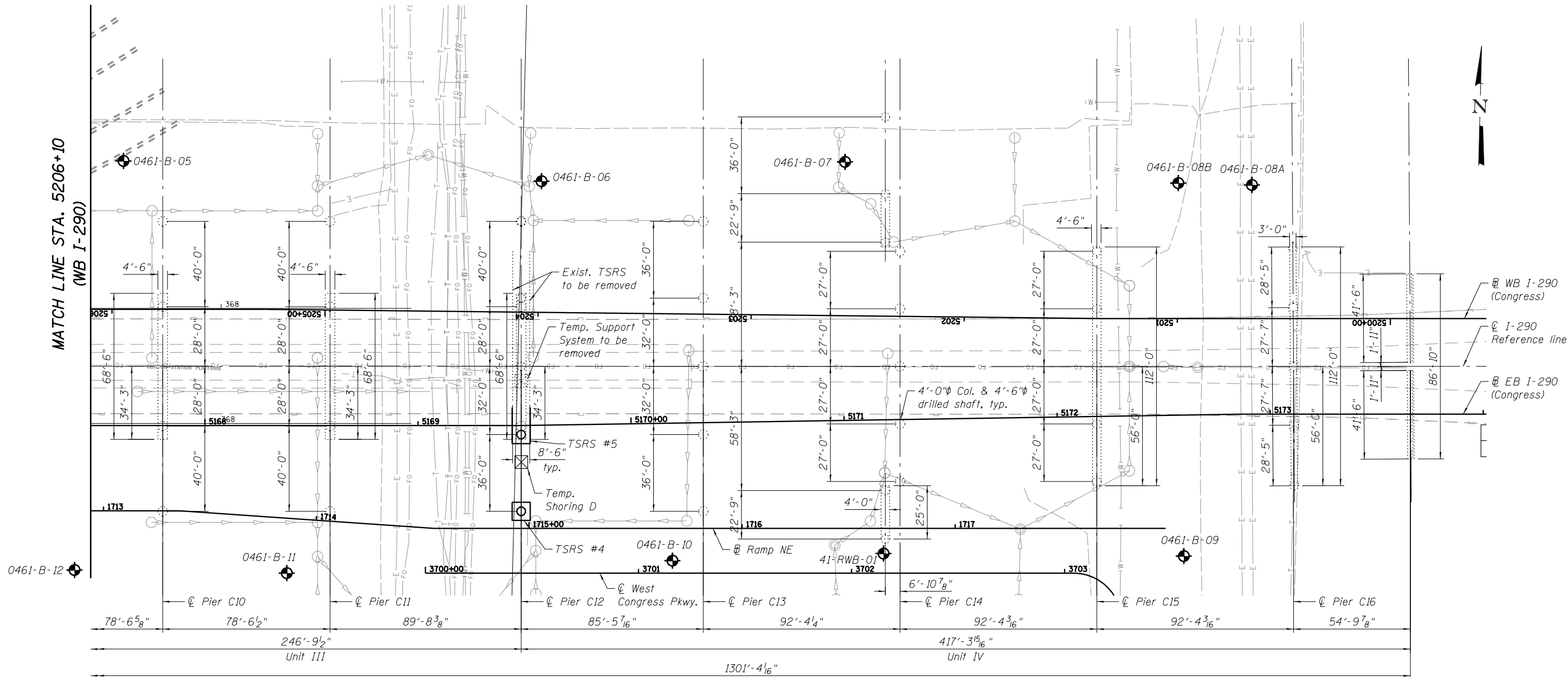




SUBSTRUCTURE LAYOUT PLAN - 2

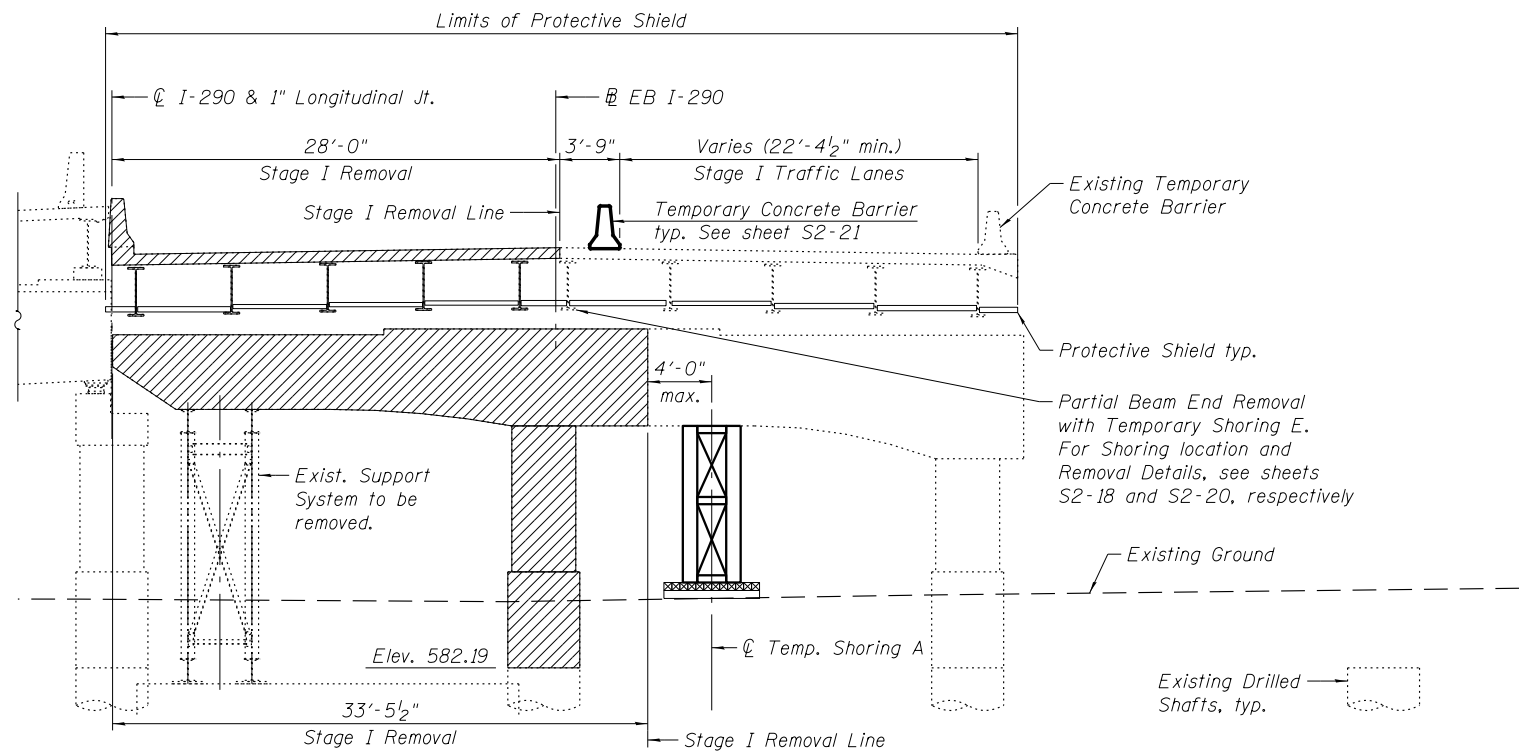
LEGEND:

- Water Line
- Electric
- Gas
- Telephone line
- Television line
- Combined Sewer
- Storm Sewer
- Soil Boring Location
- Temporary support system or temporary shoring

Note:
1. Work this sheet with S2-08.

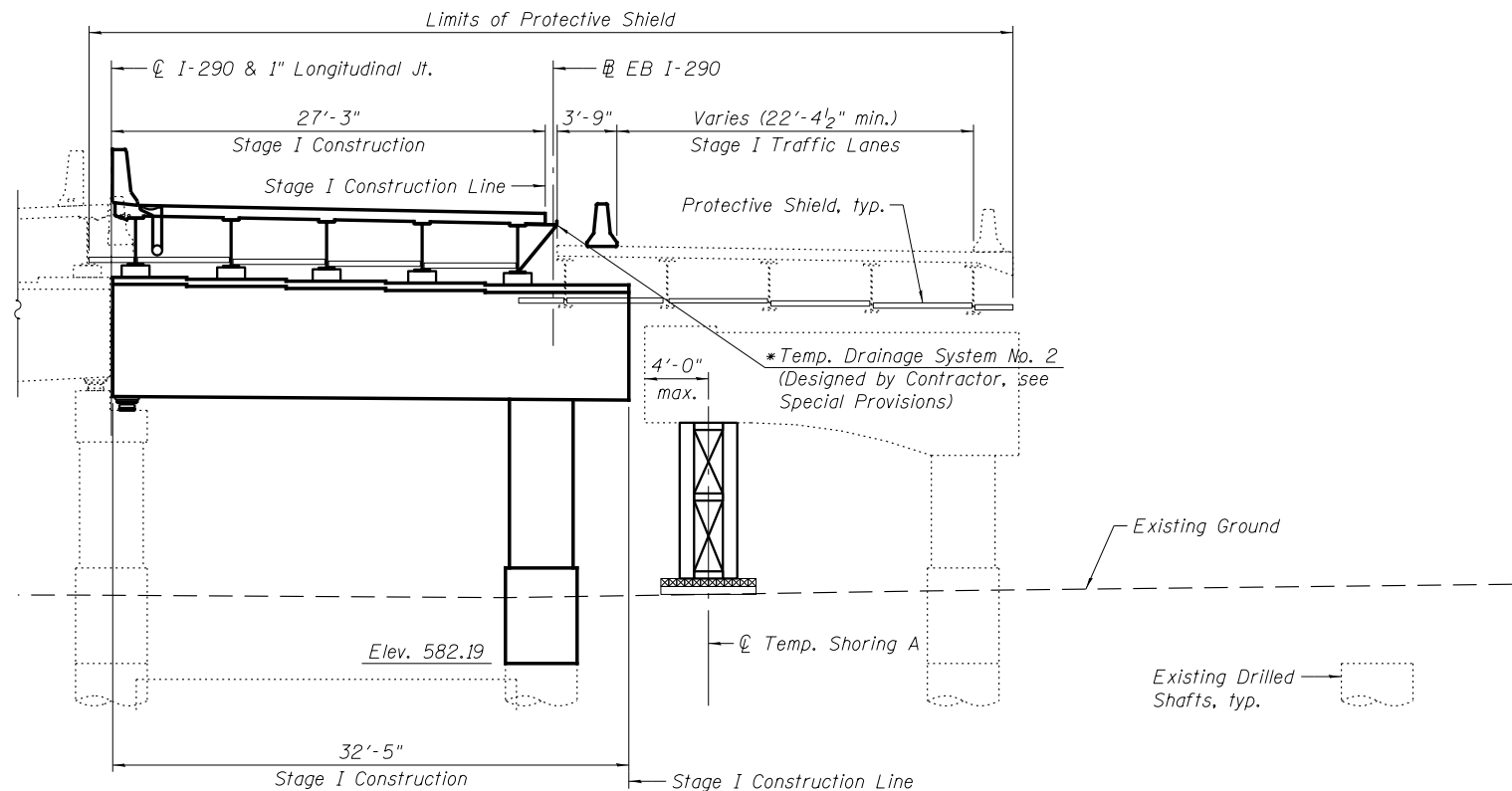
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0160461-60X75 PARSONS BRINCKERHOFF	USER NAME = pateld	DESIGNED - JZ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUBSTRUCTURE LAYOUT II STRUCTURE NO. 016-0461	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = N.T.S.	CHECKED - AH	REVISED -			90/94/290	2014-001 R&B (EB)	COOK	696	301
	PLOT DATE = 6/28/2017	DRAWN - DCP	REVISED -			CONTRACT NO. 60X75				
		CHECKED - JIG	REVISED -			ILLINOIS FED. AID PROJECT				
SHEET NO. S2-09 OF S2-137 SHEETS										



STAGE I REMOVAL - UNIT I
(Looking East, Pier C1 shown)

** For Temporary Shoring E location in plan view of Pier C1, see sheet S2-18



STAGE I CONSTRUCTION - UNIT I
(Looking East, Pier C1 shown)

* Minimum cross-sectional area of Temporary Drainage System = .35 sq. ft.

STAGE I REMOVAL - UNIT I

1. Install temporary concrete barrier as shown to locate construction work area on the north side of the existing structure.
2. Install Temporary Shoring A for pier cap at Pier C1 and Temporary Shoring E for existing eastbound Beam No. 20.
3. Install Temporary Soil Retention System at Pier C1.
4. Remove existing utilities and drainage system attached to substructure.
5. Remove the existing structure as indicated and Existing Support System on Pier C1.

STAGE I CONSTRUCTION - UNIT I

1. Repair existing Piers C2 and C3. Construct Piers C1 and C4.
2. Erect Beams 19 through 23.
3. Construct reinforced concrete deck.
4. Perform bridge deck grooving.
5. Apply protective coat for the bridge deck and parapet.
6. Provide a temporary drainage system. Connection of formwork to beam must be designed to withstand additional loading.

LEGEND

Removal of Existing Structures No. 2

BILL OF MATERIAL

Item	Unit	Quantity
Temporary Drainage System No. 2	L. Sum	1

Notes:
Horizontal dimensions are measured perpendicular to CL I-290. Stage removal and stage construction lines are different for the superstructure and substructure.
Contractor shall provide Temporary Shoring for the existing pier cap and existing Beam No. 20. The Temporary Shoring shall be approved by the Engineer. Such approval will not relieve the Contractor of responsibility for the safety of the structure. See Special Provisions.
For quantity of Temporary Concrete Barrier, see roadway plans.
For Temporary Shoring reactions and quantities, see sheets S2-16 and S2-18, respectively.
Removal of the existing temporary support system on Pier C1 shall be included in the cost of Removal of Existing Structures No. 2.

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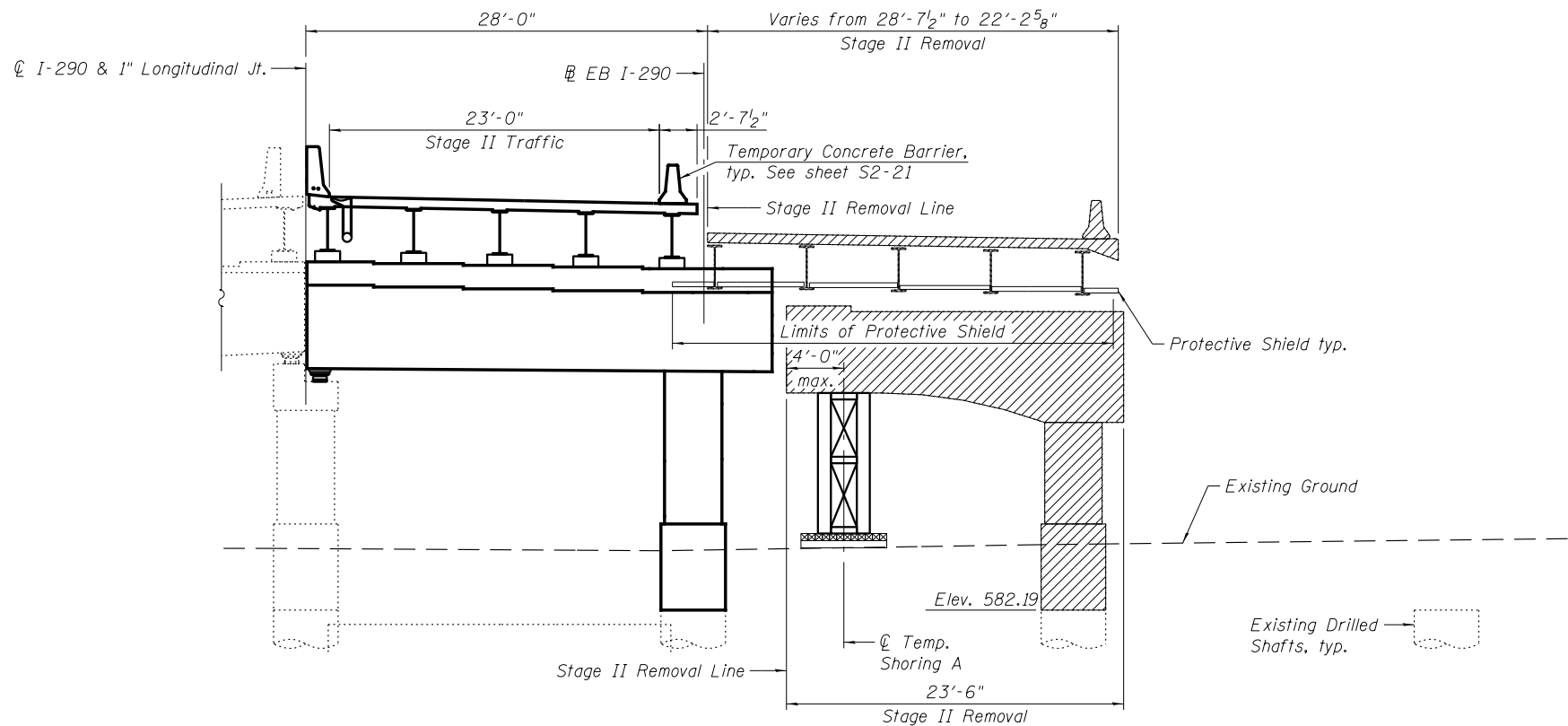
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PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

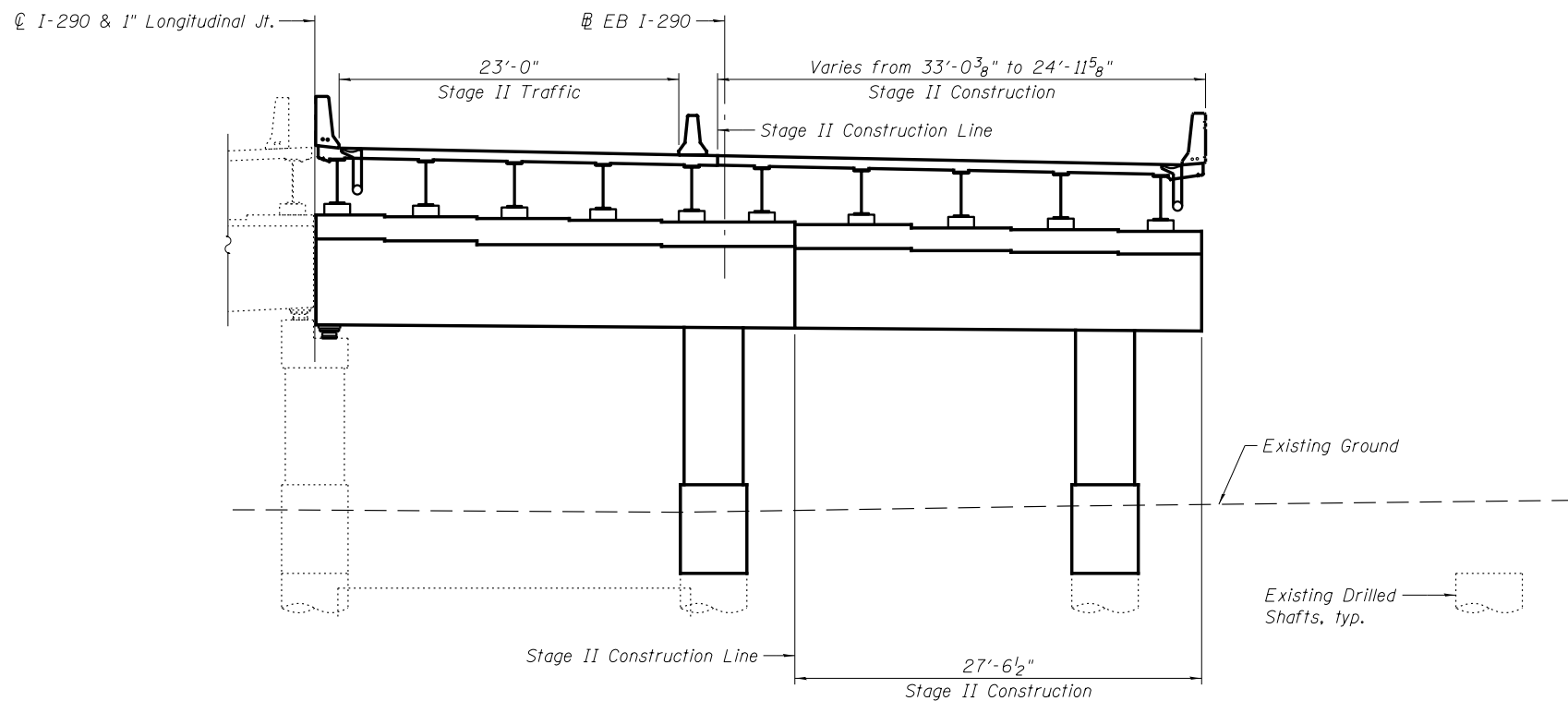
**STAGE CONSTRUCTION DETAILS I - UNIT I
STRUCTURE NO. 016-0461**

SHEET NO. S2-10 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	302
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



STAGE II REMOVAL - UNIT I
(Looking East, Pier C1 shown)



STAGE II CONSTRUCTION - UNIT I
(Looking East, Pier C1 shown)

STAGE II TRAFFIC - UNIT I

1. Install temporary concrete barrier on the new deck to locate Stage II Traffic and construction work area on the Stage I constructed portion of the bridge.

STAGE II REMOVAL - UNIT I

1. Begin removal operations on Unit I upon completion of work on Unit II and III under Stage I traffic.
2. Remove existing utilities and drainage system attached to substructure.
3. Remove the existing structure as indicated.
4. Remove Temporary Shoring A.

STAGE II CONSTRUCTION - UNIT I

1. Repair and rehabilitate existing Piers C2 and C3. Construct Piers C1 and C4.
2. Erect Beams 24 through 28.
3. Construct reinforced concrete deck.
4. Perform bridge deck grooving.
5. Apply protective coat for the bridge deck and parapet.

LEGEND

Removal of Existing Structures No. 2

Notes:
Horizontal dimensions are measured perpendicular to CL I-290 .
Stage removal and stage construction lines are different for the superstructure and substructure.
Contractor shall provide Temporary Shoring for the existing pier cap. The Temporary Shoring shall be approved by the Engineer. Such approval will not relieve the Contractor of responsibility for the safety of the structure. See Special Provisions.
For quantity of Temporary Concrete Barrier, see roadway plans.
For Temporary Shoring reactions and quantities, see sheets S2-16 and S2-18, respectively.

**PARSONS
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PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

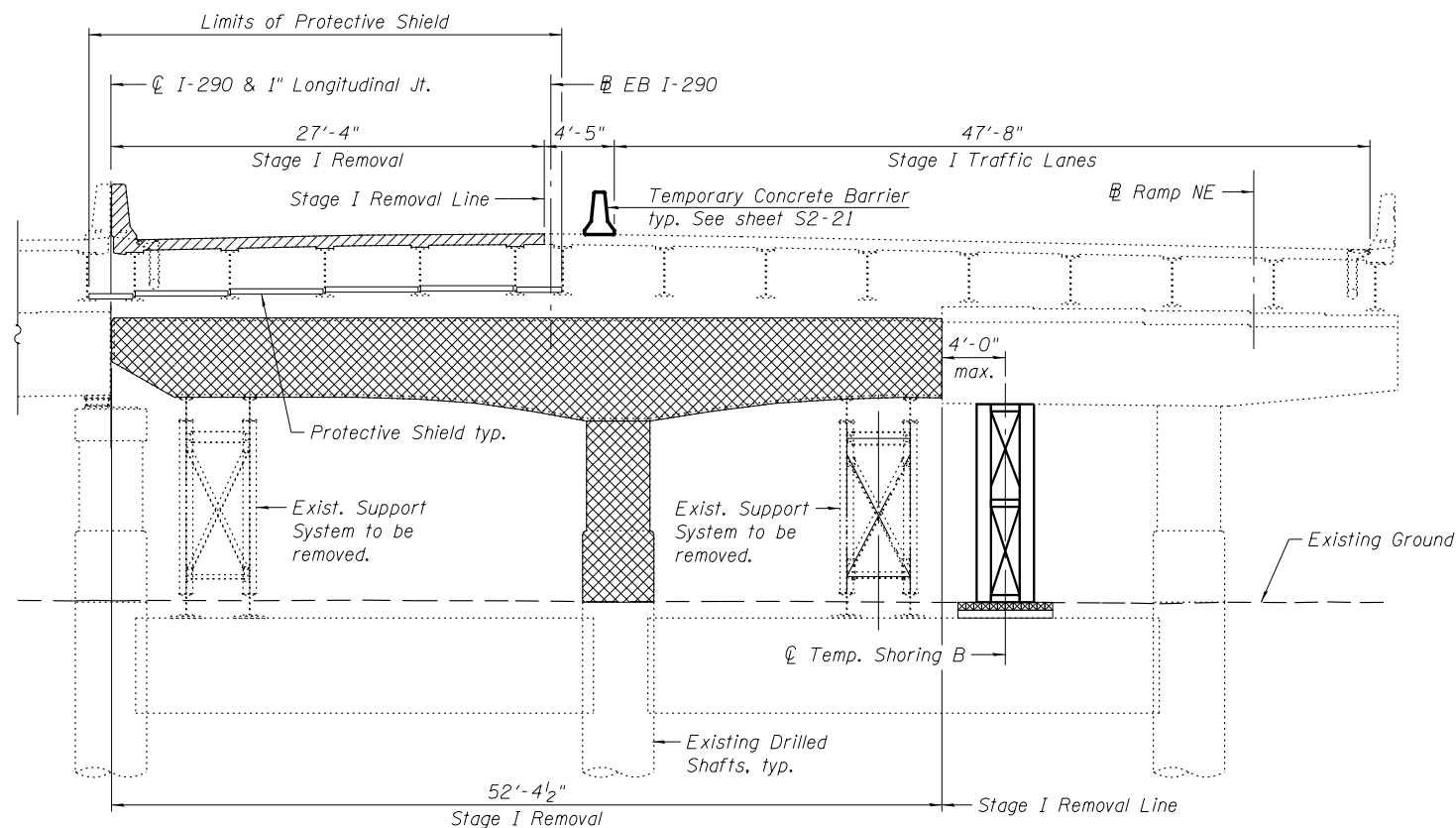
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS II - UNIT I
STRUCTURE NO. 016-0461**

SHEET NO. S2-11 OF S2-137 SHEETS

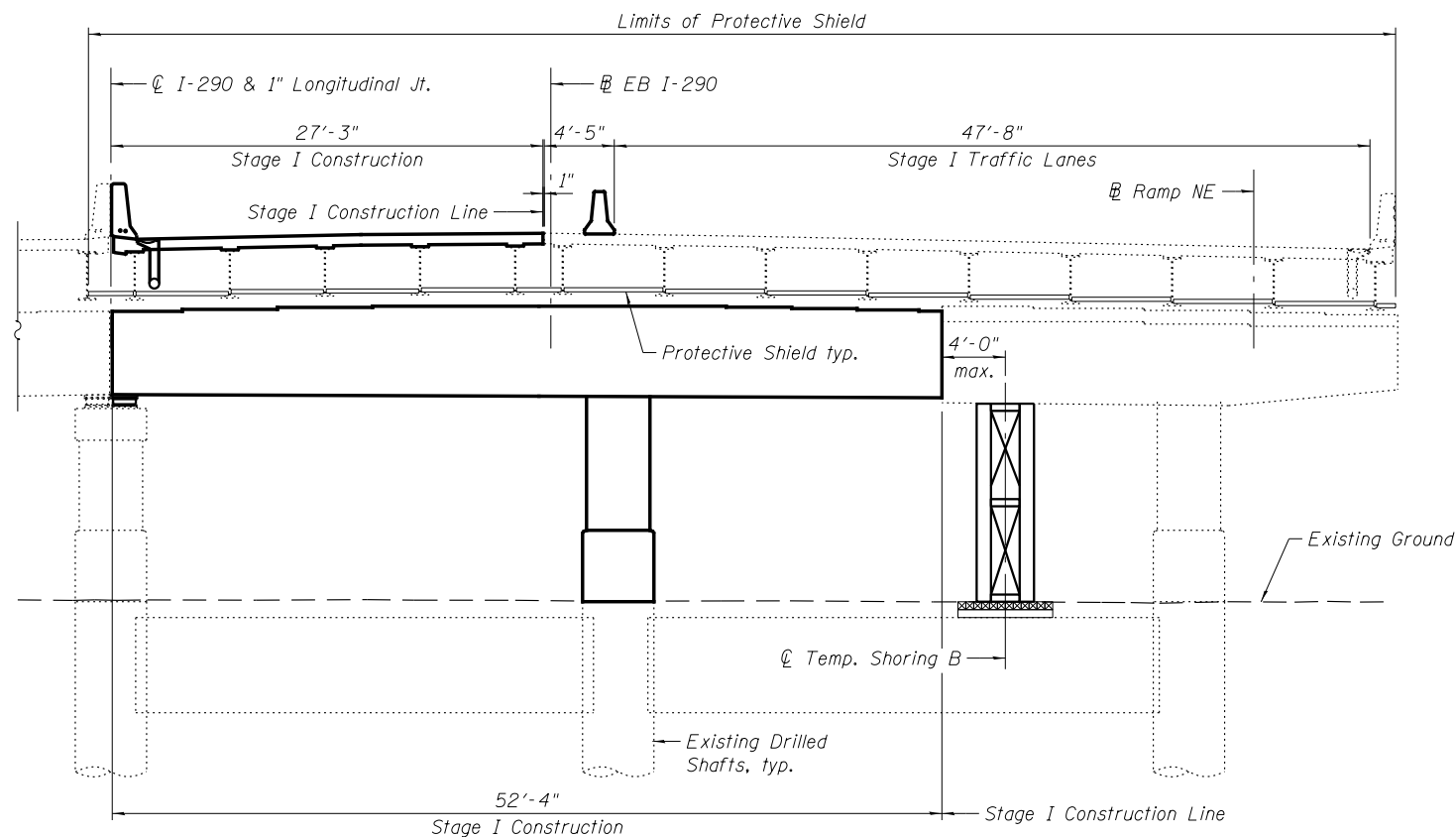
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	303
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

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STAGE I REMOVAL - UNIT II

(Looking East, Pier C4 shown)



STAGE I CONSTRUCTION - UNIT II

(Looking East, Pier C4 shown)

STAGE I REMOVAL - UNIT II

1. Install temporary concrete barrier as shown to locate construction work area on the north side of the existing structure.
2. Install Temporary Shoring B for Pier C4 and Temporary Shoring F and H for existing eastbound Beams 15 thru 23A. For shoring location, see sheet S2-18.
3. Remove existing utilities and drainage system attached to substructure.
4. Remove the existing structure as indicated and Existing Support System on Pier C4.

STAGE I CONSTRUCTION - UNIT II

1. Repair existing cap, columns and reconstruct beam seats at Piers C5 thru C8. Construct Piers C4 and C9.
2. Remove and Replace existing bearings.
3. Install Shear Stud Connectors to existing beams and set in new bearings.
4. Construct reinforced concrete deck.
5. Perform bridge deck grooving.
6. Apply protective coat for the bridge deck and parapet.

LEGEND

-  Removal of Existing Concrete Deck
-  Removal of Existing Structures No. 2

Notes:
Horizontal dimensions are measured perpendicular to CL I-290 .
Stage removal and stage construction lines are different for the superstructure and substructure.
Contractor shall provide temporary shoring and cribbing for the existing eastbound Beams 15 thru 23A. Cost included with Temporary Shoring. See Special Provisions.
For quantity of Temporary Concrete Barrier, see roadway plans.
For Temporary Shoring reactions and quantities, see sheets S2-16 and S2-18, respectively.
Removal of the existing temporary support system on Pier C4 shall be included in the cost of Removal of Existing Structures No. 2.

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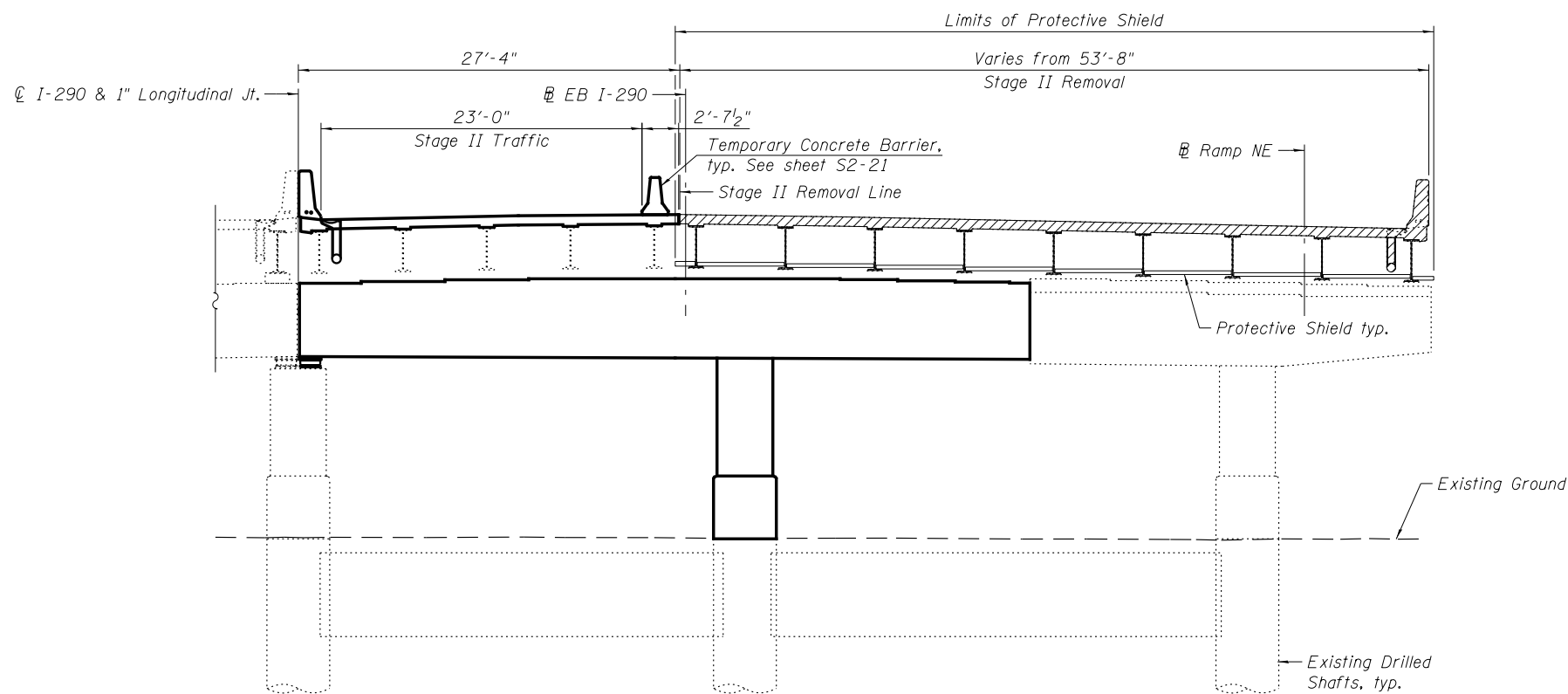
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

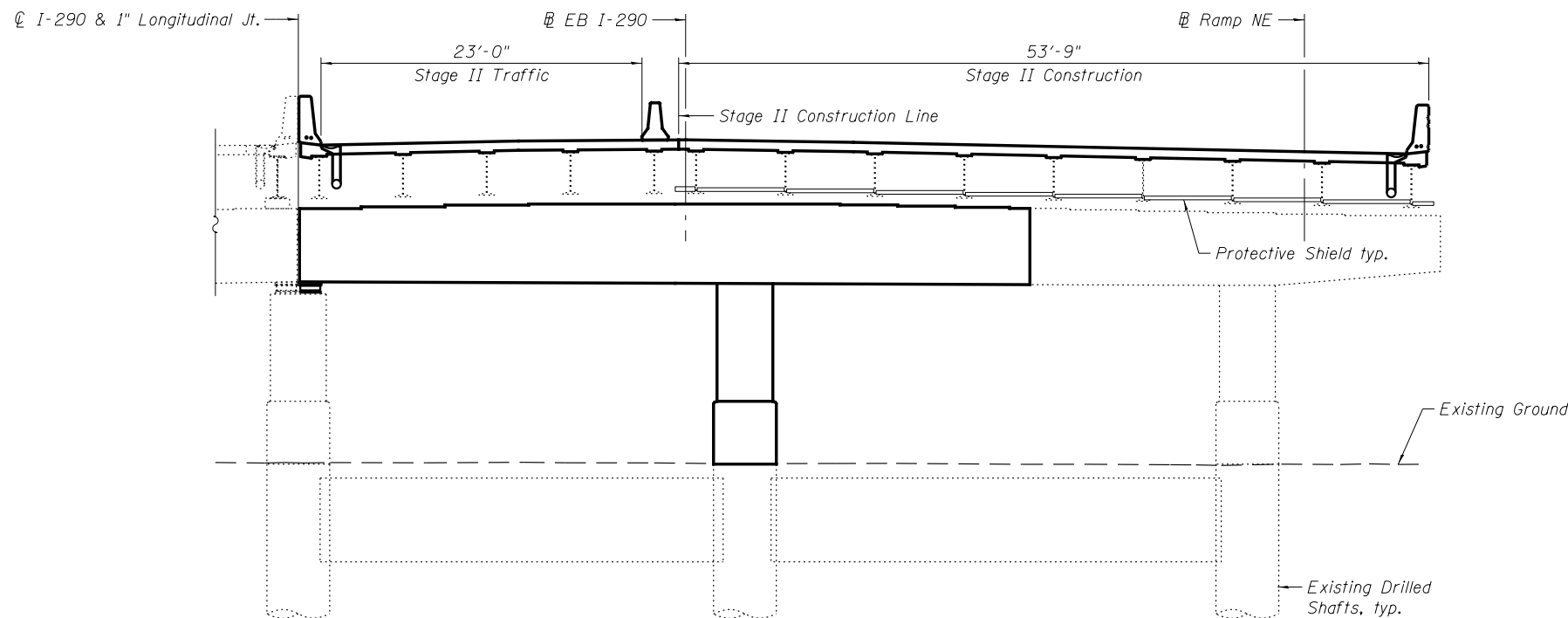
**STAGE CONSTRUCTION DETAILS I - UNIT II
STRUCTURE NO. 016-0461**

SHEET NO. S2-12 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	304
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



STAGE II REMOVAL - UNIT II
(Looking East, Pier C4 shown)



STAGE II CONSTRUCTION - UNIT II
(Looking East, Pier C4 shown)

STAGE II TRAFFIC - UNIT II

1. Install temporary concrete barrier on the new deck to locate Stage II Traffic and construction work area on the Stage I constructed portion of the bridge.

STAGE II REMOVAL - UNIT II

1. Remove the existing deck as indicated.

STAGE II CONSTRUCTION - UNIT II

1. Repair existing cap, columns and reconstruct beam seats at Piers C5 thru C8. Construct Pier C9.
2. Remove and Replace existing bearings.
3. Install Shear Stud Connectors to existing beams and set in new bearings.
4. Construct reinforced concrete deck.
5. Perform bridge deck grooving.
6. Apply protective coat for the bridge deck and parapet.

LEGEND

 Removal of Existing Concrete Deck

Notes:
Horizontal dimensions are measured perpendicular to $\varnothing$ I-290.
Stage removal and stage construction lines are different for the superstructure and substructure.
For quantity of Temporary Concrete Barrier, see roadway plans.

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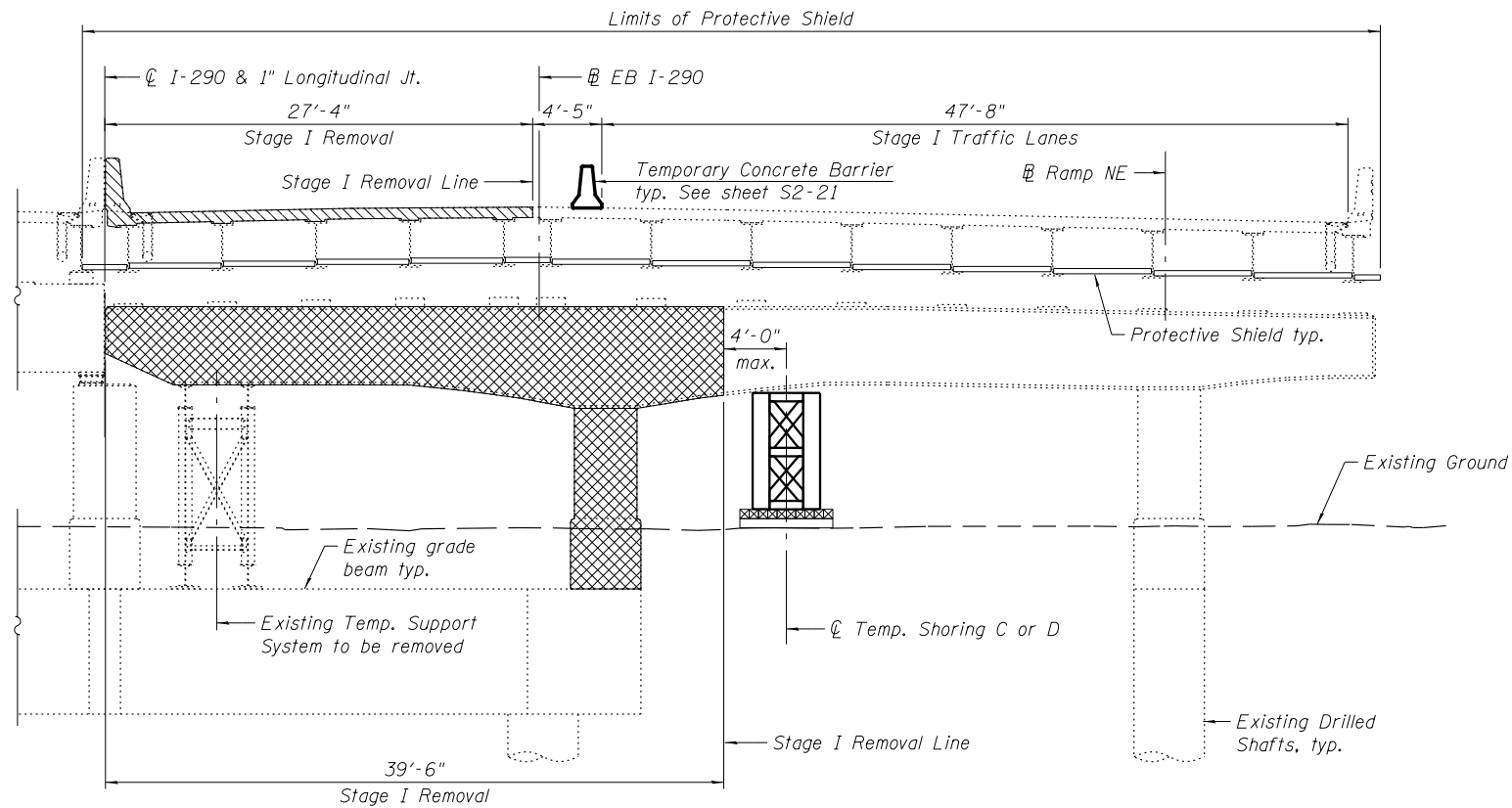
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS II - UNIT II
STRUCTURE NO. 016-0461**

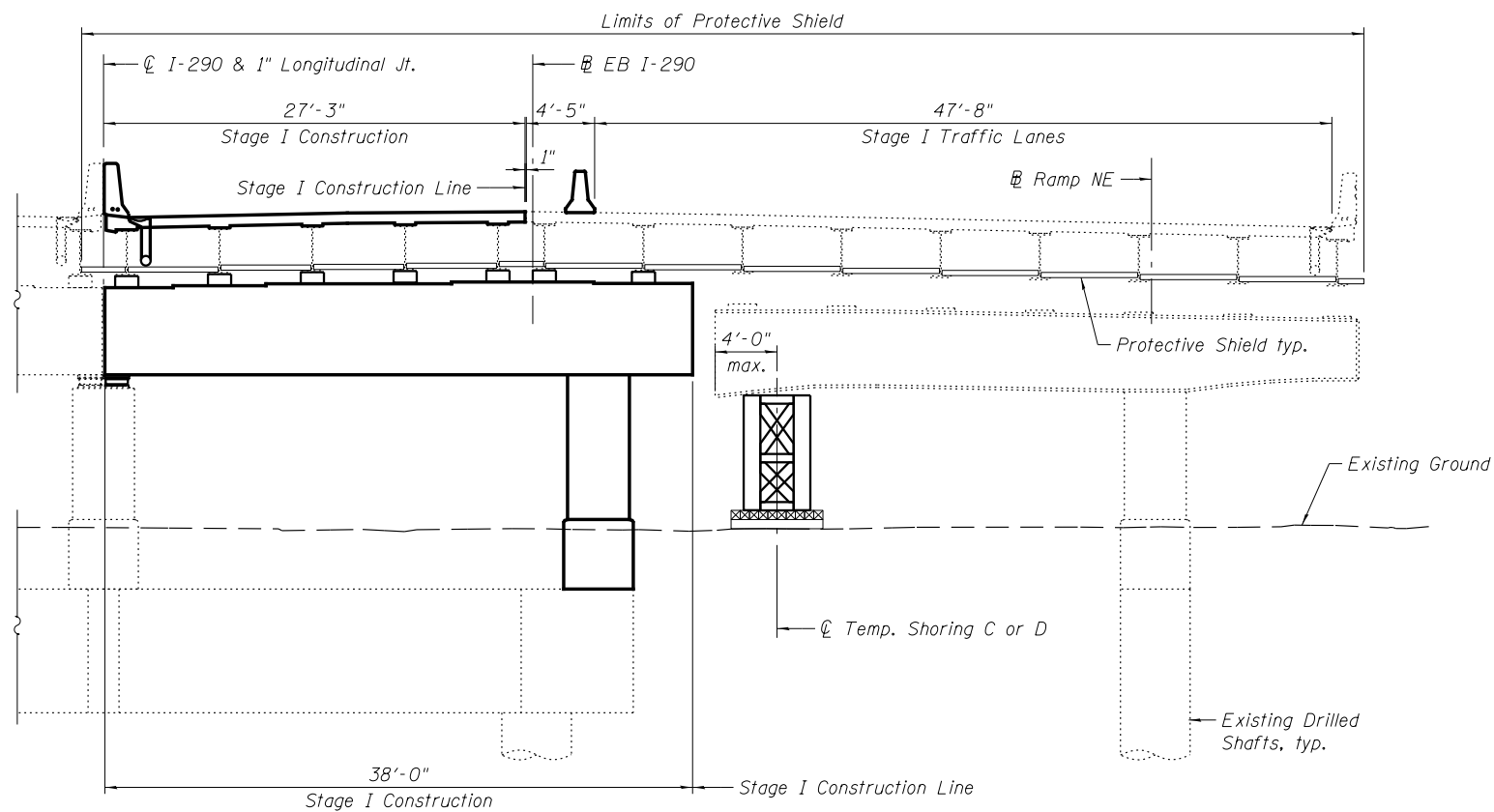
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90/94/290	2014-001 R&B (EB)	COOK	696	305
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



STAGE I REMOVAL - UNIT III

(Looking East, Pier C9 shown, Pier C12 similar)



STAGE I CONSTRUCTION - UNIT III

(Looking East, Pier C9 shown, Pier C12 similar)

STAGE I REMOVAL - UNIT III

1. Install temporary concrete barrier as shown to locate construction work area on the north side of the existing structure.
2. Install Temporary Shoring G and J for existing eastbound Beams 15 thru 21 and Temporary Shoring C or D for existing Pier Cap. For shoring location, see sheet S2-18.
3. Remove existing utilities and drainage system attached to substructure.
4. Remove the existing deck as indicated.

STAGE I CONSTRUCTION - UNIT III

1. Repair existing cap, columns and reconstruct beam seats at Piers C10 and C11. Construct Piers C9 and C12.
2. Remove and Replace existing bearings.
3. Install Shear Stud Connectors to existing beams and set in new bearings.
4. Construct reinforced concrete deck.
5. Perform bridge deck grooving.
6. Apply protective coat for the bridge deck and parapet.

LEGEND:

-  Removal of Existing Concrete Deck
-  Concrete Removal

Notes:
Horizontal dimensions are measured perpendicular to $\angle$ I-290.
Stage removal and stage construction lines are different for the superstructure and substructure.
Contractor shall provide temporary shoring and cribbing for the existing eastbound Beams 15 thru 21. Cost included with Temporary Shoring. See Special Provisions.
Contractor shall provide Temporary Shoring for the existing pier cap. The Temporary Shoring shall be approved by the Engineer. Such approval will not relieve the Contractor of responsibility for the safety of the structure. See Special Provisions.
For quantity of Temporary Concrete Barrier, see roadway plans.
For Temporary Shoring reactions and quantities, see sheets S2-16 and S2-18, respectively.
Removal of existing temporary support system at Piers C9 and C-12 shall be included with Concrete Removal.

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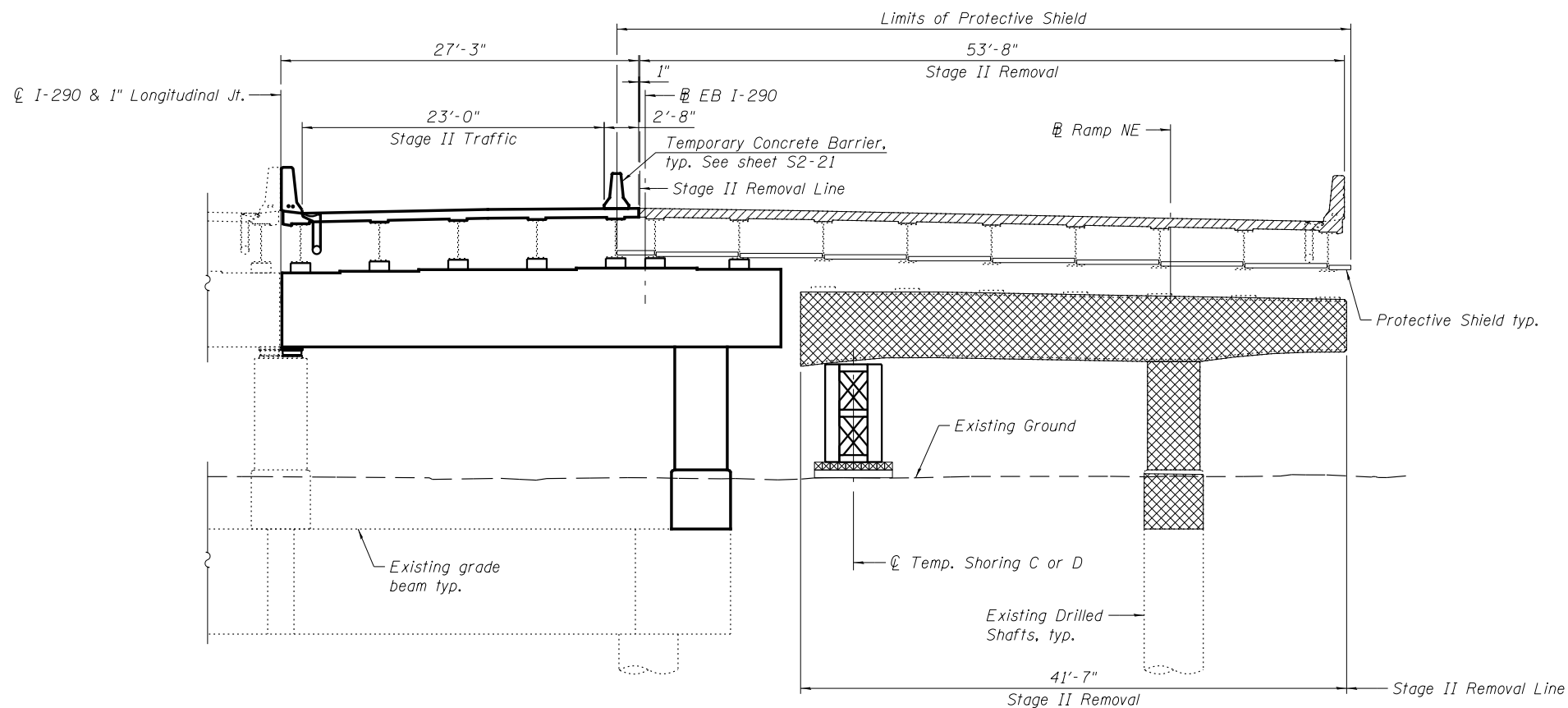
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS I - UNIT III
STRUCTURE NO. 016-0461**

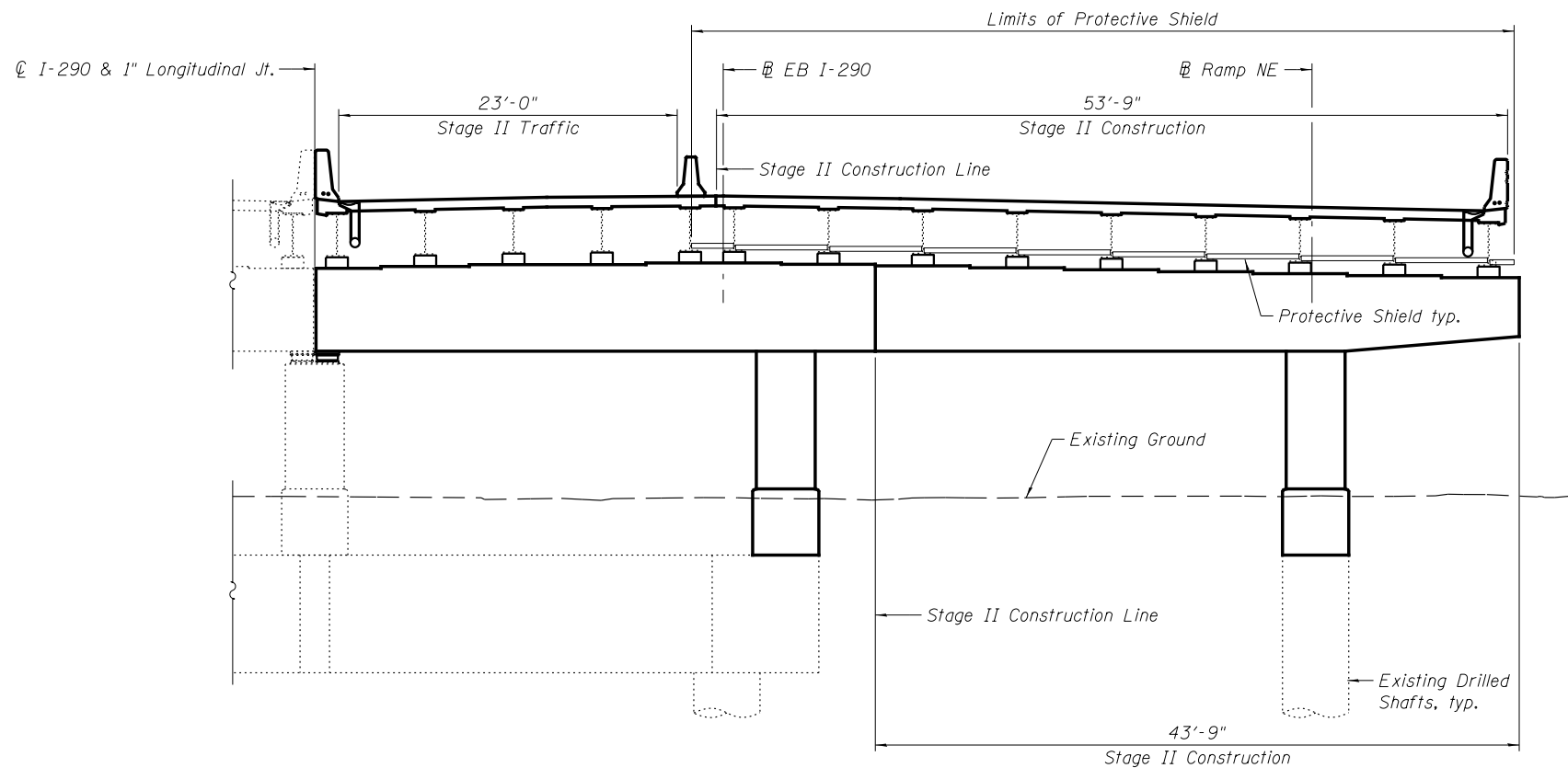
SHEET NO. S2-14 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	306
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



STAGE II REMOVAL - UNIT III

(Looking East, Pier C9 shown, Pier C12 similar)



STAGE II CONSTRUCTION - UNIT III

(Looking East, Pier C9 shown, Pier C12 similar)

STAGE II REMOVAL - UNIT III

1. Install temporary concrete barrier on new deck to locate Stage II Traffic and construction work area on the Stage I Constructed portion of the bridge.
2. Install Temporary Shoring G and J for existing eastbound Beams 22 thru 28. For shoring locations, see sheet S2-18.
3. Remove the existing deck as indicated and Temporary Shoring C and D.

STAGE II CONSTRUCTION - UNIT III

1. Repair existing cap, columns and reconstruct beam seats at Piers C10 thru C11. Construct Piers C9 and C12.
2. Remove and Replace existing bearings.
3. Install Shear Stud Connectors to existing beams and set in new bearings.
4. Construct reinforced concrete deck and expansion joints.
5. Perform bridge deck grooving.
6. Apply protective coat for the bridge deck and parapet.

LEGEND

Removal of Existing Concrete Deck

Concrete Removal

Notes:
Horizontal dimensions are measured perpendicular to CL I-290.
Stage removal and stage construction lines are different for the superstructure and substructure.
Contractor shall provide temporary shoring and cribbing for the existing eastbound Beams 22 thru 28. Cost included with Temporary Shoring. See Special Provisions.
For quantity of Temporary Concrete Barrier, see roadway plans.
For Temporary Shoring reactions and quantities, see sheets S2-16 and S2-18, respectively.

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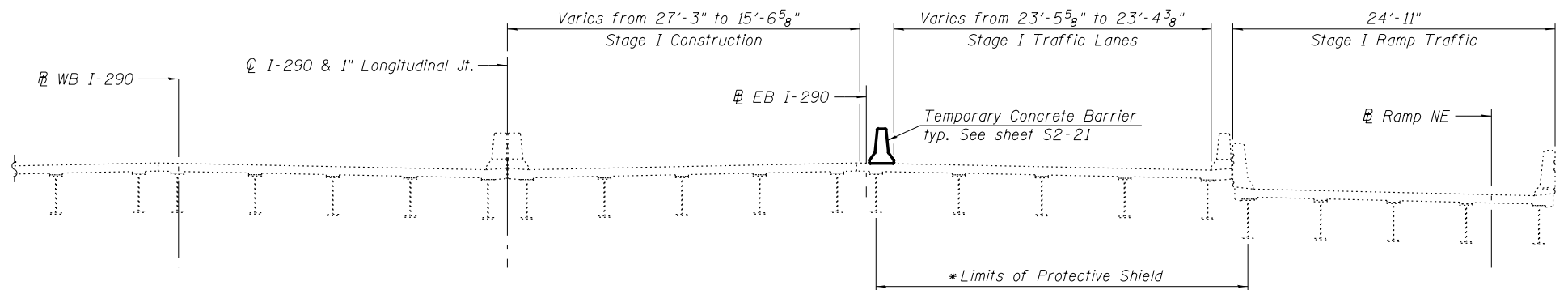
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS II - UNIT III
STRUCTURE NO. 016-0461**

SHEET NO. S2-15 OF S2-137 SHEETS

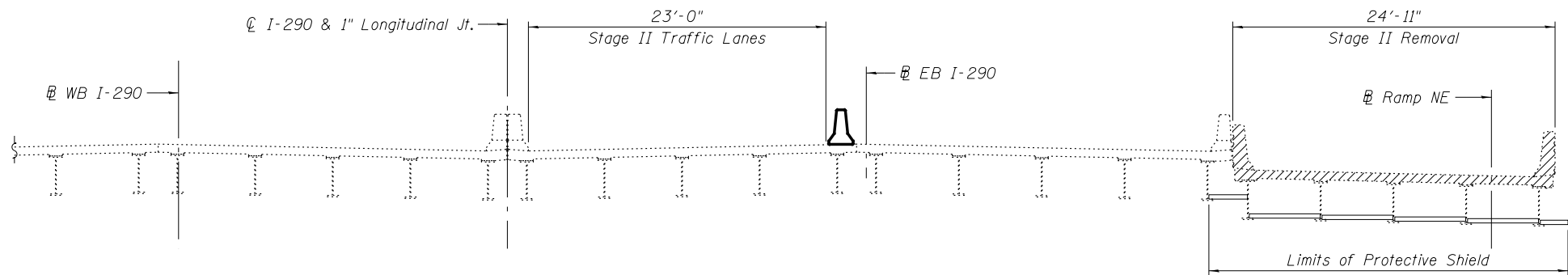
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90/94/290	2014-001 R&B (EB)	COOK	696	307
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

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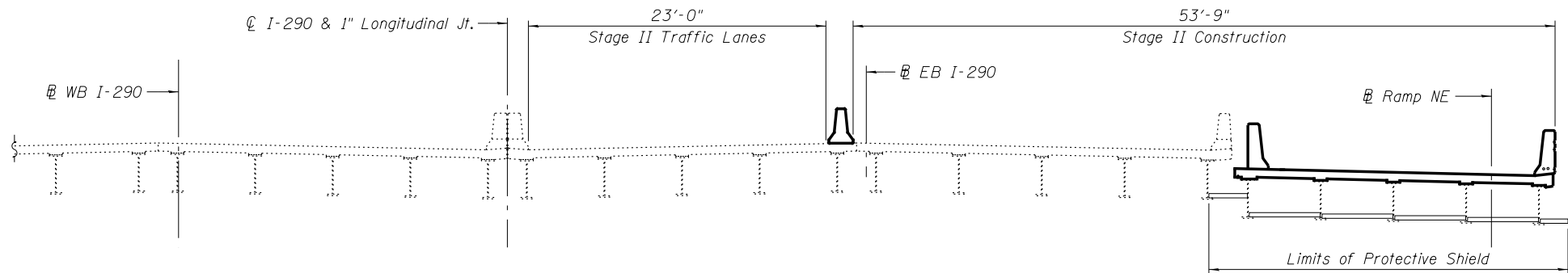


* Protective Shield in Stage I Construction as required for Deck Slab Repairs.

STAGE I CONSTRUCTION - UNIT IV (Looking East)



STAGE II REMOVAL - UNIT IV (Looking East)



STAGE II CONSTRUCTION - UNIT IV (Looking East)

SERVICE REACTION TABLE FOR TEMPORARY SHORING OF EXISTING PIERS				
Location	Pier C1	Pier C4	Pier C9	Pier C12
Temp. Shoring	A	B	C	D
$\bar{Q}$ (k)	368.4	76.9	274.7	380.8
$\bar{L}$ (k)	131.6	60.0/-41.3	93.7	120.9
Imp. (k)	0.0	0.0	0.0	0.0
Total (k)	500.0	136.9	368.4	501.7

SERVICE REACTION TABLE FOR TEMPORARY SHORING OF EXISTING BEAMS *						
Location	Exist. Beam at Pier C1	Pier C4 (East Side)	Pier C9 (East Side)	Pier C9 (West Side)	Pier C12 (East Side)	Pier C12 (West Side)
Temp. Shoring	E	F	G	H	I	J
$\bar{Q}$ (k)	34.1	28.3	37.3	28.3	36.6	44.6
$\bar{L}$ (k)	60.6	45.4	46.4	45.4	47.1	47.4
Imp. (k)	23.4	11.8	11.5	11.8	11.2	11.1
Total (k)	118.1	85.6	95.2	85.6	94.9	103.1

* Reactions shown represent the maximum reaction for a single beam.

STAGE I CONSTRUCTION - UNIT IV

1. Install temporary concrete barrier as shown to locate construction work area on the north side of the existing structure.
2. Install Temporary Shoring I for existing eastbound Beams 15 thru 21. For shoring location, see sheet S2-18.
3. Repair concrete deck and reconstruct deck expansion joint at Pier C12.

STAGE II REMOVAL AND CONSTRUCTION - UNIT IV

1. Install Temp. Shoring and Cribbing for existing eastbound Beams 22 thru 28A.
2. Remove Exit Ramp deck.
3. Repair existing cap, columns and reconstruct beam seats at Piers C13, C15 and C16.
4. Remove and Replace existing bearings at Piers C12, C13, C15 and C16.
5. Install Shear Stud Connectors to existing beams (Exit Ramp only) and set in new bearings.
6. Construct reinforced concrete deck (Exit Ramp only) and deck expansion joint at Pier C12.
7. Perform bridge deck grooving (Exit Ramp only).
8. Apply protective coat for the bridge deck and parapet (Exit Ramp only).

Notes:
Horizontal dimensions are measured perpendicular to $\bar{Q}$ I-290.
For quantity of Temporary Concrete Barrier, see roadway plans.
Contractor shall provide Temporary Shoring for the existing eastbound Beams No. 15 thru 28A at Pier C12. Cost included with Temporary Shoring. See Special Provisions.
For temporary shoring quantities, see sheet S2-18.

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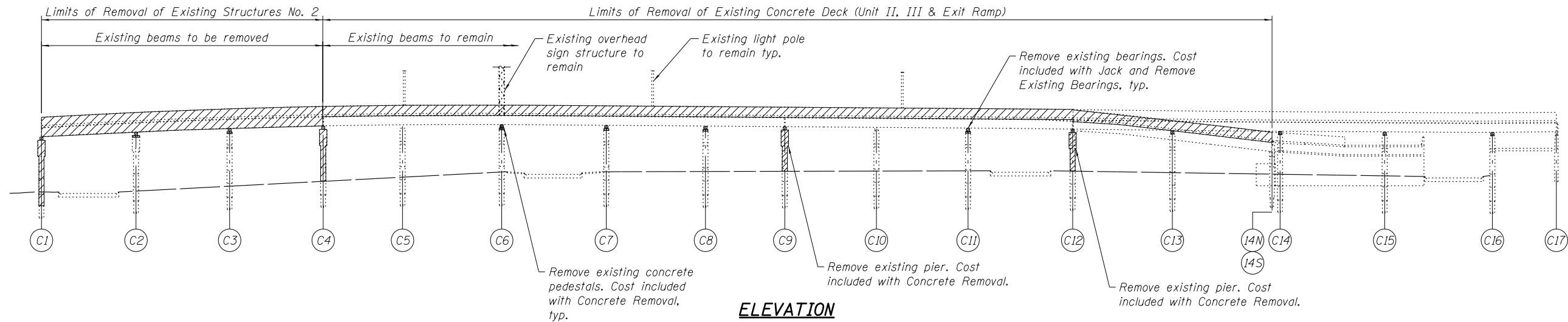
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DEPARTMENT OF TRANSPORTATION**

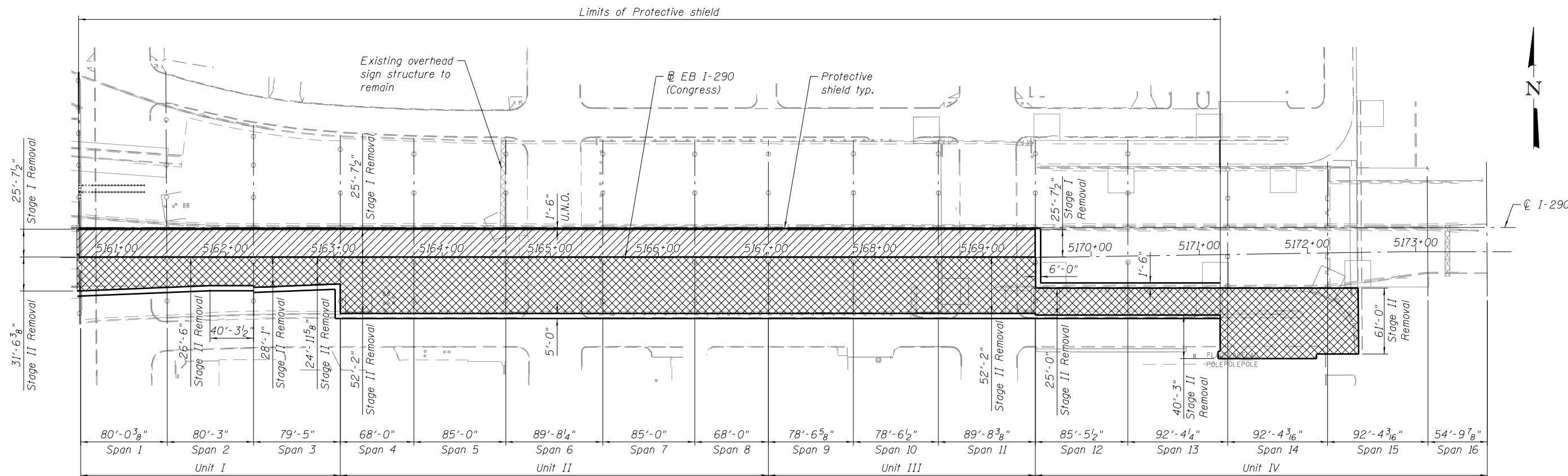
**STAGE CONSTRUCTION DETAILS - UNIT IV & EXIT RAMP
STRUCTURE NO. 016-0461**

SHEET NO. S2-16 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	308
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



ELEVATION



PLAN

LEGEND:

- Stage I Removal
- Stage II Removal
- Protective Shield

BILL OF MATERIAL

Item	Unit	Quantity
Removal of Existing Structures No. 2	Each	1
Removal of Existing Concrete Deck	Each	3
* Protective Shield	Sq Yd	8,198

* Protective Shield quantity includes areas for Deck Slab Repairs occurring within Unit IV.

Notes:
All superstructure and substructure removal (including Piers C1 & C4) and miscellaneous items such as existing drainage system, utilities, etc. attached to the structure occurring within Unit I shall be included in the cost of Removal of Existing Structures No. 2. See Special Provisions.
For additional removal details and quantities, see sheet S2-18 thru S2-20.

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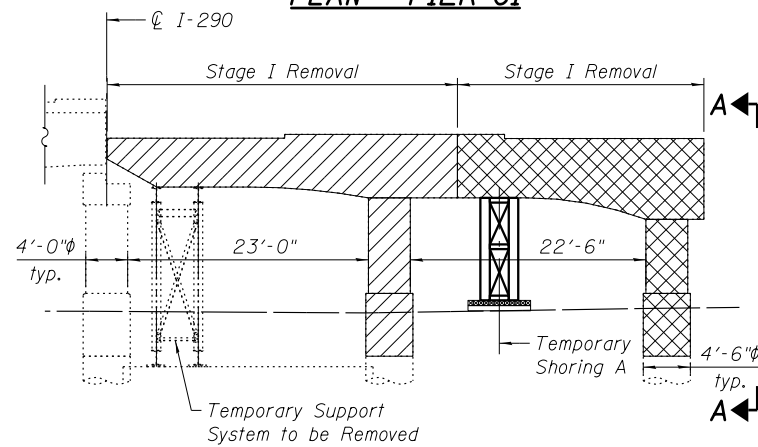
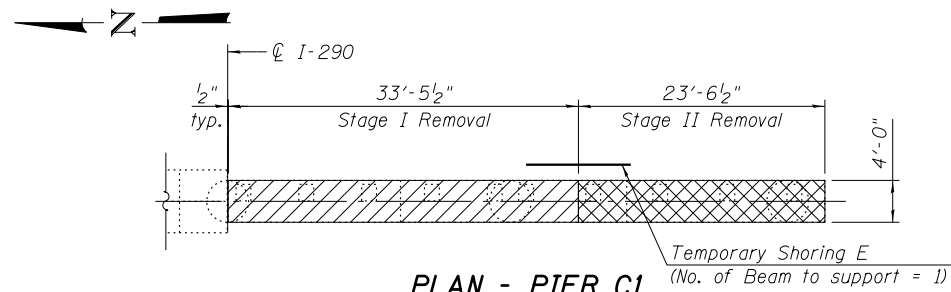
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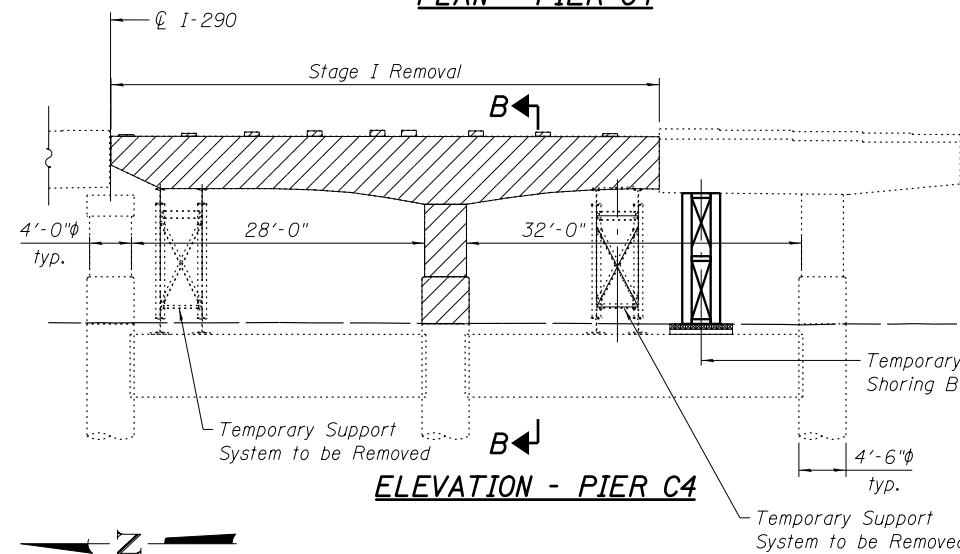
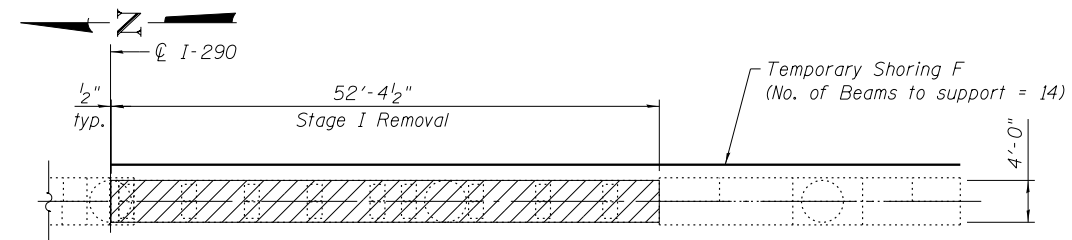
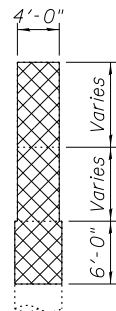
EXISTING STRUCTURE REMOVAL DETAILS I
STRUCTURE NO. 016-0461

SHEET NO. S2-17 OF S2-137 SHEETS

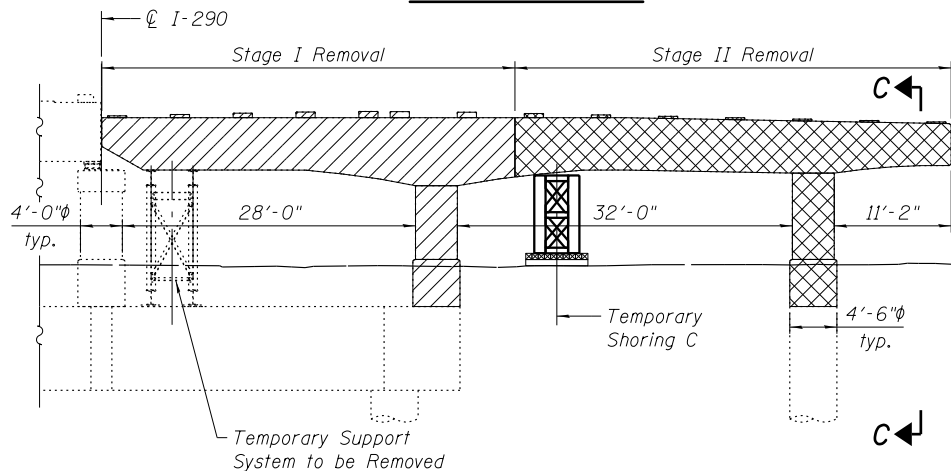
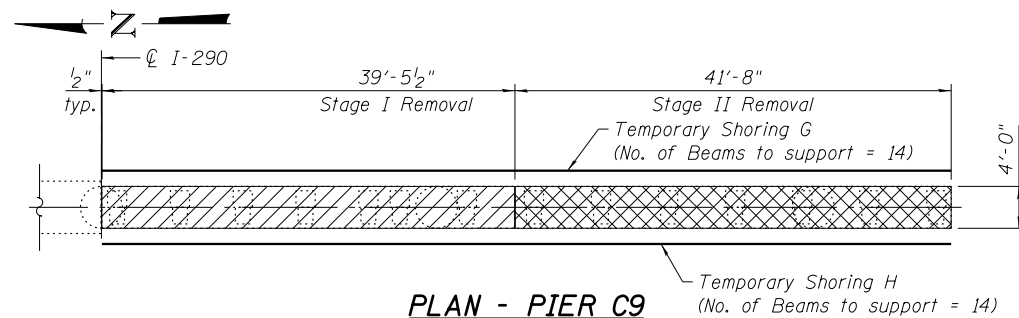
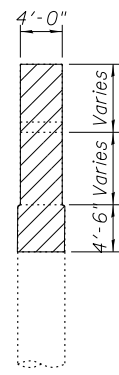
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CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



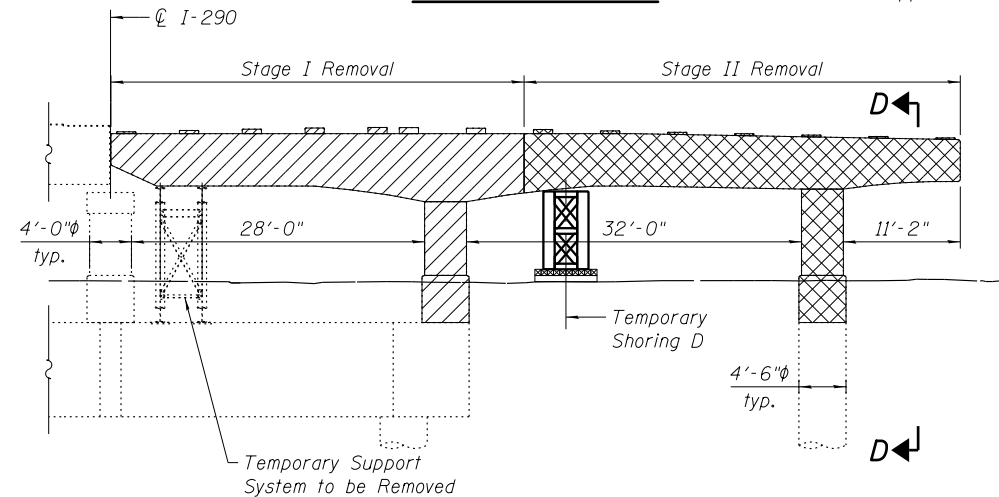
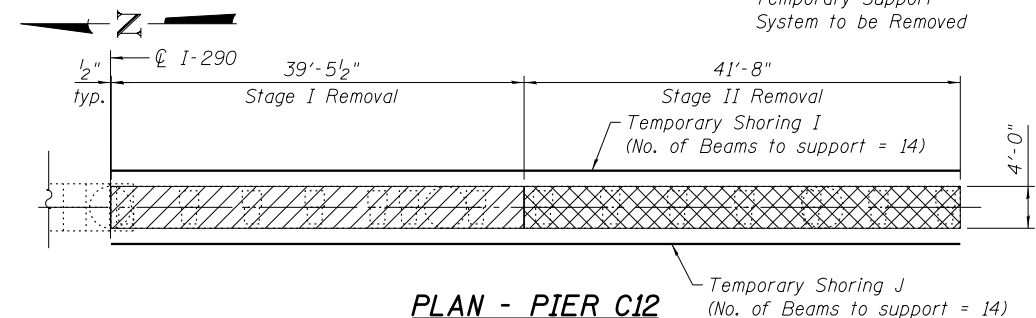
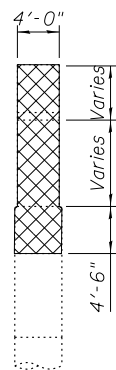
SECTION A-A



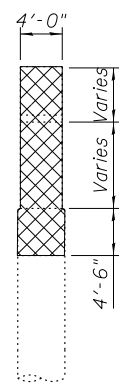
SECTION B-B



SECTION C-C



SECTION D-D



Notes:

- All plan and elevation views are looking East.
- See sheet S2-17, for stage removal plan.
- Removal of Piers C1 and C4 shall be included in the cost of Removal of Existing Structures No. 2.
- Removal of Piers C9 and C12 shall be included in the cost of Concrete Removal.
- Temporary Shorings A, B, C, and D are required to support the existing pier caps at Piers C1, C4, C9, and C12, respectively, during Stage I Removal. Temporary Shorings E thru J are required to support existing beams affected by pier removal and reconstruction operations during each stage. See Special Provisions.
- See sheet S2-16, for Temporary Shoring reactions.

LEGEND:

- Stage I Removal
- Stage II Removal

BILL OF MATERIAL

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	149.6
Temporary Shoring	Each	10

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USER NAME = pateld	DESIGNED - IJL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - JZ	REVISED -
PLOT DATE = 6/28/2017	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

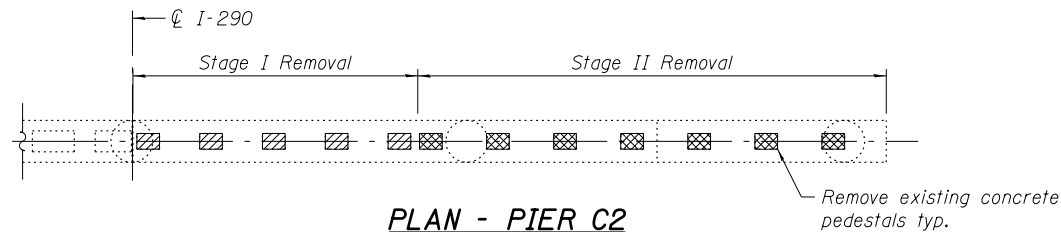
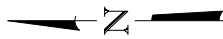
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE REMOVAL DETAILS II
STRUCTURE NO. 016-0461

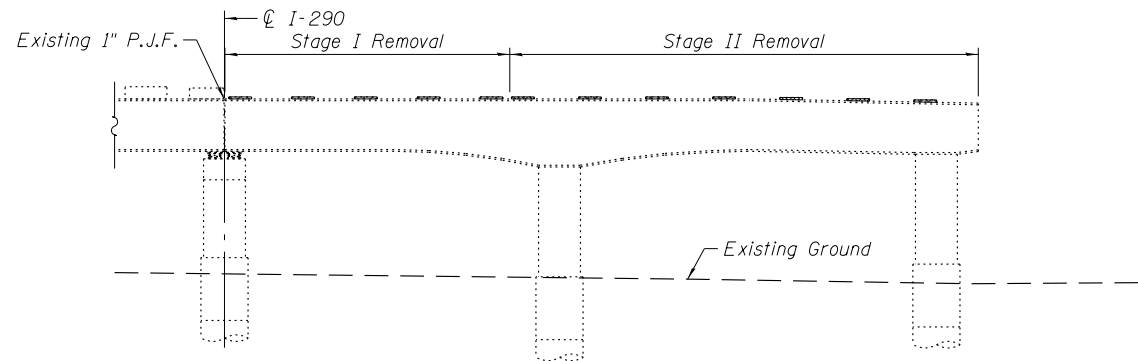
SHEET NO. S2-18 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	310
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-S018-ESR.dgn

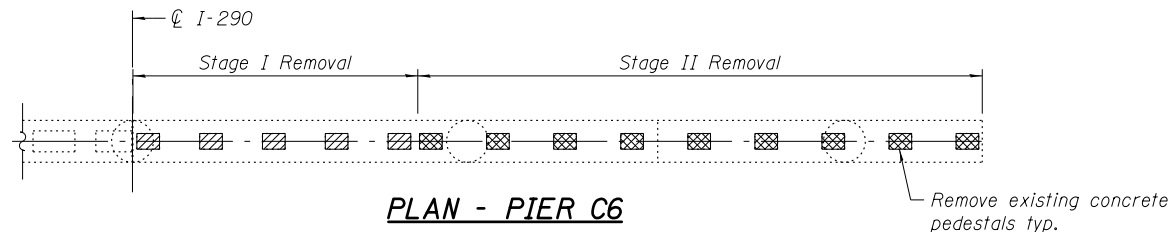
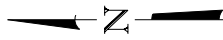


PLAN - PIER C2



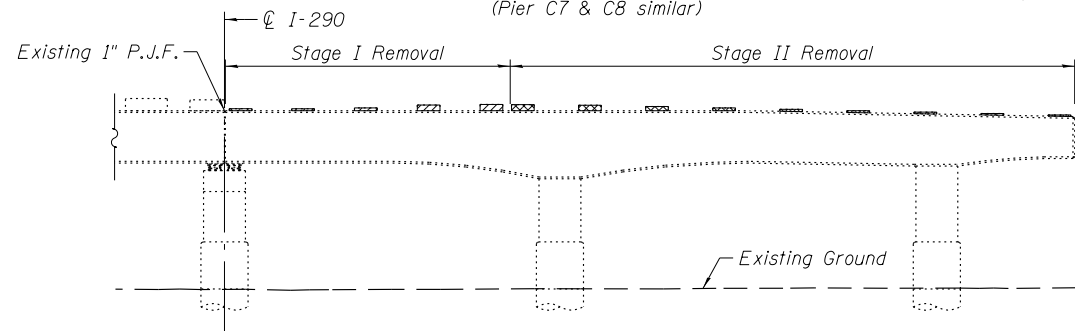
ELEVATION - PIER C2

(Looking East, Pier C3 similar)



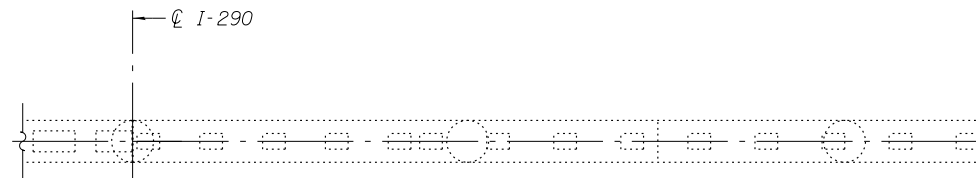
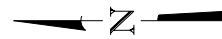
PLAN - PIER C6

(Pier C7 & C8 similar)



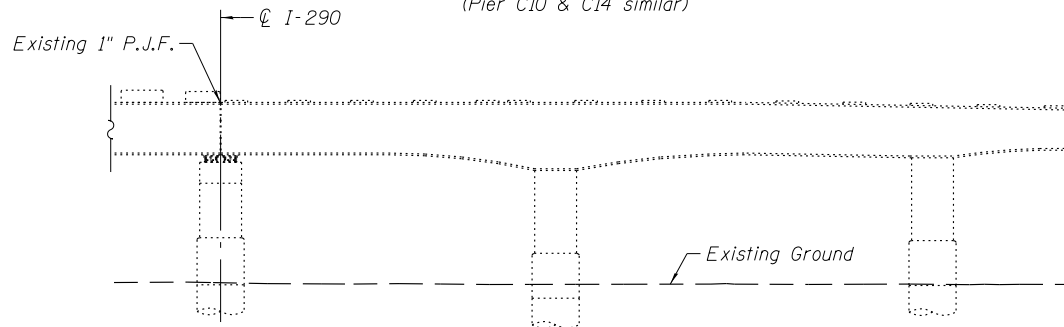
ELEVATION - PIER C6

(Looking East, Pier C7 & C8 similar)



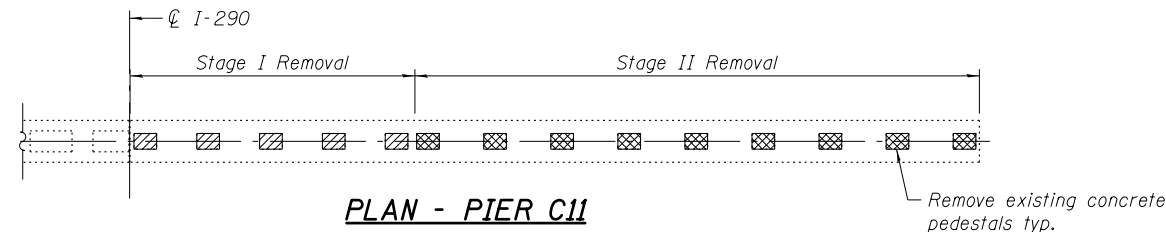
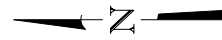
PLAN - PIER C5

(Pier C10 & C14 similar)

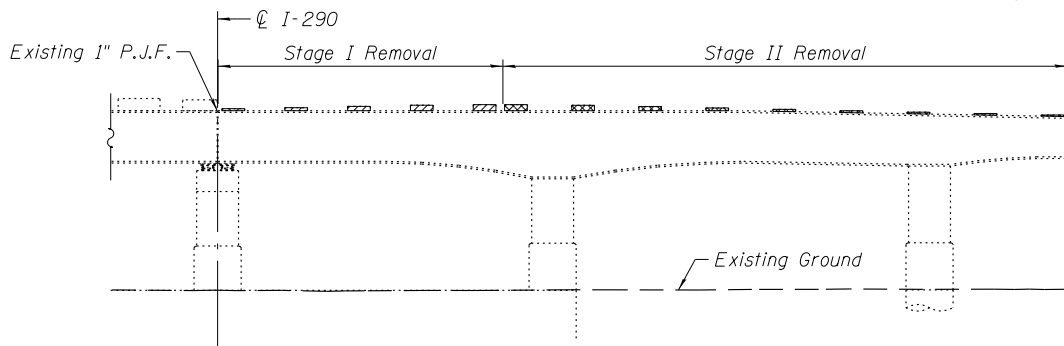


ELEVATION - PIER C5

(Looking East, Pier C10 & C14 similar)



PLAN - PIER C11



ELEVATION - PIER C11

(Looking East)

Notes:

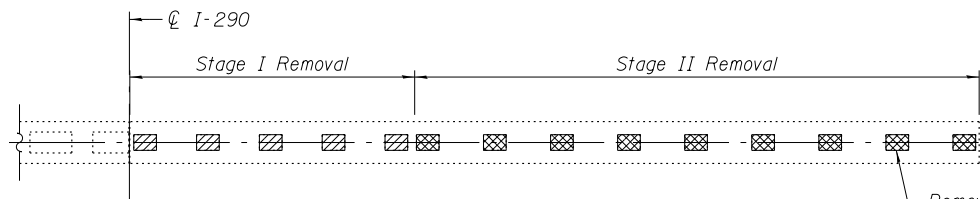
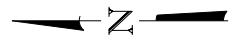
1. Removal of existing concrete pedestals at Piers C2 and C3 shall be included in the cost of Removal of Existing Structures No. 2.
2. Removal of existing concrete pedestals at Piers C5 through C16 shall be included in the cost of Concrete Removal.

LEGEND:

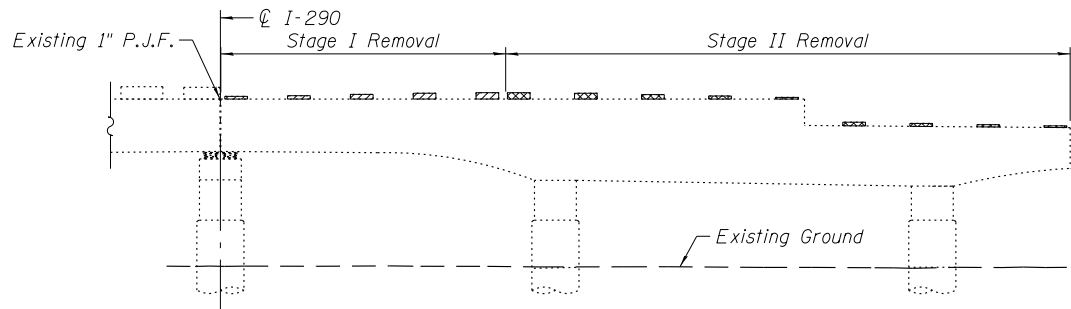
-  Stage I Removal
-  Stage II Removal

BILL OF MATERIAL

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	2.4

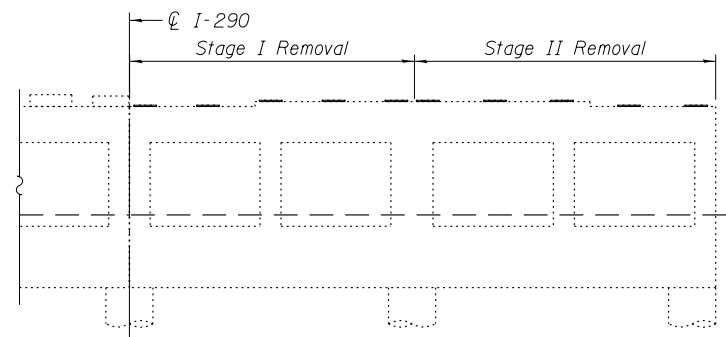
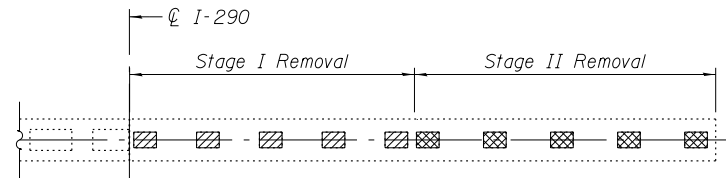
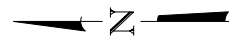


PLAN - PIER C13



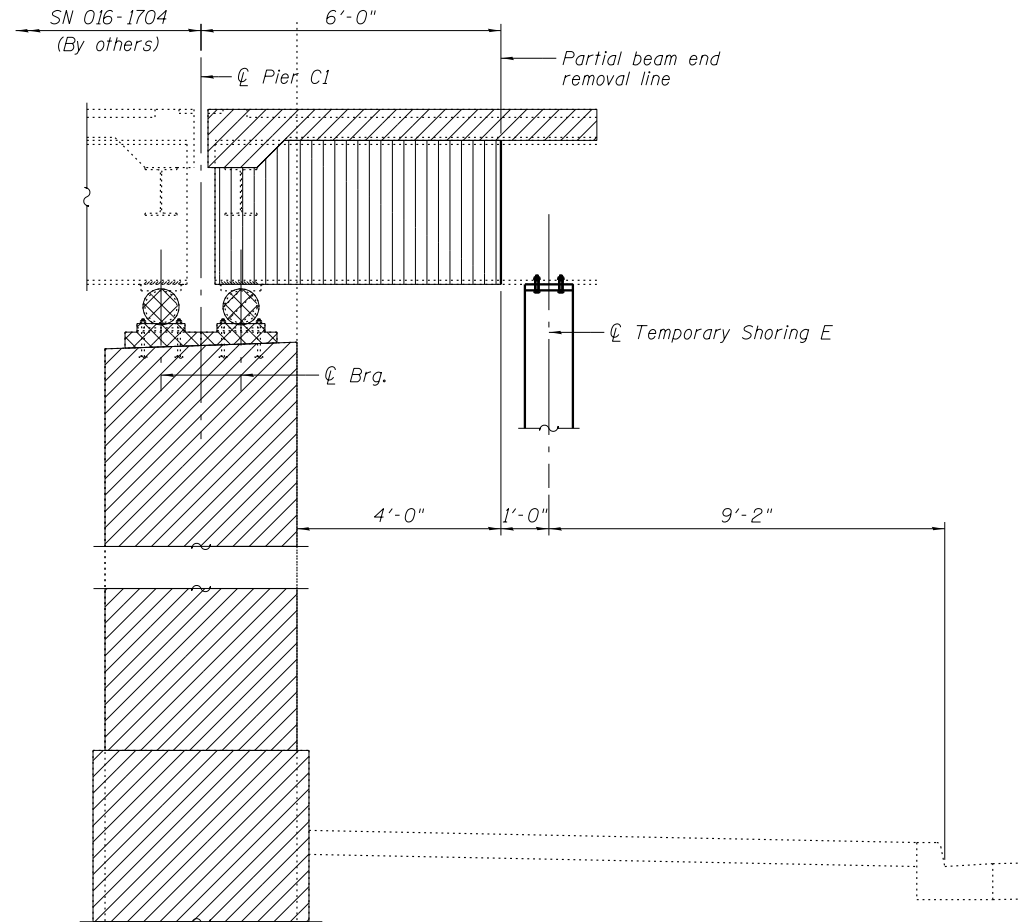
ELEVATION - PIER C13

(Looking East)



ELEVATION - PIER C15

(Looking East, Pier C16 similar)



TEMPORARY SUPPORT DETAIL

Notes:

1. Partial beam end removal of existing beam as shown in Temporary Support detail shall be included in the cost of Removal of Existing Structure No. 2.
2. Removal of existing concrete pedestals at Piers C5 through C16 shall be included in the cost of Concrete Removal.
3. For temporary shoring reactions see sheet, S2-16.
4. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to Concrete Removal.

LEGEND:

- Concrete Removal
- Jack and Remove Existing Bearings
- Partial Beam End Removal

BILL OF MATERIAL

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	1.5

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USER NAME = pateld	DESIGNED - IJL	REVISED -
	CHECKED - PJL	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

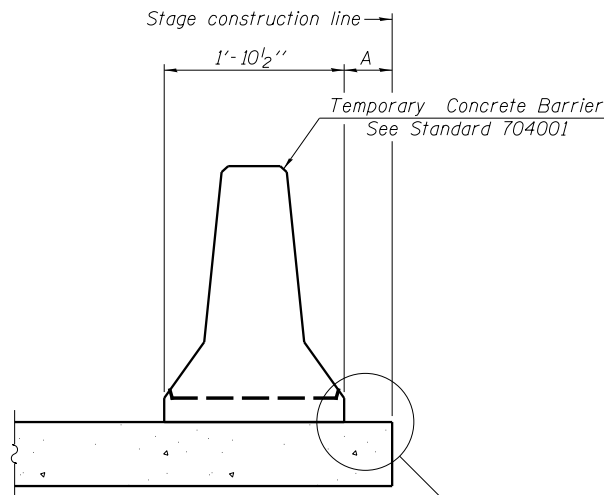
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE REMOVAL DETAILS IV
STRUCTURE NO. 016-0461

SHEET NO. S2-20 OF S2-137 SHEETS

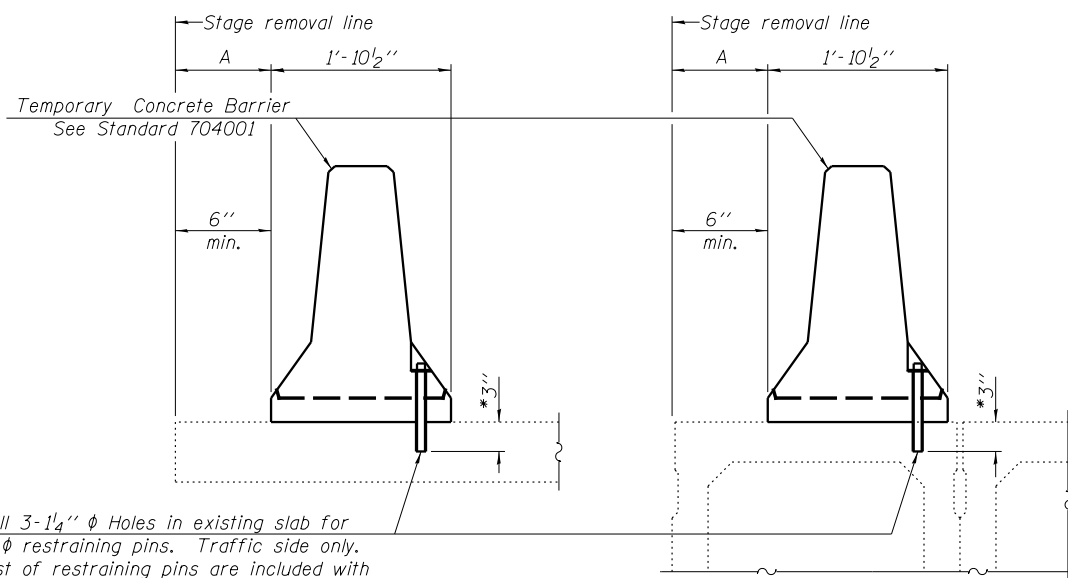
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	312
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

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When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM

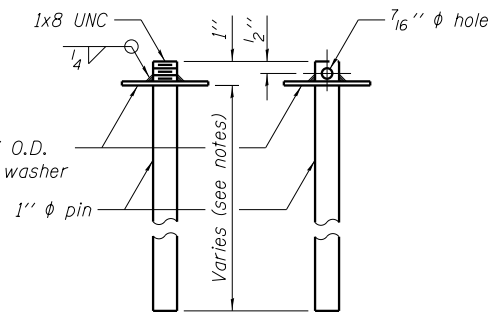


Drill 3-1 1/4" ϕ Holes in existing slab for 1" ϕ restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

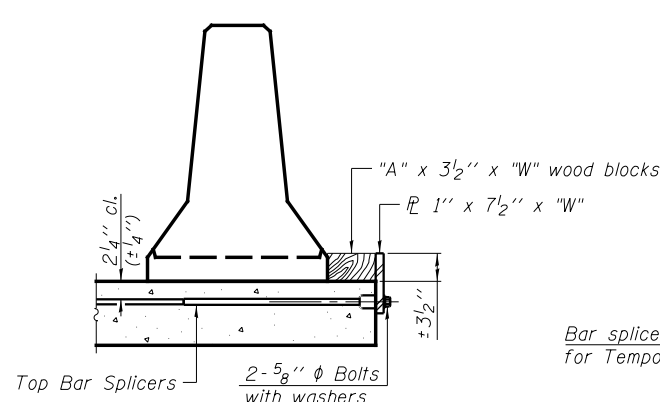
EXISTING SLAB

* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

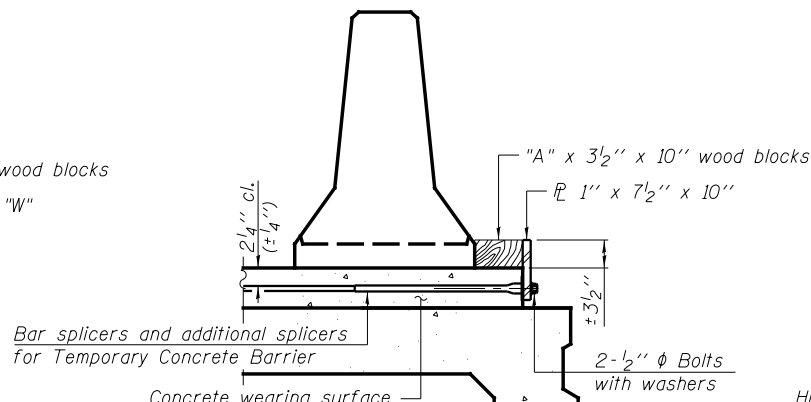
EXISTING DECK BEAM



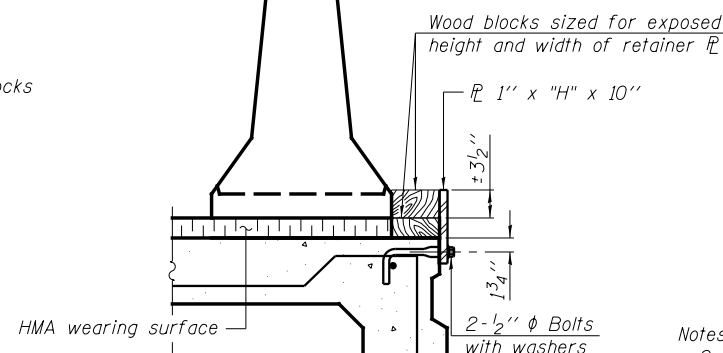
RESTRAINING PIN



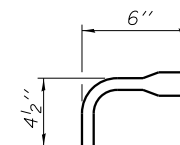
DETAIL I



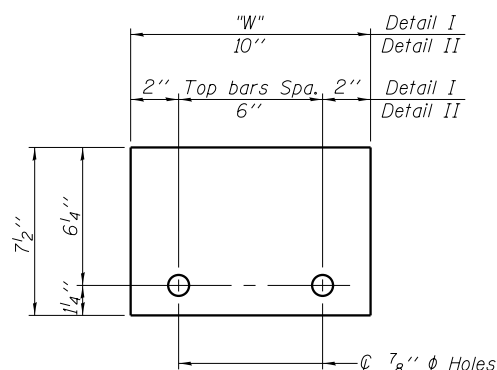
DETAIL II



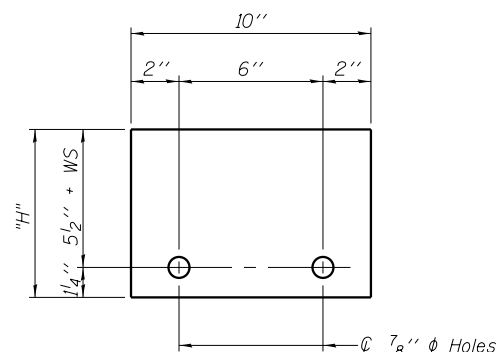
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER 1" x 7 1/2" x "W"
(Detail I and II)



STEEL RETAINER 1" x "H" x 10"
(Detail III)

Notes:
Cost of retainer assembly is included with Temporary Concrete Barrier.
A retainer assembly shall be located at the approximate ϕ of each temporary concrete barrier.
The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.
When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.
Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.
Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

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R-27

07-22-16

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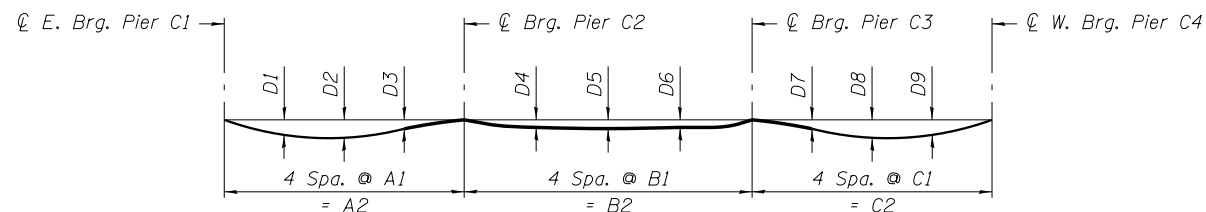
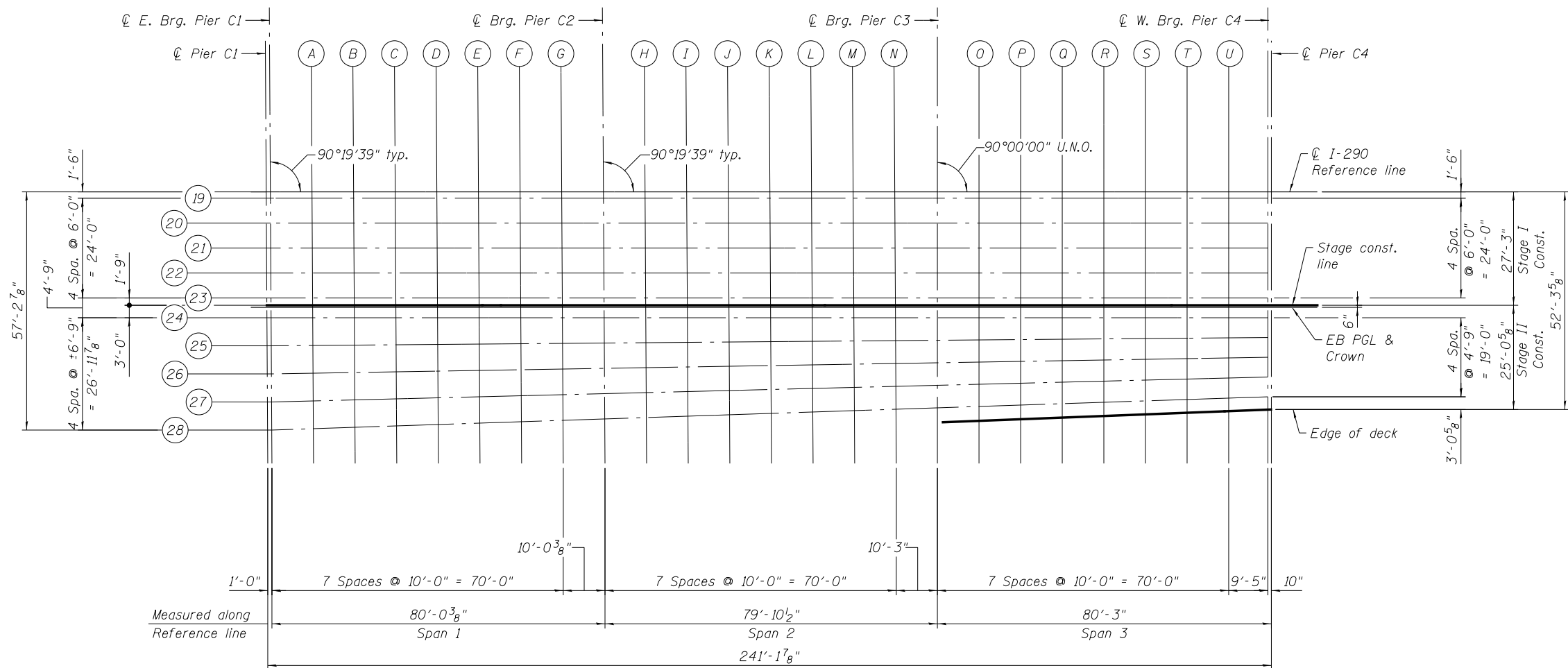
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PLOT SCALE = N.T.S.	CHECKED - AH	REVISED -
PLOT DATE = 6/28/2017	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 016-0461**

SHEET NO. S2-21 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	313
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

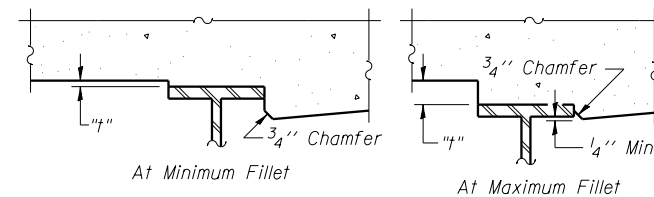
Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown in tables, see sheets S2-23 thru S2-26.

Beam No.	Span 1			Span 2			Span 3		
	D1	D2	D3	D4	D5	D6	D7	D8	D9
19	1"	1 1/4"	3/4"	1/8"	1/8"	1/8"	5/8"	1 1/4"	1"
20-23	1 1/4"	1 5/8"	7/8"	1/8"	1/8"	1/8"	7/8"	1 1/2"	1 1/4"
24-27	1 3/8"	1 5/8"	7/8"	1/8"	1/8"	1/8"	3/4"	1 3/8"	1 1/8"
28	1 1/4"	1 5/8"	7/8"	1/8"	1/8"	1/8"	7/8"	1 1/2"	1 1/4"

PLAN - UNIT I

Beam No.	Span 1		Span 2		Span 3	
	A1	A2	B1	B2	C1	C2
19	±20'-0 1/8"	80'-0 3/8"	20'-0 3/4"	80'-2 7/8"	19'-10 1/4"	79'-5"
20	±20'-0 1/8"	80'-0 3/8"	20'-0 5/8"	80'-2 1/2"	19'-10 1/4"	79'-5"
21	±20'-0 1/8"	80'-0 3/8"	20'-0 1/2"	80'-2"	19'-10 1/4"	79'-5"
22	±20'-0 1/8"	80'-0 3/8"	20'-0 3/8"	80'-1 5/8"	19'-10 1/4"	79'-5"
23	±20'-0 1/8"	80'-0 3/8"	20'-0 3/8"	80'-1 1/4"	19'-10 1/4"	79'-5"
24	±20'-0 1/8"	80'-0 3/8"	20'-0 1/4"	80'-0 7/8"	19'-10 1/4"	79'-5"
25	±20'-0 1/8"	80'-0 3/8"	20'-0 1/2"	80'-0 1/2"	19'-10 1/4"	79'-5"
26	±20'-0 1/8"	80'-0 1/2"	20'-0"	80'-0 1/4"	19'-10 1/4"	79'-5 1/8"
27	±20'-0 1/8"	80'-0 5/8"	20'-0"	80'-0"	19'-10 3/8"	79'-5 1/4"
28	±20'-0 1/4"	80'-0 3/4"	20'-0"	79'-11 3/4"	19'-10 3/8"	79'-5 1/2"



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals in tables, see sheets S2-23 thru S2-26. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets S2-23 thru S2-26, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

0160461-60X75-S022-TSE.dgn

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USER NAME = pateld	DESIGNED - RJG	REVISED -
	CHECKED - PJL	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATION PLAN - UNIT I
STRUCTURE NO. 016-0461

SHEET NO. S2-22 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	314
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-S023-TSE.dgn

BEAM NO. 19				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C1	5160+64.42	-26.25	609.74	609.74
℄ E. Brg. Pier C1	5160+65.42	-26.25	609.76	609.76
A	5160+75.42	-26.25	609.88	609.92
B	5160+85.42	-26.25	610.00	610.08
C	5160+95.42	-26.25	610.11	610.21
D	5161+05.42	-26.25	610.22	610.32
E	5161+15.42	-26.25	610.32	610.40
F	5161+25.42	-26.25	610.41	610.48
G	5161+35.42	-26.25	610.50	610.53
℄ Brg. Pier C2	5161+45.46	-26.25	610.58	610.58
H	5161+55.46	-26.25	610.66	610.65
I	5161+65.46	-26.25	610.79	610.78
J	5161+75.46	-26.25	610.92	610.91
K	5161+85.46	-26.25	611.05	611.04
L	5161+95.46	-26.25	611.18	611.17
M	5162+05.46	-26.25	611.29	611.28
N	5162+15.46	-26.25	611.40	611.40
℄ Brg. Pier C3	5162+25.70	-26.25	611.51	611.51
O	5162+35.70	-26.25	611.61	611.64
P	5162+45.70	-26.25	611.70	611.76
Q	5162+55.70	-26.25	611.79	611.87
R	5162+65.70	-26.25	611.87	611.97
S	5162+75.70	-26.25	611.94	612.04
T	5162+85.70	-26.25	612.01	612.09
U	5162+95.70	-26.25	612.07	612.11
℄ W. Brg. Pier C4	5163+05.11	-26.25	612.13	612.13
℄ Pier C4	5163+05.95	-26.25	612.13	612.13

BEAM NO. 20				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C1	5160+64.46	-20.25	609.65	609.65
℄ E. Brg. Pier C1	5160+65.46	-20.25	609.67	609.67
A	5160+75.46	-20.25	609.81	609.86
B	5160+85.46	-20.25	609.94	610.05
C	5160+95.46	-20.25	610.07	610.19
D	5161+05.46	-20.25	610.20	610.33
E	5161+15.46	-20.25	610.31	610.42
F	5161+25.46	-20.25	610.42	610.50
G	5161+35.46	-20.25	610.53	610.56
℄ Brg. Pier C2	5161+45.49	-20.25	610.63	610.63
H	5161+55.49	-20.25	610.72	610.71
I	5161+65.49	-20.25	610.85	610.84
J	5161+75.49	-20.25	610.99	610.98
K	5161+85.49	-20.25	611.12	611.10
L	5161+95.49	-20.25	611.24	611.23
M	5162+05.49	-20.25	611.36	611.35
N	5162+15.49	-20.25	611.47	611.46
℄ Brg. Pier C3	5162+25.70	-20.25	611.57	611.57
O	5162+35.70	-20.25	611.67	611.71
P	5162+45.70	-20.25	611.77	611.84
Q	5162+55.70	-20.25	611.85	611.95
R	5162+65.70	-20.25	611.93	612.06
S	5162+75.70	-20.25	612.01	612.12
T	5162+85.70	-20.25	612.07	612.18
U	5162+95.70	-20.25	612.14	612.19
℄ W. Brg. Pier C4	5163+05.11	-20.25	612.19	612.19
℄ Pier C4	5163+05.95	-20.25	612.19	612.19

BEAM NO. 21				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C1	5160+64.49	-14.25	609.56	609.56
℄ E. Brg. Pier C1	5160+65.49	-14.25	609.58	609.58
A	5160+75.49	-14.25	609.74	609.79
B	5160+85.49	-14.25	609.89	609.99
C	5160+95.49	-14.25	610.03	610.15
D	5161+05.49	-14.25	610.17	610.31
E	5161+15.49	-14.25	610.31	610.41
F	5161+25.49	-14.25	610.43	610.51
G	5161+35.49	-14.25	610.55	610.59
℄ Brg. Pier C2	5161+45.53	-14.25	610.67	610.67
H	5161+55.53	-14.25	610.78	610.77
I	5161+65.53	-14.25	610.91	610.90
J	5161+75.53	-14.25	611.05	611.04
K	5161+85.53	-14.25	611.18	611.17
L	5161+95.53	-14.25	611.30	611.29
M	5162+05.53	-14.25	611.42	611.41
N	5162+15.53	-14.25	611.53	611.52
℄ Brg. Pier C3	5162+25.70	-14.25	611.64	611.64
O	5162+35.70	-14.25	611.74	611.77
P	5162+45.70	-14.25	611.83	611.90
Q	5162+55.70	-14.25	611.91	612.01
R	5162+65.70	-14.25	611.99	612.12
S	5162+75.70	-14.25	612.07	612.18
T	5162+85.70	-14.25	612.14	612.24
U	5162+95.70	-14.25	612.20	612.25
℄ W. Brg. Pier C4	5163+05.11	-14.25	612.25	612.25
℄ Pier C4	5163+05.95	-14.25	612.26	612.26

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BEAM NO. 22				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C1	5160+64.53	-8.25	609.47	609.47
℄ E. Brg. Pier C1	5160+65.53	-8.25	609.49	609.49
A	5160+75.53	-8.25	609.66	609.72
B	5160+85.53	-8.25	609.83	609.94
C	5160+95.53	-8.25	609.99	610.11
D	5161+05.53	-8.25	610.15	610.28
E	5161+15.53	-8.25	610.30	610.40
F	5161+25.53	-8.25	610.44	610.52
G	5161+35.53	-8.25	610.58	610.62
℄ Brg. Pier C2	5161+45.56	-8.25	610.71	610.71
H	5161+55.56	-8.25	610.84	610.83
I	5161+65.56	-8.25	610.98	610.97
J	5161+75.56	-8.25	611.11	611.10
K	5161+85.56	-8.25	611.24	611.23
L	5161+95.56	-8.25	611.36	611.35
M	5162+05.56	-8.25	611.48	611.47
N	5162+15.56	-8.25	611.59	611.59
℄ Brg. Pier C3	5162+25.70	-8.25	611.70	611.70
O	5162+35.70	-8.25	611.80	611.83
P	5162+45.70	-8.25	611.89	611.96
Q	5162+55.70	-8.25	611.98	612.08
R	5162+65.70	-8.25	612.06	612.18
S	5162+75.70	-8.25	612.13	612.25
T	5162+85.70	-8.25	612.20	612.30
U	5162+95.70	-8.25	612.26	612.31
℄ W. Brg. Pier C4	5163+05.11	-8.25	612.31	612.31
℄ Pier C4	5163+05.95	-8.25	612.32	612.32

BEAM NO. 23				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C1	5160+64.56	-2.25	609.38	609.38
℄ E. Brg. Pier C1	5160+65.56	-2.25	609.40	609.40
A	5160+75.56	-2.25	609.59	609.64
B	5160+85.56	-2.25	609.78	609.88
C	5160+95.56	-2.25	609.95	610.07
D	5161+05.56	-2.25	610.13	610.26
E	5161+15.56	-2.25	610.29	610.40
F	5161+25.56	-2.25	610.45	610.53
G	5161+35.56	-2.25	610.61	610.64
℄ Brg. Pier C2	5161+45.60	-2.25	610.76	610.76
H	5161+55.60	-2.25	610.90	610.89
I	5161+65.60	-2.25	611.04	611.03
J	5161+75.60	-2.25	611.17	611.16
K	5161+85.60	-2.25	611.30	611.29
L	5161+95.60	-2.25	611.43	611.42
M	5162+05.60	-2.25	611.54	611.53
N	5162+15.60	-2.25	611.66	611.65
℄ Brg. Pier C3	5162+25.70	-2.25	611.76	611.76
O	5162+35.70	-2.25	611.86	611.90
P	5162+45.70	-2.25	611.95	612.03
Q	5162+55.70	-2.25	612.04	612.14
R	5162+65.70	-2.25	612.12	612.24
S	5162+75.70	-2.25	612.19	612.31
T	5162+85.70	-2.25	612.26	612.36
U	5162+95.70	-2.25	612.32	612.37
℄ W. Brg. Pier C4	5163+05.11	-2.25	612.38	612.38
℄ Pier C4	5163+05.95	-2.25	612.38	612.38

STAGE 1 CONSTRUCTION JOINT				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C1	5160+64.57	-0.50	609.35	609.35
℄ E. Brg. Pier C1	5160+65.57	-0.50	609.37	609.37
A	5160+75.57	-0.50	609.57	609.62
B	5160+85.57	-0.50	609.76	609.86
C	5160+95.57	-0.50	609.94	610.06
D	5161+05.57	-0.50	610.12	610.26
E	5161+15.57	-0.50	610.29	610.40
F	5161+25.57	-0.50	610.46	610.53
G	5161+35.57	-0.50	610.62	610.65
℄ Brg. Pier C2	5161+45.61	-0.50	610.77	610.77
H	5161+55.61	-0.50	610.92	610.91
I	5161+65.61	-0.50	611.06	611.05
J	5161+75.61	-0.50	611.19	611.18
K	5161+85.61	-0.50	611.32	611.31
L	5161+95.61	-0.50	611.45	611.44
M	5162+05.61	-0.50	611.56	611.55
N	5162+15.61	-0.50	611.67	611.67
℄ Brg. Pier C3	5162+25.70	-0.50	611.78	611.78
O	5162+35.70	-0.50	611.88	611.92
P	5162+45.70	-0.50	611.97	612.04
Q	5162+55.70	-0.50	612.06	612.16
R	5162+65.70	-0.50	612.14	612.26
S	5162+75.70	-0.50	612.21	612.33
T	5162+85.70	-0.50	612.28	612.38
U	5162+95.70	-0.50	612.34	612.39
℄ W. Brg. Pier C4	5163+05.11	-0.50	612.39	612.40
℄ Pier C4	5163+05.95	-0.50	612.40	612.40

PARSONS
BRINCKERHOFF

USER NAME =	pateld
PLOT SCALE =	N.T.S.
PLOT DATE =	6/28/2017

DESIGNED -	RJG
CHECKED -	PJL
DRAWN -	NG
CHECKED -	JIG

REVISED -	
REVISED -	
REVISED -	
REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS II - UNIT I
STRUCTURE NO. 016-0461

SHEET NO. S2-24 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	316
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

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EASTBOUND PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C1	5160+64.57	0.00	609.35	609.35
℄ E. Brg. Pier C1	5160+65.57	0.00	609.37	609.37
A	5160+75.57	0.00	609.56	609.62
B	5160+85.57	0.00	609.75	609.86
C	5160+95.57	0.00	609.94	610.06
D	5161+05.57	0.00	610.12	610.25
E	5161+15.57	0.00	610.29	610.39
F	5161+25.57	0.00	610.46	610.53
G	5161+35.57	0.00	610.62	610.65
℄ Brg. Pier C2	5161+45.61	0.00	610.77	610.77
H	5161+55.61	0.00	610.92	610.92
I	5161+65.61	0.00	611.06	611.05
J	5161+75.61	0.00	611.20	611.19
K	5161+85.61	0.00	611.33	611.32
L	5161+95.61	0.00	611.45	611.44
M	5162+05.61	0.00	611.57	611.56
N	5162+15.61	0.00	611.68	611.67
℄ Brg. Pier C3	5162+25.70	0.00	611.78	611.78
O	5162+35.70	0.00	611.88	611.92
P	5162+45.70	0.00	611.98	612.05
Q	5162+55.70	0.00	612.06	612.16
R	5162+65.70	0.00	612.14	612.27
S	5162+75.70	0.00	612.22	612.33
T	5162+85.70	0.00	612.29	612.39
U	5162+95.70	0.00	612.35	612.40
℄ W. Brg. Pier C4	5163+05.11	0.00	612.40	612.40
℄ Pier C4	5163+05.95	0.00	612.40	612.40

BEAM NO. 24

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C1	5160+64.59	2.50	609.30	609.30
℄ E. Brg. Pier C1	5160+65.59	2.50	609.32	609.32
A	5160+75.59	2.50	609.51	609.57
B	5160+85.59	2.50	609.70	609.82
C	5160+95.59	2.50	609.89	610.01
D	5161+05.59	2.50	610.07	610.20
E	5161+15.59	2.50	610.24	610.35
F	5161+25.59	2.50	610.41	610.48
G	5161+35.59	2.50	610.57	610.60
℄ Brg. Pier C2	5161+45.62	2.50	610.72	610.72
H	5161+55.62	2.50	610.87	610.87
I	5161+65.62	2.50	611.01	611.00
J	5161+75.62	2.50	611.15	611.14
K	5161+85.62	2.50	611.28	611.27
L	5161+95.62	2.50	611.40	611.39
M	5162+05.62	2.50	611.52	611.51
N	5162+15.62	2.50	611.63	611.62
℄ Brg. Pier C3	5162+25.70	2.50	611.73	611.73
O	5162+35.70	2.50	611.83	611.87
P	5162+45.70	2.50	611.93	611.99
Q	5162+55.70	2.50	612.01	612.10
R	5162+65.70	2.50	612.09	612.21
S	5162+75.70	2.50	612.17	612.27
T	5162+85.70	2.50	612.24	612.33
U	5162+95.70	2.50	612.30	612.35
℄ W. Brg. Pier C4	5163+05.11	2.50	612.36	612.36
℄ Pier C4	5163+05.95	2.50	612.37	612.37

BEAM NO. 25

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C1	5160+64.63	9.26	609.16	609.16
℄ E. Brg. Pier C1	5160+65.63	9.25	609.18	609.18
A	5160+75.63	9.17	609.38	609.44
B	5160+85.63	9.08	609.57	609.69
C	5160+95.63	9.00	609.76	609.89
D	5161+05.63	8.91	609.94	610.08
E	5161+15.62	8.83	610.11	610.22
F	5161+25.62	8.75	610.28	610.36
G	5161+35.62	8.66	610.45	610.48
℄ Brg. Pier C2	5161+45.66	8.58	610.60	610.60
H	5161+55.66	8.50	610.75	610.75
I	5161+65.66	8.41	610.89	610.88
J	5161+75.66	8.33	611.03	611.02
K	5161+85.66	8.25	611.16	611.15
L	5161+95.65	8.16	611.29	611.28
M	5162+05.65	8.08	611.41	611.40
N	5162+15.65	8.00	611.52	611.51
℄ Brg. Pier C3	5162+25.70	7.91	611.63	611.63
O	5162+35.70	7.83	611.73	611.76
P	5162+45.70	7.75	611.82	611.88
Q	5162+55.70	7.66	611.91	612.00
R	5162+65.70	7.58	611.99	612.11
S	5162+75.70	7.50	612.07	612.17
T	5162+85.70	7.41	612.14	612.23
U	5162+95.70	7.33	612.22	612.26
℄ W. Brg. Pier C4	5163+05.11	7.25	612.29	612.29
℄ Pier C4	5163+05.95	7.24	612.30	612.30

PARSONS
BRINCKERHOFF

USER NAME =	pateld
PLOT SCALE =	N.T.S.
PLOT DATE =	6/28/2017

DESIGNED -	RJG
CHECKED -	PJL
DRAWN -	NG
CHECKED -	JIG

REVISED -	
REVISED -	
REVISED -	
REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS III – UNIT I
STRUCTURE NO. 016–0461

SHEET NO. S2-25 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	317
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

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BEAM NO. 26

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C1	5160+64.67	16.01	609.03	609.03
℄ E. Brg. Pier C1	5160+65.67	16.00	609.05	609.05
A	5160+75.66	15.83	609.25	609.31
B	5160+85.66	15.66	609.44	609.56
C	5160+95.66	15.50	609.63	609.76
D	5161+05.66	15.33	609.81	609.95
E	5161+15.66	15.16	609.99	610.09
F	5161+25.66	15.00	610.16	610.23
G	5161+35.66	14.83	610.32	610.36
℄ Brg. Pier C2	5161+45.69	14.66	610.48	610.48
H	5161+55.69	14.49	610.63	610.63
I	5161+65.69	14.33	610.78	610.77
J	5161+75.69	14.16	610.92	610.91
K	5161+85.69	13.99	611.05	611.04
L	5161+95.69	13.83	611.18	611.16
M	5162+05.69	13.66	611.30	611.29
N	5162+15.69	13.49	611.41	611.40
℄ Brg. Pier C3	5162+25.70	13.33	611.52	611.52
O	5162+35.70	13.16	611.62	611.65
P	5162+45.70	12.99	611.72	611.78
Q	5162+55.70	12.82	611.81	611.90
R	5162+65.70	12.66	611.89	612.00
S	5162+75.70	12.49	611.97	612.07
T	5162+85.70	12.32	612.04	612.13
U	5162+95.70	12.16	612.10	612.15
℄ W. Brg. Pier C4	5163+05.11	12.00	612.19	612.19
℄ Pier C4	5163+05.95	11.99	612.22	612.22

BEAM NO. 27

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C1	5160+64.70	22.77	608.89	608.89
℄ E. Brg. Pier C1	5160+65.70	22.75	608.91	608.91
A	5160+75.70	22.50	609.12	609.17
B	5160+85.70	22.24	609.31	609.43
C	5160+95.70	21.99	609.50	609.63
D	5161+05.70	21.74	609.69	609.82
E	5161+15.70	21.49	609.86	609.97
F	5161+25.70	21.24	610.03	610.11
G	5161+35.69	20.99	610.20	610.24
℄ Brg. Pier C2	5161+45.73	20.74	610.36	610.36
H	5161+55.73	20.49	610.51	610.51
I	5161+65.72	20.24	610.66	610.65
J	5161+75.72	19.99	610.80	610.79
K	5161+85.72	19.74	610.93	610.92
L	5161+95.72	19.49	611.06	611.05
M	5162+05.72	19.24	611.18	611.17
N	5162+15.72	18.99	611.30	611.30
℄ Brg. Pier C3	5162+25.70	18.74	611.41	611.41
O	5162+35.70	18.49	611.51	611.55
P	5162+45.70	18.24	611.61	611.67
Q	5162+55.70	17.99	611.70	611.79
R	5162+65.70	17.74	611.79	611.90
S	5162+75.70	17.49	611.87	611.97
T	5162+85.70	17.24	611.94	612.03
U	5162+95.70	16.99	612.01	612.05
℄ W. Brg. Pier C4	5163+05.11	16.75	612.10	612.10
℄ Pier C4	5163+05.95	16.73	612.11	612.11

BEAM NO. 28

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C1	5160+64.74	29.53	608.76	608.76
℄ E. Brg. Pier C1	5160+65.74	29.49	608.78	608.78
A	5160+75.74	29.16	608.98	609.04
B	5160+85.74	28.83	609.18	609.29
C	5160+95.74	28.49	609.37	609.49
D	5161+05.74	28.16	609.56	609.69
E	5161+15.73	27.82	609.74	609.84
F	5161+25.73	27.49	609.91	609.98
G	5161+35.73	27.16	610.08	610.11
℄ Brg. Pier C2	5161+45.76	26.82	610.24	610.24
H	5161+55.76	26.49	610.39	610.39
I	5161+65.76	26.15	610.54	610.53
J	5161+75.76	25.82	610.68	610.67
K	5161+85.75	25.49	610.82	610.81
L	5161+95.75	25.15	610.95	610.94
M	5162+05.75	24.82	611.07	611.06
N	5162+15.75	24.48	611.19	611.19
℄ Brg. Pier C3	5162+25.70	24.15	611.30	611.30
O	5162+35.70	23.82	611.41	611.44
P	5162+45.70	23.48	611.51	611.58
Q	5162+55.70	23.15	611.60	611.70
R	5162+65.70	22.82	611.69	611.81
S	5162+75.70	22.48	611.77	611.88
T	5162+85.70	22.15	611.84	611.94
U	5162+95.70	21.81	611.91	611.96
℄ W. Brg. Pier C4	5163+05.11	21.50	612.02	612.02
℄ Pier C4	5163+05.95	21.47	612.03	612.03

EDGE OF SLAB

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Brg. Pier C3	5162+25.70	27.67	611.11	611.11
O	5162+35.70	27.28	611.26	611.31
P	5162+45.70	26.89	611.39	611.48
Q	5162+55.70	26.50	611.51	611.63
R	5162+65.70	26.11	611.62	611.75
S	5162+75.70	25.73	611.71	611.82
T	5162+85.70	25.34	611.81	611.90
U	5162+95.70	24.95	611.89	611.93
℄ W. Brg. Pier C4	5163+05.11	24.58	611.96	611.96
℄ Pier C4	5163+05.95	24.55	611.96	611.96

PARSONS
BRINCKERHOFF

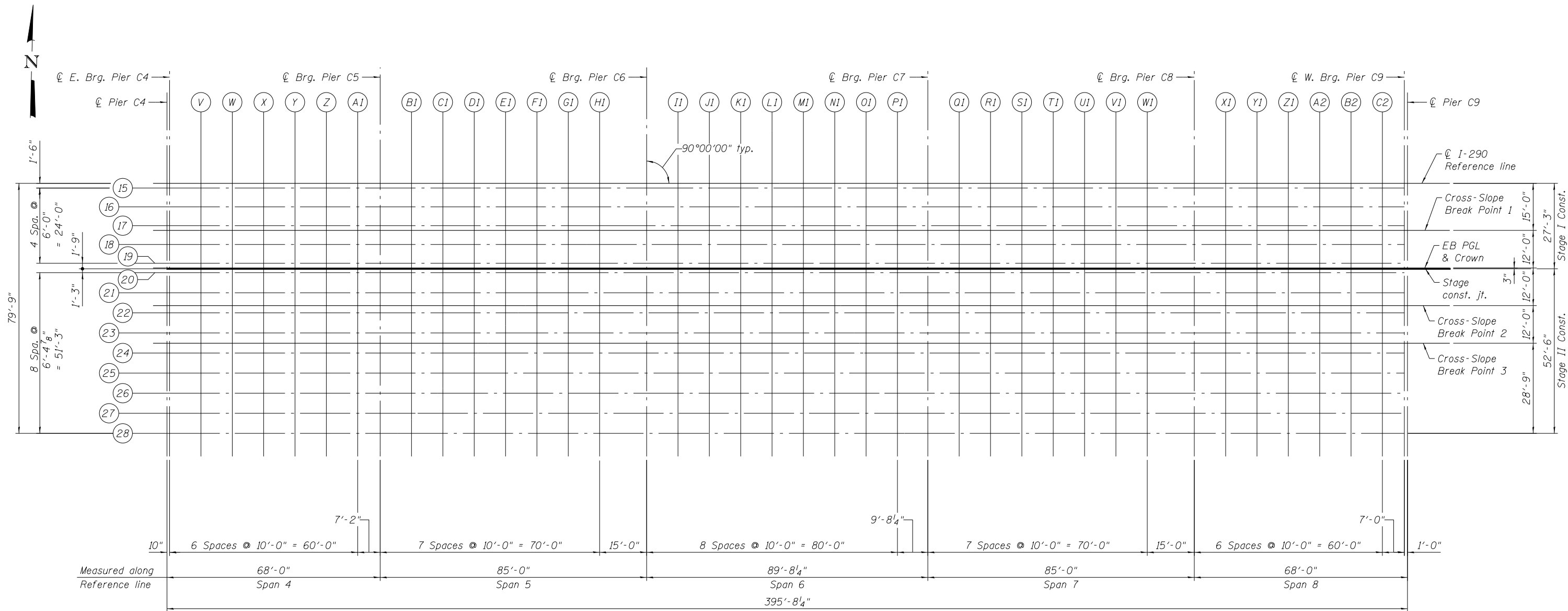
USER NAME =	pateld	DESIGNED -	RJG	REVISED -	
		CHECKED -	PJL	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	NG	REVISED -	
PLOT DATE =	6/28/2017	CHECKED -	JIG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

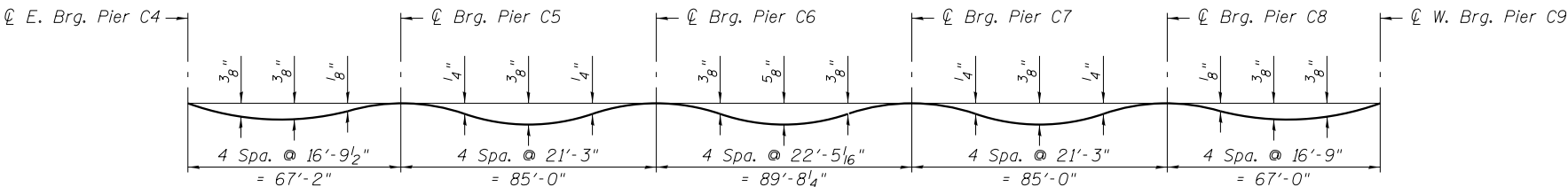
TOP OF SLAB ELEVATIONS IV – UNIT I
STRUCTURE NO. 016–0461

SHEET NO. S2-26 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	318
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



PLAN - UNIT II

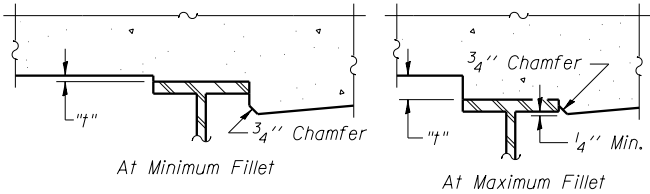


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown in tables, see sheets S2-28 thru S2-34.

Note:
Girder line numbering in Units II and Unit III correspond with those of the existing structure and do not correspond with the numbering shown on Unit I.



FILLET HEIGHTS

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals in tables, see sheets S2-28 thru S2-34. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets S2-28 thru S2-34, minus slab thickness, equals the fillet heights "t" above top flange of beams.

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PARSONS
BRINCKERHOFF

USER NAME = pateld	DESIGNED - PJL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - RJG	REVISED -
PLOT DATE = 6/28/2017	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATION PLAN - UNIT II
STRUCTURE NO. 016-0461

SHEET NO. S2-27 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	319
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

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BEAM NO. 15				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C4	5163+05.95	-26.25	612.12	612.12
℄ E. Brg. Pier C4	5163+06.78	-26.25	612.13	612.13
V	5163+16.78	-26.25	612.18	612.20
W	5163+26.78	-26.25	612.21	612.24
X	5163+36.78	-26.25	612.24	612.27
Y	5163+46.78	-26.25	612.29	612.31
Z	5163+56.78	-26.25	612.34	612.35
A1	5163+66.78	-26.25	612.38	612.38
℄ Brg. Pier C5	5163+73.95	-26.25	612.39	612.39
B1	5163+83.95	-26.25	612.41	612.42
C1	5163+93.95	-26.25	612.44	612.46
D1	5164+03.95	-26.25	612.47	612.49
E1	5164+13.95	-26.25	612.50	612.53
F1	5164+23.95	-26.25	612.53	612.55
G1	5164+33.95	-26.25	612.55	612.57
H1	5164+43.95	-26.25	612.56	612.58
℄ Brg. Pier C6	5164+58.95	-26.25	612.58	612.58
I1	5164+68.95	-26.25	612.59	612.60
J1	5164+78.95	-26.25	612.59	612.62
K1	5164+88.95	-26.25	612.59	612.63
L1	5164+98.95	-26.25	612.60	612.64
M1	5165+08.95	-26.25	612.60	612.65
N1	5165+18.95	-26.25	612.60	612.63
O1	5165+28.95	-26.25	612.59	612.61
P1	5165+38.95	-26.25	612.57	612.59
℄ Brg. Pier C7	5165+48.63	-26.25	612.56	612.56
Q1	5165+58.63	-26.25	612.55	612.56
R1	5165+68.63	-26.25	612.53	612.55
S1	5165+78.63	-26.25	612.52	612.55
T1	5165+88.63	-26.25	612.51	612.54
U1	5165+98.63	-26.25	612.50	612.52
V1	5166+08.63	-26.25	612.48	612.51
W1	5166+18.63	-26.25	612.46	612.48
℄ Brg. Pier C8	5166+33.63	-26.25	612.42	612.42
X1	5166+43.63	-26.25	612.38	612.39
Y1	5166+53.63	-26.25	612.34	612.35
Z1	5166+63.63	-26.25	612.29	612.32
A2	5166+73.63	-26.25	612.26	612.29
B2	5166+83.63	-26.25	612.22	612.25
C2	5166+93.63	-26.25	612.18	612.20
℄ W. Brg. Pier C9	5167+00.63	-26.25	612.16	612.16
℄ Pier C9	5167+01.63	-26.25	612.16	612.16

BEAM NO. 16				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C4	5163+05.95	-20.25	612.19	612.19
℄ E. Brg. Pier C4	5163+06.78	-20.25	612.19	612.19
V	5163+16.78	-20.25	612.26	612.28
W	5163+26.78	-20.25	612.31	612.34
X	5163+36.78	-20.25	612.37	612.40
Y	5163+46.78	-20.25	612.42	612.44
Z	5163+56.78	-20.25	612.46	612.47
A1	5163+66.78	-20.25	612.50	612.51
℄ Brg. Pier C5	5163+73.95	-20.25	612.52	612.52
B1	5163+83.95	-20.25	612.54	612.55
C1	5163+93.95	-20.25	612.56	612.58
D1	5164+03.95	-20.25	612.59	612.62
E1	5164+13.95	-20.25	612.63	612.66
F1	5164+23.95	-20.25	612.65	612.68
G1	5164+33.95	-20.25	612.67	612.70
H1	5164+43.95	-20.25	612.69	612.70
℄ Brg. Pier C6	5164+58.95	-20.25	612.70	612.70
I1	5164+68.95	-20.25	612.71	612.73
J1	5164+78.95	-20.25	612.71	612.74
K1	5164+88.95	-20.25	612.72	612.76
L1	5164+98.95	-20.25	612.72	612.77
M1	5165+08.95	-20.25	612.72	612.77
N1	5165+18.95	-20.25	612.72	612.76
O1	5165+28.95	-20.25	612.71	612.74
P1	5165+38.95	-20.25	612.70	612.71
℄ Brg. Pier C7	5165+48.63	-20.25	612.69	612.69
Q1	5165+58.63	-20.25	612.67	612.68
R1	5165+68.63	-20.25	612.66	612.68
S1	5165+78.63	-20.25	612.65	612.67
T1	5165+88.63	-20.25	612.63	612.66
U1	5165+98.63	-20.25	612.62	612.65
V1	5166+08.63	-20.25	612.61	612.63
W1	5166+18.63	-20.25	612.59	612.60
℄ Brg. Pier C8	5166+33.63	-20.25	612.54	612.54
X1	5166+43.63	-20.25	612.50	612.51
Y1	5166+53.63	-20.25	612.46	612.48
Z1	5166+63.63	-20.25	612.42	612.44
A2	5166+73.63	-20.25	612.38	612.41
B2	5166+83.63	-20.25	612.34	612.38
C2	5166+93.63	-20.25	612.31	612.32
℄ W. Brg. Pier C9	5167+00.63	-20.25	612.29	612.29
℄ Pier C9	5167+01.63	-20.25	612.29	612.29

BEAM NO. 17				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C4	5163+05.95	-14.25	612.25	612.25
℄ E. Brg. Pier C4	5163+06.78	-14.25	612.26	612.26
V	5163+16.78	-14.25	612.34	612.36
W	5163+26.78	-14.25	612.41	612.44
X	5163+36.78	-14.25	612.47	612.51
Y	5163+46.78	-14.25	612.53	612.55
Z	5163+56.78	-14.25	612.57	612.58
A1	5163+66.78	-14.25	612.61	612.61
℄ Brg. Pier C5	5163+73.95	-14.25	612.63	612.63
B1	5163+83.95	-14.25	612.65	612.66
C1	5163+93.95	-14.25	612.67	612.69
D1	5164+03.95	-14.25	612.70	612.73
E1	5164+13.95	-14.25	612.73	612.76
F1	5164+23.95	-14.25	612.76	612.79
G1	5164+33.95	-14.25	612.78	612.80
H1	5164+43.95	-14.25	612.80	612.81
℄ Brg. Pier C6	5164+58.95	-14.25	612.81	612.81
I1	5164+68.95	-14.25	612.82	612.83
J1	5164+78.95	-14.25	612.82	612.85
K1	5164+88.95	-14.25	612.83	612.87
L1	5164+98.95	-14.25	612.83	612.88
M1	5165+08.95	-14.25	612.83	612.88
N1	5165+18.95	-14.25	612.83	612.87
O1	5165+28.95	-14.25	612.82	612.85
P1	5165+38.95	-14.25	612.81	612.82
℄ Brg. Pier C7	5165+48.63	-14.25	612.80	612.80
Q1	5165+58.63	-14.25	612.78	612.79
R1	5165+68.63	-14.25	612.77	612.79
S1	5165+78.63	-14.25	612.76	612.78
T1	5165+88.63	-14.25	612.74	612.77
U1	5165+98.63	-14.25	612.73	612.76
V1	5166+08.63	-14.25	612.72	612.74
W1	5166+18.63	-14.25	612.70	612.71
℄ Brg. Pier C8	5166+33.63	-14.25	612.65	612.65
X1	5166+43.63	-14.25	612.61	612.62
Y1	5166+53.63	-14.25	612.57	612.58
Z1	5166+63.63	-14.25	612.53	612.55
A2	5166+73.63	-14.25	612.49	612.52
B2	5166+83.63	-14.25	612.45	612.49
C2	5166+93.63	-14.25	612.42	612.43
℄ W. Brg. Pier C9	5167+00.63	-14.25	612.40	612.40
℄ Pier C9	5167+01.63	-14.25	612.40	612.40

CROSS SLOPE BREAK POINT 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C4	5163+05.95	-12.75	612.27	612.27
℄ E. Brg. Pier C4	5163+06.78	-12.75	612.27	612.27
V	5163+16.78	-12.75	612.35	612.37
W	5163+26.78	-12.75	612.42	612.45
X	5163+36.78	-12.75	612.49	612.52
Y	5163+46.78	-12.75	612.54	612.56
Z	5163+56.78	-12.75	612.59	612.60
A1	5163+66.78	-12.75	612.63	612.63
℄ Brg. Pier C5	5163+73.95	-12.75	612.64	612.64
B1	5163+83.95	-12.75	612.66	612.67
C1	5163+93.95	-12.75	612.69	612.71
D1	5164+03.95	-12.75	612.72	612.74
E1	5164+13.95	-12.75	612.75	612.78
F1	5164+23.95	-12.75	612.78	612.80
G1	5164+33.95	-12.75	612.80	612.82
H1	5164+43.95	-12.75	612.81	612.83
℄ Brg. Pier C6	5164+58.95	-12.75	612.83	612.83
I1	5164+68.95	-12.75	612.84	612.85
J1	5164+78.95	-12.75	612.84	612.87
K1	5164+88.95	-12.75	612.84	612.88
L1	5164+98.95	-12.75	612.85	612.89
M1	5165+08.95	-12.75	612.85	612.90
N1	5165+18.95	-12.75	612.85	612.88
O1	5165+28.95	-12.75	612.84	612.86
P1	5165+38.95	-12.75	612.82	612.84
℄ Brg. Pier C7	5165+48.63	-12.75	612.81	612.81
Q1	5165+58.63	-12.75	612.80	612.81
R1	5165+68.63	-12.75	612.78	612.80
S1	5165+78.63	-12.75	612.77	612.80
T1	5165+88.63	-12.75	612.76	612.79
U1	5165+98.63	-12.75	612.75	612.77
V1	5166+08.63	-12.75	612.73	612.76
W1	5166+18.63	-12.75	612.71	612.73
℄ Brg. Pier C8	5166+33.63	-12.75	612.67	612.67
X1	5166+43.63	-12.75	612.63	612.64
Y1	5166+53.63	-12.75	612.59	612.60
Z1	5166+63.63	-12.75	612.54	612.57
A2	5166+73.63	-12.75	612.51	612.54
B2	5166+83.63	-12.75	612.47	612.50
C2	5166+93.63	-12.75	612.43	612.45
℄ W. Brg. Pier C9	5167+00.63	-12.75	612.41	612.41
℄ Pier C9	5167+01.63	-12.75	612.41	612.41

BEAM NO. 18

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C4	5163+05.95	-8.25	612.31	612.31
℄ E. Brg. Pier C4	5163+06.78	-8.25	612.32	612.32
V	5163+16.78	-8.25	612.40	612.42
W	5163+26.78	-8.25	612.47	612.50
X	5163+36.78	-8.25	612.54	612.57
Y	5163+46.78	-8.25	612.59	612.61
Z	5163+56.78	-8.25	612.63	612.64
A1	5163+66.78	-8.25	612.67	612.68
℄ Brg. Pier C5	5163+73.95	-8.25	612.69	612.69
B1	5163+83.95	-8.25	612.71	612.72
C1	5163+93.95	-8.25	612.74	612.75
D1	5164+03.95	-8.25	612.77	612.79
E1	5164+13.95	-8.25	612.80	612.83
F1	5164+23.95	-8.25	612.82	612.85
G1	5164+33.95	-8.25	612.84	612.87
H1	5164+43.95	-8.25	612.86	612.88
℄ Brg. Pier C6	5164+58.95	-8.25	612.88	612.88
I1	5164+68.95	-8.25	612.88	612.90
J1	5164+78.95	-8.25	612.89	612.91
K1	5164+88.95	-8.25	612.89	612.93
L1	5164+98.95	-8.25	612.89	612.94
M1	5165+08.95	-8.25	612.90	612.94
N1	5165+18.95	-8.25	612.89	612.93
O1	5165+28.95	-8.25	612.88	612.91
P1	5165+38.95	-8.25	612.87	612.89
℄ Brg. Pier C7	5165+48.63	-8.25	612.86	612.86
Q1	5165+58.63	-8.25	612.84	612.85
R1	5165+68.63	-8.25	612.83	612.85
S1	5165+78.63	-8.25	612.82	612.84
T1	5165+88.63	-8.25	612.81	612.84
U1	5165+98.63	-8.25	612.79	612.82
V1	5166+08.63	-8.25	612.78	612.80
W1	5166+18.63	-8.25	612.76	612.78
℄ Brg. Pier C8	5166+33.63	-8.25	612.71	612.71
X1	5166+43.63	-8.25	612.68	612.68
Y1	5166+53.63	-8.25	612.63	612.65
Z1	5166+63.63	-8.25	612.59	612.62
A2	5166+73.63	-8.25	612.55	612.58
B2	5166+83.63	-8.25	612.52	612.55
C2	5166+93.63	-8.25	612.48	612.50
℄ W. Brg. Pier C9	5167+00.63	-8.25	612.46	612.46
℄ Pier C9	5167+01.63	-8.25	612.46	612.46

BEAM NO. 19

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C4	5163+05.95	-2.25	612.37	612.37
℄ E. Brg. Pier C4	5163+06.78	-2.25	612.38	612.38
V	5163+16.78	-2.25	612.46	612.48
W	5163+26.78	-2.25	612.53	612.56
X	5163+36.78	-2.25	612.60	612.63
Y	5163+46.78	-2.25	612.65	612.67
Z	5163+56.78	-2.25	612.70	612.71
A1	5163+66.78	-2.25	612.73	612.74
℄ Brg. Pier C5	5163+73.95	-2.25	612.75	612.75
B1	5163+83.95	-2.25	612.77	612.78
C1	5163+93.95	-2.25	612.80	612.82
D1	5164+03.95	-2.25	612.83	612.85
E1	5164+13.95	-2.25	612.86	612.89
F1	5164+23.95	-2.25	612.88	612.91
G1	5164+33.95	-2.25	612.91	612.93
H1	5164+43.95	-2.25	612.92	612.94
℄ Brg. Pier C6	5164+58.95	-2.25	612.94	612.94
I1	5164+68.95	-2.25	612.95	612.96
J1	5164+78.95	-2.25	612.95	612.98
K1	5164+88.95	-2.25	612.95	612.99
L1	5164+98.95	-2.25	612.96	613.00
M1	5165+08.95	-2.25	612.96	613.01
N1	5165+18.95	-2.25	612.96	612.99
O1	5165+28.95	-2.25	612.95	612.97
P1	5165+38.95	-2.25	612.93	612.95
℄ Brg. Pier C7	5165+48.63	-2.25	612.92	612.92
Q1	5165+58.63	-2.25	612.91	612.92
R1	5165+68.63	-2.25	612.89	612.91
S1	5165+78.63	-2.25	612.88	612.91
T1	5165+88.63	-2.25	612.87	612.90
U1	5165+98.63	-2.25	612.86	612.88
V1	5166+08.63	-2.25	612.84	612.86
W1	5166+18.63	-2.25	612.82	612.84
℄ Brg. Pier C8	5166+33.63	-2.25	612.78	612.78
X1	5166+43.63	-2.25	612.74	612.74
Y1	5166+53.63	-2.25	612.70	612.71
Z1	5166+63.63	-2.25	612.65	612.68
A2	5166+73.63	-2.25	612.61	612.65
B2	5166+83.63	-2.25	612.58	612.61
C2	5166+93.63	-2.25	612.54	612.56
℄ W. Brg. Pier C9	5167+00.63	-2.25	612.52	612.52
℄ Pier C9	5167+01.63	-2.25	612.52	612.52

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PARSONS
BRINCKERHOFF

USER NAME = pateld	DESIGNED - PJL	REVISED -
	CHECKED - RJG	REVISED -
PLOT SCALE = N.T.S.	DRAWN - NG	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS II - UNIT II
STRUCTURE NO. 016-0461

SHEET NO. S2-29 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	321
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-5030-TSE.dgn

EASTBOUND PROFILE GRADE LINE & CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C4	5163+05.95	-0.75	612.39	612.39
℄ E. Brg. Pier C4	5163+06.78	-0.75	612.40	612.40
V	5163+16.78	-0.75	612.48	612.50
W	5163+26.78	-0.75	612.55	612.58
X	5163+36.78	-0.75	612.61	612.65
Y	5163+46.78	-0.75	612.67	612.69
Z	5163+56.78	-0.75	612.71	612.72
A1	5163+66.78	-0.75	612.75	612.76
℄ Brg. Pier C5	5163+73.95	-0.75	612.77	612.77
B1	5163+83.95	-0.75	612.79	612.80
C1	5163+93.95	-0.75	612.81	612.83
D1	5164+03.95	-0.75	612.84	612.87
E1	5164+13.95	-0.75	612.88	612.91
F1	5164+23.95	-0.75	612.90	612.93
G1	5164+33.95	-0.75	612.92	612.95
H1	5164+43.95	-0.75	612.94	612.95
℄ Brg. Pier C6	5164+58.95	-0.75	612.95	612.95
I1	5164+68.95	-0.75	612.96	612.98
J1	5164+78.95	-0.75	612.96	612.99
K1	5164+88.95	-0.75	612.97	613.01
L1	5164+98.95	-0.75	612.97	613.02
M1	5165+08.95	-0.75	612.97	613.02
N1	5165+18.95	-0.75	612.97	613.01
O1	5165+28.95	-0.75	612.96	612.99
P1	5165+38.95	-0.75	612.95	612.96
℄ Brg. Pier C7	5165+48.63	-0.75	612.94	612.94
Q1	5165+58.63	-0.75	612.92	612.93
R1	5165+68.63	-0.75	612.91	612.93
S1	5165+78.63	-0.75	612.90	612.92
T1	5165+88.63	-0.75	612.88	612.91
U1	5165+98.63	-0.75	612.87	612.90
V1	5166+08.63	-0.75	612.86	612.88
W1	5166+18.63	-0.75	612.84	612.85
℄ Brg. Pier C8	5166+33.63	-0.75	612.79	612.79
X1	5166+43.63	-0.75	612.75	612.76
Y1	5166+53.63	-0.75	612.71	612.73
Z1	5166+63.63	-0.75	612.67	612.69
A2	5166+73.63	-0.75	612.63	612.66
B2	5166+83.63	-0.75	612.59	612.63
C2	5166+93.63	-0.75	612.56	612.57
℄ W. Brg. Pier C9	5167+00.63	-0.75	612.54	612.54
℄ Pier C9	5167+01.63	-0.75	612.54	612.54

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C4	5163+05.95	-0.50	612.39	612.39
℄ E. Brg. Pier C4	5163+06.78	-0.50	612.39	612.39
V	5163+16.78	-0.50	612.47	612.49
W	5163+26.78	-0.50	612.54	612.57
X	5163+36.78	-0.50	612.61	612.64
Y	5163+46.78	-0.50	612.66	612.69
Z	5163+56.78	-0.50	612.71	612.72
A1	5163+66.78	-0.50	612.75	612.75
℄ Brg. Pier C5	5163+73.95	-0.50	612.76	612.76
B1	5163+83.95	-0.50	612.78	612.79
C1	5163+93.95	-0.50	612.81	612.83
D1	5164+03.95	-0.50	612.84	612.87
E1	5164+13.95	-0.50	612.87	612.90
F1	5164+23.95	-0.50	612.90	612.92
G1	5164+33.95	-0.50	612.92	612.94
H1	5164+43.95	-0.50	612.94	612.95
℄ Brg. Pier C6	5164+58.95	-0.50	612.95	612.95
I1	5164+68.95	-0.50	612.96	612.97
J1	5164+78.95	-0.50	612.96	612.99
K1	5164+88.95	-0.50	612.96	613.00
L1	5164+98.95	-0.50	612.97	613.02
M1	5165+08.95	-0.50	612.97	613.02
N1	5165+18.95	-0.50	612.97	613.01
O1	5165+28.95	-0.50	612.96	612.98
P1	5165+38.95	-0.50	612.95	612.96
℄ Brg. Pier C7	5165+48.63	-0.50	612.93	612.93
Q1	5165+58.63	-0.50	612.92	612.93
R1	5165+68.63	-0.50	612.90	612.92
S1	5165+78.63	-0.50	612.89	612.92
T1	5165+88.63	-0.50	612.88	612.91
U1	5165+98.63	-0.50	612.87	612.89
V1	5166+08.63	-0.50	612.85	612.88
W1	5166+18.63	-0.50	612.83	612.85
℄ Brg. Pier C8	5166+33.63	-0.50	612.79	612.79
X1	5166+43.63	-0.50	612.75	612.76
Y1	5166+53.63	-0.50	612.71	612.72
Z1	5166+63.63	-0.50	612.66	612.69
A2	5166+73.63	-0.50	612.63	612.66
B2	5166+83.63	-0.50	612.59	612.62
C2	5166+93.63	-0.50	612.56	612.57
℄ W. Brg. Pier C9	5167+00.63	-0.50	612.53	612.53
℄ Pier C9	5167+01.63	-0.50	612.53	612.53

BEAM NO. 20

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C4	5163+05.95	0.75	612.37	612.37
℄ E. Brg. Pier C4	5163+06.78	0.75	612.37	612.37
V	5163+16.78	0.75	612.46	612.47
W	5163+26.78	0.75	612.52	612.56
X	5163+36.78	0.75	612.59	612.62
Y	5163+46.78	0.75	612.64	612.67
Z	5163+56.78	0.75	612.69	612.70
A1	5163+66.78	0.75	612.73	612.73
℄ Brg. Pier C5	5163+73.95	0.75	612.74	612.74
B1	5163+83.95	0.75	612.76	612.77
C1	5163+93.95	0.75	612.79	612.81
D1	5164+03.95	0.75	612.82	612.85
E1	5164+13.95	0.75	612.85	612.88
F1	5164+23.95	0.75	612.88	612.91
G1	5164+33.95	0.75	612.90	612.92
H1	5164+43.95	0.75	612.92	612.93
℄ Brg. Pier C6	5164+58.95	0.75	612.93	612.93
I1	5164+68.95	0.75	612.94	612.95
J1	5164+78.95	0.75	612.94	612.97
K1	5164+88.95	0.75	612.95	612.98
L1	5164+98.95	0.75	612.95	613.00
M1	5165+08.95	0.75	612.95	613.00
N1	5165+18.95	0.75	612.95	612.99
O1	5165+28.95	0.75	612.94	612.97
P1	5165+38.95	0.75	612.93	612.94
℄ Brg. Pier C7	5165+48.63	0.75	612.91	612.91
Q1	5165+58.63	0.75	612.90	612.91
R1	5165+68.63	0.75	612.88	612.90
S1	5165+78.63	0.75	612.87	612.90
T1	5165+88.63	0.75	612.86	612.89
U1	5165+98.63	0.75	612.85	612.88
V1	5166+08.63	0.75	612.84	612.86
W1	5166+18.63	0.75	612.82	612.83
℄ Brg. Pier C8	5166+33.63	0.75	612.77	612.77
X1	5166+43.63	0.75	612.73	612.74
Y1	5166+53.63	0.75	612.69	612.70
Z1	5166+63.63	0.75	612.65	612.67
A2	5166+73.63	0.75	612.61	612.64
B2	5166+83.63	0.75	612.57	612.60
C2	5166+93.63	0.75	612.54	612.55
℄ W. Brg. Pier C9	5167+00.63	0.75	612.52	612.52
℄ Pier C9	5167+01.63	0.75	612.51	612.51

PARSONS
BRINCKERHOFF

USER NAME =	pateld
PLOT SCALE =	N.T.S.
PLOT DATE =	6/28/2017

DESIGNED -	PJL
CHECKED -	RJG
DRAWN -	NG
CHECKED -	JIG

REVISED -	
REVISED -	
REVISED -	
REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS III - UNIT II
STRUCTURE NO. 016-0461

SHEET NO. S2-30 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	322
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-S031-TSE.dgn

BEAM NO. 21				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C4	5163+05.95	7.16	612.27	612.27
℄ E. Brg. Pier C4	5163+06.78	7.16	612.28	612.28
V	5163+16.78	7.16	612.36	612.38
W	5163+26.78	7.16	612.43	612.46
X	5163+36.78	7.16	612.50	612.53
Y	5163+46.78	7.16	612.55	612.57
Z	5163+56.78	7.16	612.59	612.60
A1	5163+66.78	7.16	612.63	612.64
℄ Brg. Pier C5	5163+73.95	7.16	612.65	612.65
B1	5163+83.95	7.16	612.67	612.68
C1	5163+93.95	7.16	612.69	612.71
D1	5164+03.95	7.16	612.73	612.75
E1	5164+13.95	7.16	612.76	612.79
F1	5164+23.95	7.16	612.78	612.81
G1	5164+33.95	7.16	612.80	612.83
H1	5164+43.95	7.16	612.82	612.84
℄ Brg. Pier C6	5164+58.95	7.16	612.84	612.84
I1	5164+68.95	7.16	612.84	612.86
J1	5164+78.95	7.16	612.85	612.87
K1	5164+88.95	7.16	612.85	612.89
L1	5164+98.95	7.16	612.85	612.90
M1	5165+08.95	7.16	612.86	612.90
N1	5165+18.95	7.16	612.85	612.89
O1	5165+28.95	7.16	612.84	612.87
P1	5165+38.95	7.16	612.83	612.84
℄ Brg. Pier C7	5165+48.63	7.16	612.82	612.82
Q1	5165+58.63	7.16	612.80	612.81
R1	5165+68.63	7.16	612.79	612.81
S1	5165+78.63	7.16	612.78	612.80
T1	5165+88.63	7.16	612.77	612.80
U1	5165+98.63	7.16	612.75	612.78
V1	5166+08.63	7.16	612.74	612.76
W1	5166+18.63	7.16	612.72	612.73
℄ Brg. Pier C8	5166+33.63	7.16	612.67	612.67
X1	5166+43.63	7.16	612.64	612.64
Y1	5166+53.63	7.16	612.59	612.61
Z1	5166+63.63	7.16	612.55	612.58
A2	5166+73.63	7.16	612.51	612.54
B2	5166+83.63	7.16	612.48	612.51
C2	5166+93.63	7.16	612.44	612.46
℄ W. Brg. Pier C9	5167+00.63	7.16	612.42	612.42
℄ Pier C9	5167+01.63	7.16	612.42	612.42

CROSS SLOPE BREAK POINT 2				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C4	5163+05.95	11.25	612.21	612.21
℄ E. Brg. Pier C4	5163+06.78	11.25	612.22	612.22
V	5163+16.78	11.25	612.30	612.32
W	5163+26.78	11.25	612.37	612.40
X	5163+36.78	11.25	612.43	612.47
Y	5163+46.78	11.25	612.49	612.51
Z	5163+56.78	11.25	612.53	612.54
A1	5163+66.78	11.25	612.57	612.58
℄ Brg. Pier C5	5163+73.95	11.25	612.59	612.59
B1	5163+83.95	11.25	612.61	612.62
C1	5163+93.95	11.25	612.63	612.65
D1	5164+03.95	11.25	612.66	612.69
E1	5164+13.95	11.25	612.70	612.73
F1	5164+23.95	11.25	612.72	612.75
G1	5164+33.95	11.25	612.74	612.77
H1	5164+43.95	11.25	612.76	612.77
℄ Brg. Pier C6	5164+58.95	11.25	612.77	612.77
I1	5164+68.95	11.25	612.78	612.80
J1	5164+78.95	11.25	612.78	612.81
K1	5164+88.95	11.25	612.79	612.83
L1	5164+98.95	11.25	612.79	612.84
M1	5165+08.95	11.25	612.79	612.84
N1	5165+18.95	11.25	612.79	612.83
O1	5165+28.95	11.25	612.78	612.81
P1	5165+38.95	11.25	612.77	612.78
℄ Brg. Pier C7	5165+48.63	11.25	612.76	612.76
Q1	5165+58.63	11.25	612.74	612.75
R1	5165+68.63	11.25	612.73	612.75
S1	5165+78.63	11.25	612.72	612.74
T1	5165+88.63	11.25	612.70	612.73
U1	5165+98.63	11.25	612.69	612.72
V1	5166+08.63	11.25	612.68	612.70
W1	5166+18.63	11.25	612.66	612.67
℄ Brg. Pier C8	5166+33.63	11.25	612.61	612.61
X1	5166+43.63	11.25	612.57	612.58
Y1	5166+53.63	11.25	612.53	612.55
Z1	5166+63.63	11.25	612.49	612.51
A2	5166+73.63	11.25	612.45	612.48
B2	5166+83.63	11.25	612.41	612.45
C2	5166+93.63	11.25	612.38	612.39
℄ W. Brg. Pier C9	5167+00.63	11.25	612.36	612.36
℄ Pier C9	5167+01.63	11.25	612.36	612.36

BEAM NO. 22				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C4	5163+05.95	13.56	612.17	612.17
℄ E. Brg. Pier C4	5163+06.78	13.56	612.18	612.18
V	5163+16.78	13.56	612.26	612.28
W	5163+26.78	13.56	612.33	612.36
X	5163+36.78	13.56	612.39	612.43
Y	5163+46.78	13.56	612.44	612.46
Z	5163+56.78	13.56	612.48	612.49
A1	5163+66.78	13.56	612.52	612.53
℄ Brg. Pier C5	5163+73.95	13.56	612.54	612.54
B1	5163+83.95	13.56	612.56	612.57
C1	5163+93.95	13.56	612.59	612.60
D1	5164+03.95	13.56	612.62	612.64
E1	5164+13.95	13.56	612.65	612.68
F1	5164+23.95	13.56	612.67	612.70
G1	5164+33.95	13.56	612.69	612.72
H1	5164+43.95	13.56	612.71	612.73
℄ Brg. Pier C6	5164+58.95	13.56	612.73	612.73
I1	5164+68.95	13.56	612.73	612.75
J1	5164+78.95	13.56	612.74	612.76
K1	5164+88.95	13.56	612.74	612.78
L1	5164+98.95	13.56	612.74	612.79
M1	5165+08.95	13.56	612.75	612.79
N1	5165+18.95	13.56	612.74	612.78
O1	5165+28.95	13.56	612.73	612.76
P1	5165+38.95	13.56	612.72	612.74
℄ Brg. Pier C7	5165+48.63	13.56	612.71	612.71
Q1	5165+58.63	13.56	612.69	612.70
R1	5165+68.63	13.56	612.68	612.70
S1	5165+78.63	13.56	612.67	612.69
T1	5165+88.63	13.56	612.66	612.69
U1	5165+98.63	13.56	612.64	612.67
V1	5166+08.63	13.56	612.63	612.65
W1	5166+18.63	13.56	612.61	612.63
℄ Brg. Pier C8	5166+33.63	13.56	612.56	612.56
X1	5166+43.63	13.56	612.53	612.53
Y1	5166+53.63	13.56	612.48	612.50
Z1	5166+63.63	13.56	612.44	612.47
A2	5166+73.63	13.56	612.40	612.43
B2	5166+83.63	13.56	612.37	612.40
C2	5166+93.63	13.56	612.33	612.35
℄ W. Brg. Pier C9	5167+00.63	13.56	612.31	612.31
℄ Pier C9	5167+01.63	13.56	612.31	612.31

PARSONS
BRINCKERHOFF

USER NAME =	pateld	DESIGNED -	PJL	REVISED -	
		CHECKED -	RJG	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	NG	REVISED -	
PLOT DATE =	6/28/2017	CHECKED -	JTG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS IV - UNIT II
STRUCTURE NO. 016-0461

SHEET NO. S2-31 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	323
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-S032-TSE.dgn

BEAM NO. 23				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☒ Pier C4	5163+05.95	19.97	612.06	612.06
☒ E. Brg. Pier C4	5163+06.78	19.97	612.06	612.06
V	5163+16.78	19.97	612.15	612.16
W	5163+26.78	19.97	612.21	612.25
X	5163+36.78	19.97	612.28	612.31
Y	5163+46.78	19.97	612.31	612.33
Z	5163+56.78	19.97	612.35	612.36
A1	5163+66.78	19.97	612.39	612.39
☒ Brg. Pier C5	5163+73.95	19.97	612.40	612.40
B1	5163+83.95	19.97	612.43	612.43
C1	5163+93.95	19.97	612.45	612.47
D1	5164+03.95	19.97	612.48	612.51
E1	5164+13.95	19.97	612.51	612.54
F1	5164+23.95	19.97	612.54	612.57
G1	5164+33.95	19.97	612.56	612.58
H1	5164+43.95	19.97	612.58	612.59
☒ Brg. Pier C6	5164+58.95	19.97	612.59	612.59
I1	5164+68.95	19.97	612.60	612.61
J1	5164+78.95	19.97	612.60	612.63
K1	5164+88.95	19.97	612.61	612.64
L1	5164+98.95	19.97	612.61	612.66
M1	5165+08.95	19.97	612.61	612.66
N1	5165+18.95	19.97	612.61	612.65
O1	5165+28.95	19.97	612.60	612.63
P1	5165+38.95	19.97	612.59	612.60
☒ Brg. Pier C7	5165+48.63	19.97	612.58	612.58
Q1	5165+58.63	19.97	612.56	612.57
R1	5165+68.63	19.97	612.55	612.56
S1	5165+78.63	19.97	612.53	612.56
T1	5165+88.63	19.97	612.52	612.55
U1	5165+98.63	19.97	612.51	612.54
V1	5166+08.63	19.97	612.50	612.52
W1	5166+18.63	19.97	612.48	612.49
☒ Brg. Pier C8	5166+33.63	19.97	612.43	612.43
X1	5166+43.63	19.97	612.39	612.40
Y1	5166+53.63	19.97	612.35	612.36
Z1	5166+63.63	19.97	612.31	612.33
A2	5166+73.63	19.97	612.27	612.30
B2	5166+83.63	19.97	612.23	612.26
C2	5166+93.63	19.97	612.20	612.21
☒ W. Brg. Pier C9	5167+00.63	19.97	612.18	612.18
☒ Pier C9	5167+01.63	19.97	612.17	612.17

CROSS SLOPE BREAK POINT 3				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☒ Pier C4	5163+05.95	23.25	612.00	612.00
☒ E. Brg. Pier C4	5163+06.78	23.25	612.01	612.01
V	5163+16.78	23.25	612.09	612.11
W	5163+26.78	23.25	612.16	612.19
X	5163+36.78	23.25	612.22	612.26
Y	5163+46.78	23.25	612.24	612.26
Z	5163+56.78	23.25	612.28	612.29
A1	5163+66.78	23.25	612.32	612.33
☒ Brg. Pier C5	5163+73.95	23.25	612.34	612.34
B1	5163+83.95	23.25	612.36	612.37
C1	5163+93.95	23.25	612.38	612.40
D1	5164+03.95	23.25	612.41	612.44
E1	5164+13.95	23.25	612.45	612.48
F1	5164+23.95	23.25	612.47	612.50
G1	5164+33.95	23.25	612.49	612.52
H1	5164+43.95	23.25	612.51	612.52
☒ Brg. Pier C6	5164+58.95	23.25	612.52	612.52
I1	5164+68.95	23.25	612.53	612.55
J1	5164+78.95	23.25	612.53	612.56
K1	5164+88.95	23.25	612.54	612.58
L1	5164+98.95	23.25	612.54	612.59
M1	5165+08.95	23.25	612.54	612.59
N1	5165+18.95	23.25	612.54	612.58
O1	5165+28.95	23.25	612.53	612.56
P1	5165+38.95	23.25	612.52	612.53
☒ Brg. Pier C7	5165+48.63	23.25	612.51	612.51
Q1	5165+58.63	23.25	612.49	612.50
R1	5165+68.63	23.25	612.48	612.50
S1	5165+78.63	23.25	612.47	612.49
T1	5165+88.63	23.25	612.45	612.48
U1	5165+98.63	23.25	612.44	612.47
V1	5166+08.63	23.25	612.43	612.45
W1	5166+18.63	23.25	612.41	612.42
☒ Brg. Pier C8	5166+33.63	23.25	612.36	612.36
X1	5166+43.63	23.25	612.32	612.33
Y1	5166+53.63	23.25	612.28	612.30
Z1	5166+63.63	23.25	612.24	612.26
A2	5166+73.63	23.25	612.20	612.23
B2	5166+83.63	23.25	612.16	612.20
C2	5166+93.63	23.25	612.13	612.14
☒ W. Brg. Pier C9	5167+00.63	23.25	612.11	612.11
☒ Pier C9	5167+01.63	23.25	612.11	612.11

BEAM NO. 24				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
☒ Pier C4	5163+05.95	26.38	611.95	611.95
☒ E. Brg. Pier C4	5163+06.78	26.38	611.95	611.95
V	5163+16.78	26.38	612.03	612.05
W	5163+26.78	26.38	612.09	612.12
X	5163+36.78	26.38	612.16	612.19
Y	5163+46.78	26.38	612.17	612.20
Z	5163+56.78	26.38	612.22	612.23
A1	5163+66.78	26.38	612.26	612.26
☒ Brg. Pier C5	5163+73.95	26.38	612.27	612.27
B1	5163+83.95	26.38	612.29	612.30
C1	5163+93.95	26.38	612.32	612.34
D1	5164+03.95	26.38	612.35	612.37
E1	5164+13.95	26.38	612.38	612.41
F1	5164+23.95	26.38	612.41	612.43
G1	5164+33.95	26.38	612.43	612.45
H1	5164+43.95	26.38	612.44	612.46
☒ Brg. Pier C6	5164+58.95	26.38	612.46	612.46
I1	5164+68.95	26.38	612.47	612.48
J1	5164+78.95	26.38	612.47	612.50
K1	5164+88.95	26.38	612.47	612.51
L1	5164+98.95	26.38	612.48	612.52
M1	5165+08.95	26.38	612.48	612.53
N1	5165+18.95	26.38	612.48	612.51
O1	5165+28.95	26.38	612.47	612.49
P1	5165+38.95	26.38	612.45	612.47
☒ Brg. Pier C7	5165+48.63	26.38	612.44	612.44
Q1	5165+58.63	26.38	612.43	612.44
R1	5165+68.63	26.38	612.41	612.43
S1	5165+78.63	26.38	612.40	612.43
T1	5165+88.63	26.38	612.39	612.42
U1	5165+98.63	26.38	612.38	612.40
V1	5166+08.63	26.38	612.36	612.39
W1	5166+18.63	26.38	612.34	612.36
☒ Brg. Pier C8	5166+33.63	26.38	612.30	612.30
X1	5166+43.63	26.38	612.26	612.26
Y1	5166+53.63	26.38	612.22	612.23
Z1	5166+63.63	26.38	612.17	612.20
A2	5166+73.63	26.38	612.13	612.17
B2	5166+83.63	26.38	612.10	612.13
C2	5166+93.63	26.38	612.06	612.08
☒ W. Brg. Pier C9	5167+00.63	26.38	612.04	612.04
☒ Pier C9	5167+01.63	26.38	612.04	612.04

**PARSONS
BRINCKERHOFF**

USER NAME =	pateld
PLOT SCALE =	N.T.S.
PLOT DATE =	6/28/2017

DESIGNED -	PJL
CHECKED -	RJG
DRAWN -	NG
CHECKED -	JIG

REVISED -	
REVISED -	
REVISED -	
REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS V - UNIT II
STRUCTURE NO. 016-0461

SHEET NO. S2-32 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	324
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-5033-TSE.dgn

BEAM NO. 25				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C4	5163+05.95	32.78	611.83	611.83
℄ E. Brg. Pier C4	5163+06.78	32.78	611.84	611.84
V	5163+16.78	32.78	611.92	611.94
W	5163+26.78	32.78	611.96	611.99
X	5163+36.78	32.78	612.03	612.06
Y	5163+46.78	32.78	612.04	612.06
Z	5163+56.78	32.78	612.08	612.09
A1	5163+66.78	32.78	612.12	612.13
℄ Brg. Pier C5	5163+73.95	32.78	612.14	612.14
B1	5163+83.95	32.78	612.16	612.17
C1	5163+93.95	32.78	612.18	612.20
D1	5164+03.95	32.78	612.22	612.24
E1	5164+13.95	32.78	612.25	612.28
F1	5164+23.95	32.78	612.27	612.30
G1	5164+33.95	32.78	612.29	612.32
H1	5164+43.95	32.78	612.31	612.33
℄ Brg. Pier C6	5164+58.95	32.78	612.33	612.33
I1	5164+68.95	32.78	612.33	612.35
J1	5164+78.95	32.78	612.34	612.36
K1	5164+88.95	32.78	612.34	612.38
L1	5164+98.95	32.78	612.34	612.39
M1	5165+08.95	32.78	612.35	612.39
N1	5165+18.95	32.78	612.34	612.38
O1	5165+28.95	32.78	612.33	612.36
P1	5165+38.95	32.78	612.32	612.33
℄ Brg. Pier C7	5165+48.63	32.78	612.31	612.31
Q1	5165+58.63	32.78	612.29	612.30
R1	5165+68.63	32.78	612.28	612.30
S1	5165+78.63	32.78	612.27	612.29
T1	5165+88.63	32.78	612.26	612.29
U1	5165+98.63	32.78	612.24	612.27
V1	5166+08.63	32.78	612.23	612.25
W1	5166+18.63	32.78	612.21	612.22
℄ Brg. Pier C8	5166+33.63	32.78	612.16	612.16
X1	5166+43.63	32.78	612.13	612.13
Y1	5166+53.63	32.78	612.08	612.10
Z1	5166+63.63	32.78	612.04	612.07
A2	5166+73.63	32.78	612.00	612.03
B2	5166+83.63	32.78	611.97	612.00
C2	5166+93.63	32.78	611.93	611.95
℄ W. Brg. Pier C9	5167+00.63	32.78	611.91	611.91
℄ Pier C9	5167+01.63	32.78	611.91	611.91

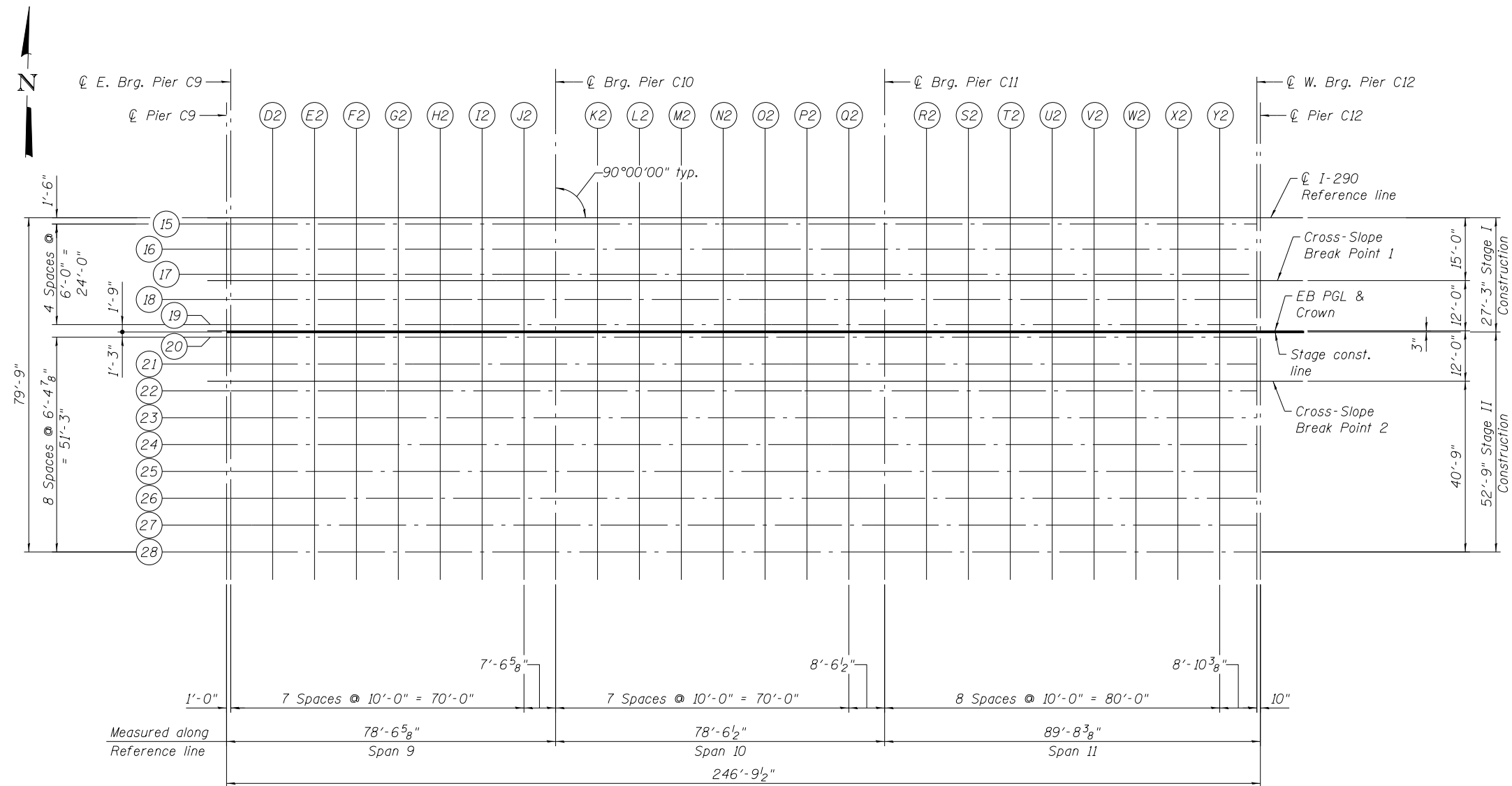
BEAM NO. 26				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C4	5163+05.95	39.19	611.72	611.72
℄ E. Brg. Pier C4	5163+06.78	39.19	611.73	611.73
V	5163+16.78	39.19	611.81	611.83
W	5163+26.78	39.19	611.83	611.86
X	5163+36.78	39.19	611.89	611.92
Y	5163+46.78	39.19	611.91	611.93
Z	5163+56.78	39.19	611.95	611.96
A1	5163+66.78	39.19	611.99	611.99
℄ Brg. Pier C5	5163+73.95	39.19	612.00	612.00
B1	5163+83.95	39.19	612.02	612.03
C1	5163+93.95	39.19	612.05	612.07
D1	5164+03.95	39.19	612.08	612.11
E1	5164+13.95	39.19	612.11	612.14
F1	5164+23.95	39.19	612.14	612.17
G1	5164+33.95	39.19	612.16	612.18
H1	5164+43.95	39.19	612.18	612.19
℄ Brg. Pier C6	5164+58.95	39.19	612.19	612.19
I1	5164+68.95	39.19	612.20	612.21
J1	5164+78.95	39.19	612.20	612.23
K1	5164+88.95	39.19	612.21	612.24
L1	5164+98.95	39.19	612.21	612.26
M1	5165+08.95	39.19	612.21	612.26
N1	5165+18.95	39.19	612.21	612.25
O1	5165+28.95	39.19	612.20	612.23
P1	5165+38.95	39.19	612.19	612.20
℄ Brg. Pier C7	5165+48.63	39.19	612.17	612.17
Q1	5165+58.63	39.19	612.16	612.17
R1	5165+68.63	39.19	612.14	612.16
S1	5165+78.63	39.19	612.13	612.16
T1	5165+88.63	39.19	612.12	612.15
U1	5165+98.63	39.19	612.11	612.14
V1	5166+08.63	39.19	612.10	612.12
W1	5166+18.63	39.19	612.08	612.09
℄ Brg. Pier C8	5166+33.63	39.19	612.03	612.03
X1	5166+43.63	39.19	611.99	612.00
Y1	5166+53.63	39.19	611.95	611.96
Z1	5166+63.63	39.19	611.91	611.93
A2	5166+73.63	39.19	611.87	611.90
B2	5166+83.63	39.19	611.83	611.86
C2	5166+93.63	39.19	611.80	611.81
℄ W. Brg. Pier C9	5167+00.63	39.19	611.78	611.78
℄ Pier C9	5167+01.63	39.19	611.77	611.77

BEAM NO. 27				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C4	5163+05.95	45.59	611.61	611.61
℄ E. Brg. Pier C4	5163+06.78	45.59	611.62	611.62
V	5163+16.78	45.59	611.70	611.72
W	5163+26.78	45.59	611.70	611.73
X	5163+36.78	45.59	611.76	611.79
Y	5163+46.78	45.59	611.77	611.80
Z	5163+56.78	45.59	611.82	611.83
A1	5163+66.78	45.59	611.85	611.86
℄ Brg. Pier C5	5163+73.95	45.59	611.87	611.87
B1	5163+83.95	45.59	611.89	611.90
C1	5163+93.95	45.59	611.92	611.94
D1	5164+03.95	45.59	611.95	611.97
E1	5164+13.95	45.59	611.98	612.01
F1	5164+23.95	45.59	612.01	612.03
G1	5164+33.95	45.59	612.03	612.05
H1	5164+43.95	45.59	612.04	612.06
℄ Brg. Pier C6	5164+58.95	45.59	612.06	612.06
I1	5164+68.95	45.59	612.07	612.08
J1	5164+78.95	45.59	612.07	612.10
K1	5164+88.95	45.59	612.07	612.11
L1	5164+98.95	45.59	612.08	612.12
M1	5165+08.95	45.59	612.08	612.13
N1	5165+18.95	45.59	612.08	612.11
O1	5165+28.95	45.59	612.07	612.09
P1	5165+38.95	45.59	612.05	612.07
℄ Brg. Pier C7	5165+48.63	45.59	612.04	612.04
Q1	5165+58.63	45.59	612.03	612.04
R1	5165+68.63	45.59	612.01	612.03
S1	5165+78.63	45.59	612.00	612.03
T1	5165+88.63	45.59	611.99	612.02
U1	5165+98.63	45.59	611.98	612.00
V1	5166+08.63	45.59	611.96	611.99
W1	5166+18.63	45.59	611.94	611.96
℄ Brg. Pier C8	5166+33.63	45.59	611.90	611.90
X1	5166+43.63	45.59	611.86	611.86
Y1	5166+53.63	45.59	611.82	611.83
Z1	5166+63.63	45.59	611.77	611.80
A2	5166+73.63	45.59	611.73	611.77
B2	5166+83.63	45.59	611.70	611.73
C2	5166+93.63	45.59	611.66	611.68
℄ W. Brg. Pier C9	5167+00.63	45.59	611.64	611.64
℄ Pier C9	5167+01.63	45.59	611.64	611.64

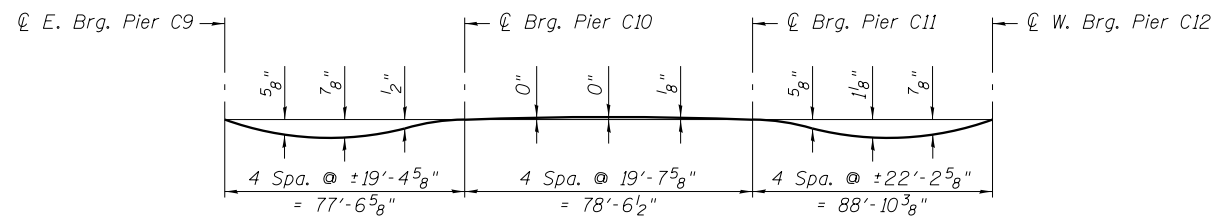
BEAM NO. 28

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C4	5163+05.95	52.00	611.50	611.50
℄ E. Brg. Pier C4	5163+06.78	52.00	611.50	611.50
V	5163+16.78	52.00	611.59	611.60
W	5163+26.78	52.00	611.56	611.59
X	5163+36.78	52.00	611.63	611.66
Y	5163+46.78	52.00	611.64	611.66
Z	5163+56.78	52.00	611.68	611.69
A1	5163+66.78	52.00	611.72	611.73
℄ Brg. Pier C5	5163+73.95	52.00	611.74	611.74
B1	5163+83.95	52.00	611.76	611.77
C1	5163+93.95	52.00	611.78	611.80
D1	5164+03.95	52.00	611.82	611.84
E1	5164+13.95	52.00	611.85	611.88
F1	5164+23.95	52.00	611.87	611.90
G1	5164+33.95	52.00	611.89	611.92
H1	5164+43.95	52.00	611.91	611.92
℄ Brg. Pier C6	5164+58.95	52.00	611.93	611.93
I1	5164+68.95	52.00	611.93	611.95
J1	5164+78.95	52.00	611.94	611.96
K1	5164+88.95	52.00	611.94	611.98
L1	5164+98.95	52.00	611.94	611.99
M1	5165+08.95	52.00	611.95	611.99
N1	5165+18.95	52.00	611.94	611.98
O1	5165+28.95	52.00	611.93	611.96
P1	5165+38.95	52.00	611.92	611.93
℄ Brg. Pier C7	5165+48.63	52.00	611.91	611.91
Q1	5165+58.63	52.00	611.89	611.90
R1	5165+68.63	52.00	611.88	611.90
S1	5165+78.63	52.00	611.87	611.89
T1	5165+88.63	52.00	611.86	611.89
U1	5165+98.63	52.00	611.84	611.87
V1	5166+08.63	52.00	611.83	611.85
W1	5166+18.63	52.00	611.81	611.82
℄ Brg. Pier C8	5166+33.63	52.00	611.76	611.76
X1	5166+43.63	52.00	611.73	611.73
Y1	5166+53.63	52.00	611.68	611.70
Z1	5166+63.63	52.00	611.64	611.67
A2	5166+73.63	52.00	611.60	611.63
B2	5166+83.63	52.00	611.57	611.60
C2	5166+93.63	52.00	611.53	611.55
℄ W. Brg. Pier C9	5167+00.63	52.00	611.51	611.51
℄ Pier C9	5167+01.63	52.00	611.51	611.51

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PLAN - UNIT III

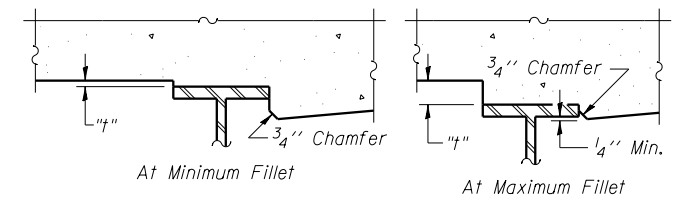


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown in tables, see sheets S2-36 thru S2-41.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals in tables, see sheets S2-36 thru S2-41. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets S2-36 thru S2-41, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

0160461-60X75-S035-TSE.dgn

PARSONS
BRINCKERHOFF

USER NAME = pateld	DESIGNED - PJL	REVISED -
	CHECKED - RJG	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATION PLAN - UNIT III
STRUCTURE NO. 016-0461

SHEET NO. S2-35 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	327
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-5036-TSE.dgn

BEAM NO. 15

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	-26.25	612.16	612.16
℄ E.Brg. Pier C9	5167+02.63	-26.25	612.16	612.16
D2	5167+12.63	-26.25	612.14	612.16
E2	5167+22.63	-26.25	612.12	612.17
F2	5167+32.63	-26.25	612.09	612.15
G2	5167+42.63	-26.25	612.05	612.12
H2	5167+52.63	-26.25	612.02	612.08
I2	5167+62.63	-26.25	611.99	612.03
J2	5167+72.63	-26.25	611.96	611.97
℄ Brg. Pier C10	5167+80.19	-26.25	611.93	611.93
K2	5167+90.19	-26.25	611.89	611.89
L2	5168+00.19	-26.25	611.84	611.84
M2	5168+10.19	-26.25	611.80	611.80
N2	5168+20.19	-26.25	611.76	611.76
O2	5168+30.19	-26.25	611.72	611.71
P2	5168+40.19	-26.25	611.68	611.67
Q2	5168+50.19	-26.25	611.66	611.66
℄ Brg. Pier C11	5168+58.73	-26.25	611.64	611.64
R2	5168+68.73	-26.25	611.61	611.63
S2	5168+78.73	-26.25	611.57	611.61
T2	5168+88.73	-26.25	611.52	611.59
U2	5168+98.73	-26.25	611.48	611.56
V2	5169+08.73	-26.25	611.43	611.52
W2	5169+18.73	-26.25	611.38	611.46
X2	5169+28.73	-26.25	611.34	611.40
Y2	5169+38.73	-26.25	611.29	611.32
℄ W.Brg. Pier C12	5169+47.60	-26.25	611.25	611.25
℄ Pier C12	5169+48.43	-26.25	611.25	611.25

BEAM NO. 16

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	-20.25	612.29	612.29
℄ E.Brg. Pier C9	5167+02.63	-20.25	612.28	612.28
D2	5167+12.63	-20.25	612.26	612.29
E2	5167+22.63	-20.25	612.24	612.29
F2	5167+32.63	-20.25	612.21	612.27
G2	5167+42.63	-20.25	612.17	612.25
H2	5167+52.63	-20.25	612.15	612.20
I2	5167+62.63	-20.25	612.12	612.15
J2	5167+72.63	-20.25	612.08	612.10
℄ Brg. Pier C10	5167+80.19	-20.25	612.05	612.05
K2	5167+90.19	-20.25	612.01	612.01
L2	5168+00.19	-20.25	611.97	611.97
M2	5168+10.19	-20.25	611.92	611.92
N2	5168+20.19	-20.25	611.88	611.88
O2	5168+30.19	-20.25	611.84	611.84
P2	5168+40.19	-20.25	611.81	611.80
Q2	5168+50.19	-20.25	611.78	611.78
℄ Brg. Pier C11	5168+58.73	-20.25	611.77	611.77
R2	5168+68.73	-20.25	611.74	611.76
S2	5168+78.73	-20.25	611.69	611.74
T2	5168+88.73	-20.25	611.65	611.71
U2	5168+98.73	-20.25	611.60	611.69
V2	5169+08.73	-20.25	611.55	611.64
W2	5169+18.73	-20.25	611.51	611.59
X2	5169+28.73	-20.25	611.46	611.53
Y2	5169+38.73	-20.25	611.42	611.45
℄ W.Brg. Pier C12	5169+47.60	-20.25	611.38	611.38
℄ Pier C12	5169+48.43	-20.25	611.38	611.38

BEAM NO. 17

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	-14.25	612.40	612.40
℄ E.Brg. Pier C9	5167+02.63	-14.25	612.39	612.39
D2	5167+12.63	-14.25	612.37	612.40
E2	5167+22.63	-14.25	612.35	612.40
F2	5167+32.63	-14.25	612.32	612.38
G2	5167+42.63	-14.25	612.28	612.36
H2	5167+52.63	-14.25	612.26	612.31
I2	5167+62.63	-14.25	612.23	612.26
J2	5167+72.63	-14.25	612.19	612.21
℄ Brg. Pier C10	5167+80.19	-14.25	612.16	612.16
K2	5167+90.19	-14.25	612.12	612.12
L2	5168+00.19	-14.25	612.08	612.08
M2	5168+10.19	-14.25	612.03	612.03
N2	5168+20.19	-14.25	611.99	611.99
O2	5168+30.19	-14.25	611.95	611.95
P2	5168+40.19	-14.25	611.92	611.91
Q2	5168+50.19	-14.25	611.89	611.89
℄ Brg. Pier C11	5168+58.73	-14.25	611.87	611.87
R2	5168+68.73	-14.25	611.84	611.87
S2	5168+78.73	-14.25	611.80	611.85
T2	5168+88.73	-14.25	611.76	611.82
U2	5168+98.73	-14.25	611.71	611.80
V2	5169+08.73	-14.25	611.66	611.75
W2	5169+18.73	-14.25	611.62	611.70
X2	5169+28.73	-14.25	611.57	611.64
Y2	5169+38.73	-14.25	611.53	611.56
℄ W.Brg. Pier C12	5169+47.60	-14.25	611.49	611.49
℄ Pier C12	5169+48.43	-14.25	611.49	611.49

PARSONS
BRINCKERHOFF

USER NAME =	pateld
PLOT SCALE =	N.T.S.
PLOT DATE =	6/28/2017

DESIGNED -	PJL
CHECKED -	RJG
DRAWN -	NG
CHECKED -	JTG

REVISED -	
REVISED -	
REVISED -	
REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS I - UNIT III
STRUCTURE NO. 016-0461

SHEET NO. S2-36 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	328
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-5037-TSE.dgn

CROSS SLOPE BREAK POINT 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	-12.75	612.41	612.41
℄ E.Brg. Pier C9	5167+02.63	-12.75	612.41	612.41
D2	5167+12.63	-12.75	612.39	612.41
E2	5167+22.63	-12.75	612.37	612.42
F2	5167+32.63	-12.75	612.34	612.40
G2	5167+42.63	-12.75	612.30	612.37
H2	5167+52.63	-12.75	612.27	612.33
I2	5167+62.63	-12.75	612.24	612.28
J2	5167+72.63	-12.75	612.21	612.22
℄ Brg. Pier C10	5167+80.19	-12.75	612.18	612.18
K2	5167+90.19	-12.75	612.14	612.14
L2	5168+00.19	-12.75	612.09	612.09
M2	5168+10.19	-12.75	612.05	612.05
N2	5168+20.19	-12.75	612.01	612.01
O2	5168+30.19	-12.75	611.97	611.96
P2	5168+40.19	-12.75	611.93	611.92
Q2	5168+50.19	-12.75	611.91	611.91
℄ Brg. Pier C11	5168+58.73	-12.75	611.89	611.89
R2	5168+68.73	-12.75	611.86	611.88
S2	5168+78.73	-12.75	611.82	611.86
T2	5168+88.73	-12.75	611.77	611.84
U2	5168+98.73	-12.75	611.73	611.81
V2	5169+08.73	-12.75	611.68	611.77
W2	5169+18.73	-12.75	611.63	611.71
X2	5169+28.73	-12.75	611.59	611.65
Y2	5169+38.73	-12.75	611.54	611.57
℄ W.Brg. Pier C12	5169+47.60	-12.75	611.50	611.50
℄ Pier C12	5169+48.43	-12.75	611.50	611.50

BEAM NO. 18

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	-8.25	612.46	612.46
℄ E.Brg. Pier C9	5167+02.63	-8.25	612.46	612.46
D2	5167+12.63	-8.25	612.43	612.46
E2	5167+22.63	-8.25	612.41	612.47
F2	5167+32.63	-8.25	612.38	612.45
G2	5167+42.63	-8.25	612.35	612.42
H2	5167+52.63	-8.25	612.32	612.37
I2	5167+62.63	-8.25	612.29	612.33
J2	5167+72.63	-8.25	612.25	612.27
℄ Brg. Pier C10	5167+80.19	-8.25	612.22	612.22
K2	5167+90.19	-8.25	612.18	612.18
L2	5168+00.19	-8.25	612.14	612.14
M2	5168+10.19	-8.25	612.09	612.09
N2	5168+20.19	-8.25	612.05	612.05
O2	5168+30.19	-8.25	612.02	612.01
P2	5168+40.19	-8.25	611.98	611.97
Q2	5168+50.19	-8.25	611.96	611.95
℄ Brg. Pier C11	5168+58.73	-8.25	611.94	611.94
R2	5168+68.73	-8.25	611.91	611.93
S2	5168+78.73	-8.25	611.86	611.91
T2	5168+88.73	-8.25	611.82	611.89
U2	5168+98.73	-8.25	611.77	611.86
V2	5169+08.73	-8.25	611.73	611.82
W2	5169+18.73	-8.25	611.68	611.76
X2	5169+28.73	-8.25	611.64	611.70
Y2	5169+38.73	-8.25	611.59	611.62
℄ W.Brg. Pier C12	5169+47.60	-8.25	611.55	611.55
℄ Pier C12	5169+48.43	-8.25	611.55	611.55

BEAM NO. 19

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	-2.25	612.52	612.52
℄ E.Brg. Pier C9	5167+02.63	-2.25	612.52	612.52
D2	5167+12.63	-2.25	612.50	612.52
E2	5167+22.63	-2.25	612.48	612.53
F2	5167+32.63	-2.25	612.44	612.51
G2	5167+42.63	-2.25	612.41	612.48
H2	5167+52.63	-2.25	612.38	612.44
I2	5167+62.63	-2.25	612.35	612.39
J2	5167+72.63	-2.25	612.32	612.33
℄ Brg. Pier C10	5167+80.19	-2.25	612.29	612.29
K2	5167+90.19	-2.25	612.25	612.25
L2	5168+00.19	-2.25	612.20	612.20
M2	5168+10.19	-2.25	612.16	612.16
N2	5168+20.19	-2.25	612.11	612.11
O2	5168+30.19	-2.25	612.08	612.07
P2	5168+40.19	-2.25	612.04	612.03
Q2	5168+50.19	-2.25	612.02	612.01
℄ Brg. Pier C11	5168+58.73	-2.25	612.00	612.00
R2	5168+68.73	-2.25	611.97	611.99
S2	5168+78.73	-2.25	611.93	611.97
T2	5168+88.73	-2.25	611.88	611.95
U2	5168+98.73	-2.25	611.84	611.92
V2	5169+08.73	-2.25	611.79	611.88
W2	5169+18.73	-2.25	611.74	611.82
X2	5169+28.73	-2.25	611.70	611.76
Y2	5169+38.73	-2.25	611.65	611.68
℄ W.Brg. Pier C12	5169+47.60	-2.25	611.61	611.61
℄ Pier C12	5169+48.43	-2.25	611.61	611.61

PARSONS
BRINCKERHOFF

USER NAME =	pateld
PLOT SCALE =	N.T.S.
PLOT DATE =	6/28/2017

DESIGNED -	PJL
CHECKED -	RJG
DRAWN -	NG
CHECKED -	JIG

REVISED -	
REVISED -	
REVISED -	
REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS II – UNIT III
STRUCTURE NO. 016–0461

SHEET NO. S2-37 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	329
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

EASTBOUND PROFILE GRADE LINE & CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	-0.75	612.54	612.54
℄ E.Brg. Pier C9	5167+02.63	-0.75	612.53	612.53
D2	5167+12.63	-0.75	612.51	612.54
E2	5167+22.63	-0.75	612.49	612.54
F2	5167+32.63	-0.75	612.46	612.52
G2	5167+42.63	-0.75	612.42	612.50
H2	5167+52.63	-0.75	612.40	612.45
I2	5167+62.63	-0.75	612.37	612.40
J2	5167+72.63	-0.75	612.33	612.35
℄ Brg. Pier C10	5167+80.19	-0.75	612.30	612.30
K2	5167+90.19	-0.75	612.26	612.26
L2	5168+00.19	-0.75	612.22	612.22
M2	5168+10.19	-0.75	612.17	612.17
N2	5168+20.19	-0.75	612.13	612.13
O2	5168+30.19	-0.75	612.09	612.09
P2	5168+40.19	-0.75	612.06	612.05
Q2	5168+50.19	-0.75	612.03	612.03
℄ Brg. Pier C11	5168+58.73	-0.75	612.02	612.02
R2	5168+68.73	-0.75	611.99	612.01
S2	5168+78.73	-0.75	611.94	611.99
T2	5168+88.73	-0.75	611.90	611.96
U2	5168+98.73	-0.75	611.85	611.94
V2	5169+08.73	-0.75	611.80	611.89
W2	5169+18.73	-0.75	611.76	611.84
X2	5169+28.73	-0.75	611.71	611.78
Y2	5169+38.73	-0.75	611.67	611.70
℄ W.Brg. Pier C12	5169+47.60	-0.75	611.63	611.63
℄ Pier C12	5169+48.43	-0.75	611.63	611.63

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	-0.50	612.53	612.53
℄ E.Brg. Pier C9	5167+02.63	-0.50	612.53	612.53
D2	5167+12.63	-0.50	612.51	612.53
E2	5167+22.63	-0.50	612.49	612.54
F2	5167+32.63	-0.50	612.46	612.52
G2	5167+42.63	-0.50	612.42	612.49
H2	5167+52.63	-0.50	612.39	612.45
I2	5167+62.63	-0.50	612.36	612.40
J2	5167+72.63	-0.50	612.33	612.34
℄ Brg. Pier C10	5167+80.19	-0.50	612.30	612.30
K2	5167+90.19	-0.50	612.26	612.26
L2	5168+00.19	-0.50	612.21	612.21
M2	5168+10.19	-0.50	612.17	612.17
N2	5168+20.19	-0.50	612.13	612.13
O2	5168+30.19	-0.50	612.09	612.08
P2	5168+40.19	-0.50	612.06	612.05
Q2	5168+50.19	-0.50	612.03	612.03
℄ Brg. Pier C11	5168+58.73	-0.50	612.01	612.01
R2	5168+68.73	-0.50	611.98	612.01
S2	5168+78.73	-0.50	611.94	611.98
T2	5168+88.73	-0.50	611.89	611.96
U2	5168+98.73	-0.50	611.85	611.93
V2	5169+08.73	-0.50	611.80	611.89
W2	5169+18.73	-0.50	611.76	611.84
X2	5169+28.73	-0.50	611.71	611.77
Y2	5169+38.73	-0.50	611.67	611.69
℄ W.Brg. Pier C12	5169+47.60	-0.50	611.63	611.63
℄ Pier C12	5169+48.43	-0.50	611.62	611.62

BEAM NO. 20

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	0.75	612.51	612.51
℄ E.Brg. Pier C9	5167+02.63	0.75	612.51	612.51
D2	5167+12.63	0.75	612.49	612.52
E2	5167+22.63	0.75	612.47	612.52
F2	5167+32.63	0.75	612.44	612.50
G2	5167+42.63	0.75	612.40	612.47
H2	5167+52.63	0.75	612.37	612.43
I2	5167+62.63	0.75	612.34	612.38
J2	5167+72.63	0.75	612.31	612.32
℄ Brg. Pier C10	5167+80.19	0.75	612.28	612.28
K2	5167+90.19	0.75	612.24	612.24
L2	5168+00.19	0.75	612.19	612.19
M2	5168+10.19	0.75	612.15	612.15
N2	5168+20.19	0.75	612.11	612.11
O2	5168+30.19	0.75	612.07	612.06
P2	5168+40.19	0.75	612.04	612.03
Q2	5168+50.19	0.75	612.01	612.01
℄ Brg. Pier C11	5168+58.73	0.75	611.99	611.99
R2	5168+68.73	0.75	611.96	611.99
S2	5168+78.73	0.75	611.92	611.97
T2	5168+88.73	0.75	611.87	611.94
U2	5168+98.73	0.75	611.83	611.91
V2	5169+08.73	0.75	611.78	611.87
W2	5169+18.73	0.75	611.74	611.82
X2	5169+28.73	0.75	611.69	611.75
Y2	5169+38.73	0.75	611.65	611.68
℄ W.Brg. Pier C12	5169+47.60	0.75	611.61	611.61
℄ Pier C12	5169+48.43	0.75	611.61	611.61

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BEAM NO. 21				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	7.16	612.42	612.42
℄ E.Brg. Pier C9	5167+02.63	7.16	612.42	612.42
D2	5167+12.63	7.16	612.39	612.42
E2	5167+22.63	7.16	612.37	612.43
F2	5167+32.63	7.16	612.34	612.41
G2	5167+42.63	7.16	612.31	612.38
H2	5167+52.63	7.16	612.28	612.33
I2	5167+62.63	7.16	612.25	612.29
J2	5167+72.63	7.16	612.21	612.23
℄ Brg. Pier C10	5167+80.19	7.16	612.18	612.18
K2	5167+90.19	7.16	612.14	612.14
L2	5168+00.19	7.16	612.10	612.10
M2	5168+10.19	7.16	612.05	612.05
N2	5168+20.19	7.16	612.01	612.01
O2	5168+30.19	7.16	611.97	611.97
P2	5168+40.19	7.16	611.94	611.93
Q2	5168+50.19	7.16	611.92	611.91
℄ Brg. Pier C11	5168+58.73	7.16	611.90	611.90
R2	5168+68.73	7.16	611.87	611.89
S2	5168+78.73	7.16	611.82	611.87
T2	5168+88.73	7.16	611.78	611.85
U2	5168+98.73	7.16	611.73	611.82
V2	5169+08.73	7.16	611.69	611.77
W2	5169+18.73	7.16	611.64	611.72
X2	5169+28.73	7.16	611.60	611.66
Y2	5169+38.73	7.16	611.56	611.59
℄ W.Brg. Pier C12	5169+47.60	7.16	611.55	611.55
℄ Pier C12	5169+48.43	7.16	611.54	611.54

CROSS SLOPE BREAK POINT 2				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	11.25	612.36	612.36
℄ E.Brg. Pier C9	5167+02.63	11.25	612.35	612.35
D2	5167+12.63	11.25	612.33	612.36
E2	5167+22.63	11.25	612.31	612.36
F2	5167+32.63	11.25	612.28	612.34
G2	5167+42.63	11.25	612.24	612.32
H2	5167+52.63	11.25	612.22	612.27
I2	5167+62.63	11.25	612.19	612.22
J2	5167+72.63	11.25	612.15	612.17
℄ Brg. Pier C10	5167+80.19	11.25	612.12	612.12
K2	5167+90.19	11.25	612.08	612.08
L2	5168+00.19	11.25	612.04	612.04
M2	5168+10.19	11.25	611.99	611.99
N2	5168+20.19	11.25	611.95	611.95
O2	5168+30.19	11.25	611.91	611.91
P2	5168+40.19	11.25	611.88	611.87
Q2	5168+50.19	11.25	611.85	611.85
℄ Brg. Pier C11	5168+58.73	11.25	611.84	611.84
R2	5168+68.73	11.25	611.81	611.83
S2	5168+78.73	11.25	611.76	611.81
T2	5168+88.73	11.25	611.72	611.78
U2	5168+98.73	11.25	611.67	611.76
V2	5169+08.73	11.25	611.62	611.71
W2	5169+18.73	11.25	611.58	611.66
X2	5169+28.73	11.25	611.53	611.60
Y2	5169+38.73	11.25	611.51	611.54
℄ W.Brg. Pier C12	5169+47.60	11.25	611.50	611.50
℄ Pier C12	5169+48.43	11.25	611.50	611.50

BEAM NO. 22				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	13.56	612.31	612.31
℄ E.Brg. Pier C9	5167+02.63	13.56	612.31	612.31
D2	5167+12.63	13.56	612.28	612.31
E2	5167+22.63	13.56	612.26	612.32
F2	5167+32.63	13.56	612.23	612.30
G2	5167+42.63	13.56	612.20	612.27
H2	5167+52.63	13.56	612.17	612.22
I2	5167+62.63	13.56	612.14	612.18
J2	5167+72.63	13.56	612.10	612.12
℄ Brg. Pier C10	5167+80.19	13.56	612.07	612.07
K2	5167+90.19	13.56	612.03	612.03
L2	5168+00.19	13.56	611.99	611.99
M2	5168+10.19	13.56	611.94	611.94
N2	5168+20.19	13.56	611.90	611.90
O2	5168+30.19	13.56	611.86	611.86
P2	5168+40.19	13.56	611.83	611.82
Q2	5168+50.19	13.56	611.81	611.80
℄ Brg. Pier C11	5168+58.73	13.56	611.79	611.79
R2	5168+68.73	13.56	611.76	611.78
S2	5168+78.73	13.56	611.71	611.76
T2	5168+88.73	13.56	611.67	611.74
U2	5168+98.73	13.56	611.62	611.71
V2	5169+08.73	13.56	611.58	611.67
W2	5169+18.73	13.56	611.53	611.61
X2	5169+28.73	13.56	611.49	611.55
Y2	5169+38.73	13.56	611.46	611.49
℄ W.Brg. Pier C12	5169+47.60	13.56	611.45	611.45
℄ Pier C12	5169+48.43	13.56	611.45	611.45

PARSONS
BRINCKERHOFF

USER NAME =	pateld
PLOT SCALE =	N.T.S.
PLOT DATE =	6/28/2017

DESIGNED -	PJL
CHECKED -	RJG
DRAWN -	NG
CHECKED -	JIG

REVISED -	
REVISED -	
REVISED -	
REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS IV - UNIT III
STRUCTURE NO. 016-0461

SHEET NO. S2-39 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	331
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

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BEAM NO. 23

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	19.97	612.17	612.17
℄ E.Brg. Pier C9	5167+02.63	19.97	612.17	612.17
D2	5167+12.63	19.97	612.15	612.18
E2	5167+22.63	19.97	612.13	612.18
F2	5167+32.63	19.97	612.10	612.16
G2	5167+42.63	19.97	612.06	612.13
H2	5167+52.63	19.97	612.03	612.09
I2	5167+62.63	19.97	612.00	612.04
J2	5167+72.63	19.97	611.97	611.99
℄ Brg. Pier C10	5167+80.19	19.97	611.94	611.94
K2	5167+90.19	19.97	611.90	611.90
L2	5168+00.19	19.97	611.86	611.86
M2	5168+10.19	19.97	611.81	611.81
N2	5168+20.19	19.97	611.77	611.77
O2	5168+30.19	19.97	611.73	611.73
P2	5168+40.19	19.97	611.70	611.69
Q2	5168+50.19	19.97	611.67	611.67
℄ Brg. Pier C11	5168+58.73	19.97	611.65	611.65
R2	5168+68.73	19.97	611.62	611.65
S2	5168+78.73	19.97	611.58	611.63
T2	5168+88.73	19.97	611.54	611.60
U2	5168+98.73	19.97	611.49	611.57
V2	5169+08.73	19.97	611.44	611.53
W2	5169+18.73	19.97	611.40	611.48
X2	5169+28.73	19.97	611.35	611.41
Y2	5169+38.73	19.97	611.33	611.36
℄ W.Brg. Pier C12	5169+47.60	19.97	611.32	611.32
℄ Pier C12	5169+48.43	19.97	611.32	611.32

BEAM NO. 24

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	26.38	612.04	612.04
℄ E.Brg. Pier C9	5167+02.63	26.38	612.04	612.04
D2	5167+12.63	26.38	612.02	612.04
E2	5167+22.63	26.38	612.00	612.05
F2	5167+32.63	26.38	611.97	612.03
G2	5167+42.63	26.38	611.93	612.00
H2	5167+52.63	26.38	611.90	611.96
I2	5167+62.63	26.38	611.87	611.91
J2	5167+72.63	26.38	611.84	611.85
℄ Brg. Pier C10	5167+80.19	26.38	611.81	611.81
K2	5167+90.19	26.38	611.77	611.77
L2	5168+00.19	26.38	611.72	611.72
M2	5168+10.19	26.38	611.68	611.68
N2	5168+20.19	26.38	611.64	611.64
O2	5168+30.19	26.38	611.60	611.59
P2	5168+40.19	26.38	611.56	611.55
Q2	5168+50.19	26.38	611.54	611.54
℄ Brg. Pier C11	5168+58.73	26.38	611.52	611.52
R2	5168+68.73	26.38	611.49	611.51
S2	5168+78.73	26.38	611.45	611.49
T2	5168+88.73	26.38	611.40	611.47
U2	5168+98.73	26.38	611.36	611.44
V2	5169+08.73	26.38	611.31	611.40
W2	5169+18.73	26.38	611.26	611.34
X2	5169+28.73	26.38	611.22	611.28
Y2	5169+38.73	26.38	611.20	611.22
℄ W.Brg. Pier C12	5169+47.60	26.38	611.19	611.19
℄ Pier C12	5169+48.43	26.38	611.19	611.19

BEAM NO. 25

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	32.78	611.91	611.91
℄ E.Brg. Pier C9	5167+02.63	32.78	611.91	611.91
D2	5167+12.63	32.78	611.88	611.91
E2	5167+22.63	32.78	611.86	611.92
F2	5167+32.63	32.78	611.83	611.90
G2	5167+42.63	32.78	611.80	611.87
H2	5167+52.63	32.78	611.77	611.82
I2	5167+62.63	32.78	611.74	611.78
J2	5167+72.63	32.78	611.70	611.72
℄ Brg. Pier C10	5167+80.19	32.78	611.67	611.67
K2	5167+90.19	32.78	611.63	611.63
L2	5168+00.19	32.78	611.59	611.59
M2	5168+10.19	32.78	611.54	611.54
N2	5168+20.19	32.78	611.50	611.50
O2	5168+30.19	32.78	611.46	611.46
P2	5168+40.19	32.78	611.43	611.42
Q2	5168+50.19	32.78	611.41	611.40
℄ Brg. Pier C11	5168+58.73	32.78	611.39	611.39
R2	5168+68.73	32.78	611.36	611.38
S2	5168+78.73	32.78	611.31	611.36
T2	5168+88.73	32.78	611.27	611.34
U2	5168+98.73	32.78	611.22	611.31
V2	5169+08.73	32.78	611.18	611.26
W2	5169+18.73	32.78	611.13	611.21
X2	5169+28.73	32.78	611.09	611.15
Y2	5169+38.73	32.78	611.06	611.09
℄ W.Brg. Pier C12	5169+47.60	32.78	611.05	611.05
℄ Pier C12	5169+48.43	32.78	611.05	611.05

PARSONS
BRINCKERHOFF

USER NAME =	pateld
PLOT SCALE =	N.T.S.
PLOT DATE =	6/28/2017

DESIGNED -	PJL
CHECKED -	RJG
DRAWN -	NG
CHECKED -	JIG

REVISED -	
REVISED -	
REVISED -	
REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS V - UNIT III
STRUCTURE NO. 016-0461

SHEET NO. S2-40 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	332
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-S041-TSE.dgn

BEAM NO. 26				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	39.19	611.77	611.77
℄ E.Brg. Pier C9	5167+02.63	39.19	611.77	611.77
D2	5167+12.63	39.19	611.75	611.78
E2	5167+22.63	39.19	611.73	611.78
F2	5167+32.63	39.19	611.70	611.76
G2	5167+42.63	39.19	611.66	611.73
H2	5167+52.63	39.19	611.63	611.69
I2	5167+62.63	39.19	611.60	611.64
J2	5167+72.63	39.19	611.57	611.59
℄ Brg. Pier C10	5167+80.19	39.19	611.54	611.54
K2	5167+90.19	39.19	611.50	611.50
L2	5168+00.19	39.19	611.46	611.46
M2	5168+10.19	39.19	611.41	611.41
N2	5168+20.19	39.19	611.37	611.37
O2	5168+30.19	39.19	611.33	611.33
P2	5168+40.19	39.19	611.30	611.29
Q2	5168+50.19	39.19	611.27	611.27
℄ Brg. Pier C11	5168+58.73	39.19	611.25	611.25
R2	5168+68.73	39.19	611.22	611.25
S2	5168+78.73	39.19	611.18	611.23
T2	5168+88.73	39.19	611.14	611.20
U2	5168+98.73	39.19	611.09	611.17
V2	5169+08.73	39.19	611.04	611.13
W2	5169+18.73	39.19	611.00	611.08
X2	5169+28.73	39.19	610.95	611.01
Y2	5169+38.73	39.19	610.93	610.96
℄ W.Brg. Pier C12	5169+47.60	39.19	610.92	610.92
℄ Pier C12	5169+48.43	39.19	610.92	610.92

BEAM NO. 27				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	45.59	611.64	611.64
℄ E.Brg. Pier C9	5167+02.63	45.59	611.64	611.64
D2	5167+12.63	45.59	611.62	611.64
E2	5167+22.63	45.59	611.60	611.65
F2	5167+32.63	45.59	611.56	611.63
G2	5167+42.63	45.59	611.53	611.60
H2	5167+52.63	45.59	611.50	611.56
I2	5167+62.63	45.59	611.47	611.51
J2	5167+72.63	45.59	611.44	611.45
℄ Brg. Pier C10	5167+80.19	45.59	611.41	611.41
K2	5167+90.19	45.59	611.37	611.37
L2	5168+00.19	45.59	611.32	611.32
M2	5168+10.19	45.59	611.28	611.28
N2	5168+20.19	45.59	611.24	611.23
O2	5168+30.19	45.59	611.20	611.19
P2	5168+40.19	45.59	611.16	611.15
Q2	5168+50.19	45.59	611.14	611.13
℄ Brg. Pier C11	5168+58.73	45.59	611.12	611.12
R2	5168+68.73	45.59	611.09	611.11
S2	5168+78.73	45.59	611.05	611.09
T2	5168+88.73	45.59	611.00	611.07
U2	5168+98.73	45.59	610.96	611.04
V2	5169+08.73	45.59	610.91	611.00
W2	5169+18.73	45.59	610.86	610.94
X2	5169+28.73	45.59	610.82	610.88
Y2	5169+38.73	45.59	610.80	610.82
℄ W.Brg. Pier C12	5169+47.60	45.59	610.79	610.79
℄ Pier C12	5169+48.43	45.59	610.79	610.79

BEAM NO. 28				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C9	5167+01.63	52.00	611.51	611.51
℄ E.Brg. Pier C9	5167+02.63	52.00	611.50	611.50
D2	5167+12.63	52.00	611.48	611.51
E2	5167+22.63	52.00	611.46	611.52
F2	5167+32.63	52.00	611.43	611.49
G2	5167+42.63	52.00	611.40	611.47
H2	5167+52.63	52.00	611.37	611.42
I2	5167+62.63	52.00	611.34	611.38
J2	5167+72.63	52.00	611.30	611.32
℄ Brg. Pier C10	5167+80.19	52.00	611.27	611.27
K2	5167+90.19	52.00	611.23	611.23
L2	5168+00.19	52.00	611.19	611.19
M2	5168+10.19	52.00	611.14	611.14
N2	5168+20.19	52.00	611.10	611.10
O2	5168+30.19	52.00	611.06	611.06
P2	5168+40.19	52.00	611.03	611.02
Q2	5168+50.19	52.00	611.01	611.00
℄ Brg. Pier C11	5168+58.73	52.00	610.99	610.99
R2	5168+68.73	52.00	610.96	610.98
S2	5168+78.73	52.00	610.91	610.96
T2	5168+88.73	52.00	610.87	610.93
U2	5168+98.73	52.00	610.82	610.91
V2	5169+08.73	52.00	610.78	610.86
W2	5169+18.73	52.00	610.73	610.81
X2	5169+28.73	52.00	610.69	610.75
Y2	5169+38.73	52.00	610.66	610.69
℄ W.Brg. Pier C12	5169+47.60	52.00	610.65	610.65
℄ Pier C12	5169+48.43	52.00	610.65	610.65

PARSONS
BRINCKERHOFF

USER NAME =	pateld
PLOT SCALE =	N.T.S.
PLOT DATE =	6/28/2017

DESIGNED -	PJL
CHECKED -	RJG
DRAWN -	NG
CHECKED -	JIG

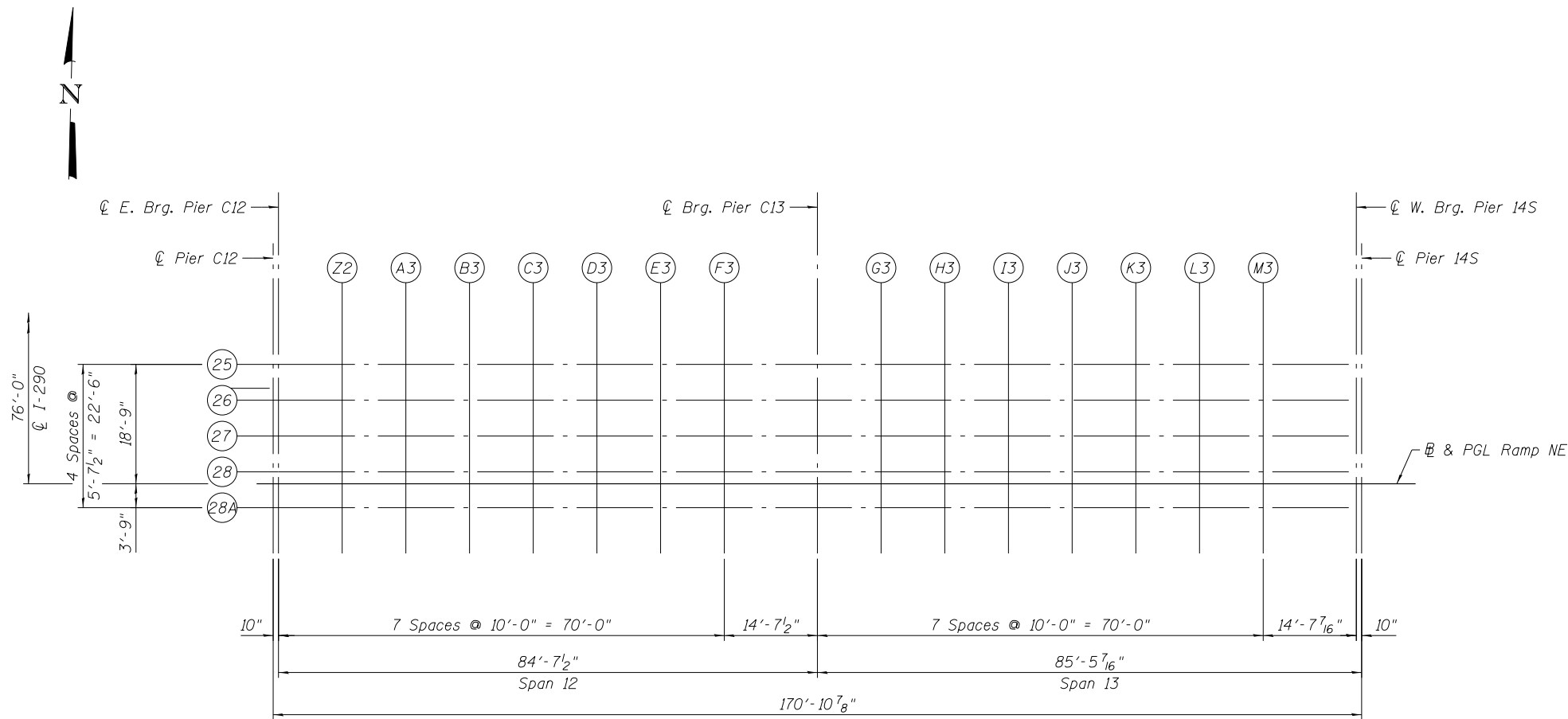
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

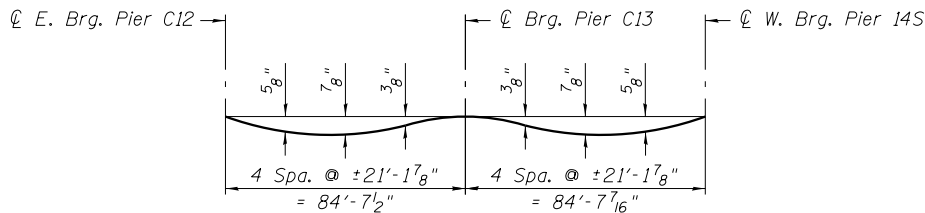
TOP OF SLAB ELEVATIONS VI - UNIT III
STRUCTURE NO. 016-0461

SHEET NO. S2-41 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	333
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

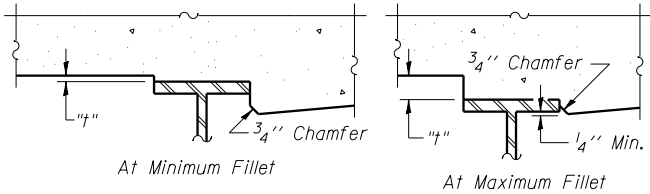


PLAN - EXIT RAMP
(Stage II Construction)



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

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown in tables, see sheet S2-43.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals in tables, see sheet S2-43. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet S2-43, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

0160461-60X75-S042-TSE.dgn

**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - RJG	REVISED -
	CHECKED - PJL	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATION PLAN - EXIT RAMP
STRUCTURE NO. 016-0461**

SHEET NO. S2-42 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	334
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-S043-TSE.dgn

BEAM NO. 25

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C12	1714+96.31	-18.75	611.06	611.06
℄ E.Brg. Pier C12	1714+97.14	-18.75	611.05	611.05
Z2	1715+07.14	-18.75	610.92	610.94
A3	1715+17.14	-18.75	610.72	610.77
B3	1715+27.14	-18.75	610.46	610.52
C3	1715+37.14	-18.75	610.12	610.19
D3	1715+47.14	-18.75	609.72	609.78
E3	1715+57.14	-18.75	609.27	609.31
F3	1715+67.14	-18.75	608.80	608.83
℄ Brg. Pier C13	1715+81.77	-18.75	608.13	608.13
G3	1715+91.77	-18.75	607.66	607.68
H3	1716+01.77	-18.75	607.20	607.23
I3	1716+11.77	-18.75	606.74	606.79
J3	1716+21.77	-18.75	606.28	606.34
K3	1716+31.77	-18.75	605.81	605.88
L3	1716+41.77	-18.75	605.35	605.40
M3	1716+51.77	-18.75	604.89	604.92
℄ W.Brg. Pier 14S	1716+66.39	-18.75	604.11	604.11
℄ Pier 14S	1716+67.22	-18.75	604.07	604.07

BEAM NO. 26

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C12	1714+96.31	-13.13	610.94	610.94
℄ E.Brg. Pier C12	1714+97.14	-13.13	610.93	610.93
Z2	1715+07.14	-13.13	610.80	610.83
A3	1715+17.14	-13.13	610.60	610.65
B3	1715+27.14	-13.13	610.34	610.40
C3	1715+37.14	-13.13	610.01	610.08
D3	1715+47.14	-13.13	609.61	609.66
E3	1715+57.14	-13.13	609.15	609.19
F3	1715+67.14	-13.13	608.69	608.71
℄ Brg. Pier C13	1715+81.77	-13.13	608.01	608.01
G3	1715+91.77	-13.13	607.55	607.56
H3	1716+01.77	-13.13	607.08	607.11
I3	1716+11.77	-13.13	606.62	606.67
J3	1716+21.77	-13.13	606.16	606.23
K3	1716+31.77	-13.13	605.70	605.76
L3	1716+41.77	-13.13	605.23	605.29
M3	1716+51.77	-13.13	604.77	604.81
℄ W.Brg. Pier 14S	1716+66.39	-13.13	604.03	604.03
℄ Pier 14S	1716+67.22	-13.13	603.98	603.98

BEAM NO. 27

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C12	1714+96.31	-7.50	610.82	610.82
℄ E.Brg. Pier C12	1714+97.14	-7.50	610.82	610.82
Z2	1715+07.14	-7.50	610.69	610.71
A3	1715+17.14	-7.50	610.49	610.54
B3	1715+27.14	-7.50	610.22	610.28
C3	1715+37.14	-7.50	609.89	609.96
D3	1715+47.14	-7.50	609.49	609.55
E3	1715+57.14	-7.50	609.03	609.07
F3	1715+67.14	-7.50	608.57	608.59
℄ Brg. Pier C13	1715+81.77	-7.50	607.89	607.89
G3	1715+91.77	-7.50	607.43	607.44
H3	1716+01.77	-7.50	606.97	607.00
I3	1716+11.77	-7.50	606.50	606.55
J3	1716+21.77	-7.50	606.04	606.11
K3	1716+31.77	-7.50	605.58	605.64
L3	1716+41.77	-7.50	605.12	605.17
M3	1716+51.77	-7.50	604.65	604.69
℄ W.Brg. Pier 14S	1716+66.39	-7.50	603.94	603.94
℄ Pier 14S	1716+67.22	-7.50	603.90	603.90

BEAM NO. 28

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C12	1714+96.31	-1.88	610.71	610.71
℄ E.Brg. Pier C12	1714+97.14	-1.88	610.70	610.70
Z2	1715+07.14	-1.88	610.57	610.59
A3	1715+17.14	-1.88	610.37	610.42
B3	1715+27.14	-1.88	610.11	610.17
C3	1715+37.14	-1.88	609.77	609.84
D3	1715+47.14	-1.88	609.37	609.43
E3	1715+57.14	-1.88	608.92	608.95
F3	1715+67.14	-1.88	608.45	608.47
℄ Brg. Pier C13	1715+81.77	-1.88	607.78	607.78
G3	1715+91.77	-1.88	607.31	607.33
H3	1716+01.77	-1.88	606.85	606.88
I3	1716+11.77	-1.88	606.39	606.44
J3	1716+21.77	-1.88	605.92	605.99
K3	1716+31.77	-1.88	605.46	605.53
L3	1716+41.77	-1.88	605.00	605.05
M3	1716+51.77	-1.88	604.54	604.57
℄ W.Brg. Pier 14S	1716+66.39	-1.88	603.85	603.85
℄ Pier 14S	1716+67.22	-1.88	603.81	603.81

RAMP NE PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C12	1714+96.31	0.00	610.67	610.67
℄ E.Brg. Pier C12	1714+97.14	0.00	610.66	610.66
Z2	1715+07.14	0.00	610.53	610.55
A3	1715+17.14	0.00	610.33	610.38
B3	1715+27.14	0.00	610.07	610.13
C3	1715+37.14	0.00	609.73	609.80
D3	1715+47.14	0.00	609.33	609.39
E3	1715+57.14	0.00	608.88	608.92
F3	1715+67.14	0.00	608.41	608.44
℄ Brg. Pier C13	1715+81.77	0.00	607.74	607.74
G3	1715+91.77	0.00	607.27	607.29
H3	1716+01.77	0.00	606.81	606.84
I3	1716+11.77	0.00	606.35	606.40
J3	1716+21.77	0.00	605.89	605.95
K3	1716+31.77	0.00	605.42	605.49
L3	1716+41.77	0.00	604.96	605.01
M3	1716+51.77	0.00	604.50	604.53
℄ W.Brg. Pier 14S	1716+66.39	0.00	603.82	603.82
℄ Pier 14S	1716+67.22	0.00	603.78	603.78

BEAM NO. 28A

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Pier C12	1714+96.31	3.75	610.59	610.59
℄ E.Brg. Pier C12	1714+97.14	3.75	610.58	610.58
Z2	1715+07.14	3.75	610.45	610.48
A3	1715+17.14	3.75	610.25	610.30
B3	1715+27.14	3.75	609.99	610.05
C3	1715+37.14	3.75	609.66	609.73
D3	1715+47.14	3.75	609.26	609.31
E3	1715+57.14	3.75	608.80	608.84
F3	1715+67.14	3.75	608.34	608.36
℄ Brg. Pier C13	1715+81.77	3.75	607.66	607.66
G3	1715+91.77	3.75	607.20	607.21
H3	1716+01.77	3.75	606.73	606.76
I3	1716+11.77	3.75	606.27	606.32
J3	1716+21.77	3.75	605.81	605.88
K3	1716+31.77	3.75	605.34	605.41
L3	1716+41.77	3.75	604.88	604.94
M3	1716+51.77	3.75	604.42	604.45
℄ W.Brg. Pier 14S	1716+66.39	3.75	603.76	603.76
℄ Pier 14S	1716+67.22	3.75	603.72	603.72

PARSONS
BRINCKERHOFF

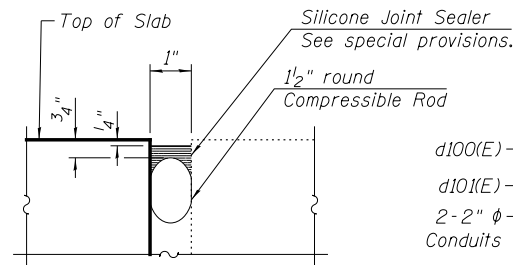
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PLOT DATE =	6/28/2017	CHECKED -	JIG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS – EXIT RAMP
STRUCTURE NO. 016–0461

SHEET NO. S2-43 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	335
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



DETAIL "A"

- ① 3- #5 b102(E) bars
@ 12" max. cts.
- ② 2- #5 b102(E) bars
@ 12" max. cts.
- ③ 6- #5 b102(E) bars
fanned with max. ±12" cts.
and min. ±5" cts. between
beam flanges in bottom of slab.

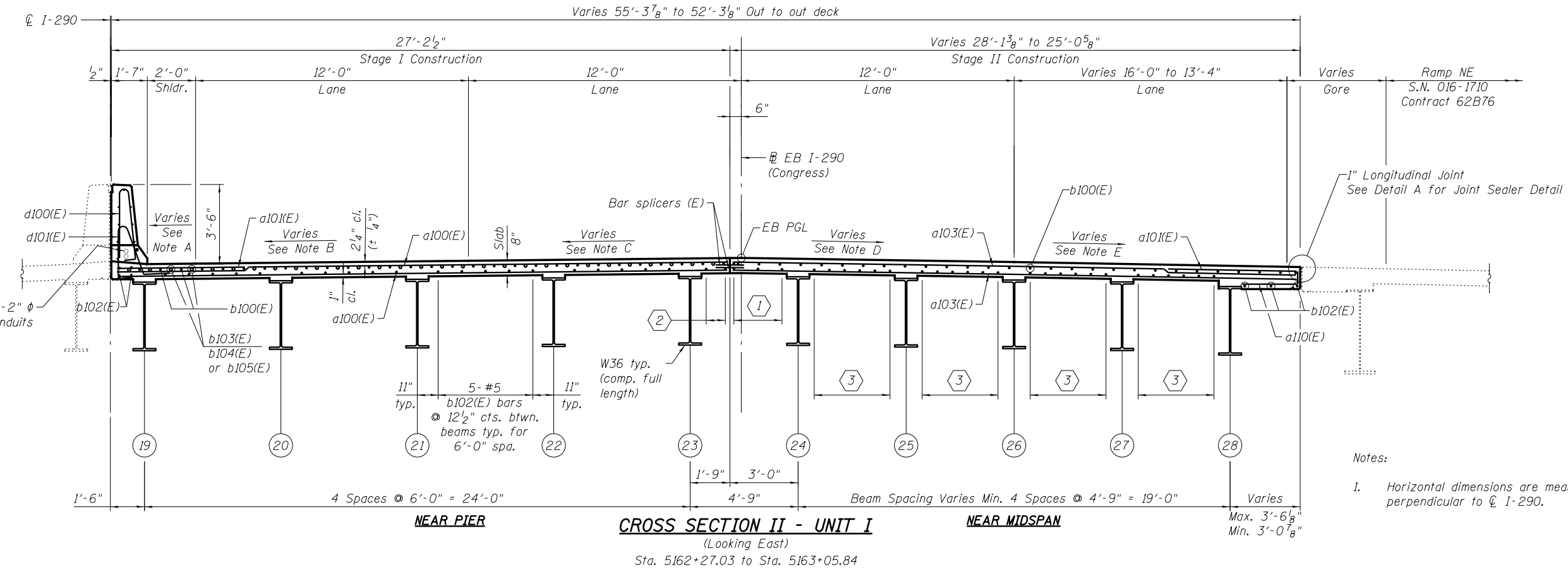
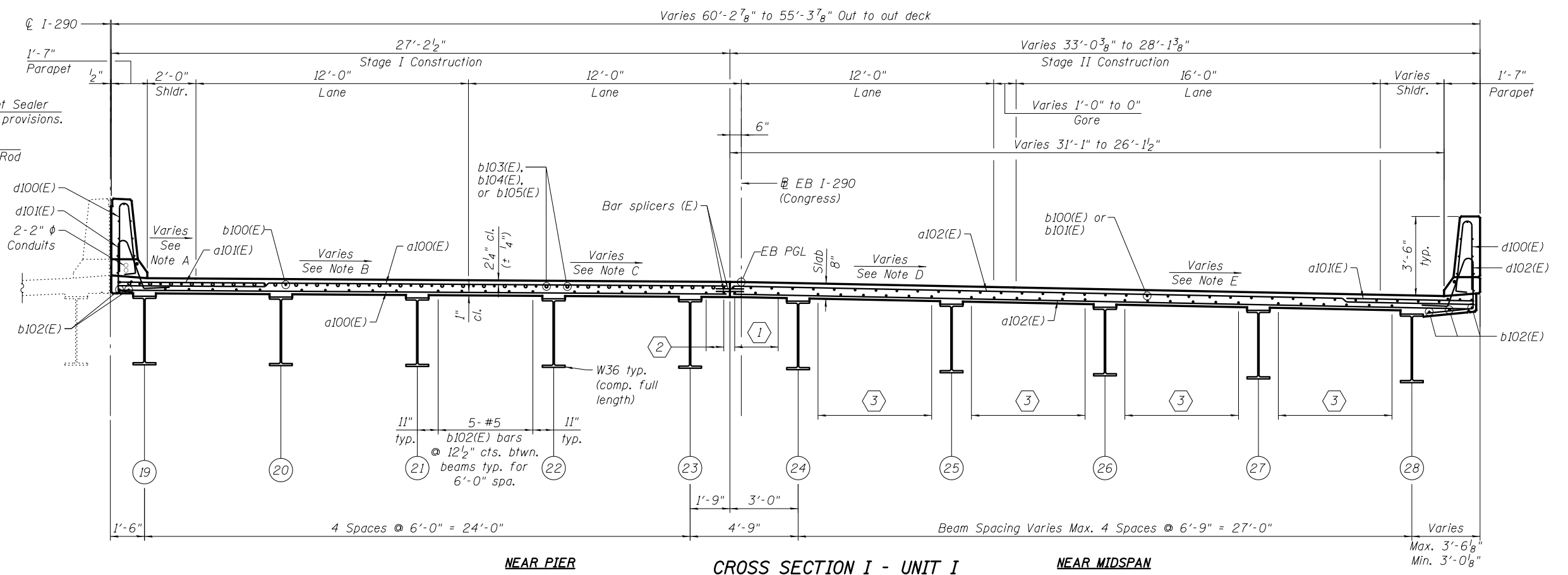
Note A: (Direction of slope referenced from EB PGL, stations increasing looking east)
Transition (0.65% to -1.04%)
Sta. 5160+64.44 to Sta. 5161+57.26
Constant cross slope (-1.04%)
Sta. 5161+57.26 to Sta. 5163+05.95

Note B: (Direction of slope referenced from EB PGL, stations increasing looking east)
Transition (0.65% to -1.04%)
Sta. 5160+64.51 to Sta. 5161+57.26
Constant cross slope (-1.04%)
Sta. 5161+57.26 to Sta. 5163+05.95

Note C: (Direction of slope referenced from EB PGL, stations increasing looking east)
Transition (0.65% to -1.04%)
Sta. 5160+64.57 to Sta. 5161+57.26
Constant cross slope (-1.04%)
Sta. 5161+57.26 to Sta. 5163+05.95

Note D: (Direction of slope referenced from EB PGL, stations increasing looking east)
Constant cross slope (-2.00%)
Sta. 5160+64.64 to Sta. 5162+87.95
Transition (-2.00% to -1.50%)
Sta. 5162+87.95 to Sta. 5163+05.95

Note E: (Direction of slope referenced from EB PGL, stations increasing looking east)
Constant cross slope (-2.00%)
Sta. 5160+64.71 to Sta. 5162+96.95
Transition (-2.00% to -1.75%)
Sta. 5162+96.95 to Sta. 5163+05.95



Notes:

- Horizontal dimensions are measured perpendicular to $\angle$ I-290.

**PARSONS
BRINCKERHOFF**

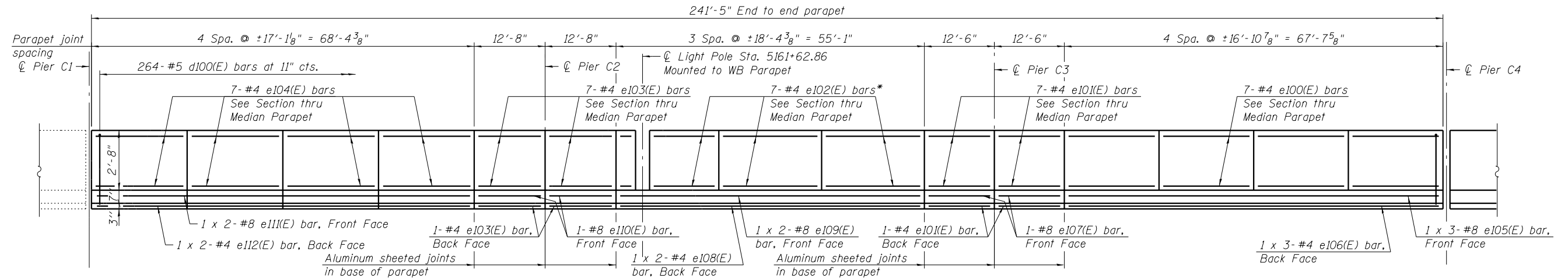
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	CHECKED - MS	REVISED -
PLOT SCALE = N.T.S.	DRAWN - NG	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK DETAILS I - UNIT I
STRUCTURE NO. 016-0461**

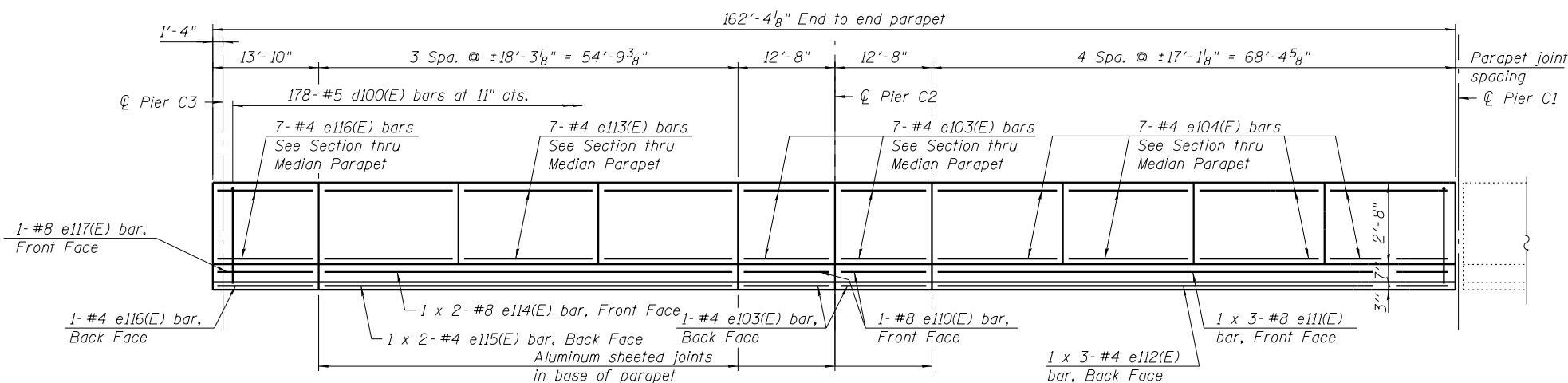
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	337
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-S045-DET.dgn



INSIDE ELEVATION OF EB NORTH MEDIAN PARAPET

* Cut in field to clear openings. See existing Light Pole Pedestal Details this sheet for breakout clearances.

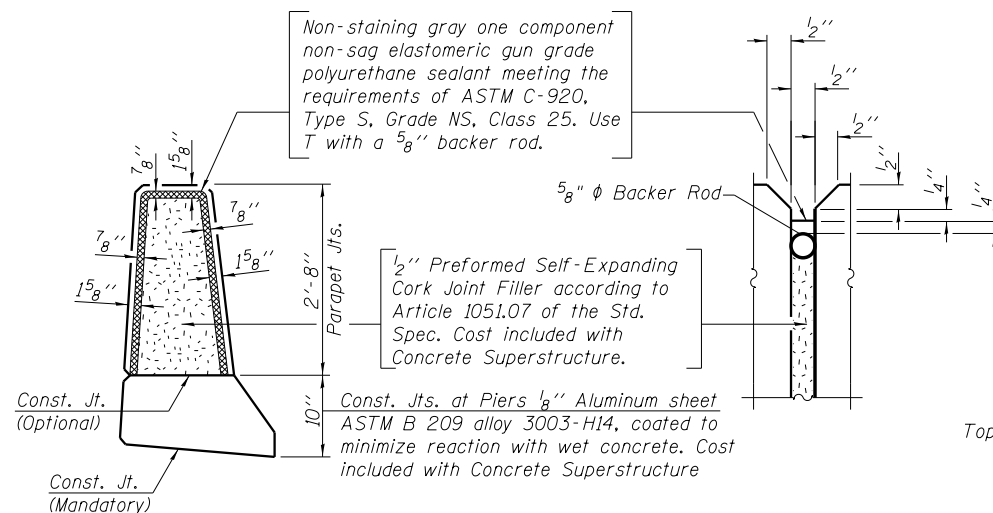


INSIDE ELEVATION OF EB SOUTH PARAPET

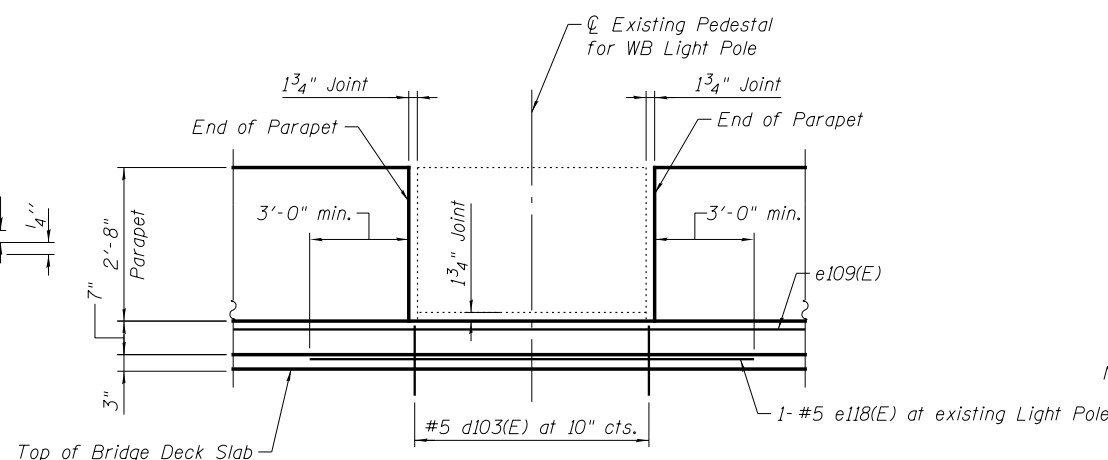
MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-1"
#8 bar = 5'-5"

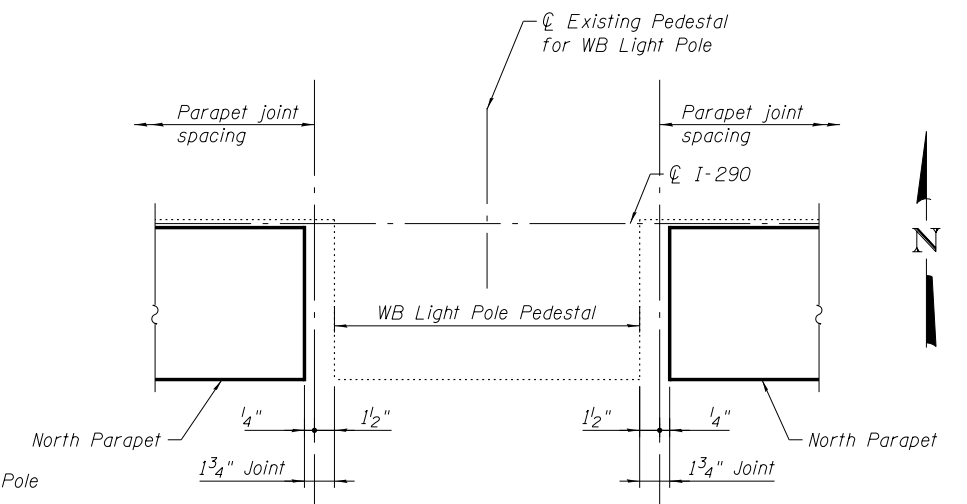
Note:
For Section thru Median Parapet &
Section thru South Parapet, see sheet S2-47.



PARAPET JOINT DETAILS



NORTH PARAPET CURB PARTIAL ELEVATION AT EXISTING WB LIGHT POLE PEDESTAL



NORTH PARAPET PARTIAL PLAN AT EXISTING WB LIGHT POLE PEDESTAL

0160461-60X75-S046-DET.dgn

**PARSONS
BRINCKERHOFF**

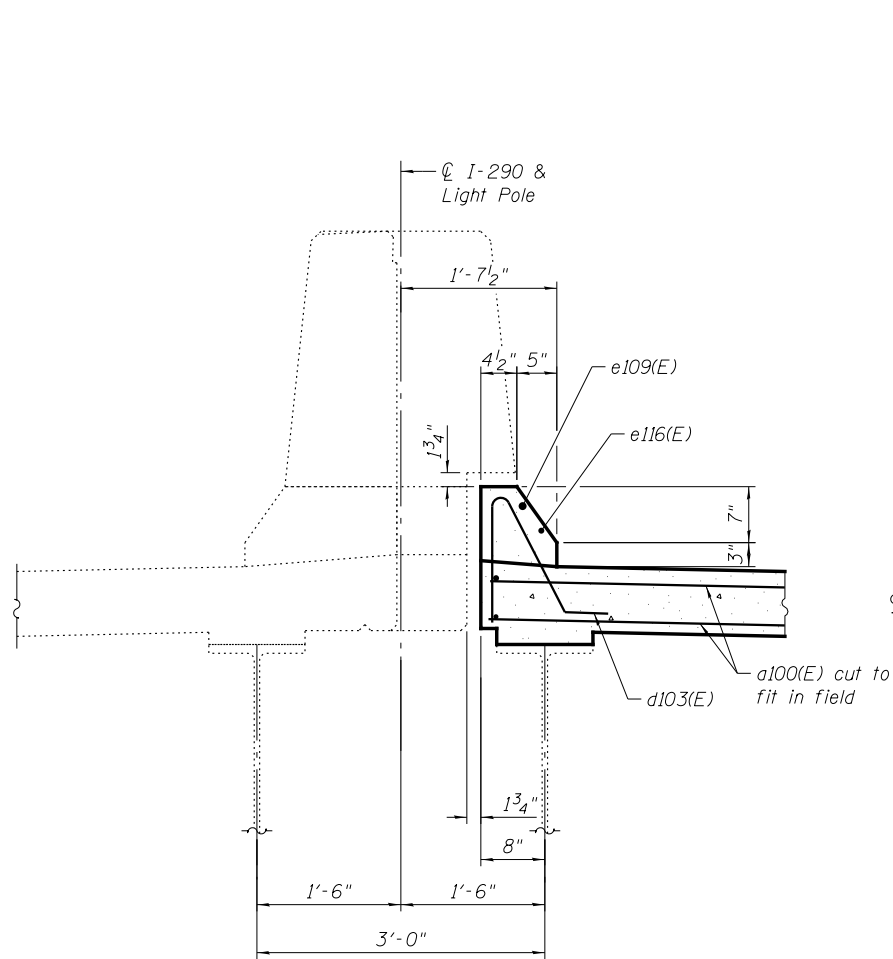
USER NAME = pateld	DESIGNED - TWP	REVISED -
CHECKED - MS	REVISED -	
PLOT SCALE = N.T.S.	DRAWN - NG	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

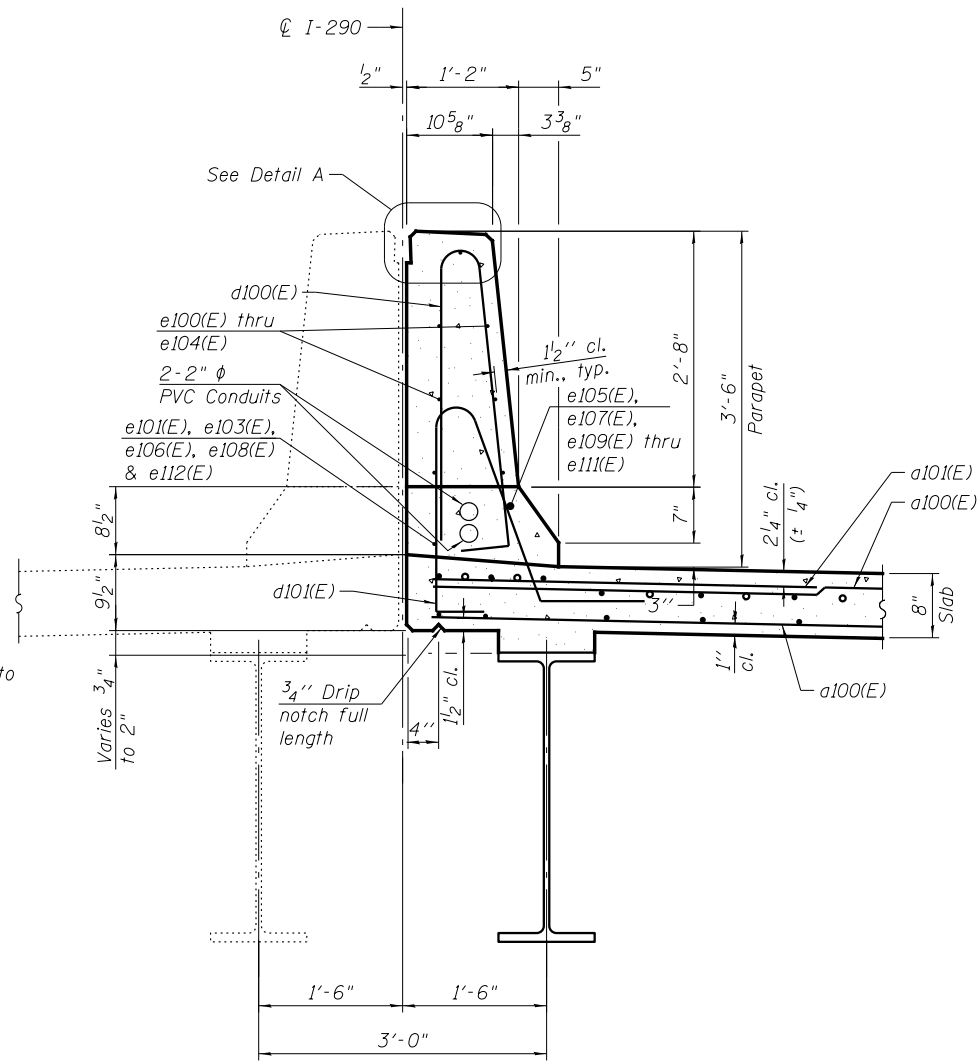
**DECK DETAILS II - UNIT I
STRUCTURE NO. 016-0461**

SHEET NO. S2-46 OF S2-137 SHEETS

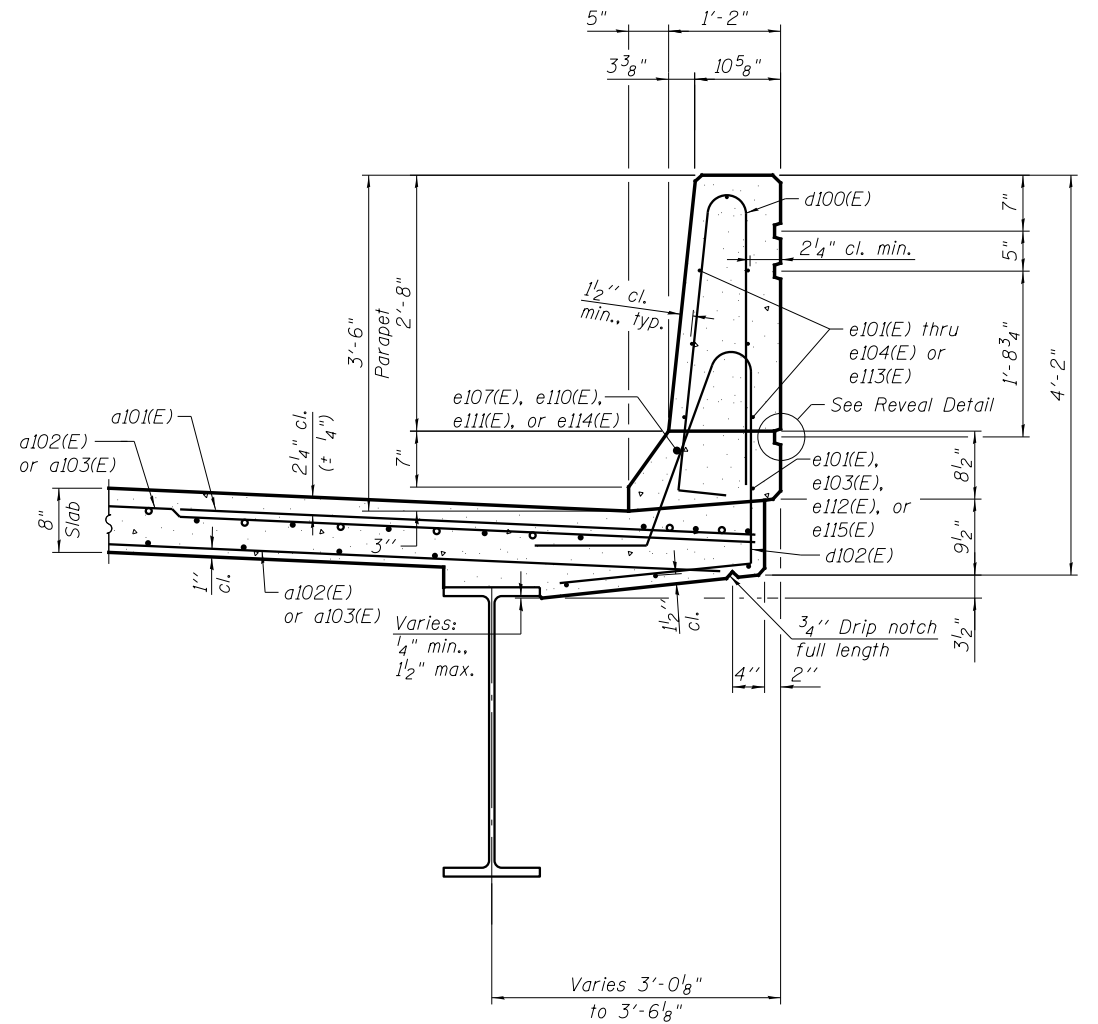
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	338
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



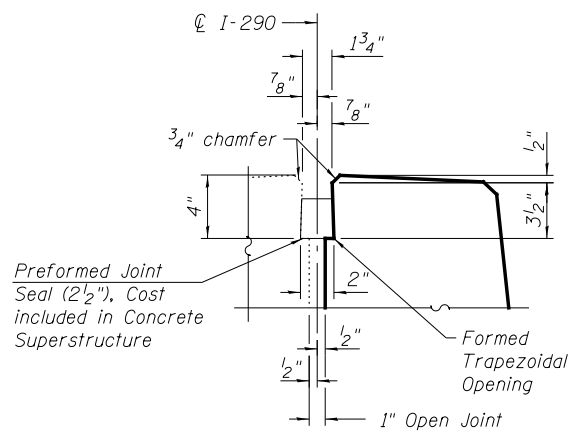
**EB NORTH MEDIAN CURB - SECTION
AT WB MEDIAN LIGHT POLE SUPPORT**



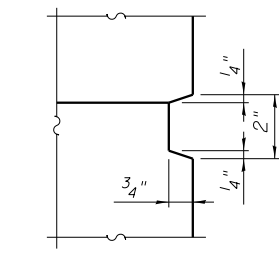
SECTION THRU NORTH MEDIAN PARAPET



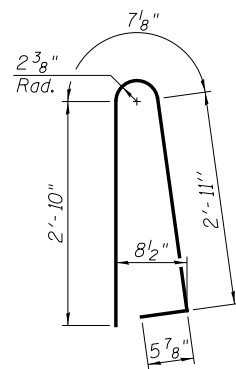
SECTION THRU SOUTH PARAPET



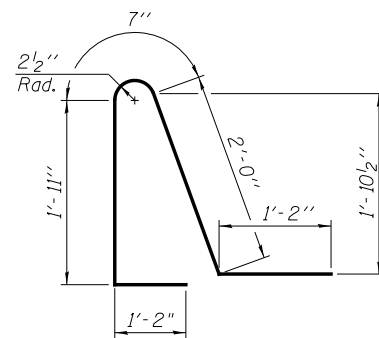
DETAIL A



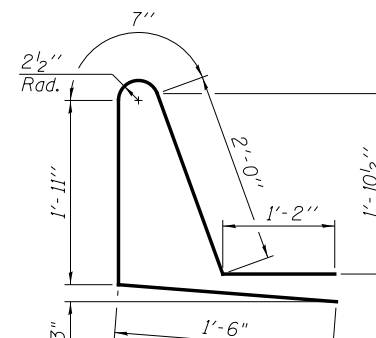
REVEAL DETAIL



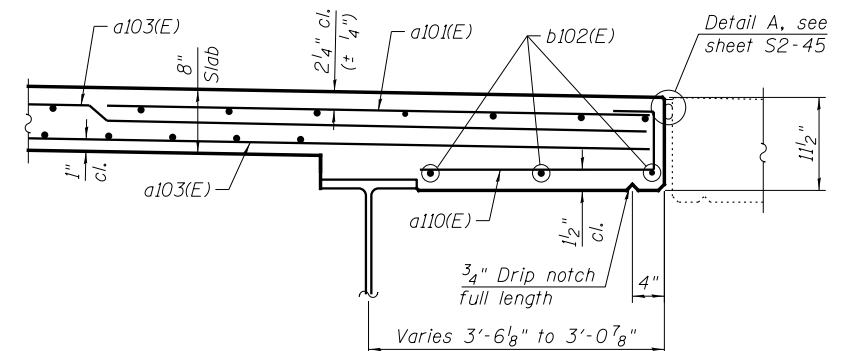
BAR d100(E)



BAR d101(E)



BAR d102(E)



**SECTION THRU DECK OVERHANG
AT LONG. JOINT WITH RAMP**

Notes:

1. Reveal is included in cost of Concrete Superstructure.
2. See sheet S2-48, for superstructure details and Bill of Material.

**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - TWP	REVISED -
PLOT SCALE = N.T.S.	CHECKED - MS	REVISED -
PLOT DATE = 6/28/2017	DRAWN - NG	REVISED -
	CHECKED - JIG	REVISED -

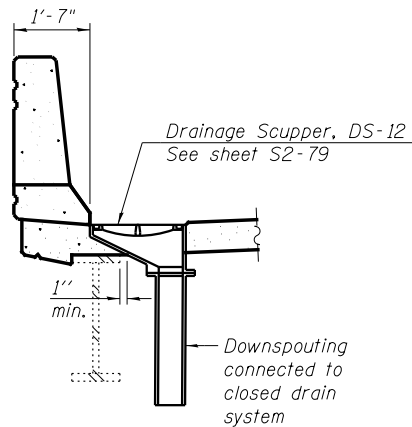
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK DETAILS III - UNIT I
STRUCTURE NO. 016-0461**

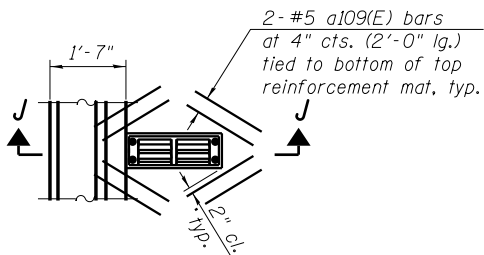
SHEET NO. S2-47 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	339
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-S047-DET.dgn



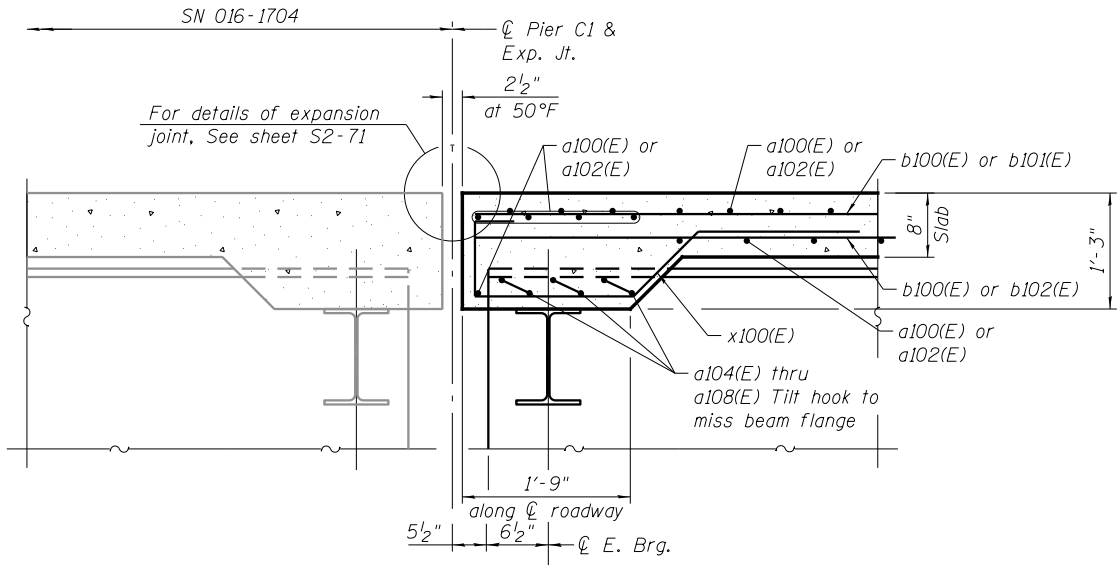
SECTION J-J



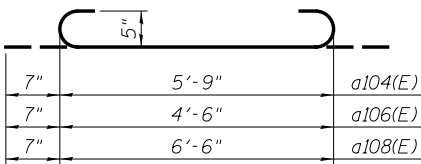
PLAN

Note:

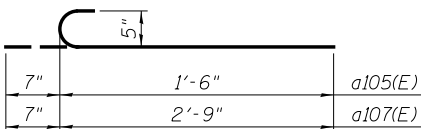
1. Cut longitudinal reinforcement to clear drainage scuppers.



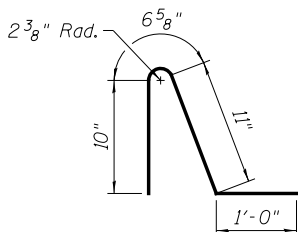
SECTION A-A



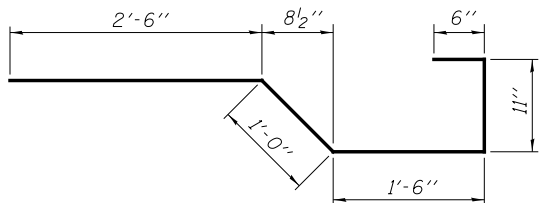
BARS a104(E), a106(E) or a108(E)



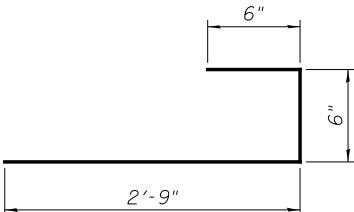
BARS a105(E) or a107(E)



BAR d103(E)



BAR x100(E)



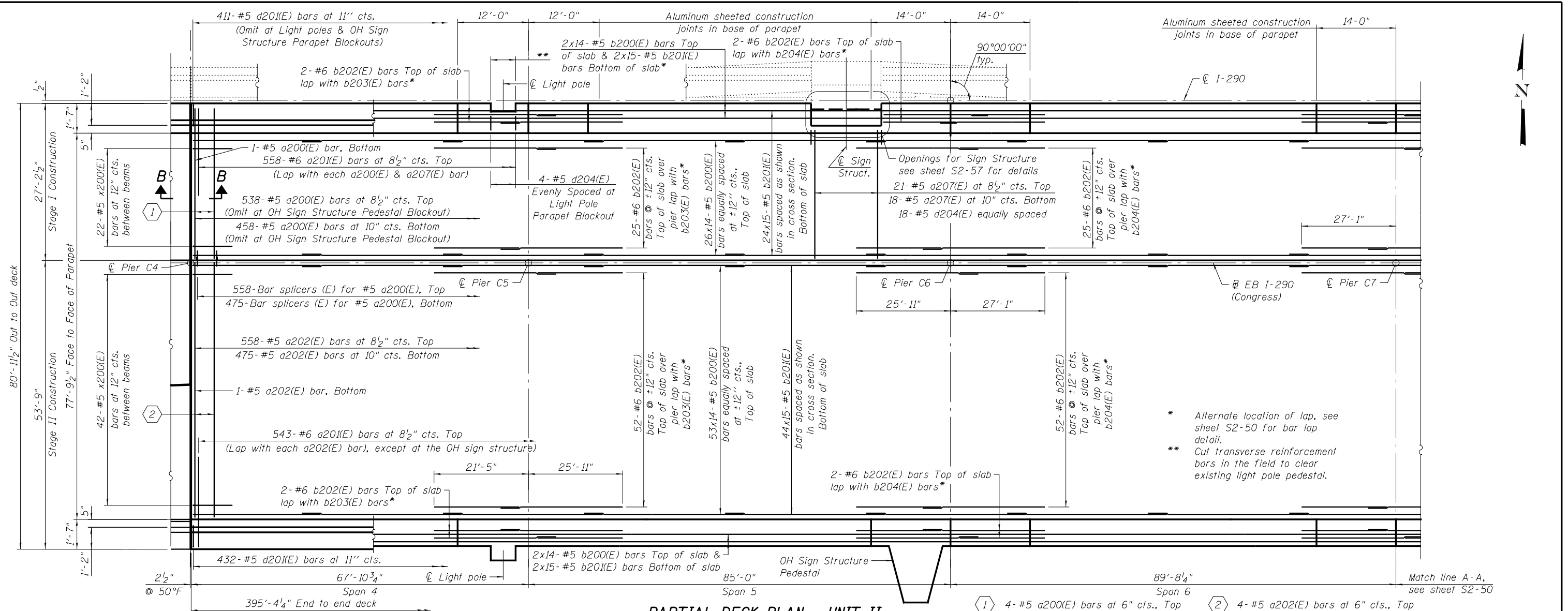
BAR a110(E)

SUPERSTRUCTURE BILL OF MATERIAL

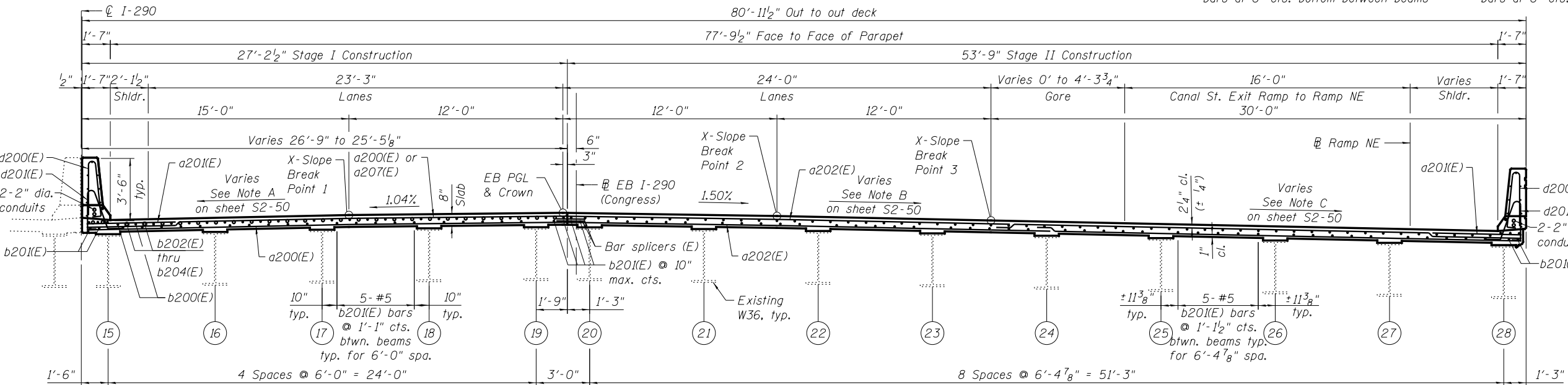
Bar	No.	Size	Length	Shape
a100(E)	746	#5	26'-9"	—
a101(E)	892	#6	6'-6"	—
a102(E)	373	#5	32'-8"	—
a103(E)	373	#5	29'-0"	—
a104(E)	24	#5	6'-11"	—
a105(E)	6	#5	2'-1"	—
a106(E)	12	#5	5'-8"	—
a107(E)	6	#5	3'-4"	—
a108(E)	12	#5	7'-8"	—
a109(E)	24	#5	2'-0"	—
a110(E)	98	#5	3'-9"	—
b100(E)	455	#5	32'-5"	—
b101(E)	90	#5	34'-3"	—
b102(E)	486	#5	29'-2"	—
b103(E)	112	#6	32'-0"	—
b104(E)	57	#6	27'-3"	—
b105(E)	55	#6	26'-1"	—
d100(E)	442	#5	6'-10"	—
d101(E)	264	#5	6'-10"	—
d102(E)	178	#5	7'-2"	—
d103(E)	4	#5	3'-4"	—
e100(E)	28	#4	16'-7"	—
e101(E)	16	#4	12'-3"	—
e102(E)	21	#4	18'-1"	—
e103(E)	32	#4	12'-5"	—
e104(E)	56	#4	16'-10"	—
e105(E)	3	#8	26'-2"	—
e106(E)	3	#4	23'-11"	—
e107(E)	2	#8	12'-3"	—
e108(E)	2	#4	28'-6"	—
e109(E)	2	#8	30'-2"	—
e110(E)	4	#8	12'-5"	—
e111(E)	6	#8	26'-4"	—
e112(E)	6	#4	24'-5"	—
e113(E)	21	#4	18'-0"	—
e114(E)	2	#8	30'-1"	—
e115(E)	2	#4	28'-5"	—
e116(E)	8	#4	13'-6"	—
e117(E)	1	#8	13'-6"	—
e118(E)	1	#5	8'-10"	—
x100(E)	94	#5	6'-5"	—
Reinforcement Bars, Epoxy Coated			Pound	107,920
Concrete Superstructure			Cu. Yds.	413.6
Protective Coat			Sq. Yd.	1,648
Bridge Deck Grooving			Sq. Yd.	1,395
Silicone Joint Sealer, 1"			Foot	81

USER NAME = pateld	DESIGNED - TWP	REVISED -
CHECKED - MS	REVIS	ED -
PLOT SCALE = N.T.S.	DRAWN - NG	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	340
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



PARTIAL DECK PLAN - UNIT II



CROSS SECTION - UNIT II
(Looking East)

MINIMUM BAR LAP

#5 bar = 2'-7"
#6 bar = 3'-1"

Notes:

- See sheet S2-51 and S2-52, for parapet reinforcement.
- See sheet S2-53 and S2-55, for superstructure details, Section B-B, deck pouring sequence and Bill of Material.
- Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
- Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.
- Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail strip seal joint, deck dimensions may require adjustments to satisfy the details on sheet S2-68.
- Scuppers are not shown for clarity.

0160461-60X75-S049-DEK.dgn

PARSONS
BRINCKERHOFF

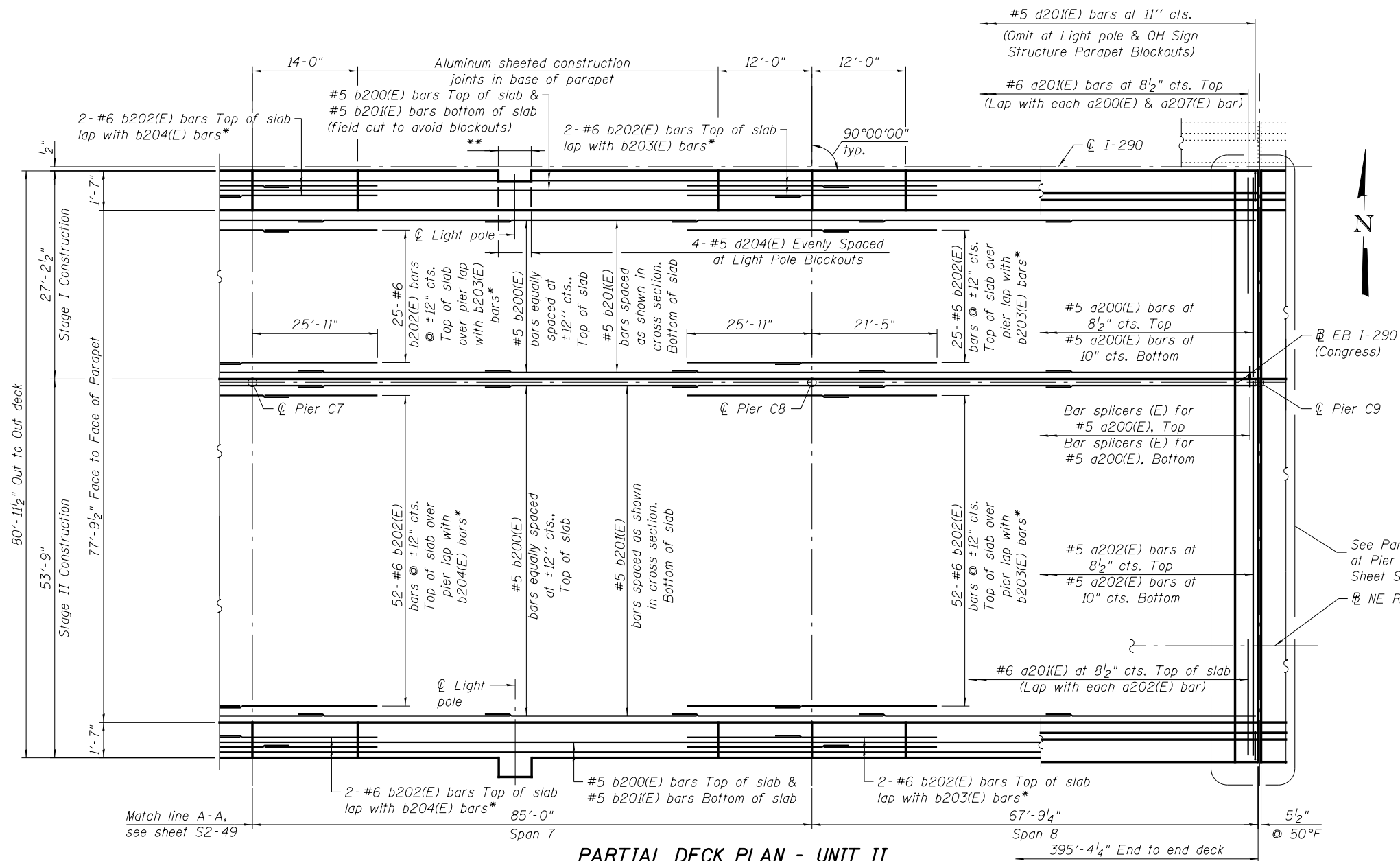
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PLOT DATE =	6/28/2017	CHECKED -	JIG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

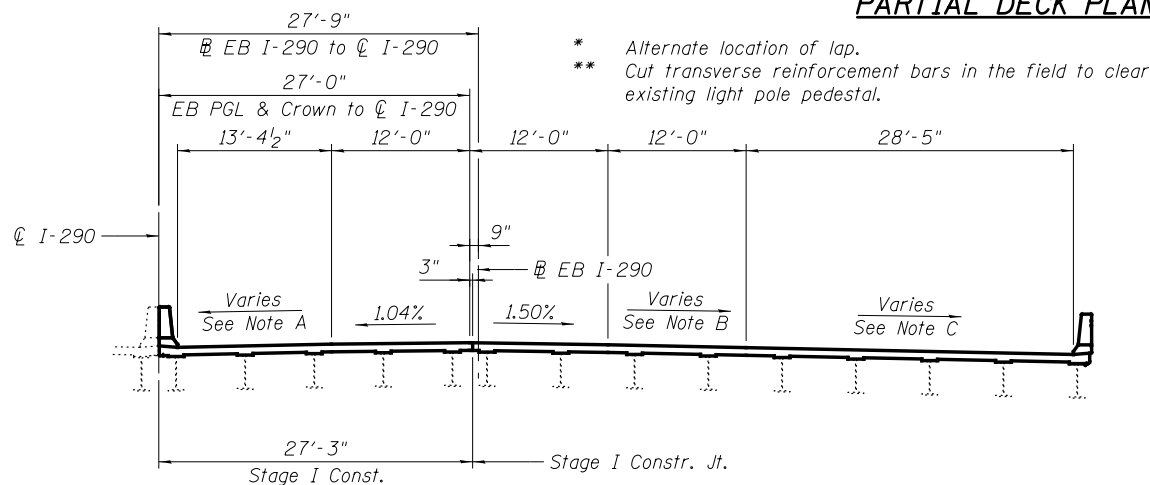
DECK PLAN I - UNIT II
STRUCTURE NO. 016-0461

SHEET NO. S2-49 OF S2-137 SHEETS

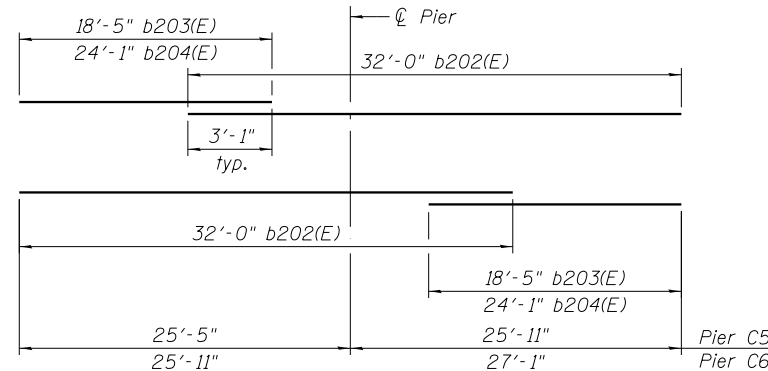
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	341
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



PARTIAL DECK PLAN - UNIT II



DECK CROSS SLOPES - UNIT II
(Looking East)



ALTERNATE BAR LAP DETAIL

(Pier C5 & C6 shown, Pier C7 & C8 mirror)
For bars b202(E), b203(E) & b204(E)

Note A: (Direction of slope referenced from EB PGL & Crown)
Constant cross slope (-1.04%) Sta. 5163+05.95 to Sta. 5163+07.37
Transition (-1.04% to -2.08%) Sta. 5163+07.37 to Sta. 5163+37.37
Constant cross slope (-2.08%) Sta. 5163+37.37 to Sta. 5167+01.63

Note B: (Direction of slope referenced from EB PGL & Crown)
Constant cross slope (-1.75%) Sta. 5163+05.95 to Sta. 5163+37.37
Transition (-1.75% to -2.08%) Sta. 5163+37.37 to Sta. 5163+47.37
Constant cross slope (-2.08%) Sta. 5163+47.37 to Sta. 5167+01.63

Note C: (Direction of slope referenced from EB PGL & Crown)
Constant cross slope (-1.75%) Sta. 5163+05.95 to Sta. 5163+17.37
Transition (-1.75% to -2.08%) Sta. 5163+17.37 to Sta. 5163+27.37
Constant cross slope (-2.08%) Sta. 5163+27.37 to Sta. 5167+01.63

MINIMUM BAR LAP

#5 bar = 2'-7"
#6 bar = 3'-1"

Notes:

- See sheet S2-51 and S2-52, for parapet reinforcement.
- See sheet S2-53 and S2-55, for superstructure details, Section A-A, deck pouring sequence and Bill of Material.
- See sheet S2-61, for Partial Plan at Pier C9.
- Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
- Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.

0160461-60X75-S050-DEK.dgn

PARSONS
BRINCKERHOFF

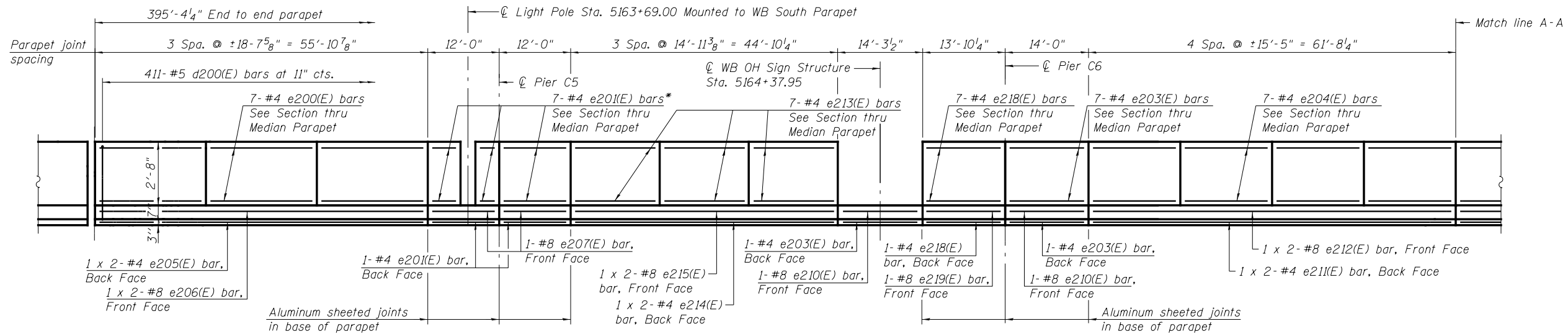
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	CHECKED - MS	REVISED -
PLOT SCALE = N.T.S.	DRAWN - NG	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

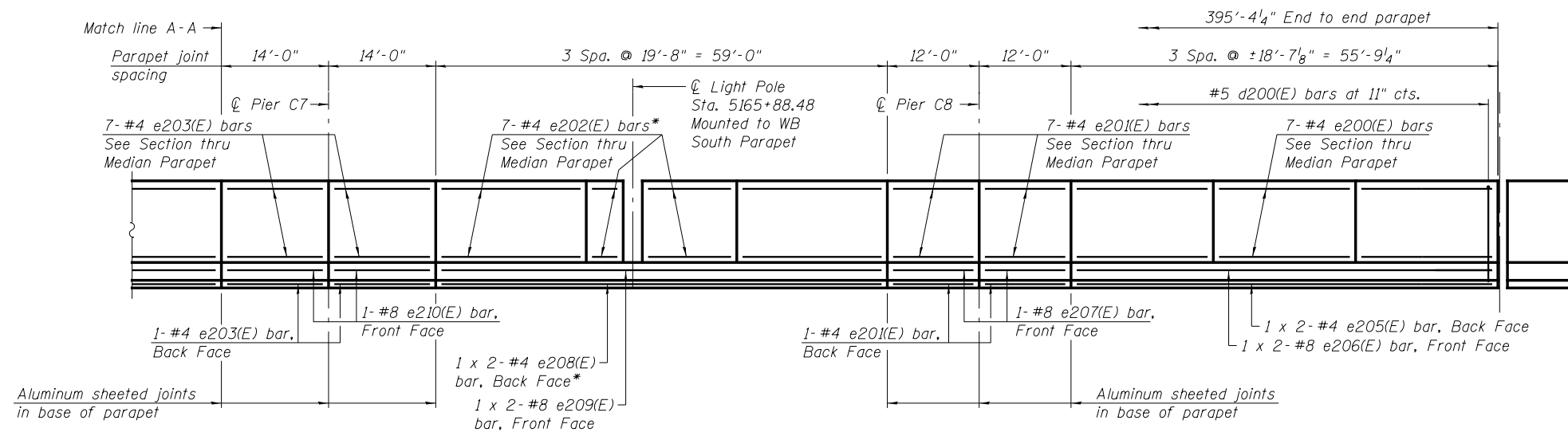
DECK PLAN II - UNIT II
STRUCTURE NO. 016-0461

SHEET NO. S2-50 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	342
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



INSIDE ELEVATION OF EB NORTH MEDIAN PARAPET

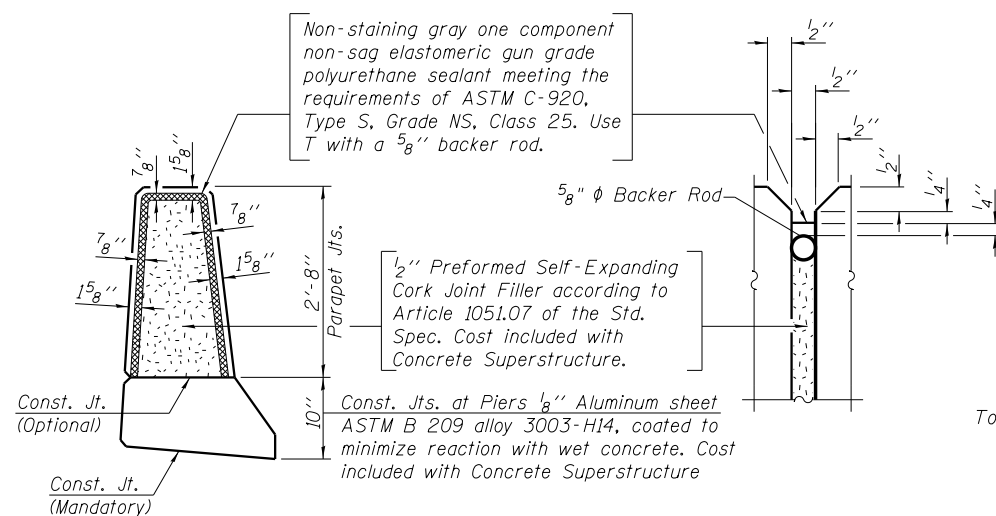


* Cut in field to clear openings.

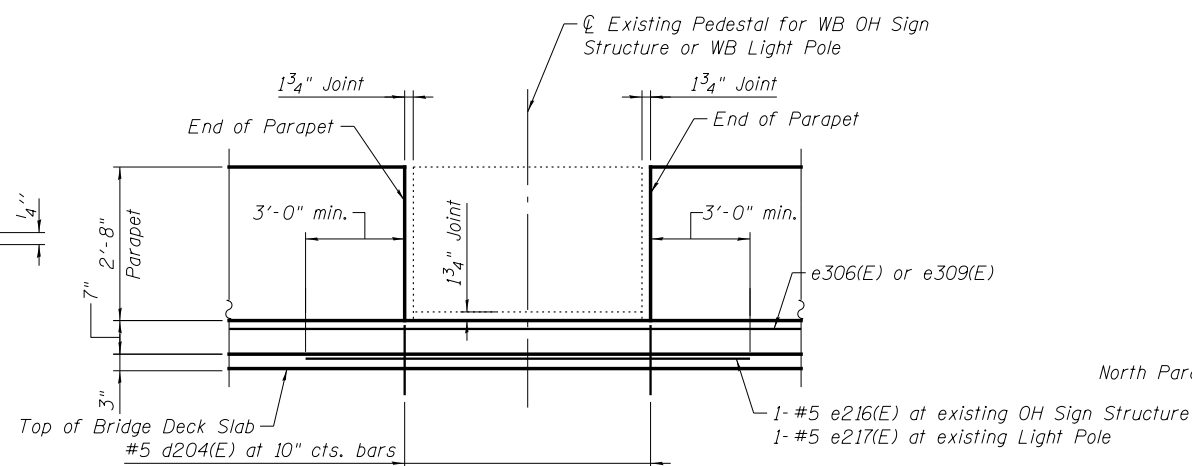
INSIDE ELEVATION OF EB NORTH MEDIAN PARAPET

MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-1"
#8 bar = 5'-5"

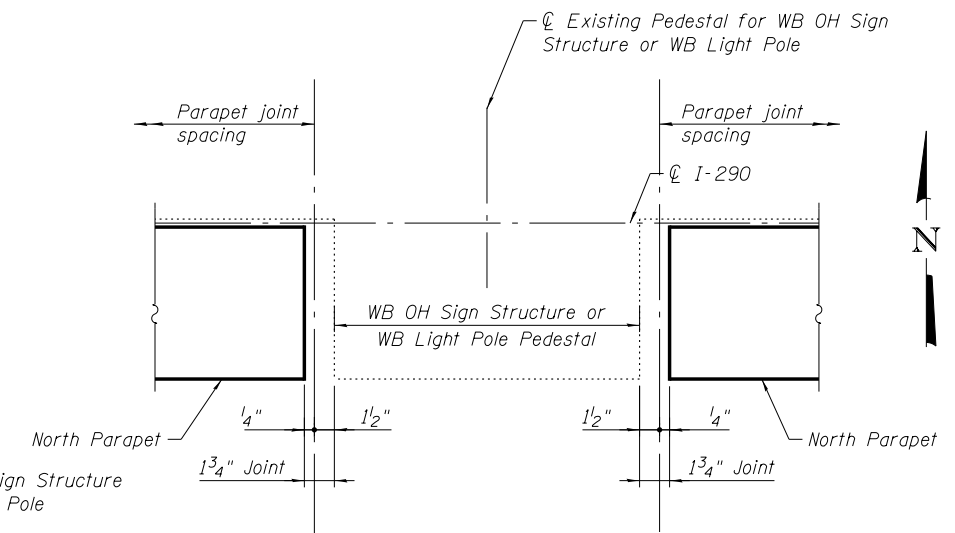


PARAPET JOINT DETAILS



For clarity, only reinforcement in the front face of the curb is shown.

NORTH PARAPET CURB PARTIAL ELEVATION AT EXISTING WB OH SIGN STRUCTURE OR LIGHT POLE PEDESTAL



NORTH PARAPET PARTIAL PLAN AT EXISTING WB OH SIGN STRUCTURE OR LIGHT POLE PEDESTAL

0160461-60X75-S051-DET.dgn

**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - TWP	REVISED -
PLOT SCALE = N.T.S.	CHECKED - MS	REVISED -
PLOT DATE = 6/28/2017	DRAWN - NG	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK DETAILS I - UNIT II
STRUCTURE NO. 016-0461**

SHEET NO. S2-51 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	343
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



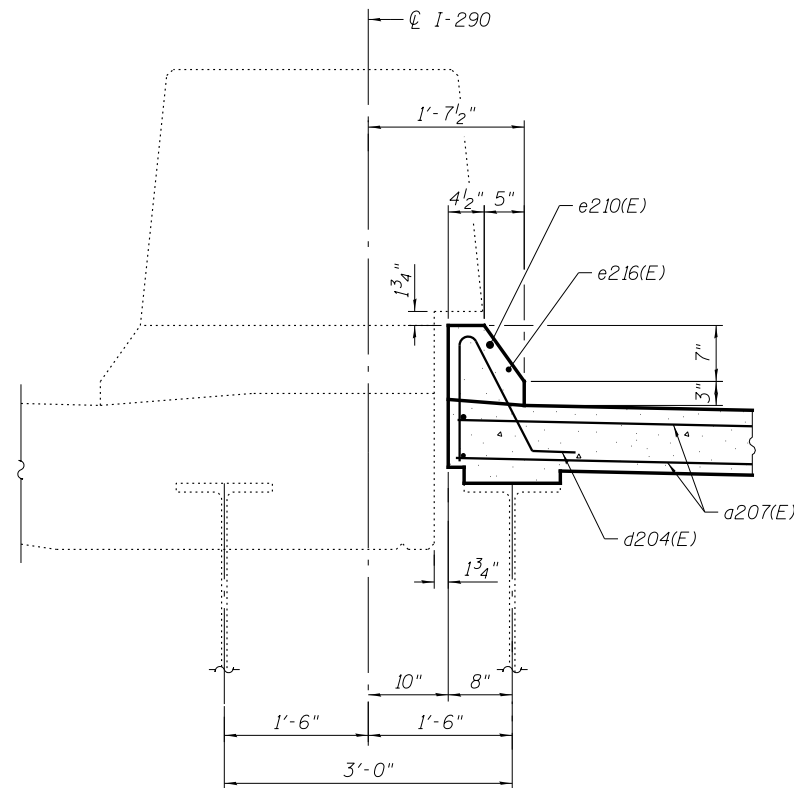
Cost included with
Concrete Superstructure



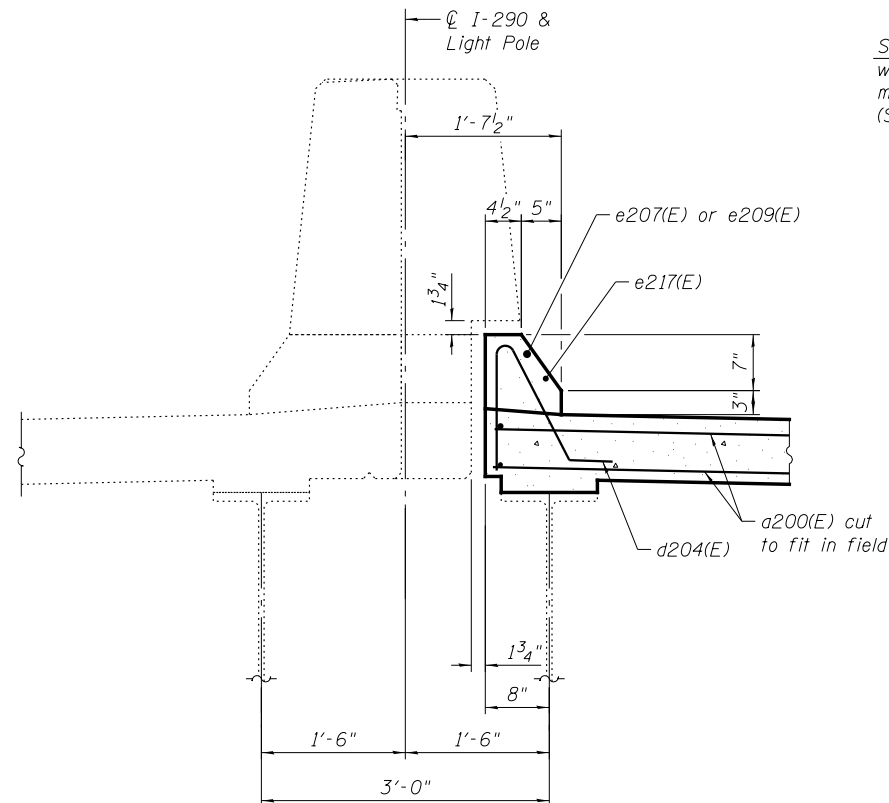
Notes:

1. See sheet S-51, for Parapet Joint Detail.

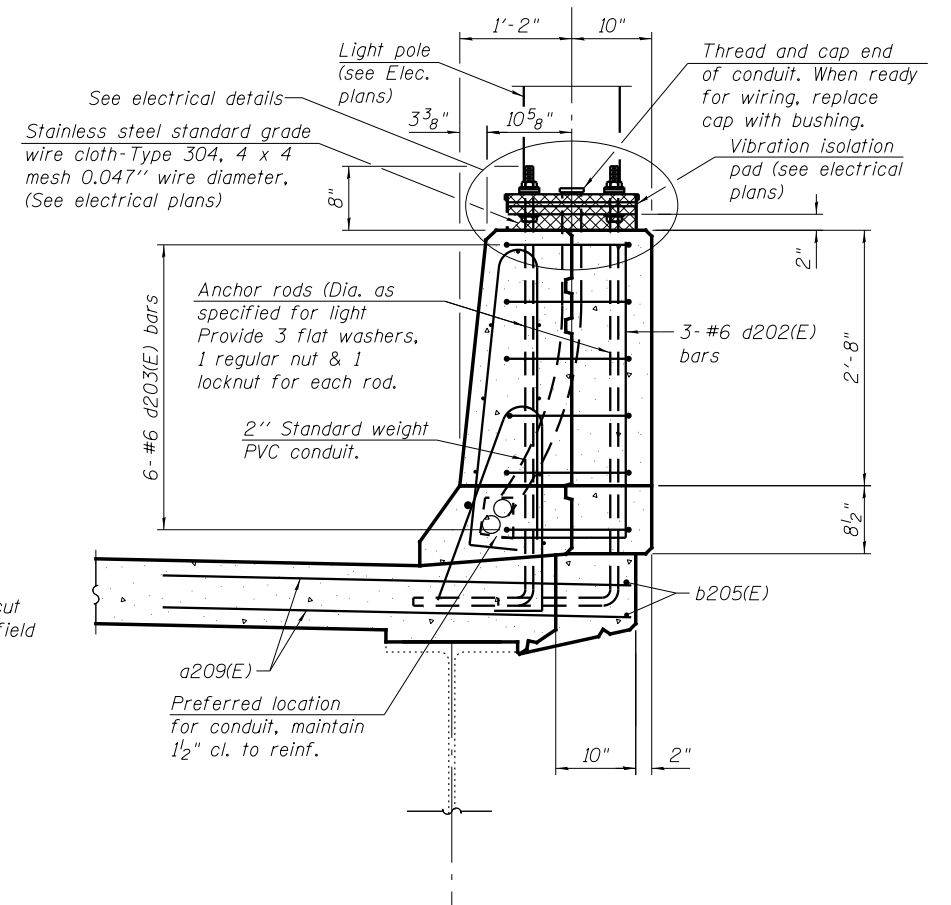




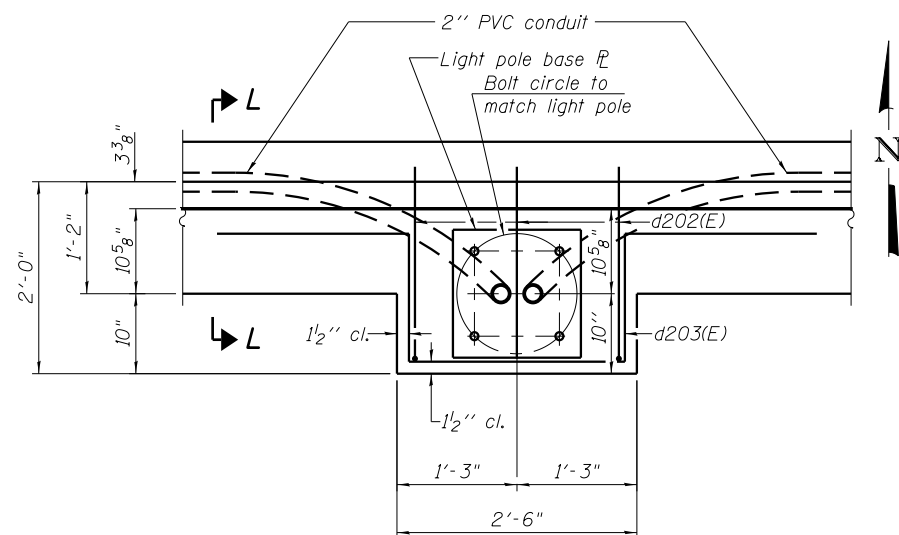
**EB NORTH MEDIAN CURB - SECTION
AT WB MEDIAN OH SIGN STRUCTURE**



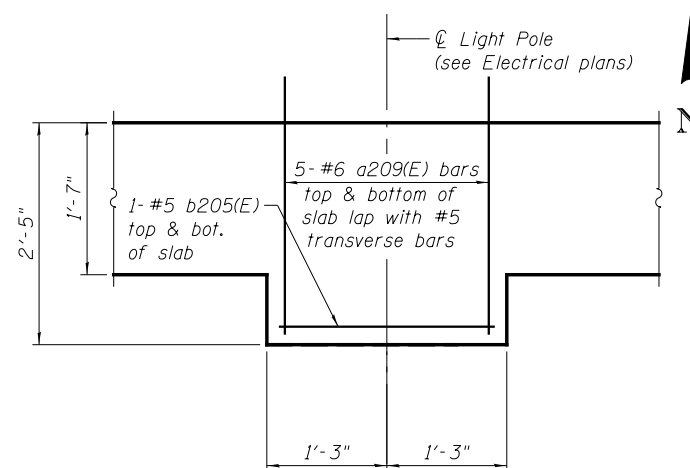
**EB NORTH MEDIAN CURB - SECTION
AT WB MEDIAN LIGHT POLE SUPPORT**



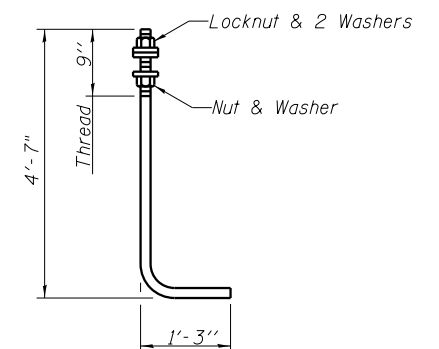
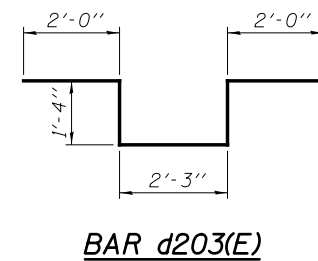
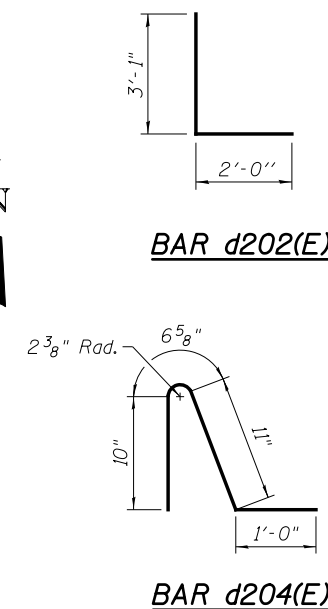
SECTION L-L



LIGHT POLE FOUNDATION PLAN THROUGH PARAPET



**PARTIAL SLAB PLAN AT
SOUTH PARAPET LIGHT POLE**



ANCHOR ROD

Diameter as specified for light poles.
(ASTM F 1554 Grade 105) full length
hot dipped galvanized. Cost included with
cost of Concrete Superstructure

Note:
See sheet S2-55, for superstructure details,
deck pouring sequence and Bill of Material.

0160461-60X75-S063-DET.dgn

**PARSONS
BRINCKERHOFF**

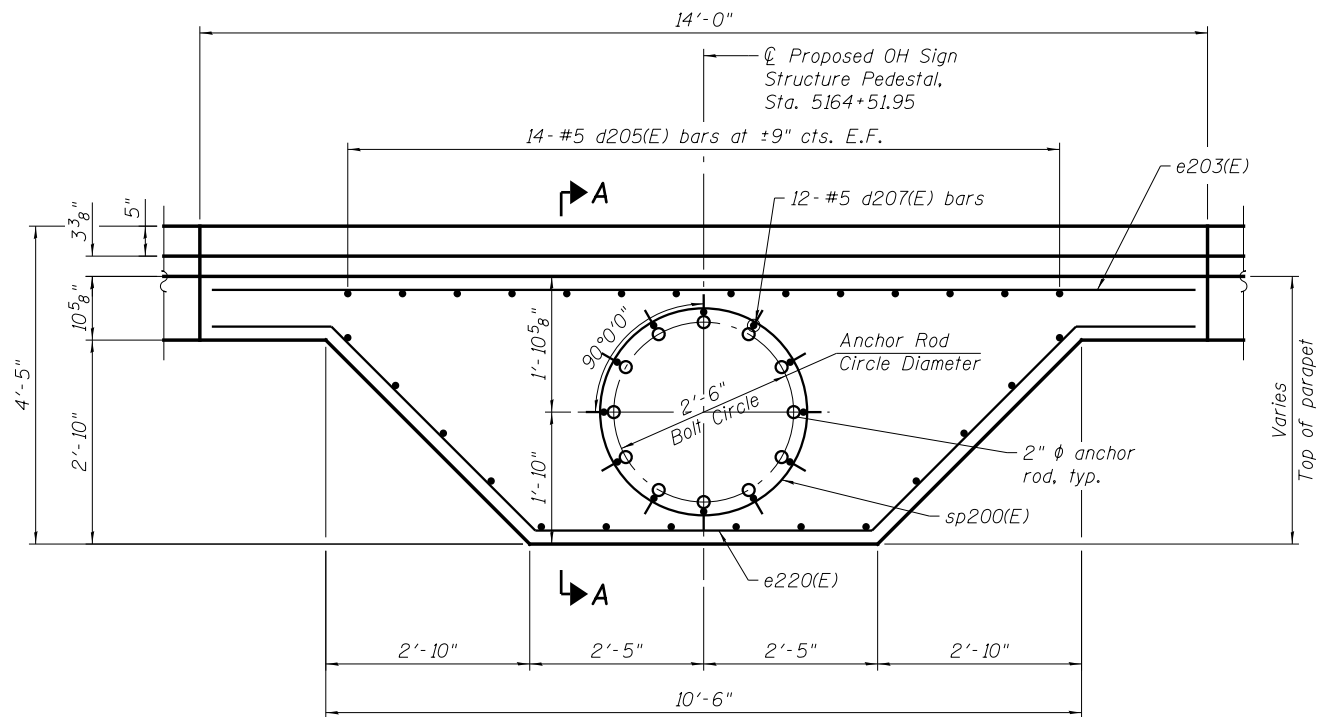
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	CHECKED - MS	REVISED -
PLOT SCALE = N.T.S.	DRAWN - NG	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

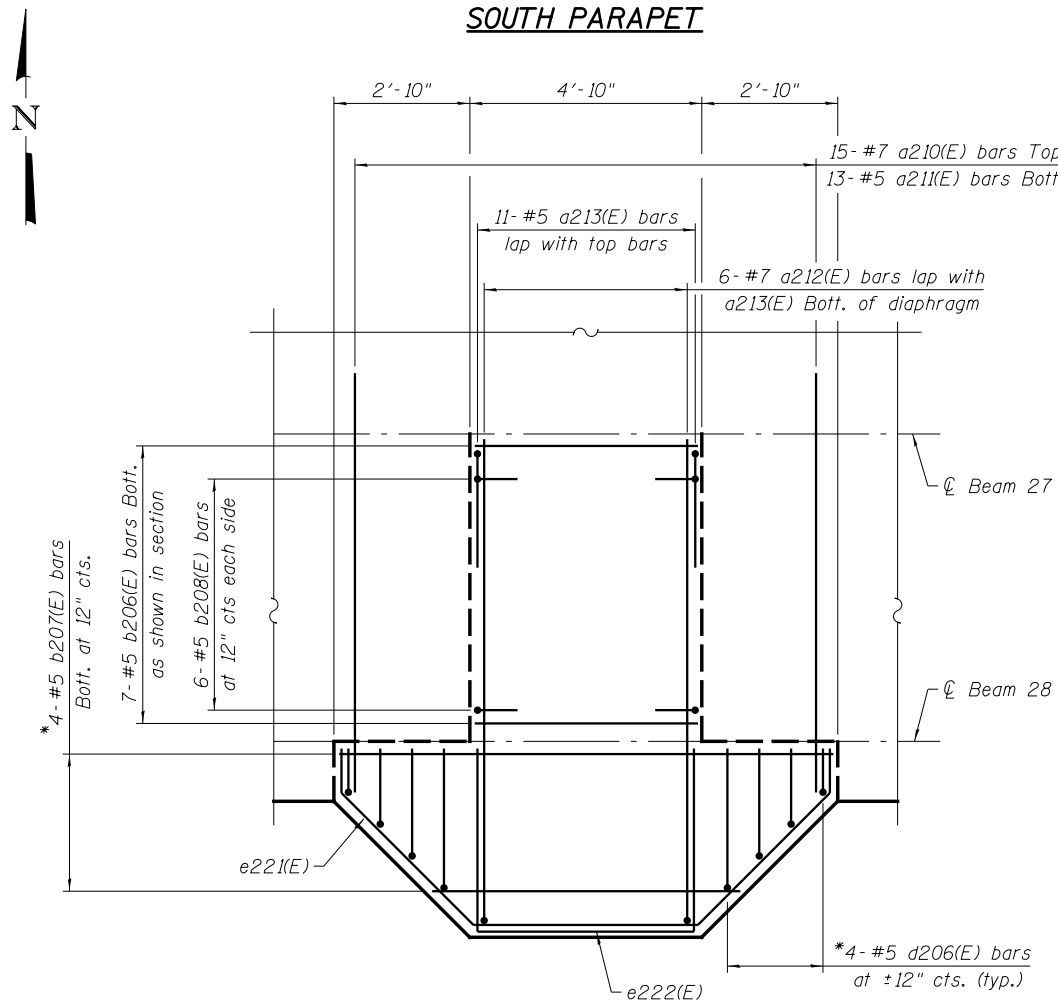
**DECK DETAILS III - UNIT II
STRUCTURE NO. 016-0461**

SHEET NO. S2-53 OF S2-137 SHEETS

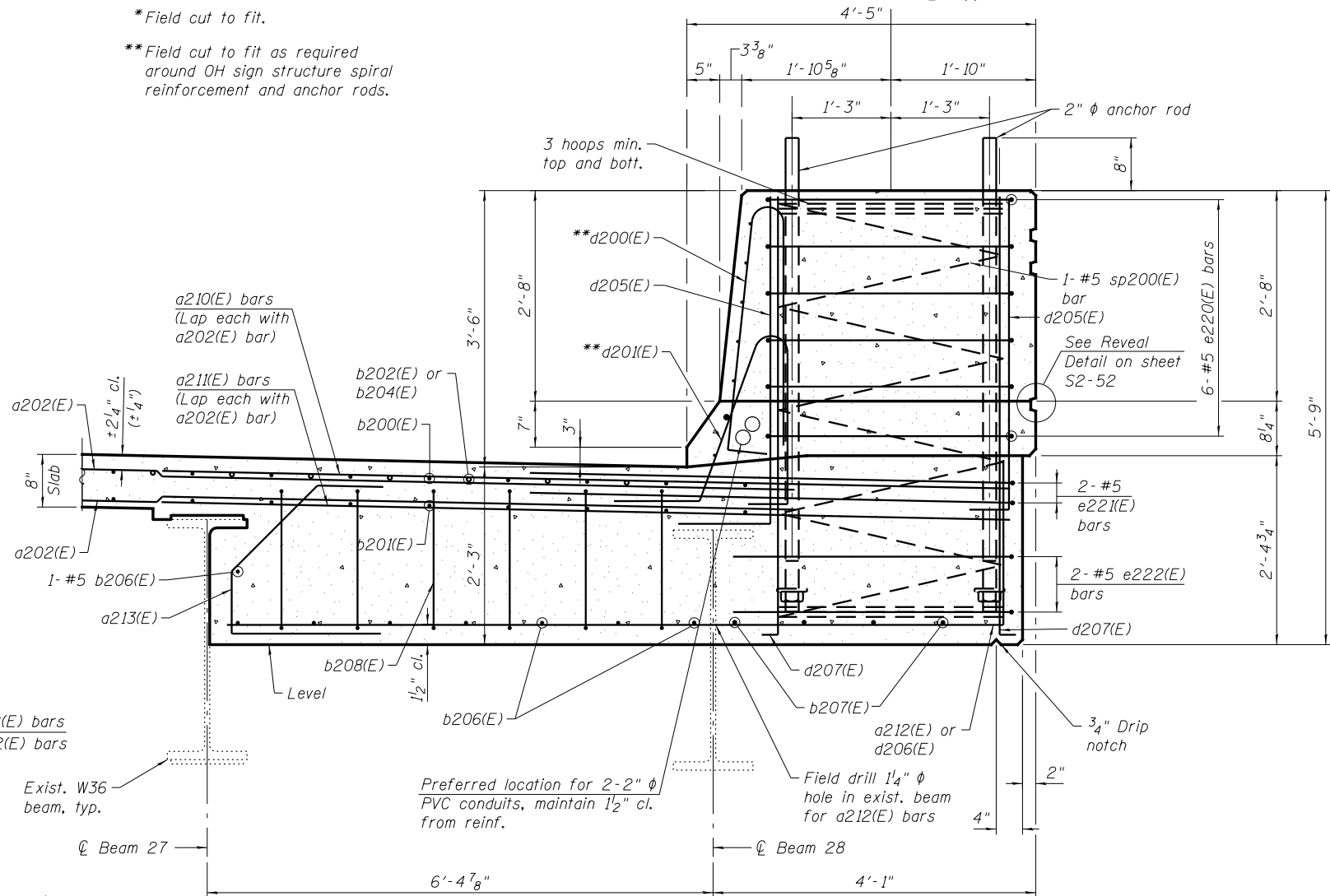
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	345
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



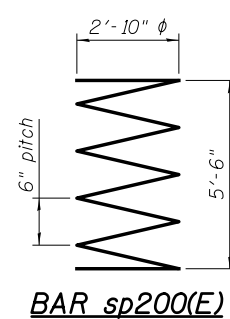
**OH SIGN STRUCTURE PEDESTAL PLAN
SOUTH PARAPET**



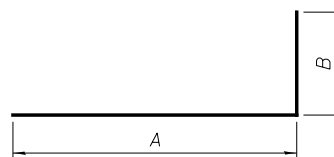
**PARTIAL SLAB PLAN AT
SOUTH PARAPET OH SIGN STRUCTURE**



SECTION A-A

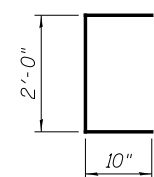


BAR sp200(E)

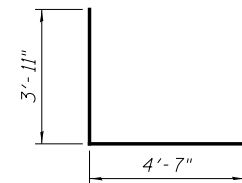


A & B DIMENSIONS

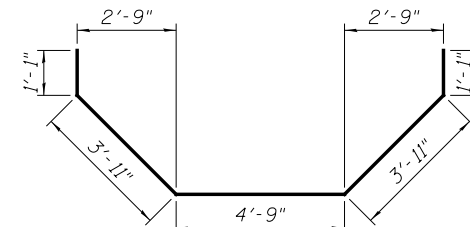
Bar	A	B
a212(E)	10'-1"	2'-2"
d205(E)	10"	4'-0"
d206(E)	3'-4"	2'-2"
d207(E)	4"	5'-6"



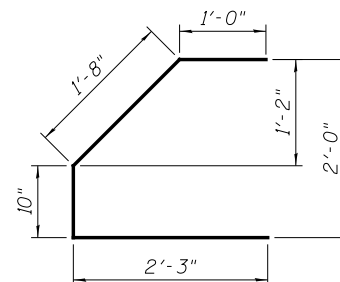
BAR b208(E)



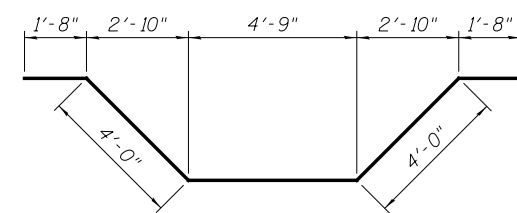
BAR e222(E)



BAR e221(E)



BAR a213(E)



BAR e220(E)

Notes:

- For all Sign Structures, Anchor Rod details, Positioning Plate, see Roadway Plans. Cost is included in the Overhead Sign Structure Cantilever Type II-C-A.
- A normal surface finish followed by a Protective Coat application will be required on concrete surfaces. Cost is included in Protective Coat.
- For Parapet reinforcement detail, see section thru south parapet on sheet S2-52.
- The cost of the field drill of 1 1/4" hole in exist. beam 28 is included in the cost of Reinforcement Bars, Epoxy Coated.

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**PARSONS
BRINCKERHOFF**

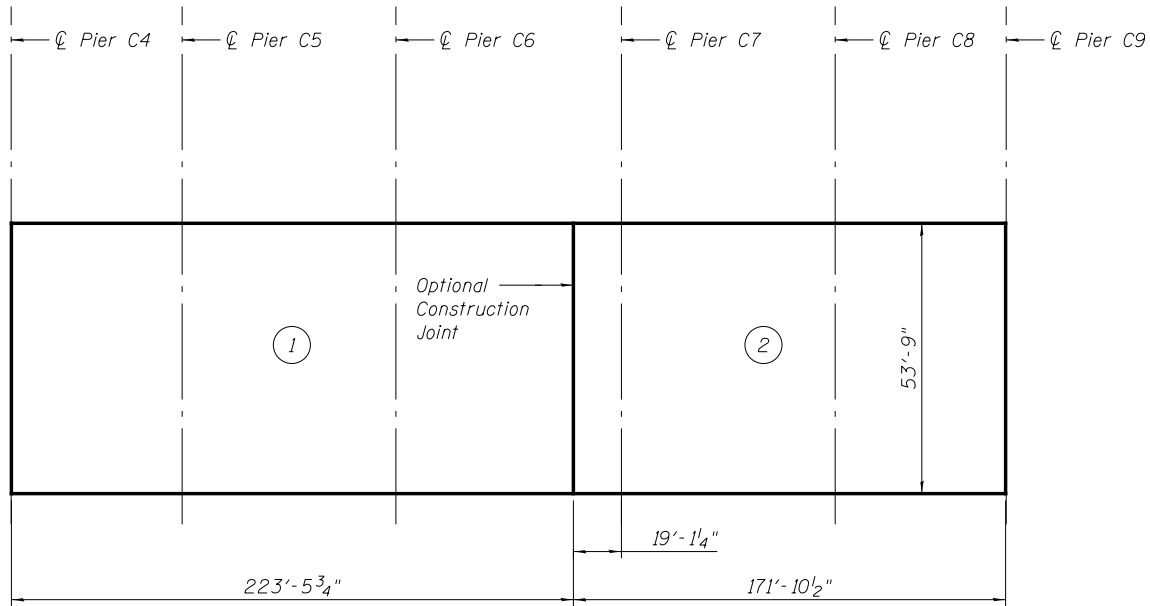
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PLOT SCALE = N.T.S.	CHECKED - PJL	REVISED -
PLOT DATE = 6/28/2017	DRAWN - DCP/MI	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK DETAILS IV - UNIT II
STRUCTURE NO. 016-0461**

SHEET NO. S2-54 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	346
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



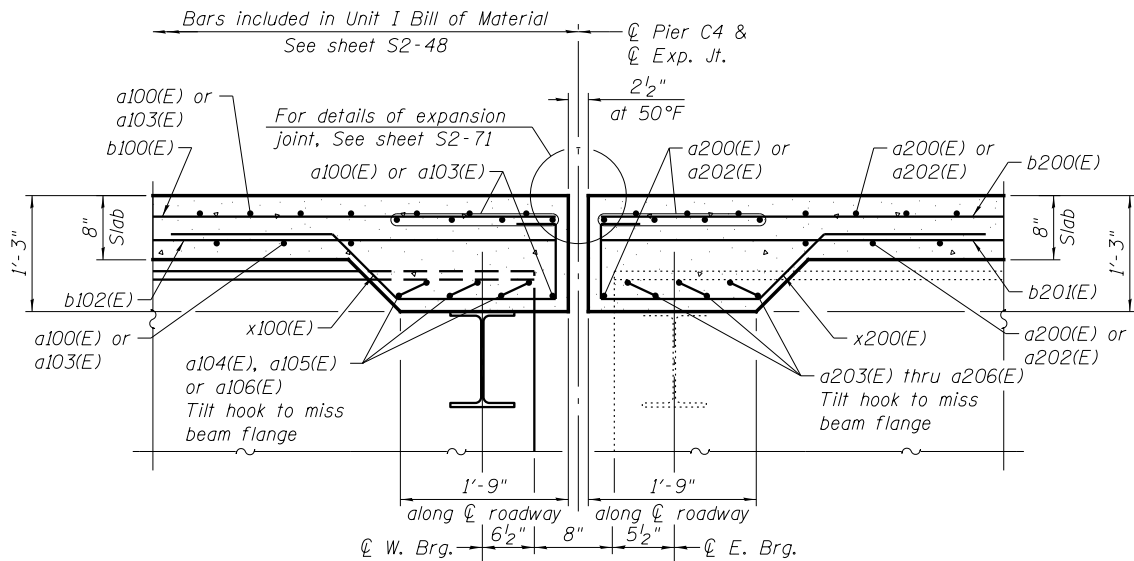
POURING SEQUENCE - STAGE II

DECK POURING SEQUENCE

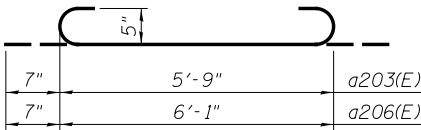
When the deck pour is stopped for the day at one or more of the transverse Bonded Construction Joints in the Deck Pouring Sequence as shown, the next pour shall not be made until both of the following are met:

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.

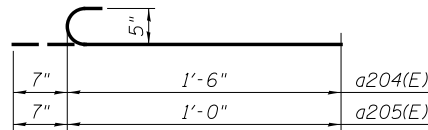
Concrete pours shall follow the numerical order shown in the pouring sequence. Deviation from this pour sequence requires approval from the Engineer.



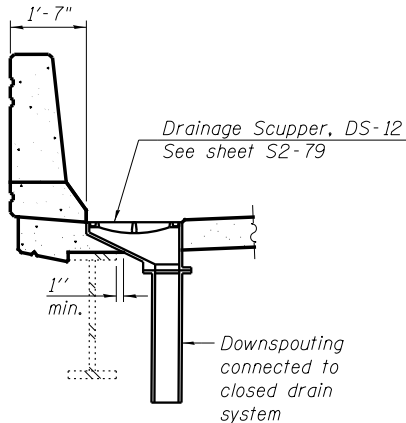
SECTION B-B



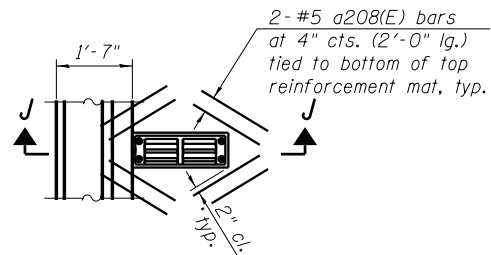
BARS a203(E) & a206(E)



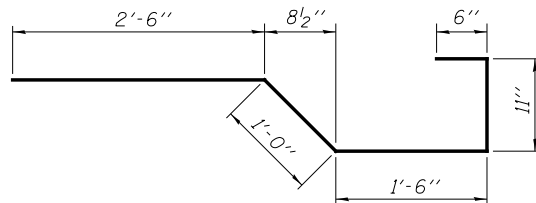
BARS a204(E) & a205(E)



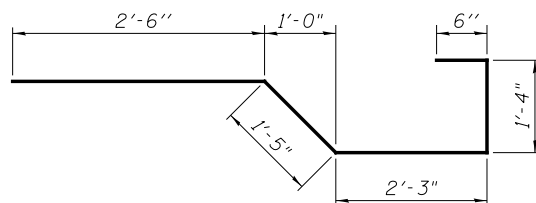
SECTION J-J



PLAN



BAR x200(E)



BAR x201(E)

**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a200(E)	1,007	#5	26'-9"	—
a201(E)	1,101	#6	6'-6"	—
a202(E)	1,044	#5	53'-3"	—
a203(E)	12	#5	6'-11"	—
a204(E)	3	#5	2'-1"	—
a205(E)	3	#5	1'-7"	—
a206(E)	24	#5	7'-3"	—
a207(E)	39	#5	25'-11"	—
a208(E)	72	#5	2'-0"	—
a209(E)	20	#6	7'-2"	—
a210(E)	15	#7	10'-11"	—
a211(E)	13	#5	10'-11"	—
a212(E)	6	#5	12'-3"	—
a213(E)	11	#5	5'-9"	—
b200(E)	1,162	#5	30'-7"	—
b201(E)	1,080	#5	28'-9"	—
b202(E)	324	#6	32'-0"	—
b203(E)	162	#6	18'-5"	—
b204(E)	162	#6	24'-1"	—
b205(E)	4	#5	2'-3"	—
b206(E)	8	#5	4'-7"	—
b207(E)	4	#5	10'-3"	—
b208(E)	12	#5	3'-8"	—
d200(E)	843	#5	6'-10"	—
d201(E)	843	#5	7'-0"	—
d202(E)	6	#6	5'-1"	—
d203(E)	12	#6	8'-11"	—
d204(E)	26	#5	3'-4"	—
d205(E)	28	#5	4'-10"	—
d206(E)	8	#5	5'-6"	—
d207(E)	12	#5	5'-10"	—
e200(E)	84	#4	18'-4"	—
e201(E)	64	#4	11'-9"	—
e202(E)	42	#4	19'-5"	—
e203(E)	64	#4	13'-9"	—
e204(E)	56	#4	15'-2"	—
e205(E)	8	#4	28'-9"	—
e206(E)	8	#8	30'-4"	—
e207(E)	8	#8	11'-9"	—
e208(E)	4	#4	30'-5"	—
e209(E)	4	#8	32'-0"	—
e210(E)	9	#8	13'-9"	—
e211(E)	4	#4	31'-9"	—
e212(E)	4	#8	33'-4"	—
e213(E)	42	#4	14'-8"	—
e214(E)	4	#4	23'-5"	—
e215(E)	4	#8	25'-0"	—
e216(E)	1	#5	20'-3"	—
e217(E)	2	#5	8'-10"	—
e218(E)	8	#4	13'-6"	—
e219(E)	1	#8	13'-6"	—
e220(E)	6	#5	16'-1"	—
e221(E)	2	#5	14'-9"	—
e222(E)	2	#5	12'-5"	—
*sp200(E)	1	#5	5'-6"	—
x200(E)	64	#5	6'-5"	—
x201(E)	68	#5	8'-0"	—
Reinforcement Bars, Epoxy Coated			Pound	214,970
Concrete Superstructure			Cu. Yds.	955.0
Protective Coat			Sq. Yd.	3,818
Bridge Deck Grooving			Sq. Yd.	3,327

Note:

*Length is height of spiral

1. Cut longitudinal reinforcement to clear drainage scuppers.

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**PARSONS
BRINCKERHOFF**

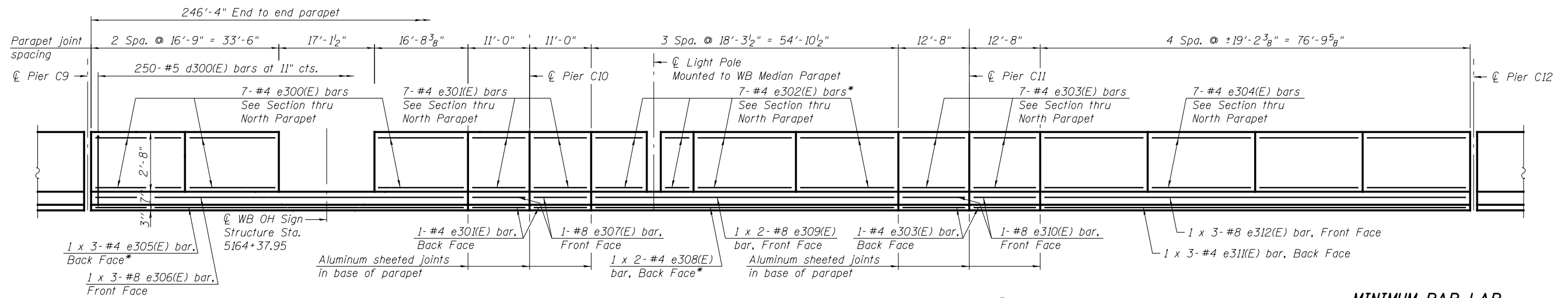
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CHECKED -	MS	REVISED -			
PLOT SCALE =	N.T.S.	DRAWN -	NG	REVISED -	
PLOT DATE =	6/28/2017	CHECKED -	JIG	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK DETAILS V - UNIT II
STRUCTURE NO. 016-0461**

SHEET NO. S2-55 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	347
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

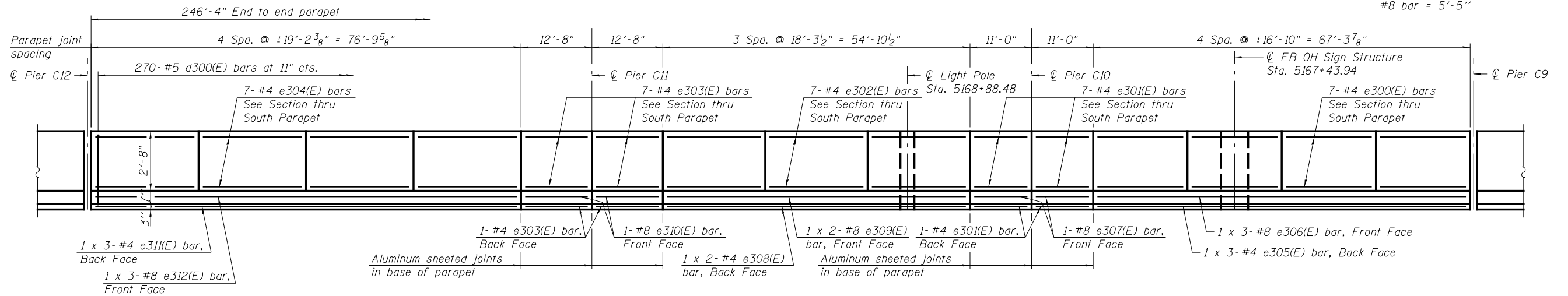


INSIDE ELEVATION OF EB NORTH MEDIAN PARAPET

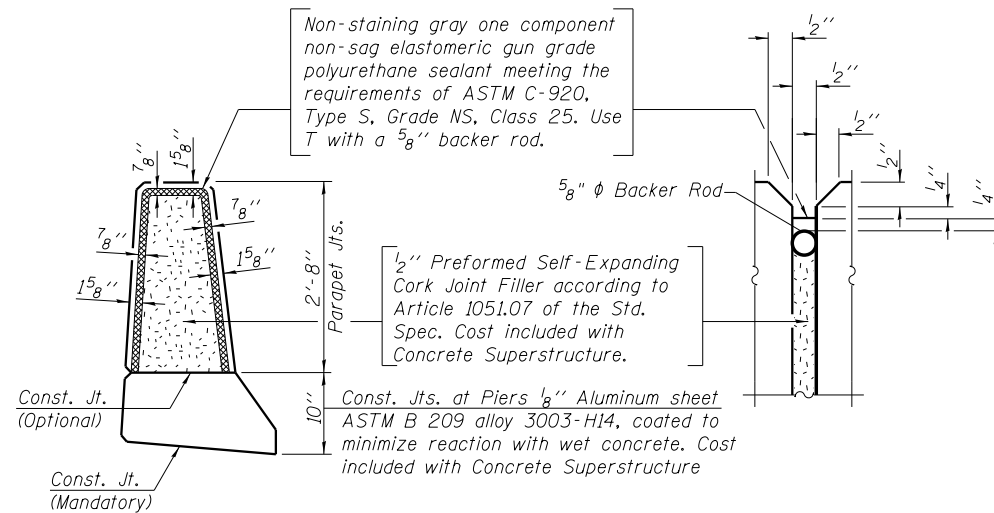
* Cut in field to clear openings. See details of openings below for Light Pole and Existing WB Sign Structure Parapet Blockouts.

MINIMUM BAR LAP

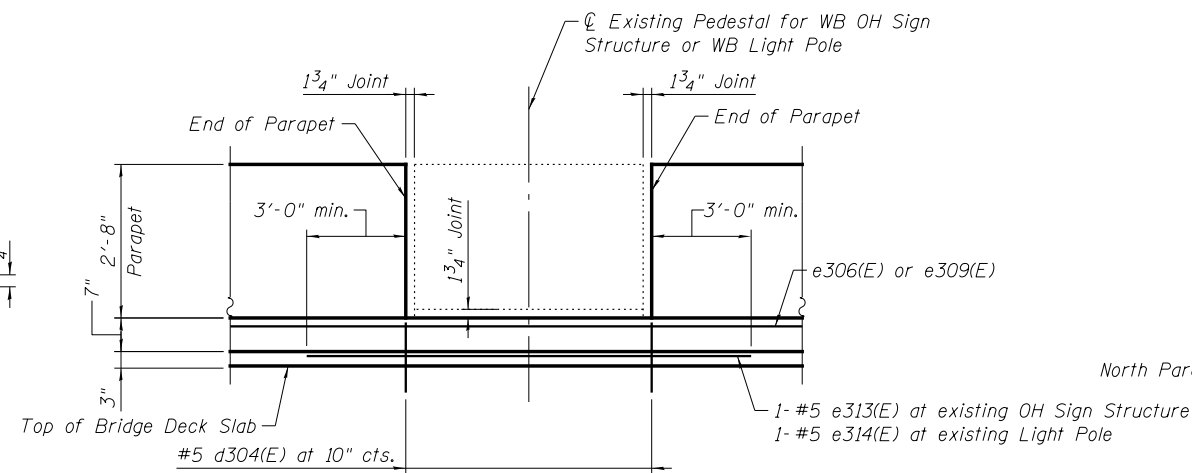
(Parapet)
#4 bar = 2'-1"
#8 bar = 5'-5"



INSIDE ELEVATION OF EB SOUTH PARAPET

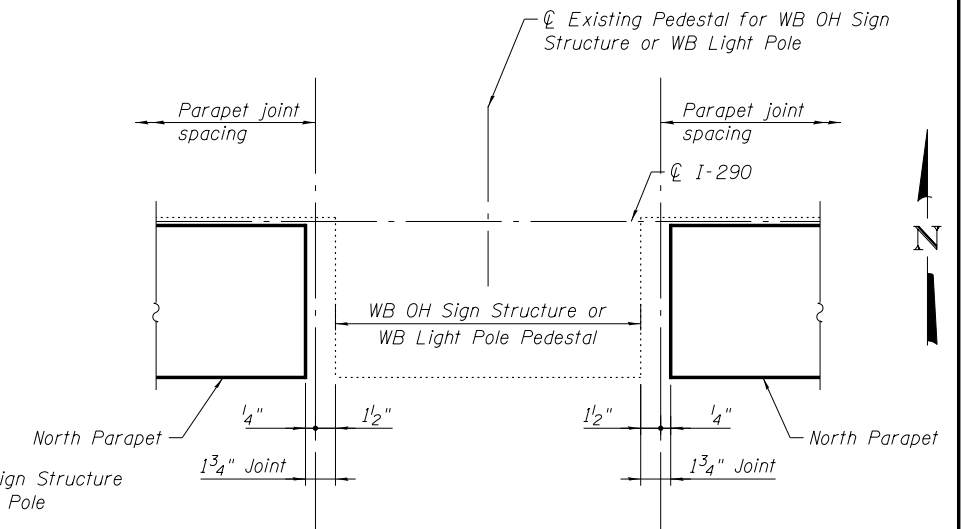


PARAPET JOINT DETAILS



NORTH PARAPET CURB PARTIAL ELEVATION AT EXISTING WB OH SIGN STRUCTURE OR LIGHT POLE PEDESTAL

For clarity, only reinforcement in the front face of the curb is shown.



NORTH PARAPET PARTIAL PLAN AT EXISTING WB OH SIGN STRUCTURE OR LIGHT POLE PEDESTAL

Note:
For Section thru North Median Parapet & Section thru South Parapet, see sheet S2-58 & S2-59.

0160461-60X75-S057-DET.dgn

**PARSONS
BRINCKERHOFF**

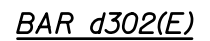
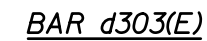
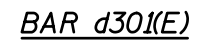
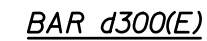
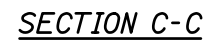
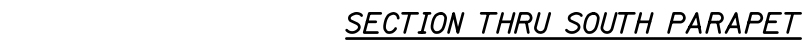
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PLOT SCALE = N.T.S.	CHECKED - MS	REVISED -
PLOT DATE = 6/28/2017	DRAWN - NG	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK DETAILS I - UNIT III
STRUCTURE NO. 016-0461**

SHEET NO. S2-57 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	349
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



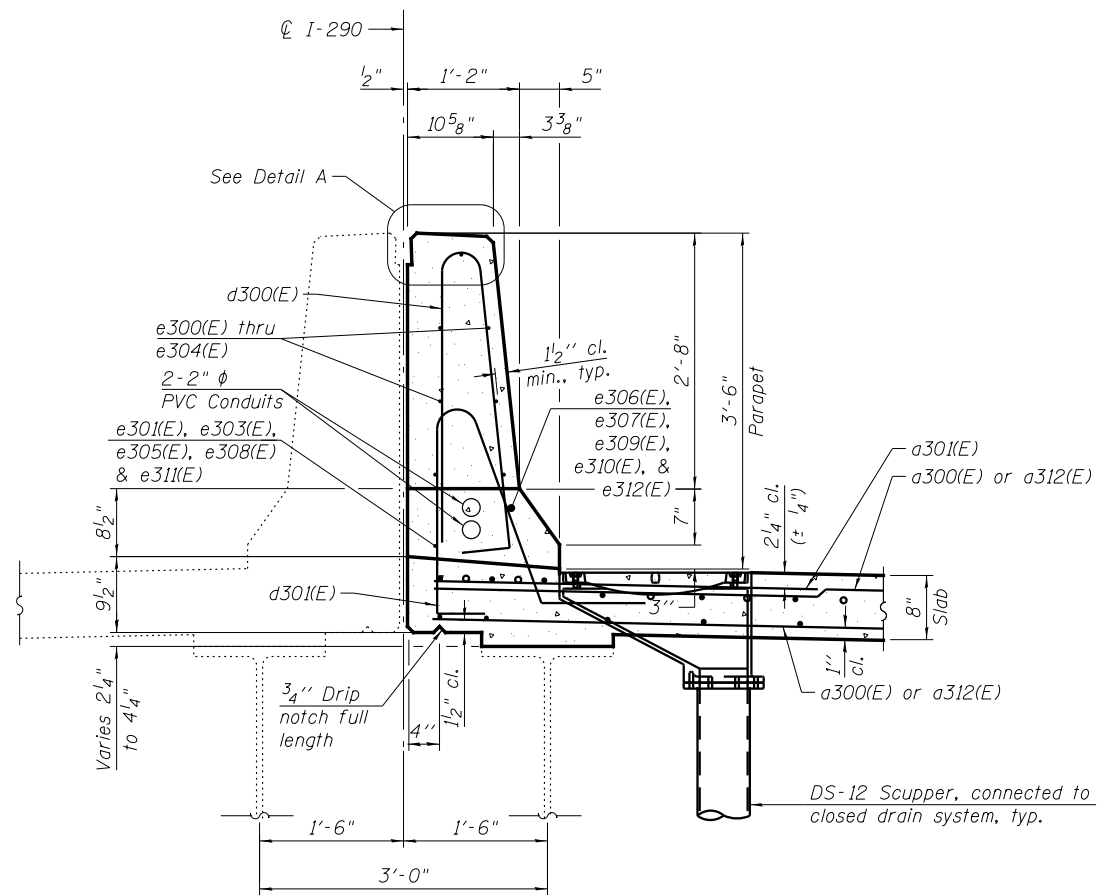
For bars b302(E) & b303(E)



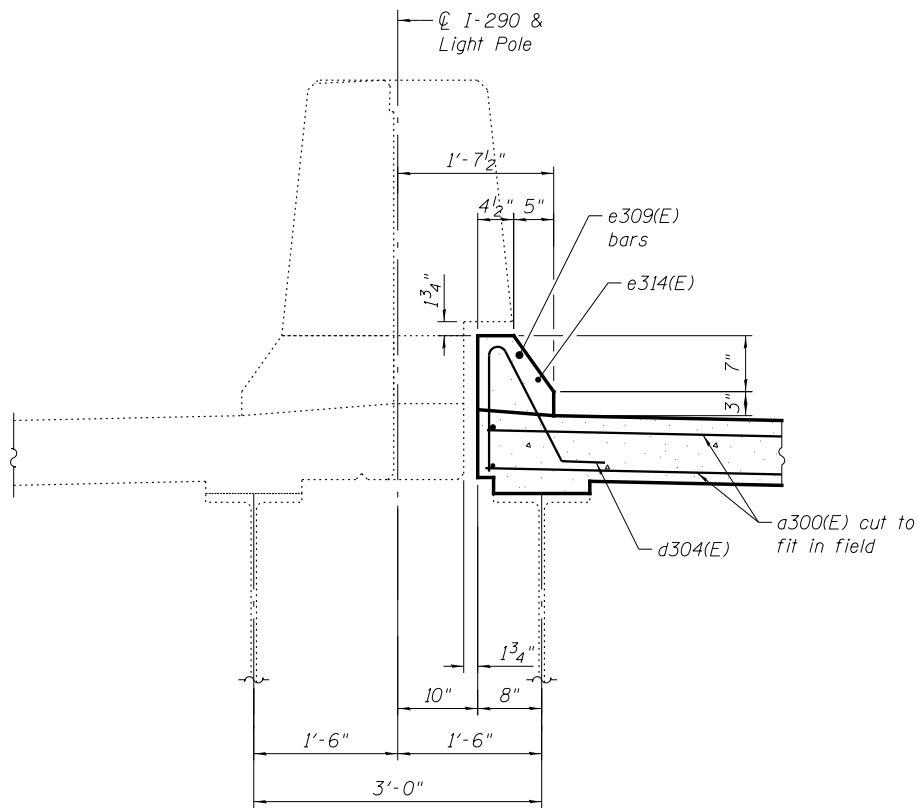
Diameter as specified for light poles.
(ASTM F 1554 Grade 105) full length
hot dipped galvanized. Cost included with
cost of Concrete Superstructure

Notes:

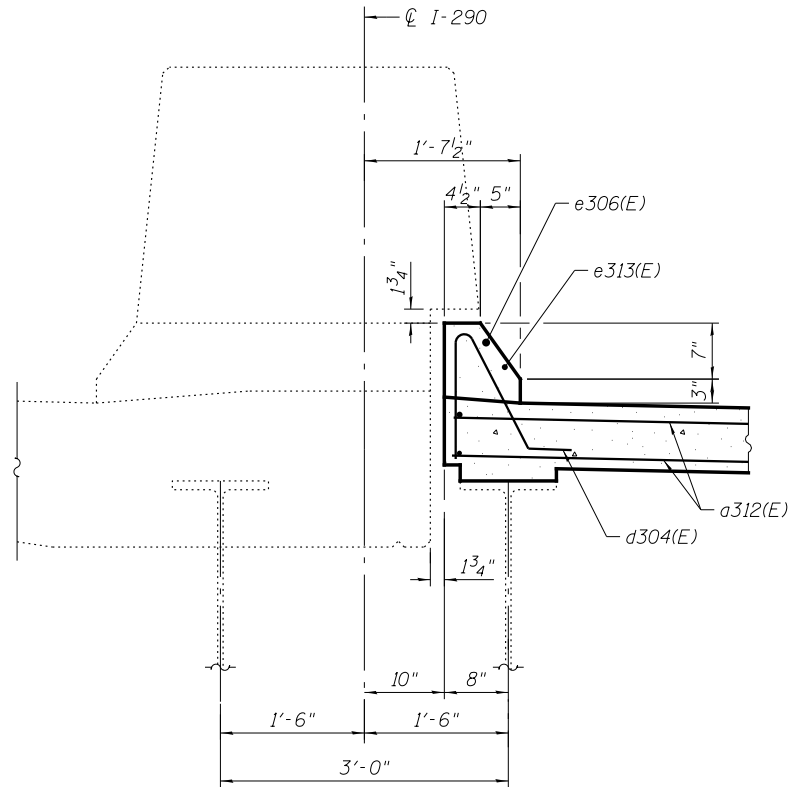
1. See sheet S2-61, for Bill of Material.
2. Reveal is included in cost of Concrete Superstructure.



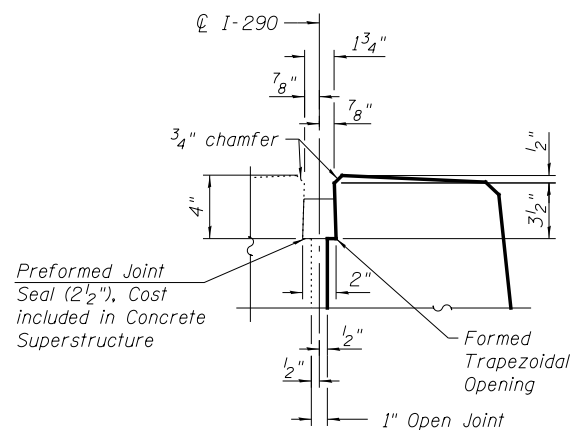
SECTION THRU NORTH MEDIAN PARAPET



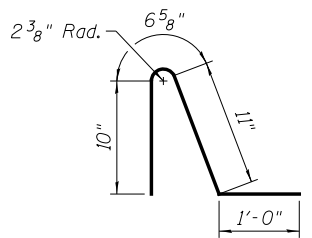
EB NORTH MEDIAN CURB - SECTION AT
WB MEDIAN LIGHT POLE SUPPORT



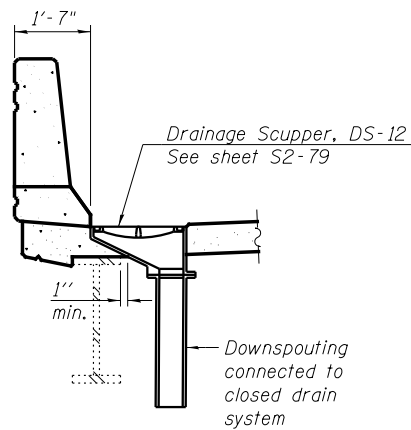
EB NORTH MEDIAN CURB - SECTION AT
WB MEDIAN OH SIGN STRUCTURE



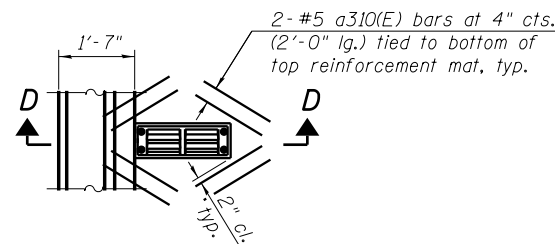
DETAIL A



BAR d304(E)



SECTION D-D



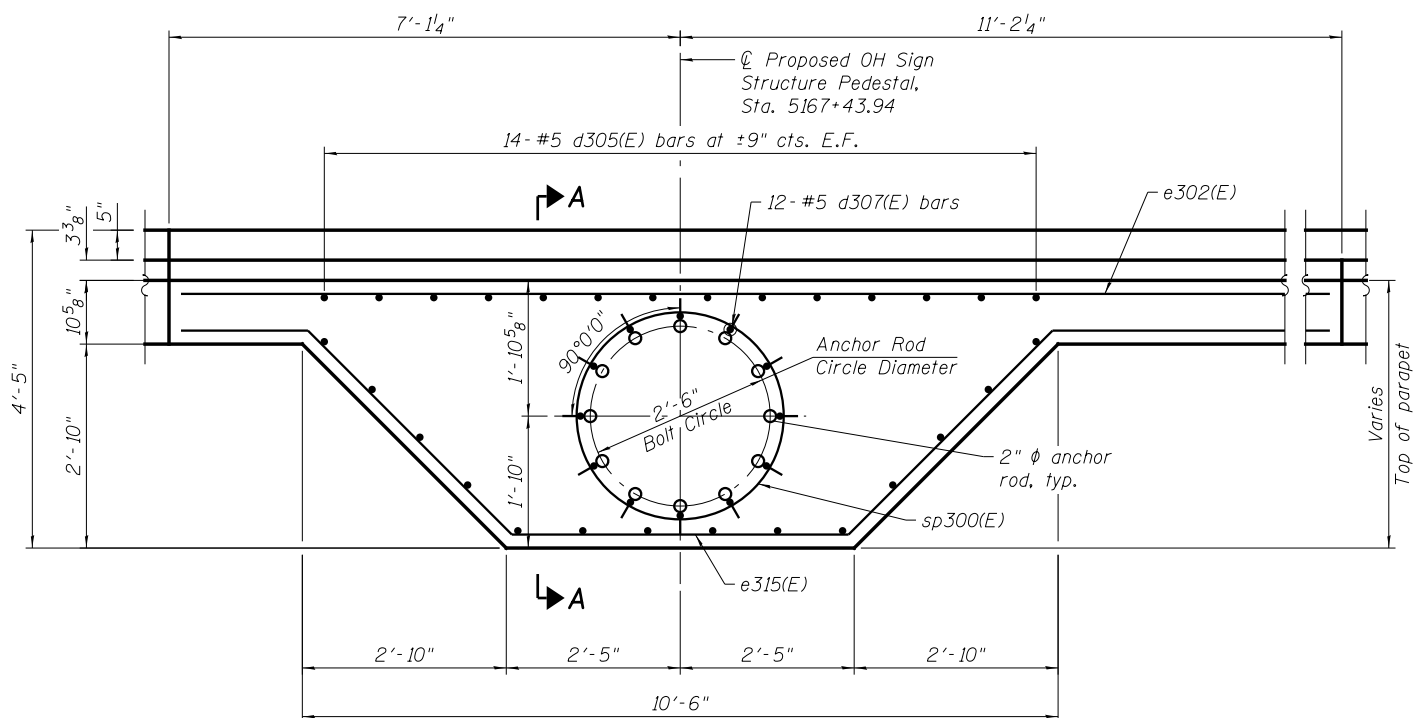
REINFORCING PLAN AT SCUPPER

Note:
See sheet S2-61, for superstructure details and Bill of Material.
Cut longitudinal reinforcement to clear drainage scupper.

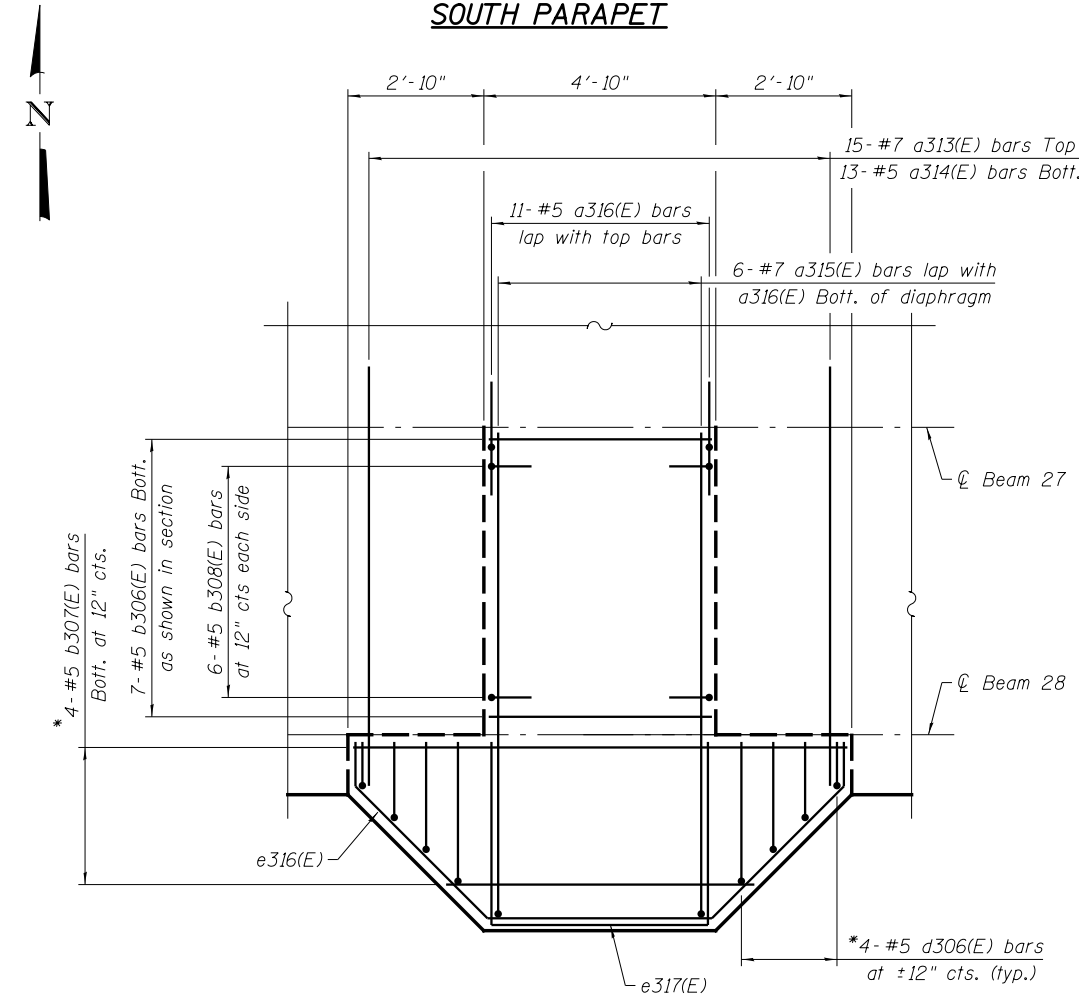
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0160461-60X75

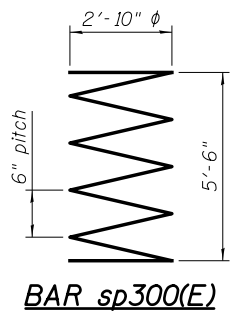
PARSONS BRINCKERHOFF	USER NAME = pateld	DESIGNED - TWP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK DETAILS III - UNIT III STRUCTURE NO. 016-0461	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = N.T.S.	CHECKED - MS	REVISED -			90/94/290	2014-001 R&B (EB)	COOK	696	351
	PLOT DATE = 6/28/2017	DRAWN - NG	REVISED -			CONTRACT NO. 60X75				
		CHECKED - JIG	REVISED -			ILLINOIS FED. AID PROJECT				
SHEET NO. S2-59 OF S2-137 SHEETS										



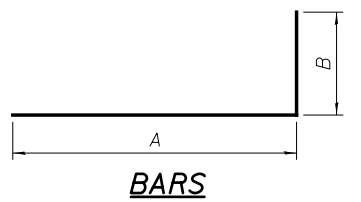
**OH SIGN STRUCTURE PEDESTAL PLAN
SOUTH PARAPET**



**PARTIAL SLAB PLAN AT
SOUTH PARAPET OH SIGN STRUCTURE**

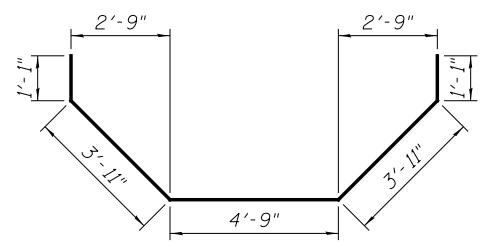
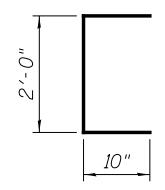


BAR b308(E)

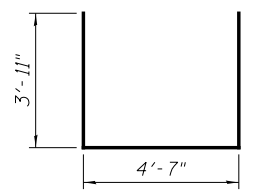


A & B DIMENSIONS

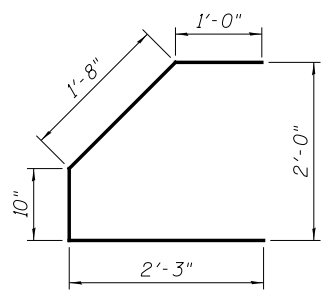
Bar	A	B
a315(E)	10'-1"	2'-2"
d305(E)	10"	4'-0"
d306(E)	3'-4"	2'-2"
d307(E)	4"	5'-6"



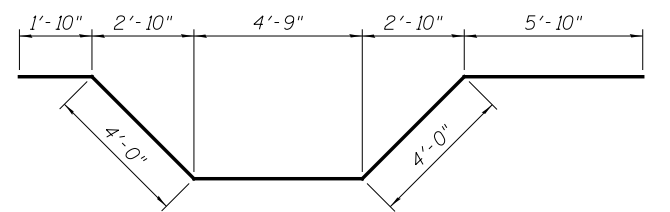
BAR e316(E)



BAR e317(E)



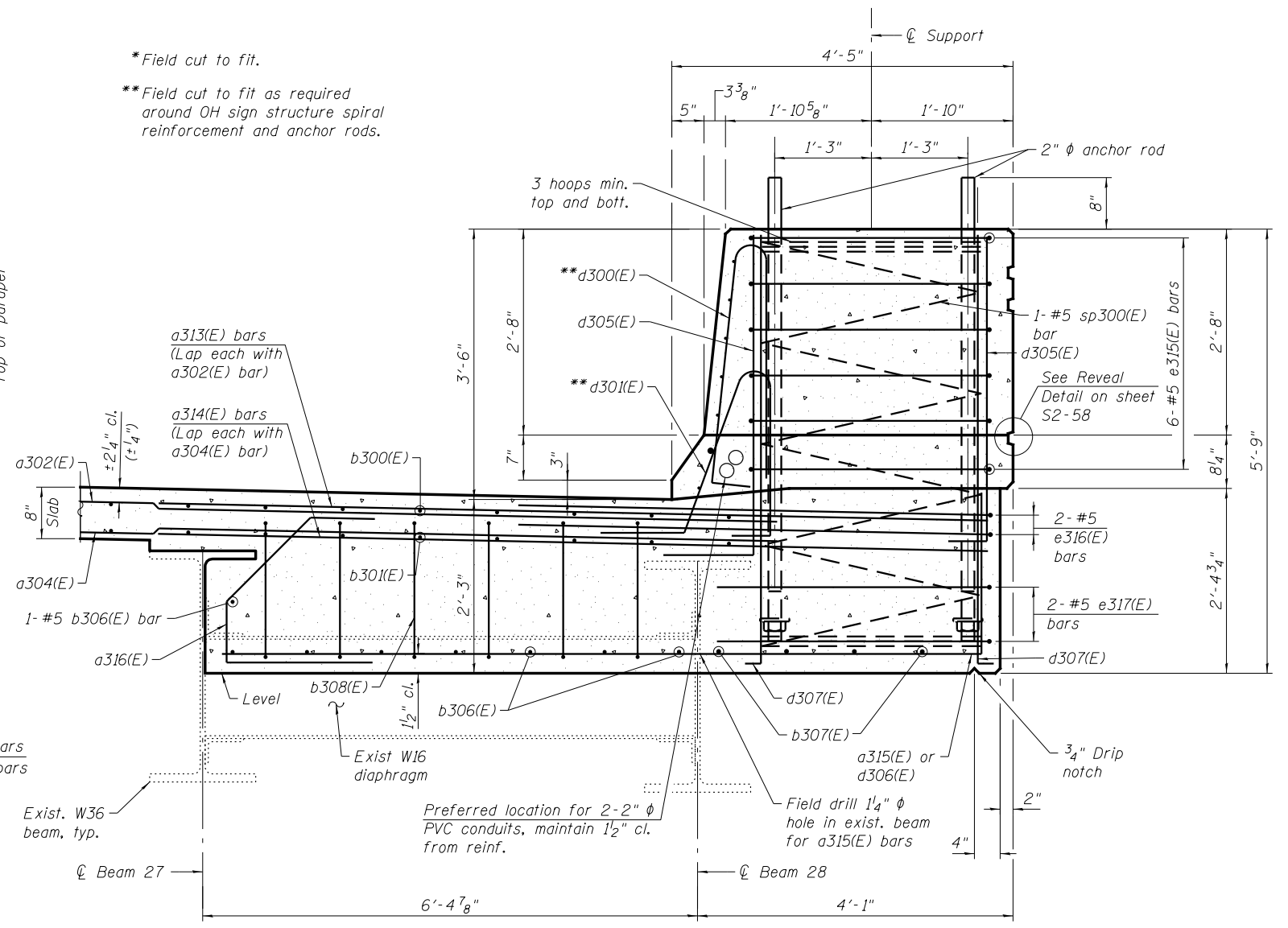
BAR a316(E)



BAR e315(E)

Notes:

- For all Sign Structures, Anchor Rod details, Positioning Plate, see Roadway Plans. Cost is included in the Overhead Sign Structure Cantilever Type II-C-A.
- A normal surface finish followed by a Protective Coat application will be required on concrete surfaces. Cost is included in Protective Coat.
- For Parapet reinforcement detail, see section thru south parapet on sheet S2-58.
- The cost of the field drill of 1 1/4\" hole in exist. beam 28 is included in the cost of Reinforcement Bars, Epoxy Coated.



SECTION A-A

*Field cut to fit.

**Field cut to fit as required around OH sign structure spiral reinforcement and anchor rods.

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**PARSONS
BRINCKERHOFF**

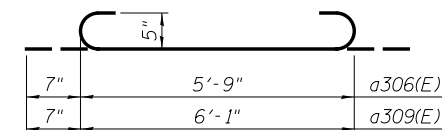
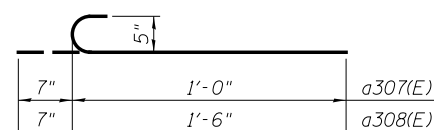
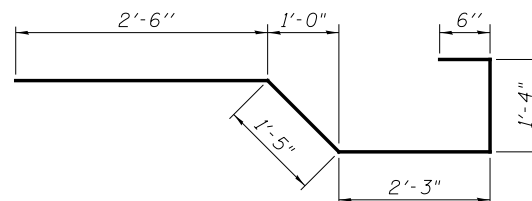
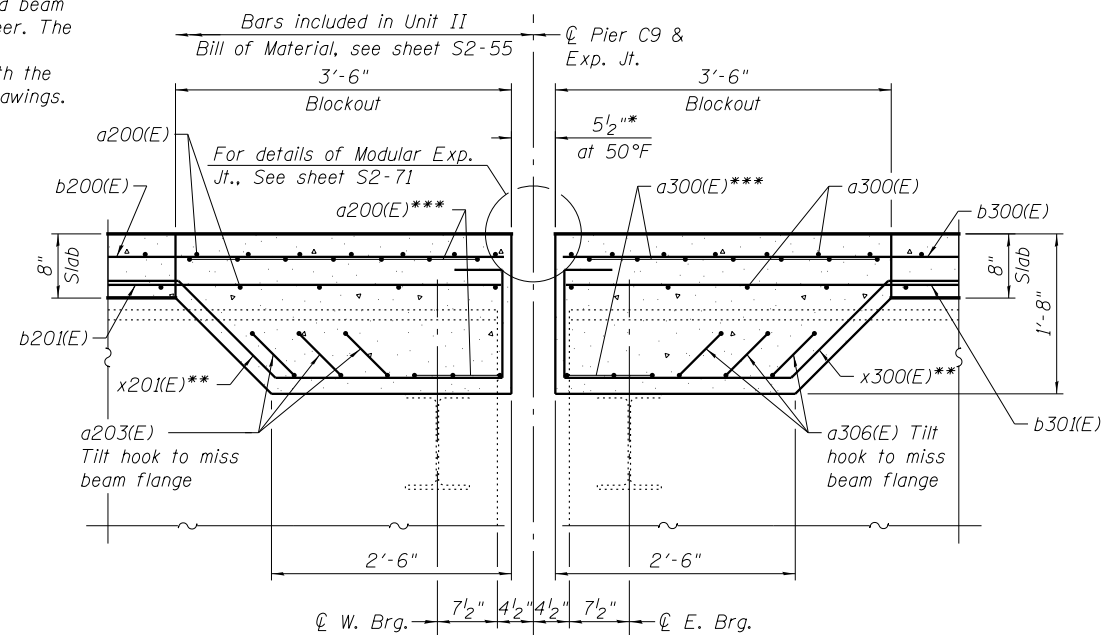
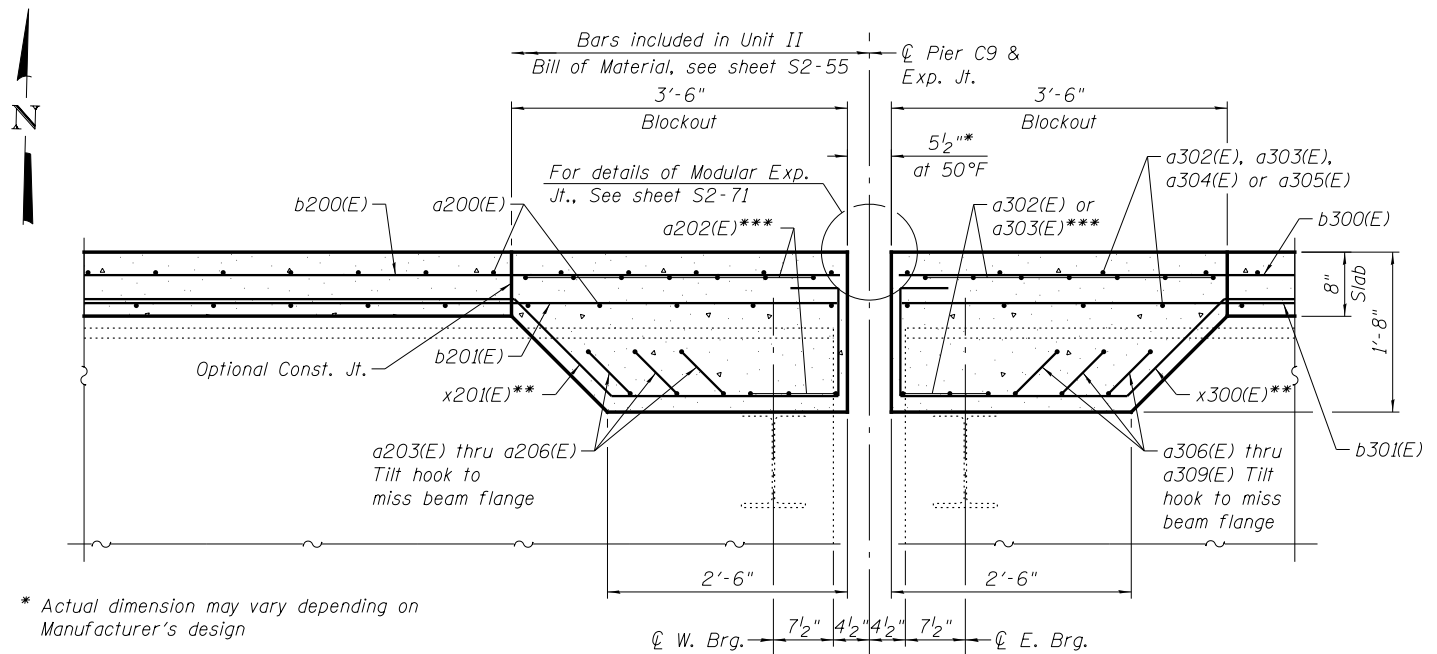
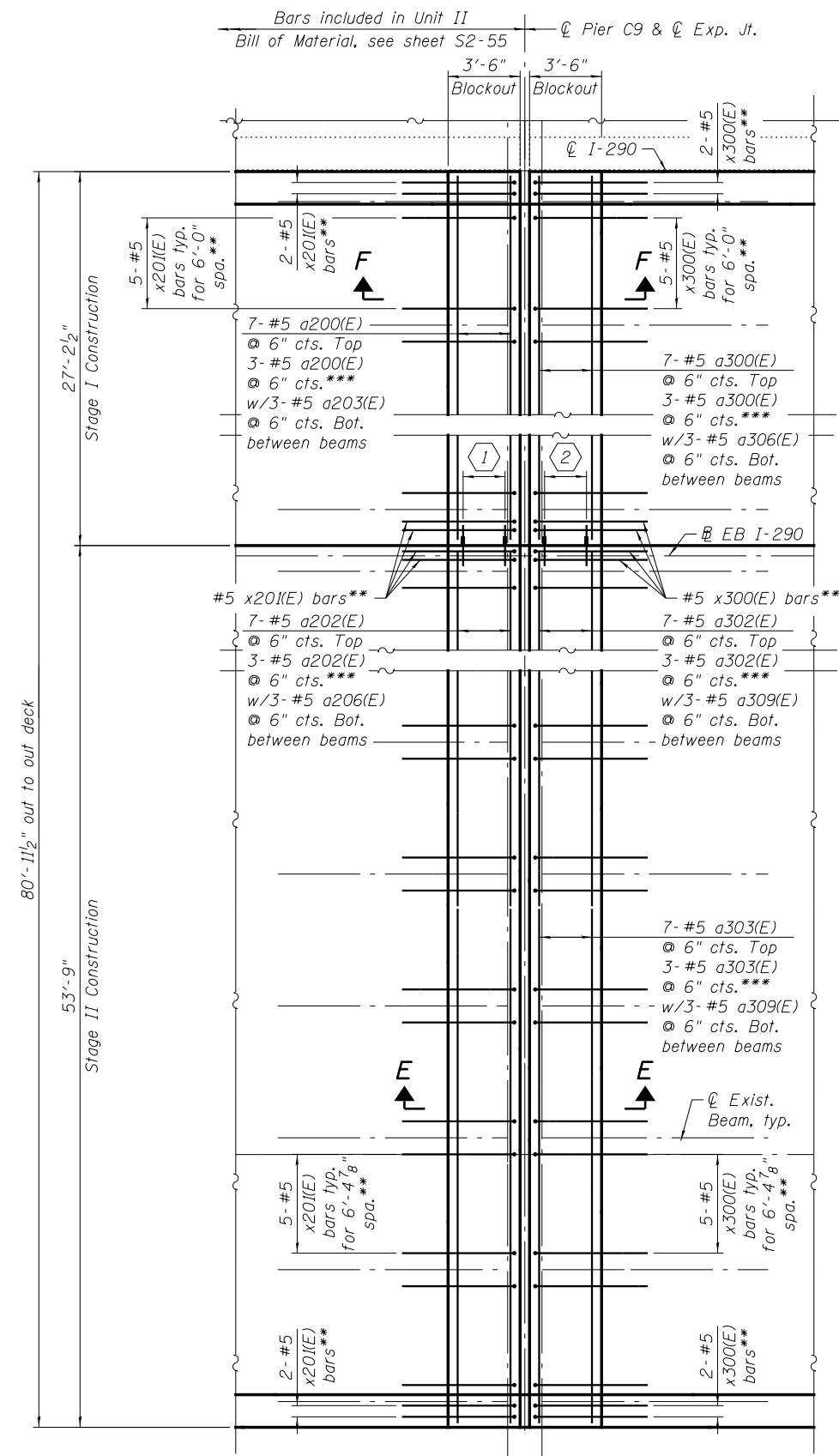
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CHECKED - P.JL	REVISED -	
PLOT SCALE = N.T.S.	DRAWN - DCP/MI	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK DETAILS IV - UNIT III
STRUCTURE NO. 016-0461**

SHEET NO. S2-60 OF S2-137 SHEETS

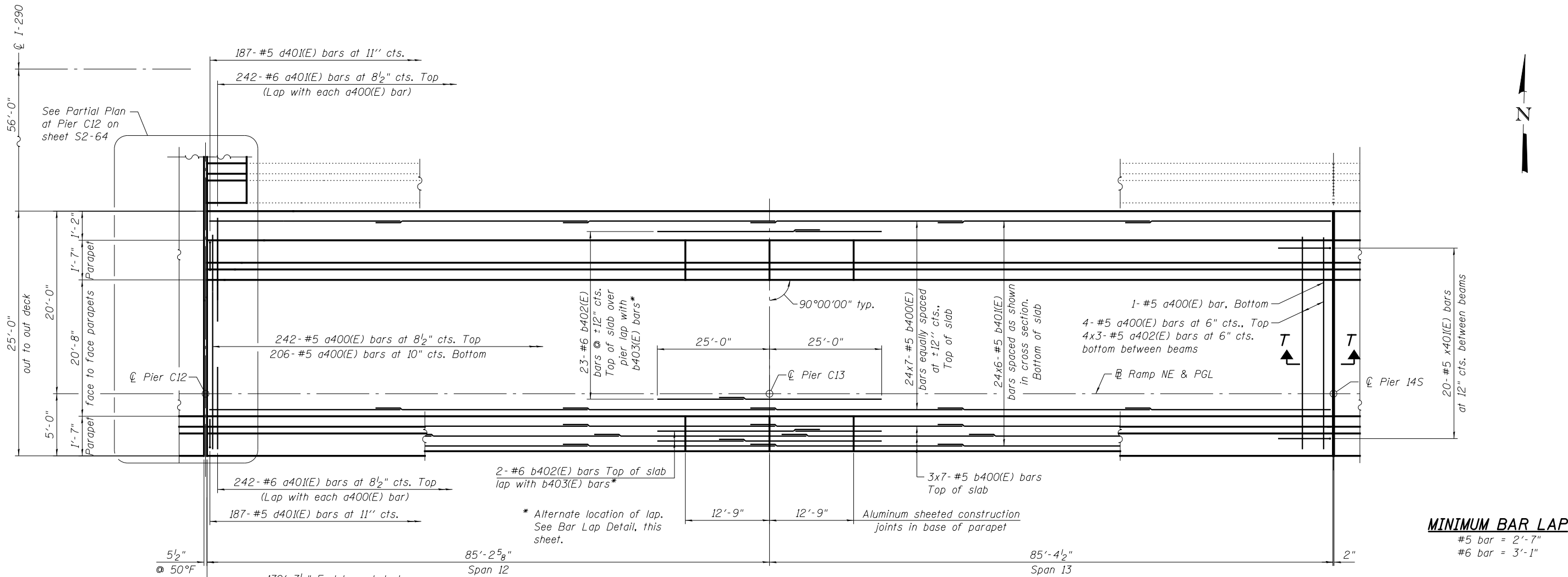
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	352
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



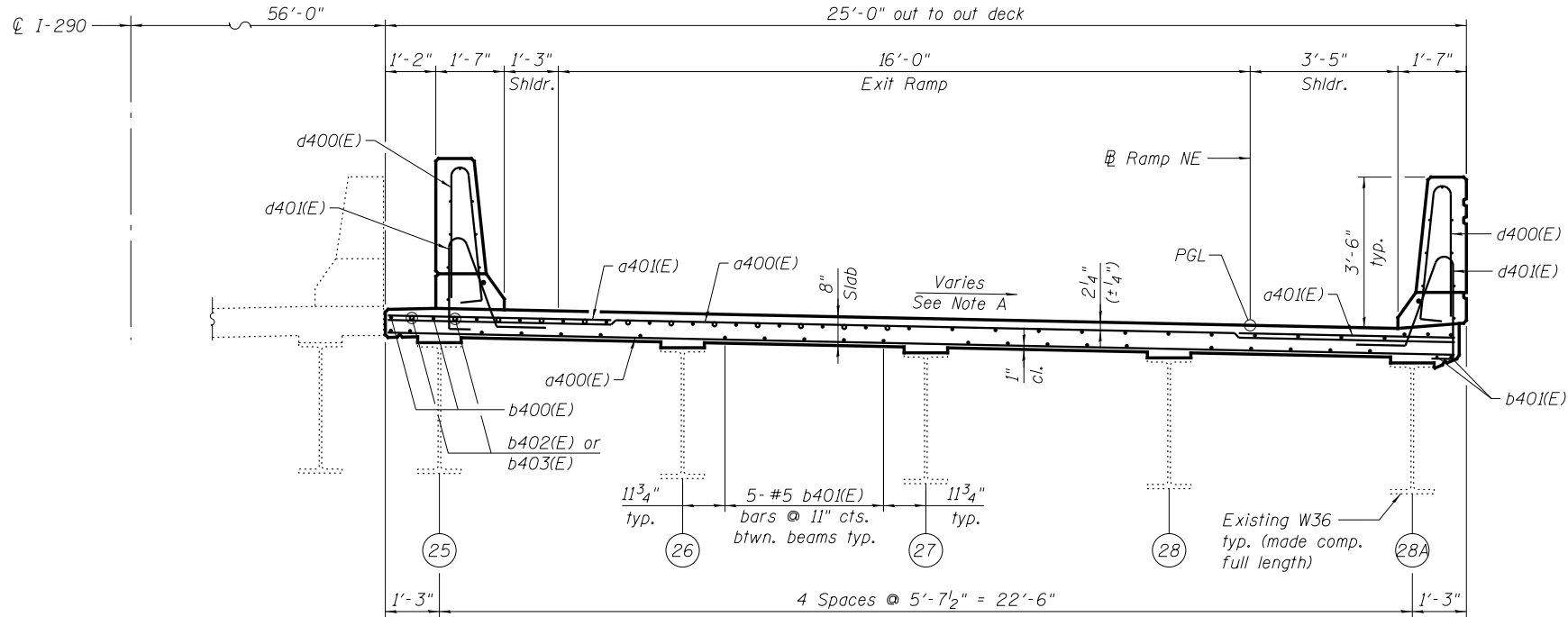
SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a300(E)	622	#5	26'-9"	—
a301(E)	683	#6	6'-6"	—
a302(E)	369	#5	24'-11"	—
a303(E)	369	#5	31'-0"	—
a304(E)	297	#5	30'-0"	—
a305(E)	297	#5	25'-11"	—
a306(E)	24	#5	6'-11"	U
a307(E)	3	#5	1'-7"	U
a308(E)	3	#5	2'-1"	U
a309(E)	48	#5	7'-3"	U
a310(E)	48	#5	2'-0"	—
a311(E)	10	#6	7'-4"	—
a312(E)	44	#5	25'-2"	—
a313(E)	15	#7	10'-11"	—
a314(E)	13	#5	10'-11"	—
a315(E)	6	#5	12'-3"	┘
a316(E)	11	#5	5'-9"	└
b300(E)	765	#5	29'-8"	—
b301(E)	680	#5	27'-0"	—
b302(E)	162	#6	32'-0"	—
b303(E)	81	#6	17'-11"	—
b304(E)	81	#6	25'-1"	—
b305(E)	2	#5	2'-2"	—
b306(E)	8	#5	4'-7"	—
b307(E)	4	#5	10'-3"	—
b308(E)	12	#5	3'-8"	┘
d300(E)	520	#5	6'-10"	┘
d301(E)	520	#5	6'-10"	┘
d302(E)	3	#6	5'-1"	┘
d303(E)	6	#6	8'-11"	┘
d304(E)	25	#5	3'-4"	┘
d305(E)	28	#5	4'-10"	┘
d306(E)	8	#5	5'-6"	┘
d307(E)	12	#5	5'-10"	┘
e300(E)	49	#4	16'-4"	—
e301(E)	32	#4	10'-7"	—
e302(E)	42	#4	17'-10"	—
e303(E)	32	#4	12'-3"	—
e304(E)	56	#4	18'-9"	—
e305(E)	6	#4	23'-9"	—
e306(E)	6	#8	23'-9"	—
e307(E)	4	#8	10'-7"	—
e308(E)	4	#4	28'-4"	—
e309(E)	4	#8	28'-4"	—
e310(E)	4	#8	12'-3"	—
e311(E)	6	#4	26'-11"	—
e312(E)	6	#8	26'-11"	—
e313(E)	1	#5	23'-2"	—
e314(E)	1	#5	8'-10"	—
e315(E)	6	#5	20'-5"	U
e316(E)	2	#5	14'-9"	U
e317(E)	2	#5	12'-5"	U
* sp300(E)	1	#5	5'-6"	W
x300(E)	136	#5	8'-0"	U
Reinforcement Bars, Epoxy Coated			Pound	134,720
Concrete Superstructure			Cu. Yds.	614.0
Protective Coat			Sq. Yd.	2,380
Bridge Deck Grooving			Sq. Yd.	2,072

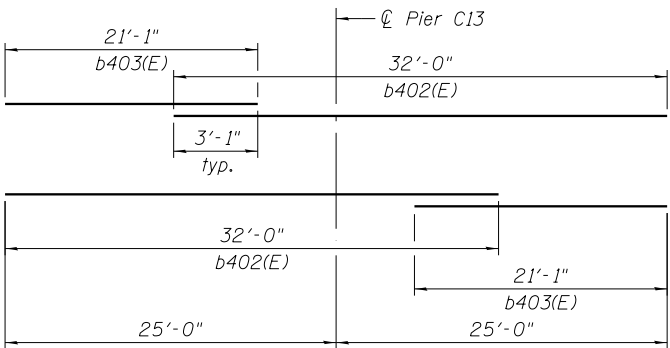
*Length is height of spiral



DECK PLAN - EXIT RAMP



CROSS SECTION - EXIT RAMP
(Looking East)



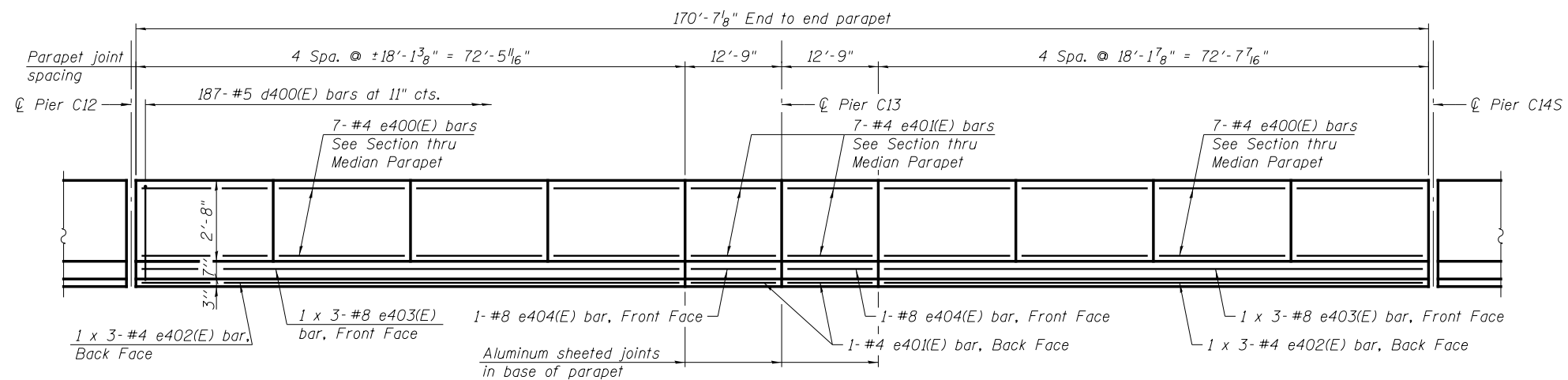
ALTERNATE BAR LAP DETAIL
For bars b402(E) & b403(E)

- Notes:
- See sheet S2-63, for parapet reinforcement.
 - See sheet S2-64, for Partial Plan at Pier C12.
 - See sheet S2-65, for superstructure details, Section T-T, and Bill of Material.
 - Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
 - Reinforcement bars shall not pass thru aluminum sheets and cork joint filler.
 - Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Base Sheet EJ-SSJ.
 - Drainage Scuppers not shown for clarity.

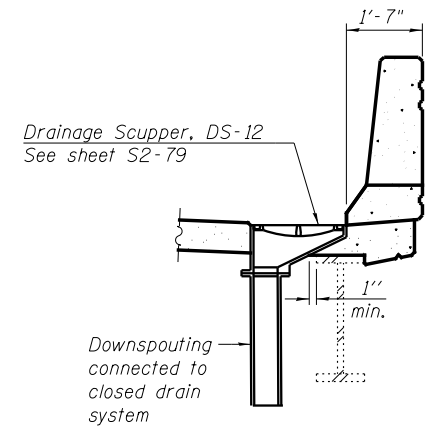
Note A: (Direction of slope referenced from NE Ramp @, stations increasing looking east)
Constant cross slope (-2.08%) Sta. 1714+96.54 to Sta. 1746+53.72
Transition (-2.08% to -1.54%) Sta. 1746+53.72 to Sta. 1716+67.22

0160461-60X75-S062-DEK.dgn

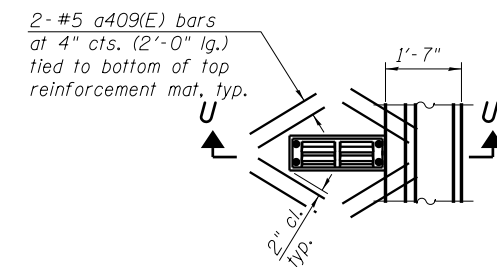
PARSONS BRINCKERHOFF	USER NAME = pateld	DESIGNED - TWP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK PLAN EXIT RAMP STRUCTURE NO. 016-0461	F.A.I. RTE. 90/94/290	SECTION 2014-001 R&B (EB)	COUNTY COOK	TOTAL SHEETS 696	SHEET NO. 354
	PLOT SCALE = N.T.S.	CHECKED - MS	REVISED -							
	PLOT DATE = 6/28/2017	DRAWN - NG	REVISED -							
		CHECKED - JIG	REVISED -							
SHEET NO. S2-62 OF S2-137 SHEETS						CONTRACT NO. 60X75				
						ILLINOIS FED. AID PROJECT				



INSIDE ELEVATION OF PARAPET
(North Parapet Shown, South Parapet similar but opposite hand)

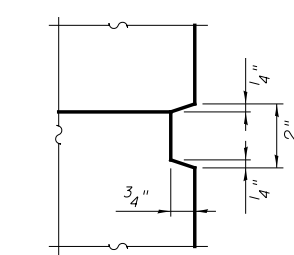


SECTION U-U



REINFORCING PLAN AT SCUPPER

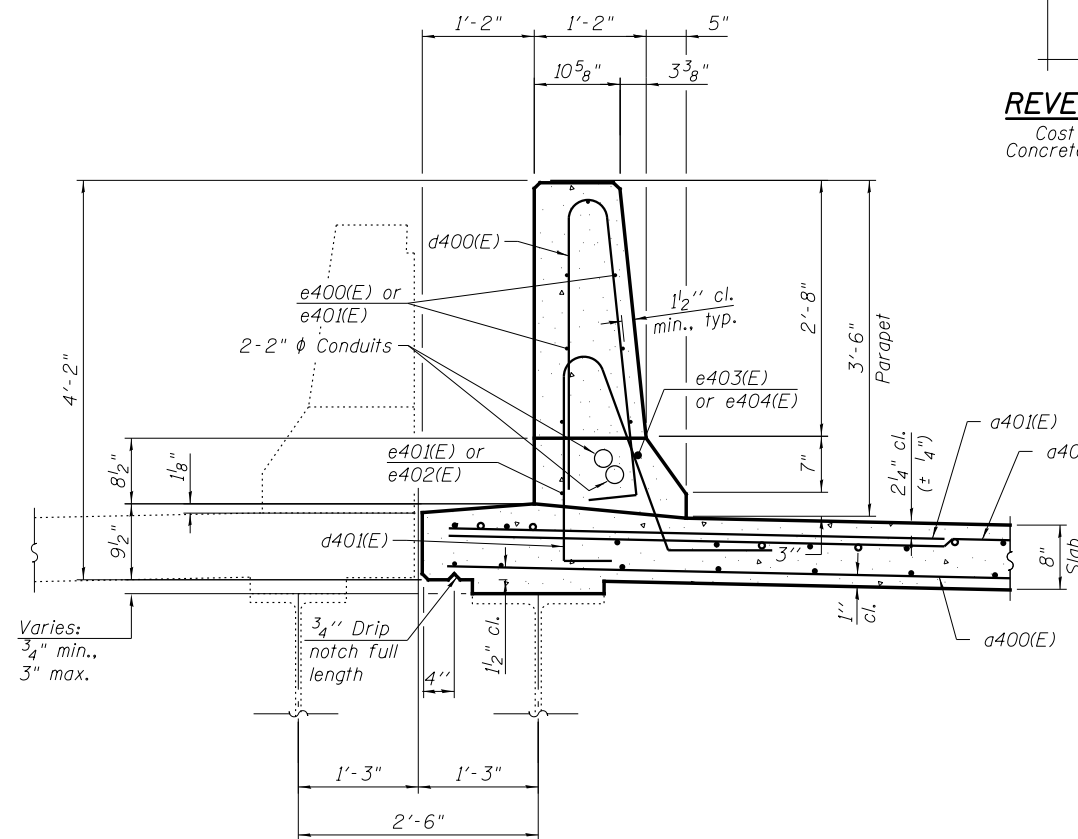
Note:
Cut longitudinal reinforcement to clear drainage scuppers.



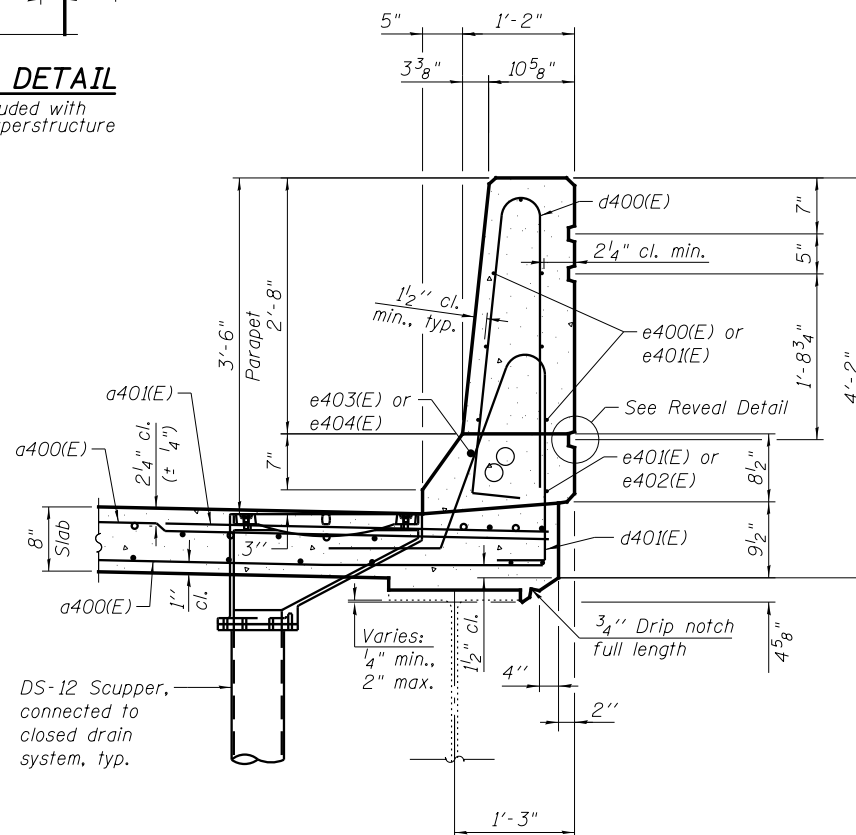
REVEAL DETAIL
Cost included with Concrete Superstructure

MINIMUM BAR LAP

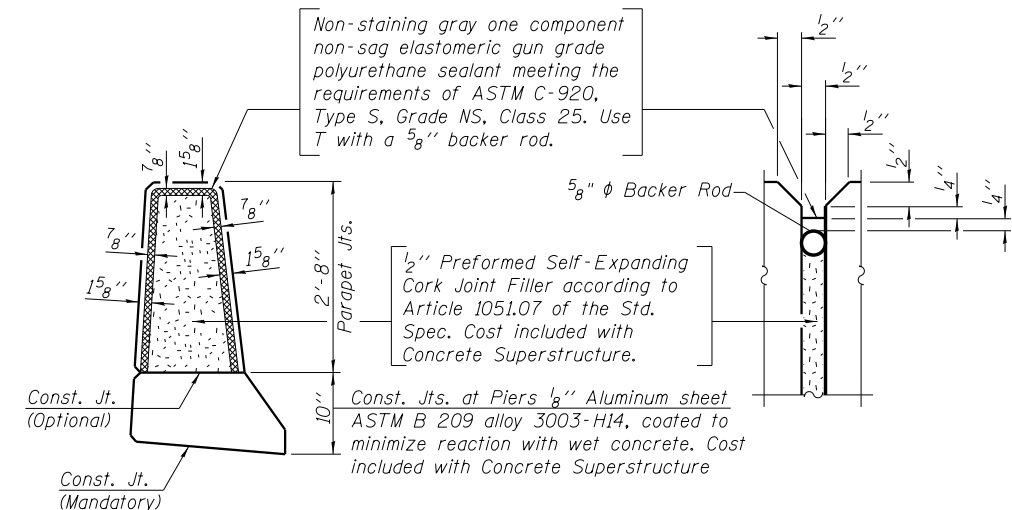
(Parapet)
#4 bar = 2'-1"
#8 bar = 5'-5"



SECTION THRU NORTH PARAPET



SECTION THRU SOUTH PARAPET



PARAPET JOINT DETAILS

0160461-60X75-S063-DET.dgn

**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - TWP	REVISED -
PLOT SCALE = N.T.S.	CHECKED - MS	REVISED -
PLOT DATE = 6/28/2017	DRAWN - NG	REVISED -
	CHECKED - JIG	REVISED -

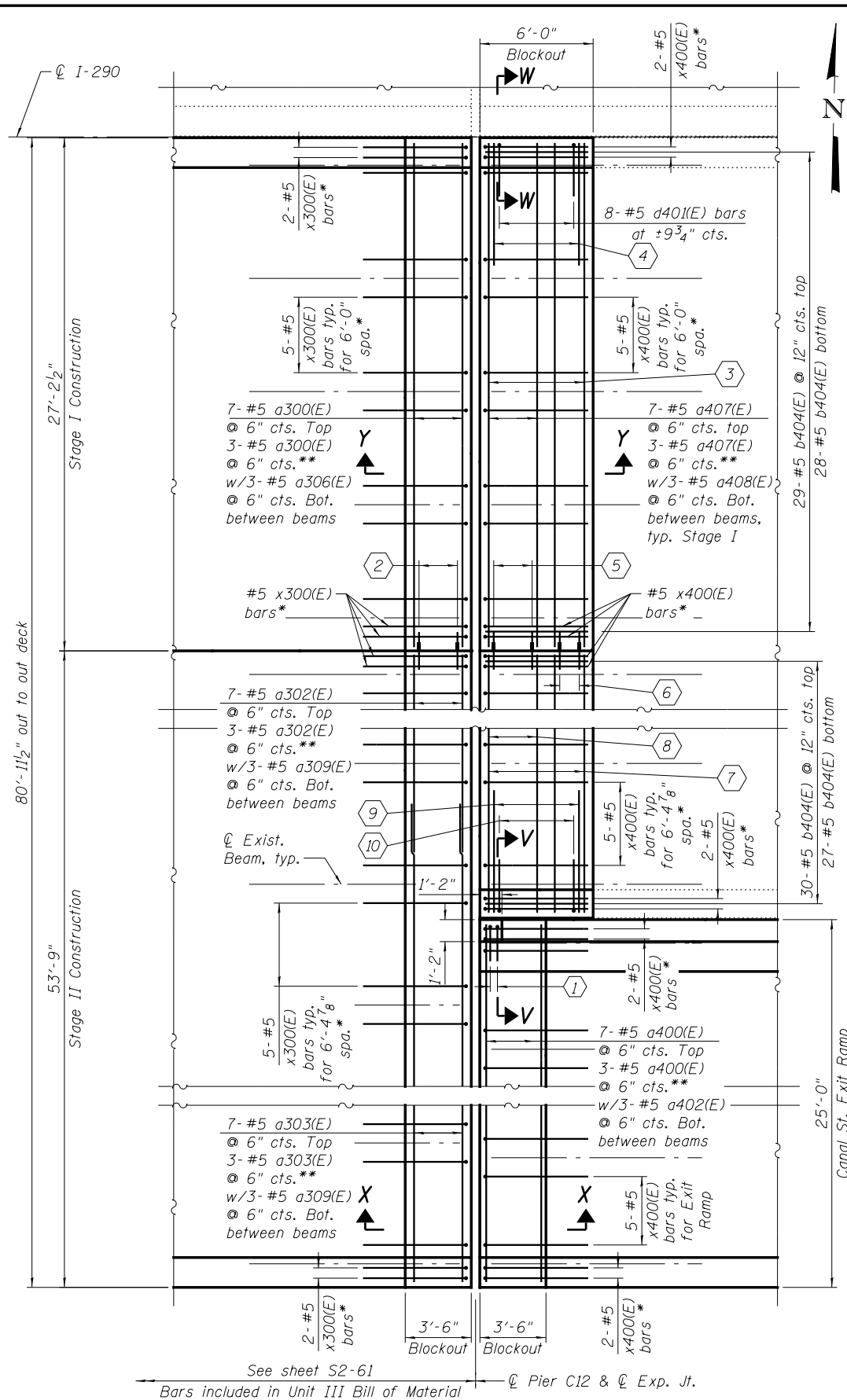
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DECK DETAILS I - EXIT RAMP
STRUCTURE NO. 016-0461**

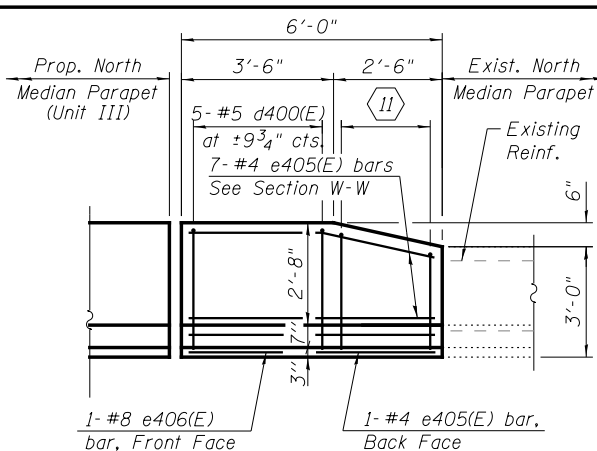
SHEET NO. S2-63 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	355
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-S064-DET.dgn



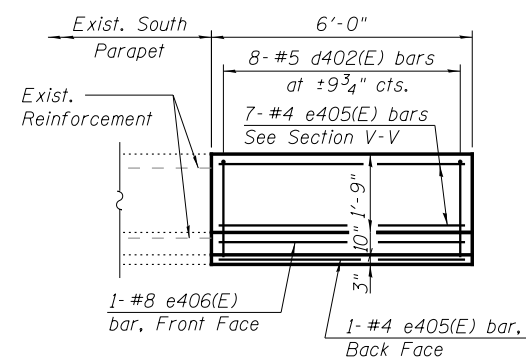
PARTIAL PLAN AT PIER C12



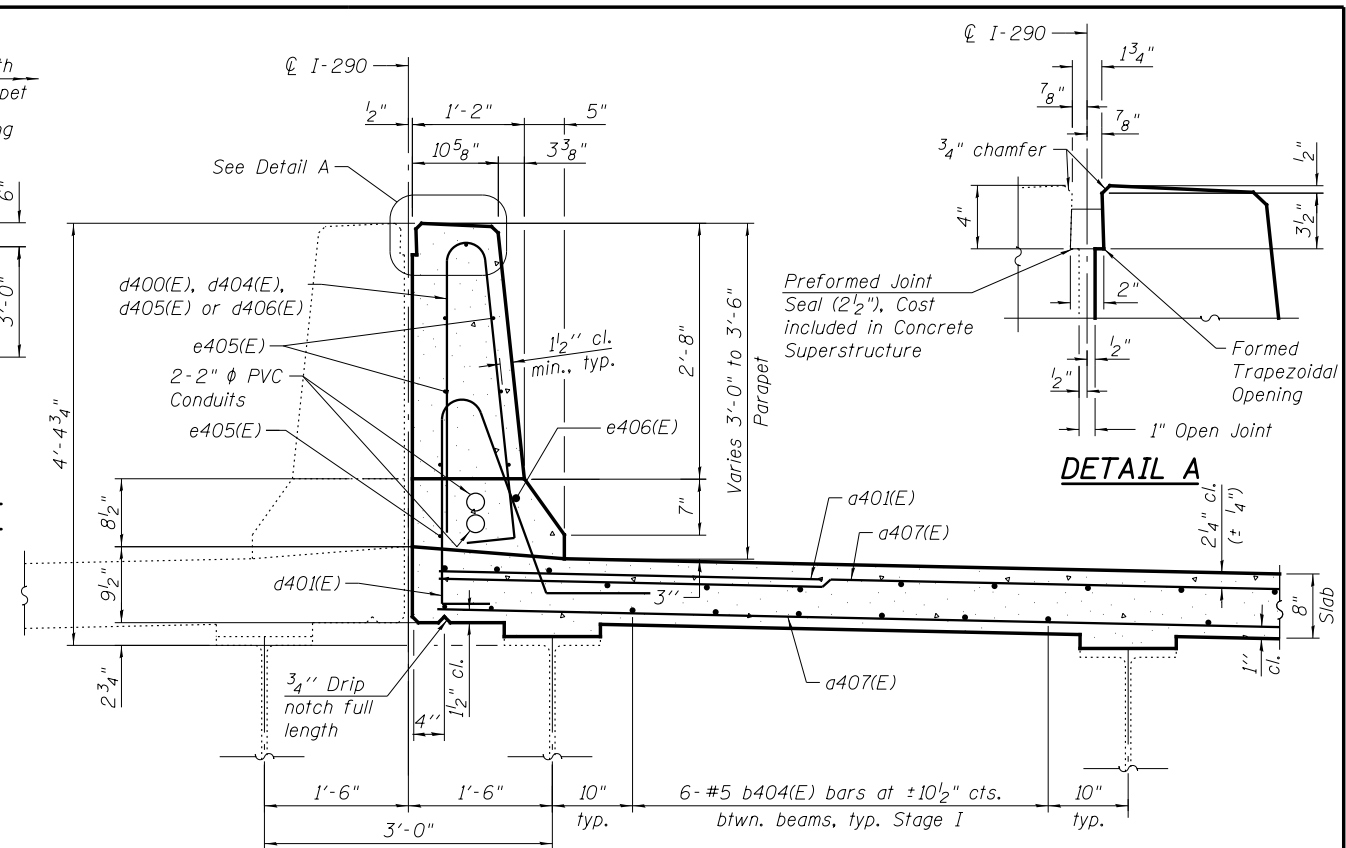
INSIDE ELEVATION OF PARAPET
AT EXIST. NORTH MEDIAN PARAPET

- * x300(E) and x400(E) bars to be placed at 12" cts. between beams and adjusted in field to miss support boxes
- ** Bars to be adjusted and/or cut in field to miss support boxes and beam webs, as allowed by the Engineer. The Contractor shall reference and coordinate rebar installation with the approved modular joint shop drawings.

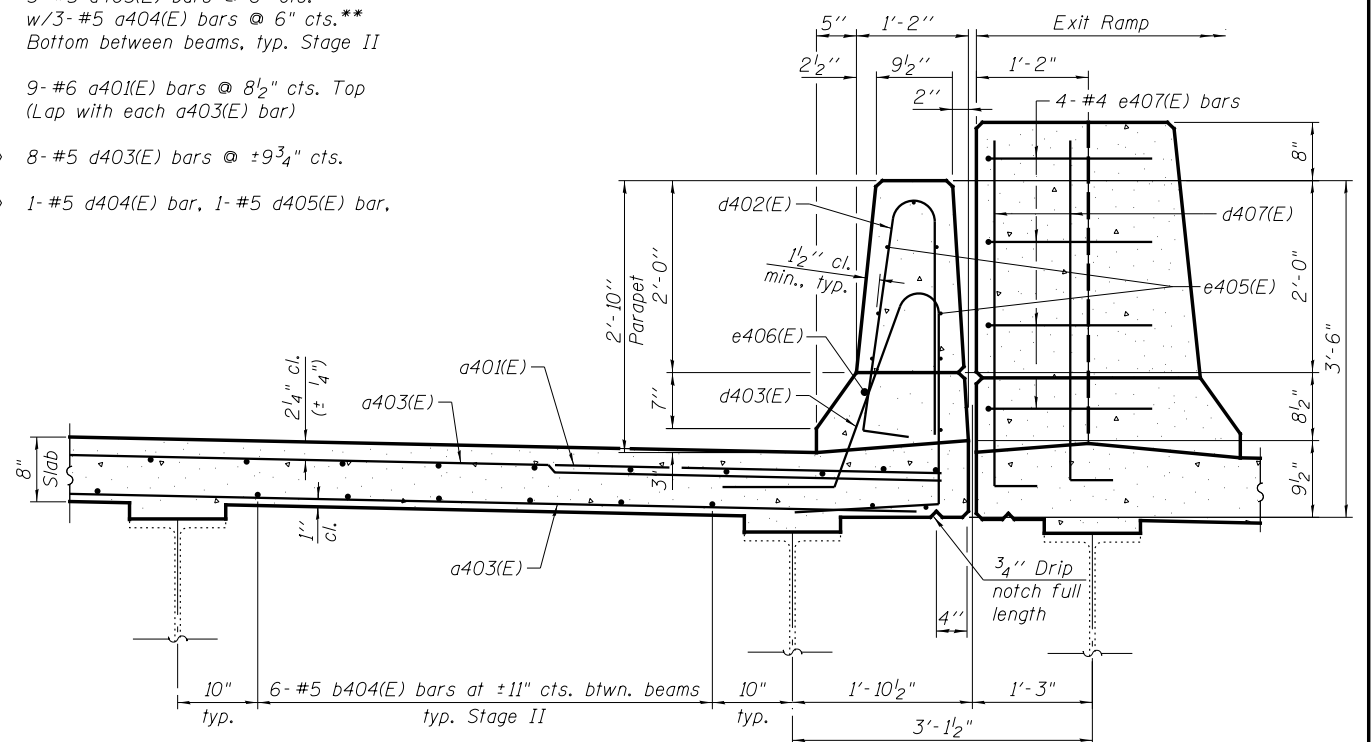
- 1 2-Pairs #5 d407(E) bars at 11" cts.
- 2 3-#5 a307(E) bars, 3-#5 a308(E) bars & 13-Bar Splicers (E) for #5 a300(E) and a307(E)-a308(E) bars top and bottom
- 3 9-#5 a407(E) bars @ 8 1/2" cts. 8-#5 a407(E) bars @ 10" cts.
- 4 9-#6 a401(E) bars @ 8 1/2" cts. Top (Lap with each a407(E) bar)
- 5 3-#5 a405(E) bars, 3-#5 a406(E) bars & 13-Bar Splicers (E) for #5 a407(E) and a405(E)-a406(E) bars top and bottom
- 6 30-Bar Splicers (E) for #5 a405(E) & a407(E) bars top and bottom
- 7 9-#5 a403(E) bars @ 8 1/2" cts. top 8-#5 a403(E) bars at 10" cts. bottom
- 8 7-#5 a403(E) bars @ 6" cts. top 3-#5 a403(E) bars @ 6" cts. w/3-#5 a404(E) bars @ 6" cts. Bottom between beams, typ. Stage II
- 9 9-#6 a401(E) bars @ 8 1/2" cts. Top (Lap with each a403(E) bar)
- 10 8-#5 d403(E) bars @ ±9 3/4" cts.
- 11 1-#5 d404(E) bar, 1-#5 d405(E) bar,



INSIDE ELEVATION OF PARAPET
AT EXIST. SOUTH PARAPET



SECTION W-W



SECTION V-V

Notes:

- See sheet S2-65, for superstructure details and Bill of Material.
- Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Removal of Existing Concrete Deck.
- Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to Removal of Existing Concrete Deck.

PARSONS
BRINCKERHOFF

USER NAME = pateld
DESIGNED - TWP
CHECKED - MS
PLOT SCALE = N.T.S.
DRAWN - NG
PLOT DATE = 6/28/2017
CHECKED - JIG

REVISED -
REVISED -
REVISED -
REVISED -

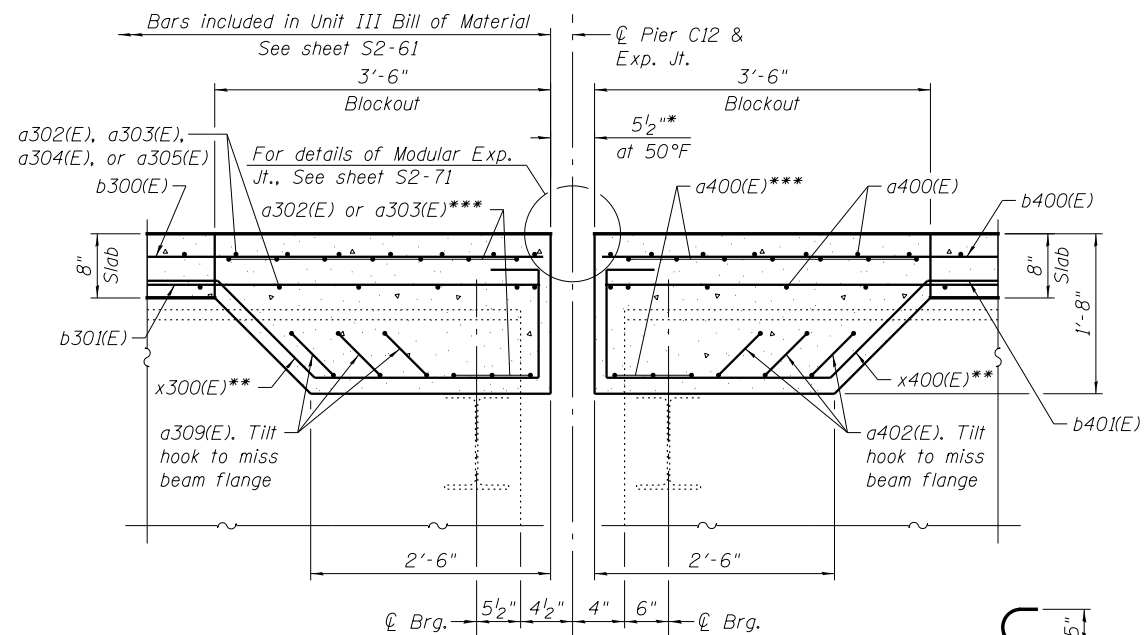
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK DETAILS II - EXIT RAMP
STRUCTURE NO. 016-0461

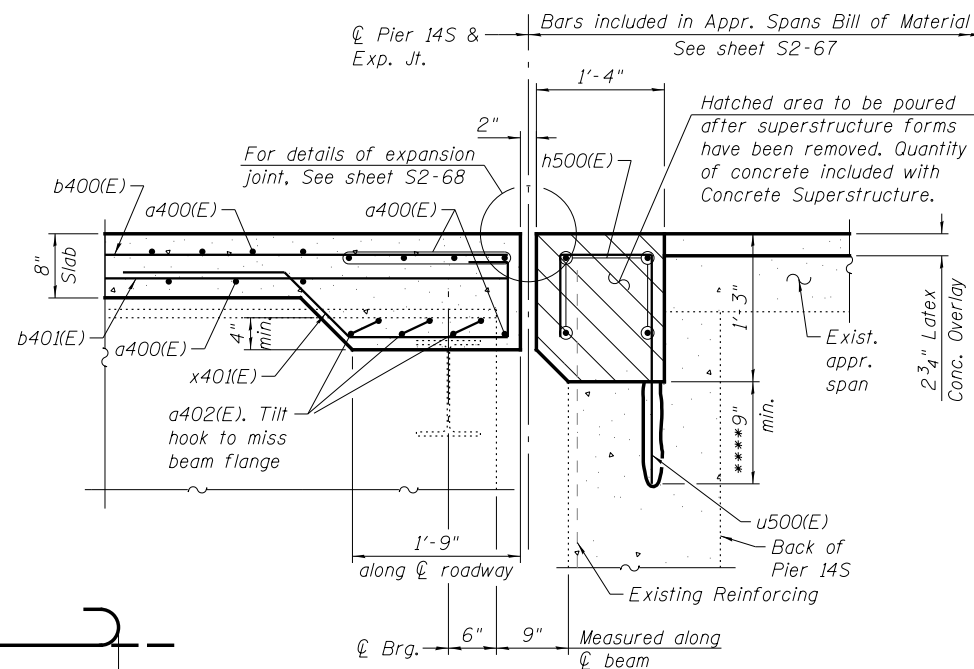
SHEET NO. S2-64 OF S2-137 SHEETS

F.A.I. R.T.E. 90/94/290
SECTION 2014-001 R&B (EB)
COUNTY COOK
TOTAL SHEETS 696
SHEET NO. 356
CONTRACT NO. 60X75
ILLINOIS FED. AID PROJECT

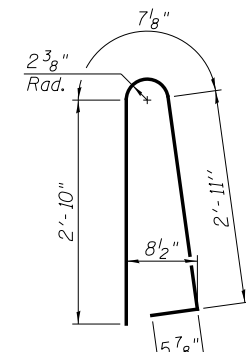
0160461-60X75-S065-DET.dgn



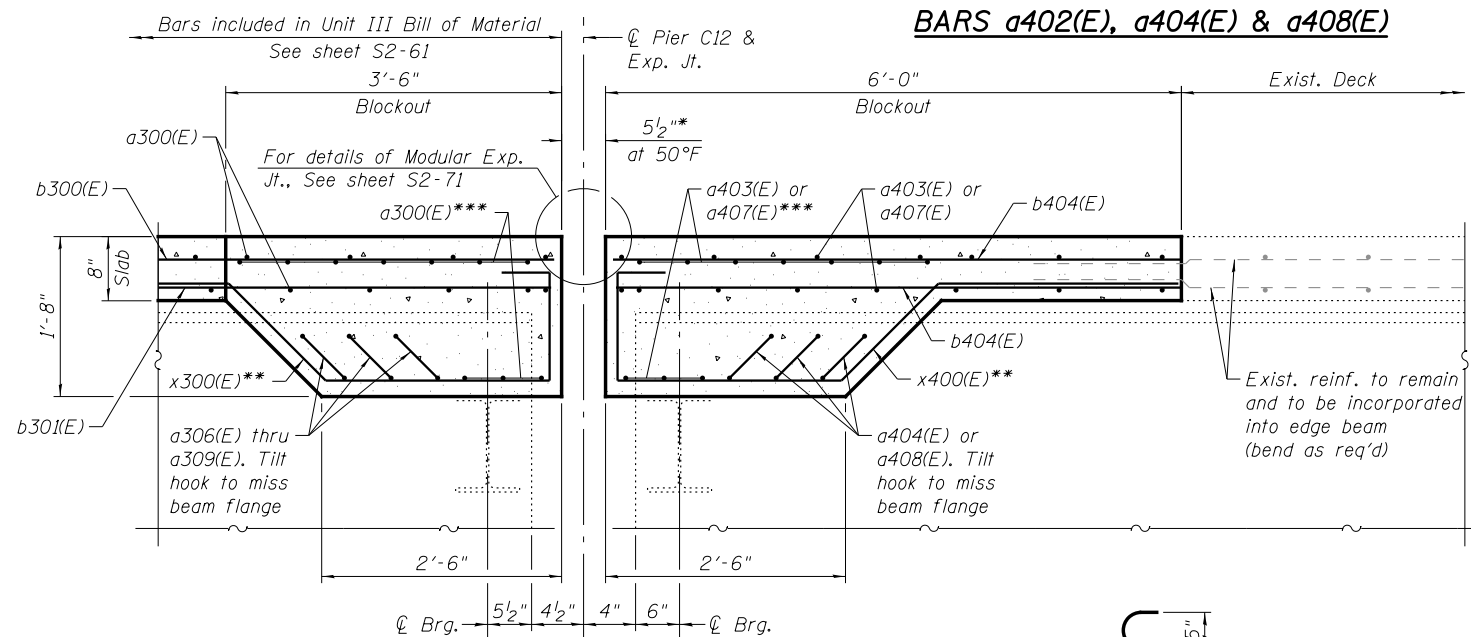
SECTION X-X



SECTION T-T

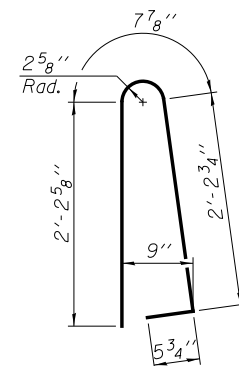
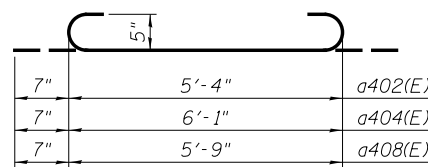


BAR d400(E)

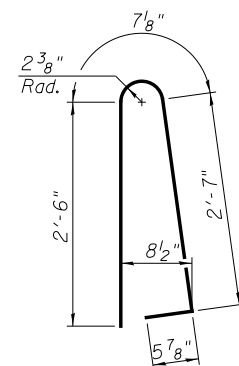


SECTION Y-Y

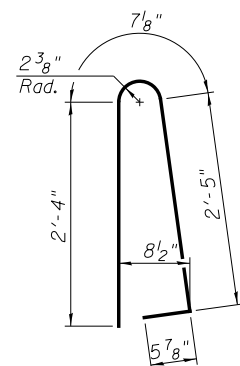
BARS a402(E), a404(E) & a408(E)



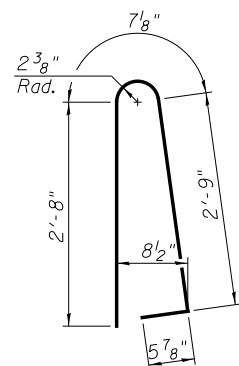
BAR d402(E)



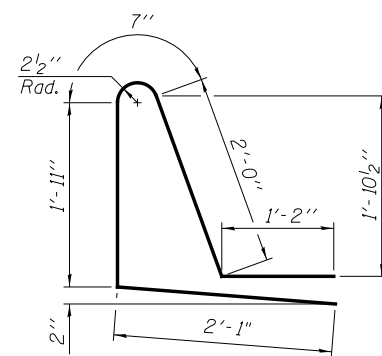
BAR d405(E)



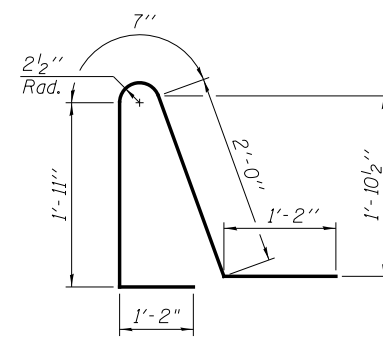
BAR d404(E)



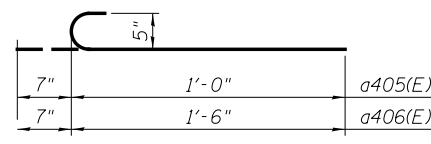
BAR d406(E)



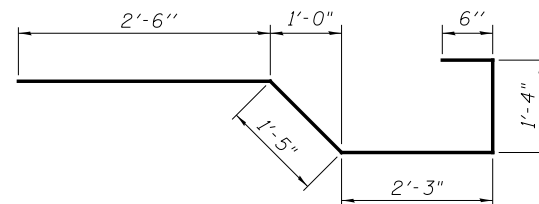
BAR d403(E)



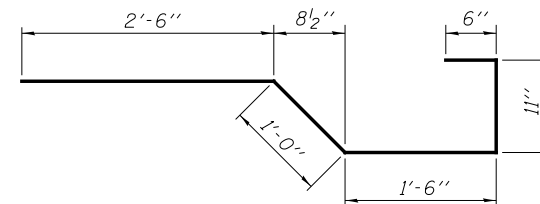
BAR d401(E)



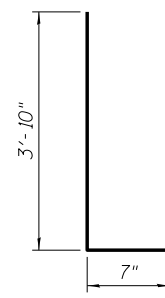
BARS a405(E) & a406(E)



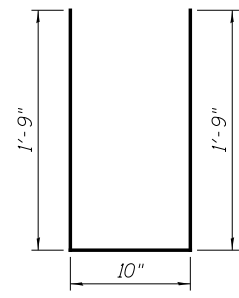
BAR x400(E)



BAR x401(E)



BAR d407(E)



BAR e407(E)

SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a400(E)	463	#5	24'-7"	
a401(E)	502	#6	6'-6"	
a402(E)	24	#5	6'-6"	
a403(E)	27	#5	28'-5"	
a404(E)	12	#5	7'-3"	
a405(E)	3	#5	1'-7"	
a406(E)	3	#5	2'-1"	
a407(E)	27	#5	26'-11"	
a408(E)	12	#5	6'-11"	
b400(E)	189	#5	26'-7"	
b401(E)	144	#5	30'-7"	
b402(E)	25	#6	32'-0"	
b403(E)	25	#6	21'-1"	
b404(E)	114	#5	5'-8"	
d400(E)	379	#5	6'-10"	
d401(E)	382	#5	6'-10"	
d402(E)	8	#5	5'-7"	
d403(E)	8	#5	7'-9"	
d404(E)	1	#5	5'-10"	
d405(E)	1	#5	6'-2"	
d406(E)	1	#5	6'-6"	
d407(E)	4	#5	4'-5"	
e400(E)	112	#4	17'-10"	
e401(E)	32	#4	12'-6"	
e402(E)	12	#4	25'-6"	
e403(E)	12	#8	27'-9"	
e404(E)	4	#8	12'-6"	
e405(E)	16	#4	5'-9"	
e406(E)	2	#8	5'-9"	
e407(E)	4	#4	4'-4"	
x400(E)	72	#5	8'-0"	
x401(E)	20	#5	6'-5"	
Reinforcement Bars, Epoxy Coated			Pound	40,430
Concrete Superstructure			Cu. Yds.	182.1
Protective Coat			Sq. Yd.	630
Bridge Deck Grooving			Sq. Yd.	388

Notes:

- Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Removal of Existing Concrete Deck.
- Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to Removal of Existing Concrete Deck.

PARSONS
BRINCKERHOFF

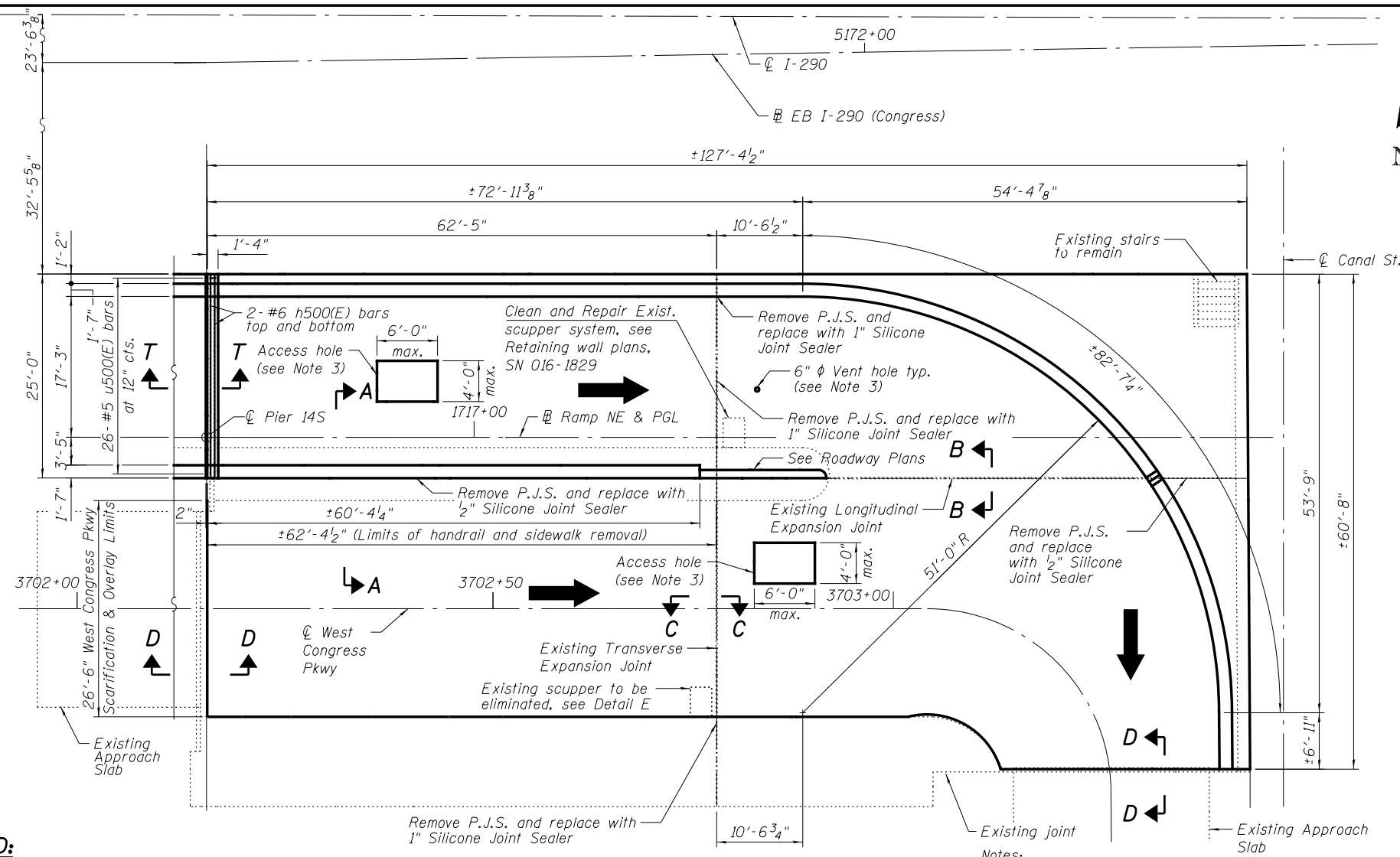
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CHECKED - MS	REVISED -	
PLOT SCALE = N.T.S.	DRAWN - NG	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK DETAILS III - EXIT RAMP
STRUCTURE NO. 016-0461

SHEET NO. S2-65 OF S2-137 SHEETS

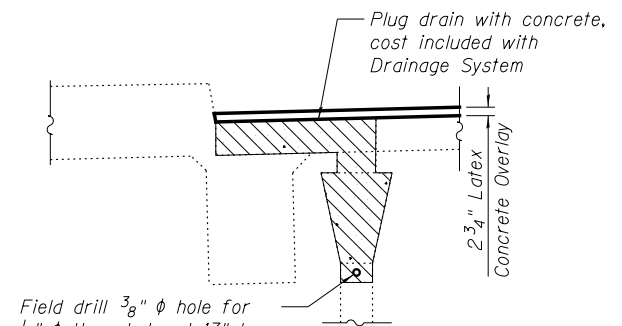
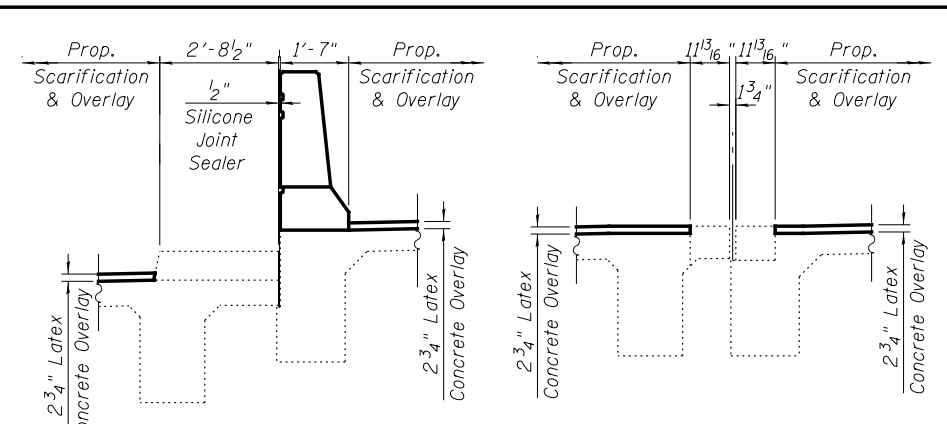
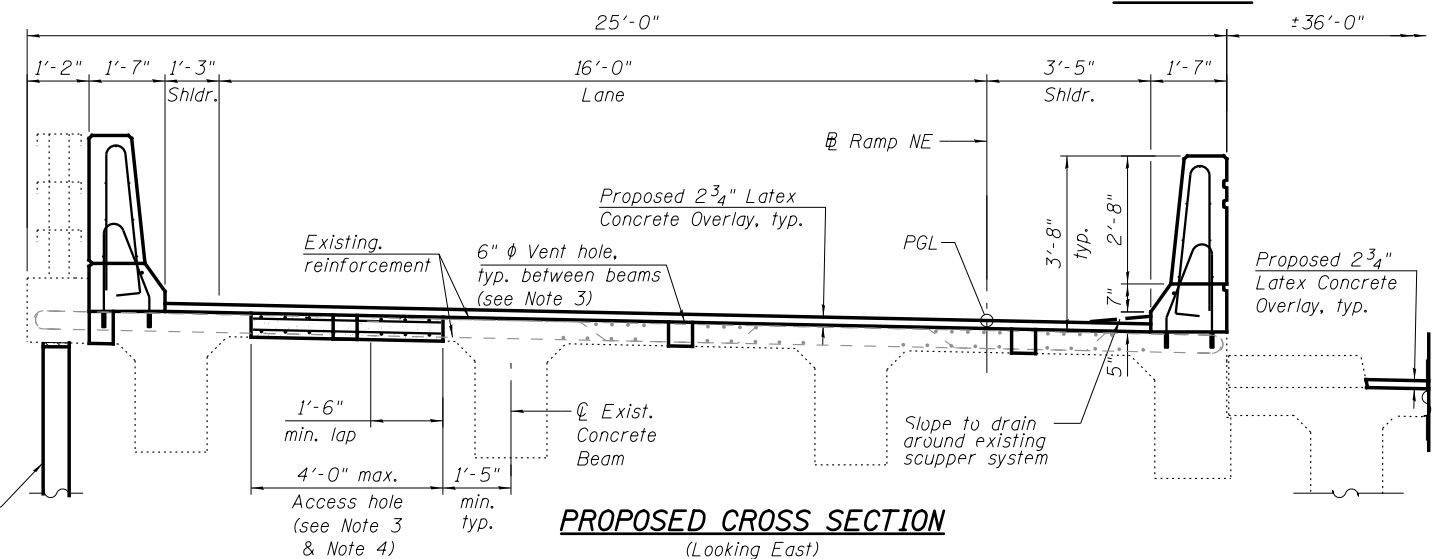
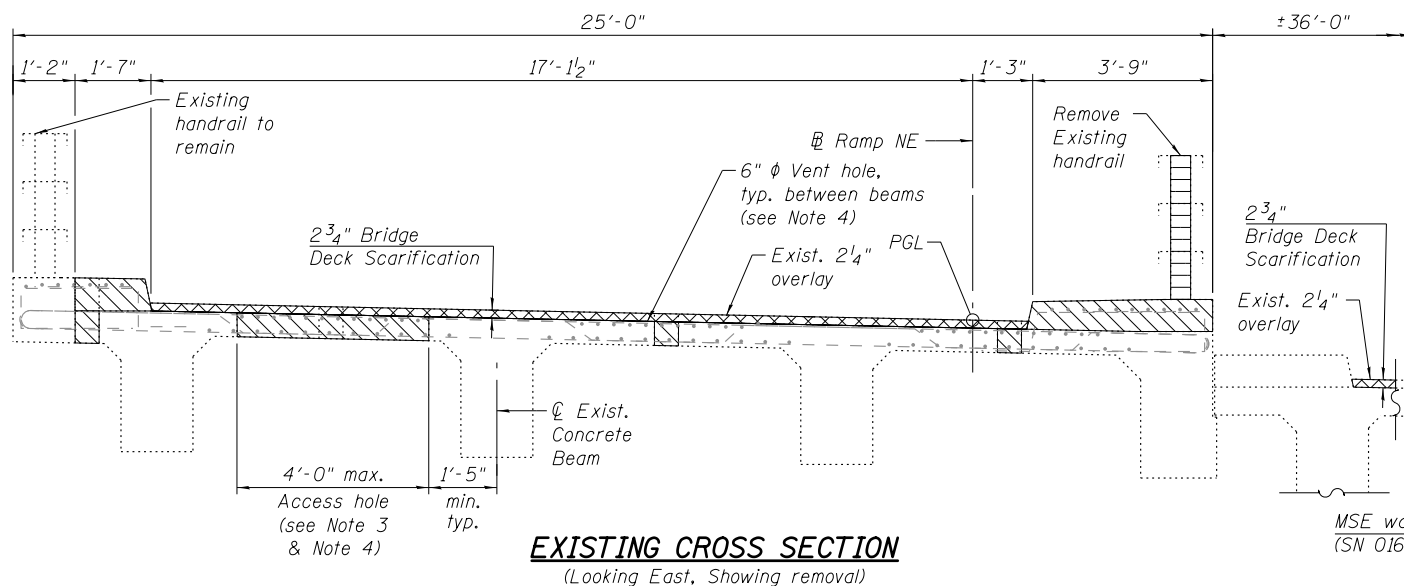
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	357
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



LEGEND:

- Concrete Removal
- Bridge Deck Scarification
- Handrail Removal

PLAN - CANAL STREET APPROACH SPANS



- See sheet S2-65, for section T-T.
- See sheet S2-67, for parapet details, reinforcement and Bill of Material.
- Proposed access holes and vent holes between existing beams location to be determined by Contractor. See retaining wall plans, SN 016-1829.
- Existing reinforcement shall be cleaned and incorporated into the new construction. Any reinforcement bars that are damaged during access hole and vent hole removal and reconstruction shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.

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**PARSONS
BRINCKERHOFF**

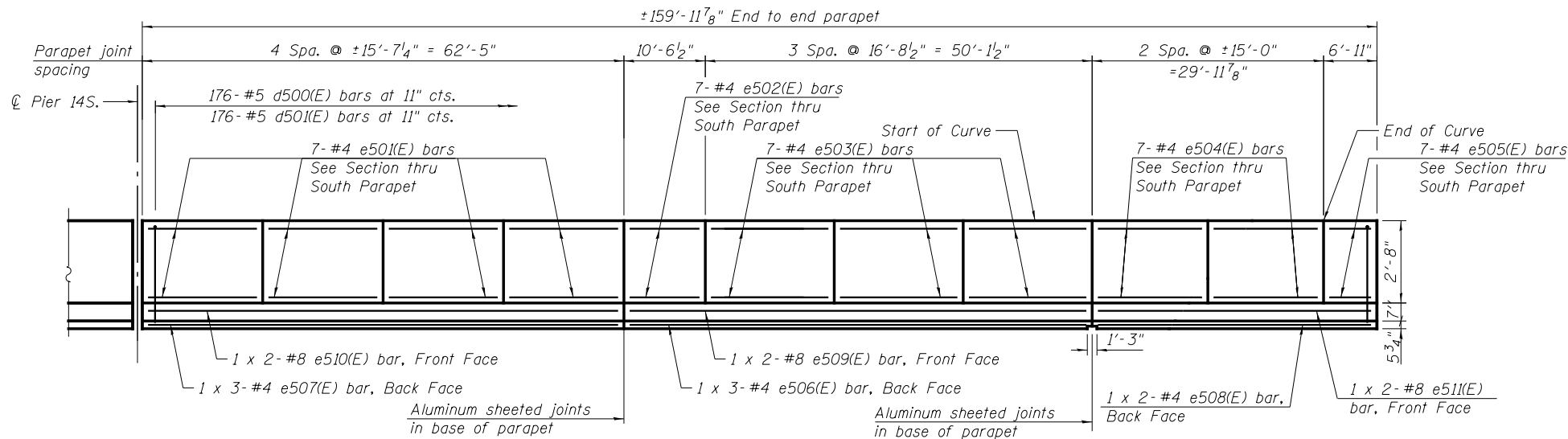
USER NAME = pateld	DESIGNED - HA	REVISED -
CHECKED - LFC	REVIS	
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

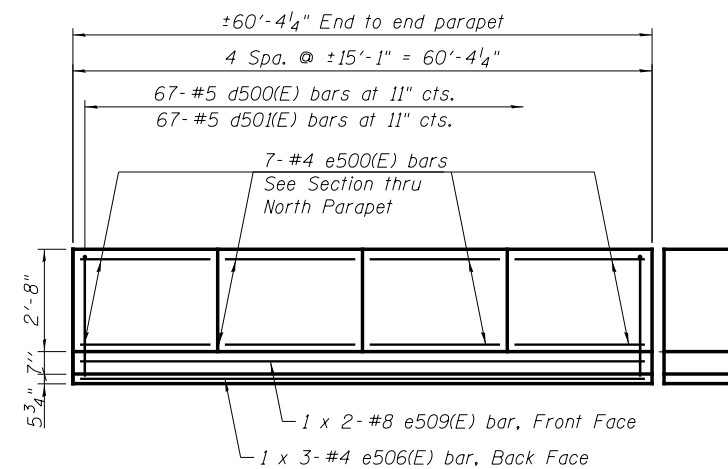
**APPROACH SPAN PLAN
STRUCTURE NO. 016-0461**

SHEET NO. S2-66 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	358
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



INSIDE ELEVATION OF NORTH PARAPET

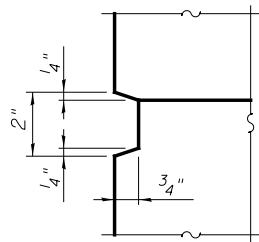


INSIDE ELEVATION OF SOUTH PARAPET

MINIMUM BAR LAP

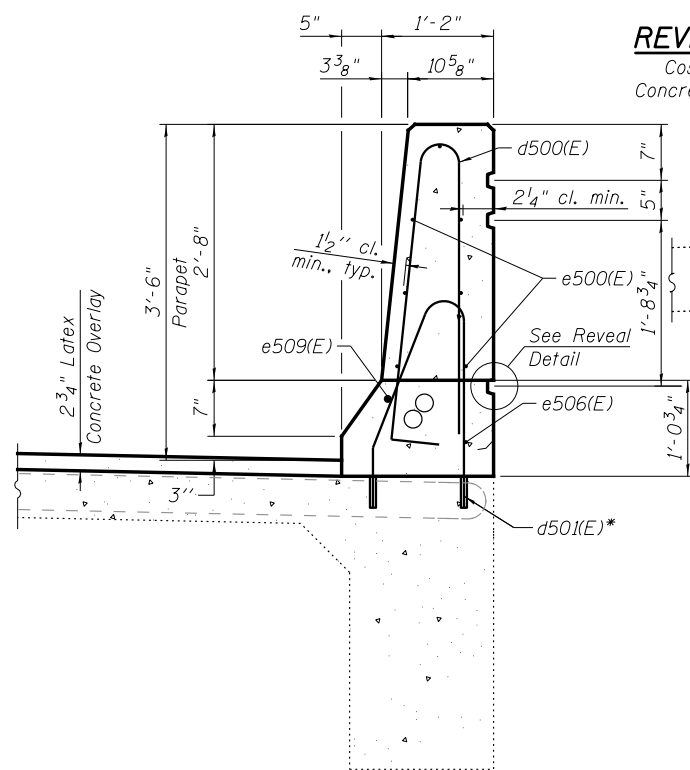
(Parapet)
#4 bar = 2'-1"
#8 bar = 5'-5"

* Core and set #5 d501(E) bar according to Article 509.06 of the Standard Specifications. Cored holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 6". Cost included with Reinforcement Bars, Epoxy Coated.

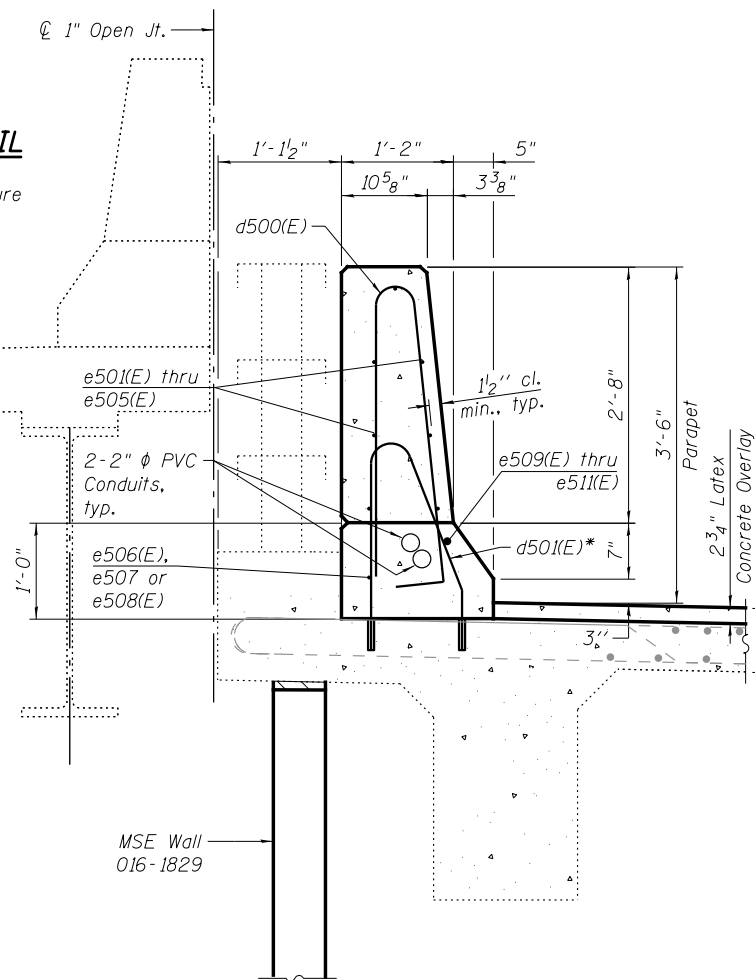


REVEAL DETAIL

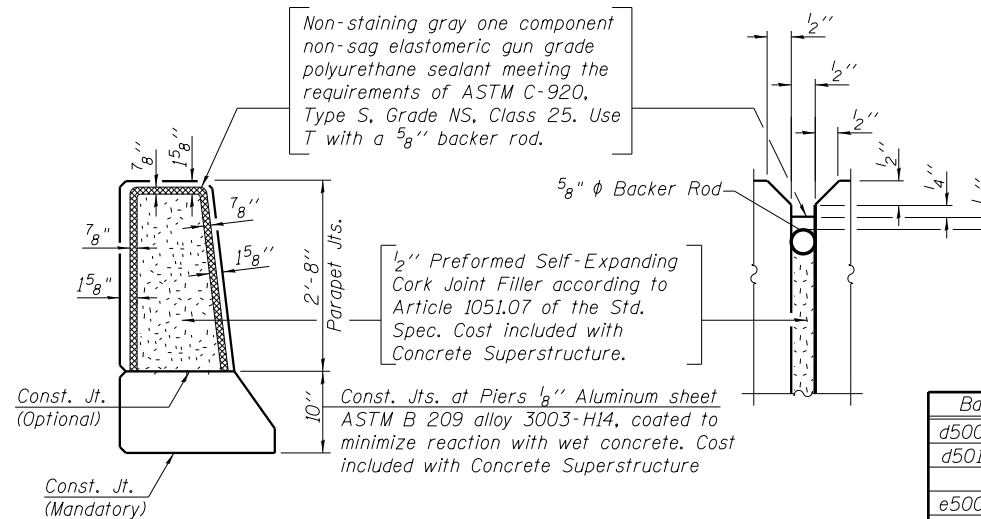
Cost included with Concrete Superstructure



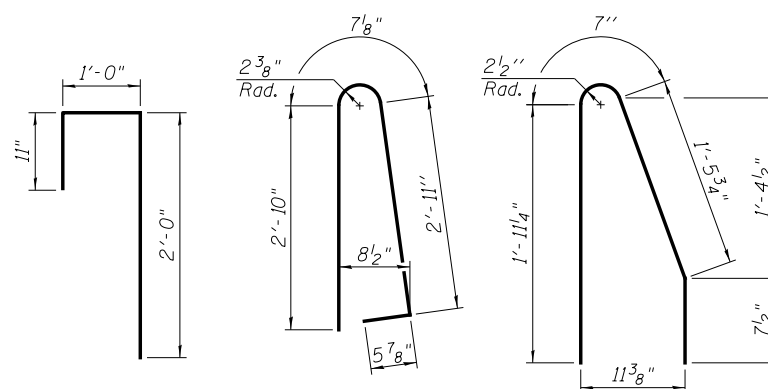
SECTION THRU SOUTH PARAPET



SECTION THRU NORTH PARAPET



PARAPET JOINT DETAILS



BAR u500(E)

BAR d500(E)

BAR d501(E)

**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d500(E)	243	#5	6'-10"	⏏
d501(E)	243	#5	4'-8"	⏏
e500(E)	28	#4	14'-9"	—
e501(E)	28	#4	15'-3"	—
e502(E)	7	#4	10'-3"	—
e503(E)	21	#4	16'-4"	—
e504(E)	14	#4	14'-8"	—
e505(E)	7	#4	6'-7"	—
e506(E)	6	#4	21'-6"	—
e507(E)	3	#4	22'-1"	—
e508(E)	2	#4	19'-4"	—
e509(E)	4	#8	32'-11"	—
e510(E)	2	#8	33'-9"	—
e511(E)	2	#8	21'-0"	—
h500(E)	4	#6	24'-8"	—
u500(E)	26	#5	3'-11"	⏏
Reinforcement Bars, Epoxy Coated		Pound		4,980
Concrete Superstructure		Cu. Yds.		33.8
Bridge Deck Scarification 2 3/4"		Sq. Yds.		606
Bridge Deck Latex Concrete Overlay, 2 3/4"		Sq. Yds.		606
Concrete Removal		Cu. Yds.		15
Handrail Removal		Foot		6.3
Silicone Joint Sealer, 1/2"		Foot		75
Silicone Joint Sealer, 1"		Foot		21

Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.

**PARSONS
BRINCKERHOFF**

USER NAME = pateld
DESIGNED - HA
CHECKED - LFC
PLOT SCALE = N.T.S.
DRAWN - DE
PLOT DATE = 6/28/2017
CHECKED - JIG

REVISED -
REVISED -
REVISED -
REVISED -

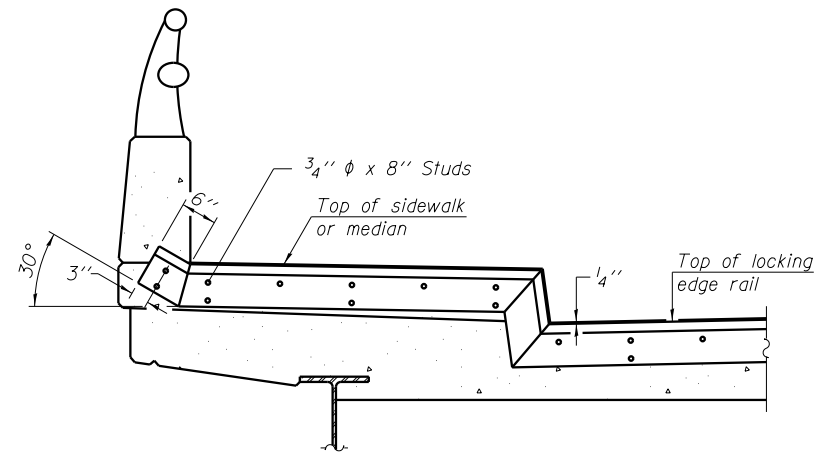
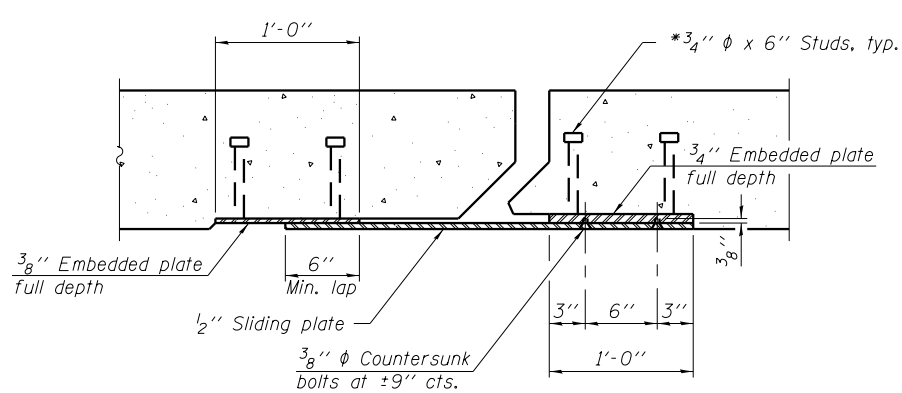
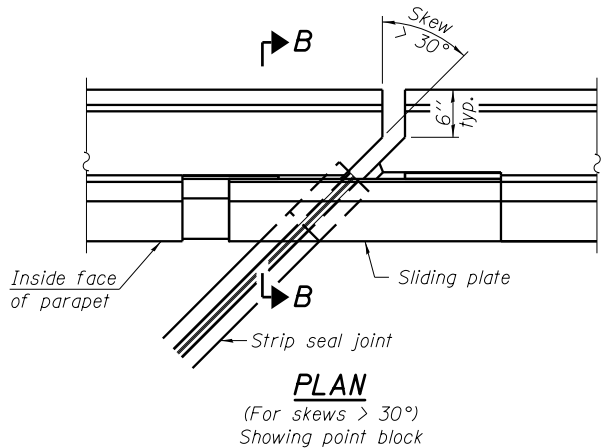
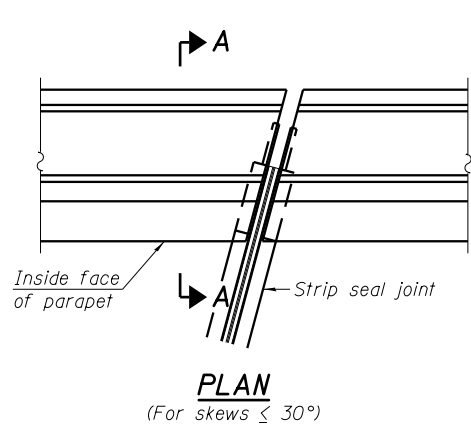
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**APPROACH SPAN DETAILS
STRUCTURE NO. 016-0461**

SHEET NO. S2-67 OF S2-137 SHEETS

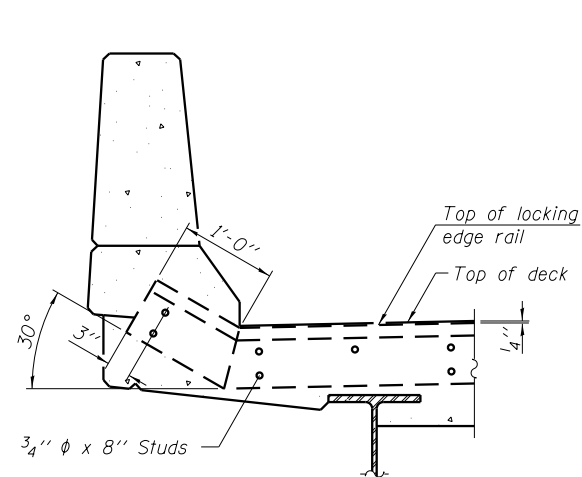
F.A.I. RTE. 90/94/290
SECTION 2014-001 R&B (EB)
COUNTY COOK
TOTAL SHEETS 696
SHEET NO. 359
CONTRACT NO. 60X75
ILLINOIS FED. AID PROJECT

0160461-60X75-S067-DET.dgn

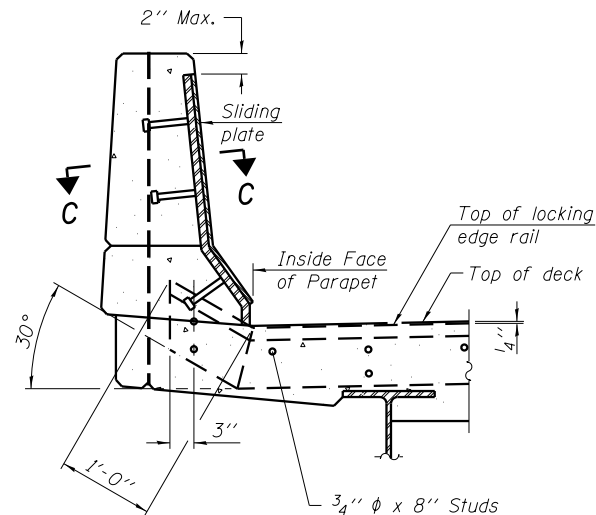


**TYPICAL END TREATMENT
AT SIDEWALK OR MEDIAN**

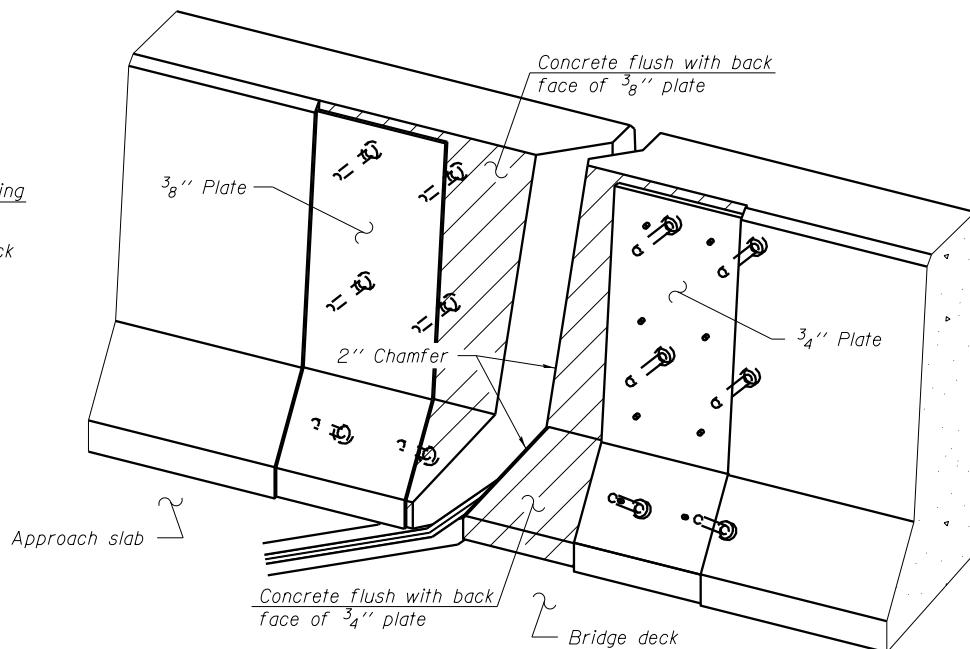
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



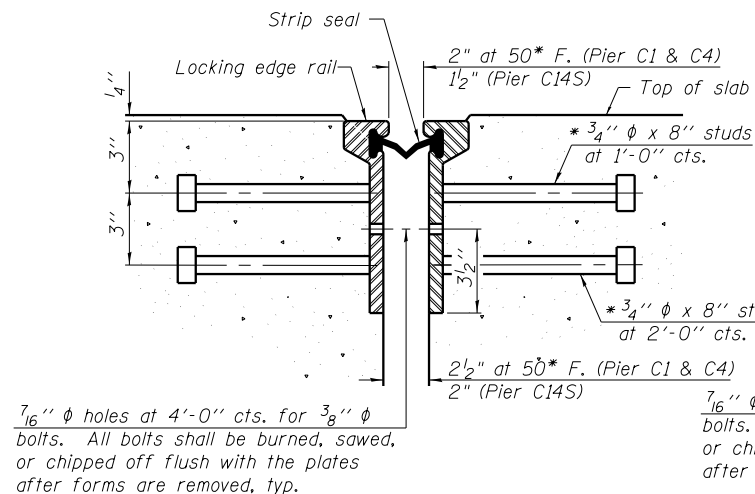
SECTION A-A



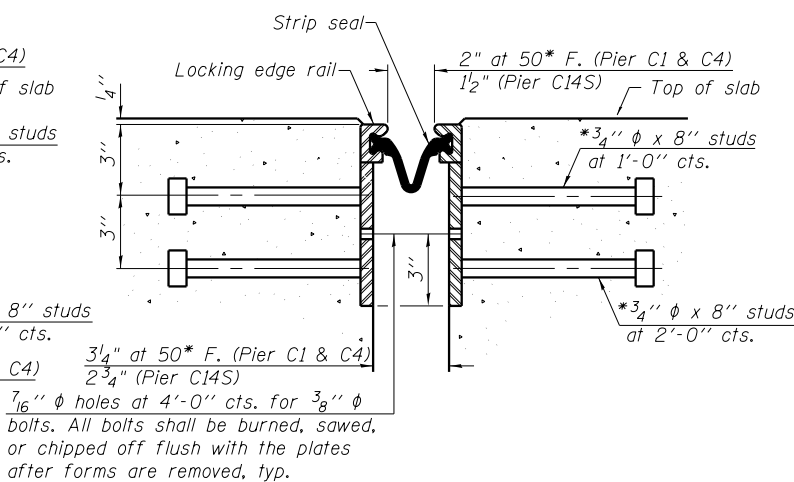
SECTION B-B



**TRIMETRIC VIEW
(Showing back plates only)**



**SECTION THRU
ROLLED RAIL JOINT**



**SECTION THRU
WELDED RAIL JOINT**

**ROLLED
EXTRUDED RAIL**

WELDED RAIL

**LOCKING EDGE
RAIL SPLICE**

The inside of the locking edge rail groove shall be free of weld residue.
Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	163

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

Parapet plates and anchorage studs for skew angles greater than 30 degrees included in the cost of Preformed Joint Strip Seal.

*** Back gouge not required if complete joint penetration is verified by mock-up.

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

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EJ-SSJ

1-27-12

**PARSONS
BRINCKERHOFF**

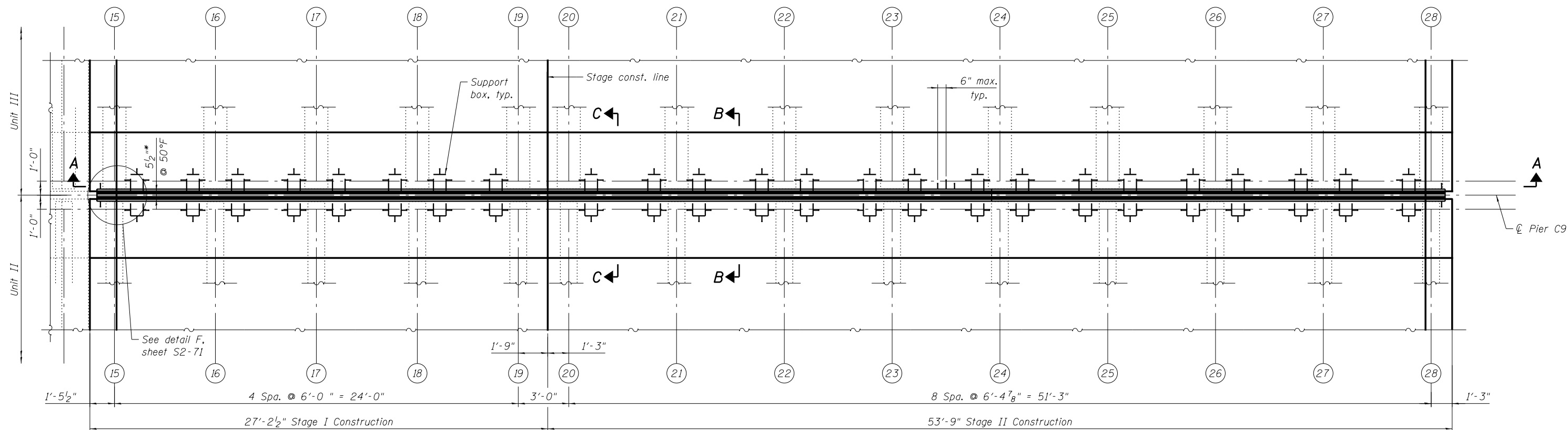
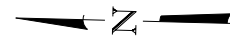
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PLOT DATE = 6/28/2017	DRAWN - DCP	REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

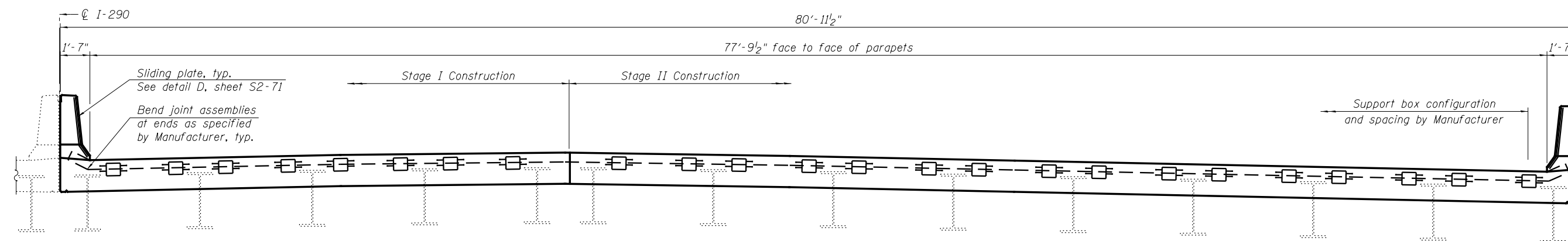
**PREFORMED JOINT STRIP SEAL - PIER C1, C4 & 14S
STRUCTURE NO. 016-0461**

SHEET NO. S2-68 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	360
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



PLAN



SECTION A-A

Notes:

See sheet S2-71, for modular expansion joint notes.

See sheet S2-71, for sections B-B and C-C.

Modular Expansion Joint 6" shall provide a minimum total movement of 5 1/4".

BILL OF MATERIAL

Item	Unit	Total
Modular Expansion Joint, 6"	Foot	79

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PARSONS
BRINCKERHOFF

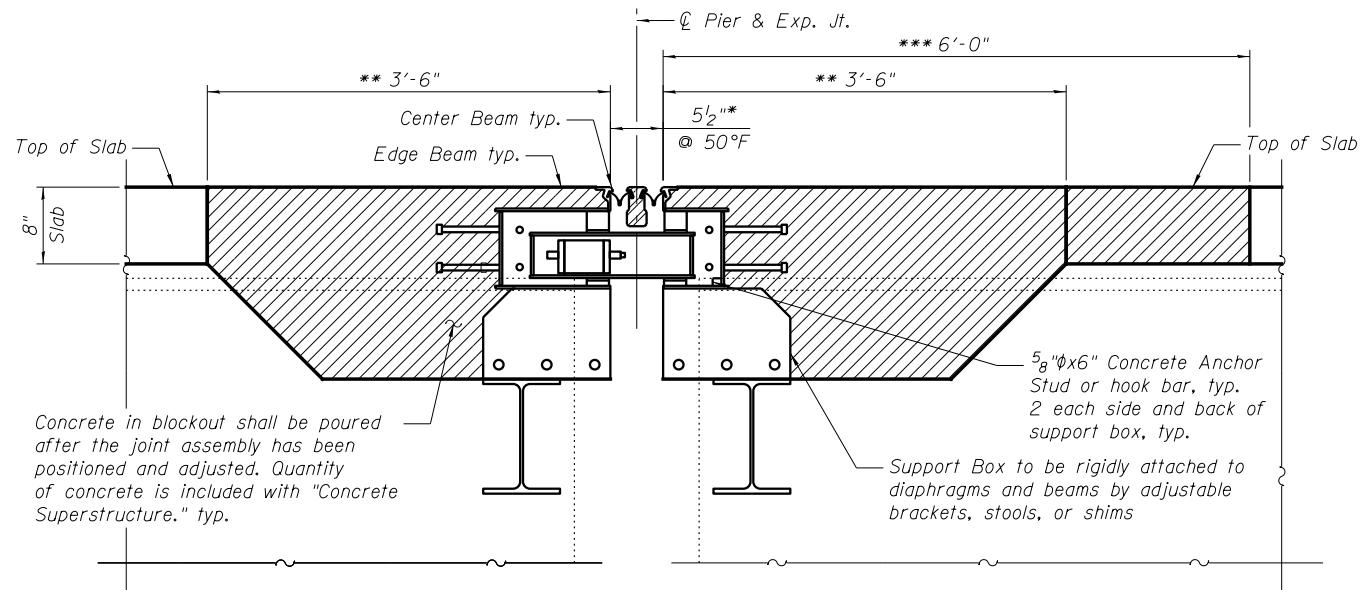
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PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

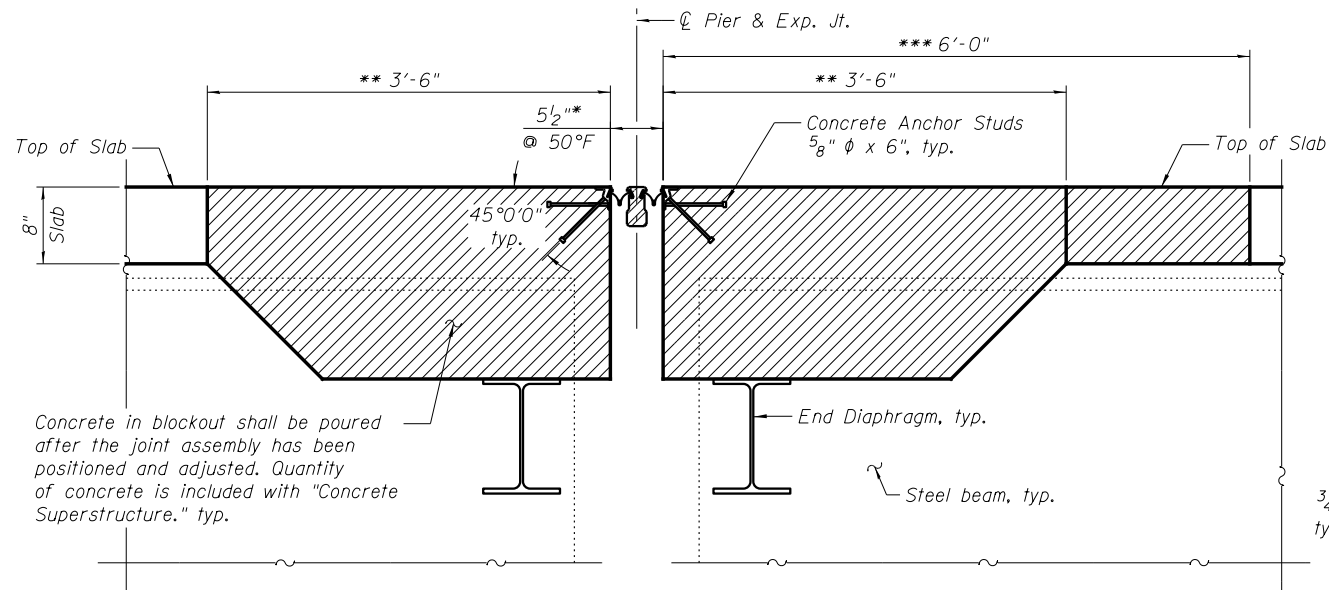
MODULAR EXPANSION JOINT - PIER C9
STRUCTURE NO. 016-0461

SHEET NO. S2-69 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



SECTION B-B

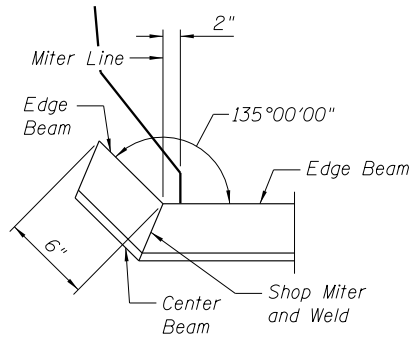


SECTION C-C

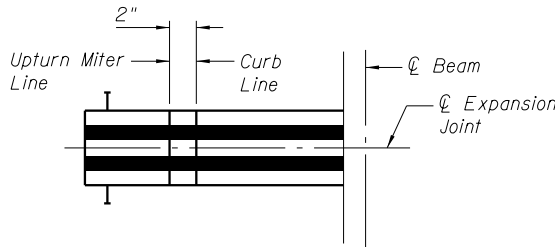
* Number of beams and seals determined by manufacturer

** Blockout dimensions to be verified by Contractor with Joint Manufacturer. See sheet S2-61 for blockout dimensions and additional details of edge beam at Pier C9.

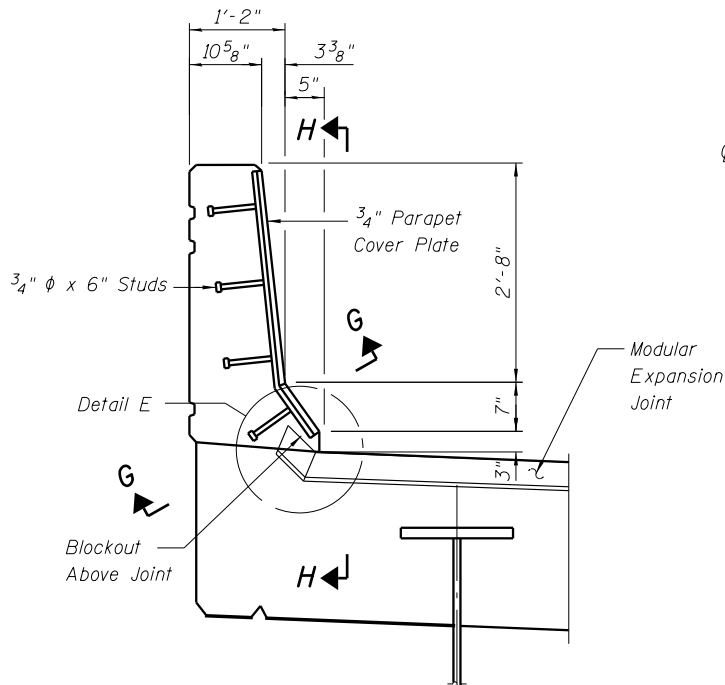
*** Blockout dimensions to be verified by Contractor with Joint Manufacture. See sheet S2-64 for blockout dimensions and additional details for the edge beam at Pier C12.



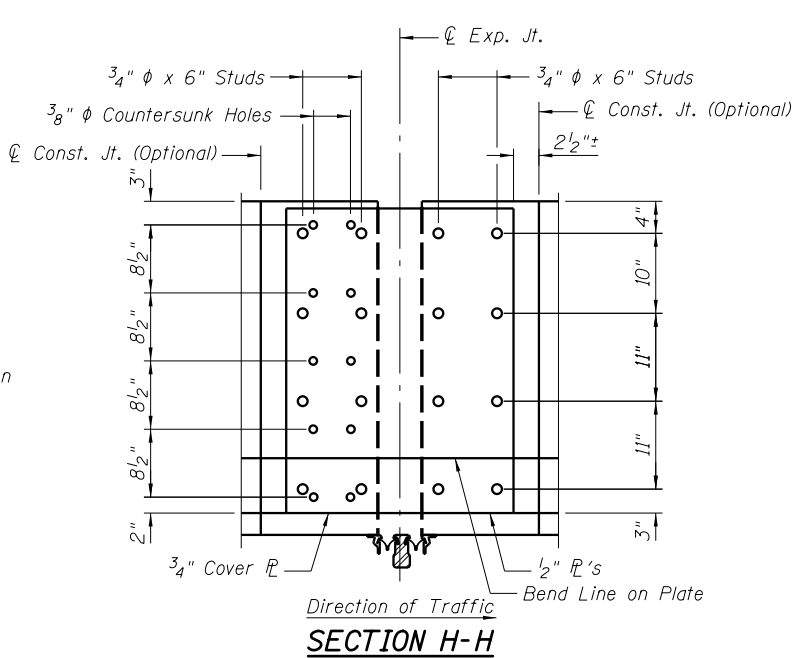
DETAIL E



DETAIL F



DETAIL D

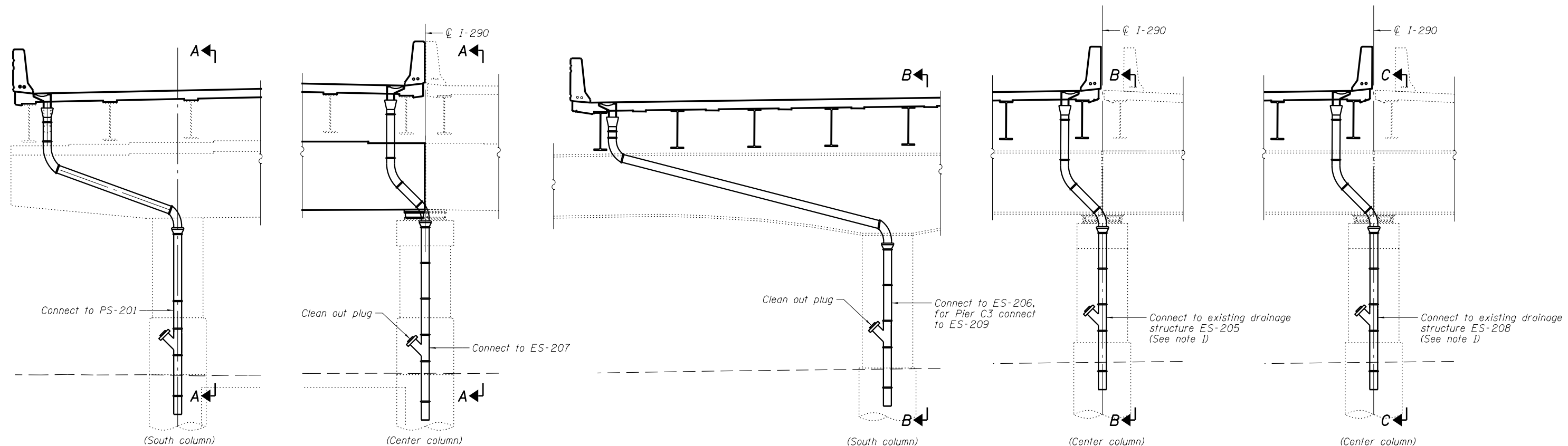


SECTION H-H

- Notes:
- Modular expansion joint shall be designed according to Section 14 of the 2014 AASHTO specifications for HL-93 truck loading with impact and the Special Provisions.
 - Joint shall be fabricated and installed according to the manufacturer's recommendations and as specified in the special provisions for a modular joint system and as approved by the Engineer.
 - Joint shall be fabricated to conform to the roadway profile and cross-slope.
 - The expansion joint assembly shall be hot dip galvanized in accordance with AASHTO M111 or M232 after fabrication.
 - Modular expansion joints shall be shipped in one piece unless noted.
 - Concrete anchors granular or solid flux filled headed studs attached to the modular expansion joint shall conform to Article 1006.32 of the Standard Specifications, automatically end welded. The cost of the anchor studs shall be included with Modular Expansion Joints, 6". Number and spacing of concrete anchor studs shall be determined by Joint Manufacturer in accordance with Note 1 above.
 - All splices of center beams and edge beams located in the roadway shall be full penetration welds, (Upturn splices may be partial penetration welds).
 - See deck reinforcement plan sheet S2-61 and S2-64 for bar size, designation and blockout dimensions. The Contractor shall refer to the approved joint shop drawings.
 - Sliding plate assemblies as shown shall be provided for the parapets. The cost of furnishing and installing sliding plate assemblies shall be included with Modular Expansion Joint, 6".
 - Coordinate blockout dimensions and pocket locations and reinforcement bar layout with Joint Manufacturer. Blockout area to be poured after expansion assemblies have been adjusted.
 - Modular expansion joints shall be assembled in their final relative position with the ends in place for shop inspection and acceptance.
 - Modular Expansion Joint, 6" shall provide a minimum total movement of 4 1/8".

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0160461-60X75 PARSONS BRINCKERHOFF	USER NAME = pateld	DESIGNED - TWP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MODULAR EXPANSION JOINT DETAILS STRUCTURE NO. 016-0461	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 6/28/2017	DRAWN - NG	REVISED -			CONTRACT NO. 60X75				
		CHECKED - JIG	REVISED -			ILLINOIS FED. AID PROJECT				
SHEET NO. S2-71 OF S2-137 SHEETS										

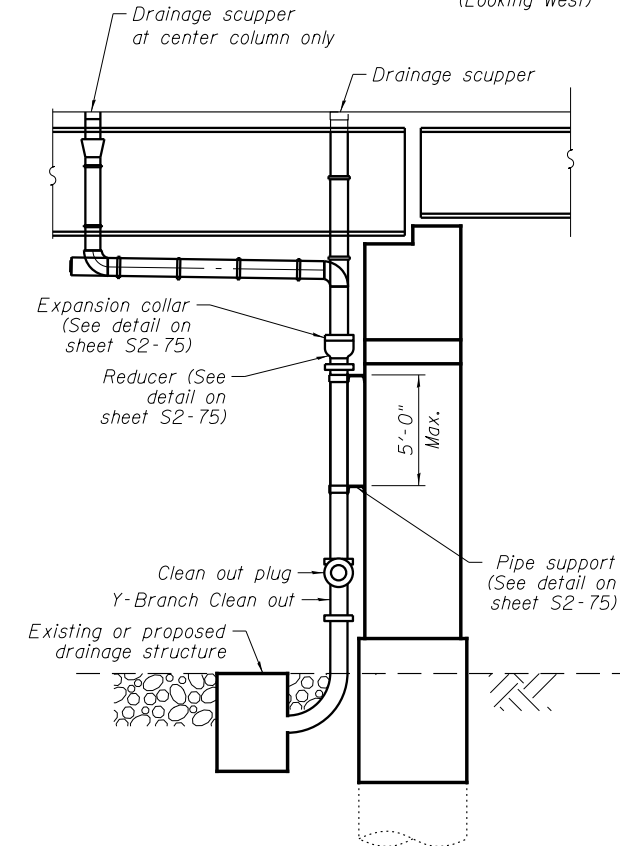


ELEVATION - PIER C4
(Looking West)

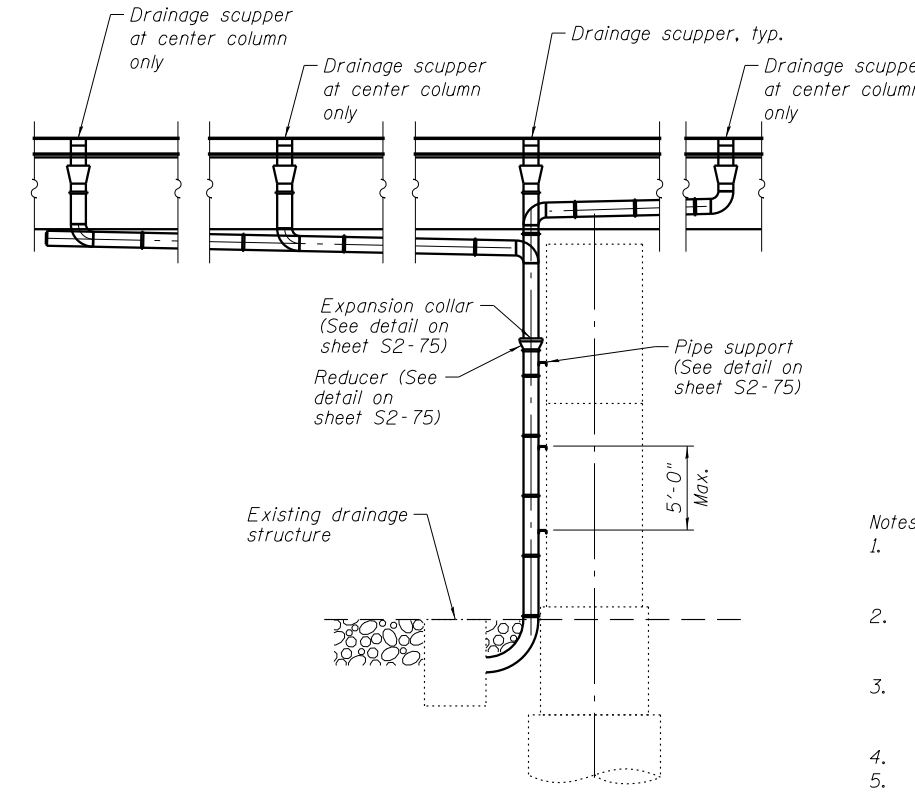
ELEVATION - PIER C2
(Looking West)

ELEVATION - PIER C2
(Looking West)

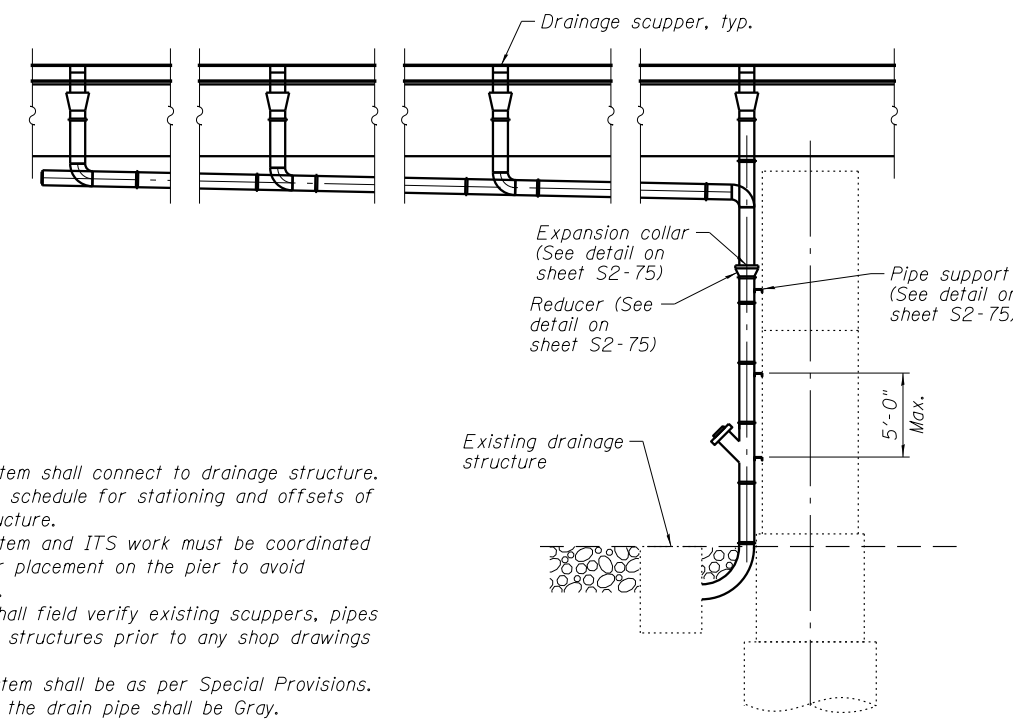
ELEVATION - PIER C3
(Looking West)



SECTION A-A



SECTION B-B



SECTION C-C

- Notes:**
1. Drainage system shall connect to drainage structure. See drainage schedule for stationing and offsets of drainage structure.
 2. Drainage system and ITS work must be coordinated prior to their placement on the pier to avoid any conflicts.
 3. Contractor shall field verify existing scuppers, pipes and drainage structures prior to any shop drawings submittal.
 4. Drainage System shall be as per Special Provisions.
 5. The color of the drain pipe shall be Gray.

**PARSONS
BRINCKERHOFF**

USER NAME =	pateld	DESIGNED -	HA	REVISED -	
		CHECKED -	HA	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	DCP/NJP	REVISED -	
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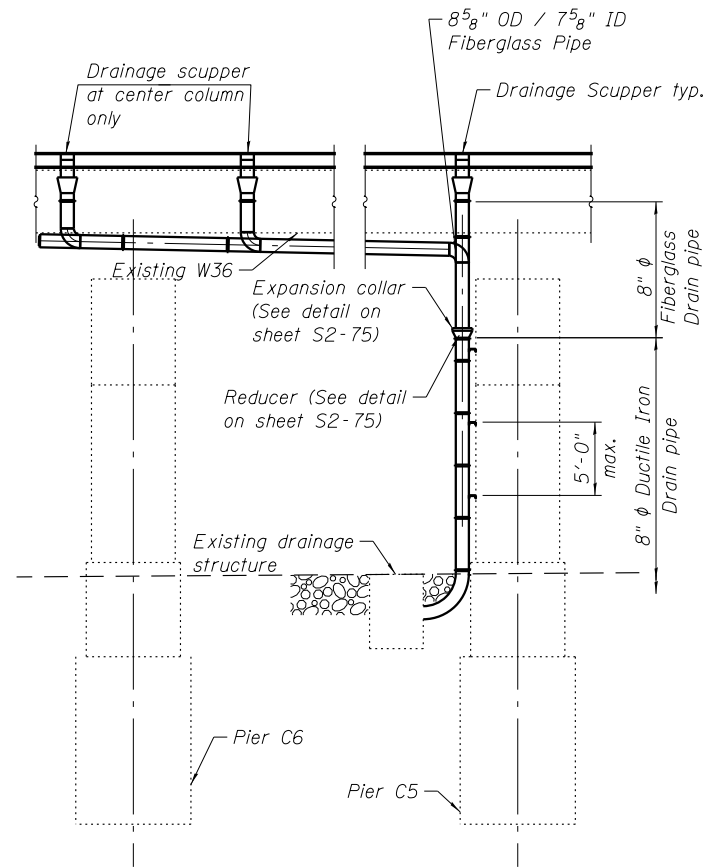
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DRAINAGE SYSTEM DETAILS - PIER C1, C2, C3 & C4
STRUCTURE NO. 016-0461

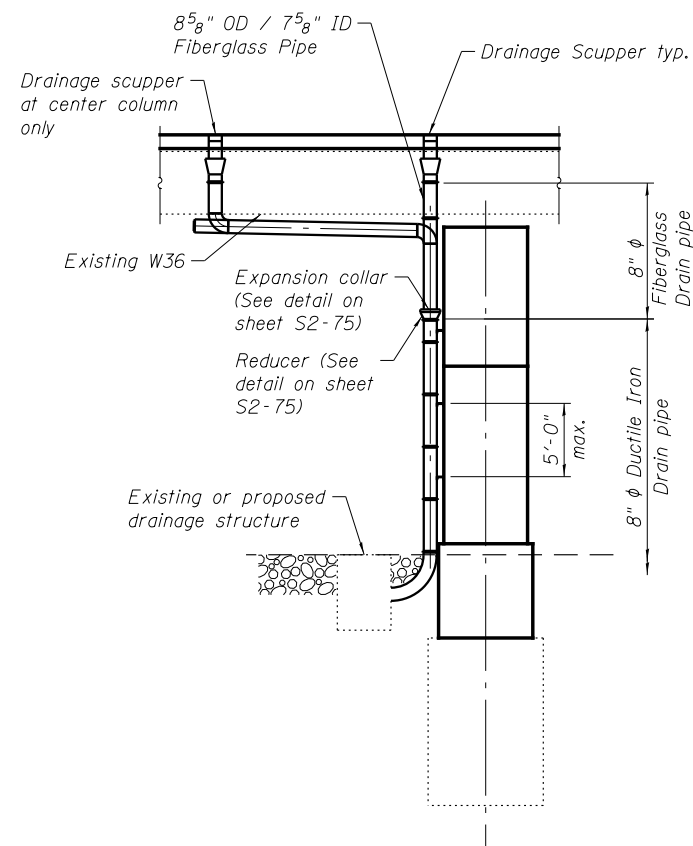
SHEET NO. S2-72 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

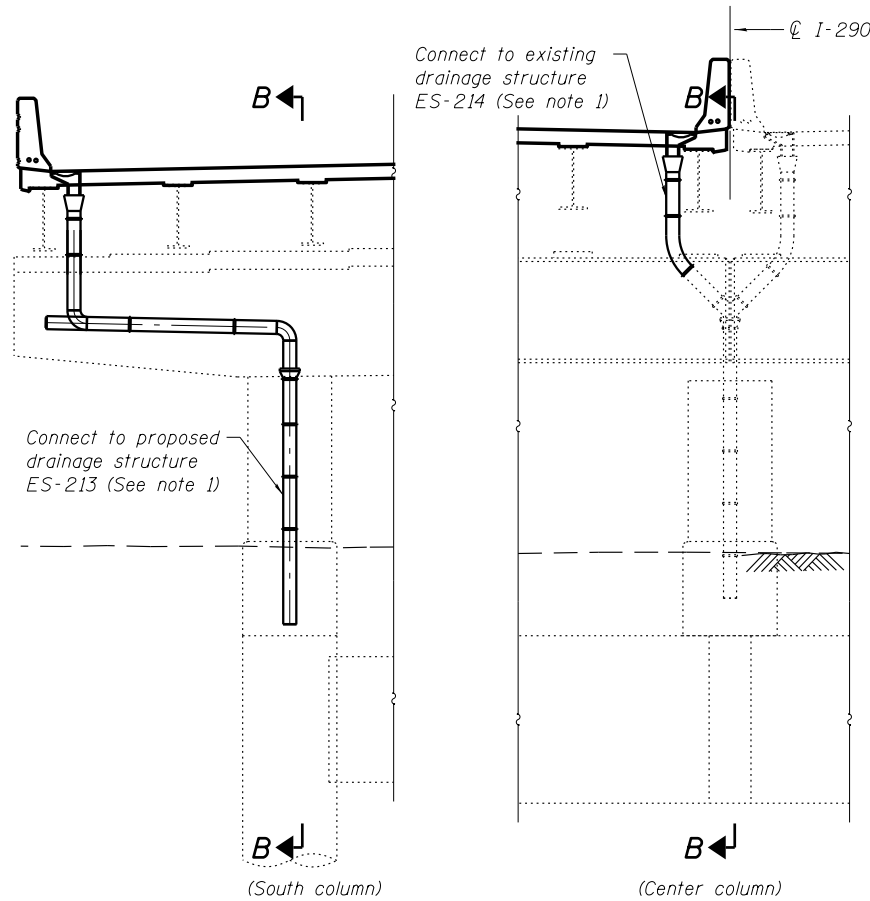
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SECTION B-B

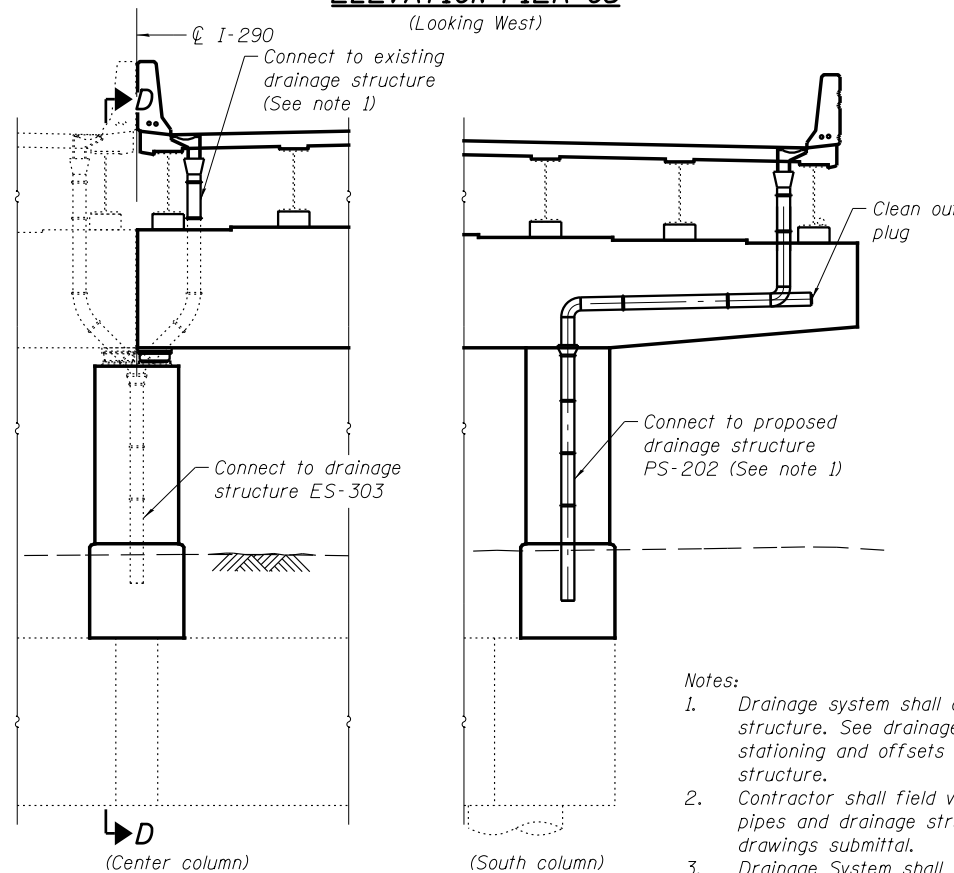


SECTION D-D



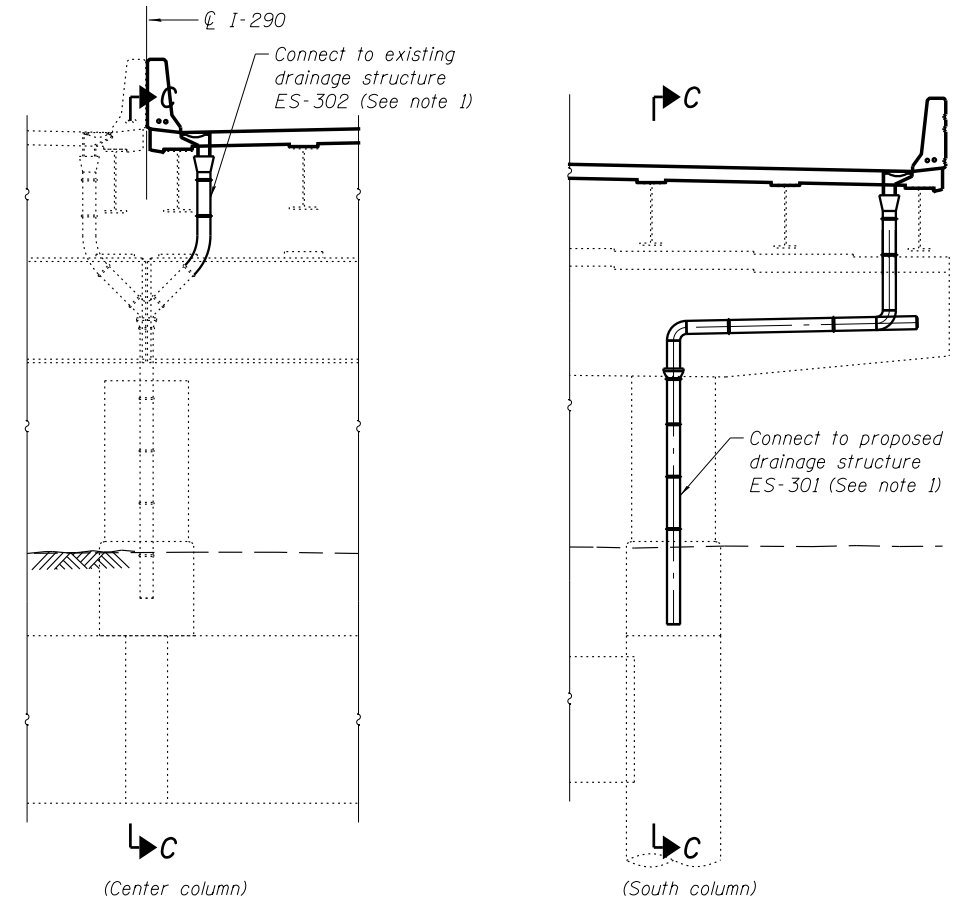
ELEVATION PIER C5

(Looking West)



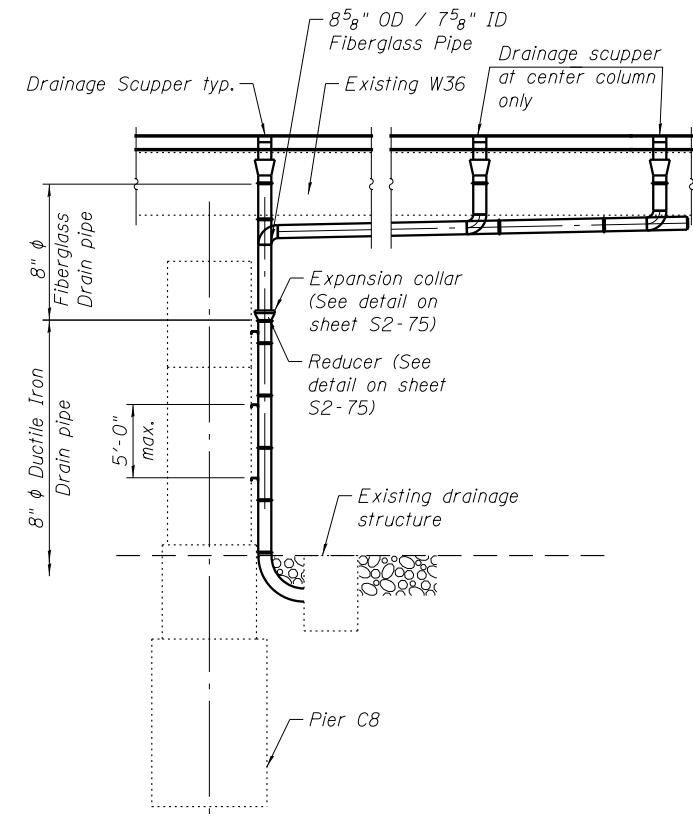
ELEVATION PIER C9

(Looking East)



ELEVATION PIER C8

(Looking East)



SECTION C-C

Notes:

1. Drainage system shall connect to drainage structure. See drainage schedule for stationing and offsets of drainage structure.
2. Contractor shall field verify existing scuppers, pipes and drainage structures prior to any shop drawings submittal.
3. Drainage System shall be as per Special Provisions.
4. The color of the drain pipe shall be Gray.

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**PARSONS
BRINCKERHOFF**

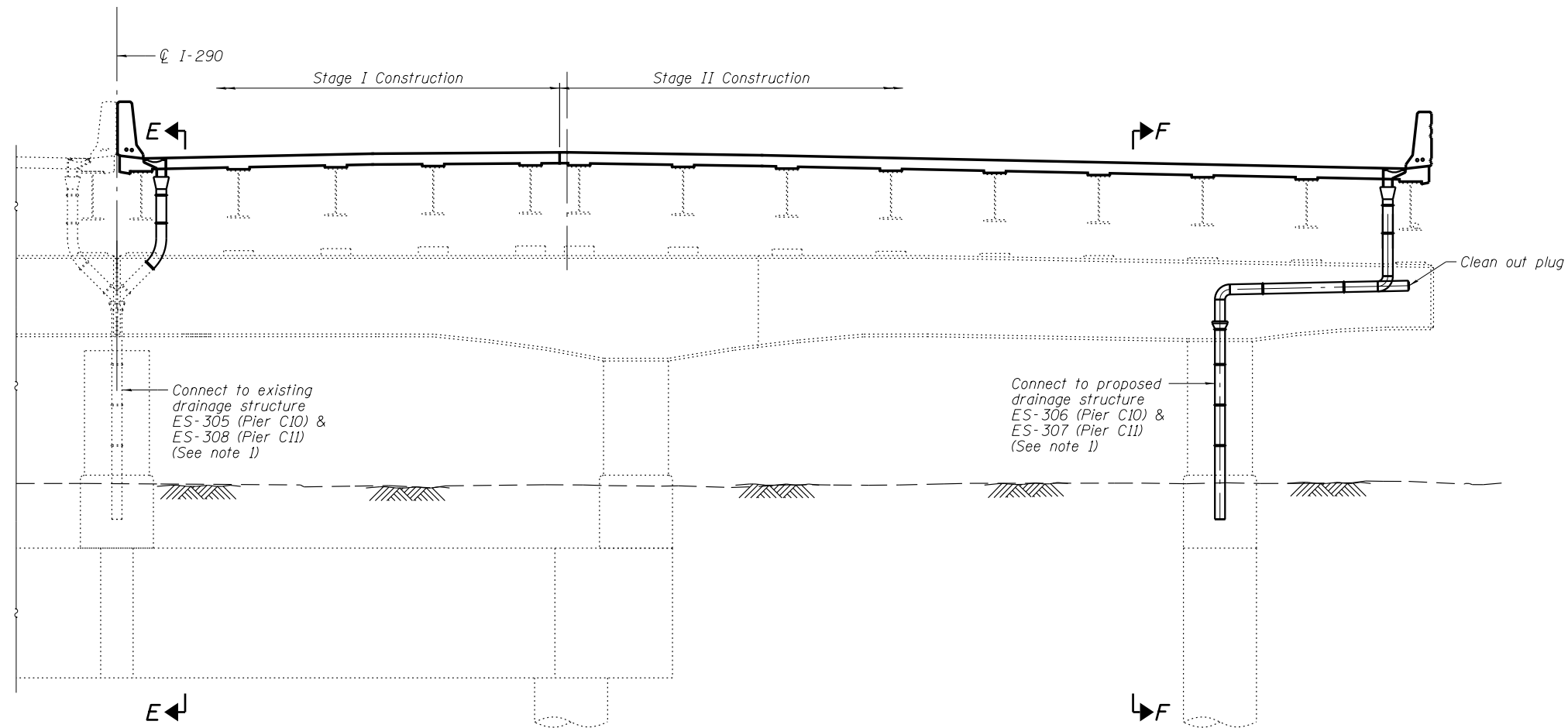
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PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

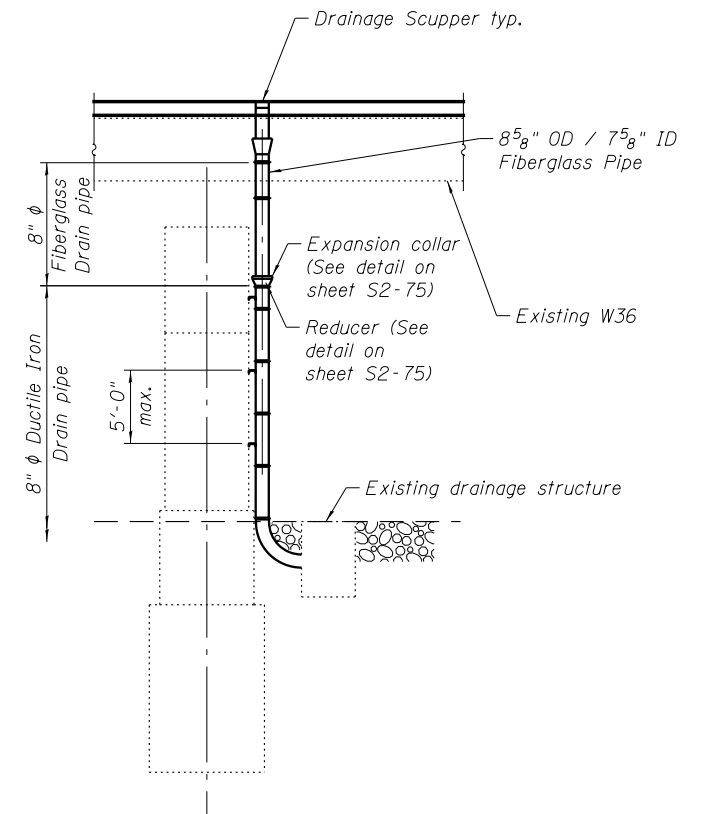
**DRAINAGE SYSTEM DETAILS - PIER C5, C8 & C9
STRUCTURE NO. 016-0461**

SHEET NO. S2-73 OF S2-137 SHEETS

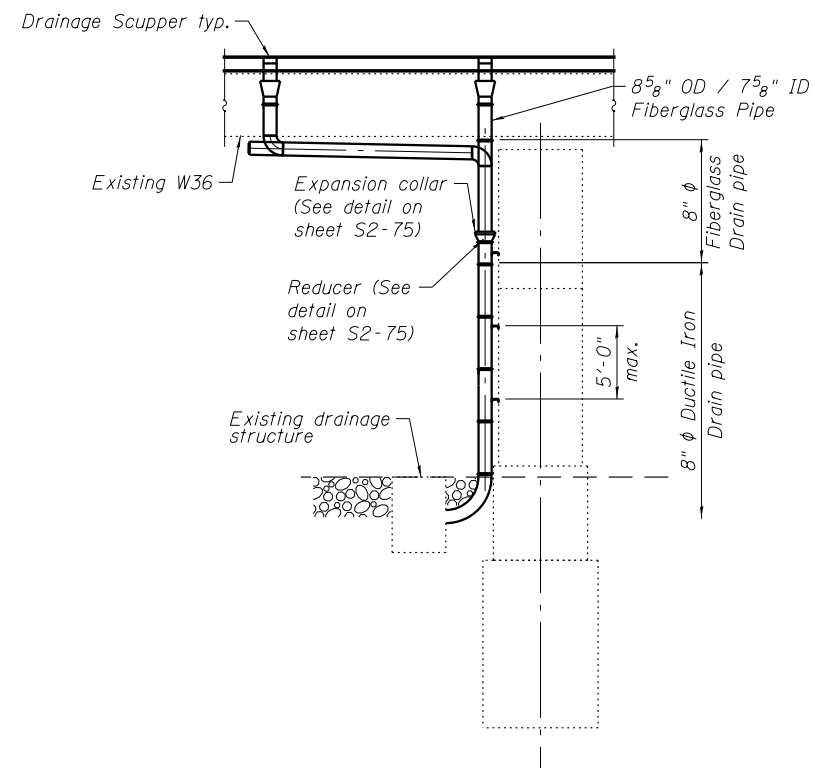
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90/94/290	2014-001 R&B (EB)	COOK	696	365
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



ELEVATION PIER C10 & C11
(Looking East)



SECTION F-F



SECTION E-E

Notes:

1. Drainage system shall connect to an existing drainage structure. See drainage schedule for stationing and offsets of existing drainage structure.
2. Contractor shall field verify existing scuppers, pipes and drainage structures prior to any shop drawings submittal.
3. Drainage System shall be as per Special Provisions.
4. The color of the drain pipe shall be Gray.

**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - HA	REVISED -
	CHECKED - HA	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP/NJP	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

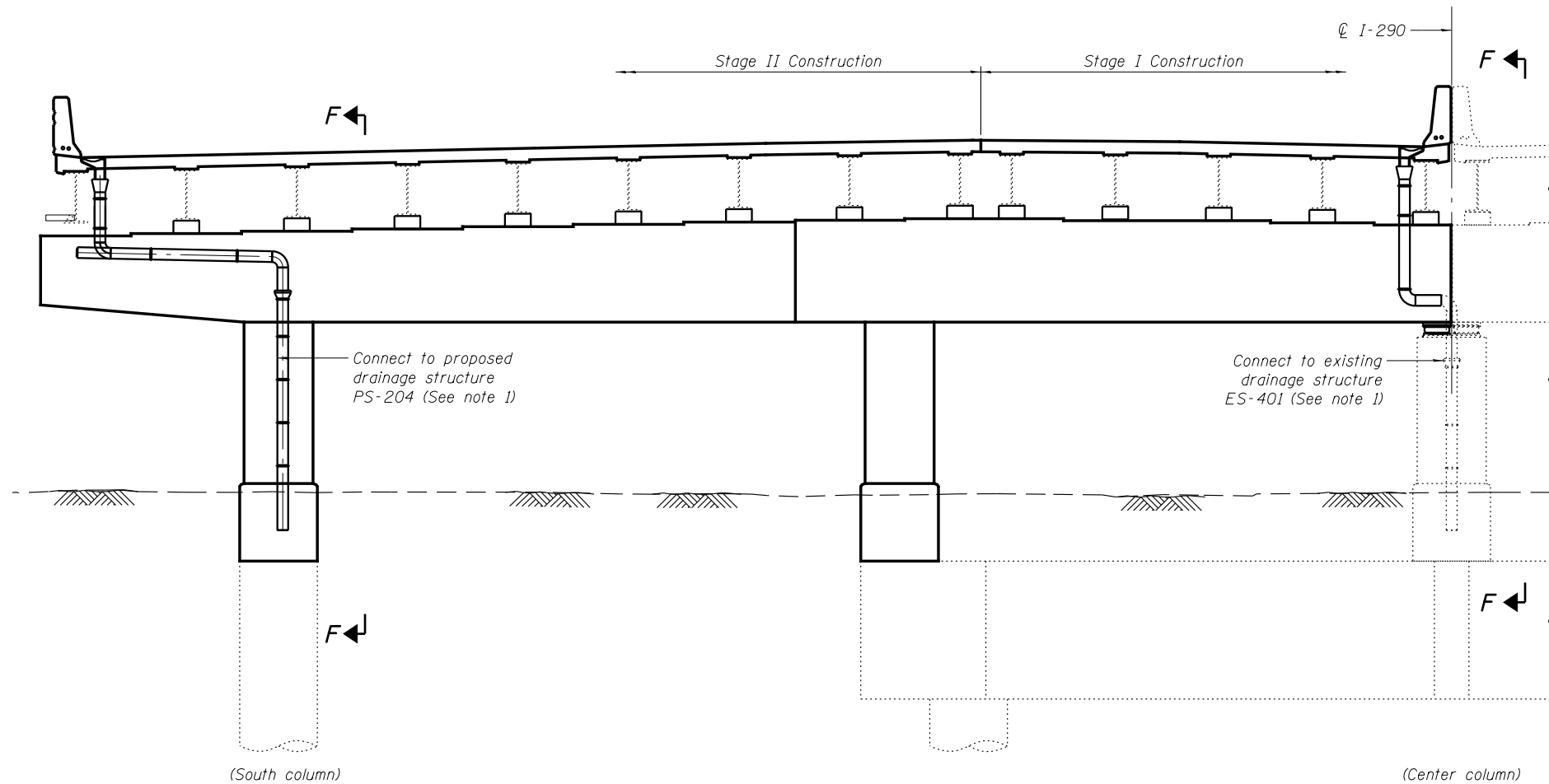
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE SYSTEM DETAILS - PIER C10 & C11
STRUCTURE NO. 016-0461**

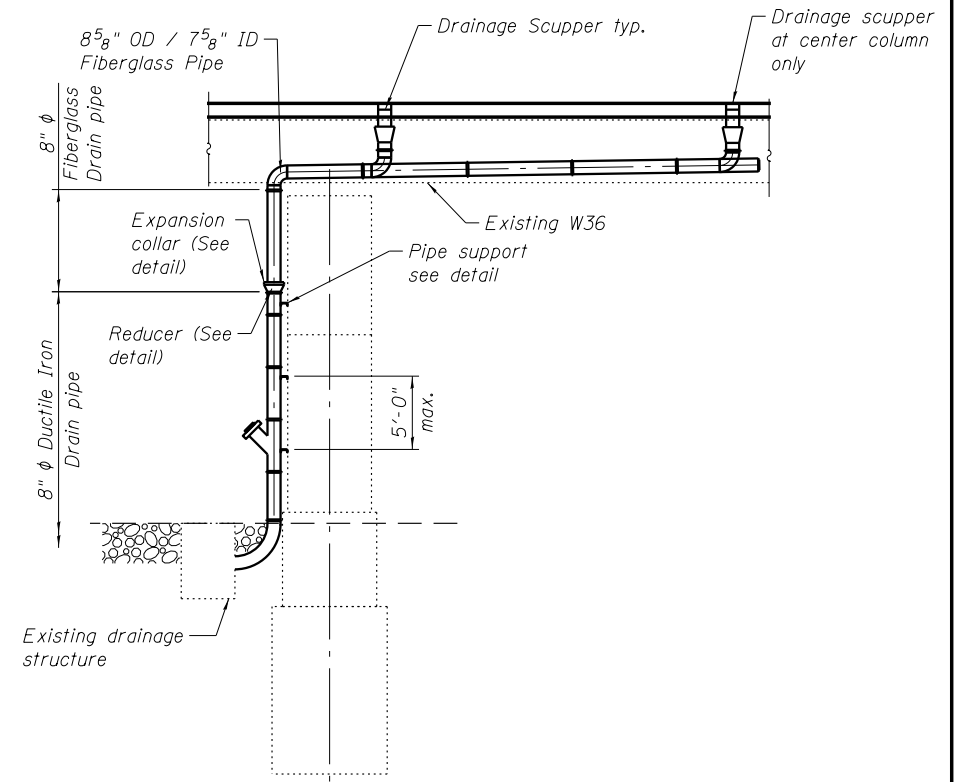
SHEET NO. S2-74 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

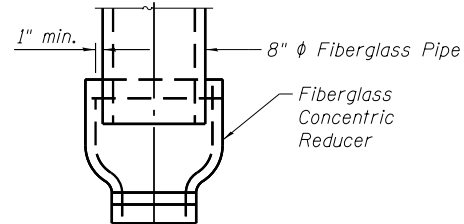
0160461-60X75-S074-DRN.dgn



ELEVATION PIER C12
(Looking West)



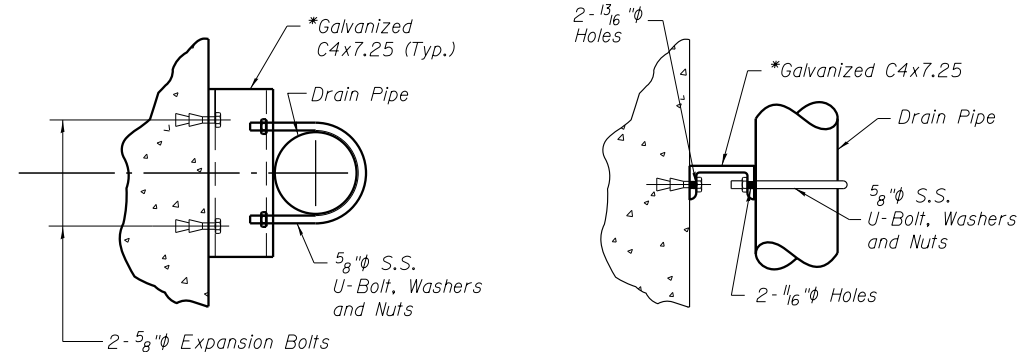
SECTION F-F



REDUCER DETAIL

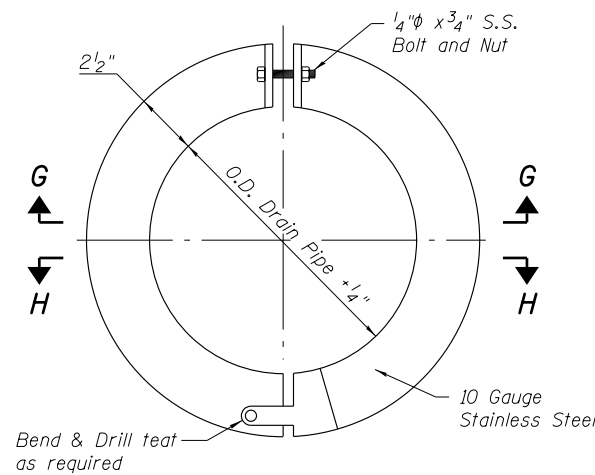


SECTION G-G



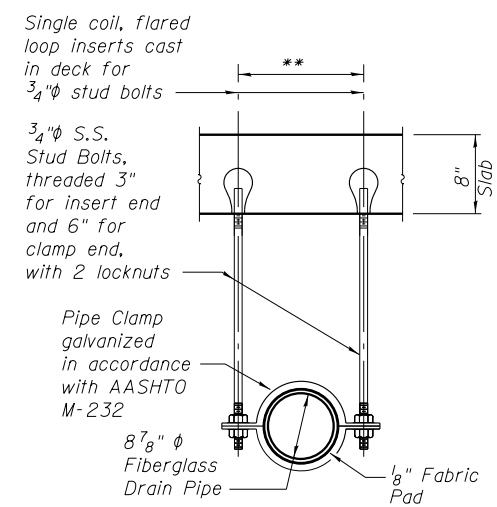
PIPE SUPPORT DETAIL

*Provide curved C6x8.2 to fit Round Pier Columns where needed



SECTION H-H

DETAIL OF EXPANSION COLLAR



PIPE SUPPORT DETAIL

** Dimension as required by Pipe Clamp

Notes:

1. Drainage system shall connect to drainage structure. See drainage schedule for stationing and offsets of drainage structure.
2. Contractor shall field verify existing scuppers, pipes and drainage structures prior to any shop drawings submittal.
3. S.S. denotes Stainless Steel.
4. Drainage System shall be as per Special Provisions.
5. The color of the drain pipe shall be Gray.

BILL OF MATERIAL

Item	Unit	Quantity
Drainage System	L. Sum	0.7

0160461-60X75-S075-DRN.dgn

**PARSONS
BRINCKERHOFF**

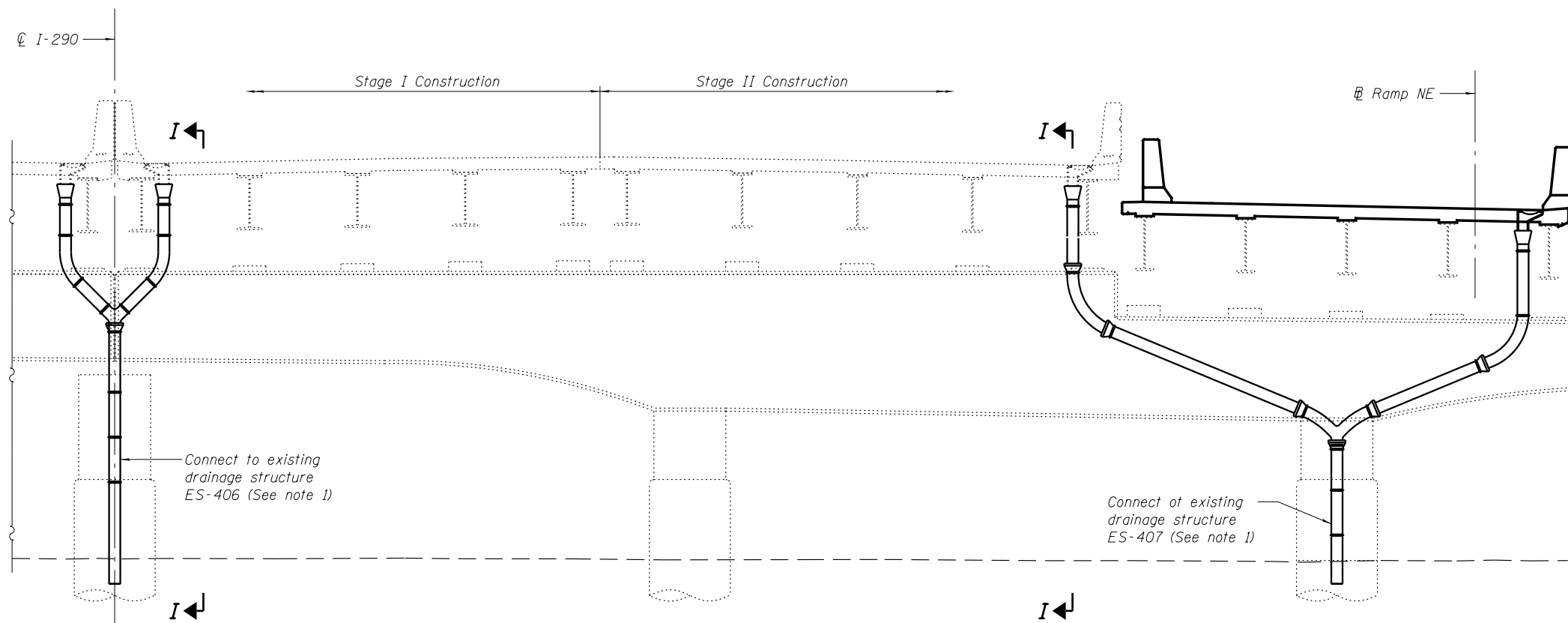
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	CHECKED - HA	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP/NJP	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

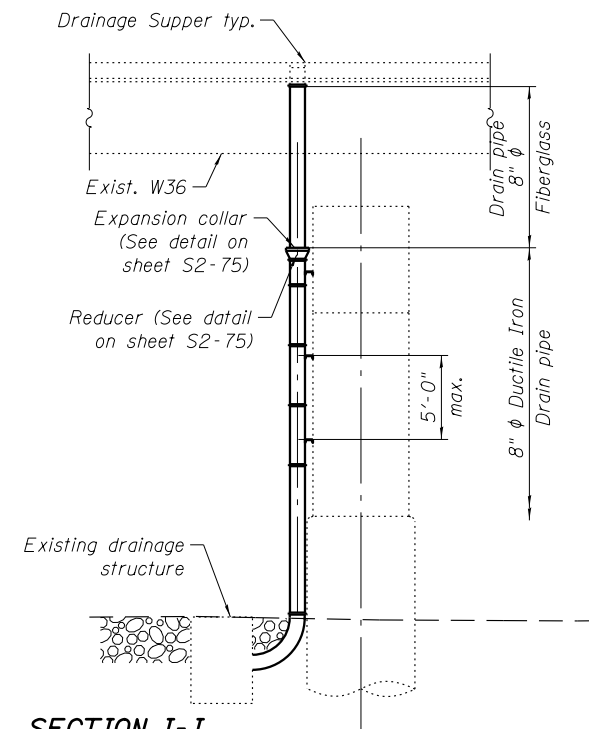
**DRAINAGE SYSTEM DETAILS - PIER C12
STRUCTURE NO. 016-0461**

SHEET NO. S2-75 OF S2-137 SHEETS

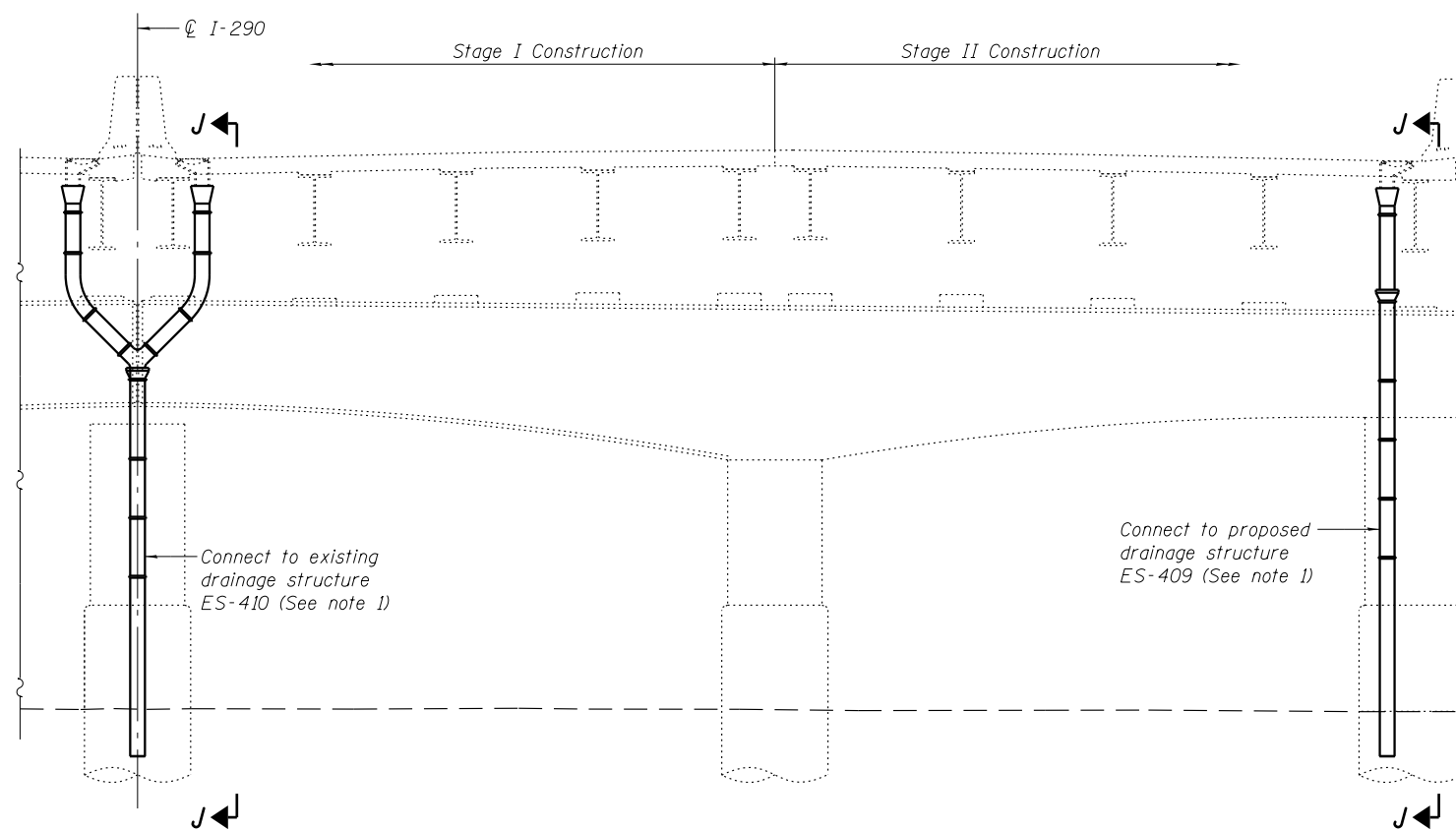
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	367
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



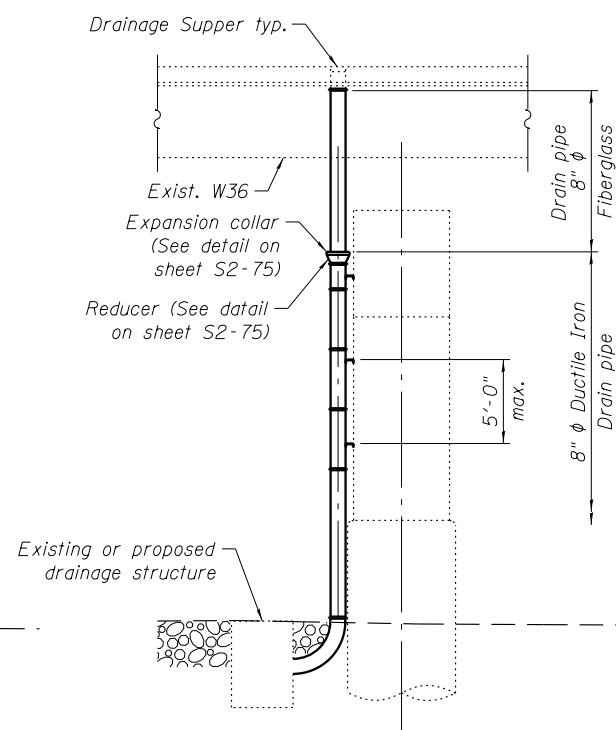
ELEVATION - PIER C13
(Looking East)



SECTION I-I



ELEVATION - PIER C14
(Looking East)



SECTION J-J

Notes:

1. Drainage system shall connect to an existing drainage structure. See drainage schedule for stationing and offsets of existing drainage structure.
2. Contractor shall field verify existing scuppers, pipes and drainage structures prior to any shop drawings submittal.
3. Drainage System shall be as per Special Provisions.
4. The color of the drain pipe shall be Gray.

0160461-60X75-S076-DRN.dgn

**PARSONS
BRINCKERHOFF**

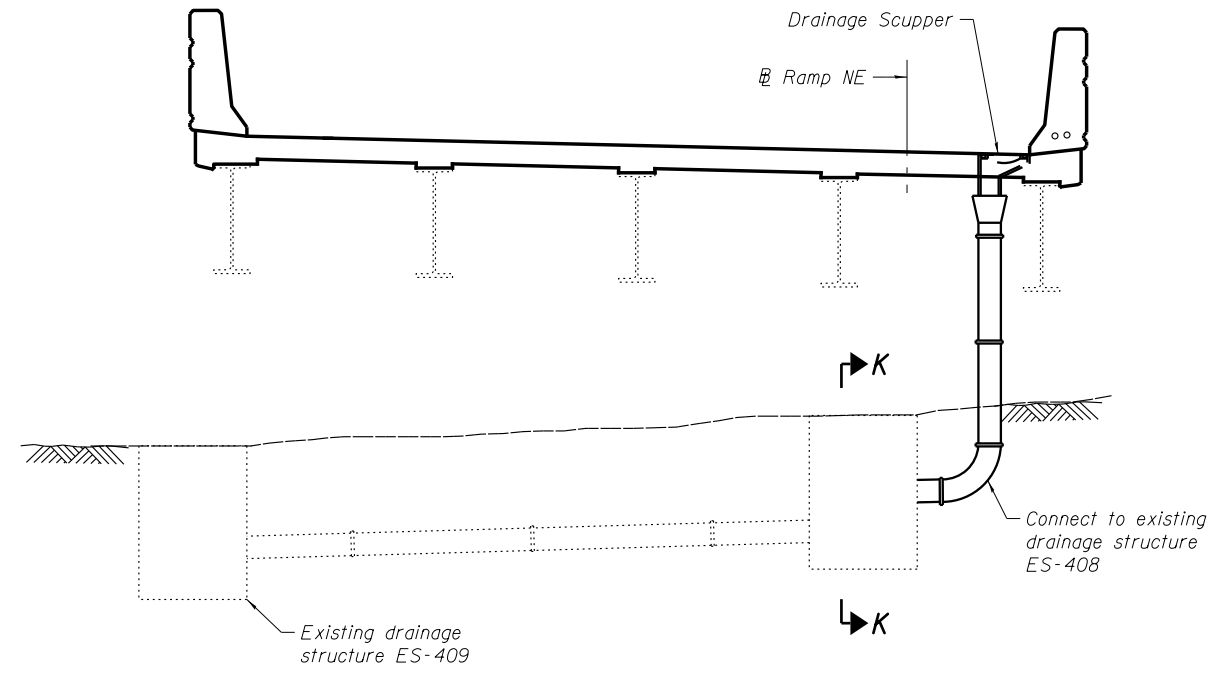
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	CHECKED - HA	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DE	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

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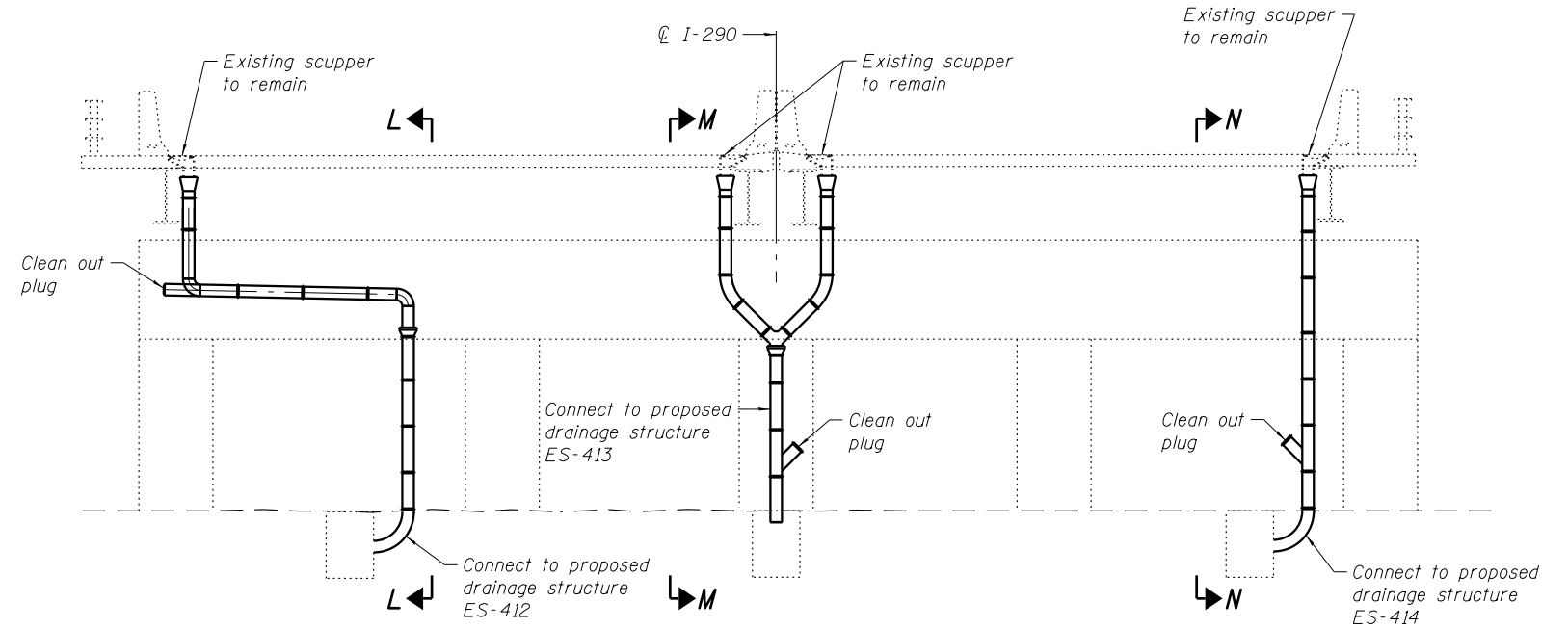
**DRAINAGE SYSTEM DETAILS - PIER C13 & C14
STRUCTURE NO. 016-0461**

SHEET NO. S2-76 OF S2-137 SHEETS

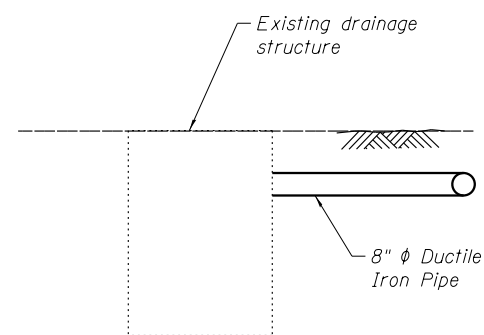
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90/94/290	2014-001 R&B (EB)	COOK	696	368
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



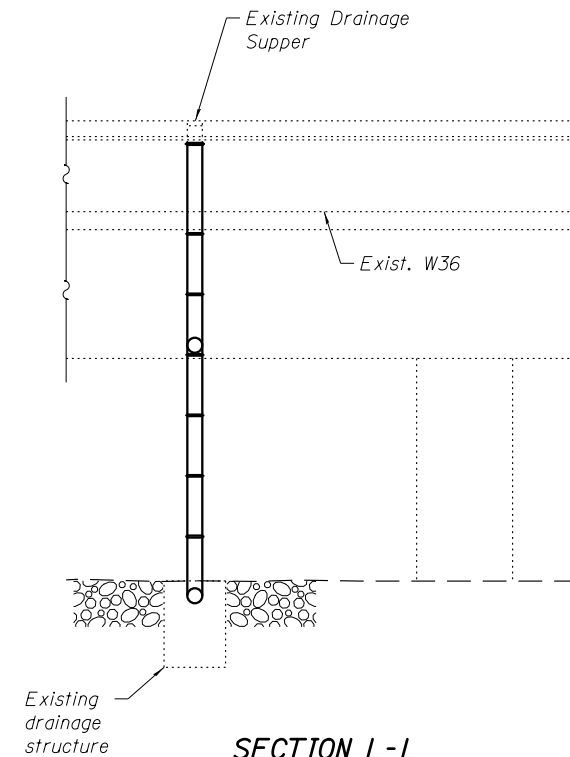
PIER 14S - ELEVATION
(Looking East)



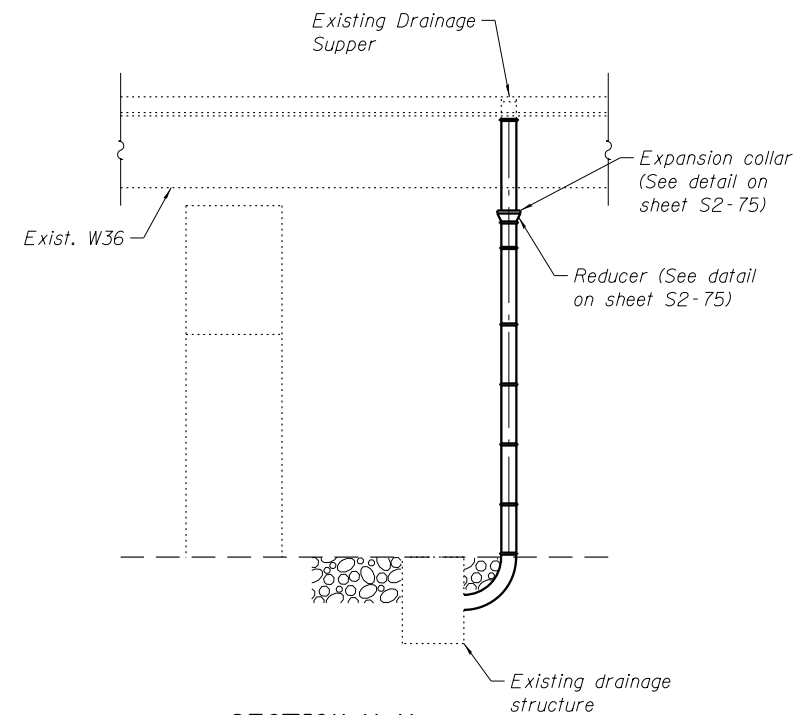
PIER C15 - ELEVATION
(Looking West)



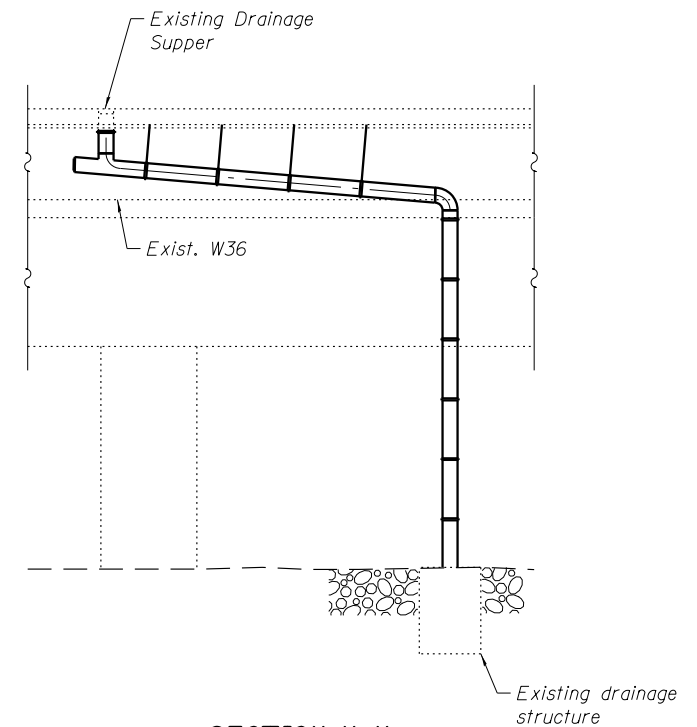
SECTION K-K



SECTION L-L



SECTION M-M



SECTION N-N

- Notes:
1. Drainage system shall connect to an proposed drainage structure. See drainage schedule for stationing and offsets of proposed drainage structure.
 2. Contractor shall field verify existing scuppers, pipes and drainage structures prior to any shop drawings submittal.
 3. Drainage System shall be as per Special Provisions.
 4. The color of the drain pipe shall be Gray.

**PARSONS
BRINCKERHOFF**

USER NAME =	pateld	DESIGNED -	HA	REVISED -	
		CHECKED -	HA	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	DE/NJP	REVISED -	
PLOT DATE =	6/28/2017	CHECKED -	JIG	REVISED -	

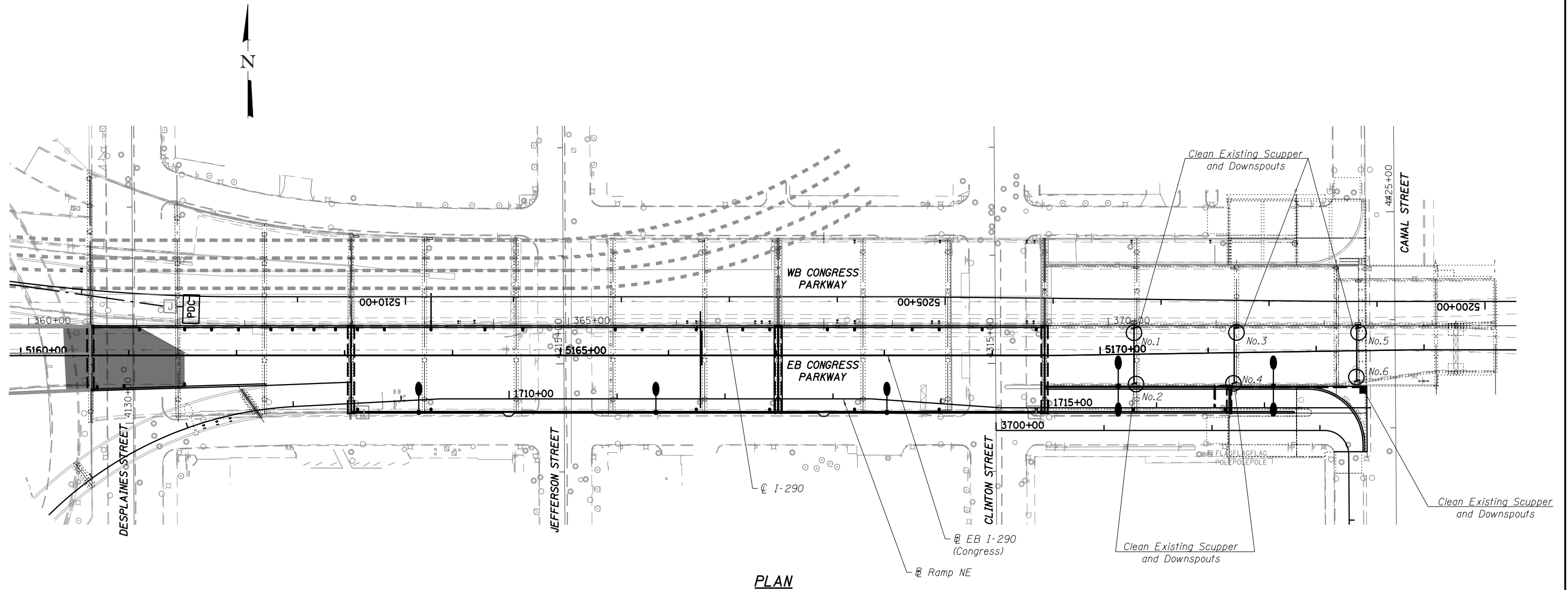
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE SYSTEM DETAILS - PIER 14S & C15
STRUCTURE NO. 016-0461**

SHEET NO. S2-77 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	369
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

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PLAN

EXISTING BRIDGE SCUPPER STATION/OFFSET

Scupper No.	Station	Offset
1	370+24.08	2.16' Rt.
2	370+23.85	53.63' Rt.
3	371+18.60	2.09' Rt.
4	371+16.68	53.03' Rt.
5	372+31.44	2.22' Rt.
6	372+30.26	56.37' Rt.

Note:

1. Bridge scupper Station/Offset are measured along Existing $\varnothing$ I-290.

BILL OF MATERIAL

Item	Unit	Quantity
Cleaning Bridge Scuppers and Downspouts	Each	6

0160461-60X75-S078-DRN.dgn

PARSONS
BRINCKERHOFF

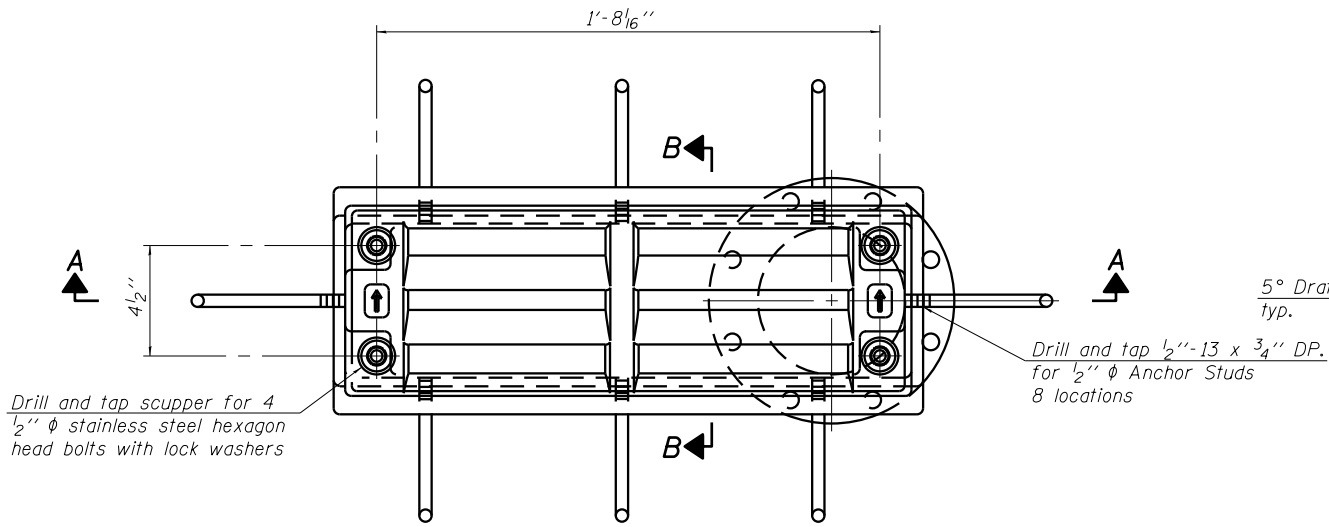
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PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

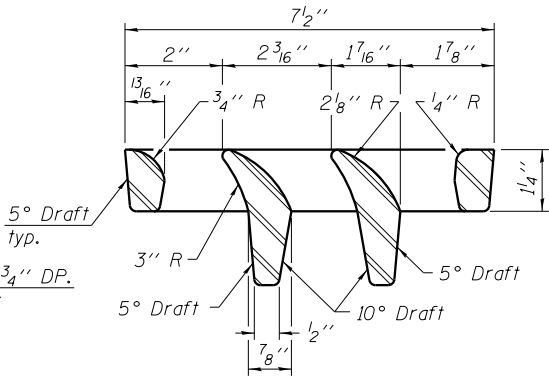
CLEANING BRIDGE SCUPPERS AND DOWNSPOUTS
STRUCTURE NO. 016-0461

SHEET NO. S2-78 OF S2-137 SHEETS

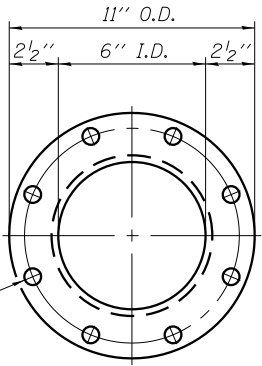
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90/94/290	2014-001 R&B (EB)	COOK	696	370
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



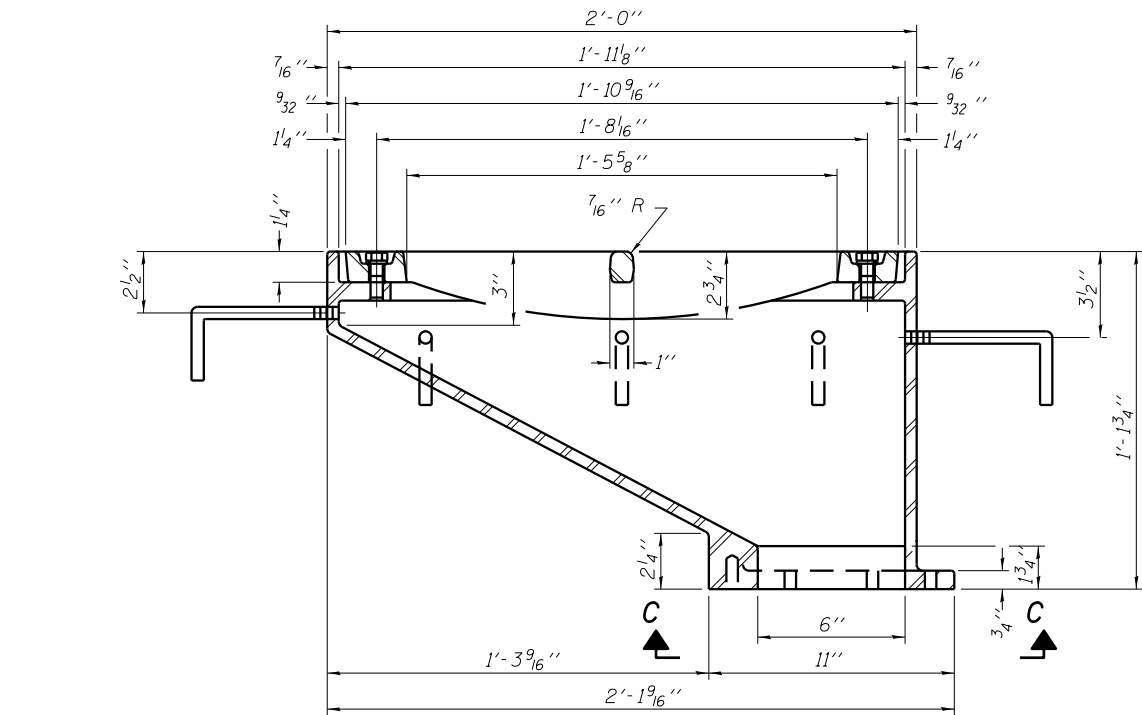
PLAN



VANE GRATE DETAIL

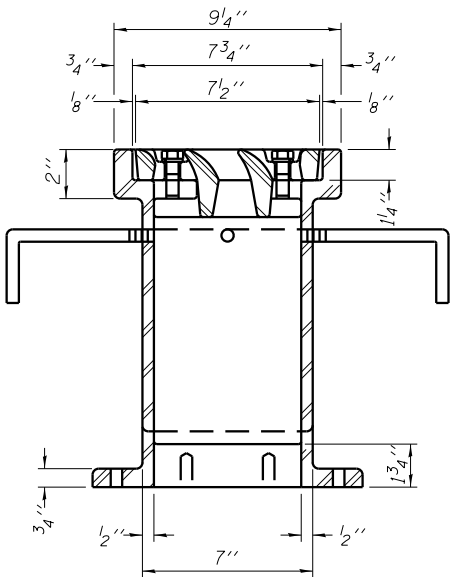


8- 9/16" ϕ holes on an
9 1/2" ϕ bolt circle

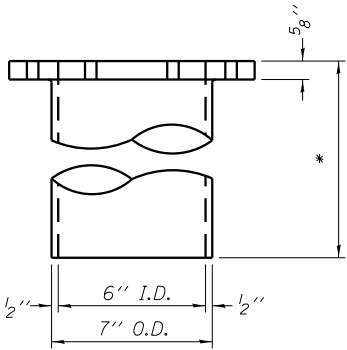


SECTION A-A

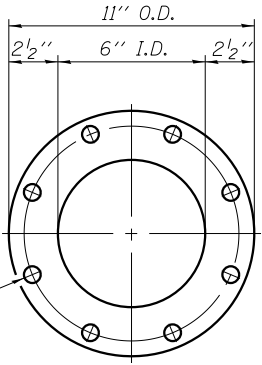
See sheet S2-48, S2-55 & S2-59 for scupper
location relative to parapet.



SECTION B-B

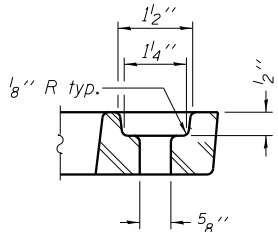


DOWNSPOUT

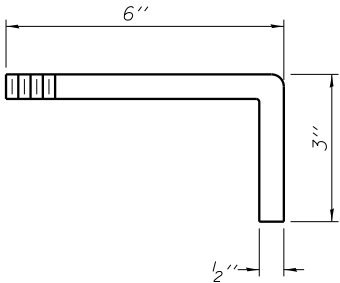


VIEW C-C

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



BOLT HOLE DETAIL



ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12	Each	36

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.

* Length of downspout to be coordinated with Drainage System

DS-12

7-1-10

**PARSONS
BRINCKERHOFF**

USER NAME =	pateld	DESIGNED -	PJL	REVISED -	
		CHECKED -	AH	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	DCP	REVISED -	
PLOT DATE =	6/28/2017	CHECKED -	JIG	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

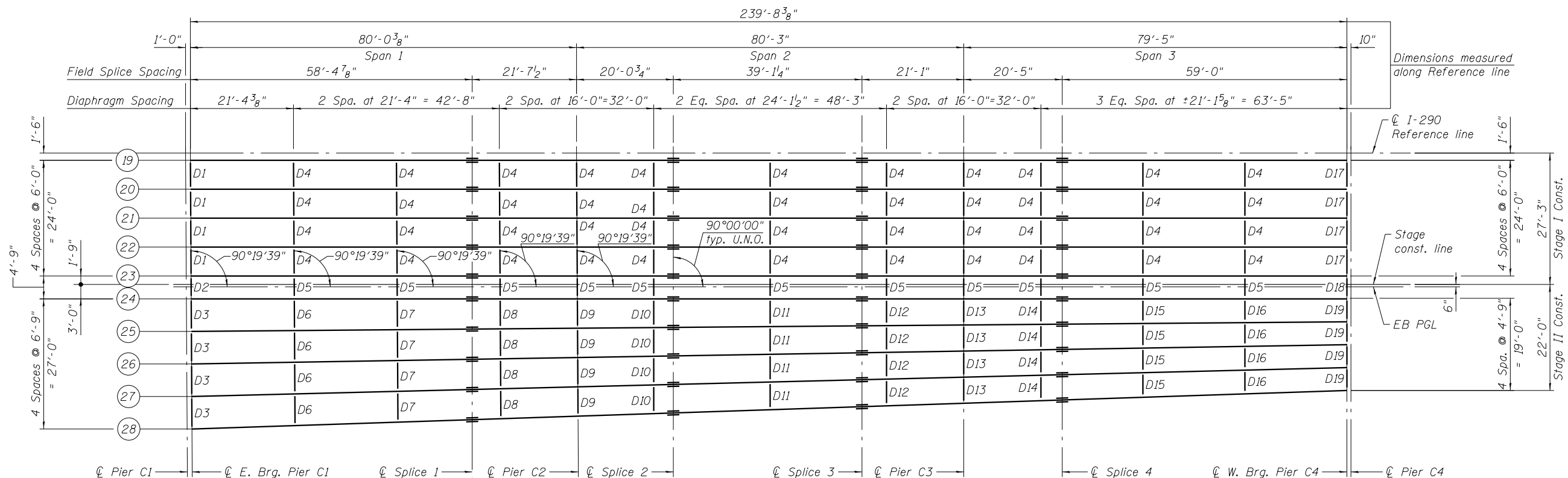
**DRAINAGE SCUPPER, DS-12
STRUCTURE NO. 016-0461**

SHEET NO. S2-79 OF S2-137 SHEETS

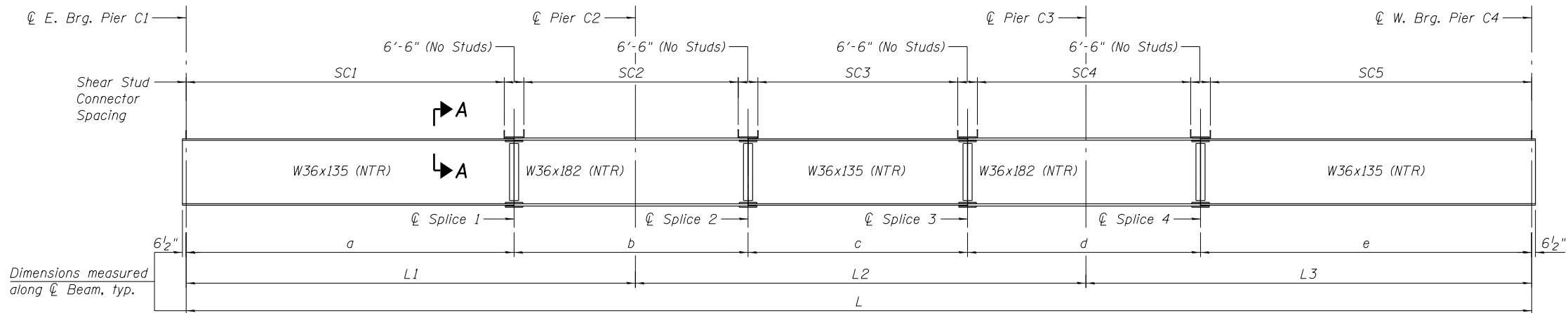
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	371
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-S079-SCP.dgn

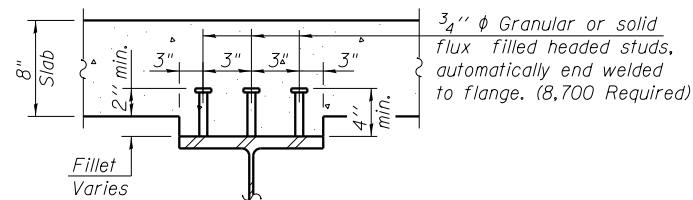
0160461-60X75-S080-FRM.dgn



FRAMING PLAN - UNIT I



BEAM ELEVATION



SECTION A-A

Notes:
See sheet S2-81 for moment tables and reaction tables.
See sheet S2-82 for bolted field splice details and diaphragms details.
All beams and splice plates shall be AASHTO M270 Grade 50.
All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
All structural steel shall be hot dipped galvanized. Cost included with Furnishing and Erecting Structural Steel.

BEAM DIMENSIONS

Beam	L	L1	L2	L3	a	b	c	d	e
19	239'-8 1/4"	80'-0 3/8"	80'-2 7/8"	79'-5"	58'-4 3/4"	41'-8 1/4"	39'-1 1/4"	41'-6"	59'-0"
20	239'-7 7/8"	80'-0 3/8"	80'-2 1/2"	79'-5"	58'-4 3/8"	41'-8 1/4"	39'-1 1/4"	41'-6"	59'-0"
21	239'-7 1/2"	80'-0 3/8"	80'-2"	79'-5"	58'-4"	41'-8 1/4"	39'-1 1/4"	41'-6"	59'-0"
22	239'-7"	80'-0 3/8"	80'-1 5/8"	79'-5"	58'-3 5/8"	41'-8 1/4"	39'-1 1/4"	41'-6"	59'-0"
23	239'-6 5/8"	80'-0 3/8"	80'-1 1/4"	79'-5"	58'-3 1/8"	41'-8 1/4"	39'-1 1/4"	41'-6"	59'-0"
24	239'-6 3/8"	80'-0 1/2"	80'-0 7/8"	79'-5"	58'-3"	41'-8 1/4"	39'-1 1/4"	41'-6"	59'-0"
25	239'-5 7/8"	80'-0 3/8"	80'-0 1/2"	79'-5"	58'-2 3/8"	41'-8 1/4"	39'-1 1/4"	41'-6"	59'-0"
26	239'-5 3/4"	80'-0 1/2"	80'-0 1/4"	79'-5 1/8"	58'-2"	41'-8 1/4"	39'-1 3/8"	41'-6 1/8"	59'-0 1/8"
27	239'-5 3/4"	80'-0 5/8"	80'-0"	79'-5 1/4"	58'-1 5/8"	41'-8 3/8"	39'-1 3/8"	41'-6 1/8"	59'-0 1/4"
28	239'-6"	80'-0 3/4"	79'-11 3/4"	79'-5 1/2"	58'-1 3/8"	41'-8 1/2"	39'-1 1/2"	41'-6 1/4"	59'-0 3/8"

STUD SHEAR CONNECTOR SPACING

Beam	SC1	SC2	SC3	SC4	SC5
19	73 Spa. at $\pm 9"$ = 55'-1 3/4"	47 Spa. at $\pm 9"$ = 35'-2 1/4"	44 Spa. at $\pm 9"$ = 32'-7 1/4"	47 Spa. at $\pm 9"$ = 35'-0"	74 Spa. at $\pm 9"$ = 55'-9"
20	73 Spa. at $\pm 9"$ = 55'-1 3/8"	47 Spa. at $\pm 9"$ = 35'-2 1/2"	44 Spa. at $\pm 9"$ = 32'-7 1/4"	47 Spa. at $\pm 9"$ = 35'-0"	74 Spa. at $\pm 9"$ = 55'-9"
21	73 Spa. at $\pm 9"$ = 55'-1"	47 Spa. at $\pm 9"$ = 35'-2 1/4"	44 Spa. at $\pm 9"$ = 32'-7 1/4"	47 Spa. at $\pm 9"$ = 35'-0"	74 Spa. at $\pm 9"$ = 55'-9"
22	73 Spa. at $\pm 9"$ = 55'-0 5/8"	47 Spa. at $\pm 9"$ = 35'-2 1/4"	44 Spa. at $\pm 9"$ = 32'-7 1/4"	47 Spa. at $\pm 9"$ = 35'-0"	74 Spa. at $\pm 9"$ = 55'-9"
23	73 Spa. at $\pm 9"$ = 55'-0 1/8"	47 Spa. at $\pm 9"$ = 35'-2 1/4"	44 Spa. at $\pm 9"$ = 32'-7 1/4"	47 Spa. at $\pm 9"$ = 35'-0"	74 Spa. at $\pm 9"$ = 55'-9"
24	73 Spa. at $\pm 9"$ = 55'-0"	47 Spa. at $\pm 9"$ = 35'-2 1/4"	44 Spa. at $\pm 9"$ = 32'-7 1/4"	47 Spa. at $\pm 9"$ = 35'-0"	74 Spa. at $\pm 9"$ = 55'-9"
25	73 Spa. at $\pm 9"$ = 54'-11 3/8"	47 Spa. at $\pm 9"$ = 35'-2 1/4"	44 Spa. at $\pm 9"$ = 32'-7 1/4"	47 Spa. at $\pm 9"$ = 35'-0"	74 Spa. at $\pm 9"$ = 55'-9"
26	73 Spa. at $\pm 9"$ = 54'-11"	47 Spa. at $\pm 9"$ = 35'-2 1/4"	44 Spa. at $\pm 9"$ = 32'-7 3/8"	47 Spa. at $\pm 9"$ = 35'-0 1/8"	74 Spa. at $\pm 9"$ = 55'-9 1/8"
27	73 Spa. at $\pm 9"$ = 54'-10 5/8"	47 Spa. at $\pm 9"$ = 35'-2 3/8"	44 Spa. at $\pm 9"$ = 32'-7 3/8"	47 Spa. at $\pm 9"$ = 35'-0 1/8"	74 Spa. at $\pm 9"$ = 55'-9 1/4"
28	73 Spa. at $\pm 9"$ = 54'-10 3/8"	47 Spa. at $\pm 9"$ = 35'-2 1/2"	44 Spa. at $\pm 9"$ = 32'-7 1/2"	47 Spa. at $\pm 9"$ = 35'-0 1/4"	74 Spa. at $\pm 9"$ = 55'-9 3/8"

PARSONS
BRINCKERHOFF

USER NAME = pateld	DESIGNED - LFB	REVISED -
PLOT SCALE = N.T.S.	CHECKED - AH	REVISED -
PLOT DATE = 6/28/2017	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN - UNIT I
STRUCTURE NO. 016-0461

SHEET NO. S2-80 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	372
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

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INTERIOR BEAM MOMENT TABLE - UNIT 1					
	0.4 Sp. 1	Pier C2	0.5 Sp. 2	Pier C3	0.6 Sp. 3
I_s	(in ⁴)	7,800	11,300	7,800	11,300
$I_c(n)$	(in ⁴)	22,398	-	21,760	-
$I_c(3n)$	(in ⁴)	16,379	-	15,755	-
$I_c(cr)$	(in ⁴)	-	14,355	-	14,047
S_s	(in ³)	439	623	439	623
$S_c(n)$	(in ³)	676	-	670	-
$S_c(3n)$	(in ³)	609	-	600	-
$S_c(cr)$	(in ³)	-	700	-	693
DC1	(k/')	0.852	0.859	0.778	0.793
M _{DC1}	('k)	420	588	92	500
DC2	(k/')	0.11	0.11	0.11	0.11
M _{DC2}	('k)	54	83	24	50
DW	(k/')	0.162	0.152	0.144	0.134
M _{DW}	('k)	81	106	19	87
M _{ℓ + 1M}	('k)	842	867	612	797
M _u (Strength I)	('k)	2,188	2,515	1,245	2,213
Φ _f M _n	('k)	3,249	3,591	3,357	3,528
f _s DC1	(ksi)	11.5	11.3	2.5	9.6
f _s DC2	(ksi)	1.1	1.4	0.5	0.9
f _s DW	(ksi)	1.6	1.8	0.4	1.5
f _s (ℓ+1M)	(ksi)	14.9	14.9	11.0	13.8
f _s (Service II)	(ksi)	33.6	33.9	17.6	30.0
0.95R _n F _{yf}	(ksi)	47.5	47.5	47.5	47.5
f _s (Total)(Strength I)	(ksi)	44.2	44.1	25.7	43.3
Φ _f F _n	(ksi)	-	-	-	-
V _r	(k)	34.9	-	36.3	-

INTERIOR BEAM REACTION TABLE - UNIT 1				
	Pier C1	Pier C2	Pier C3	Pier C4
R _{DC1}	(k)	27.84	75.29	66.47
R _{DC2}	(k)	3.50	10.12	6.82
R _{DW}	(k)	5.20	13.75	11.66
R _{ℓ + 1M}	(k)	75.76	114.59	105.96
R _{Total}	(k)	112.30	213.75	190.91

TOP OF BEAM ELEVATIONS

(For fabrication only)

	Beam 19	Beam 20	Beam 21	Beam 22	Beam 23	Beam 24	Beam 25	Beam 26	Beam 27	Beam 28
℄ E. Brg. Pier C1	608.92	608.84	608.75	608.66	608.57	608.48	608.35	608.21	608.08	607.94
℄ Splice 1	609.58	609.59	609.60	609.60	609.61	609.56	609.44	609.31	608.19	609.06
℄ Pier C2	609.75	609.79	609.84	609.88	609.92	609.89	609.77	609.65	609.52	609.40
℄ Splice 2	609.91	609.98	610.06	610.14	610.21	610.19	610.07	609.95	609.84	609.72
℄ Splice 3	610.48	610.54	610.60	610.66	610.73	610.70	610.59	610.48	610.36	610.25
℄ Pier C3	610.68	610.74	610.80	610.87	610.93	610.90	610.79	610.69	610.58	610.47
℄ Splice 4	610.89	610.95	611.01	611.08	611.14	611.11	611.01	610.90	610.80	610.69
℄ W. Brg. Pier C4	611.29	611.36	611.42	611.48	611.54	611.53	611.46	611.35	611.27	611.19

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in.⁴ and in.³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in.⁴ and in.³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

$I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.⁴ and in.³).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{ℓ + 1M}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).

1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{ℓ + 1M}

Φ_fM_n: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).

M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).

M_{DC2} / S_{c(3n)} or M_{DC2} / S_{c(cr)} as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).

M_{DW} / S_{c(3n)} or M_{DW} / S_{c(cr)} as applicable.

f_s (ℓ+1M): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).

M_{ℓ + 1M} / S_{c(n)} or M_{ℓ + 1M} / cS (cr) as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).

f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_s (ℓ + 1M)

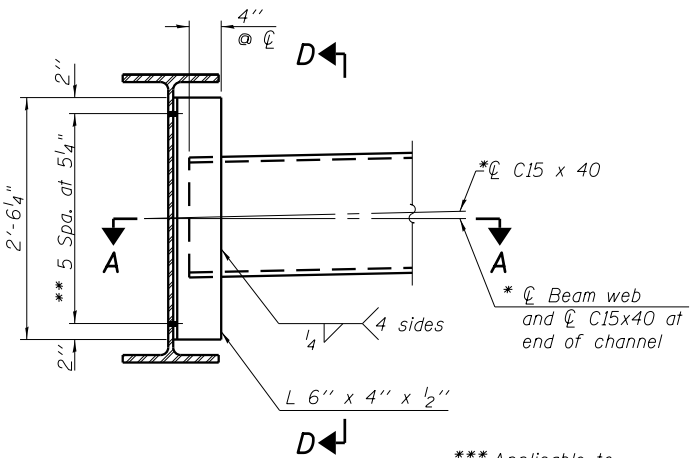
0.95R_nF_{yf}: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).

1.25 (f_{sDC1} + f_{sDC2}) + 1.5 f_{sDW} + 1.75 f_s (ℓ + 1M)

Φ_fF_n: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

V_r: Maximum factored shear range in span computed according to Article 6.10.10.



INTERIOR DIAPHRAGM

D4 (44 Required)
D5 (11 Required)
D6 thru D16 (4 each = 44 Required)

*** Applicable to
Interior D5
Diaphragms
Between Beams
23 & 24 Only
(at 11 of the 40
D5 diaphragms)

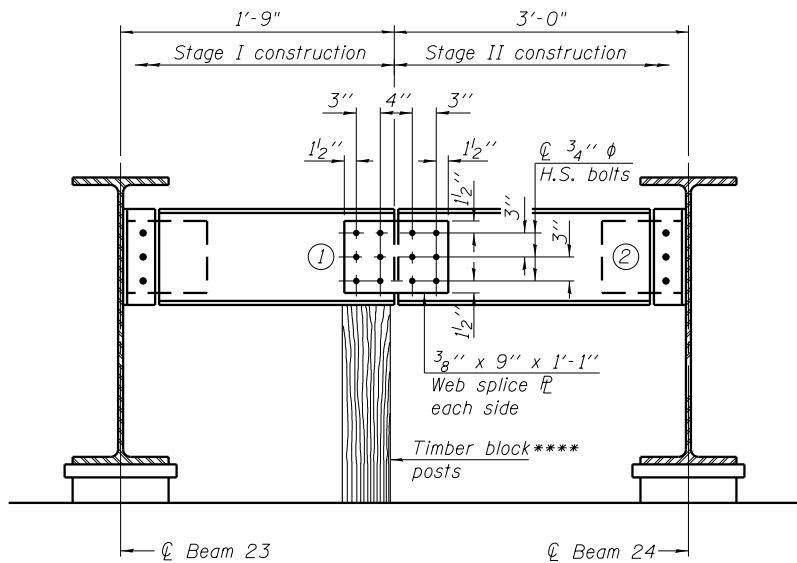
Note:

Two hardened washers required for each set of oversized holes.

*Alternate channel C15x50 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

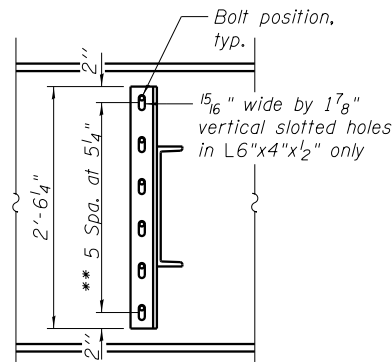


END DIAPHRAGM STAGE I AND II

(Looking East, 2 Required)
End diaphragm (D2) at Pier C1 shown,
end diaphragm (D18) at Pier C4 similar

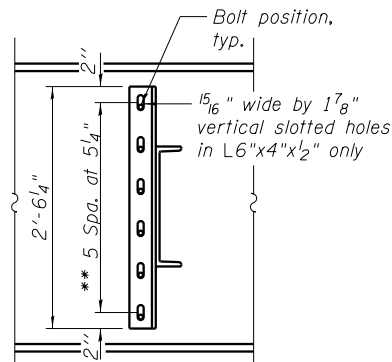
END DIAPHRAGM STAGE CONSTRUCTION SEQUENCE

- 1.) Order diaphragm in two sections.
- 2.) Attach section ① of diaphragm to Beam 23.
- 3.) Place timber block posts between section ① of diaphragm and pier bearing section.
- 4.) Attach section ② of diaphragm to both Beam 24 and section ① of diaphragm during stage II construction with splice plates.
- 5.) Remove timber block posts.



*** SECTION D-D

At Beam 24 on
before placing
Stage II concrete slab

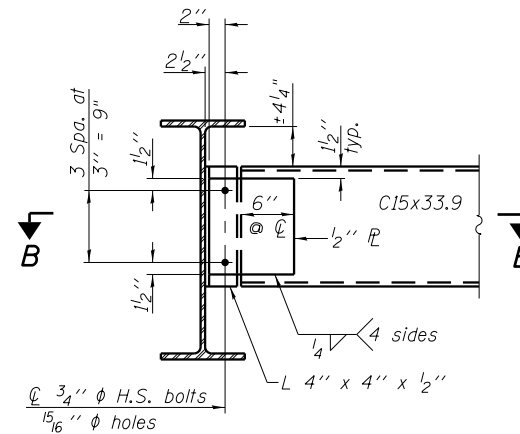


*** SECTION D-D

At Beam 24 on
after placing
Stage II concrete slab

*** SUGGESTED SEQUENCE OF CONSTRUCTION FOR INTERIOR DIAPHRAGMS AT STAGE CONSTRUCTION

1. Prior to Stage II deck work, connect diaphragm to Beam 23. Bolts in slots of Beam 24 and in diaphragm connection angle shall be finger tight until the Stage II pour is complete. Position slots so bolts start at one end with no concrete load and finish near the opposite end under deck load.
2. Set slab forms and place reinforcement.
3. Place Stage II concrete slab. Once beam 24 deflects, tighten bolts as required.

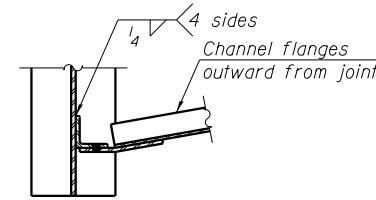


END DIAPHRAGM

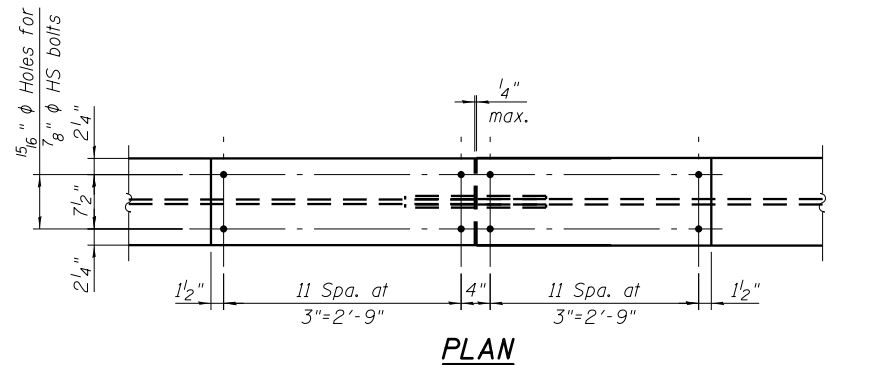
D1 (4 Required)
D2 (1 Required)
D3 (4 Required)
D17 (4 Required)
D18 (1 Required)
D19 (4 Required)

Note:

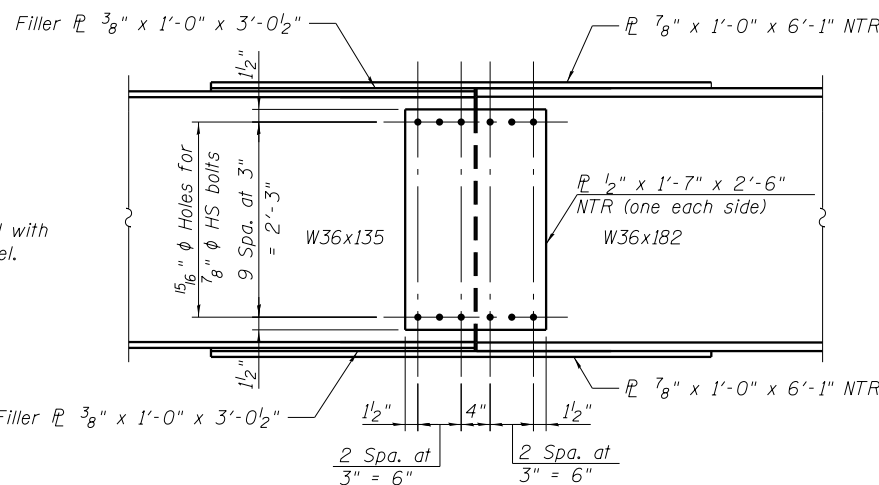
Two hardened washers required for each set of oversized holes.



SECTION B-B



PLAN



ELEVATION

TYPICAL SPLICE DETAIL

(40 Required)

Notes:

All diaphragms, angles, fill plates and connecting plates may be AASHTO M270, Grade 36.

All splice plates, except filler plates shall be AASHTO M270 Grade 50.

Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

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**PARSONS
BRINCKERHOFF**

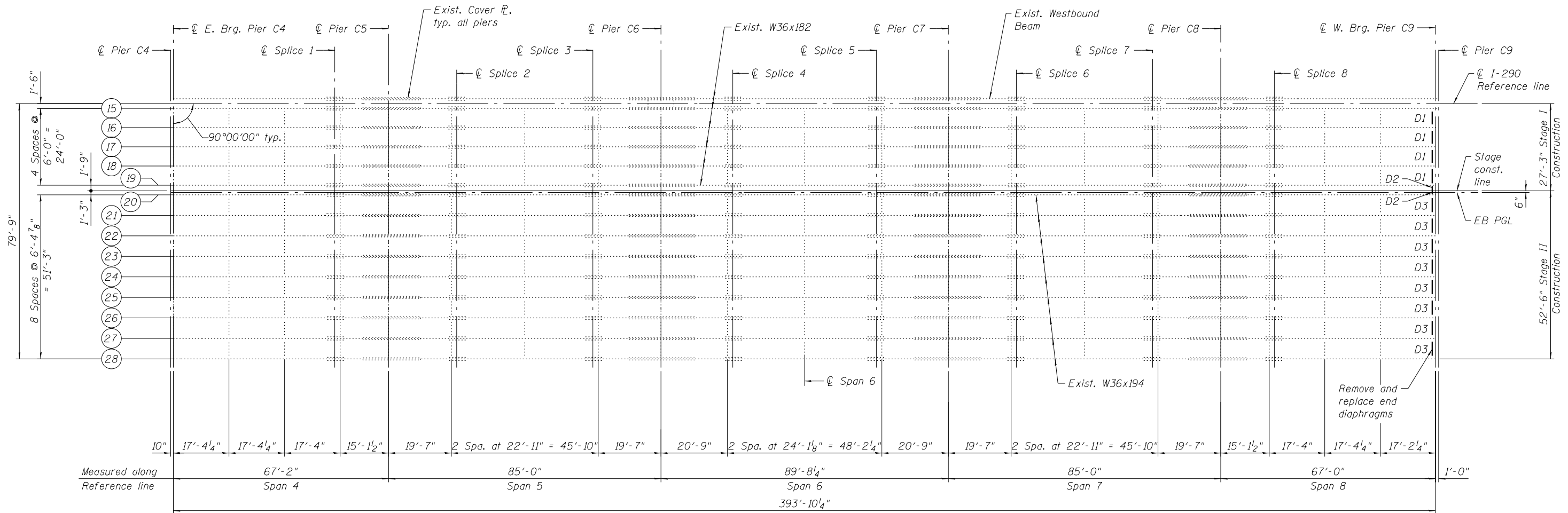
USER NAME = pateld	DESIGNED - LFB	REVISED -
PLOT SCALE = N.T.S.	CHECKED - AH	REVISED -
PLOT DATE = 6/28/2017	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

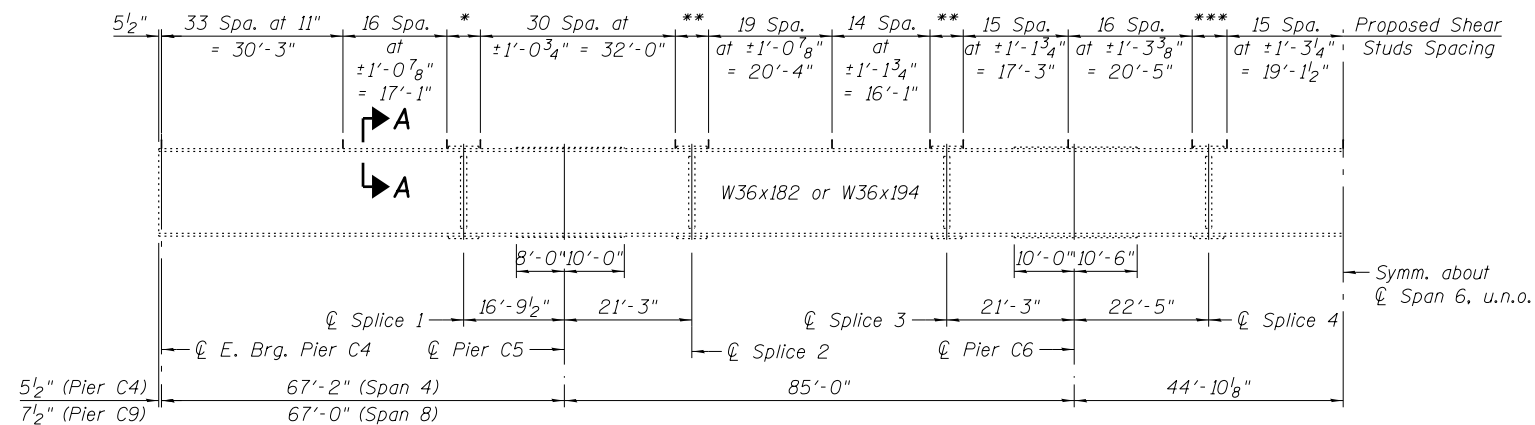
**SUPERSTRUCTURE STEEL DETAILS II - UNIT I
STRUCTURE NO. 016-0461**

SHEET NO. S2-82 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	374
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

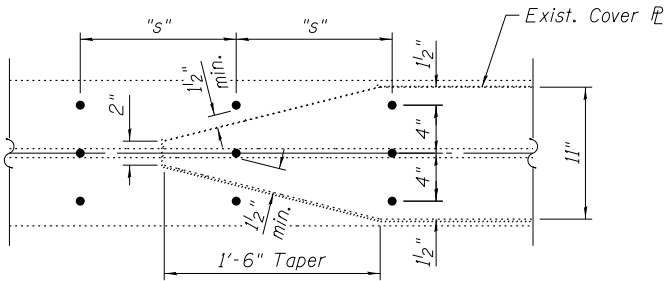


EXISTING FRAMING PLAN - UNIT II



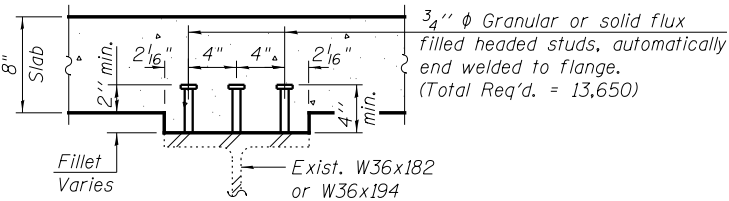
EXISTING BEAM ELEVATION - UNIT II

* 6'-1" (No Studs)
 ** 6'-0 1/2" (No Studs)
 *** 6'-3 5/8" (No Studs)



SHEAR STUDS AT ENDS OF COVER PLATE

Shear connector spacing, "s", may be adjusted up to 3" to maintain minimum clearances.



SECTION A-A

Notes:
 For top of existing beam elevations and notes and tables, see sheet S2-84.
 For diaphragm replacement details, see sheet S2-88.

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PARSONS BRINCKERHOFF	USER NAME = pateld	DESIGNED - IJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FRAMING PLAN - UNIT II STRUCTURE NO. 016-0461	F.A.I. RTE. 90/94/290	SECTION 2014-001 R&B (EB)	COUNTY COOK	TOTAL SHEETS 696	SHEET NO. 375
	PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -			CONTRACT NO. 60X75				
	PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -			ILLINOIS FED. AID PROJECT				
						SHEET NO. S2-83 OF S2-137 SHEETS				

INTERIOR BEAM MOMENT TABLE						
		0.4 Sp. 4 or 0.6 Sp. 8	Pier C5 or Pier C8	0.5 Sp. 5 or 0.5 Sp. 7	Pier C6 or Pier C7	0.5 Sp. 6
I_s	(in ⁴)	12100	15865	12100	16838	12100
$I_c(n)$	(in ⁴)	30740		30740		30740
$I_c(3n)$	(in ⁴)	21792		21792		21792
$I_c(cr)$	(in ⁴)		19320		20304	
S_s	(in ³)	664	846	664	892	664
$S_c(n)$	(in ³)	977		977		977
$S_c(3n)$	(in ³)	866		866		866
$S_c(cr)$	(in ³)		1157		1201	
$\bar{\varrho}$	(k/')	0.879	0.920	0.879	0.931	0.879
$M \bar{\varrho}$	('k)	268	523	237	598	290
$s \bar{\varrho}$	(k/')	0.230	0.230	0.230	0.230	0.230
$M_s \bar{\varrho}$	('k)	70	135	63	155	77
$M \bar{L}$	('k)	435	416	450	479	475
$M_I \bar{u}$	('k)	113	103	107	113	111
$^5_3 [M \bar{L} + I]$	('k)	913	865	928	987	977
M_a	('k)	1627	1980	1597	2262	1747
* M_u	('k)					
$f_s \bar{\varrho}$ non-comp	(ksi)	4.8	7.4	4.3	8.0	5.2
$f_s \bar{\varrho}$ (comp)	(ksi)	1.0	1.4	0.9	1.5	1.1
$f_s \ ^5_3 [M \bar{L} + M_I]$	(ksi)	11.2	9.0	11.4	9.9	12.0
f_s (Overload)	(ksi)	17.0	17.8	16.6	19.4	18.3
** f_s (Total)	(ksi)	22.1	23.1	21.6	25.2	23.8
VR	(k)	54.5	58.7	41.9	57.2	41.9

* Compact section
** Braced non-compact and partially braced section

INTERIOR BEAM REACTION TABLE					
	Pier C4 & C9	Pier C5 & C8	Pier C6	Pier C7	
$R \bar{\varrho}$	(k)	28.3	94.0	106.6	99.4
$R \bar{L}$	(k)	45.4	59.0	62.4	62.4
R_I	(k)	11.8	14.7	14.7	14.7
R_{Total}	(k)	85.6	167.7	183.7	176.5

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in.⁴ and in.³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in.⁴ and in.³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

$I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total and Overload) in cracked sections, due to both short-term composite live loads long-term composite (superimposed) dead

$\bar{\varrho}$: loads (in.⁴ and in.³).

$M \bar{\varrho}$: Un-factored non-composite dead load (kips/ft.).

$s \bar{\varrho}$: Un-factored moment due to non-composite dead load (kip-ft.).
Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_s \bar{\varrho}$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

$M \bar{L}$: Un-factored live load moment (kip-ft.).

M_I : Un-factored moment due to impact (kip-ft.).

M_a : Factored design moment (kip-ft.).

1.3 [$M \bar{\varrho}$ + $M_s \bar{\varrho}$ + $\frac{5}{3} (M \bar{L} + M_I)$]

M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments below (ksi).
 $M \bar{\varrho}$ + $M_s \bar{\varrho}$ + $\frac{5}{3} (M \bar{L} + M_I)$

f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
1.3 [$M \bar{\varrho}$ + $M_s \bar{\varrho}$ + $\frac{5}{3} (M \bar{L} + M_I)$]

VR: Maximum $\bar{L}$ + impact shear range within the composite portion of the span for stud shear connector design (kips).

*** TOP OF EXISTING BEAM ELEVATION

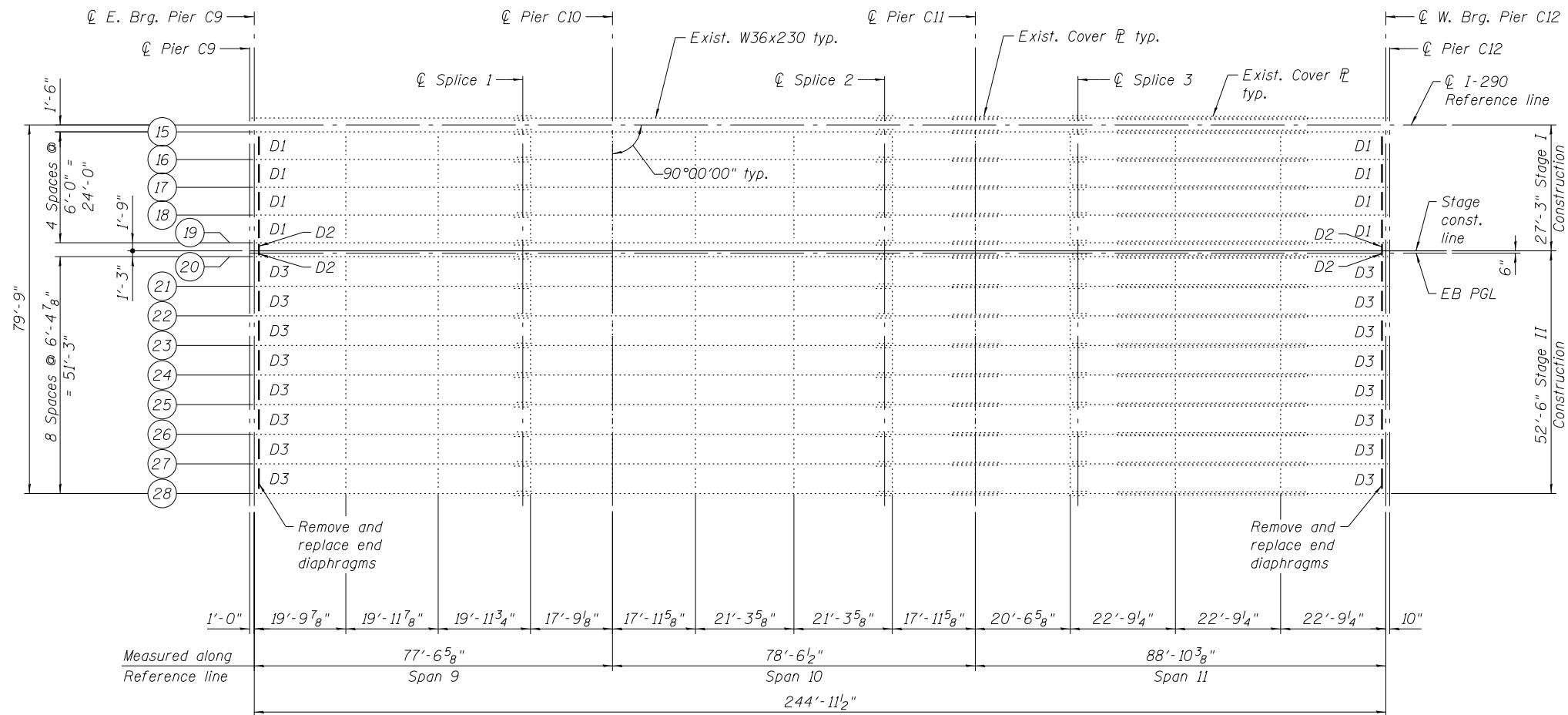
	Beam 15	Beam 16	Beam 17	Beam 18	Beam 19	Beam 20	Beam 21	Beam 22	Beam 23	Beam 24	Beam 25	Beam 26	Beam 27	Beam 28
$\bar{C}$ E. Brg. Pier C4	611.22	611.35	611.47	611.58	611.64	611.63	611.58	611.46	611.32	611.19	611.06	610.92	610.79	610.65
$\bar{C}$ Splice 1	611.37	611.50	611.62	611.73	611.79	611.79	611.73	611.60	611.47	611.34	611.20	611.07	610.94	610.80
$\bar{C}$ Brg. Pier C5	611.42	611.55	611.67	611.78	611.84	611.84	611.78	611.65	611.52	611.39	611.25	611.12	610.99	610.85
$\bar{C}$ Splice 2	611.49	611.61	611.73	611.85	611.90	611.90	611.84	611.72	611.58	611.45	611.32	611.18	611.05	610.92
$\bar{C}$ Splice 3	611.57	611.70	611.82	611.93	611.99	611.99	611.93	611.80	611.67	611.54	611.40	611.27	611.14	611.00
$\bar{C}$ Brg. Pier C6	611.59	611.72	611.84	611.96	612.01	612.01	611.95	611.83	611.69	611.56	611.43	611.29	611.16	611.03
$\bar{C}$ Splice 4	611.62	611.74	611.87	611.98	612.03	612.03	611.97	611.85	611.72	611.58	611.45	611.32	611.18	611.05
$\bar{C}$ Splice 5	611.62	611.74	611.87	611.98	612.03	612.03	611.97	611.85	611.72	611.58	611.45	611.32	611.18	611.05
$\bar{C}$ Brg. Pier C7	611.59	611.72	611.84	611.96	612.01	612.01	611.95	611.83	611.69	611.56	611.43	611.29	611.16	611.03
$\bar{C}$ Splice 6	611.57	611.70	611.82	611.93	611.99	611.99	611.93	611.81	611.67	611.54	611.40	611.27	611.14	611.00
$\bar{C}$ Splice 7	611.49	611.61	611.73	611.85	611.90	611.90	611.84	611.72	611.58	611.45	611.32	611.18	611.05	610.92
$\bar{C}$ Brg. Pier C8	611.42	611.55	611.67	611.78	611.84	611.84	611.78	611.66	611.52	611.39	611.25	611.12	610.99	610.85
$\bar{C}$ Splice 8	611.37	611.50	611.62	611.73	611.79	611.79	611.73	611.61	611.47	611.34	611.20	611.07	610.94	610.80
$\bar{C}$ W. Brg. Pier C9	611.30	611.43	611.55	611.66	611.71	611.71	611.66	611.53	611.40	611.27	611.13	611.00	610.87	610.73

*** Elevations have been converted from the City of Chicago Datum on the original construction plans dated June 26, 1950 to the current NAVD 88 datum using a conversion of 579.19 feet.

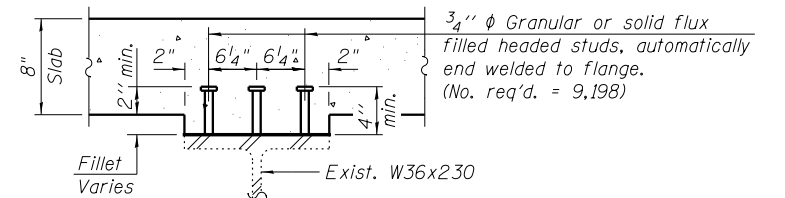
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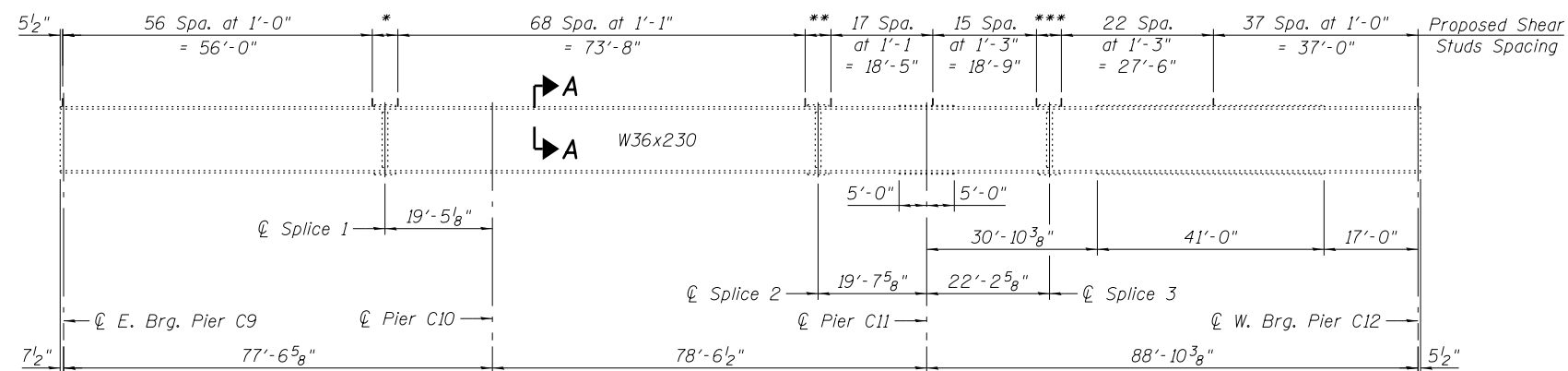
PARSONS BRINCKERHOFF	USER NAME = pateld	DESIGNED - IJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE STEEL DETAILS I – UNIT II STRUCTURE NO. 016-0461	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - HA	REVISED -			90/94/290	2014-001 R&B (EB)	COOK	696	376
	PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -			CONTRACT NO. 60X75				
	PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -			SHEET NO. S2-84 OF S2-137 SHEETS				
						ILLINOIS FED. AID PROJECT				



EXISTING FRAMING PLAN - UNIT III



SECTION A-A



EXISTING BEAM ELEVATION - UNIT III

- * 4'-7 1/2" (No Studs)
- ** 4'-8" (No Studs)
- *** 4'-6" (No Studs)

Notes:
 For minimum clearances of shear studs at ends of cover plates, see sheet S2-83.
 For interior beam moment table and reactions, see sheet S2-86.
 For diaphragm replacement details, see sheet S2-88.

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**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - IJL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - HA	REVISED -
PLOT DATE = 6/28/2017	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FRAMING PLAN - UNIT III
STRUCTURE NO. 016-0461**

SHEET NO. S2-85 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	377
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

INTERIOR BEAM MOMENT TABLE					
	0.4 Sp. 9	Pier C10	0.5 Sp. 10	Pier C11	0.6 Sp. 11
I_s	(in ⁴)	15000	15000	15000	21254
$I_c(n)$	(in ⁴)	34857		34857	43499
$I_c(3n)$	(in ⁴)	24894		24894	31714
$I_c(cr)$	(in ⁴)		18370	24686	
S_s	(in ³)	837	837	837	1144
$S_c(n)$	(in ³)	1162		1162	1492
$S_c(3n)$	(in ³)	1038		1038	1346
$S_c(cr)$	(in ³)		1155	1456	
$\bar{Q}$	(k/')	0.928	0.928	0.928	0.998
$M \bar{Q}$	('k)	461	530	107	687
$s \bar{Q}$	(k/')	0.230	0.230	0.230	0.230
$M_s \bar{Q}$	('k)	113	133	26	169
M_L	('k)	518	410	430	466
M_I	('k)	128	101	105	112
$^5_3 [M_L + I]$	('k)	1077	852	892	963
M_a	('k)	2146	1969	1332	2365
* M_u	('k)				
$f_s \bar{Q}$ non-comp	(ksi)	6.6	7.6	1.5	7.2
$f_s \bar{Q}$ (comp)	(ksi)	1.3	1.4	0.3	1.4
$f_s \ ^5_3 [M_L + M_I]$	(ksi)	11.1	8.9	9.2	7.9
f_s (Overload)	(ksi)	19.0	17.9	11.0	16.5
** f_s (Total)	(ksi)	24.7	23.3	14.3	21.5
VR	(k)	53.1	59.3	41.8	58.2

* Compact section
** Braced non-compact and partially braced section

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in.⁴ and in.³).
 $I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in.⁴ and in.³).
 $I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in.⁴ and in.³).
 $I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total and Overload) in cracked sections, due to both short-term composite live loads long-term composite (superimposed) dead $\bar{Q}$: loads (in.⁴ and in.³).
 $M \bar{Q}$: Un-factored non-composite dead load (kips/ft.).
 $s \bar{Q}$: Un-factored moment due to non-composite dead load (kip-ft.).
Un-factored long-term composite (superimposed) dead load (kips/ft.).
 $M_s \bar{Q}$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
 M_L : Un-factored live load moment (kip-ft.).
 M_I : Un-factored moment due to impact (kip-ft.).
 M_a : Factored design moment (kip-ft.).
 $1.3 [M \bar{Q} + M_s \bar{Q} + \frac{5}{3} (M_L + M_I)]$
 M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
 f_s (Overload): Sum of stresses as computed from the moments below (ksi).
 $M \bar{Q} + M_s \bar{Q} + \frac{5}{3} (M_L + M_I)$
 f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.3 [M \bar{Q} + M_s \bar{Q} + \frac{5}{3} (M_L + M_I)]$
VR: Maximum $\bar{Q}$ + impact shear range within the composite portion of the span for stud shear connector design (kips).

INTERIOR BEAM REACTION TABLE				
	Pier C9	Pier C10	Pier C11	Pier C12
$R \bar{Q}$	(k)	37.3	96.5	110.8
R_L	(k)	46.4	59.3	62.9
R_I	(k)	11.5	14.6	15.1
R_{Total}	(k)	95.2	170.4	188.8

*** TOP EXISTING BEAM ELEVATION

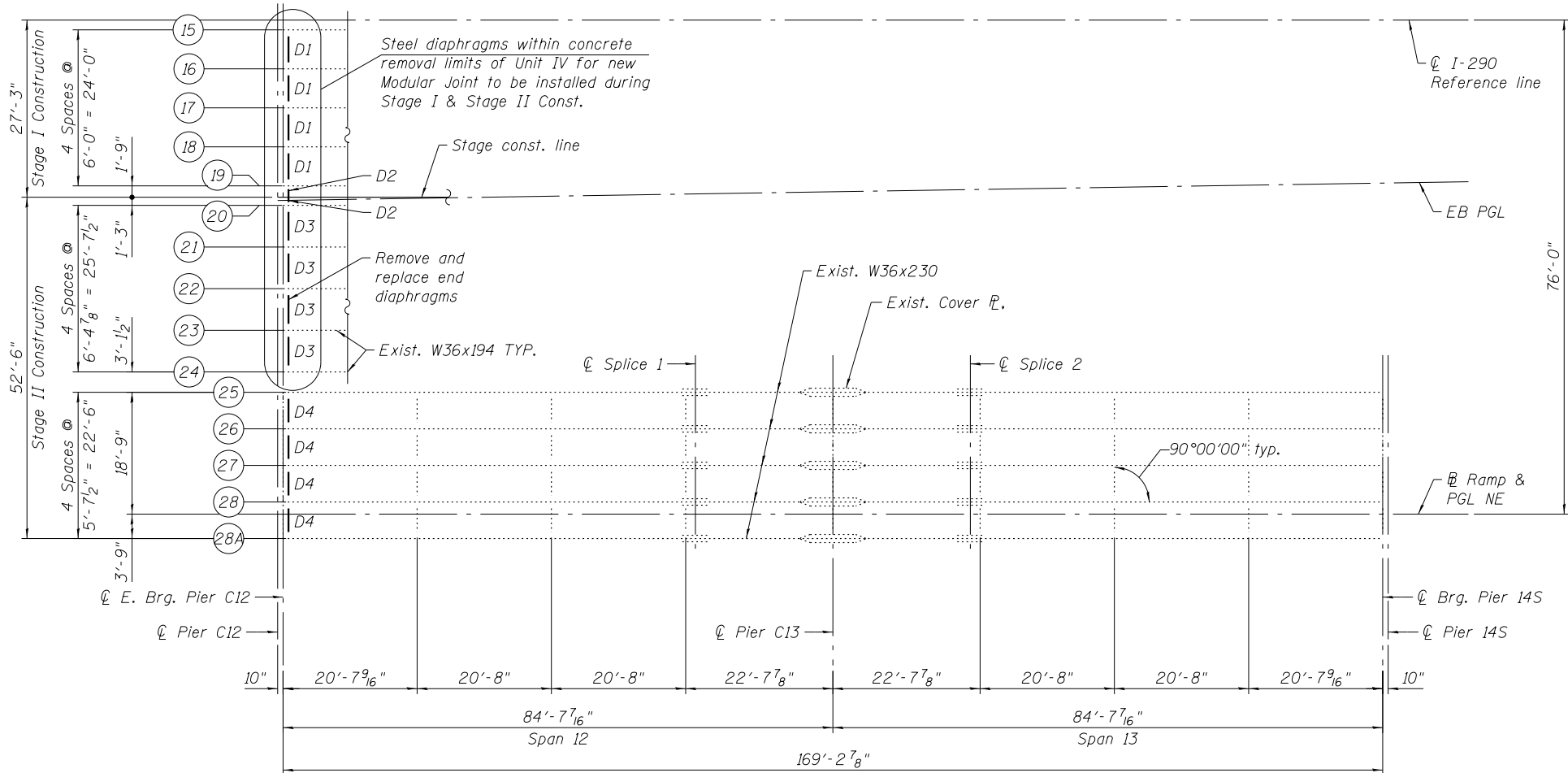
	Beam 15	Beam 16	Beam 17	Beam 18	Beam 19	Beam 20	Beam 21	Beam 22	Beam 23	Beam 24	Beam 25	Beam 26	Beam 27	Beam 28
$\bar{Q}$ E. Brg. Pier C9	611.29	611.42	611.54	611.65	611.71	611.71	611.65	611.52	611.39	611.26	611.12	610.99	610.86	610.72
$\bar{Q}$ Splice 1	610.98	611.11	611.23	611.34	611.40	611.40	611.34	611.22	611.08	610.95	610.81	610.68	610.55	610.41
$\bar{Q}$ Brg. Pier C10	610.91	611.04	611.16	611.27	611.33	611.33	611.27	611.14	611.01	610.88	610.74	610.61	610.48	610.34
$\bar{Q}$ Splice 2	610.70	610.82	610.95	611.06	611.11	611.11	611.05	610.93	610.80	610.66	610.53	610.40	610.26	610.13
$\bar{Q}$ Brg. Pier C11	610.62	610.75	610.87	610.98	611.04	611.04	610.98	610.85	610.72	610.59	610.45	610.32	610.19	610.05
$\bar{Q}$ Splice 3	610.54	610.66	610.79	610.90	610.95	610.95	610.89	610.77	610.64	610.50	610.37	610.24	610.10	609.97
$\bar{Q}$ W. Brg. Pier C12	610.37	610.50	610.62	610.74	610.79	610.79	610.73	610.61	610.47	610.34	610.21	610.07	609.94	609.81

*** Elevations have been converted from the City of Chicago Datum on the original construction plans dated June 26, 1950 to the current NAVD 88 datum using a conversion of 579.19 feet.

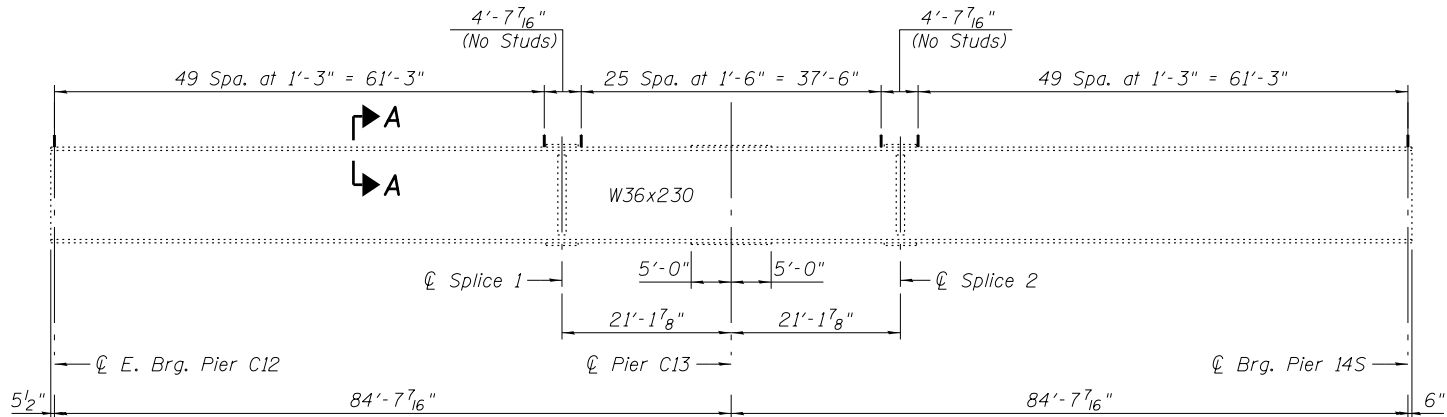
FOR INFORMATION ONLY

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PARSONS BRINCKERHOFF	USER NAME = pateld	DESIGNED - IJL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE STEEL DETAILS – UNIT III STRUCTURE NO. 016-0461	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - HA	REVISED -			90/94/290	2014-001 R&B (EB)	COOK	696	378
	PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -			CONTRACT NO. 60X75				
	PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -			SHEET NO. S2-86 OF S2-137 SHEETS				
						ILLINOIS FED. AID PROJECT				



EXISTING FRAMING PLAN - EXIT RAMP



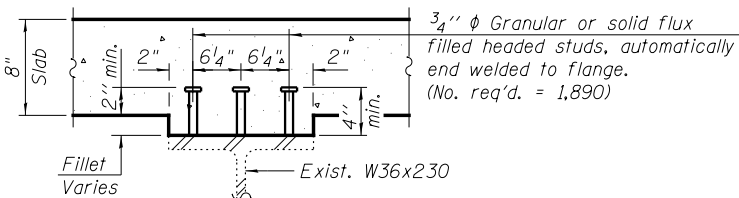
EXISTING BEAM ELEVATION - EXIT RAMP

TOP EXISTING BEAM ELEVATION

(For information only)

	Beam 25	Beam 26	Beam 27	Beam 28	Beam 28A
℄ E. Brg. Pier C12	610.27	610.15	610.03	609.92	609.80
℄ Splice 1	608.23	608.11	607.99	607.87	607.76
℄ Brg. Pier C13	607.24	607.12	607.00	606.88	606.77
℄ Splice 2	606.24	606.13	606.01	605.89	605.78
℄ Brg. Pier 14S	603.38	603.26	603.14	603.02	602.90

*** Elevations have been converted from the City of Chicago Datum on the original construction plans dated June 26, 1950 to the current NAVD 88 datum using a conversion of 579.19 feet.



SECTION A-A

INTERIOR BEAM MOMENT TABLE			
		0.4 Sp. 12 or 0.6 Sp. 13	Pier C13
I_s	(in ⁴)	15000	21254
$I_c(n)$	(in ⁴)	33553	
$I_c(3n)$	(in ⁴)	23960	
$I_c(cr)$	(in ⁴)		24292
S_s	(in ³)	837	1144
$S_c(n)$	(in ³)	1149	
$S_c(3n)$	(in ³)	1023	
$S_c(cr)$	(in ³)		1417
ϕ	(k'/')	0.850	0.920
$M\phi$	(k)	416	788
$s\phi$	(k'/')	0.340	0.340
$M_s\phi$	(k)	166	314
M_L	(k)	510	451
M_{IM}	(k)	122	108
$\phi_3 [M_L + i]$	(k)	1053	932
M_a	(k)	2126	2644
* M_u	(k)		
$f_s \phi$ non-comp	(ksi)	6.0	8.3
$f_s \phi$ (comp)	(ksi)	1.9	2.7
$f_s \phi_3 [M_L + M_I]$	(ksi)	11.0	7.9
f_s (Overload)	(ksi)	18.9	18.9
** f_s (Total)	(ksi)	24.6	24.6
VR	(k)	49.5	48.1

* Compact section

** Braced non-compact and partially braced section

INTERIOR BEAM REACTION TABLE		
	Pier C12 or Pier 14S	Pier C13
$R\phi$	(k)	38.1
R_L	(k)	45.5
R_I	(k)	10.9
R_{Total}	(k)	94.5

I_s , S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in.⁴ and in.³).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in.⁴ and in.³).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total and Overload) in cracked sections, due to both short-term composite live loads long-term composite (superimposed) dead loads (in.⁴ and in.³).

ϕ : loads (in.⁴ and in.³).

$M\phi$: Un-factored non-composite dead load (kips/ft.).

$s\phi$: Un-factored moment due to non-composite dead load (kip-ft.).
Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_s\phi$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M_L : Un-factored live load moment (kip-ft.).

M_I : Un-factored moment due to impact (kip-ft.).

M_a : Factored design moment (kip-ft.).

$1.3 [M\phi + M_s\phi + \frac{5}{8} (M_L + M_I)]$

M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments below (ksi).

$M\phi + M_s\phi + \frac{5}{8} (M_L + M_I)$

f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).

$1.3 [M\phi + M_s\phi + \frac{5}{8} (M_L + M_I)]$

VR: Maximum L_t + impact shear range within the composite portion of the span for stud shear connector design (kips).

Notes:

For minimum clearances of shear studs at ends of cover plates, see sheet S2-83.

For diaphragm replacement details, see sheet S2-88.

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**PARSONS
BRINCKERHOFF**

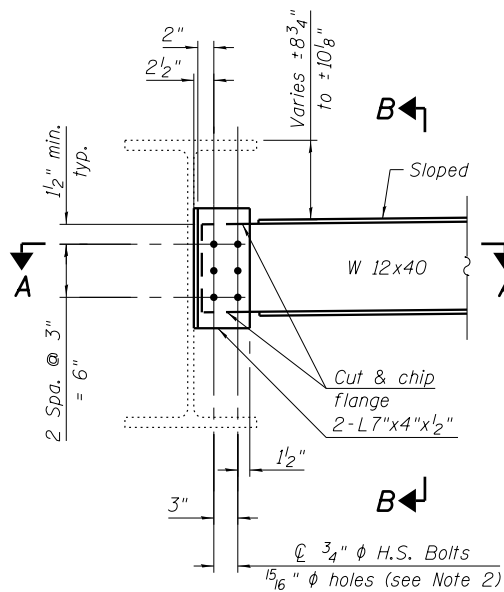
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	CHECKED - HA	REVISED -
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FRAMING PLAN - EXIT RAMP
STRUCTURE NO. 016-0461**

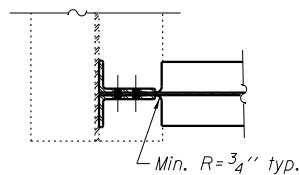
SHEET NO. S2-87 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	379
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

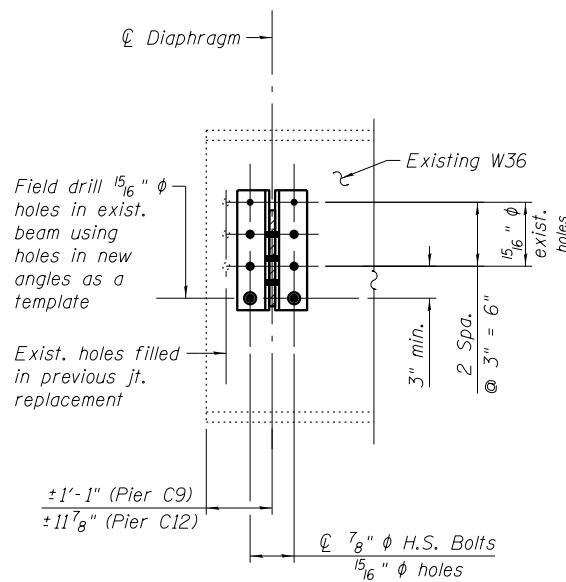


END DIAPHRAGM D1, D3 & D4

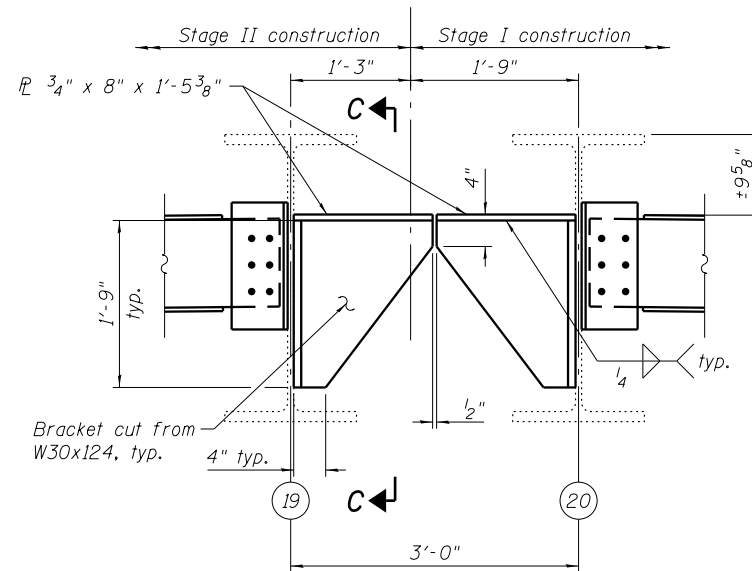
D1 (4 Required, Unit II, ϕ W. Brg. Pier C9,
4 Required, Unit III, ϕ E. Brg. Pier C9,
4 Required, Unit III, ϕ W. Brg. Pier C12,
4 Required, Unit IV, ϕ E. Brg. Pier C12)
D3 (8 Required, Unit II, ϕ W. Brg. Pier C9,
8 Required, Unit III, ϕ E. Brg. Pier C9,
8 Required, Unit III, ϕ W. Brg. Pier C12,
4 Required, Unit IV, ϕ E. Brg. Pier C12)
D4 (4 Required Exit Ramp, ϕ E. Brg. Pier C12)



SECTION A-A

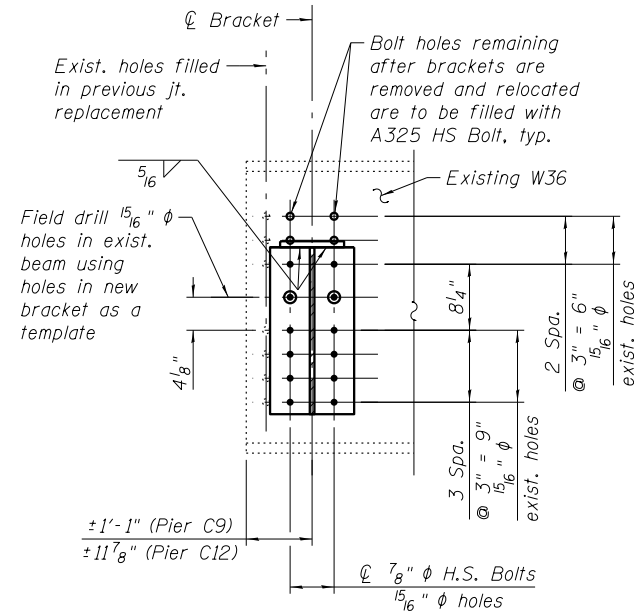


SECTION B-B



END DIAPHRAGM (BRACKETS) D2 AT STAGE LINE

D2 (2 Required, Unit II, ϕ W. Brg. Pier C9,
2 Required, Unit III, ϕ E. Brg. Pier C9,
2 Required, Unit III, ϕ W. Brg. Pier C12,
2 Required, Unit IV, ϕ E. Brg. Pier C12)



SECTION C-C

Notes:

- All structural steel for diaphragms and brackets at Pier C9 & Pier C12 may be AASHTO M270 Grade 36 and shall be hot dipped galvanized. Cost of removal and replacement of steel diaphragms, brackets, and connections included in Structural Steel Repair.
- Two hardened washers required for each set of oversized holes.
- Cost of field drilling is included in Structural Steel Repair.

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	18,774

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**PARSONS
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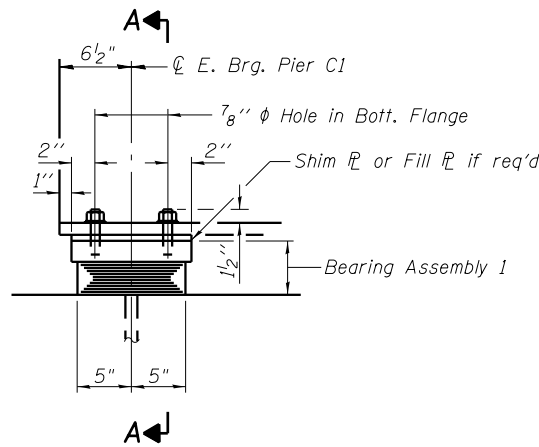
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	CHECKED - HA	REVISED -
PLOT SCALE = N.T.S.	DRAWN - PJL	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

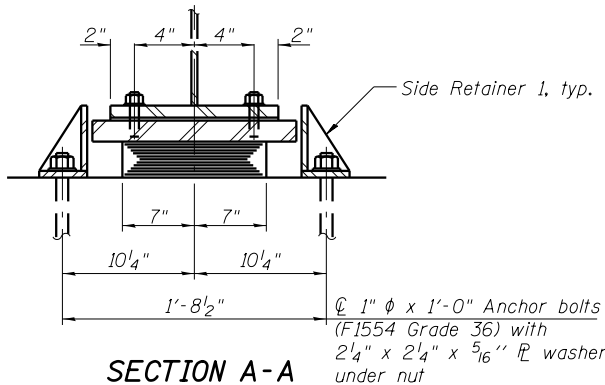
**SUPERSTRUCTURE STEEL DETAILS - UNIT II, UNIT III & EXIT RAMP
STRUCTURE NO. 016-0461**

SHEET NO. S2-88 OF S2-137 SHEETS

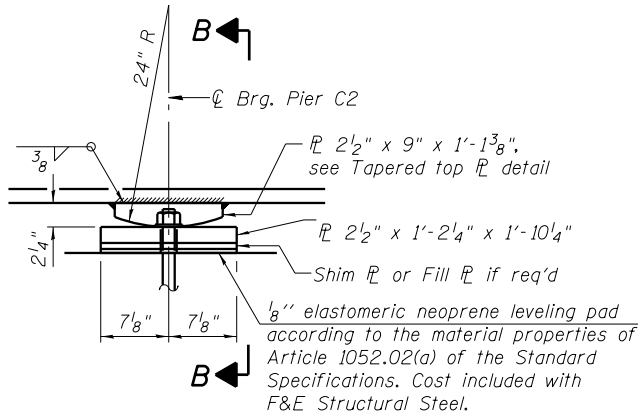
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



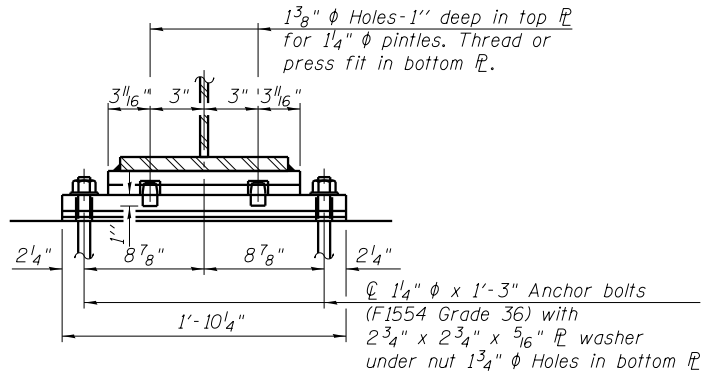
ELEVATION AT E. BRG. PIER C1



SECTION A-A

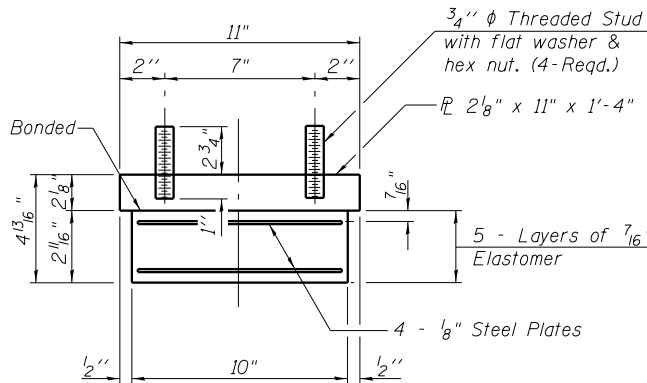


ELEVATION AT PIER C2



SECTION B-B

TYPE I ELASTOMERIC EXP. BRG. AT E. BRG. PIER C1
(10 Required)

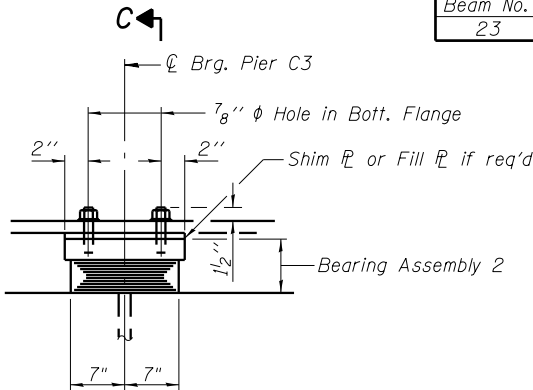


BEARING ASSEMBLY 1

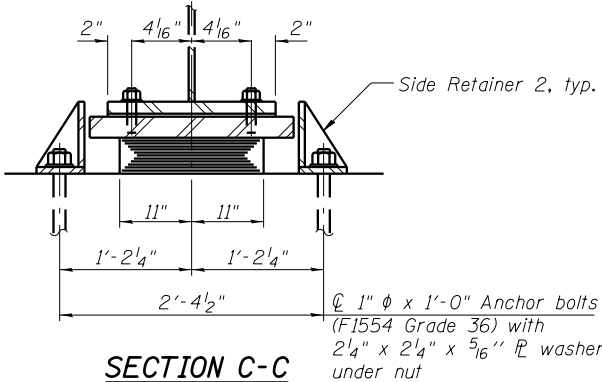
Note:
Shim plates shall not be placed under Bearing Assembly.

FILL PLATE THICKNESS TABLE
AT PIER C2 & C3

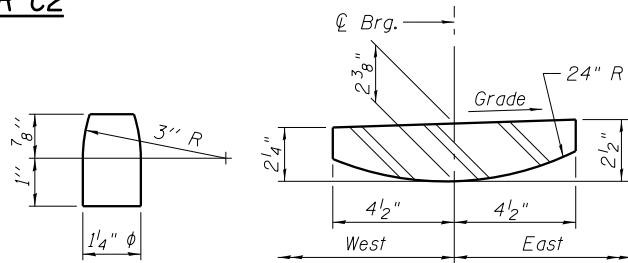
Beam No.	Thickness
23	3/8"



ELEVATION AT PIER C3



SECTION C-C



PINTLE

TAPERED TOP PLATE DETAIL

Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. 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 elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Fixed Bearing Assembly included in the cost of Furnishing and Erecting Structural Steel.

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.

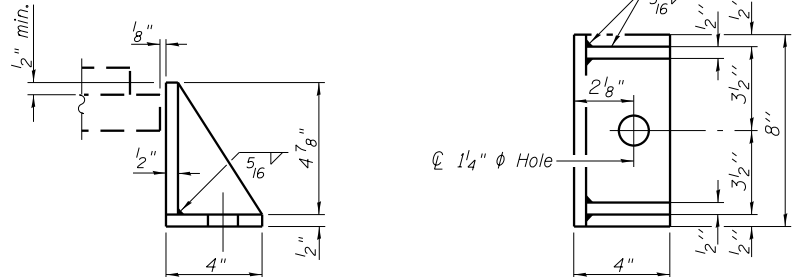
All bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

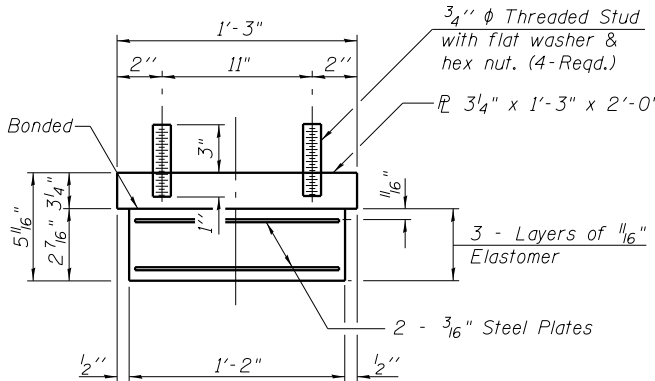
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	20
Anchor Bolts 1"	Each	40
Anchor Bolts 1 1/4"	Each	20



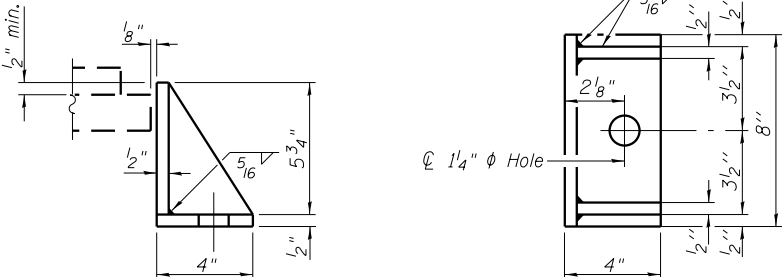
SIDE RETAINER 1

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



BEARING ASSEMBLY 2

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



SIDE RETAINER 2

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

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PLOT DATE = 6/28/2017	DRAWN - IJL/DCP	REVISED -
	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS I - UNIT I
STRUCTURE NO. 016-0461

SHEET NO. S2-89 OF S2-137 SHEETS

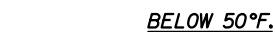
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	381
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



(10 Required)



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



(Move bott. brg. away from fixed brg.) (Move bott. brg. toward fixed brg.)

ABOVE 50°F.

(Move bott. brg. toward fixed brg.)

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

Beam No.	Thickness
23	$\frac{1}{4}$ "

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

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 elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

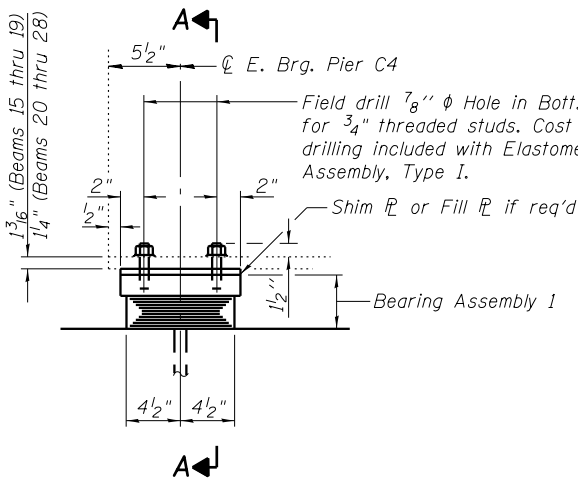
Two "8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

All bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.

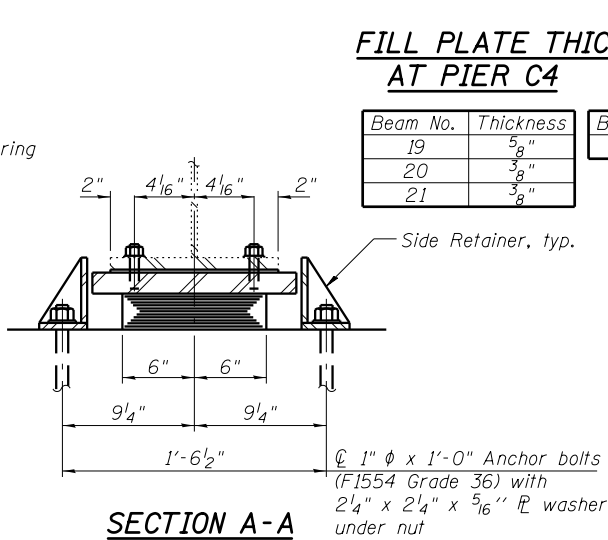
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

<i>Item</i>	<i>Unit</i>	<i>Total</i>
Elastomeric Bearing Assembly, Type II	Each	10
Anchor Bolts 1"	Each	20



ELEVATION AT PIER C4

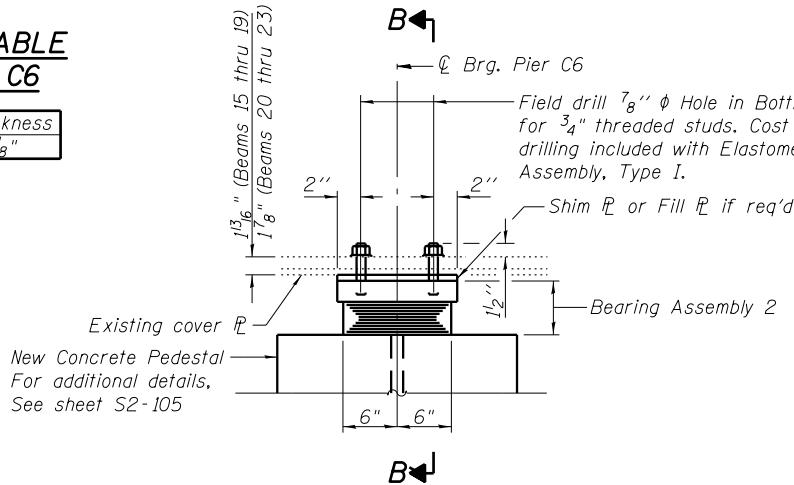


SECTION A-A

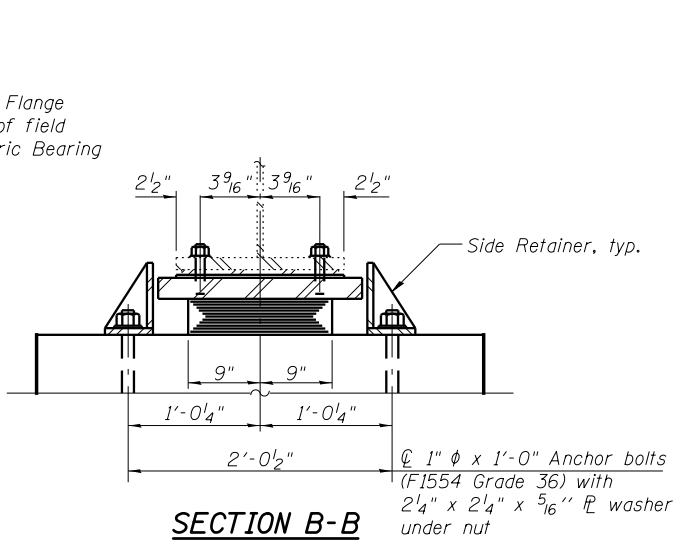
FILL PLATE THICKNESS TABLE
AT PIER C4 AT PIER C6

Beam No.	Thickness
19	5/8"
20	3/8"
21	3/8"

Beam No.	Thickness
19	1/8"

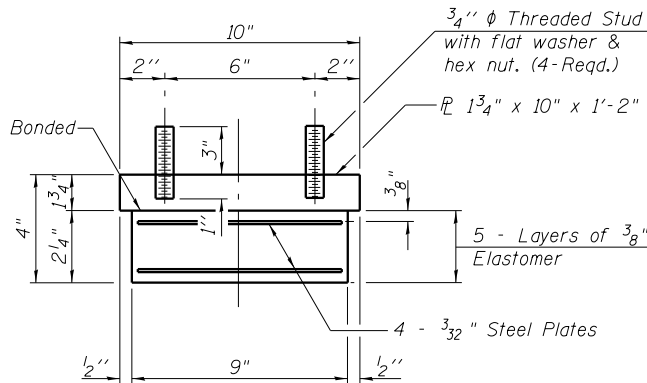


ELEVATION AT PIER C6



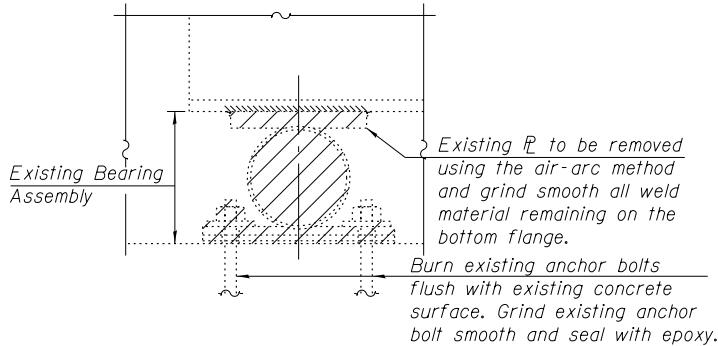
SECTION B-B

TYPE I ELASTOMERIC EXP. BRG. AT E. BRG. PIER C4
(14 Required)



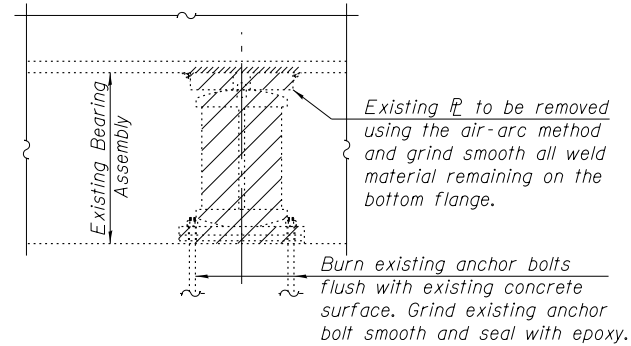
BEARING ASSEMBLY 1

Shim plates shall not be placed under Bearing Assembly.



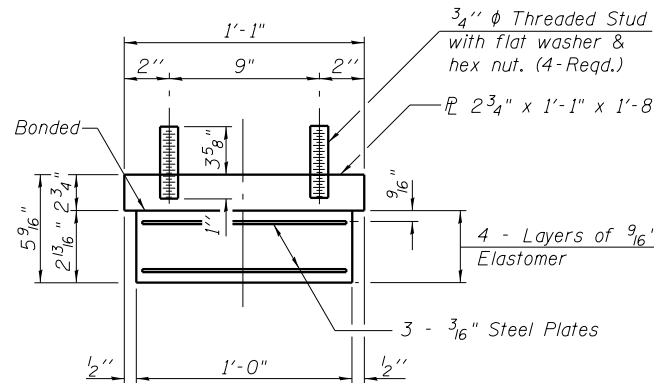
EXISTING BEARING REMOVAL DETAIL
PIER C4, C9 & C12

Cost included with Jack and Remove Existing Bearings.
(56 Required)



EXISTING BEARING REMOVAL DETAIL
PIERS C6, C7, C8, & C11

Cost included with Jack and Remove Existing Bearings.
(56 Required)



BEARING ASSEMBLY 2

Shim plates shall not be placed under Bearing Assembly.

JACK AND REMOVE EXISTING BEARINGS PROCEDURE - UNIT II & III

- The Contractor shall submit for approval by the Engineer, plans for jacking existing bearings and installing new bearings prior to commencing any related work.
- Jacking and removing existing bearings shall be done after the existing deck is removed and prior to placing the new deck, except as noted herein:
 - At Pier C4, jacking and removing existing bearings for beams 20 thru 23 will be done with the existing deck remaining in place and with live load traffic.
 - At Piers C9 and C12, jacking and removing existing bearings for beams 20 and 21 will be done with the existing deck remaining in place and with live load traffic.
 - The jacking system at these locations shall be designed to support dead load and full live load (with impact).
- See table below for dead load reaction, live load plus impact reaction, and minimum jack capacities per beam at each Pier.
- The new concrete pedestals shall be poured and cured prior to the lowering and removal of the jacks.

BEAM REACTIONS

(With deck removed. Applicable to all beams, except beams 20 thru 23)

Pier	R _ℓ (kips)	Min. Jack Capacity (kips)
C4 (East)	5.5	9
C6	20.2	31
C7	20.2	31
C8	18.8	21
C9 (West)	5.5	9
C9 (East)	8.3	13
C11	26.1	40
C12 (West)	11.1	17

BEAM REACTIONS

(With deck remaining in place. Applicable to beams 20 thru 23 only)

Pier	R _ℓ (kips)	R _{ℓ+IM} (kips)	Min. Jack Capacity (kips)
C4 (East)	28.3	57.2	129
C6	106.6	77.1	274
C7	99.4	77.2	263
C8	94.0	73.7	250
C9 (West)	28.3	57.2	129
C9 (East)	37.4	57.9	143
C11	110.9	78.0	281
C12 (West)	44.6	58.4	154

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Elastomeric Bearing Assembly, Type I.

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

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

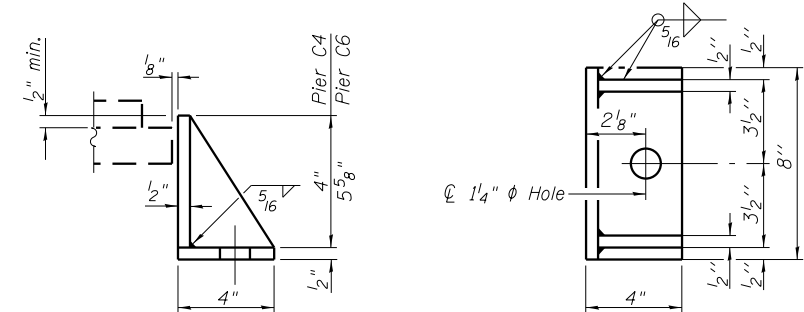
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Two 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
Elastomeric Bearing Assembly, Type I	Each	28
Anchor Bolts, 1"	Each	56
Jack and Remove Existing Bearings	Each	112



SIDE RETAINER

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

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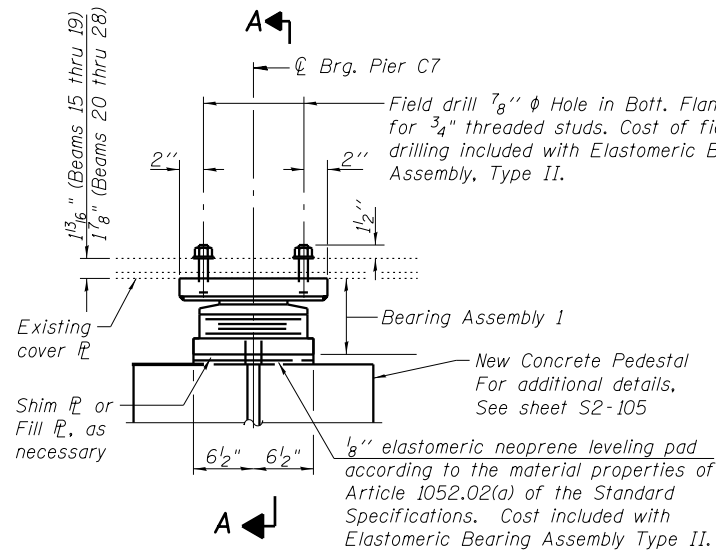
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PLOT SCALE = N.T.S.	CHECKED - P.JL/JZ	REVISED -
PLOT DATE = 6/28/2017	DRAWN - IJL/DCP	REVISED -
	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

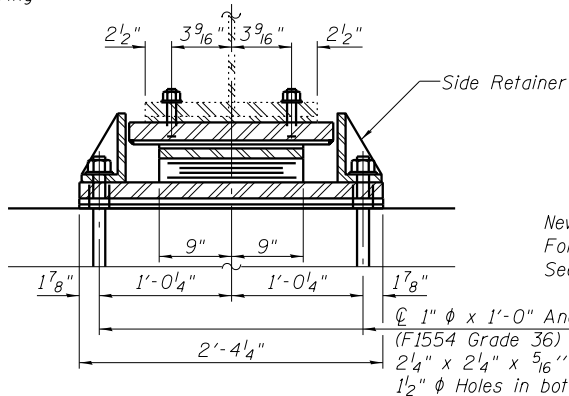
BEARING DETAILS I - UNIT II
STRUCTURE NO. 016-0461

SHEET NO. S2-91 OF S2-137 SHEETS

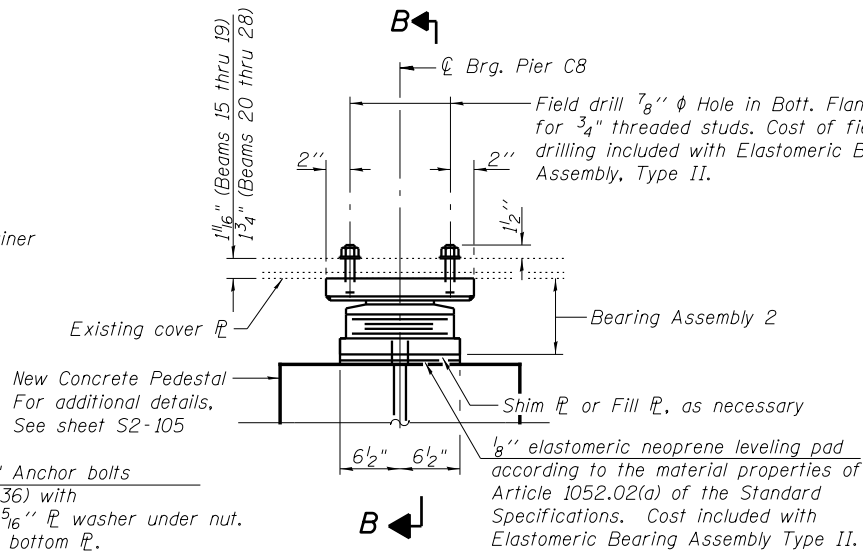
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	383
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



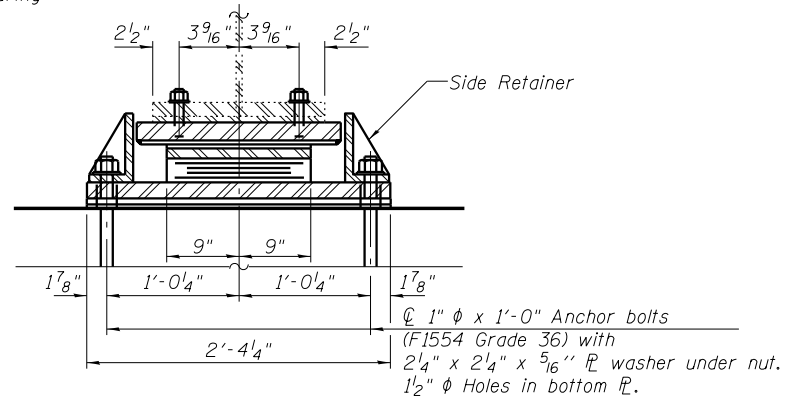
ELEVATION AT PIER C7



SECTION A-A



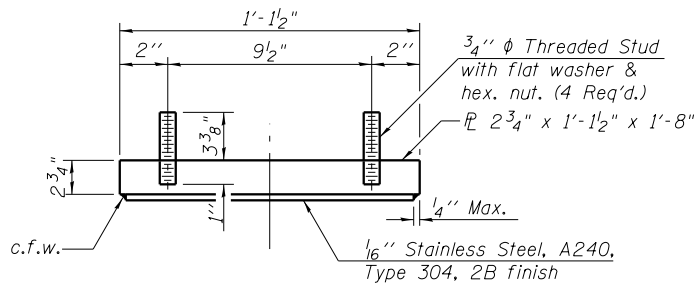
ELEVATION AT PIER C8



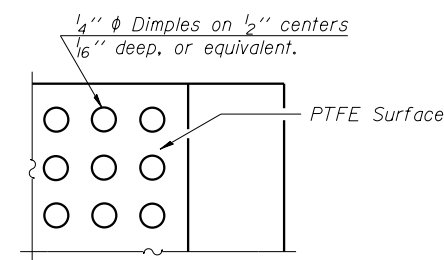
SECTION B-B

TYPE II ELASTOMERIC EXP. BRG. AT PIER C7

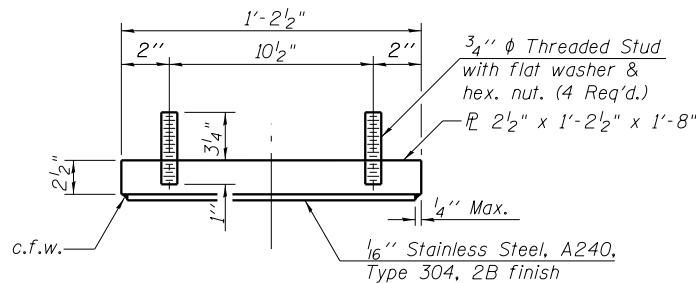
(14 Required)



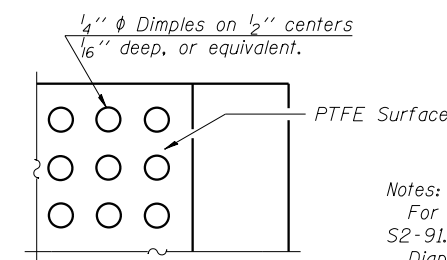
TOP BEARING ASSEMBLY 1



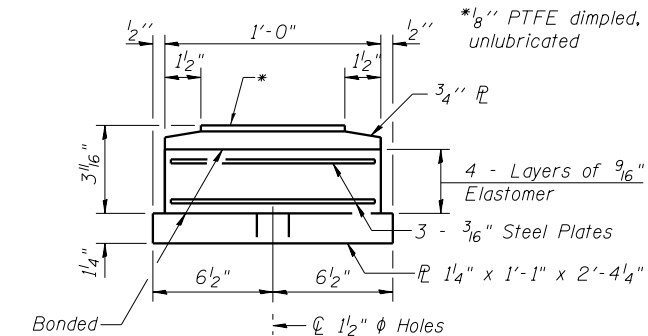
PLAN-PTFE SURFACE



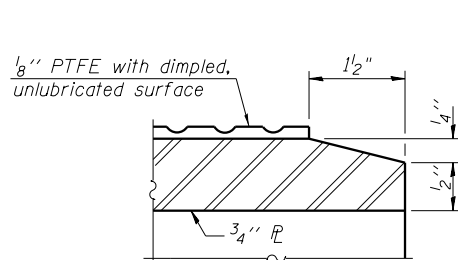
TOP BEARING ASSEMBLY 2



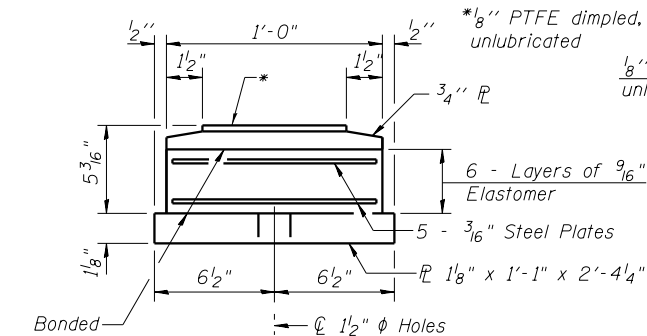
PLAN-PTFE SURFACE



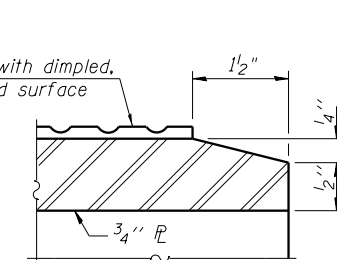
BOTTOM BEARING ASSEMBLY 1



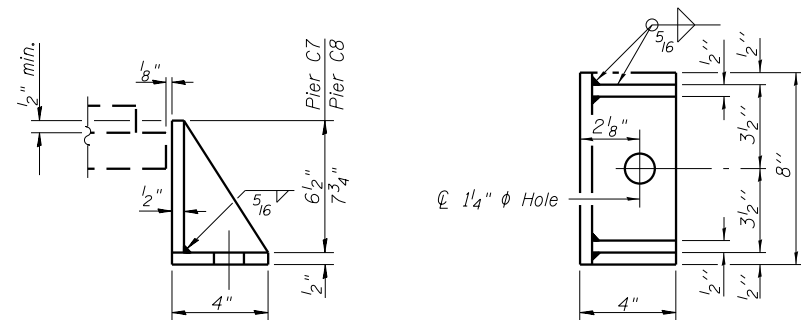
SECTION THRU PTFE



BOTTOM BEARING ASSEMBLY 2

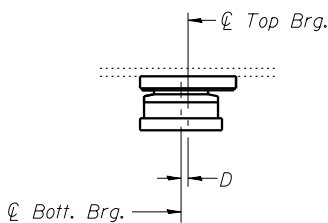


SECTION THRU PTFE



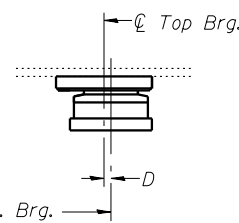
SIDE RETAINER

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



BELOW 50°F.

(Move bott. brg. away from fixed brg.)



ABOVE 50°F.

SETTING ANCHOR BOLTS AT EXP. BRG.

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

FILL PLATE THICKNESS TABLE AT PIERS C7 & C8

Pier	Beam No.	Thickness
C7	19	$1/8''$
C8	19	$1/4''$

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	28
Anchor Bolts 1"	Each	56

0160461-60X75-S092-BRG.dgn

PARSONS BRINCKERHOFF

USER NAME = pateld	DESIGNED - IJL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - P.JL/JZ	REVISED -
PLOT DATE = 6/28/2017	DRAWN - IJL/DCP	REVISED -
	CHECKED - JIG	REVISED -

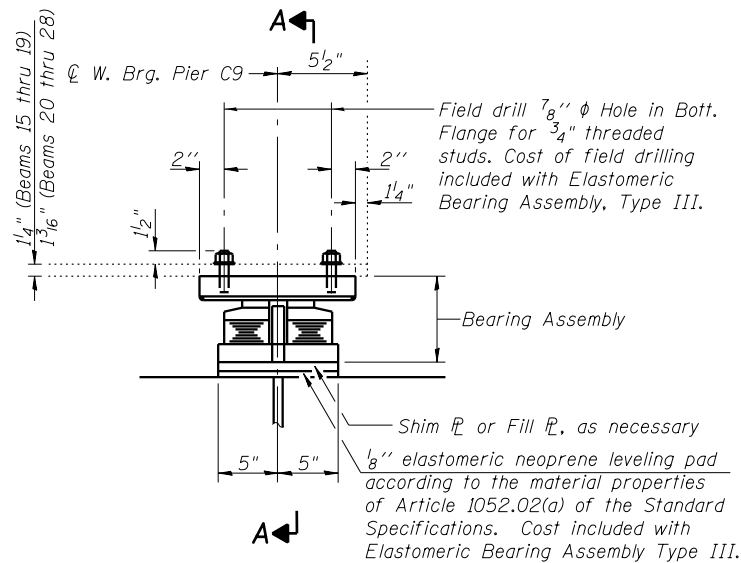
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BEARING DETAILS II - UNIT II
STRUCTURE NO. 016-0461**

SHEET NO. S2-92 OF S2-137 SHEETS

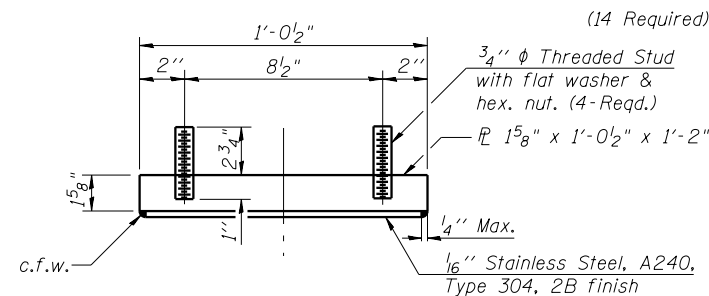
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	384
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-S093-BRG.dgn

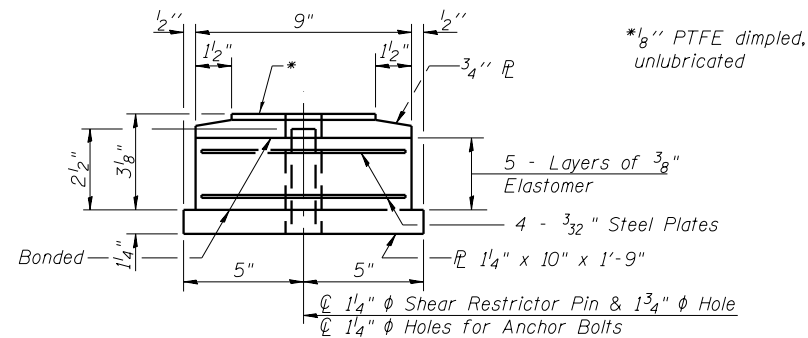


ELEVATION AT W. BRG. PIER C9

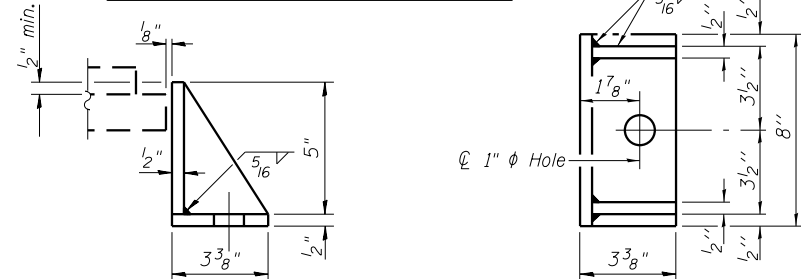
TYPE III ELASTOMERIC EXP. BRG. AT W. BRG. PIER C9



TOP BEARING ASSEMBLY

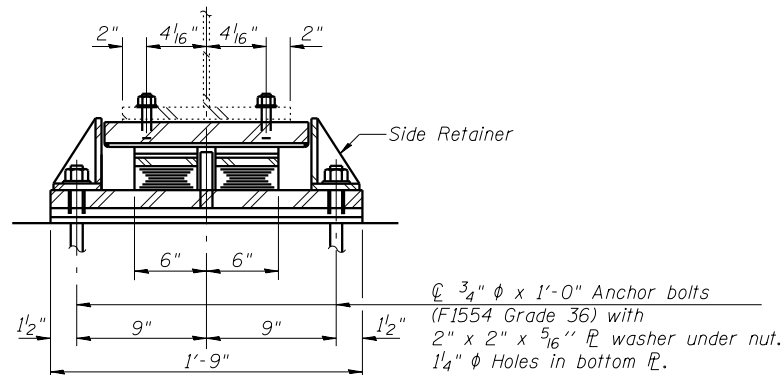


BOTTOM BEARING ASSEMBLY

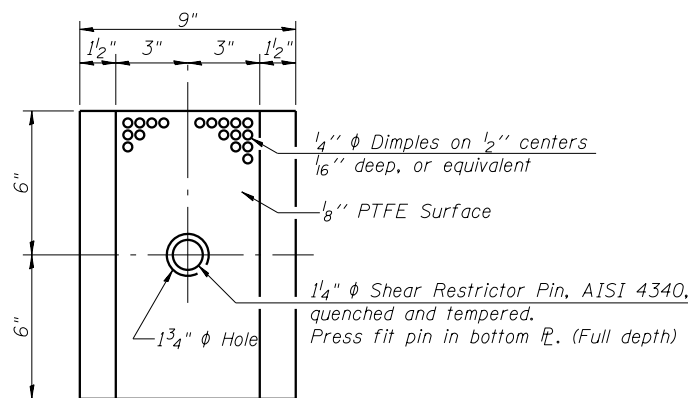


SIDE RETAINER

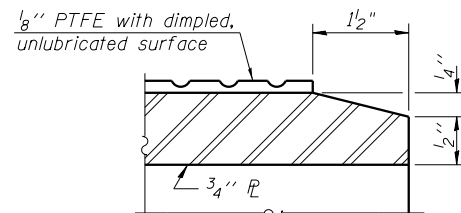
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



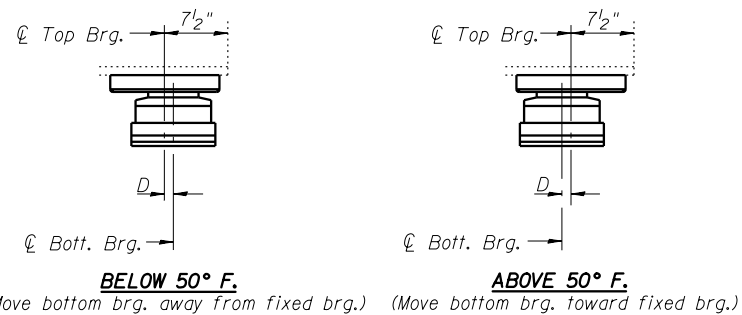
SECTION A-A



PLAN-PTFE ELASTOMERIC BRG.



SECTION THRU PTFE



SETTING ANCHOR BOLTS AT EXP. BRG.

D=1/8 inch per each 100 feet of expansion for every 15 degrees temp. change from the normal temp. of 50 degrees F.

Notes:

For bearing removal details and quantity, see sheet S2-91.

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Elastomeric Bearing Assembly, Type III.

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

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. 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 elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type III.

The 1/8 inch 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 inch PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

Two 1/8 inch adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

FILL PLATE THICKNESS TABLE
AT E. BRG. PIER C9

Beam No.	Thickness
20	3/4"
19	7/8"
18	1"

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type III	Each	14
Anchor Bolts 3/4"	Each	28

PARSONS
BRINCKERHOFF

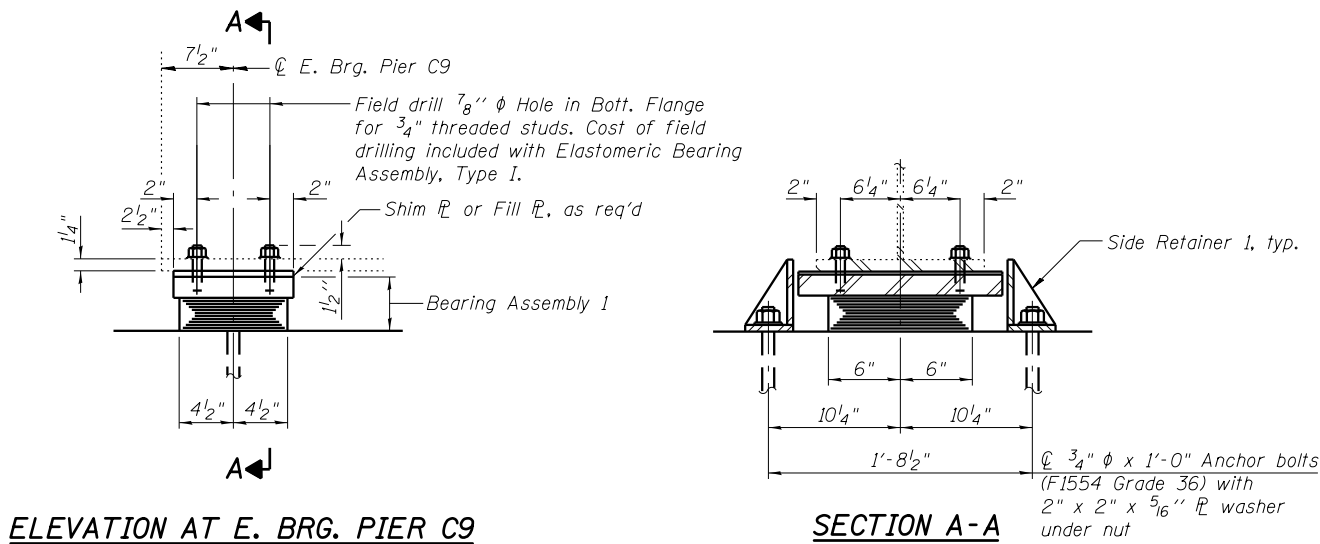
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PLOT SCALE =	N.T.S.	DRAWN -	IJL/DCP	REVISED -	
PLOT DATE =	6/28/2017	CHECKED -	JIG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS III - UNIT II
STRUCTURE NO. 016-0461

SHEET NO. S2-93 OF S2-137 SHEETS

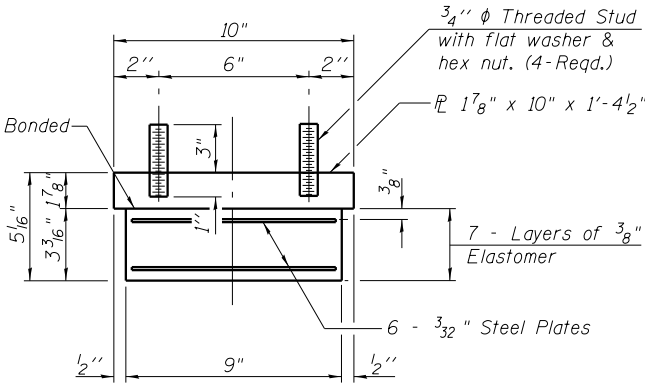
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	385
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



ELEVATION AT E. BRG. PIER C9

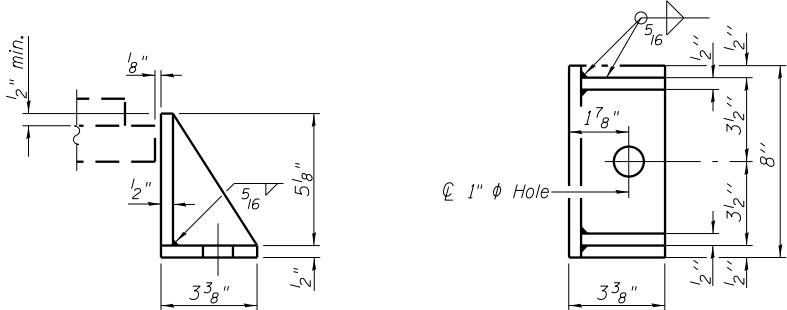
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG. AT E. BRG. PIER C9
(14 Required)



BEARING ASSEMBLY 1

Shim plates shall not be placed under Bearing Assembly.



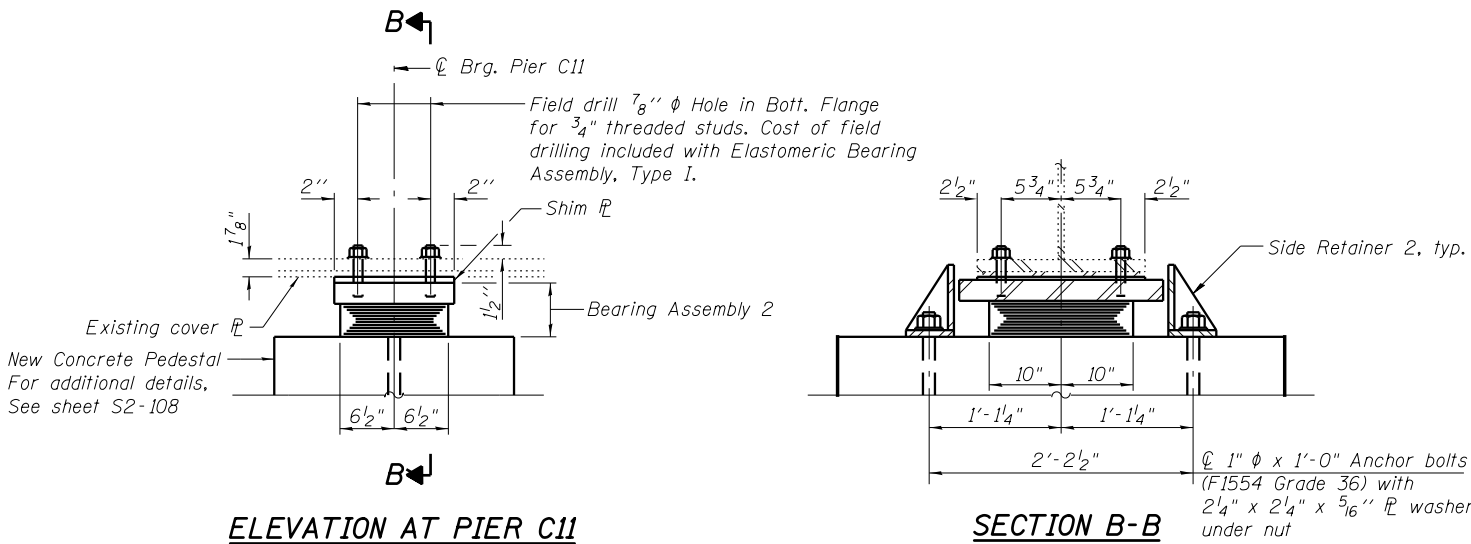
SIDE RETAINER 1

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

Notes:
For bearing removal details and quantity, see sheet S2-91.
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Elastomeric Bearing Assembly, Type I.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
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 elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
Two 8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

FILL PLATE THICKNESS TABLE
AT E. BRG. PIER C9

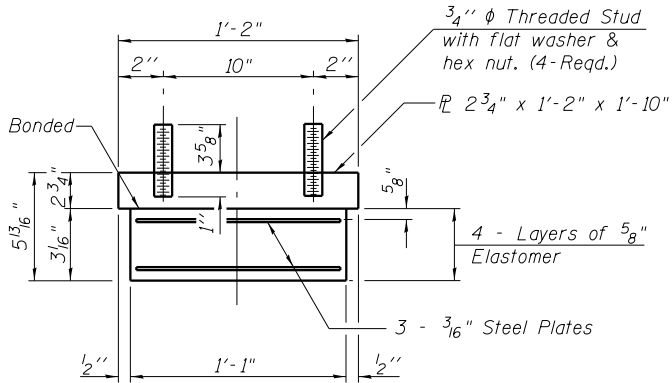
Beam No.	Thickness
20	3/4"
19	3/4"
18	8"



ELEVATION AT PIER C11

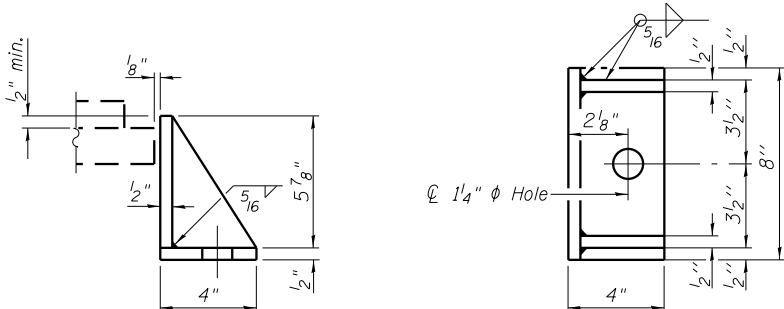
SECTION B-B

TYPE I ELASTOMERIC EXP. BRG. AT PIER C11
(14 Required)



BEARING ASSEMBLY 2

Shim plates shall not be placed under Bearing Assembly.



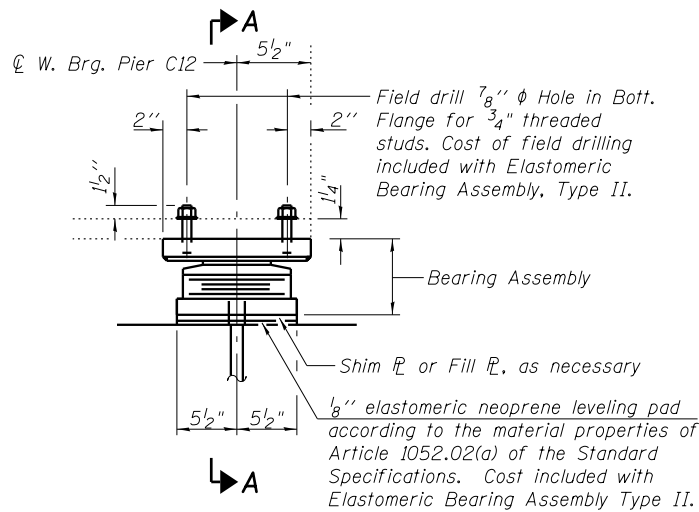
SIDE RETAINER 2

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

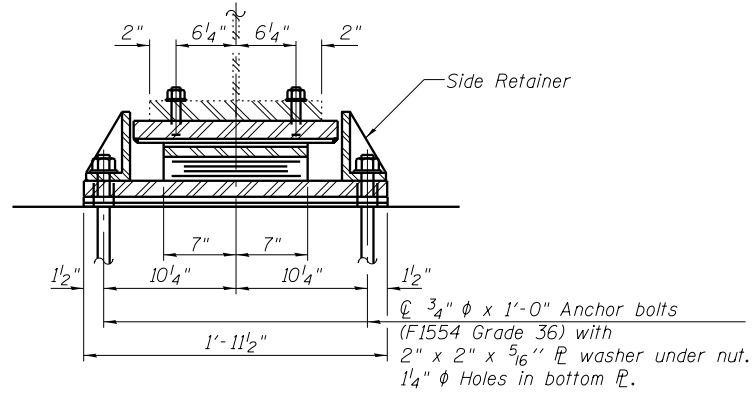
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	28
Anchor Bolts, 3/4"	Each	28
Anchor Bolts, 1"	Each	28

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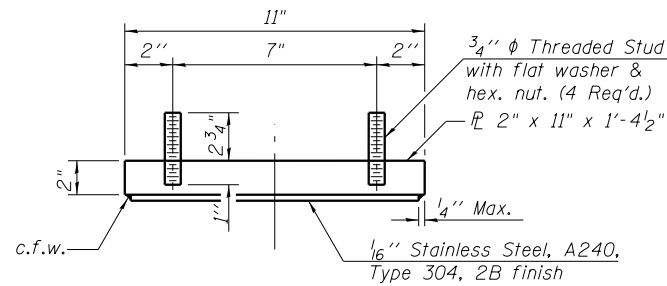
ELEVATION AT W. BRG. PIER C12



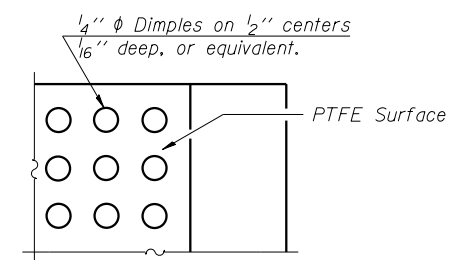
SECTION A-A

TYPE II ELASTOMERIC EXP. BRG. AT W. BRG. PIER C12

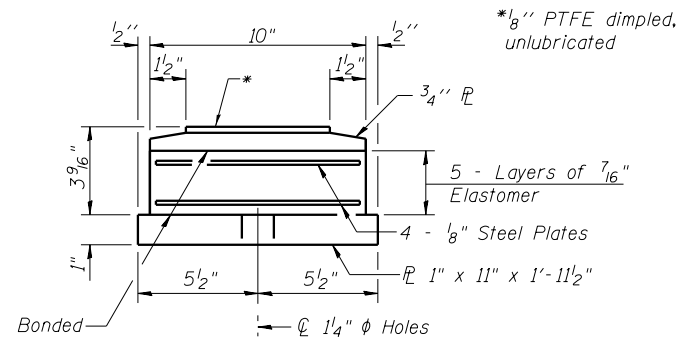
(14 Required)



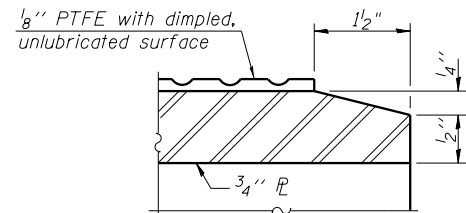
TOP BEARING ASSEMBLY



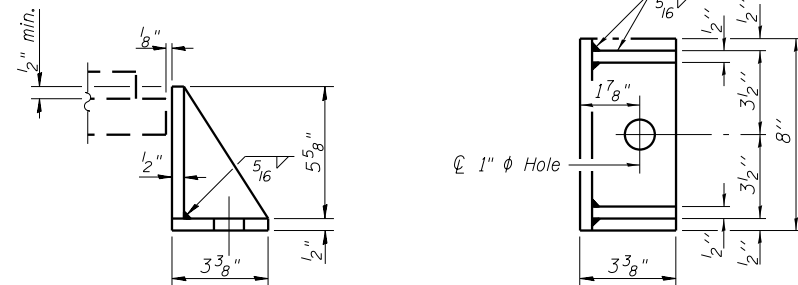
PLAN-PTFE SURFACE



BOTTOM BEARING ASSEMBLY



SECTION THRU PTFE



SIDE RETAINER

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



BELOW 50°F.

ABOVE 50°F.

(Move bott. brg. away from fixed brg.) (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1/8 inch per each 100 feet of expansion for every 15 degrees temperature change from the normal temperature of 50 degrees Fahrenheit.

FILL PLATE THICKNESS TABLE AT W. BRG. PIER C12

Beam No.	Thickness
20	3/4 inch
19	3/4 inch
18	1/2 inch

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	14
Anchor Bolts 3/4 inch	Each	28

Notes:

For bearing removal details and quantity, see sheet S2-91.

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Elastomeric Bearing Assembly, Type II.

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

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

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 elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

The 1/8 inch 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 inch PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

Two 1/8 inch adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

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**PARSONS
BRINCKERHOFF**

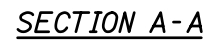
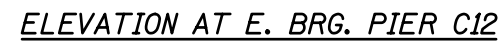
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PLOT DATE = 6/28/2017	DRAWN - IJL/DCP	REVISED -
	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BEARING DETAILS II - UNIT III
STRUCTURE NO. 016-0461**

SHEET NO. S2-95 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	387
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



Beam No.	Thickness
18	$\frac{1}{8}$ "
19	$\frac{3}{4}$ "
20	$\frac{3}{4}$ "



(10 Required)



SECTION THRU PTFE



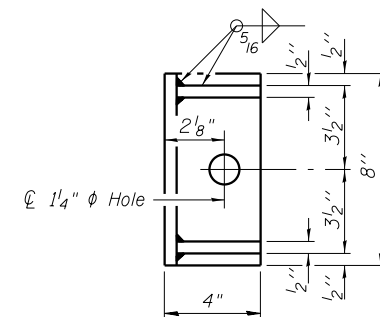
SETTING ANCHOR BOLTS AT EXP. BRG.

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

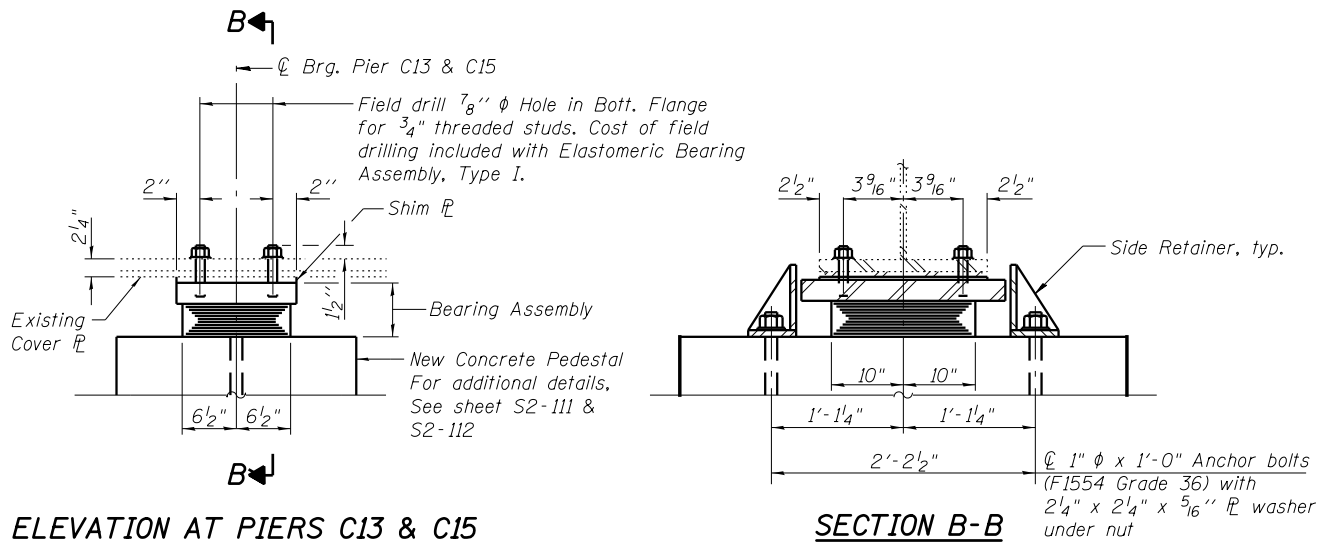


SIDE RETAINER 2

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



Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	20
Anchor Bolts 1"	Each	20
Anchor Bolts 3/4"	Each	20

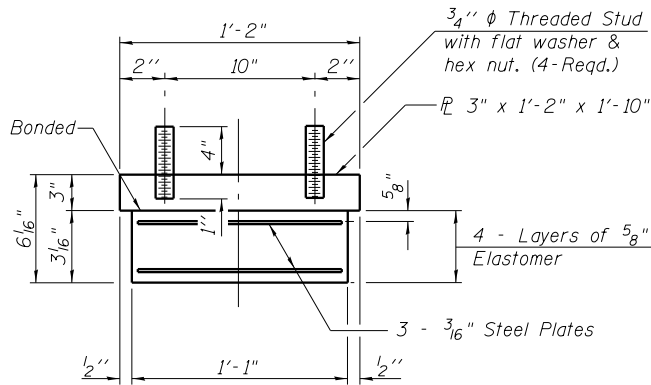


ELEVATION AT PIERS C13 & C15

SECTION B-B

TYPE I ELASTOMERIC EXP. BRG. AT PIERS C13 & C15

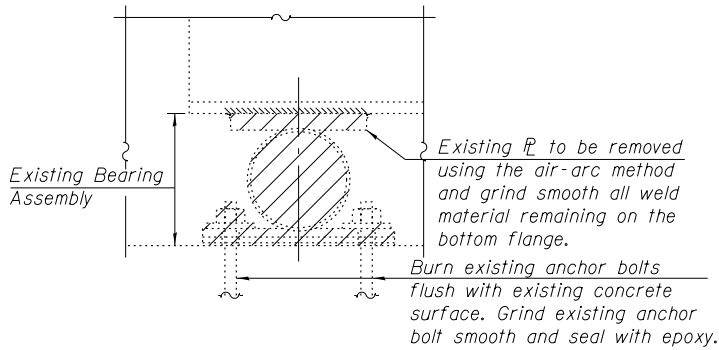
(10 Required at Pier C13 and 10 Required at Pier C15)



BEARING ASSEMBLY

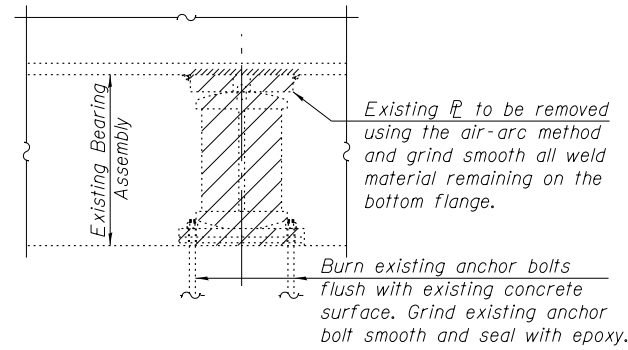
(At Pier C13 & C15)

Shim plates shall not be placed under Bearing Assembly.



EXISTING BEARING REMOVAL DETAIL
PIER C12

Cost included with Jack and Remove Existing Bearings.
(15 Required)



EXISTING BEARING REMOVAL DETAIL
PIERS C13, C15 & C16

Cost included with Jack and Remove Existing Bearings.
(35 Required)

JACK AND REMOVE EXISTING BEARINGS PROCEDURE - UNIT IV (EXIT RAMP)

- The Contractor shall submit for approval by the Engineer, plans for jacking existing bearings and installing new bearings prior to commencing any related work.
- Jacking and removing existing bearings shall be done with existing deck remaining in place and without live load traffic, except for beam 20 which will support live load traffic during jacking and removing existing bearing.
- The jacking system for beam 20 shall be designed to support dead load and full live load (with impact).
- See table below for dead load reaction, live load plus impact reaction, and minimum jack capacities per beam at each Pier.
- The new concrete pedestals shall be poured and cured prior to the lowering and removal of the jacks.

BEAM REACTIONS

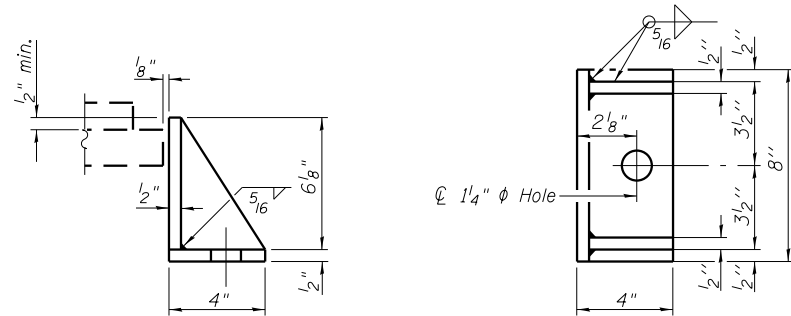
(Applicable to all beams, except Beam 20)

Pier	R _ℓ (kips)	Min. Jack Capacity (kips)
C12 (East)	36.6	55
C13	109.3	164
C15	105.8	159
C16	90.2	136

BEAM REACTIONS

(Applicable to Beam 20 only)

Pier	R _ℓ (kips)	R _{ℓ+IM} (kips)	Min. Jack Capacity (kips)
C12 (East)	36.6	58.3	143
C13	109.3	81.3	286
C15	105.8	80.8	280
C16	90.2	74.5	248



SIDE RETAINER

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

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Elastomeric Bearing Assembly, Type I.

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

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

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 elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Two 1/8 inch 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
Elastomeric Bearing, Assembly, Type I	Each	20
Anchor Bolts, 1"	Each	40
Jack and Remove Existing Bearings	Each	50

ELEVATION AT E. BRG. PIER C12

SECTION A-A

ELEVATION AT PIER C13

SECTION B-B

TYPE II ELASTOMERIC EXP. BRG. AT E. BRG. PIER C12 (EXIT RAMP)

(5 Required)

TOP BEARING ASSEMBLY 1

PLAN-PTFE SURFACE

BOTTOM BEARING ASSEMBLY 1

SIDE RETAINER 1

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

SECTION THRU PTFE

℄ Bott. Brq.

BELOW 50°F.

(Move bott. brq. away from fixed brq.)

ABOVE 50°F.

brq.) (Move bott. brq. toward fixed brq.)

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.

SIDE RETAINER 2

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

Notes:

For bearing removal details and quantity, see sheet S2-97.

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Elastomeric Bearing Assembly Type I or Elastomeric Bearing Assembly Type II as applicable.

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

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for Type I side retainers may be cast in place or installed in holes drilled before or after members are 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 elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly Type I or Elastomeric Bearing Assembly Type II as applicable.

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.

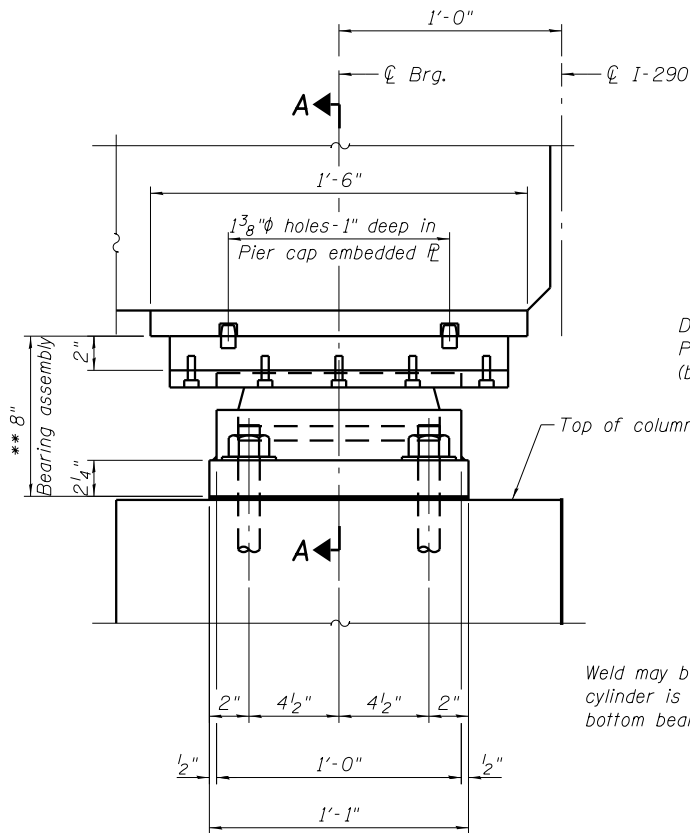
Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

Two "8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

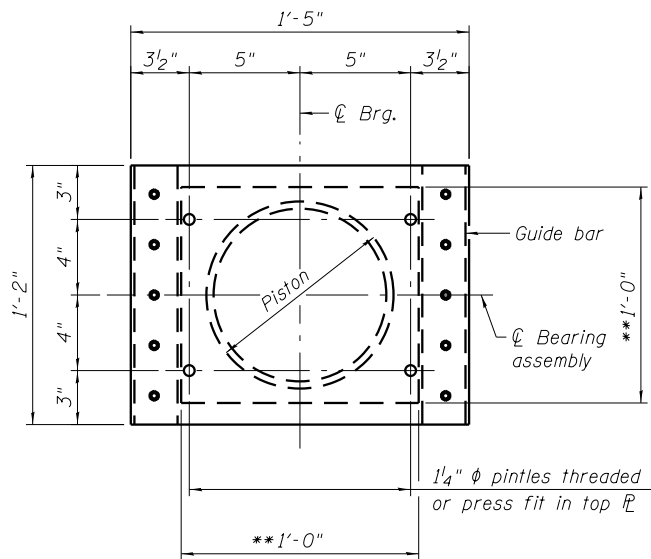
See sheet S2-97, for Jack and Remove Existing
Bearing Procedure and Beam Reaction Tables.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	5
Elastomeric Bearing Assembly, Type II	Each	5
Anchor Bolts, $\frac{3}{4}$ "	Each	10
Anchor Bolts, 1"	Each	10

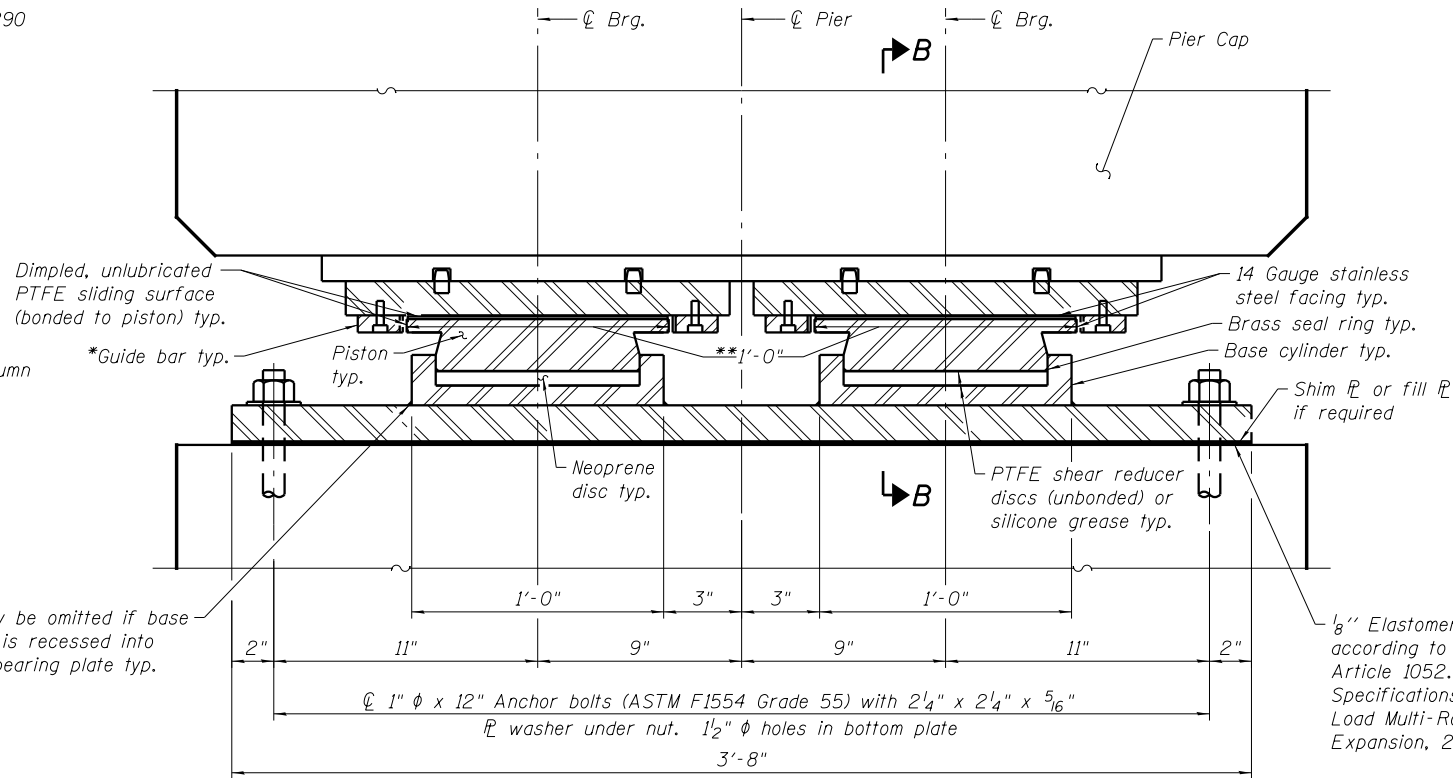


ELEVATION AT PIER
(Looking East)

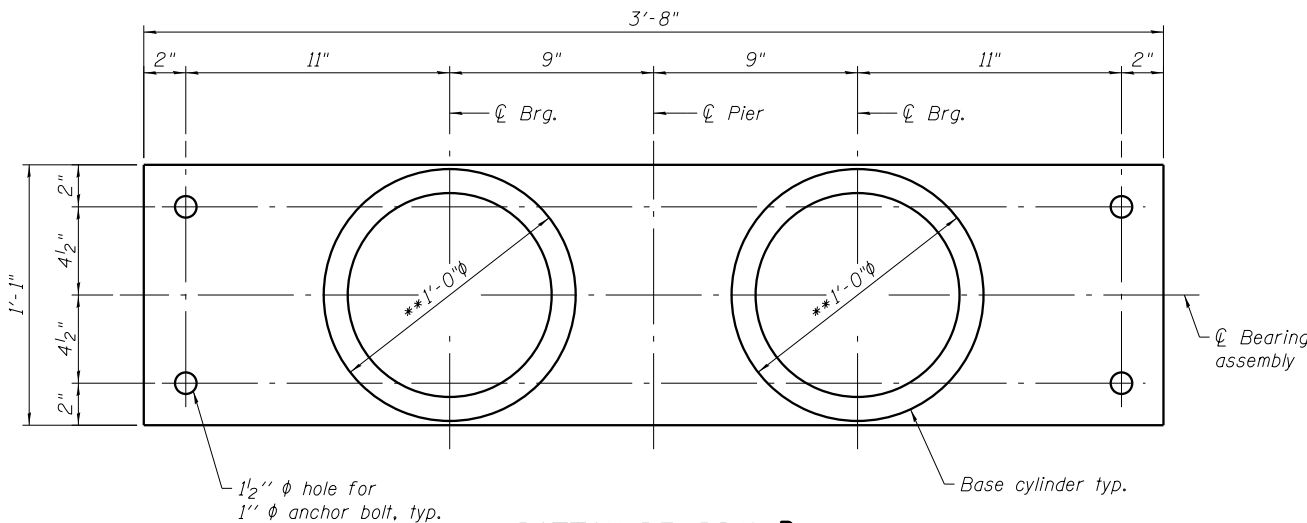


TOP BEARING AND PISTON PLAN

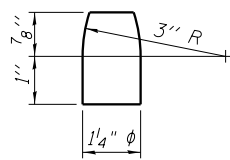
NESTED BEARING (AT PIER C1, C4, C9 & C12)
(8 Required, 2 HLMR Bearings per Assembly)



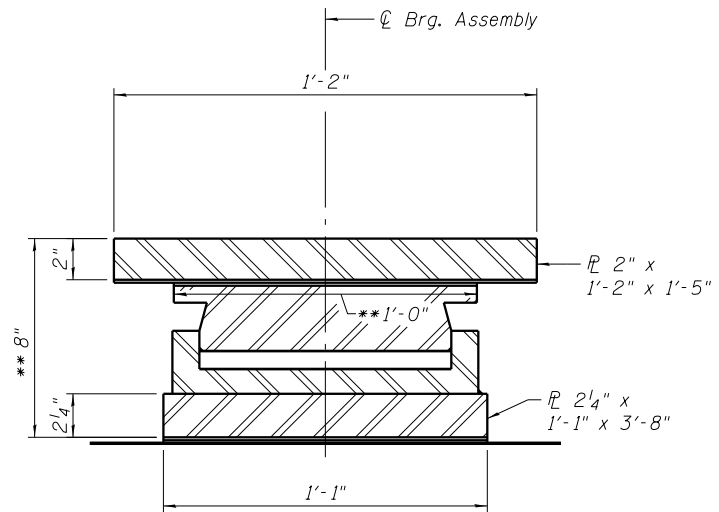
SECTION A-A



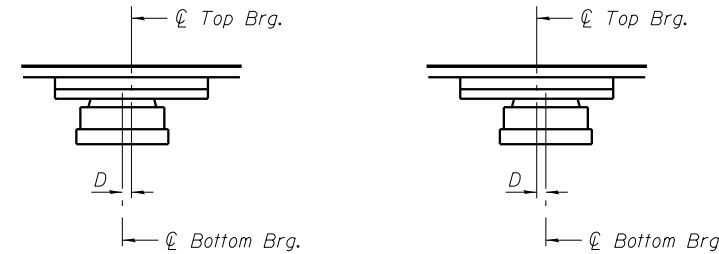
BOTTOM BEARING AND BASE CYLINDER PLAN



PINTLE



SECTION B-B
(Guide bar, pintles and pier cap embedded plate omitted for clarity)



BELOW 50° F. (Move bottom brg. away from adjacent column)
ABOVE 50° F. (Move bottom brg. toward adjacent column)

SETTING ANCHOR BOLTS AT EXP. BRG.

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

* 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. If bolted connection is used, maintain a minimum clearance of 3" from the centerline of the pintles to the bolts in the guide bar.

** Dimensions may vary depending on Manufacturer's design. Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

For anchor bolt locations, see sheets S2-101, S2-104, S2-107 & S2-110. The structural steel plates and pintles of the Bearing Assembly shall conform to the requirements of AASHTO M 270, Grade 50.

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.

Bearing dimensions and details shown are for a pot type HLMR bearing. Disc type HLMR bearing dimensions and details will vary.

Fabricator shall design the HLMR bearing according to 2014 AASHTO LRFD Bridge Design Specifications, 7th Ed. with 2015 and 2016 interims.

DESIGN DATA

Bearing Manufacturer Design Criteria	Prop. Piers
Vertical Design Load (kips)	237.5
Horizontal Design Load (kips), H _u	47.5
Design Rotation (rad), θ _u	0.02
Total Required Movement (in.)	1/2"

BILL OF MATERIAL

Item	Unit	Total
High Load Multi-Rotational Bearings, Guided Expansion, 250k	Each	8
Anchor Bolts, 1"	Each	16

STATE OF ILLINOIS
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COLUMN BEARING DETAILS I
STRUCTURE NO. 016-0461

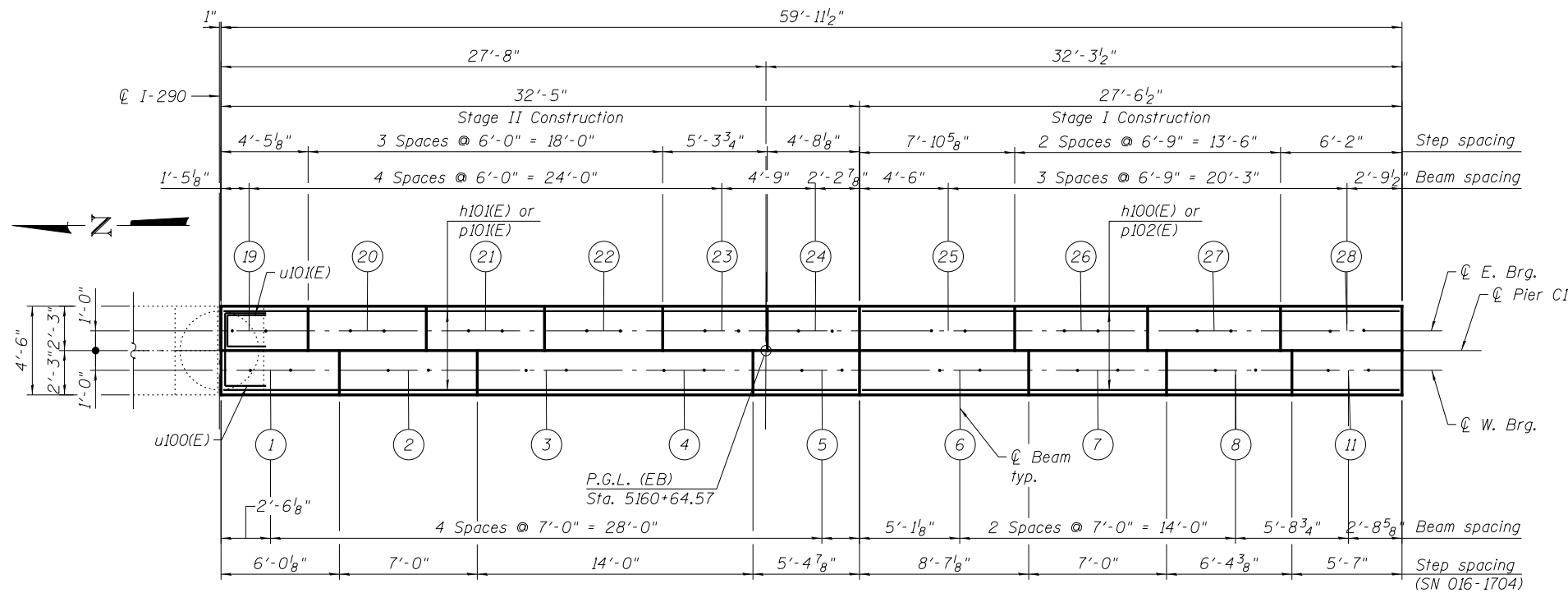
SHEET NO. S2-99 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	391
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

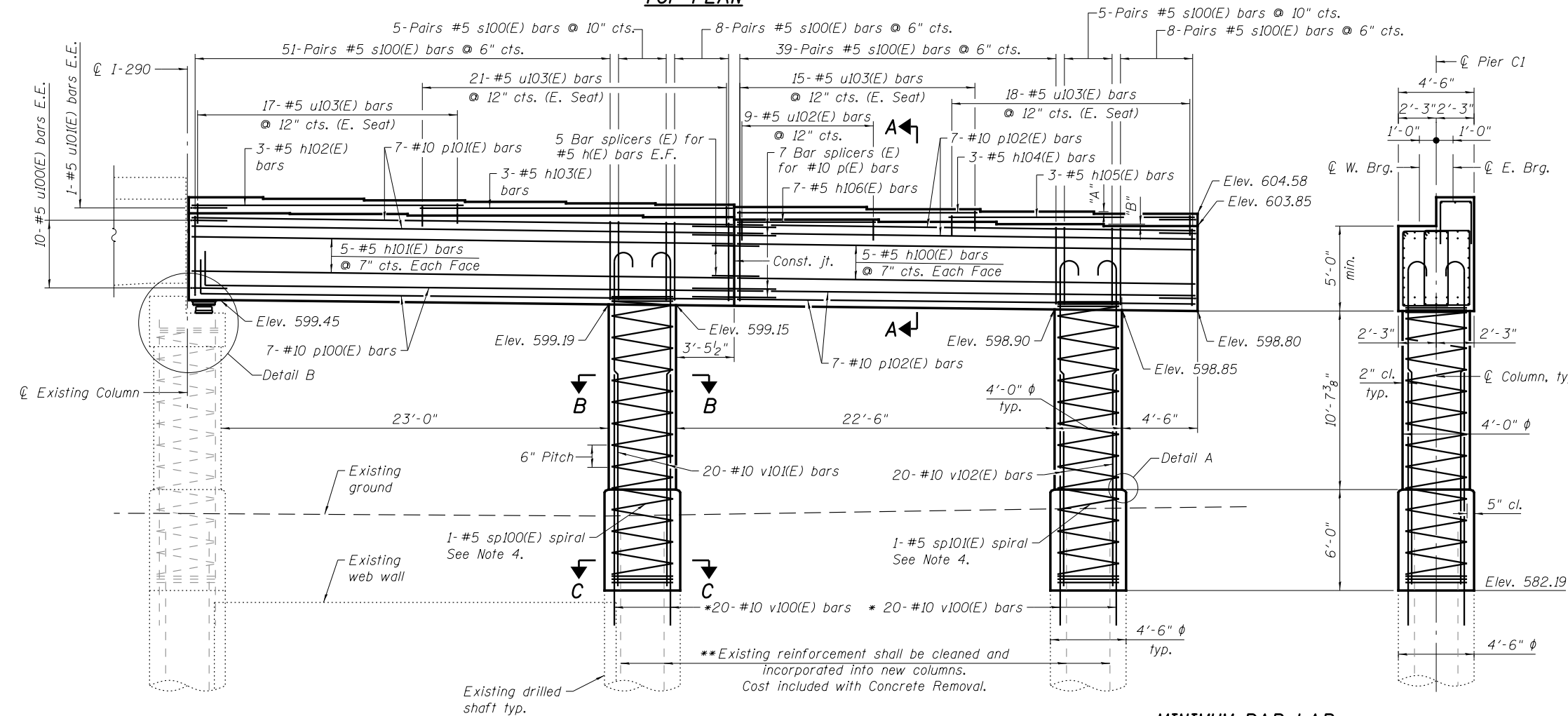
PARSONS
BRINCKERHOFF

USER NAME = pateld	DESIGNED - IJL	REVISED -
PLOT SCALE = N.T.S.	CHECKED - JZ	REVISED -
PLOT DATE = 6/28/2017	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

0160461-60X75-S99-BRG.dgn



TOP PLAN



ELEVATION
(Looking East)

MINIMUM BAR LAP
#5 bar = 3'-3"
#10 bar = 10'-10"

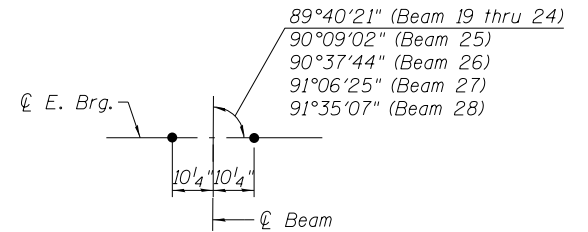
END VIEW

**BEARING SEAT
STEP HEIGHTS**

E. Seat Step	"A"
19 to 20	1 1/8"
20 to 21	1 1/8"
21 to 22	1"
22 to 23	1 1/8"
23 to 24	1"
24 to 25	1 5/8"
25 to 26	1 5/8"
26 to 27	1 5/8"
27 to 28	1 1/2"
W. Seat Step	"B"
1 to 2	3/4"
2 to 4	1"
4 to 5	1"
5 to 6	1 5/8"
6 to 7	1 3/4"
7 to 8	1 5/8"
8 to 11	1 3/8"

TOP OF SEAT ELEVATION

Beam No.	E. Seat Elevation	Beam No.	W. Seat Elevation
19	605.56	1	604.61
20	605.47	2	604.56
21	605.38	3	604.47
22	605.29	4	604.47
23	605.20	5	604.39
24	605.12	6	604.25
25	604.98	7	604.11
26	604.85	8	603.97
27	604.71	11	603.85
28	604.58		



ANCHOR BOLT LAYOUT

* Drill and grout bars according to Article 584 of the Std. Specs., with a minimum embedment of 2'-1". Cost included in the cost of Reinforcement Bars, Epoxy Coated.

** Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system at Contractor expense.

Notes:

1. Space reinforcement in cap to miss anchor bolts.
2. Pour steps monolithically with cap.
3. For Sections A-A, B-B & C-C, and Details A & B, see sheet S2-101.
4. sp100(E) & sp101(E) spiral,
 - 1) Provide 1 1/2 extra turns, shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap or column cap. Provide 4- #4 spacers or equivalent.
 - 2) When splicing spiral reinforcement is necessary, the spiral shall be provided with 1 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall both terminate with a 135° standard hook.
5. Apply concrete sealer to all exposed concrete surfaces of the pier.

**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - IJL/MS	REVISED -
CHECKED - P.JL	REVISI	REVISI
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISI
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISI

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

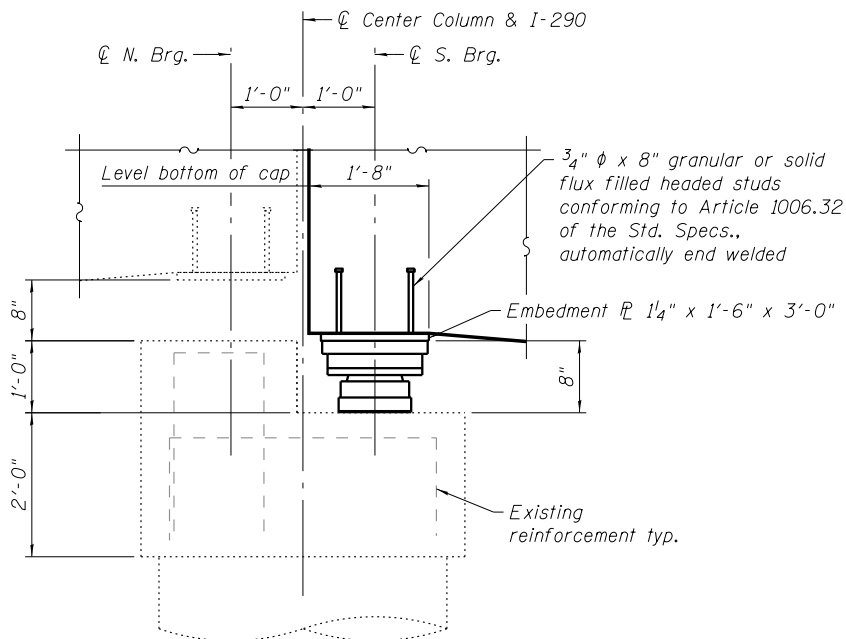
**PIER C1
STRUCTURE NO. 016-0461**

SHEET NO. S2-100 OF S2-137 SHEETS

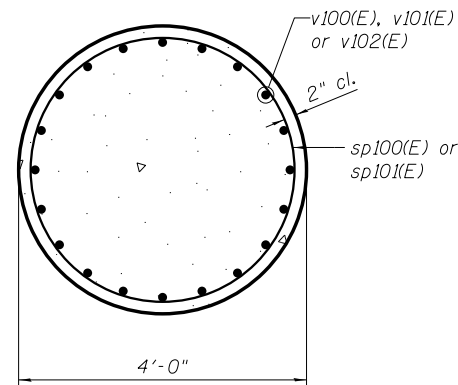
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	392
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-S100-PCI.dgn

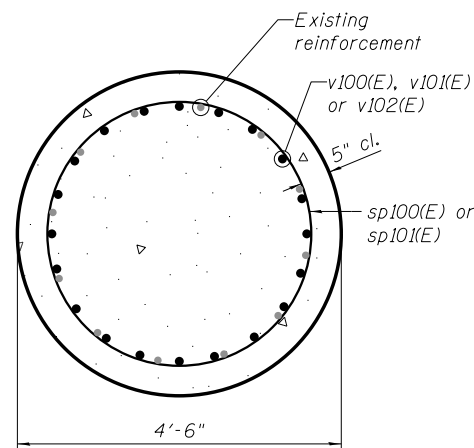
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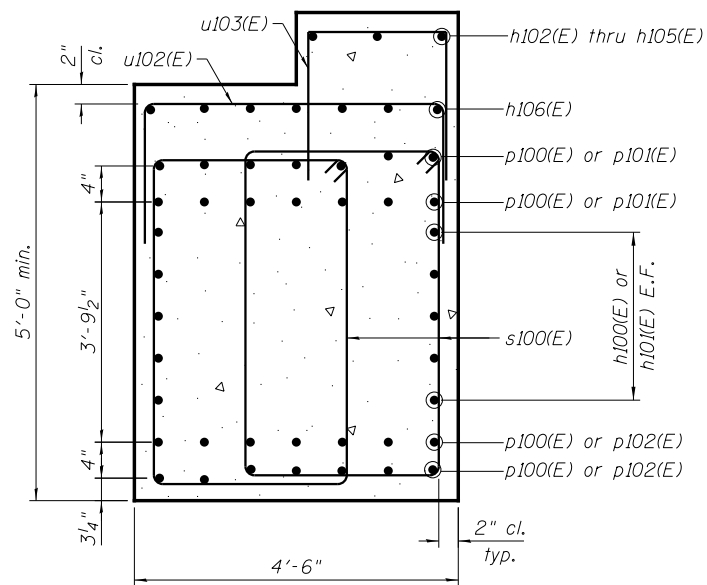
DETAIL B



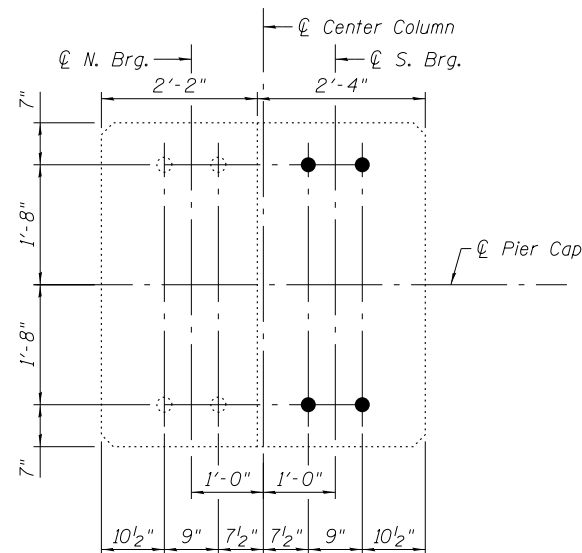
SECTION B-B



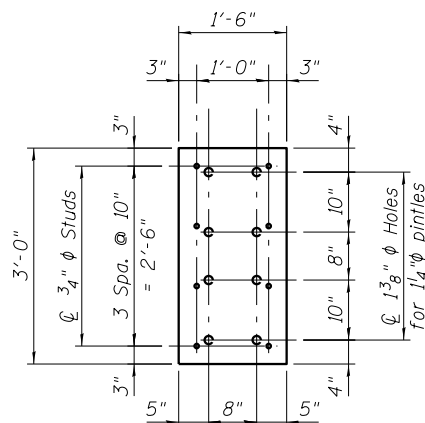
SECTION C-C



SECTION A-A

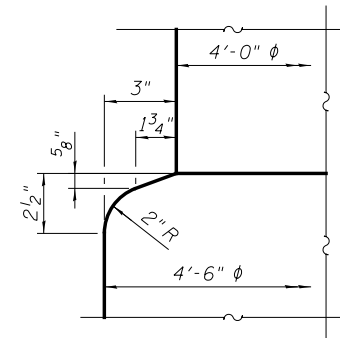


ANCHOR BOLT LAYOUT AT NESTED BEARING

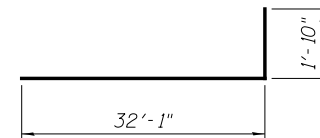


EMBEDMENT PLATE

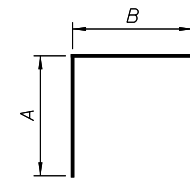
Cost included with Concrete Structures.
See sheet S2-99 for additional details.



DETAIL A



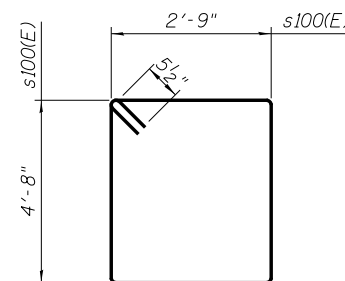
BAR p100(E)



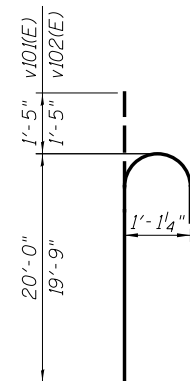
BARS

A & B DIMENSIONS

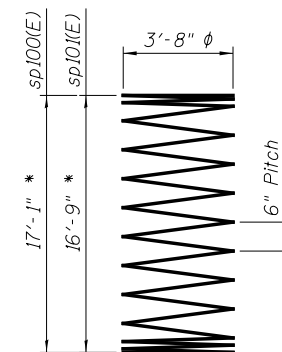
Bar	A	B
u100(E)	3'-6"	4'-0"
u101(E)	3'-6"	1'-9"
u102(E)	2'-2"	4'-2"
u103(E)	2'-2"	1'-11"



BARS s100(E)



**BARS v101(E)
& v102(E)**



**BARS sp100(E)
& sp101(E)**

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h100(E)	10	#5	27'-3"	
h101(E)	10	#5	32'-2"	
h102(E)	3	#5	16'-1"	
h103(E)	3	#5	19'-4"	
h104(E)	3	#5	14'-3"	
h105(E)	3	#5	16'-3"	
h106(E)	7	#5	8'-3"	
p100(E)	14	#10	33'-11"	
p101(E)	14	#10	32'-2"	
p102(E)	28	#10	27'-3"	
s100(E)	232	#5	15'-9"	
sp100(E)	1	#5	17'-1"	
sp101(E)	1	#5	16'-9"	
u100(E)	20	#5	11'-0"	
u101(E)	2	#5	8'-9"	
u102(E)	71	#5	8'-6"	
u103(E)	9	#5	6'-3"	
v100(E)	40	#10	13'-3"	
v101(E)	20	#10	21'-5"	
v102(E)	20	#10	21'-2"	
Structure Excavation		Cu. Yd.	27	
Concrete Structures		Cu. Yd.	74.4	
Reinforcement Bars, Epoxy Coated		Pound	19,730	
Concrete Sealer		Sq. Ft.	1,726	

* Length is height of spiral

- Notes:
- Space reinforcement in column cap to miss anchor bolts.
 - Bars equally spaced, unless otherwise noted.
 - All edges shall have standard 3/4" chamfer, unless otherwise noted.
 - Spirals are measured vertically.

**PARSONS
BRINCKERHOFF**

USER NAME = pateld	DESIGNED - IJL/MS	REVISED -
PLOT SCALE = N.T.S.	CHECKED - P.JL	REVISED -
PLOT DATE = 6/28/2017	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

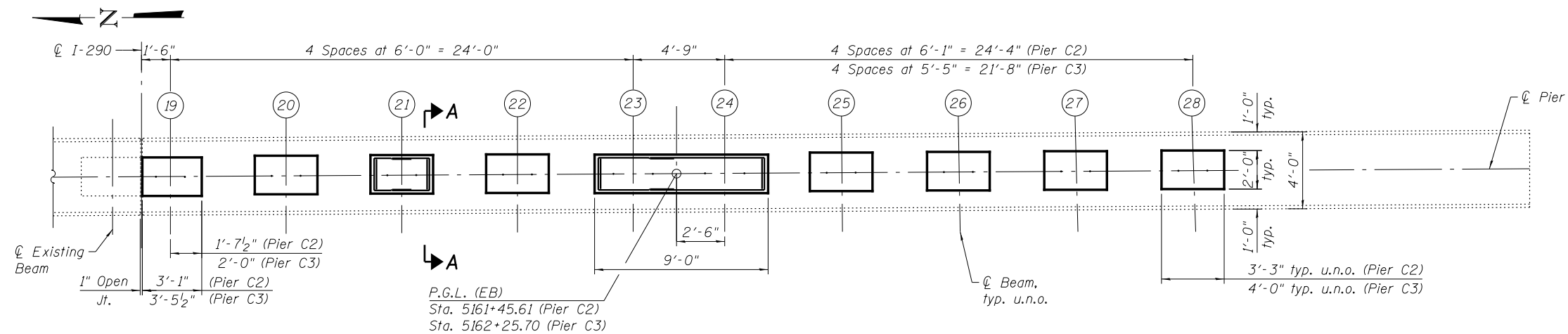
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PIER C1 DETAILS
STRUCTURE NO. 016-0461**

SHEET NO. S2-101 OF S2-137 SHEETS

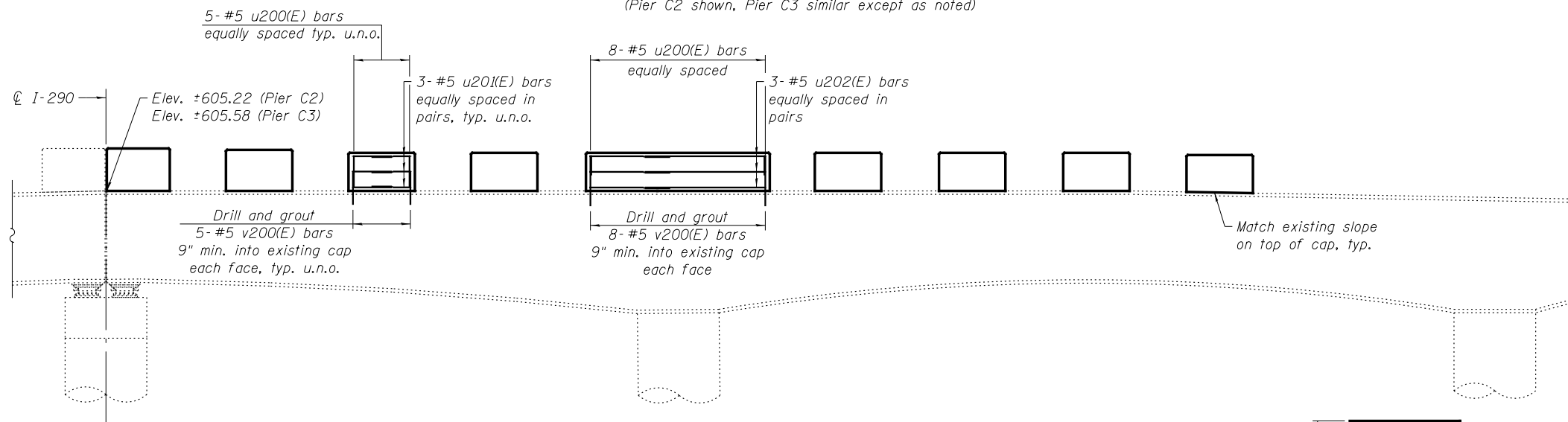
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	393
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				

0160461-60X75-S102-PC.dgn



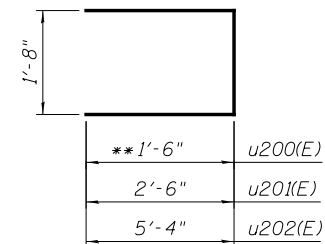
PLAN

(Pier C2 shown, Pier C3 similar except as noted)



ELEVATION

(Looking East, Pier C2 shown, Pier C3 similar except as noted)



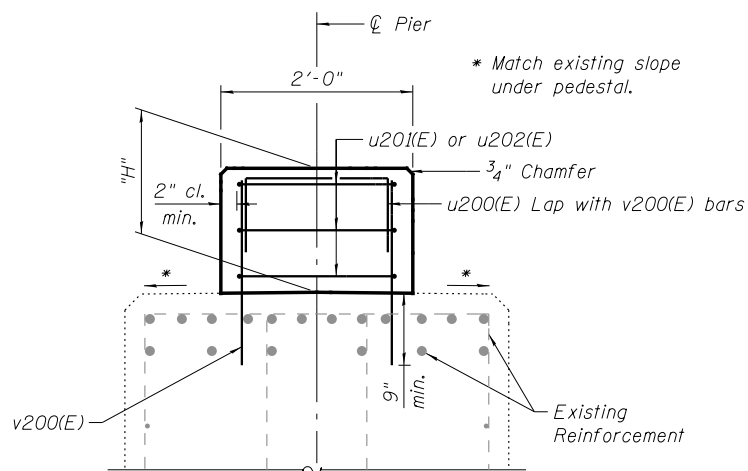
BARS u200(E), u201(E) & u202(E)

** Cut in field to fit

BILL OF MATERIAL

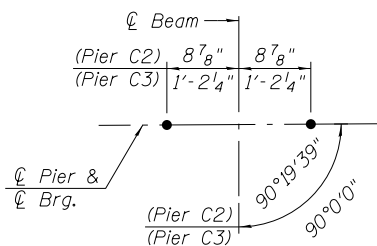
Bar	No.	Size	Length	Shape
u200(E)	96	#5	4'-8"	U
u201(E)	96	#5	6'-8"	U
u202(E)	12	#5	12'-4"	U
*** v200(E)	192	#5	2'-7"	—
Reinforcement Bars, Epoxy Coated			Pound	1,820
Concrete Structures			Cu. Yd.	7.6

*** Cut bar in field to fit.



SECTION A-A

(Anchor bolts not shown for clarity)



ANCHOR BOLT LAYOUT

BEAM SEAT ELEVATION

Beam	Pier C2	Pier C3
19	606.31	607.18
20	606.36	607.24
21	606.40	607.31
22	606.44	607.37
23	606.45	607.40
24	606.45	607.40
25	606.33	607.30
26	606.21	607.19
27	606.09	607.08
28	605.97	606.97

PEDESTAL HEIGHT, "H"

Beam	Pier C2	Pier C3
19	1'-1"	1'-7 1/8"
20	1'-1 5/8"	1'-7 7/8"
21	1'-2 1/8"	1'-8 3/4"
22	1'-2 5/8"	1'-9 1/2"
23	1'-2 3/4"	1'-9 3/4"
24	1'-2 3/4"	1'-9 3/4"
25	1'-1 1/4"	1'-8 5/8"
26	11 1/8"	1'-7 1/4"
27	10 1/2"	1'-6"
28	10 1/8"	1'-5"

Notes:

- Beam seat elevations and pedestal heights, "H", were determined based on data from existing plans. Prior to ordering any material, the Contractor shall verify in the field all beam seat heights and shim thickness dimensions. Space reinforcement in concrete pedestals to miss anchor bolts.
- Drilling and grouting of bars into existing pier cap and column shall be done in accordance with Article 584 of the Standard Specifications. Drilled and grouted bars shall maintain 5" clearance from an existing face of concrete and shall be installed such that they miss existing pier cap reinforcement. Cost included with Reinforcement Bars, Epoxy Coated.

**PARSONS
BRINCKERHOFF**

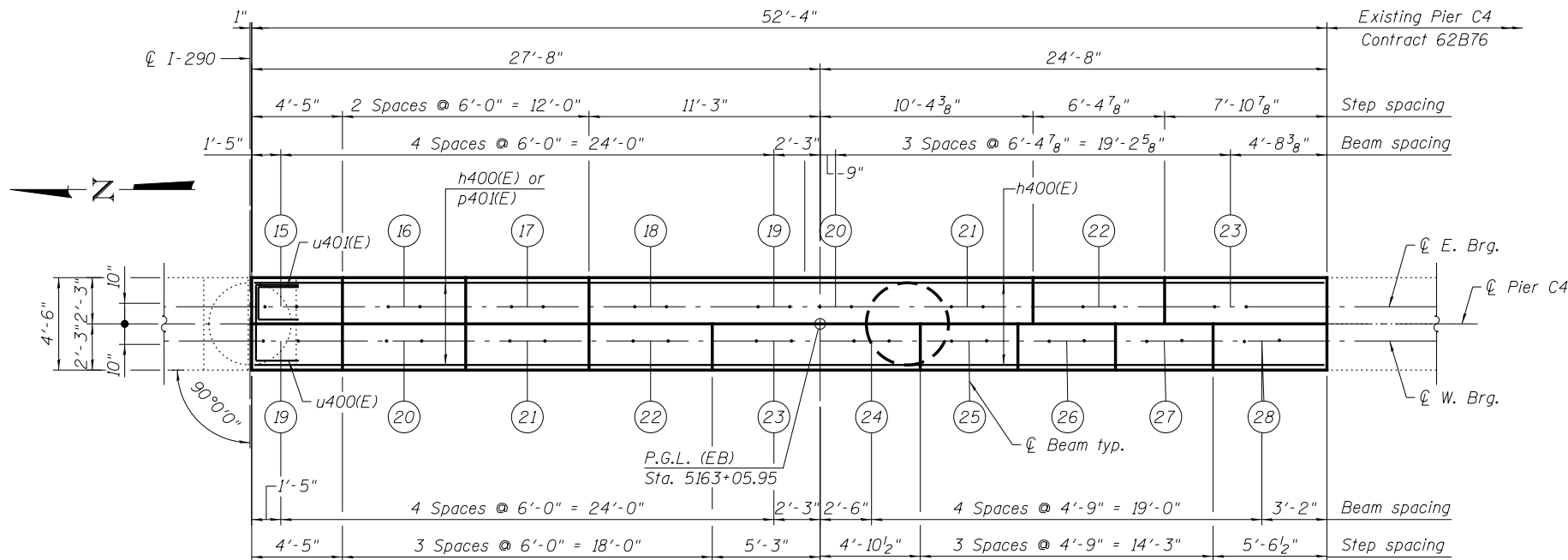
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		CHECKED -	JZ	REVISED -	
PLOT SCALE =	N.T.S.	DRAWN -	DCP	REVISED -	
PLOT DATE =	6/28/2017	CHECKED -	JIG	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

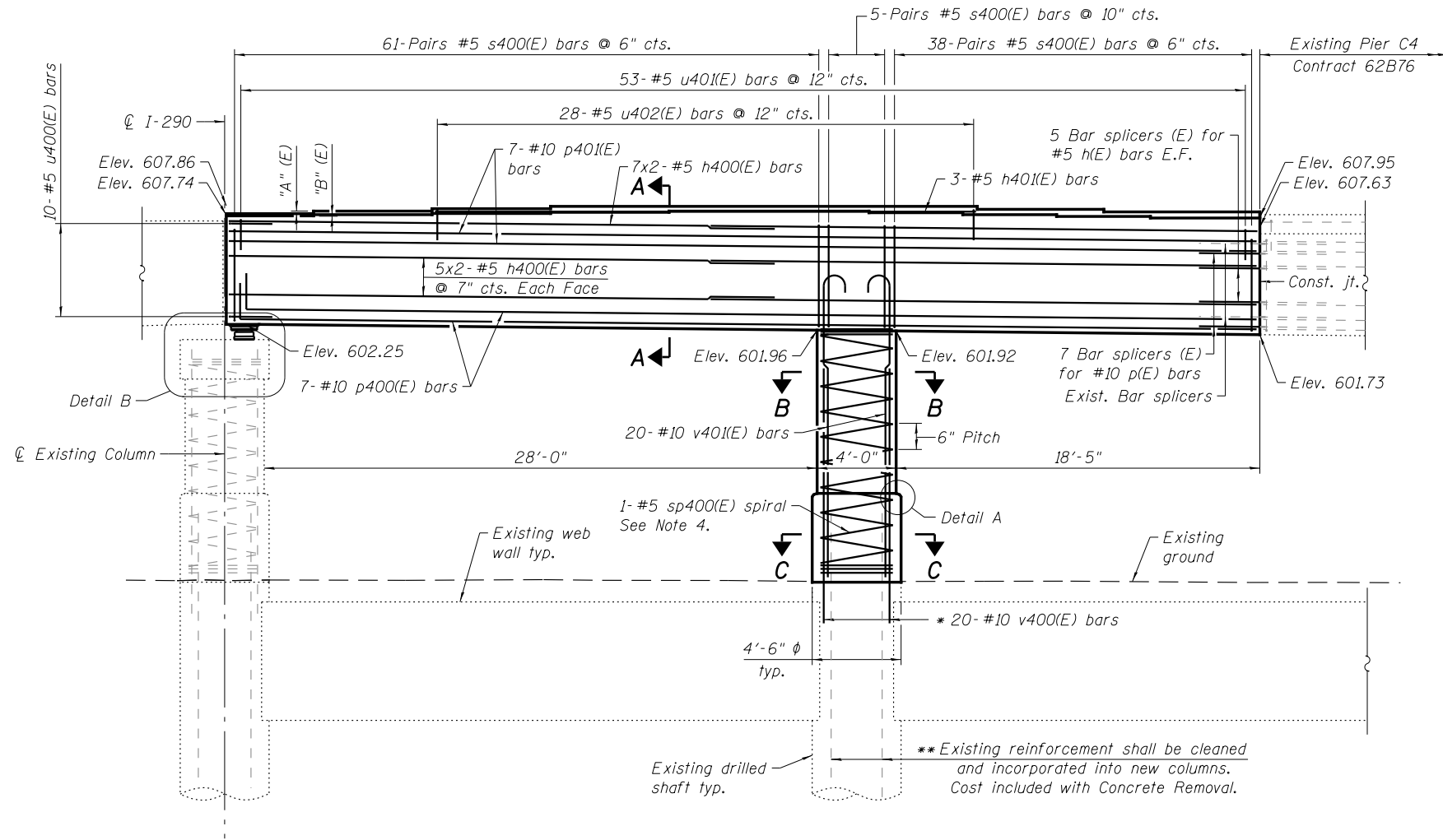
**PIER C2 & C3 DETAILS
STRUCTURE NO. 016-0461**

SHEET NO. S2-102 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	394
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



TOP PLAN



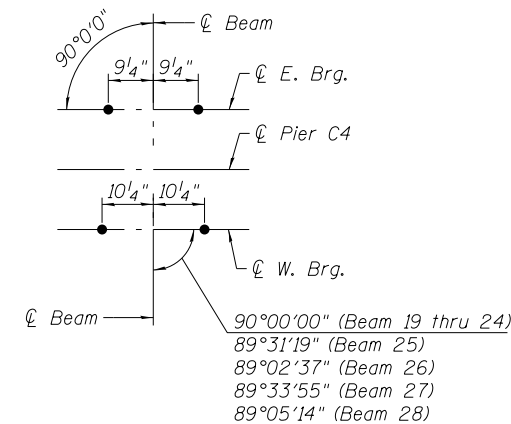
ELEVATION
(Looking East)

BEARING SEAT
STEP HEIGHTS

E. Seat Step	"A"
15 to 16	1 1/2"
16 to 17	1 3/8"
17 to 18/19/20/21	1 3/8"
21 to 22	1 3/4"
22-23	1 5/8"
W. Seat Step	"B"
19 to 20	3/4"
20 to 21	3/4"
21 to 22	3/4"
22 to 23/24	3/4"
24 to 25	1"
25 to 26	1 1/8"
26 to 27	1"
27 to 28	1"

TOP OF SEAT
ELEVATION

Beam No.	E. Seat Elevation	Beam No.	W. Seat Elevation
15	607.86	19	607.74
16	607.99	20	607.80
17	608.11	21	607.86
18	608.23	22	607.92
19	608.23	23	607.97
20	608.23	24	607.97
21	608.23	25	607.90
22	608.08	26	607.80
23	607.95	27	607.71
		28	607.63



ANCHOR BOLT LAYOUT

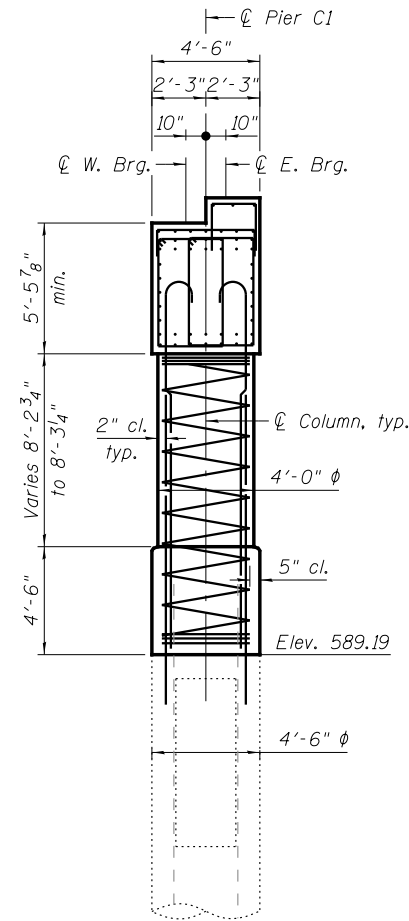
MINIMUM BAR LAP

#5 bar = 3'-3"
#10 bar = 10'-10"

* Drill and grout bars according to Article 584 of the Std. Specs., with a minimum embedment of 2'-1". Cost included in the cost of Reinforcement Bars, Epoxy Coated.

** Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system at Contractor expense.

- Notes:
1. Space reinforcement in cap to miss anchor bolts.
 2. Pour steps monolithically with cap.
 3. For Sections A-A, B-B & C-C, and Details A & B, see sheet S2-104.
 4. sp400(E) spiral,
1) Provide 1 1/2 extra turns, shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap or column cap. Provide 4-#4 spacers or equivalent.
2) When splicing spiral reinforcement is necessary, the spiral shall be provided with 1 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall both terminate with a 135° standard hook.
 5. Apply concrete sealer to all exposed concrete surfaces of the pier.



END VIEW

0160461-60X75-S103-PC4.dgn

PARSONS
BRINCKERHOFF

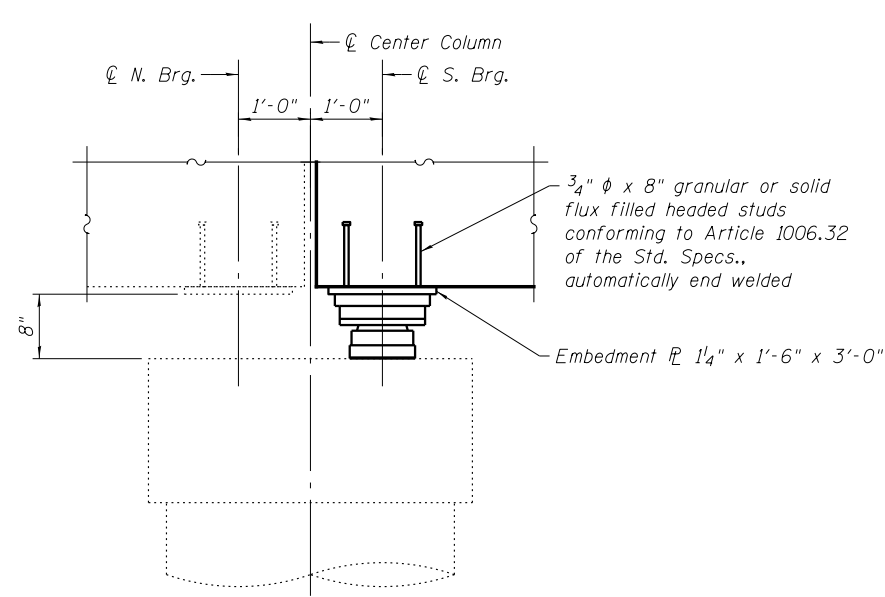
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CHECKED -	DS	REVISOR -		REVISOR -	
PLOT SCALE =	N.T.S.	DRAWN -	DCP	REVISOR -	
PLOT DATE =	6/28/2017	CHECKED -	JIG	REVISOR -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER C4
STRUCTURE NO. 016-0461

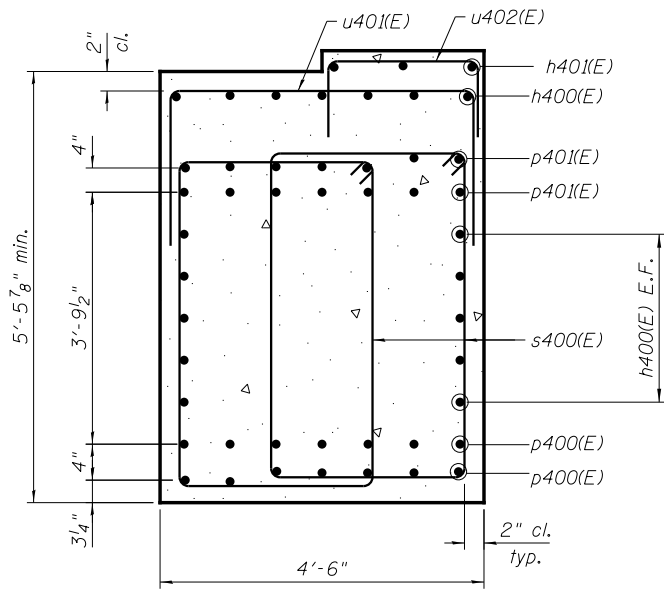
SHEET NO. S2-103 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



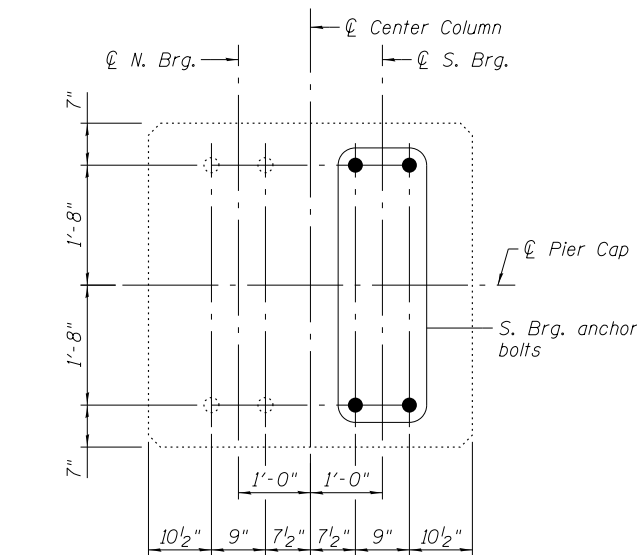
DETAIL B

Pier cap reinforcement not shown for clarity

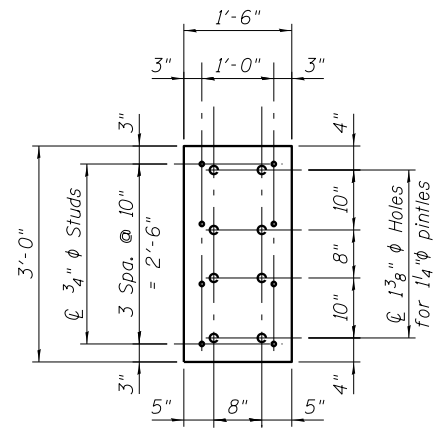


SECTION A-A

Middle of Pier Cap

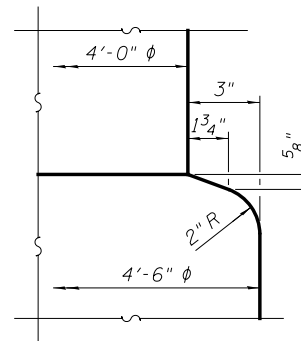


ANCHOR BOLT LAYOUT AT NESTED BEARING

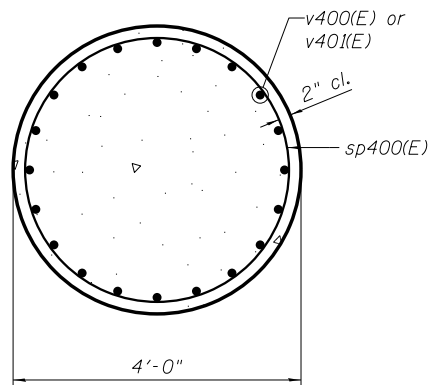


EMBEDMENT PLATE

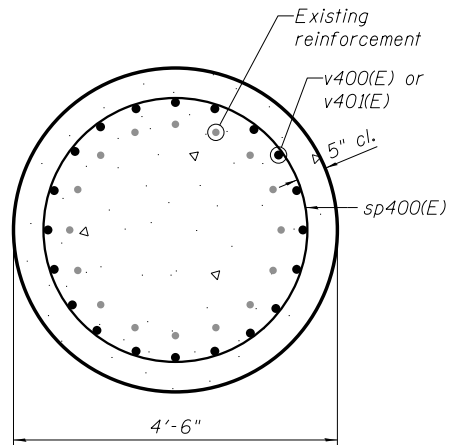
Cost included with Concrete Structures.
See sheet S2-99 for additional details.



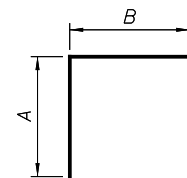
DETAIL A



SECTION B-B

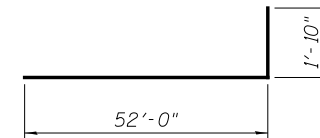


SECTION C-C

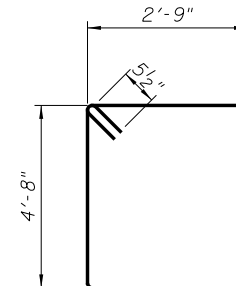


**BARS
A & B DIMENSIONS**

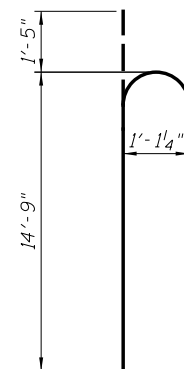
Bar	A	B
u400(E)	3'-6"	4'-0"
u401(E)	2'-2"	4'-2"
u402(E)	2'-2"	1'-11"



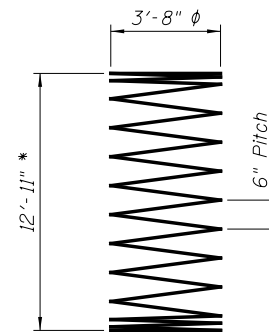
BAR p400(E)



BAR s400(E)



BAR v401(E)



BAR sp400(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h400(E)	34	#5	27'-8"	
h401(E)	3	#5	27'-3"	
p400(E)	14	#10	53'-10"	
p401(E)	14	#10	52'-1"	
s400(E)	208	#5	15'-9"	
sp400(E)	1	#5	12'-11"	
u400(E)	10	#5	11'-0"	
u401(E)	53	#5	8'-6"	
u402(E)	28	#5	6'-3"	
v400(E)	20	#10	13'-3"	
v401(E)	20	#10	16'-2"	
Concrete Structures			Cu. Yd.	58.4
Reinforcement Bars, Epoxy Coated			Pound	14,510
Concrete Sealer			Sq. Ft.	1,299

* Length is height of spiral

Note:

1. Space reinforcement in column cap to miss anchor bolts.
2. Bars equally spaced, unless otherwise noted.
3. All edges shall have standard 3/4" chamfer, unless otherwise noted.
4. Spirals are measured vertically.

0160461-60X75-S104-PC4.dgn

**PARSONS
BRINCKERHOFF**

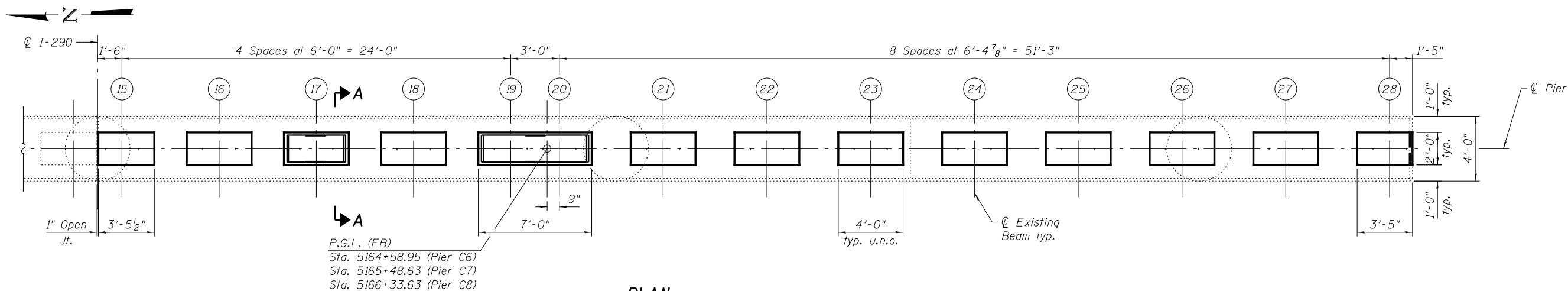
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CHECKED - DS	REVISED -	
PLOT SCALE = N.T.S.	DRAWN - DCP	REVISED -
PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

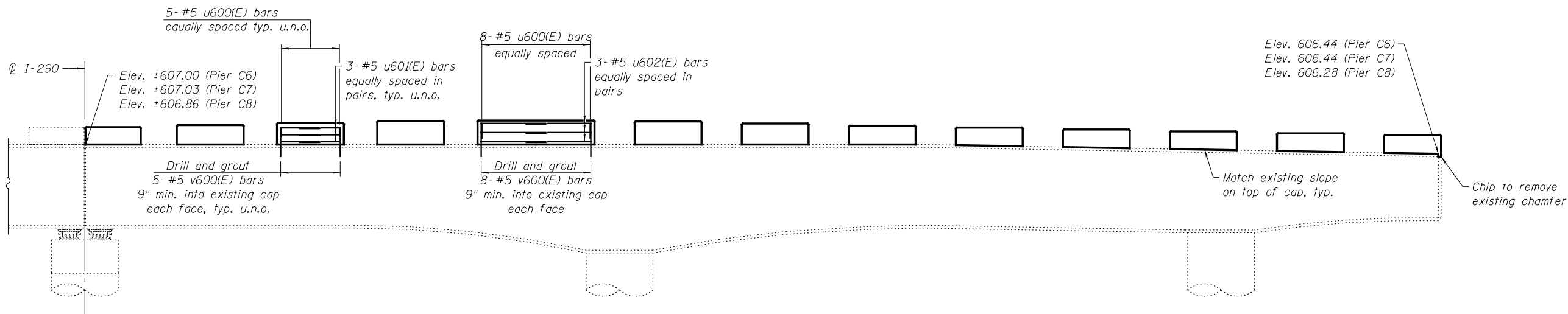
**PIER C4 DETAILS
STRUCTURE NO. 016-0461**

SHEET NO. S2-104 OF S2-137 SHEETS

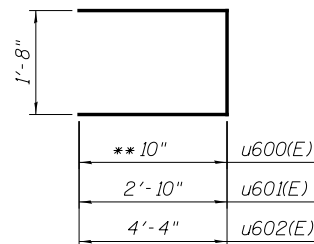
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	396
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



PLAN
(Pier C6 shown, other Piers C7 and C8 similar)



ELEVATION
(Looking East, Pier C6 shown, other Piers C7 and C8 similar)

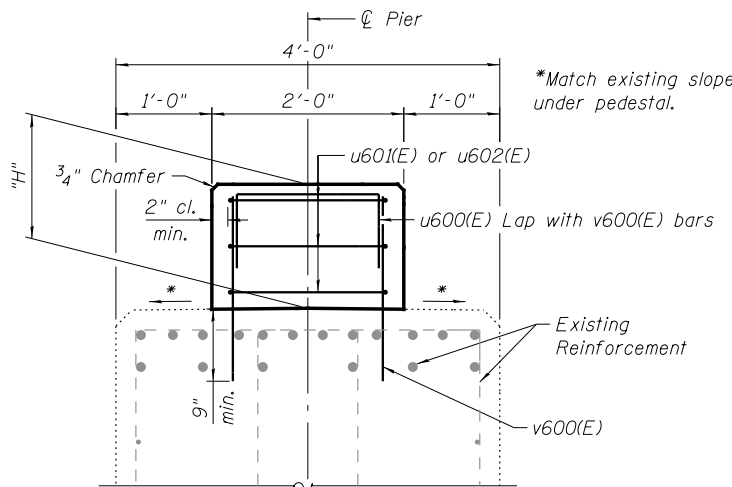


BARS u600(E) TO u603(E)
** Cut in field to fit

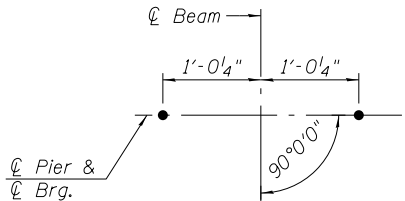
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
u600(E)	204	#5	3'-4"	
u601(E)	216	#5	7'-4"	
u602(E)	18	#5	10'-4"	
*** v600(E)	408	#5	2'-0"	
Reinforcement Bars, Epoxy Coated			Pound	3,410
Concrete Structures			Cu. Yd.	12.6

*** Cut bar in field to fit.



SECTION A-A
(Anchor bolts not shown for clarity)



ANCHOR BOLT LAYOUT

BEAM SEAT ELEVATION

Beam	Pier C6	Pier C7	Pier C8
15	608.05	607.86	607.60
16	608.18	607.98	607.73
17	608.30	608.11	607.85
18	608.41	608.22	607.96
19	608.45	608.26	608.00
20	608.45	608.26	608.00
21	608.39	608.20	607.95
22	608.27	608.08	607.82
23	608.14	607.94	607.69
24	608.00	607.81	607.56
25	607.87	607.68	607.42
26	607.74	607.54	607.29
27	607.60	607.41	607.16
28	607.47	607.28	607.02

PEDESTAL HEIGHT, "H"

Beam	Pier C6	Pier C7	Pier C8
15	1'-0 5/8"	10"	8 7/8"
16	1'-2 1/8"	11 1/2"	10 3/8"
17	1'-3 5/8"	1'-1"	11 7/8"
18	1'-5"	1'-2 1/4"	1'-1 1/4"
19	1'-5 5/8"	1'-2 3/4"	1'-1 3/4"
20	1'-5 3/8"	1'-2 3/4"	1'-1 3/4"
21	1'-4 3/4"	1'-2"	1'-1"
22	1'-3 1/4"	1'-0 5/8"	11 1/2"
23	1'-1 5/8"	11"	10"
24	1'-0 7/8"	10 1/4"	9 1/4"
25	1'-0 3/4"	10 1/8"	9 1/2"
26	1'-0 1/2"	10"	9"
27	1'-0 1/4"	9 7/8"	8 3/4"
28	1'-0 1/8"	9 3/4"	8 5/8"

Notes:

- Beam seat elevations and pedestal heights, "H", were determined based on data from existing plans. Prior to ordering any material, the Contractor shall verify in the field all beam seat heights and shim thickness dimensions. Space reinforcement in concrete pedestals to miss anchor bolts.
- Drilling and grouting of bars into existing pier cap and column shall be done in accordance with Article 584 of the Standard Specifications. Drilled and grouted bars shall maintain 5" clearance from an existing face of concrete and shall be installed such that they miss existing pier cap reinforcement. Cost included with Reinforcement Bars, Epoxy Coated.

0160461-60X75-S105-PC.dgn

**PARSONS
BRINCKERHOFF**

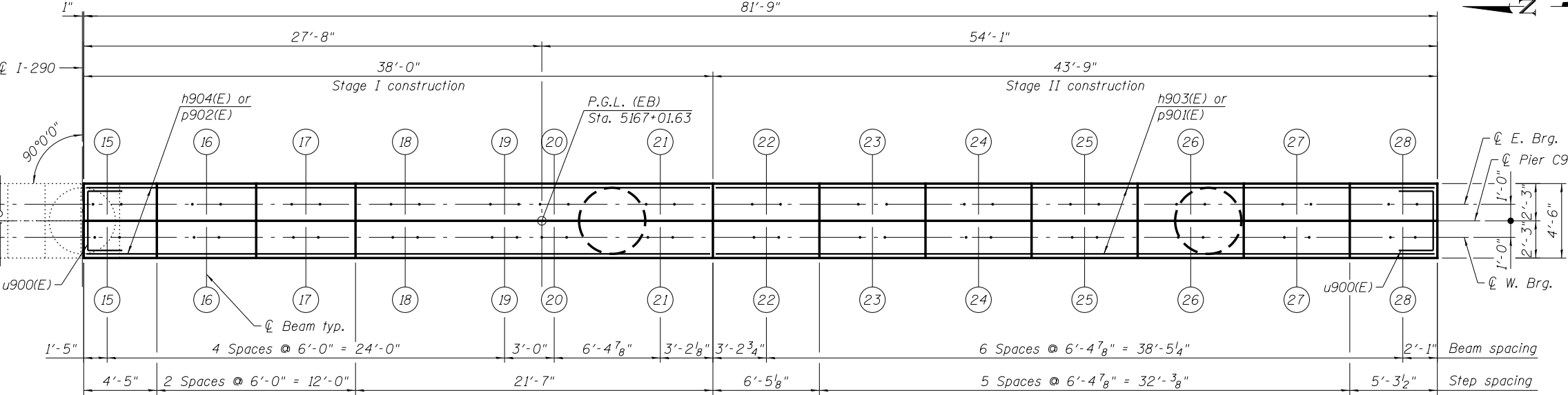
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PLOT DATE = 6/28/2017	CHECKED - JIG	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

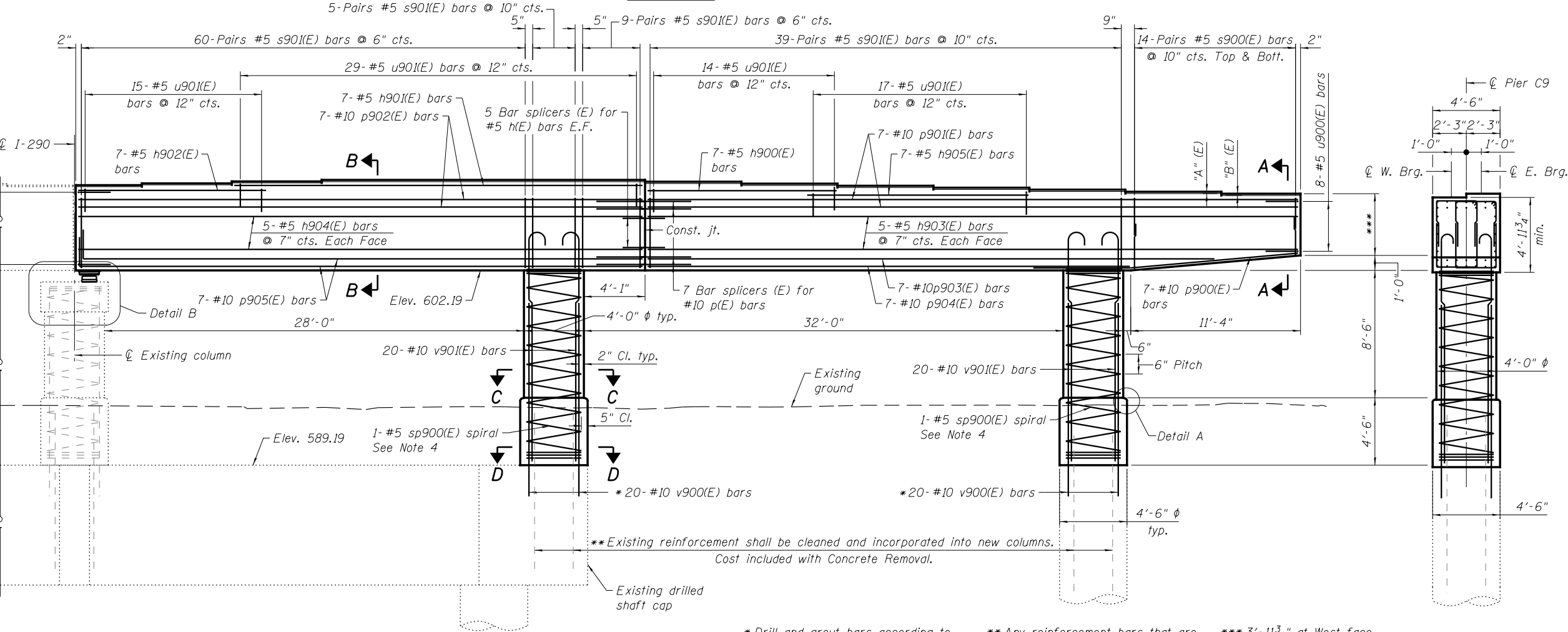
**PIERS C6 TO C8 DETAILS
STRUCTURE NO. 016-0461**

SHEET NO. S2-105 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	397
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



TOP PLAN



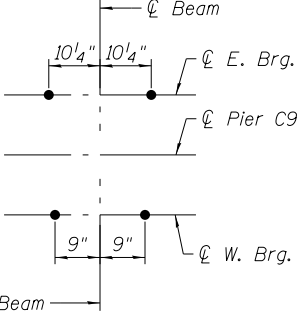
ELEVATION
(Looking East)

BEARING SEAT
STEP HEIGHTS

E. Seat Step	"A"
15 to 16	1'3/8"
16 to 17	1'1/2"
17 to 18/19/20/21	1'4"
21 to 22	1'3/8"
22 to 23	1'1/2"
23 to 24	1'5/8"
24 to 25	1'1/2"
25 to 26	1'1/2"
26 to 27	1'5/8"
27 to 28	1'1/2"
W. Seat Step	"B"
15 to 16	1'3/8"
16 to 17	1'1/2"
17 to 18/19/20/21	1"
21 to 22	1'3/8"
22 to 23	1'5/8"
23 to 24	1'1/2"
24 to 25	1'5/8"
25 to 26	1'1/2"
26 to 27	1'5/8"
27 to 28	1'5/8"

TOP OF SEAT
ELEVATION

Beam No.	E. Seat Elevation	W. Seat Elevation
15	607.88	607.76
16	608.00	607.88
17	608.13	608.01
18	608.23	608.10
19	608.23	608.10
20	608.23	608.10
21	608.23	608.10
22	608.11	607.98
23	607.98	607.84
24	607.84	607.71
25	607.71	607.57
26	607.58	607.44
27	607.44	607.31
28	607.31	607.17



ANCHOR BOLT LAYOUT

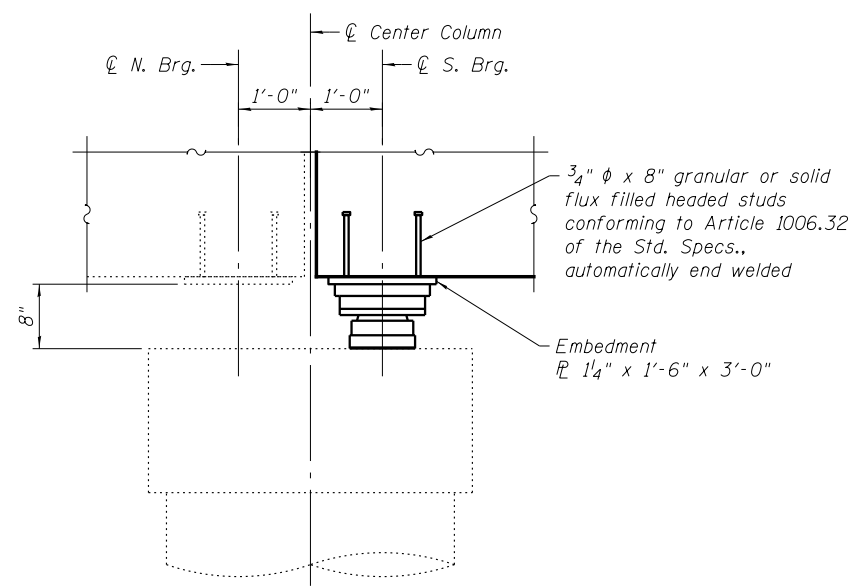
MINIMUM BAR LAP

#5 bar = 3'-3"
#10 bar = 10'-10"

- Notes:
- Space reinforcement in cap to miss anchor bolts.
 - Pour steps monolithically with cap.
 - For Sections A-A, B-B, C-C & D-D and Details A & B, see sheet S2-107.
 - sp900(E) spiral,
1) Provide 1 1/2 extra turns, shop welded together per AWS D1.4 top and bottom. Extend spiral 2" into pier cap or column cap. Provide 4-#4 spacers or equivalent.
2) When splicing spiral reinforcement is necessary, the spiral shall be provided with 1 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall both terminate with a 135° standard hook.
 - Apply concrete sealer to all exposed concrete surfaces of the pier.

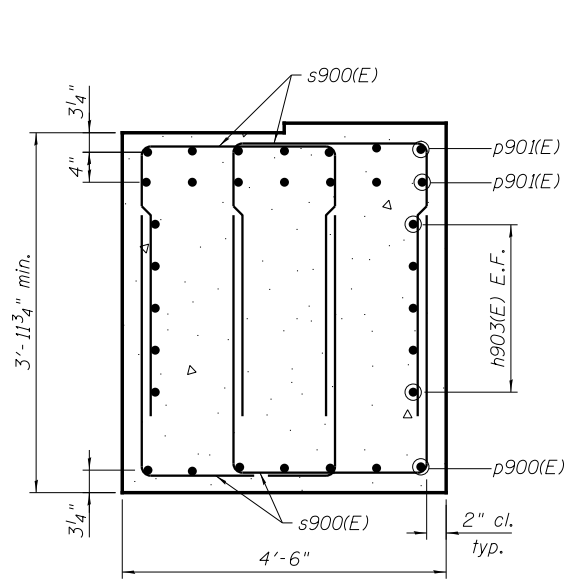
END VIEW

0160461-60X75-S106-PC9.dgn

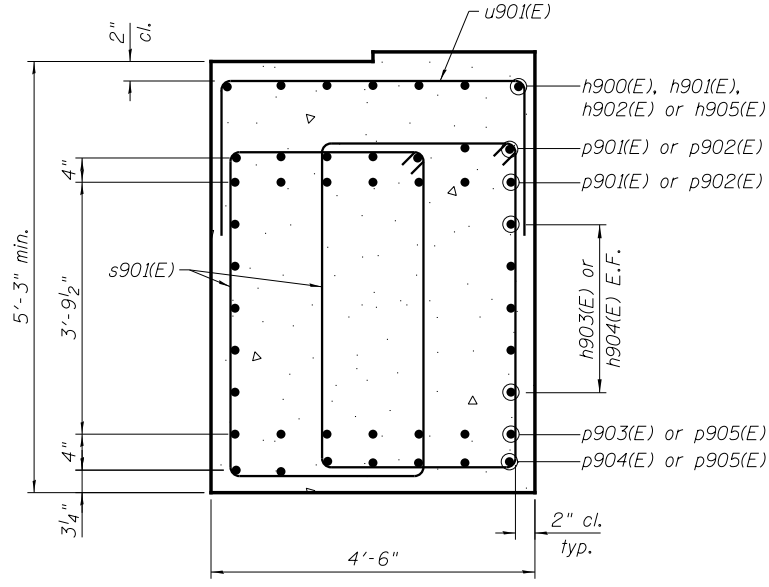


DETAIL B

Pier cap reinforcement not shown for clarity



SECTION A-A

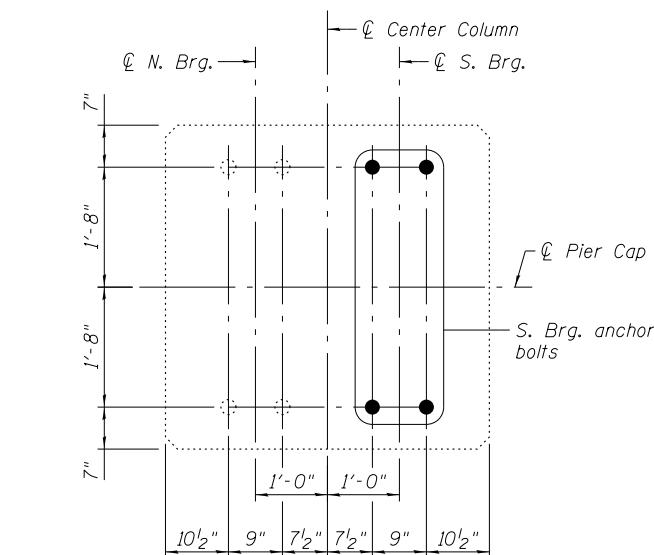


SECTION B-B

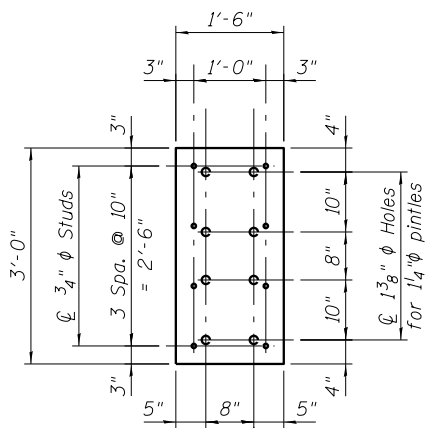
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h900(E)	7	#5	12'-6"	
h901(E)	7	#5	27'-3"	
h902(E)	7	#5	14'-3"	
h903(E)	10	#5	43'-5"	
h904(E)	10	#5	37'-8"	
h905(E)	7	#5	16'-8"	
p900(E)	7	#10	22'-1"	
p901(E)	14	#10	43'-5"	
p902(E)	14	#10	37'-9"	
p903(E)	7	#10	38'-0"	
p904(E)	7	#10	32'-6"	
p905(E)	14	#10	39'-7"	
s900(E)	56	#5	9'-7"	
s901(E)	226	#5	15'-9"	
sp900(E)	2	#5	13'-2"	
u900(E)	18	#5	11'-0"	
u901(E)	75	#5	8'-6"	
v900(E)	40	#10	13'-3"	
v901(E)	40	#10	16'-5"	
Structure Excavation			Cu. Yd.	29
Concrete Structures			Cu. Yd.	90.2
Reinforcement Bars, Epoxy Coated			Pound	22,030
Concrete Sealer			Sq. Ft.	2,020

* Length is height of spiral

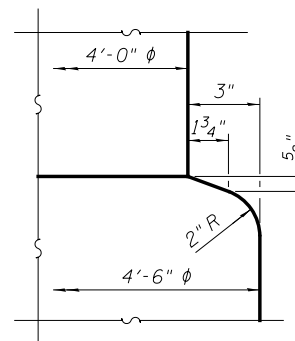


ANCHOR BOLT LAYOUT AT NESTED BEARING

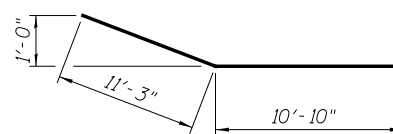


EMBEDMENT PLATE

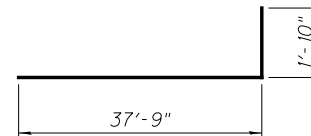
Cost included with Concrete Structures. See sheet S2-99 for additional details.



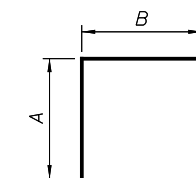
DETAIL A



BAR p900(E)

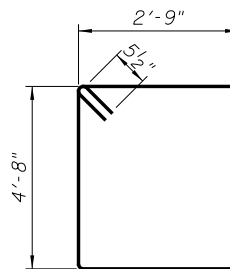


BAR p905(E)

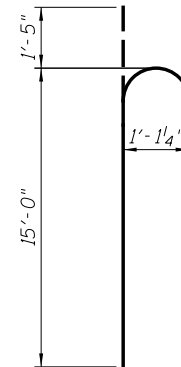


BARS A & B DIMENSIONS

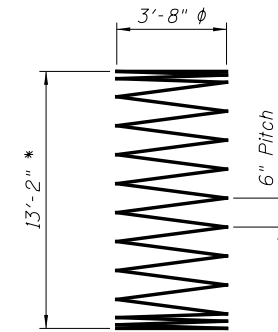
Bar	A	B
s900(E)	3'-5"	2'-9"
u900(E)	3'-6"	4'-0"
u901(E)	2'-2"	4'-2"



BAR s901(E)



BAR v901(E)



BAR sp900(E)

- Note:
- Space reinforcement in column cap to miss anchor bolts.
 - Bars equally spaced, unless otherwise noted.
 - All edges shall have standard 3/4" chamfer, unless otherwise noted.
 - Spirals are measured vertically.

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PARSONS
BRINCKERHOFF

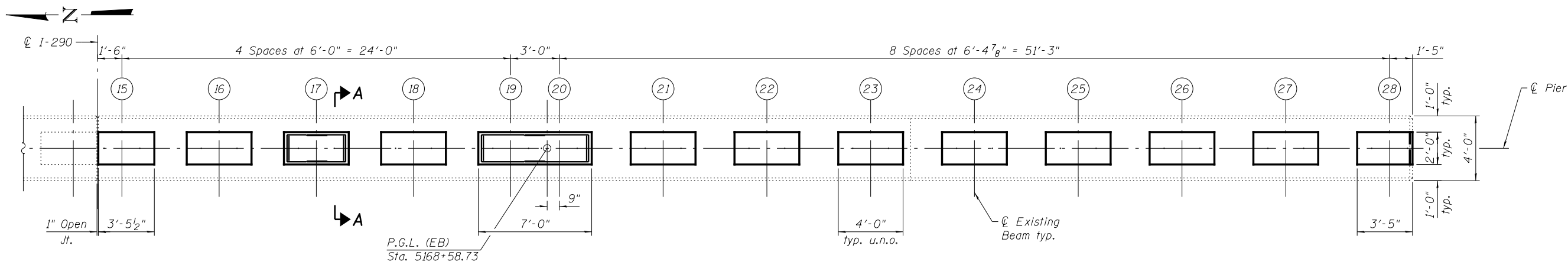
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PLOT DATE = 6/28/2017	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

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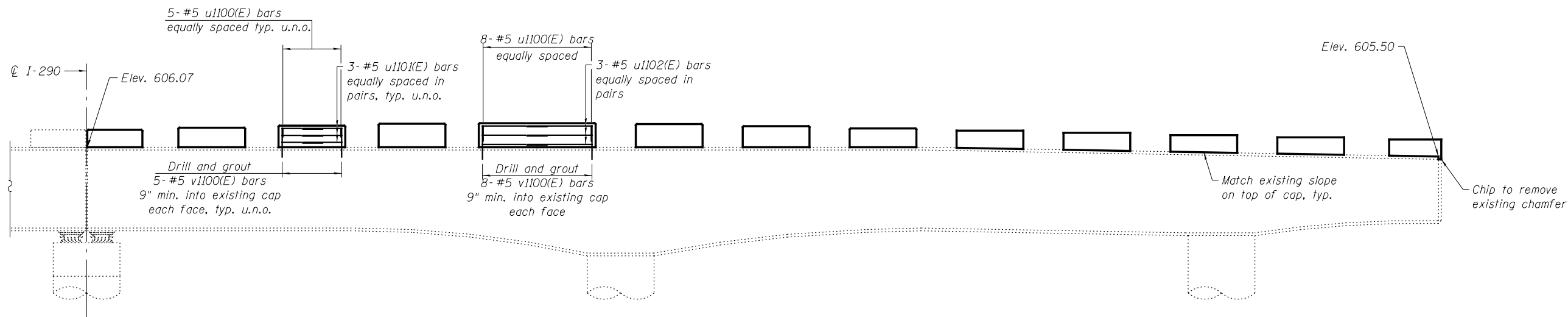
PIER C9 DETAILS
STRUCTURE NO. 016-0461

SHEET NO. S2-107 OF S2-137 SHEETS

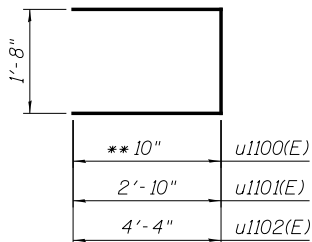
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	399
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				



PLAN



ELEVATION
(Looking East)



BARS u1100(E) TO u1102(E)
** Cut in field to fit

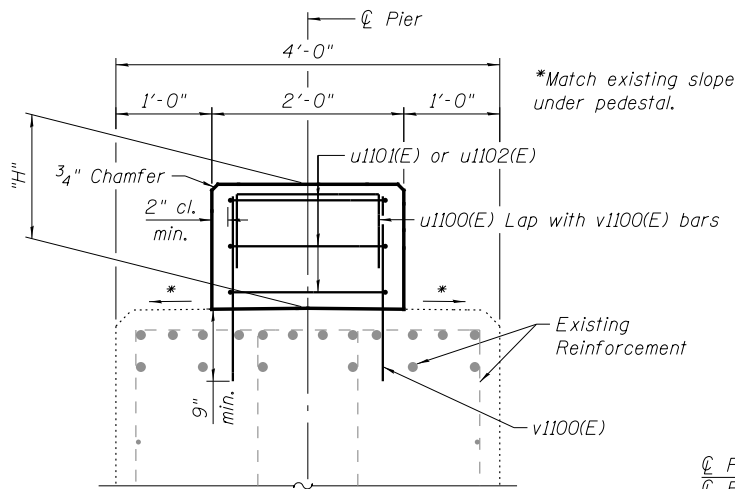
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
u1100(E)	68	#5	3'-4"	
u1101(E)	72	#5	7'-4"	
u1102(E)	6	#5	10'-4"	
v1100(E)	136	#5	2'-0"	
Reinforcement Bars, Epoxy Coated			Pound	1,140
Concrete Structures			Cu. Yds.	4.8

*** Cut bar in field to fit.

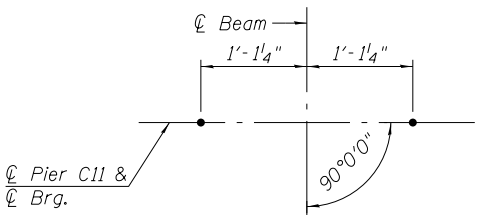
Notes:

- Beam seat elevations and pedestal heights, "H", were determined based on data from existing plans. Prior to ordering any material, the Contractor shall verify in the field all beam seat heights and shim thickness dimensions. Space reinforcement in concrete pedestals to miss anchor bolts.
- Drilling and grouting of bars into existing pier cap and column shall be done in accordance with Article 584 of the Standard Specifications. Drilled and grouted bars shall maintain 5" clearance from an existing face of concrete and shall be installed such that they miss existing pier cap reinforcement. Cost included with Reinforcement Bars, Epoxy Coated.



SECTION A-A

(Anchor bolts not shown for clarity)



ANCHOR BOLT LAYOUT

PEDESTAL HEIGHT, "H"

Beam	Pier C11
15	1'-0 1/4"
16	1'-1 3/4"
17	1'-3 1/4"
18	1'-4 5/8"
19	1'-5 1/4"
20	1'-5 1/4"
21	1'-4 5/8"
22	1'-3 1/8"
23	1'-1 1/2"
24	1'-0 3/4"
25	1'-0 5/8"
26	1'-0 3/8"
27	1'-0 1/4"
28	1'-0"

BEAM SEAT ELEVATION

Beam	Pier C11
15	607.09
16	607.22
17	607.34
18	607.46
19	607.51
20	607.51
21	607.45
22	607.33
23	607.19
24	607.06
25	606.93
26	606.79
27	606.66
28	606.53

0160461-60X75-S108-PC11.dgn

PARSONS
BRINCKERHOFF

USER NAME = pateld	DESIGNED - JZ	REVISED -
PLOT SCALE = N.T.S.	CHECKED - JZ	REVISED -
PLOT DATE = 6/28/2017	DRAWN - DCP	REVISED -
	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER C11 DETAILS
STRUCTURE NO. 016-0461

SHEET NO. S2-108 OF S2-137 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-001 R&B (EB)	COOK	696	400
CONTRACT NO. 60X75				
ILLINOIS FED. AID PROJECT				