT)	STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT)	RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
20.0				175.52 (575.71)				
21.0				GRAY SILT MOIST AND DENSE	SS-10 21.0-22.5 18" R		3 12 14	QU=177 B w=19.5 %
23.0								
24.0				174.45 (572.21)	SS-11 23.5-25.0 18" R		8 7	QU=128 B w=22.9%
26.0				173.99 (570.71)				
27.0				GRAY SILTY CLAY LOAM SL. MOIST AND STIFF	SS-12 26.0-27.5 18" R		4 5 5	QU=289 B w=23%
28.0				173.23 (568.21)				
29.0				GRAY SILT, DENSE MOIST	SS-13 28.5-30.0 16" R		5 6 8	N=19 NP w=26.1%
30.0								
31.0								
32.0				172.01 (564.21)				
33.0								
34.0				NO RECOVERY	SS-14 33.5-35.0 18" R		10 12 22	N=34
35.0								
36.0				170.79 (560.21)				
37.0				GRAY SILT, VERY DENSE, MOIST				
38.0								
39.0					SS-15 38.5-40.0 18" R		16 25 32	w=19.2% N=57 EOB AT 40'
40.0								

NOTE:

1. To convert from kPa to psi:
1 kPa = 0.14504 psi

BORING LOGS 2
STRUCTURE NO. 016-W821

TYLIN INTERNATIONAL	DESIGNED - MAU	REVISIONS		SHEET NO. 14	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.				
	CHECKED - AMD,	NAME	DATE		55					0711.2R & 1011.1BR	COOK	741	690
	DRAWN - MAU				CONTRACT NO. 60999								
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT								
	DATE - 03/25/2011			16 SHEETS									

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4/28/2011

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
0.0	0.0	0.0	0.0	DARK BROWN SILTY LOAM, SL. MOIST SAND	AU-1 0-1.0	14	w = 13.6%
1.0	1.0	1.0	1.0		SS-2 1.0-2.5 8" R	21	CONCRETE DEBRIS IN SPOON
2.0	2.0	2.0	2.0			4	w = 12.2%
3.0	3.0	3.0	3.0	180.90 (593.34)			SAMPLE BROKEN NO PIECES > 2"
4.0	4.0	4.0	4.0	GRAY-BROWN SILTY CLAY, SL. MOIST, MEDIUM STIFF	SS-3 3.5-5.0 8" R	2	w = 19.7%
5.0	5.0	5.0	5.0			3	
6.0	6.0	6.0	6.0		SS-4 6.0-7.5 6" R	1	QU=40 B
7.0	7.0	7.0	7.0			2	w = 23.9%
8.0	8.0	8.0	8.0			3	
9.0	9.0	9.0	9.0		SS-5 8.5-10.0 6" R	1	QU=120 B
10.0	10.0	10.0	10.0			2	w = 22.1%
11.0	11.0	11.0	11.0			3	
12.0	12.0	12.0	12.0		SS-6 11.0-12.5 18" R	2	QU=128 B
13.0	13.0	13.0	13.0			3	w = 23.7%
14.0	14.0	14.0	14.0			4	
15.0	15.0	15.0	15.0		SS-7 13.5-15.0 18" R	1	QU=153 B
16.0	16.0	16.0	16.0			4	w = 23.4%
17.0	17.0	17.0	17.0			5	
18.0	18.0	18.0	18.0		SS-8 16.0-17.5 18" R	1	QU=72 B
19.0	19.0	19.0	19.0			4	w = 23.4%
20.0	20.0	20.0	20.0		SS-9 18.5-20.0 18" R	1	QU=176 B
						4	w = 19.9%

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
20.0	20.0	20.0	20.0	175.56 (575.84)			
21.0	21.0	21.0	21.0	GRAY SILTY CLAY, SL. MOIST TRACE FINE SAND, STIFF	SS-10 21.0-22.5 18" R	2	QU=217 B
22.0	22.0	22.0	22.0			5	w=20.0%
23.0	23.0	23.0	23.0	174.80 (573.34)			
24.0	24.0	24.0	24.0	GRAY SILTY CLAY, SL. MOIST TRACE FINE SAND, STIFF	SS-11 23.5-25.0 18" R	2	QU=233 B
25.0	25.0	25.0	25.0			4	w=22.0%
26.0	26.0	26.0	26.0	173.88 (570.34)			
27.0	27.0	27.0	27.0	GRAY SILTY LOAM, SL. MOIST, MEDIUM DENSE	SS-12 26.0-27.5 18" R	2	N=17 NP
28.0	28.0	28.0	28.0			7	w=14.1%
29.0	29.0	29.0	29.0			10	
30.0	30.0	30.0	30.0		SS-13 28.5-30.0 18" R	2	N=17 NP
31.0	31.0	31.0	31.0			6	w=13.5%
32.0	32.0	32.0	32.0			11	
33.0	33.0	33.0	33.0			12	
34.0	34.0	34.0	34.0		SS-14 33.5-35.0 18" R	4	N=19 NP
35.0	35.0	35.0	35.0			7	w=14.1%
36.0	36.0	36.0	36.0			12	
37.0	37.0	37.0	37.0	170.68 (559.84)			
38.0	38.0	38.0	38.0				
39.0	39.0	39.0	39.0	GRAY SILT, VERY DENSE SLIGHT MOIST	SS-15 38.5-40.0 18" R	13	N=52 NP
40.0	40.0	40.0	40.0			22	w=15.6%
						30	

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
DEPTH (m)	DEPTH (FT)	DEPTH (m)	DEPTH (FT)				
40.0	40.0	40.0	40.0				
41.0	41.0	41.0	41.0				
42.0	42.0	42.0	42.0				
43.0	43.0	43.0	43.0				
44.0	44.0	44.0	44.0	GRAY SILT, SL. MOIST, VERY DENSE	SS-16 43.5-45.0 18" R	11	N=35 NP
45.0	45.0	45.0	45.0			14	w=14.4%
46.0	46.0	46.0	46.0	167.63 (549.84)			
47.0	47.0	47.0	47.0				
48.0	48.0	48.0	48.0				
49.0	49.0	49.0	49.0	GRAY LOAM, VERY DENSE, DRY	SS-17 48.5-50.0 18" R	11	N=51 NP
50.0	50.0	50.0	50.0			25	EOB AT 50'
51.0	51.0	51.0	51.0			26	w=5.5%
52.0	52.0	52.0	52.0				
53.0	53.0	53.0	53.0				
54.0	54.0	54.0	54.0		SS-18 53.5-55.0 18" R		
55.0	55.0	55.0	55.0				
56.0	56.0	56.0	56.0				
57.0	57.0	57.0	57.0				
58.0	58.0	58.0	58.0				
59.0	59.0	59.0	59.0		SS-19 58.5-60.0 18" R		
60.0	60.0	60.0	60.0				

NOTE:

1. To convert from kPa to psi:
1 kPa = 0.14504 psi

BORING LOGS 3
STRUCTURE NO. 016-W821

TYLIN INTERNATIONAL	DESIGNED - MAU	REVISIONS		SHEET NO. 15	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	691	
	DRAWN - MAU				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011			16 SHEETS						

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
0.0	1.0	2.0	3.0				
0.0	1.0	2.0	3.0	DARK BROWN SILTY CLAY LOAM, LITTLE-COARSE SAND, SL. MOIST 181.58 (595.60)	AU-1 0-1.0	3	w=14.4%
1.0	2.0	3.0	4.0	BROWN- GRAY SILTY CLAY, LITTLE FINE SAND, SL. MOIST, STIFF	SS-2 1.0-2.5 12" R	5 3	NO PIECES > 2" w=13.8%
1.5	3.0	4.0	5.0	180.21 (591.10)	SS-3 3.5-5.0 12" R	1 2 3	NO PIECES > 2" w=17.5%
6.0	7.0	8.0	9.0	GRAY SILTY CLAY, MOIST, SOFT, LITTLE MEDIUM SAND	SS-4 6.0-7.5 12" R	1 1 2	QU=8 B w=24.3%
8.0	9.0	10.0	11.0	179.45 (588.60)	SS-5 8.5-10.0 12" R	1 2 2	QU=145 B w=23.2%
3.0	11.0	12.0	13.0	GRAY SILT, SL. MOIST, MEDIUM DENSE	SS-6 11.0-12.5 15" R	2 5 6	N=11 NP w=20.3%
14.0	15.0	16.0	17.0	176.86 (580.10)	SS-7 13.5-15.0 16" R	7 7 9	N=16 NP w=19.9%
17.0	18.0	19.0	20.0	GRAY SILTY CLAY MEDIUM STIFF, MOIST, LITTLE FINE-MEDIUM SAND	SS-8 16.0-17.5 14" R	2 2 3	QU=80 B w=18.9%
18.0	19.0	20.0	21.0	SS-9 18.5-20.0 18" R	2 3 4	QU=113 B w=20.8%	

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
20.0	21.0	22.0	23.0				
20.0	21.0	22.0	23.0	GRAY SILTY CLAY, MOIST MEDIUM STIFF TRACE MEDIUM SAND	SS-10 21.0-22.5 18" R	2 4 4	QU=193 B w=21.2%
24.0	25.0	26.0	27.0	SS-11 23.5-25.0 18" R	2 3 6	QU=177 B w=20.2%	
28.0	29.0	30.0	31.0	SS-12 26.0-27.5 18" R	2 3 6	QU=273 B w=15.5%	
32.0	33.0	34.0	35.0	SS-13 28.5-30.0 18" R	3 6 10	QU=161 B w=21.4%	
36.0	37.0	38.0	39.0	172.13 (564.60)	SS-14 33.5-35.0 18" R	4 9 16	N=25 w=11.4%
40.0	41.0	42.0	43.0	GRAY SILT, SL MOIST TRACE MEDIUM SAND MEDIUM DENSE	SS-15 38.5-40.0 18" R	11 27 33	N=60 NP w=15.5%
44.0	45.0	46.0	47.0	170.46 (559.10)			

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
40.0	41.0	42.0	43.0				
40.0	41.0	42.0	43.0	GRAY SILT, SL. MOIST VERY DENSE	SS-16 43.5-45.0 18" R	20 31 33	N=64 NP EOB AT 45' w=16.7%
44.0	45.0	46.0	47.0	SS-17 48.5-50.0 18" R			
48.0	49.0	50.0	51.0	SS-18 53.5-55.0 18" R			
54.0	55.0	56.0	57.0	SS-19 58.5-60.0 18" R			

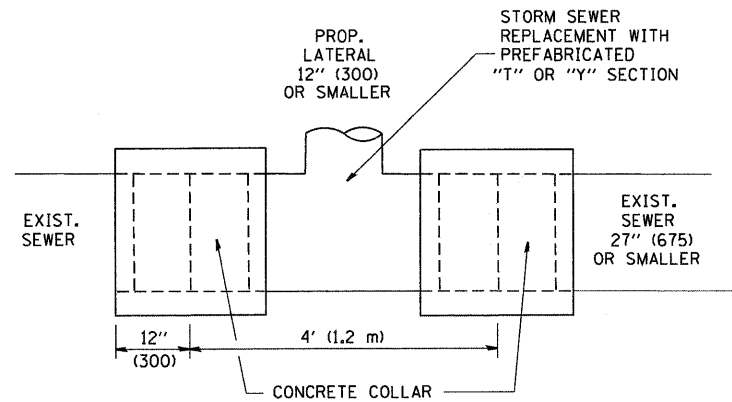
NOTE:

1. To convert from kPa to psi:
1 kPa = 0.14504 psi

BORING LOGS 4
STRUCTURE NO. 016-W821

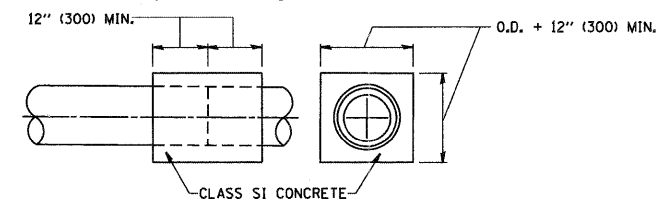
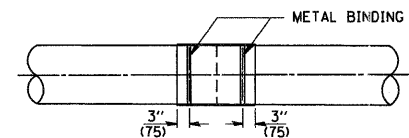
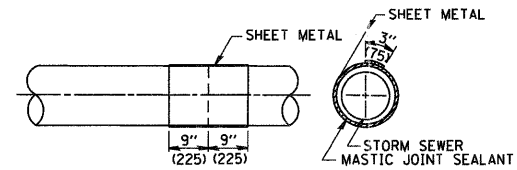
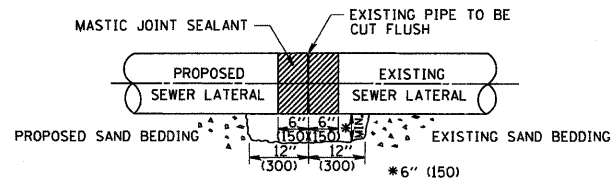
TYLIN INTERNATIONAL	DESIGNED - MAU	REVISIONS		SHEET NO. 16 16 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	692	
	DRAWN - MAU				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

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DETAIL "A"

LATERAL CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER

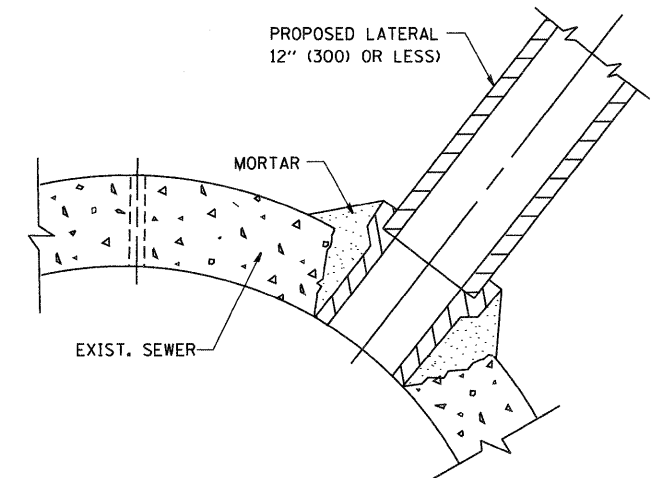


DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12' x 6' (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT A PIECE OF SHEET METAL GAGE NO. 19 I.I. (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 3" (75) LONG.
5. WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
9. PLACE CLASS SI CONCRETE AROUND THE JOINT.



DETAIL "C"

PROPOSED LATERAL CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER

NOTES

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

1. THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.
- II. CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:
 - A) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".
 - B) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS. THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

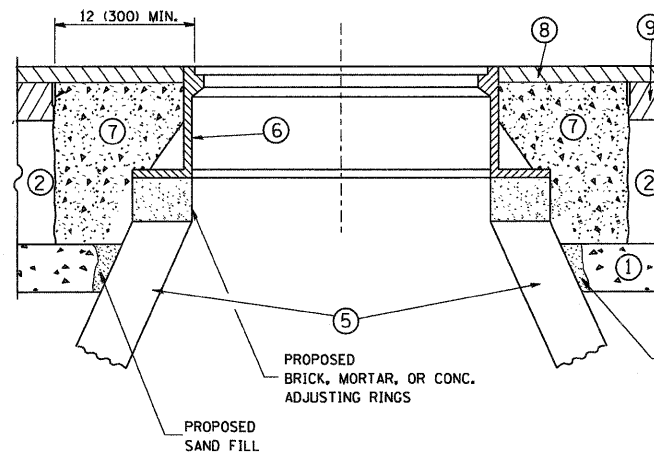
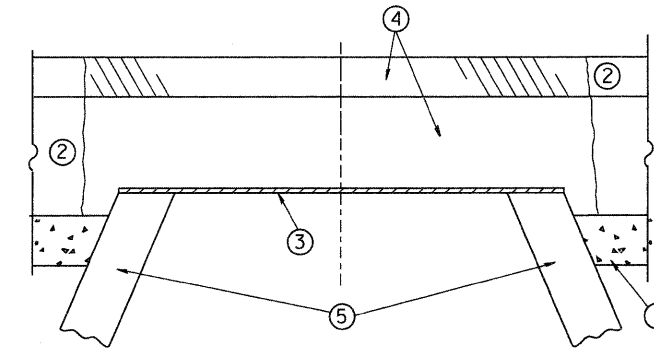
REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = M:\diststd\22x34\bd07.dgn	USER NAME = goglianobt	DESIGNED - M. DE YONG	REVISED - M. DE YONG 05-08-92	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - R. SHAH 09-09-94		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	741	693		
		PLOT SCALE = 50,000' / IN.	CHECKED -		REVISED - R. SHAH 10-25-94				BD500-01 (BD-7)		CONTRACT NO.	
		PLOT DATE = 1/4/2008	DATE - 07-25-90		REVISED - R. SHAH 06-12-96				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
- B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
- C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS SI CONCRETE, OR HMA SURFACE COURSE OR HMA BINDER COURSE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS.

LEGEND

- ① SUB-BASE GRANULAR MATERIAL
- ② EXISTING PAVEMENT
- ③ 36 (900) DIAMETER METAL PLATE
- ④ PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- ⑤ EXISTING STRUCTURE
- ⑥ FRAME AND LID (SEE NOTES)
- ⑦ CLASS SI CONCRETE, HMA SURFACE COURSE OR HMA BINDER COURSE
- ⑧ PROPOSED HMA SURFACE COURSE
- ⑨ PROPOSED HMA BINDER COURSE

NOTES:

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

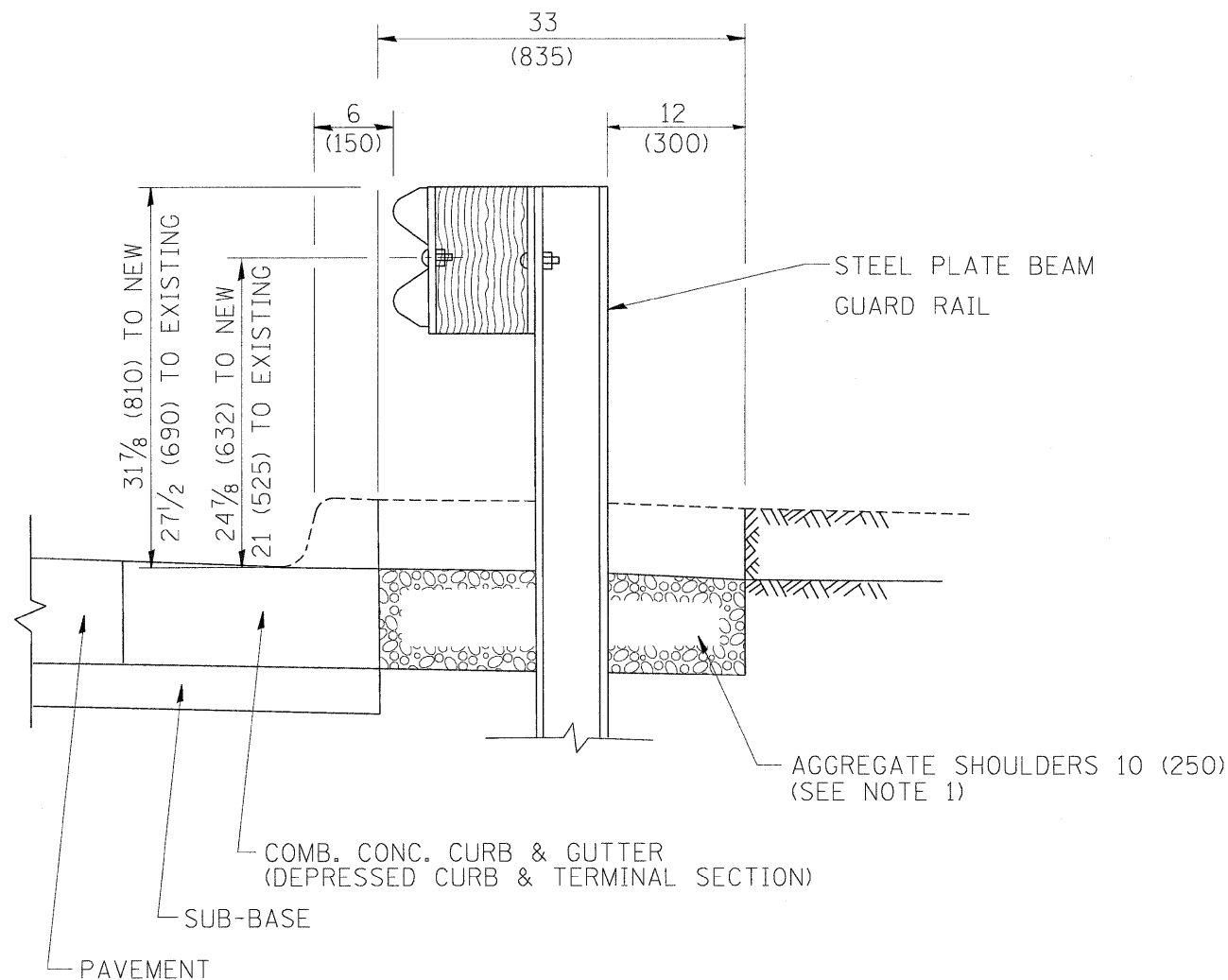
BASIS OF PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "FRAMES AND LIDS TO BE ADJUSTED, SPECIAL"

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

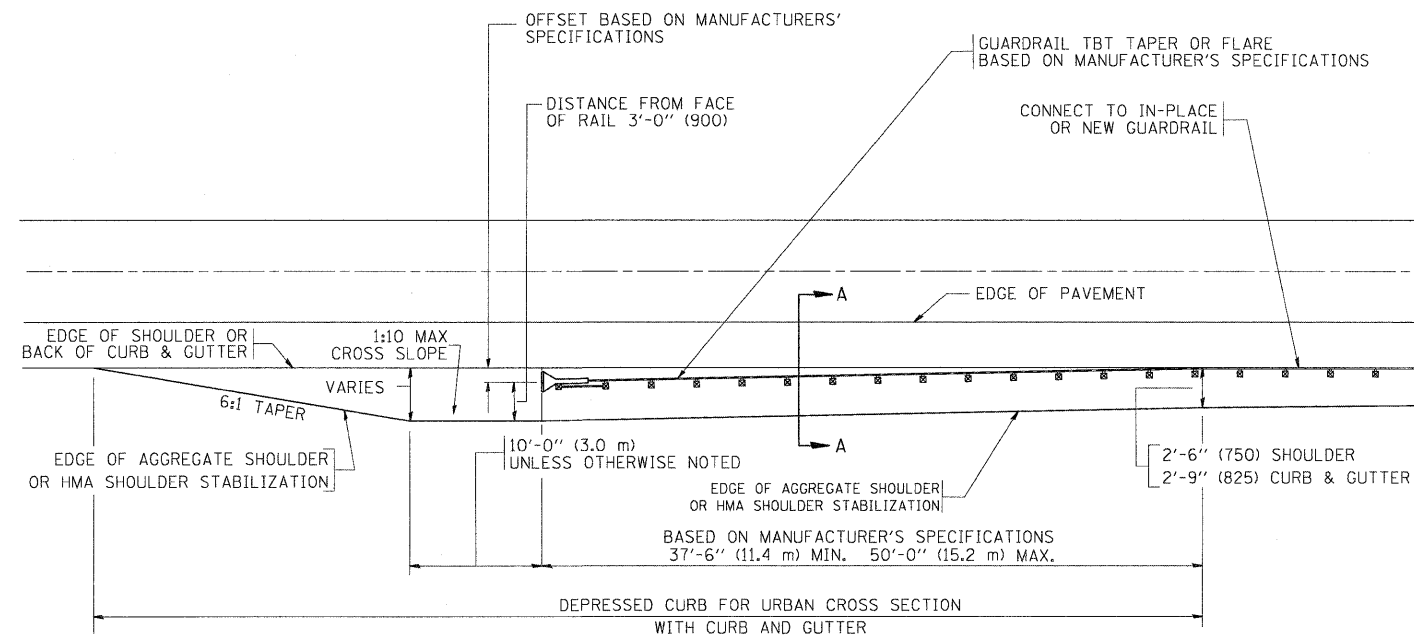
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W:\diststd\22x34\bd88.dgn		DRAWN -	REVISED - A. ABBAS 03-21-97		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	741	694		
		PLOT SCALE = 50.0000' / IN.	REVISED - R. WIEDEMAN 05-14-04					BD600-03 (BD-8)		CONTRACT NO.		
		PLOT DATE = 1/4/2008	REVISED - R. BORO 01-01-07					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



SECTION A-A

- NOTES:
1. THE AGGREGATE SHOULDER, 10" OR HMA SHOULDER, 6" (IF REQUIRED) SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL.
 2. "EXISTING" GUARDRAIL REFERS TO CONNECTING TERMINAL SECTION TO GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
 3. THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

DETAILS FOR STEEL PLATE BEAM
 GUARD RAIL ADJACENT TO CURB AND GUTTER
 [FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]



DEPRESSED CURB AND GUTTER AND
 SHOULDER TREATMENT AT TBT TY. 1 SPL.

BASIS OF PAYMENT: HMA SHOULDERS 6 (150) (IF REQUIRED) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SHOULDERS 6" (150 mm)".

STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

TBT = TRAFFIC BARRIER TERMINAL
 ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

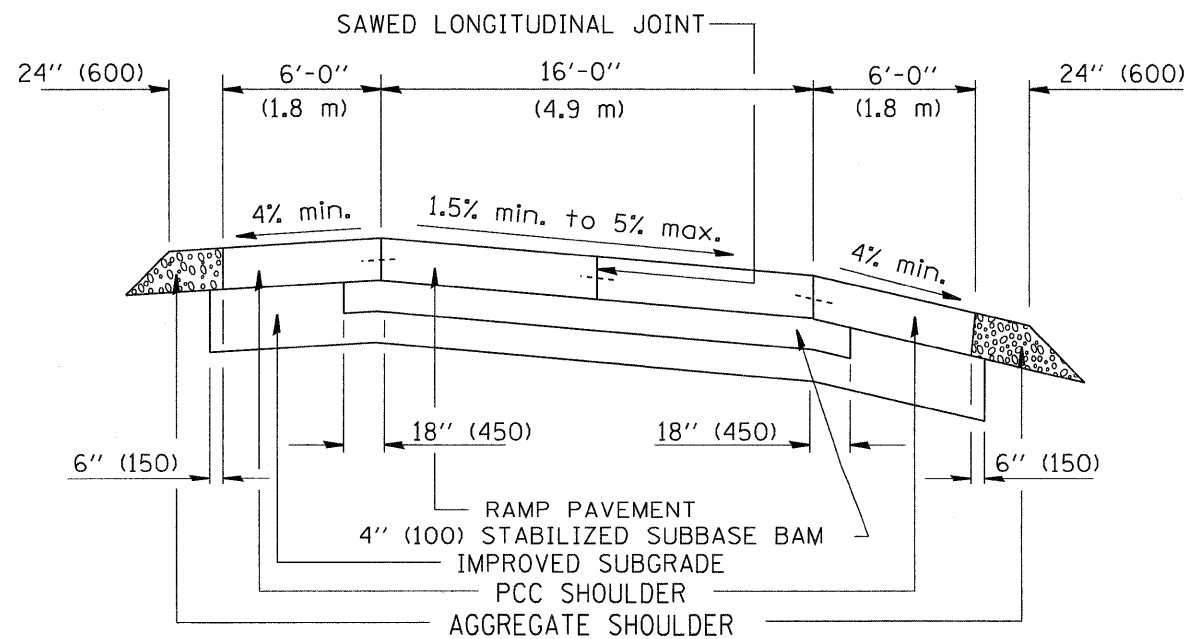
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	PLOT SCALE = 49,9999 / / IN.	CHECKED -	REVISED - R. BORO 12-08-2008
	PLOT DATE = 9/21/2009	DATE - 09-22-90	REVISED - R. BORO 09-14-2009

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DETAILS FOR DEPRESSED CURB & GUTTER AND
 SHOULDER TREATMENT AT TBT TY 1 SPL.

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

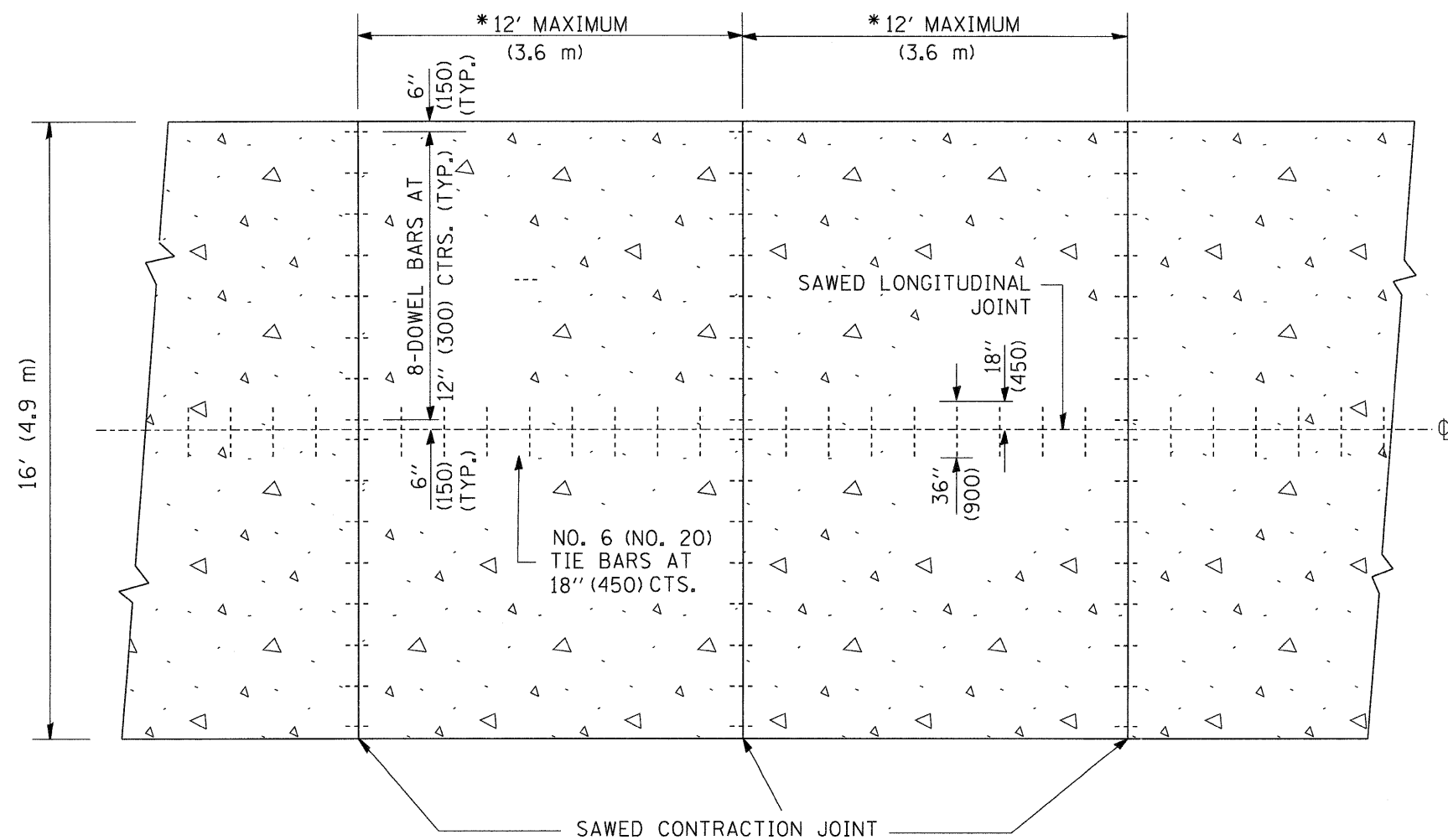
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			741	695
BD600-10 (BD 34)			CONTRACT NO.	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



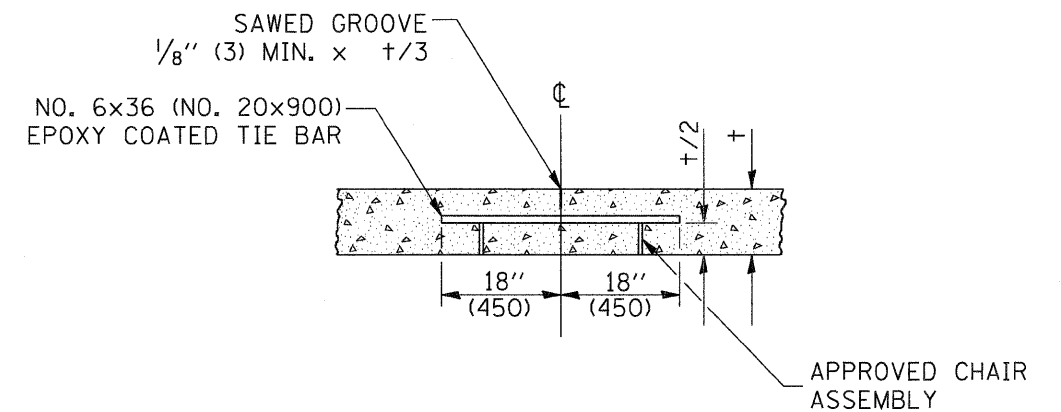
SECTION

NOTES:

1. CENTERLINE JOINT REMAINS IN THE CENTER WHEN RAMP TRANSITIONS TO TWO (2) RAMPS AT 12' (3.6 m).
2. ALL BARS TO BE EPOXY COATED.



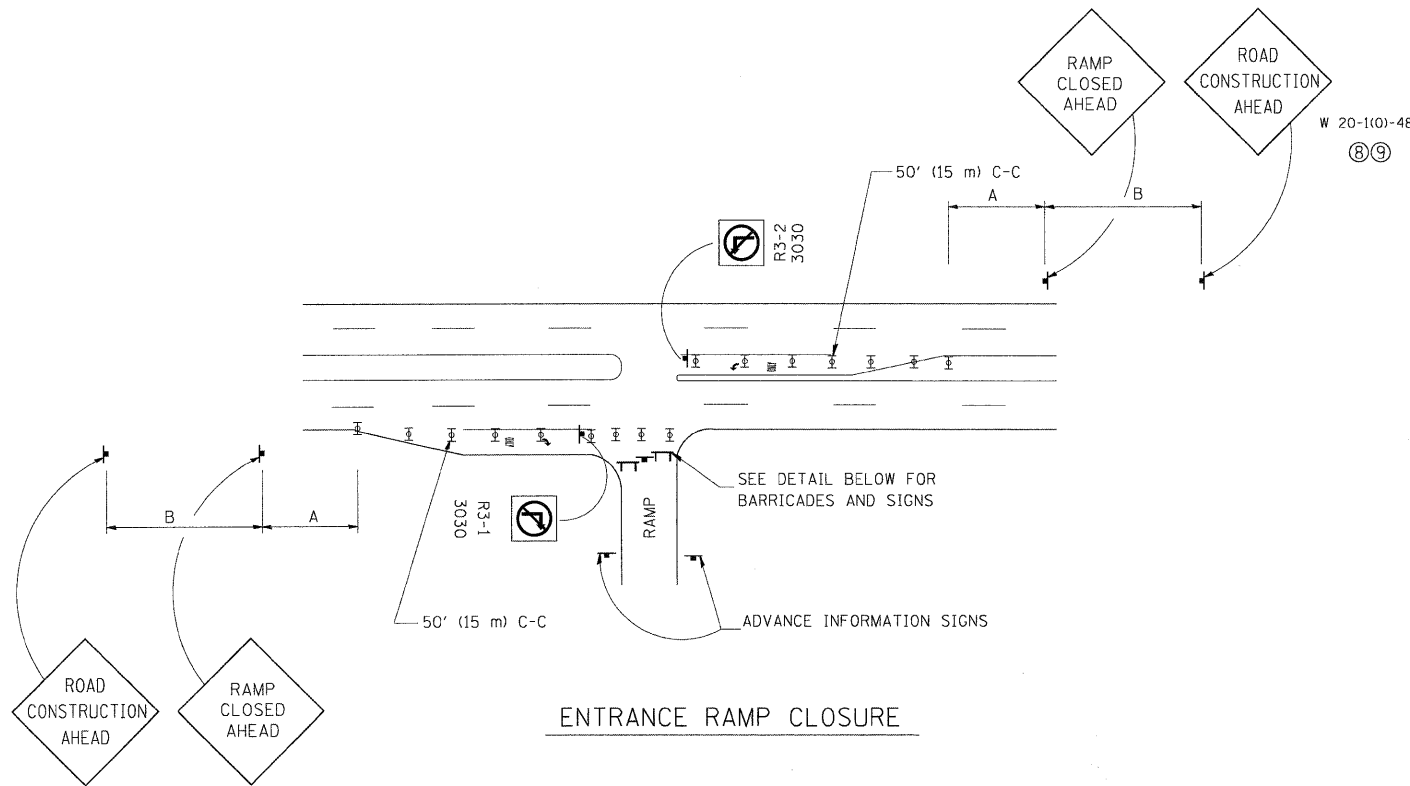
PLAN



SAWED LONGITUDINAL JOINT

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED

FILE NAME = W:\diststd\22x34\bd49.dgn	USER NAME = geglionobt	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAIL FOR CENTERLINE SAW CUT 16' (4.9 m) AND VARIABLE JOINTED PCC PAVEMENT FOR RAMPS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = 50.0000' / IN.	DRAWN - TOM MATOUSEK	REVISIONS -								741	696	
	PLOT DATE = 1/4/2008	CHECKED - A. ABBAS	REVISIONS -					BD49		CONTRACT NO.			
		DATE - 10-18-02	REVISIONS -					SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA. TO STA.	



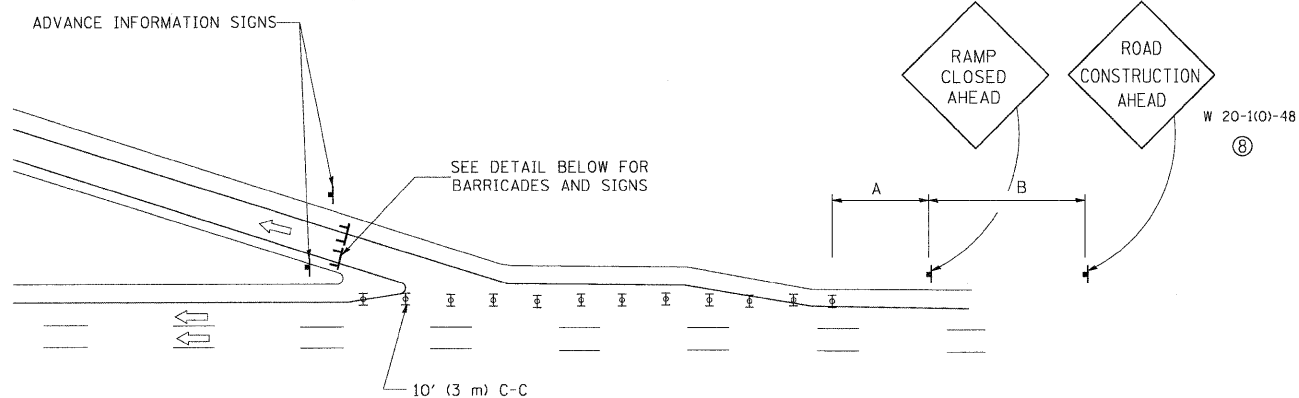
ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY ≤24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL ≥45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	150' (45 m)	150' (45 m)

DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.

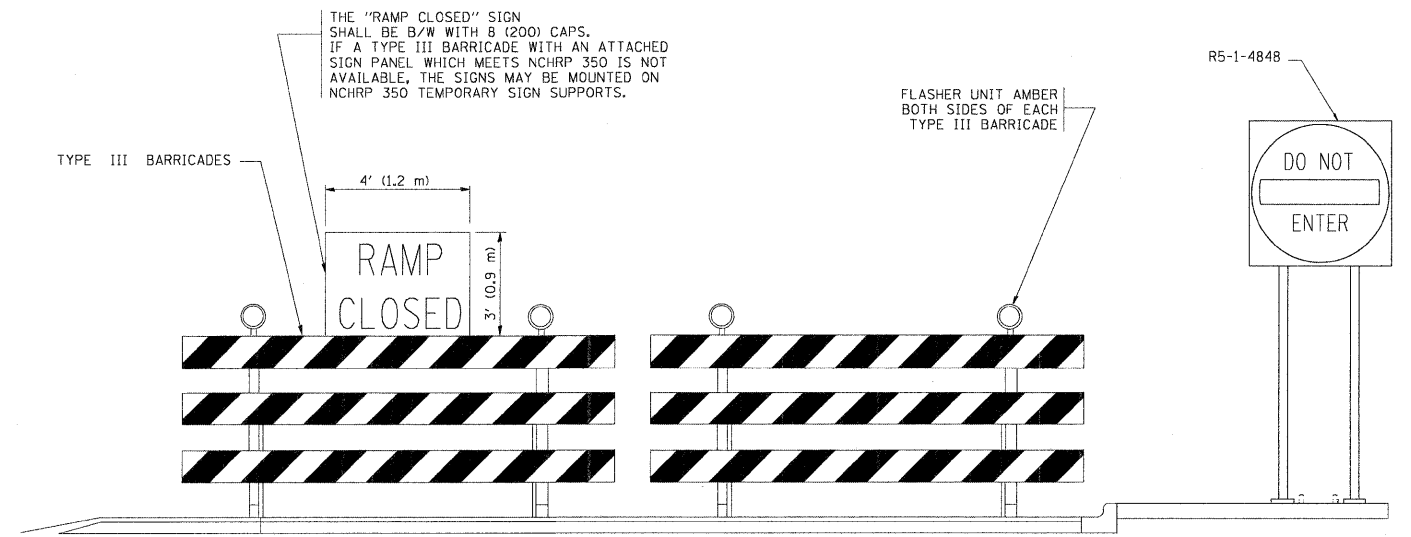
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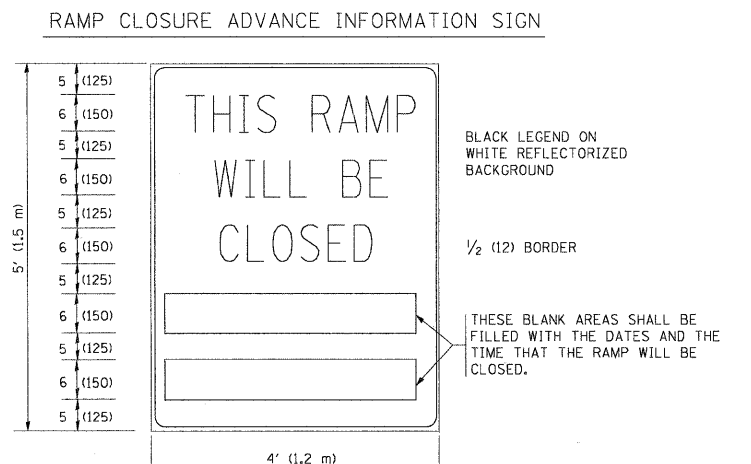
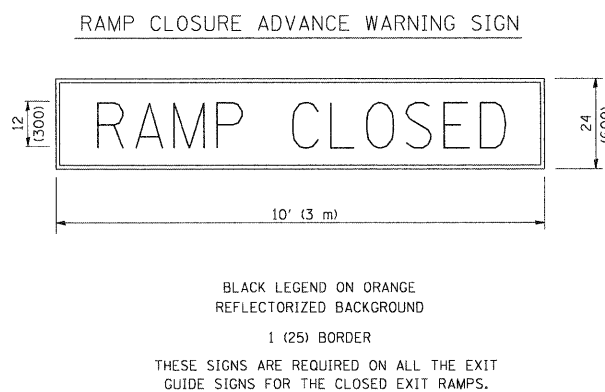
EXIT RAMP CLOSURE

SYMBOLS

- ▬ TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- ▬ TYPE III BARRICADE WITH FLASHING LIGHT



DETAIL FOR REQUIRED BARRICADES & SIGNS



THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

GENERAL NOTES:

- ① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- ② STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
- ③ A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES.
- ④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED.
- ⑤ THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
- ⑥ AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- ⑦ THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED TWENTY-FOUR (24) HOURS IN LENGTH.
- ⑧ ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
- ⑨ ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED ON CLOSURES LESS THAN 24 HOURS IN DURATION.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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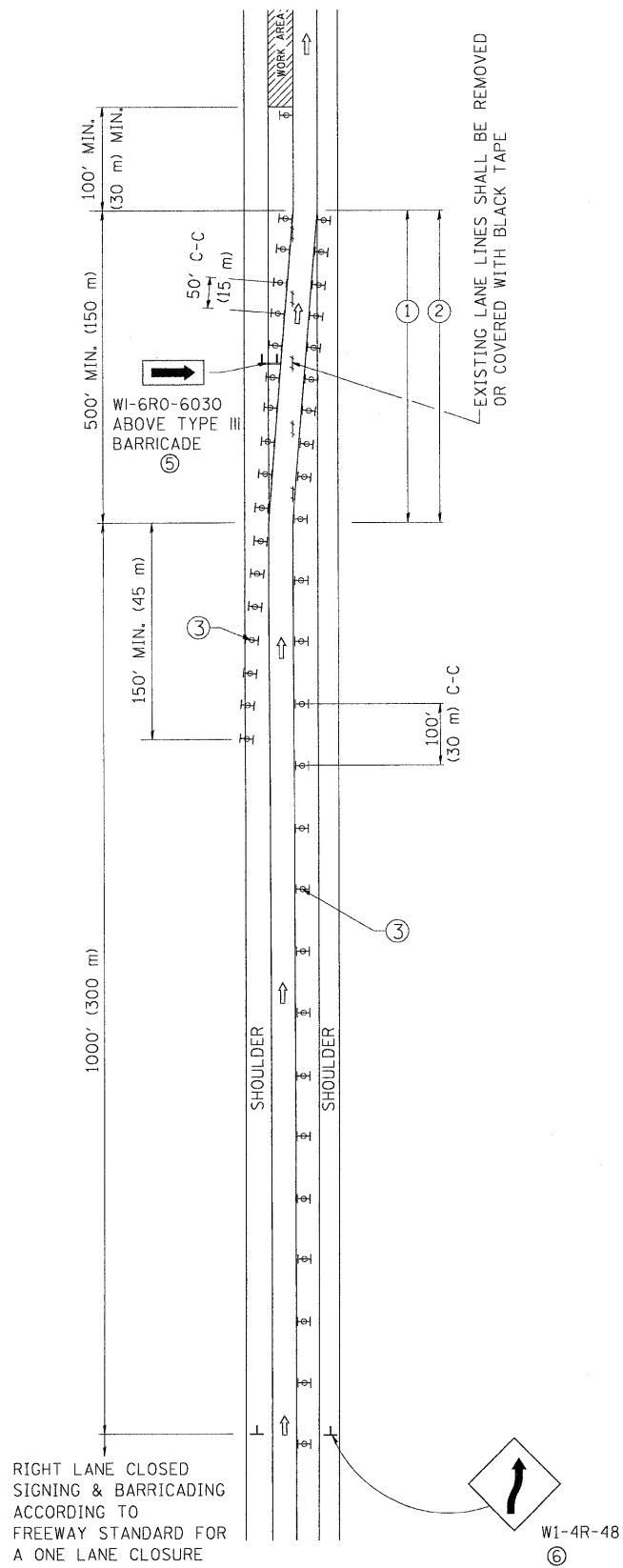
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DRAWN -	REVISED - JAF 02-06
CHECKED -	REVISED - SPB 01-07
DATE - 02-83	REVISED - SPB 12-09

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

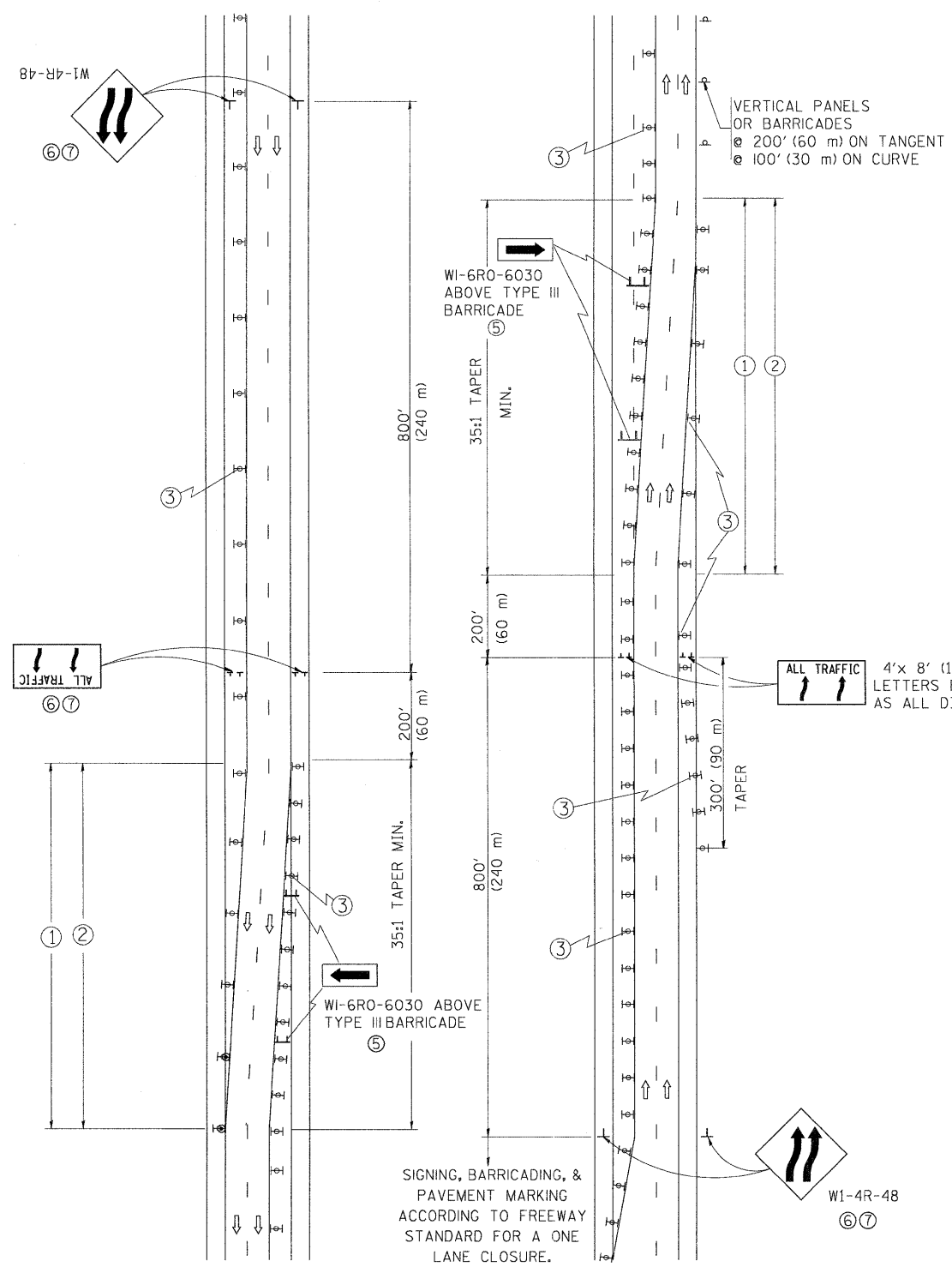
**FREWAY ENTRANCE AND EXIST RAMP
 CLOSURE DETAILS**
 SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			741	697
TC-08		CONTRACT NO.		
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT				

SINGLE LANE WEAVE



MULTI-LANE WEAVE



GENERAL NOTES

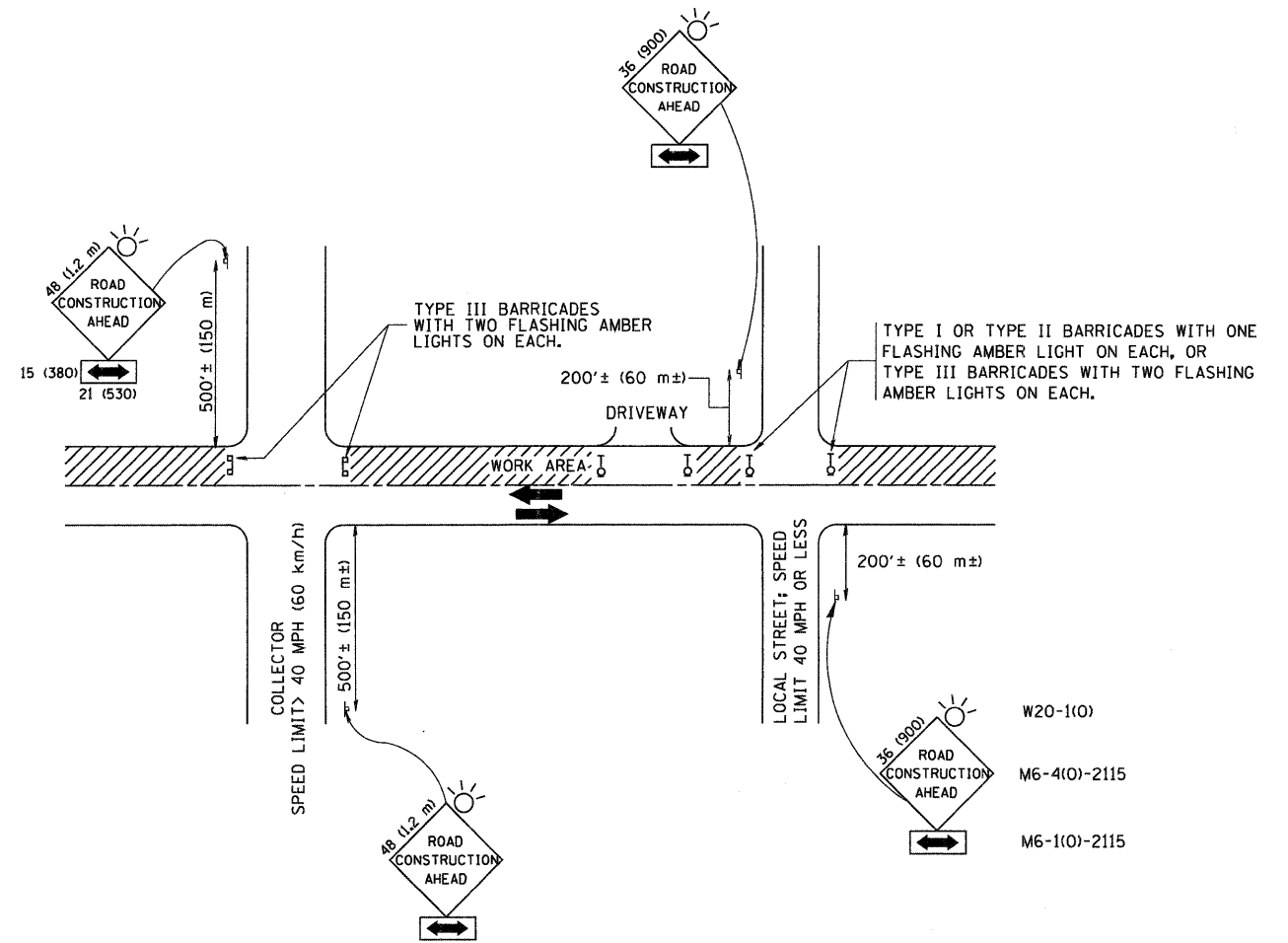
- EXISTING CONFLICTING PAVEMENT MARKING LINES SHALL BE REMOVED. PAVEMENT MARKING REMOVAL SHALL NOT BE REQUIRED FOR SINGLE LANE WEAVES UNDER 24 HOURS IN DURATION.
- CONTINUOUS REFLECTIVE TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND FOR 300' (90 m) ALONG SIDE THE WORK AREA WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS. THE LEFT EDGE LINE SHALL BE YELLOW AND THE RIGHT EDGE LINE SHALL BE WHITE. FOR MULTI-LANE WEAVES LANE LINES SHALL BE 5 INCH, 10'-30' (3 m-9 m) SKIP DASH, WHITE.
- PLASTIC DRUMS WITH STEADY BURN LIGHTS AT 50' (15 m) C-C SPACING IN TAPERS AND 100' (30 m) C-C SPACING IN TANGENTS.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 IS NOT AVAILABLE, THE SIGNS MAY BE MOUNTED ON NCHRP 350 TEMPORARY SIGN SUPPORTS. TYPE III BARRICADES MAY BE OMITTED FOR SINGLE-LANE WEAVES UNDER 24-HOURS IN DURATION. W1-6 SIGNS WILL STILL BE REQUIRED. IF THE WIDTH OF OFFSET IS LESS THAN 6' THEN THE TYPE III BARRICADE WITH ATTACHED ARROW SIGN PANEL CAN BE ELIMINATED IN THE TAPER AREAS.
- WHEN THE LENGTH OF THE SHIFTED SEGMENT (DISTANCE BETWEEN WEAVE POINTS) IS LESS THAN 1500', DOUBLE REVERSE CURVE SIGNS (W24-1) SHOULD BE USED INSTEAD OF THE REVERSE CURVE (W1-4) SIGNS. ARROWS ON THE 4'X8' "ALL TRAFFIC" SIGNS SHALL BE THE SAME SHAPE.
- THE NUMBER OF ARROWS ON THESE SIGNS SHALL MATCH THE NUMBER OF LANES OPEN TO TRAFFIC.

SYMBOLS

- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TYPE II BARRICADE OR DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
- W24-1-48
- W1-4R-48

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME = W:\diststd\22x34\td09.dgn	USER NAME = lejan	DESIGNED - DWS	REVISED - JAF 01-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL DETAILS FOR FREEWAY SINGLE & MULTI-LANE WEAVE			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.000 "/ IN.	DRAWN -	REVISED - JAF 02-06		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	741	698		
	PLOT DATE = 1/26/2010	CHECKED -	REVISED - SPB 01-07					TC-09		CONTRACT NO.		
		DATE - 02-87	REVISED - SPB 12-09					FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
 1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (inches) unless otherwise shown.

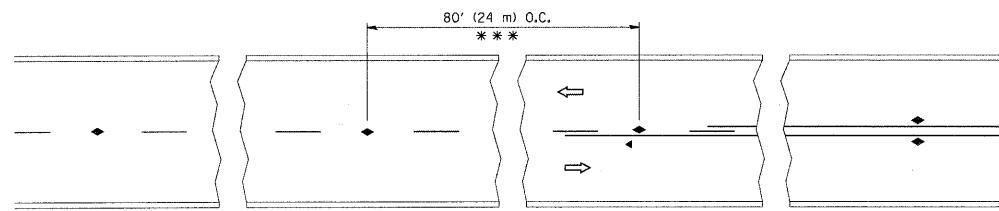
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		DRAWN -	REVISED - A. HOUSEH 03-06-96
		CHECKED -	REVISED - A. HOUSEH 10-15-96
		DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

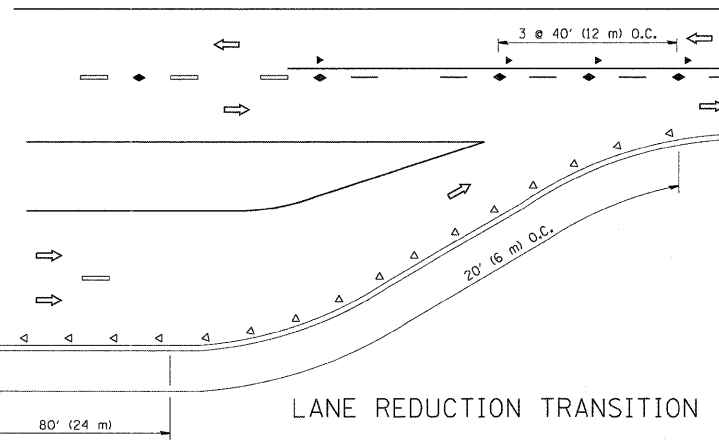
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			741	699
TC-10		CONTRACT NO.		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

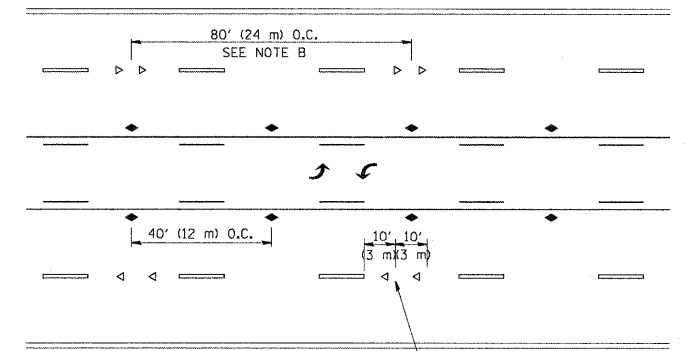


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

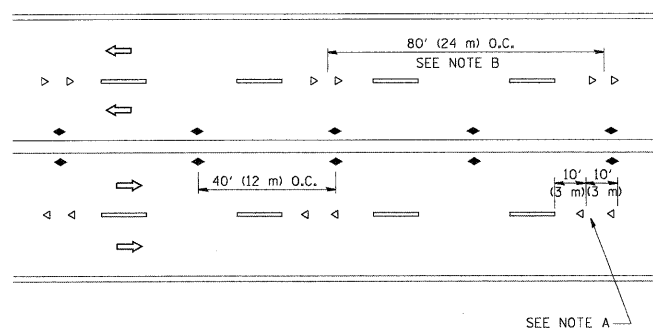
TWO-LANE/TWO-WAY



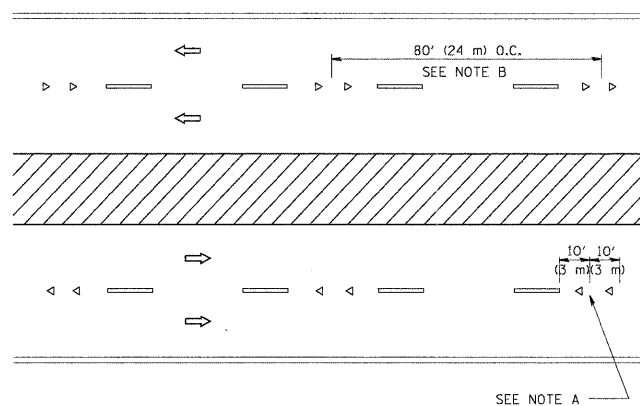
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

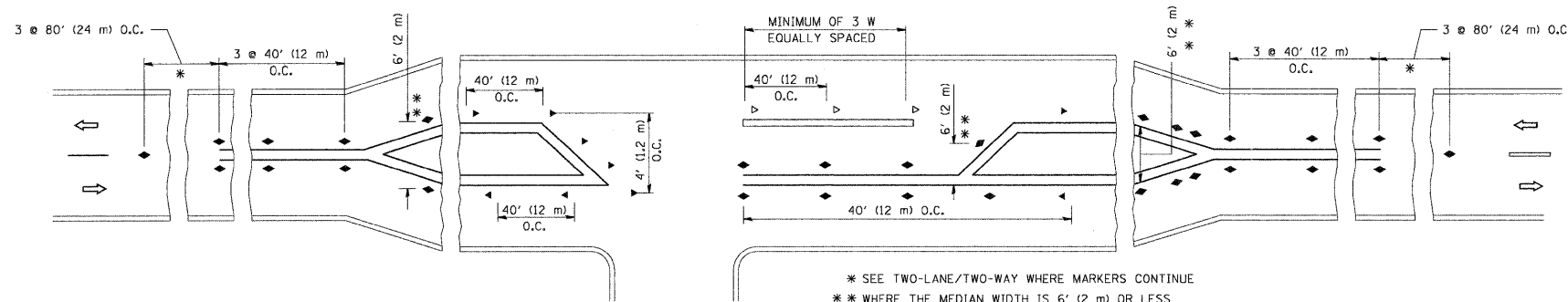
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H. (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



LEFT TURN

* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
 ** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = drivakosgn	DESIGNED -	REVISED - T. RAMMACHER 09-19-94
ct:\pw_work\p\ridot\drivakosgn\080315\to1.dgn		DRAWN -	REVISED - T. RAMMACHER 03-12-99
	PLOT SCALE = 50.000 / IN.	CHECKED -	REVISED - T. RAMMACHER 01-06-00
	PLOT DATE = 9/9/2009	DATE -	REVISED - C. JUCIUS 09-09-09

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS
 RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			741	700
TC-11			CONTRACT NO.	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				