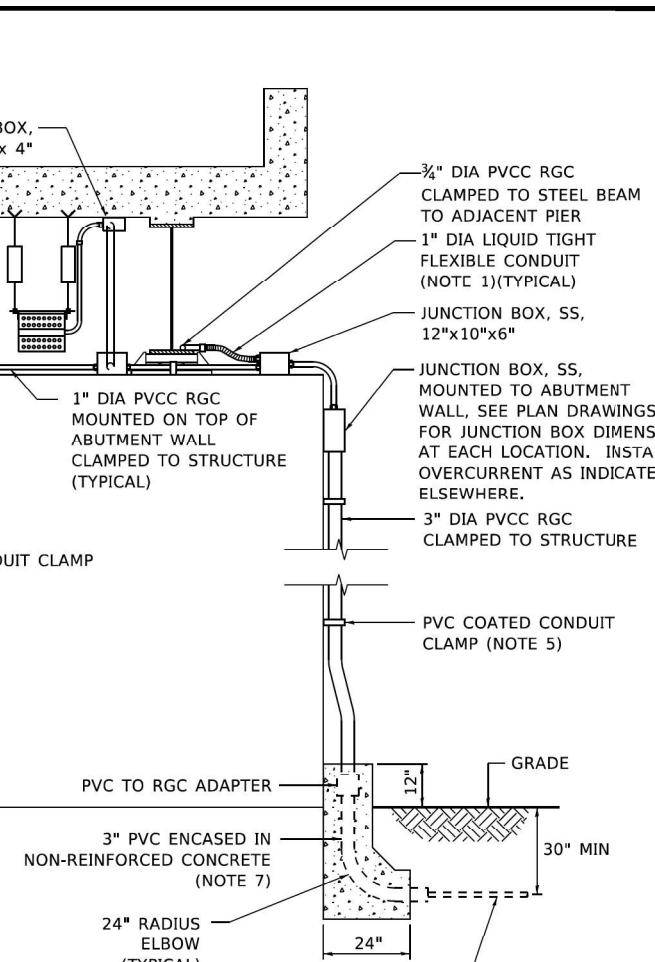
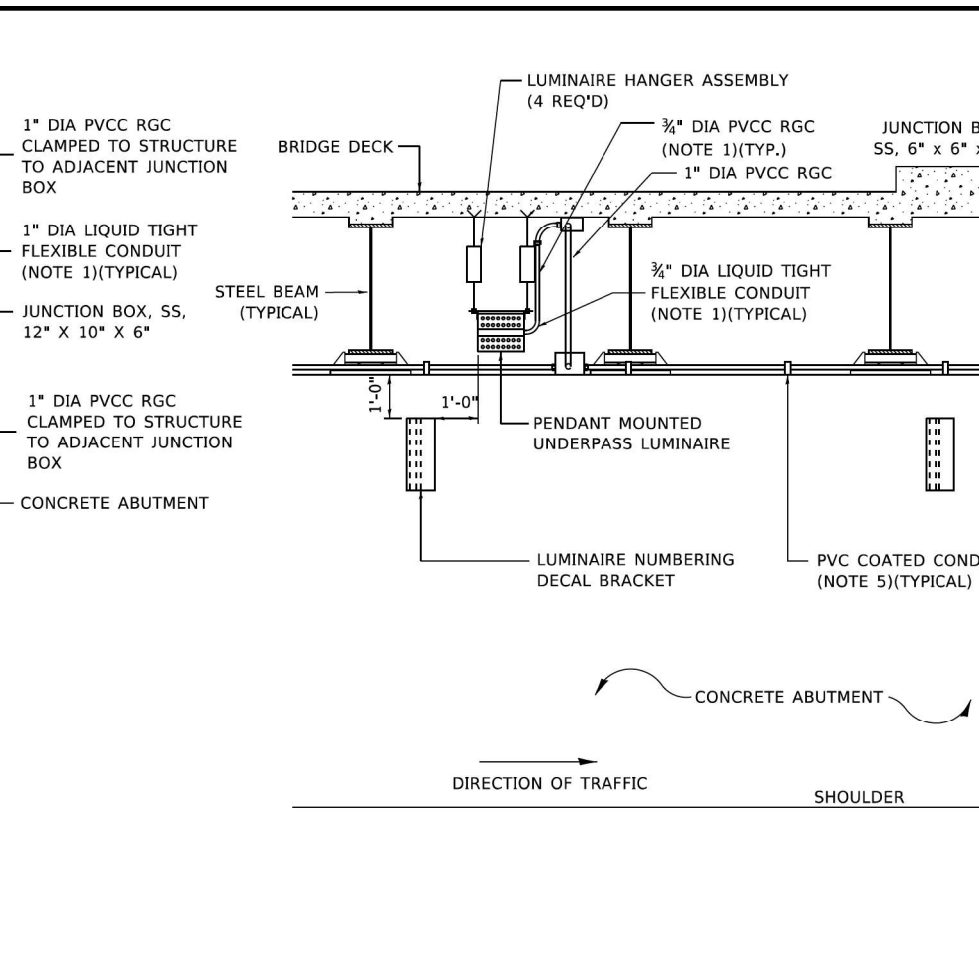
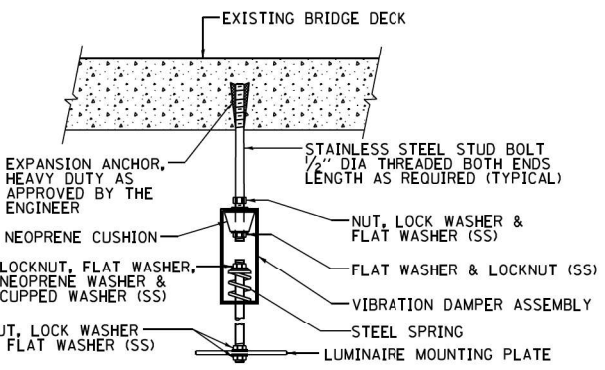


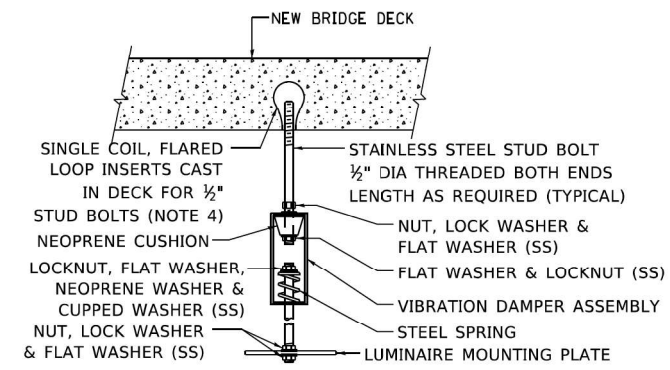
NOTE:
LUMINAIRE TILT SHALL BE AS UTILIZED IN THE APPROVED LUMINAIRE PHOTOMETRIC CALCULATIONS. THE TILT ANGLE MUST BE DOCUMENTED IN THE RECORD DRAWINGS.



- NOTES:**
- LIQUID TIGHT FLEXIBLE METAL CONDUIT, MAXIMUM LENGTH 6'-0", TYPICAL FOR EACH INSTANCE AS SHOWN. PROVIDE PVC COATED RIGID GALVANIZED STEEL CONDUIT AS REQUIRED NOT TO EXCEED 6'-0" OF FLEXIBLE LIQUID TIGHT METAL CONDUIT. LIQUID TIGHT FLEXIBLE METAL CONDUIT WILL BE INCLUDED IN THE COST OF THE CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED PAY ITEM EXCEPT THAT " DIA. CONDUIT AND " DIA. FLEXIBLE CONDUIT SHALL BE INCLUDED IN THE COST OF UNDERPASS LUMINAIRE INSTALLATION.
 - SEE UNDERPASS LIGHTING PLANS FOR INSTALLATION LOCATION OF UNDERPASS LIGHTING LUMINAIRES.
 - THE CONTRACTOR SHALL USE APPROVED SINGLE COIL FLARED LOOP INSERTS WHEN SUSPENDED MOUNTING AN UNDERPASS LUMINAIRE TO A NEW BRIDGE DECK. THE FLARED LOOP INSERTS MUST BE CAST INTO THE CONCRETE DECK. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND COORDINATING THE INSERT LOCATIONS FOR MOUNTING THE UNDERPASS LIGHTING SYSTEM AS SHOWN ON THE PLANS WITH THE BRIDGE DECK CONTRACTOR. SEE DETAIL.
 - THE UNDERPASS LUMINAIRE HANGER ASSEMBLY COMPLETE WITH HEAVY DUTY ANCHORS/INSERTS AND ALL APPLICABLE HARDWARE SHALL BE INCLUDED IN THE COST OF THE UNDERPASS LUMINAIRE PAY ITEM.
 - SECURE THE CONDUIT WITH PVC COATED CONDUIT CLAMPS OR CONDUIT BEAM CLAMPS AS SHOWN AT 5'-0" INTERVALS FOR LATERALS AND WITHIN 2'-0" MAXIMUM FROM ANY JUNCTION BOX, FLEXIBLE CONDUIT, OR CHANGE IN DIRECTION. ALL PVC COATED CONDUIT CLAMPS OR BEAM CLAMPS SHALL BE INCLUDED WITH THE COST OF THE "CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED" PAY ITEM.
 - ALL UNDERPASS LUMINAIRES MUST BE CENTERED IN THE BEAM SPACE AS INDICATED ON THE PLANS UNLESS OTHERWISE DIRECTED BY THE ENGR. LUMINAIRE SETBACK SHALL BE AS INDICATED IN PLANS FOR EACH SPECIFIC UNDERPASS
 - THE CONCRETE ENCASED CONDUIT TRANSITION SHALL BE INCLUDED IN THE COST OF THE GALVANIZED RIGID STEEL CONDUIT PAY ITEMS.
 - ALL CONDUIT ATTACHED TO STRUCTURE SHALL BE PVC COATED RIGID STEEL CONDUIT (PVCC RGC) TYPICAL.
 - IN NO INSTANCE SHALL ANY UNDERPASS LUMINAIRE OR ANY OTHER ELECTRICAL EQUIPMENT BE INSTALLED BELOW THE ELEVATION OF THE BOTTOM OF THE BRIDGE BEAM WHEN OVER ANY PAVEMENT (ROADWAY OR SHOULDER).

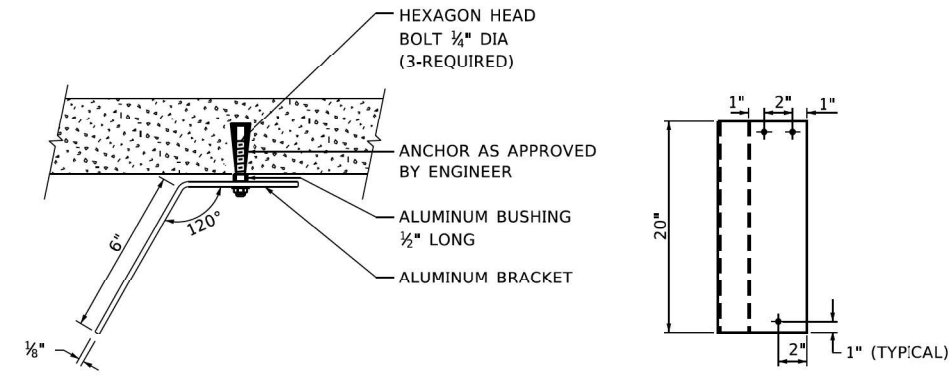


EXISTING BRIDGE DECK INSTALLATION



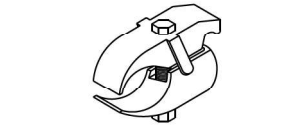
NEW BRIDGE DECK INSTALLATION

TYPICAL LUMINAIRE HANGER ASSEMBLY DETAILS

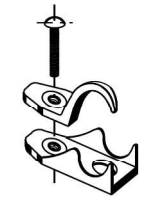


LUMINAIRE NUMBERING DECAL BRACKET

NOT TO SCALE



PVC COATED CONDUIT BEAM CLAMP
NOT TO SCALE



PVC COATED CONDUIT CLAMP
NOT TO SCALE

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DATE: 1/15/2020
USER: gagliarobt

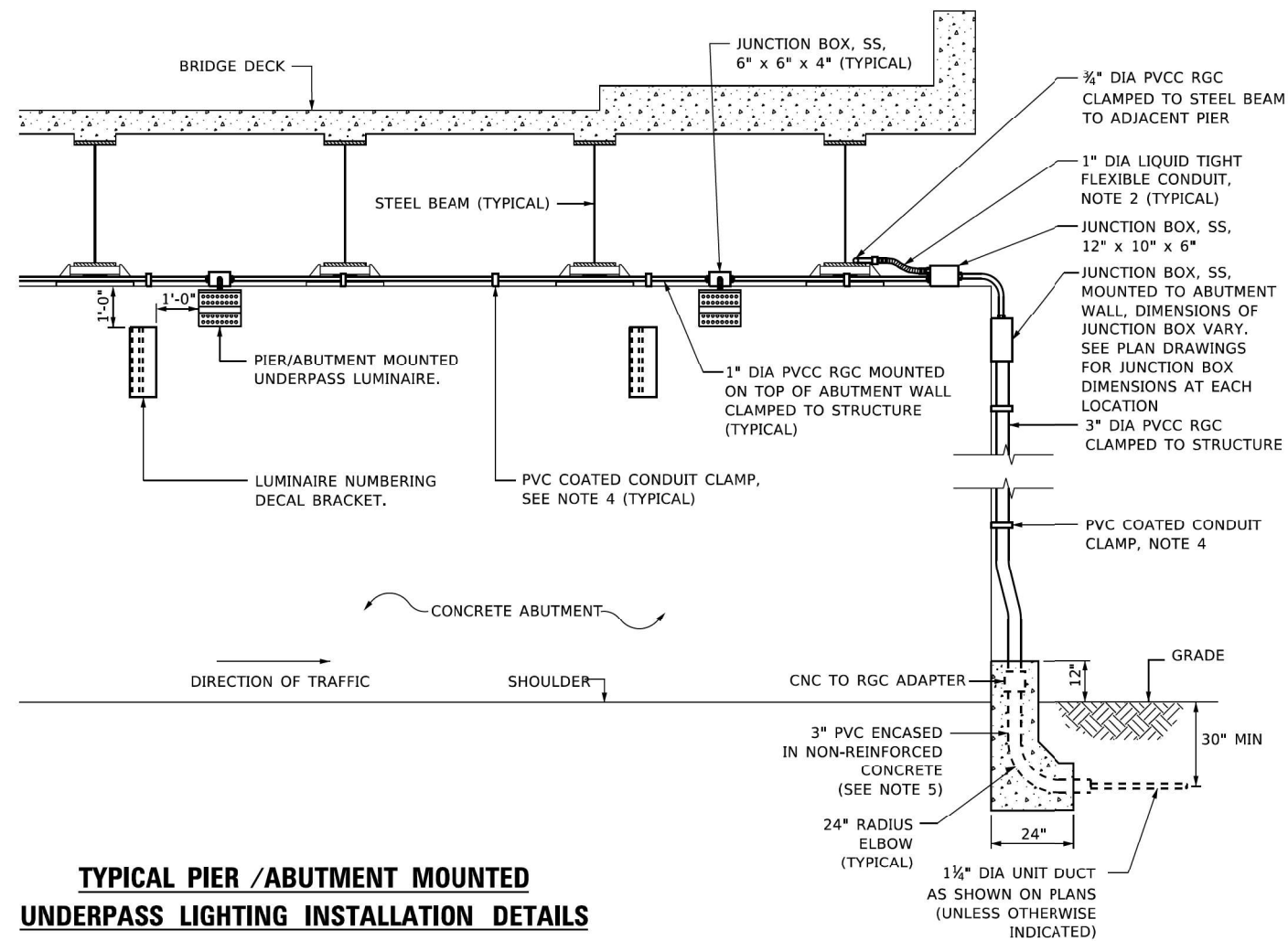
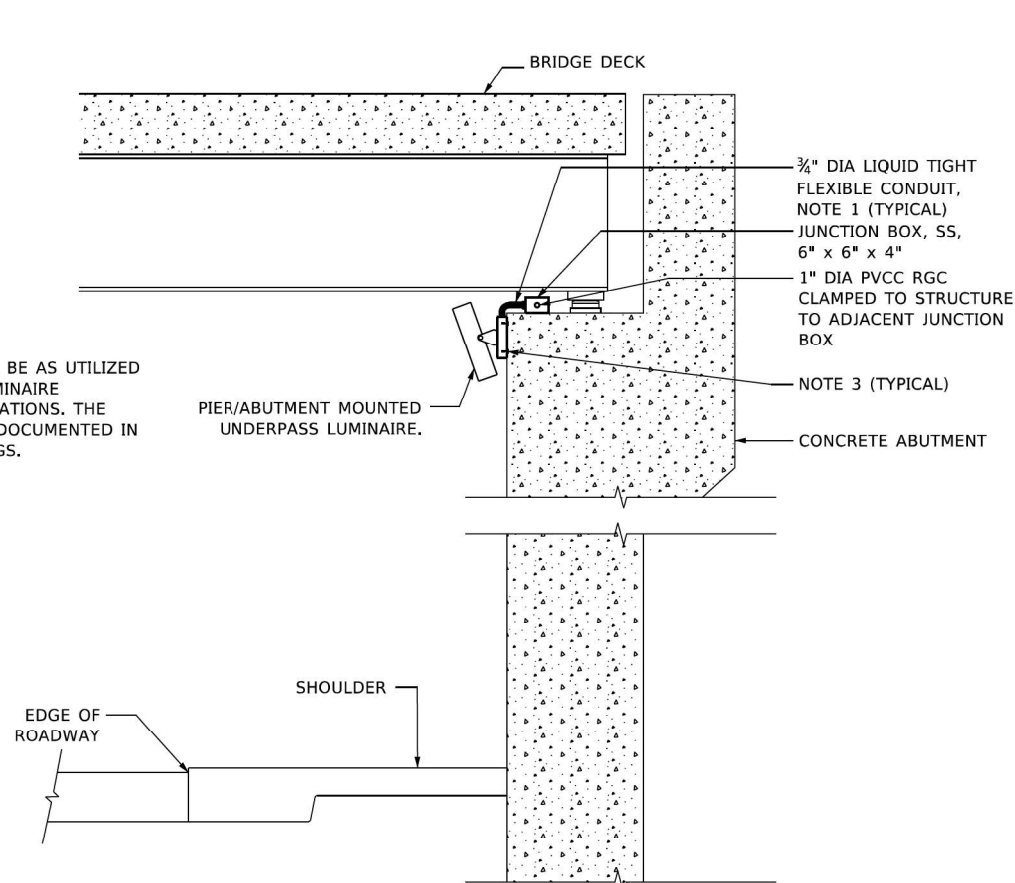
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	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

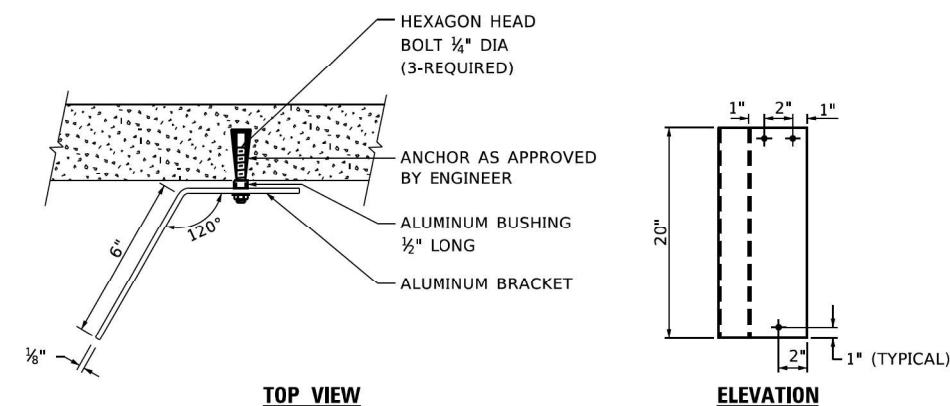
SUSPENDED MOUNT LED UNDERPASS LUMINAIRE INSTALLATION DETAILS		
SCALE: NONE	SHEET 1 OF 1 SHEETS	STA. TO STA.

F.A.P. RTE. 29 & 348	SECTION 3128-Z-I-R&RS	COUNTY COOK	TOTAL SHEETS 659	SHEET NO. 401
BE-901		CONTRACT NO. 60R49		
ILLINOIS FED. AID PROJECT				

NOTE:
LUMINAIRE TILT SHALL BE AS UTILIZED IN THE APPROVED LUMINAIRE PHOTOMETRIC CALCULATIONS. THE TILT ANGLE MUST BE DOCUMENTED IN THE RECORD DRAWINGS.

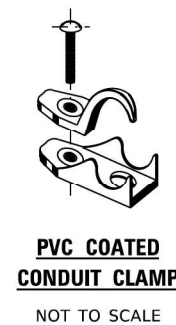
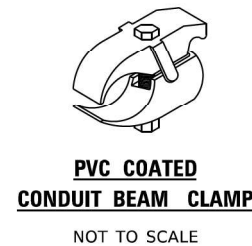


TYPICAL PIER /ABUTMENT MOUNTED UNDERPASS LIGHTING INSTALLATION DETAILS



LUMINAIRE NUMBERING DECAL BRACKET

NOT TO SCALE



NOTES:

- LIQUID TIGHT FLEXIBLE METAL CONDUIT, MAXIMUM LENGTH 6'-0", TYPICAL FOR EACH INSTANCE AS SHOWN. PROVIDE PVC COATED RIGID GALVANIZED STEEL CONDUIT AS REQUIRED NOT TO EXCEED 6'-0" OF FLEXIBLE LIQUID TIGHT METAL CONDUIT. LIQUID TIGHT FLEXIBLE METAL CONDUIT WILL BE INCLUDED IN THE COST OF THE CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED PAY ITEM EXCEPT THAT THE COST OF THE " DIA. RIGID STEEL CONDUIT AND " DIA. FLEXIBLE CONDUIT SHALL BE INCLUDED IN THE LUMINAIRE INSTALLATION.
- SEE UNDERPASS LIGHTING PLANS FOR INSTALLATION LOCATION OF UNDERPASS LIGHTING LUMINAIRES.
- UNDERPASS LUMINAIRE MOUNTED TO FACE OF PIER OR ABUTMENT WALL WITH 1/2" ALUMINUM SPACERS. MOUNTING HEIGHT OF 1" BELOW THE TOP OF PIER OR ABUTMENT WALL TYPICAL FOR ALL PIER/ABUTMENT MOUNTED UNDERPASS LUMINAIRES UNLESS OTHERWISE NOTED.
- EXPANSION ANCHOR, POWDER ACTUATED FASTENERS WILL NOT BE ALLOWED. EXPANSION ANCHOR MUST BE SIZED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.
- SECURE THE CONDUIT WITH PVC COATED CONDUIT CLAMPS OR CONDUIT BEAM CLAMPS AS SHOWN AT 5'-0" INTERVALS FOR LATERALS AND WITHIN 2'-0" MAXIMUM FROM ANY JUNCTION BOX, FLEXIBLE CONDUIT, OR CHANGE IN DIRECTION. ALL PVC COATED CONDUIT CLAMPS OR BEAM CLAMPS SHALL BE INCLUDED WITH THE COST OF THE "CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED" PAY ITEM.
- THE CONCRETE ENCASED CONDUIT TRANSITION SHALL BE INCLUDED IN THE COST OF THE GALVANIZED RIGID STEEL CONDUIT PAY ITEMS.
- ALL CONDUIT ATTACHED TO STRUCTURE SHALL BE PVC COATED RIGID STEEL CONDUIT (PVCC RGC) TYPICAL.

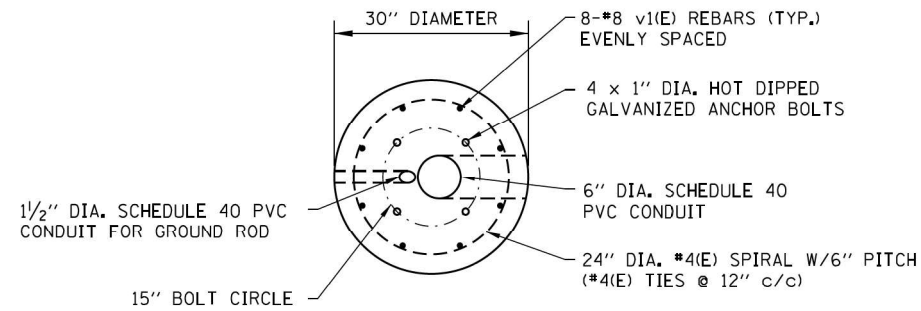
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PLOT USER: gagliano

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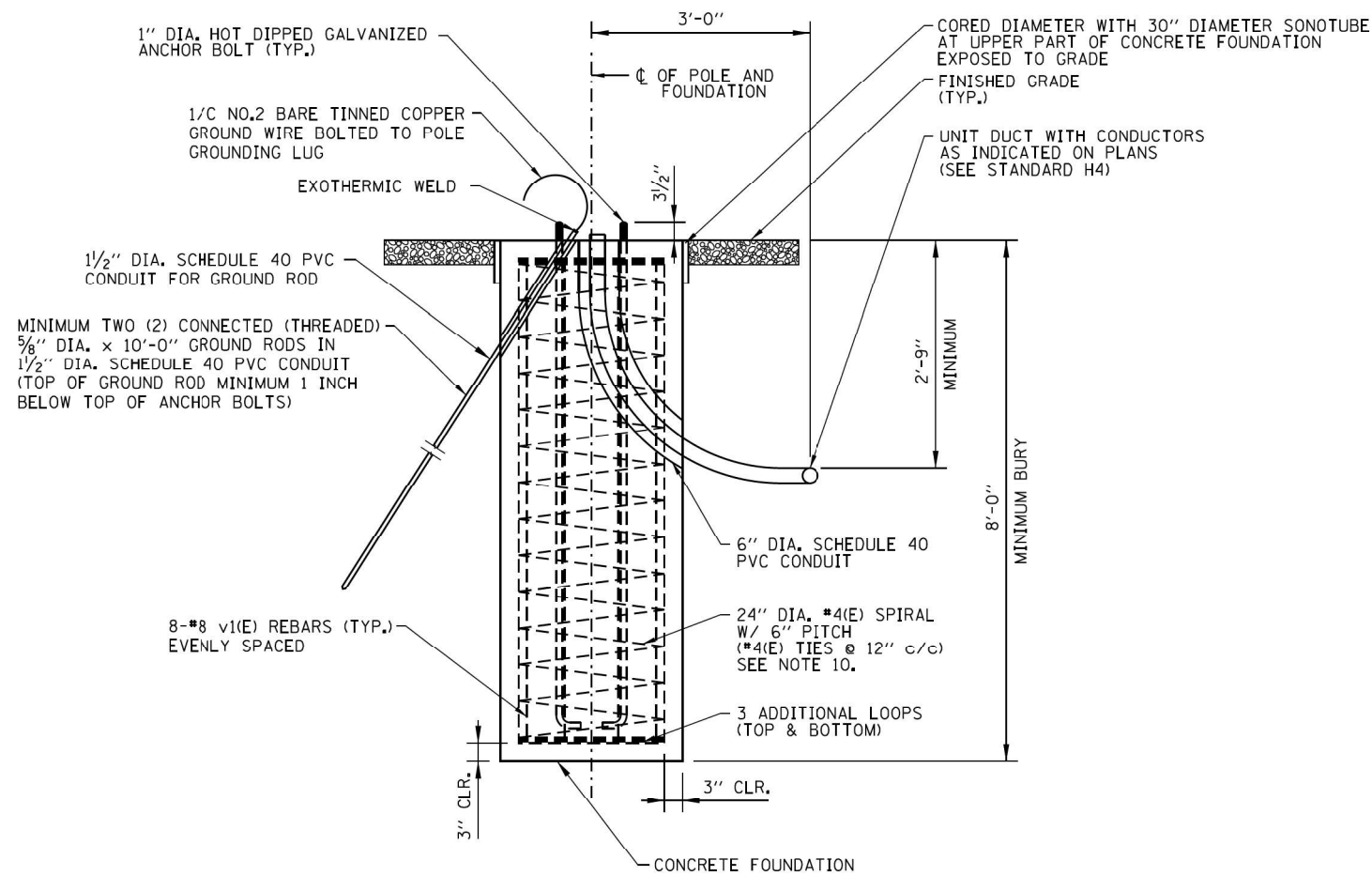
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PIER /ABUTMENT MOUNTED LED UNDERPASS LUMINAIRE INSTALLATION DETAILS		
SCALE: NONE	SHEET 1 OF 1 SHEETS	STA. TO STA.

F.A.P. RTE. 29 & 348	SECTION 3128-Z-I-R&RS	COUNTY COOK	TOTAL SHEETS 659	SHEET NO. 402
BE-903		CONTRACT NO. 60R49		
ILLINOIS FED. AID PROJECT				



PLAN

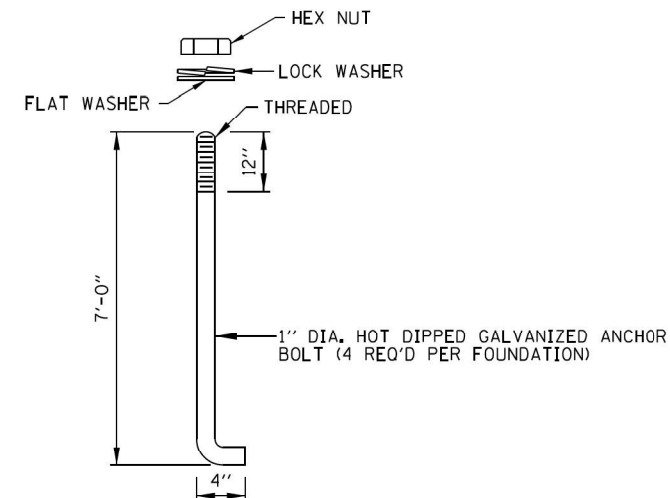


ELEVATION

LIGHT STANDARD FOUNDATION DETAILS - CONCRETE
(GROUND MOUNTED UNITS)

NOTES:

- AT LOCATIONS NOT SHIELDED BY GUARDRAIL, THE LIGHT POLE FOUNDATION SHALL BE FLUSH WITH SURROUNDING GRADED ON ALL SIDES. THE SURROUNDING AREA SHALL BE A LEVEL GRADED AREA CONSTRUCTED OF AGGREGATE SHOULDERS WITH FILTER FABRIC, TYPE B, 4".
- PROVIDE SEEDING, POTASSIUM FERTILIZER NUTRIENT, AND EROSION CONTROL BLANKET AS REQUIRED.
- THE TOP OF FOUNDATION SHALL BE AT THE SAME ELEVATION AS THE ADJACENT TOP OF GUTTER OR WHEN ADJACENT TO AGGREGATE SHOULDER, AT THE SAME ELEVATION AS THE OUTSIDE EDGE OF THE AGGREGATE SHOULDER SLOPED A MAXIMUM 6% AWAY FROM THE PAVED SHOULDER.
- ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).
- ALL GROUND MOUNTED LIGHT POLES SHALL BE PROVIDED WITH AN ACCEPTED FHWA BREAKAWAY BASE OR DEVICE PER THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS SECTION 1070.
- FOR DETAILS OF FUSE HOLDER, POLE BASE WIRING AND CONDUCTOR SPLICE SEE STANDARD H2.
- ALL REINFORCEMENT BARS SHALL BE EPOXY COATED.
- ALL EQUIPMENT SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND THE NATIONAL SAFETY CODE.
- FOR ALL MEDIAN BARRIER FOUNDATIONS, THE ANCHOR BOLTS SHALL BE CENTERED AROUND THE MEDIAN BARRIER WALL CENTERLINE.
- ADJUST SPIRAL BAR SPACING AS NEEDED TO ACCOMMODATE CONDUIT ENTRANCE.



ANCHOR BOLT DETAIL

SHEET 1 OF 10



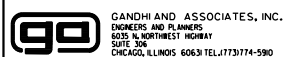
LIGHT STANDARD FOUNDATION

STANDARD H1-11

DATE	REVISIONS
3-01-2023	ADDED ANCHOR BOLT NOTE, REVISED PLAN DIMENSION OF MEDIAN BARRIER TO MATCH SECTION A-A, REVISED PLAN DIMENSION OF MEDIAN BARRIER TO MATCH SECTION D-D & THE LENGTH OF ANCHOR BOLT DETAIL TO 6'-8 3/4". REVISED PLAN DIMENSIONS OF THE MEDIAN BARRIER TO MATCH SECTION A-A.

APPROVED BY: *Manar Nashif* DATE: 03/01/2023
CHIEF ENGINEERING OFFICER

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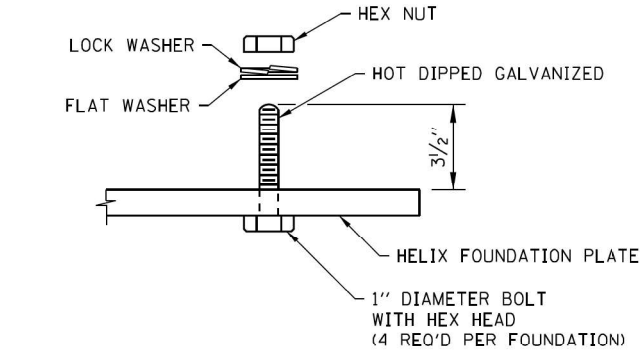
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING DETAILS

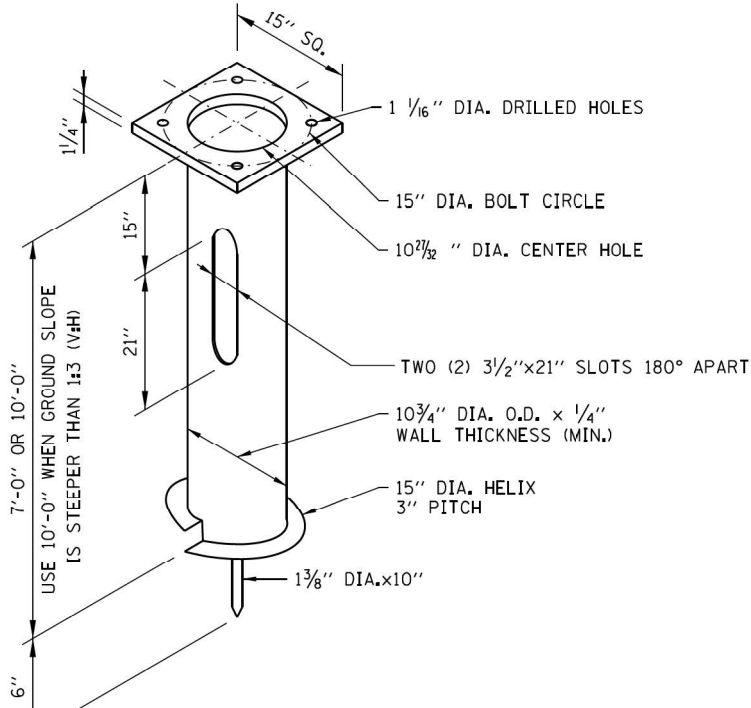
SHEET 16 OF 18 SHEETS STA. TO STA.

F.A.P. RTE. 29 & 348	SECTION 3128-Z-I-R&S	COUNTY COOK	TOTAL SHEETS 659	SHEET NO. 403
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

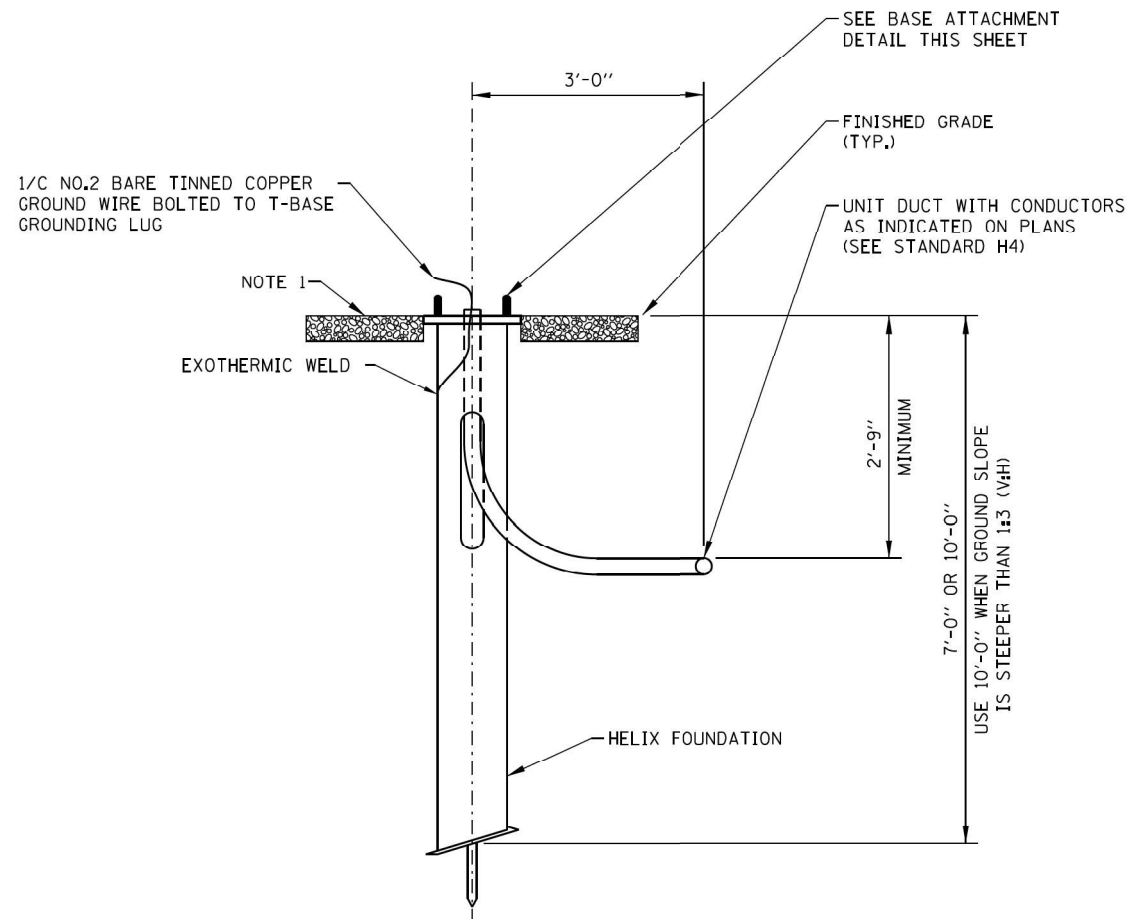
LT-93



BASE ATTACHMENT DETAIL



ISOMETRIC



ELEVATION

APPROVED BY: *Manar Nashif* DATE: 03/01/2023
 CHIEF ENGINEERING OFFICER

**LIGHT STANDARD FOUNDATION DETAILS - HELIX
 (GROUND MOUNTED UNITS)**

NOTES:
 SEE SHEET 1 OF THIS SERIES FOR NOTES.

SHEET 2 OF 10

LIGHT STANDARD FOUNDATION
 STANDARD H1-11

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GO GANDHI AND ASSOCIATES, INC.
 ENGINEERS AND PLANNERS
 5015 N. NORTHWEST HIGHWAY
 SUITE 206
 CHICAGO, ILLINOIS 60630 TEL: 773-774-590

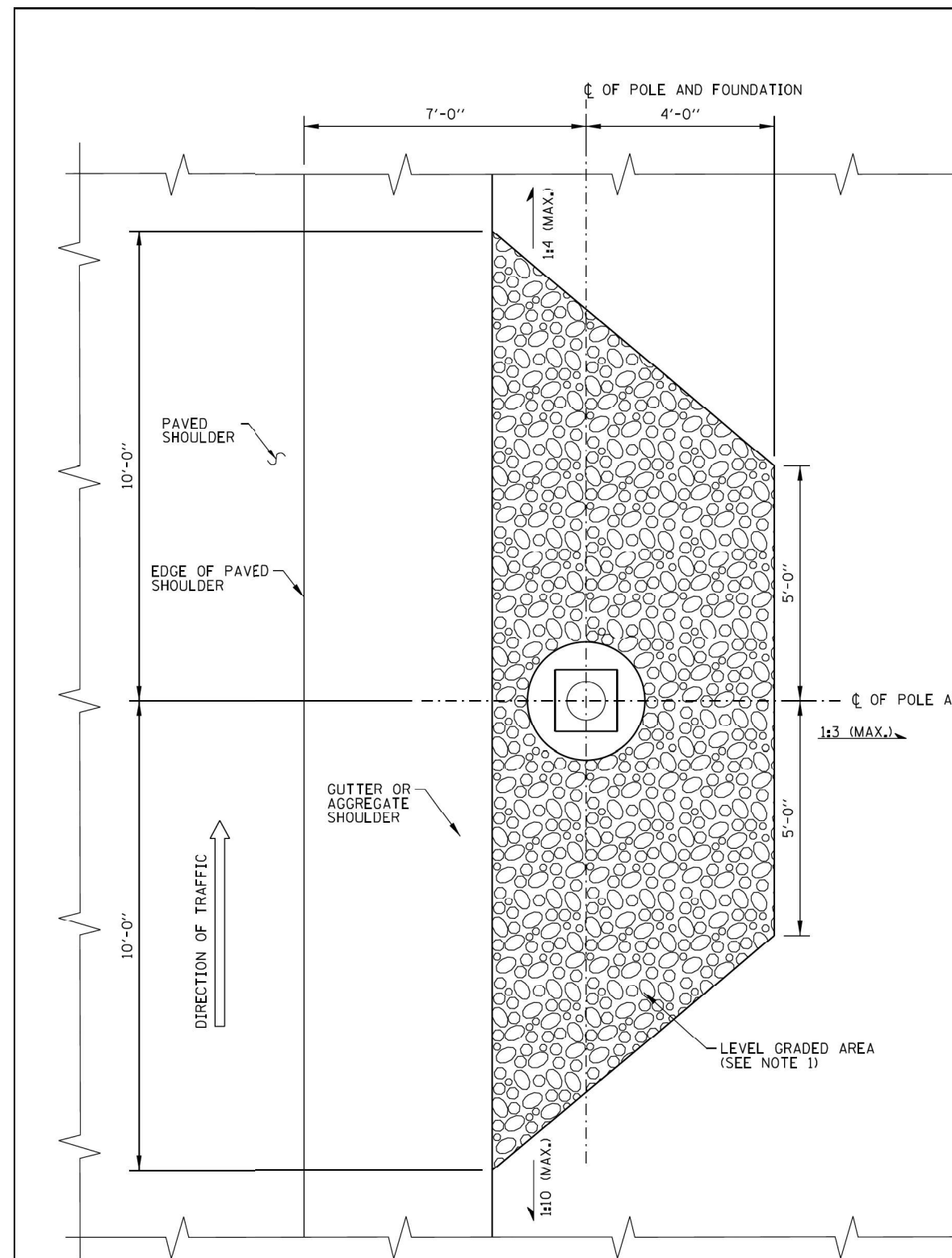
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

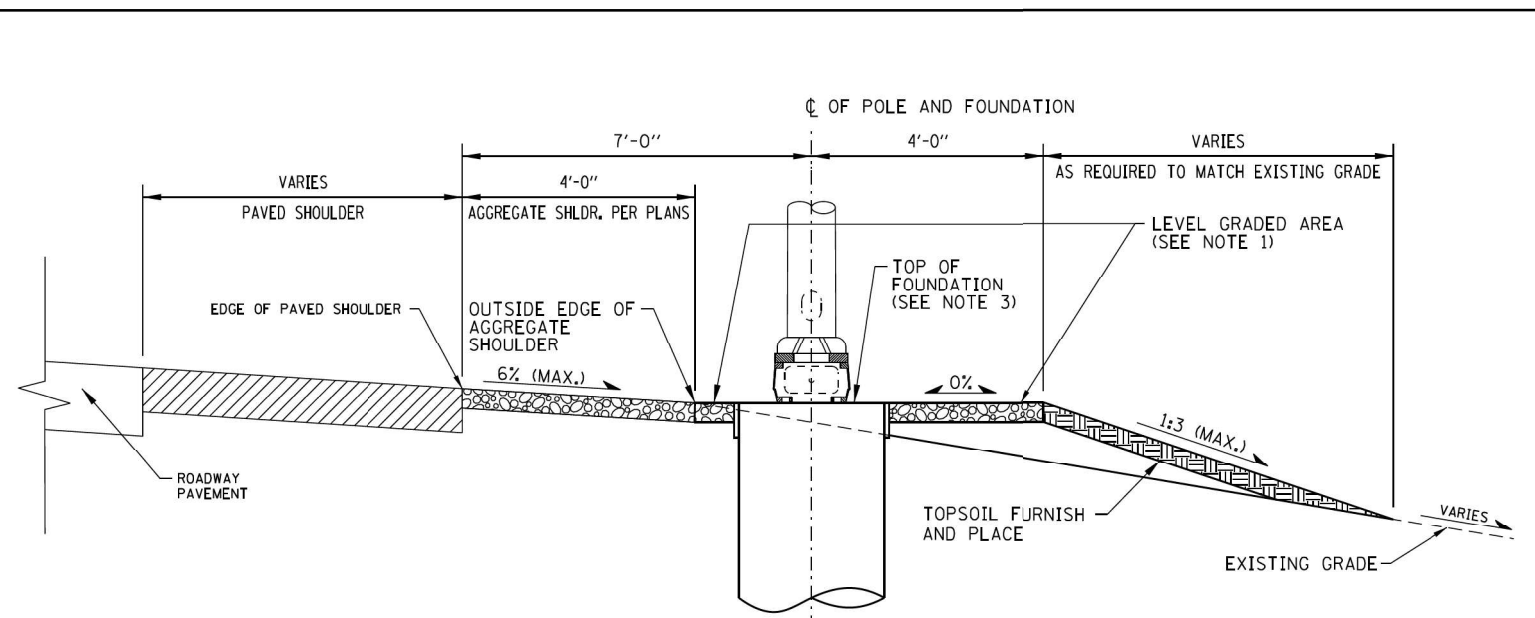
LIGHTING DETAILS

SHEET 17	OF 19 SHEETS	STA.	TO STA.
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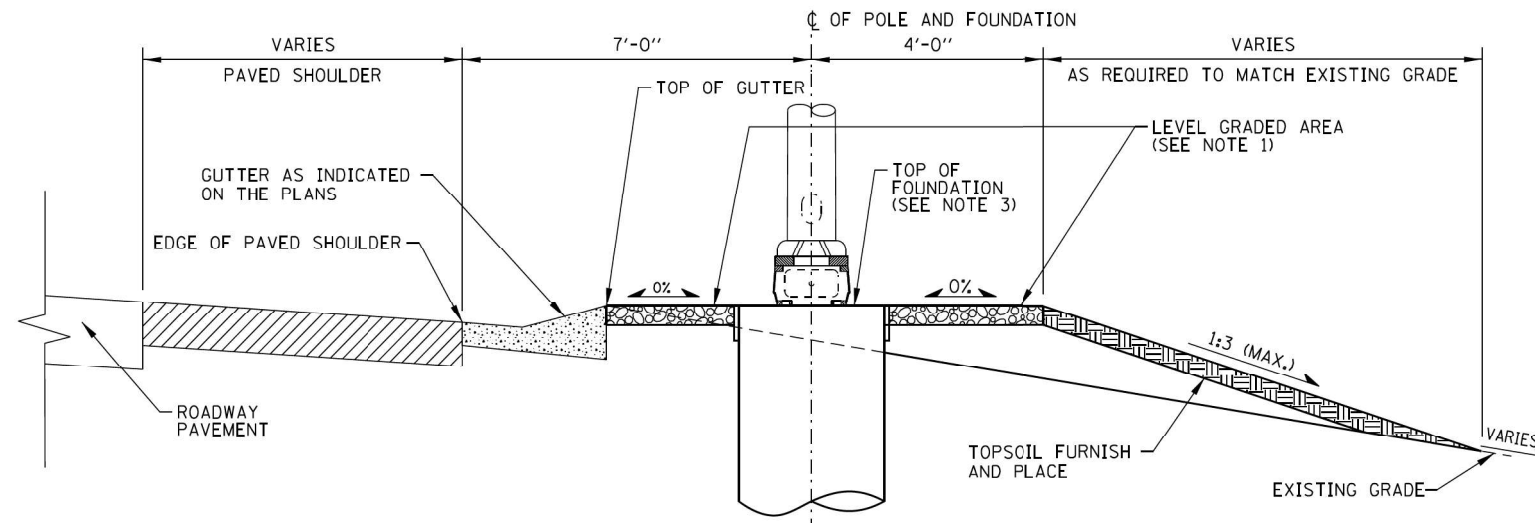
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CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				



PLAN



LIGHT STANDARD FOUNDATION
ADJACENT TO AGGREGATE SHOULDER



LIGHT STANDARD FOUNDATION
ADJACENT TO GUTTER

APPROVED BY:
Manar Nashif
CHIEF ENGINEERING OFFICER
DATE: 03/01/2023

LIGHT STANDARD FOUNDATION DETAILS - GRADING W/ FORESLOPE
(GROUND MOUNTED UNITS)

NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

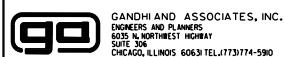
SHEET 7 OF 10



LIGHT STANDARD
FOUNDATION

STANDARD H1-11

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REVISOR -
CHECKED - NT
DATE - 2023-12-14

REVISOR -
REVISOR -
REVISOR -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING DETAILS

SHEET 18 OF 19 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29 & 348	3128-Z-I-R&S	COOK	659	405
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60R49	

B.M.: #205 Square "□" cut on bridge wall at S.W. corner of IL 43 bridge over CSX Railroad at Sta. 310+23.54, 36.1' LT. with Elev.: 633.81

Existing Structure: S.N. 016-0321 was constructed in 1961, rehabilitated in 1981 & 1999. Structure consists of 4 continuous spans carrying concrete deck over steel beams with three reinforced concrete piers and two pile bent abutments. Structure measures 253'-2" (bk. to bk. abut.) long, 84'-11 7/8" (out to out) wide at S. Abutment & 88'-9 7/8" (out to out) wide N. Abutment.

- Staging Notes:
1. Staged construction utilizing median crossovers.
 2. Ramp G2 will not be closed during Stage 1.
 3. Salvage: None

SCOPE OF WORK

1. Remove deck and approach pavements
2. Make deck composite full length by installing shear connectors on the beam top flange.
3. Perform steel cover plate retrofit.
4. Remove abutment backwall and replace with semi-integral abutment.
5. Repair existing slope wall.
6. Raise supporting beams 3" & construct new concrete bearing seat at abutments.
7. Perform epoxy crack injection and formed concrete repairs at abutments and piers.
8. Remove expansion bearings at abutments, Pier 1 & Pier 3 and replace with elastomeric bearings for raised deck.
9. Pour new deck and approach slabs.
10. Install guardrails.
11. Painting and cleaning of structural steel.
12. Remove and replace lighting standards.
13. Remove fixed bearings at pier 2 and replace with low profile fixed bearings.
14. Remove and Replace Wing Walls.

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications Customary US Units Eighth Edition.

DESIGN STRESSES

FIELD UNITS (New Construction)
 $f'_c = 4,000$ psi (superstructure concrete)
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinf.)
 $f_y = 36,000$ psi (M270 Grade 36 structural steel)

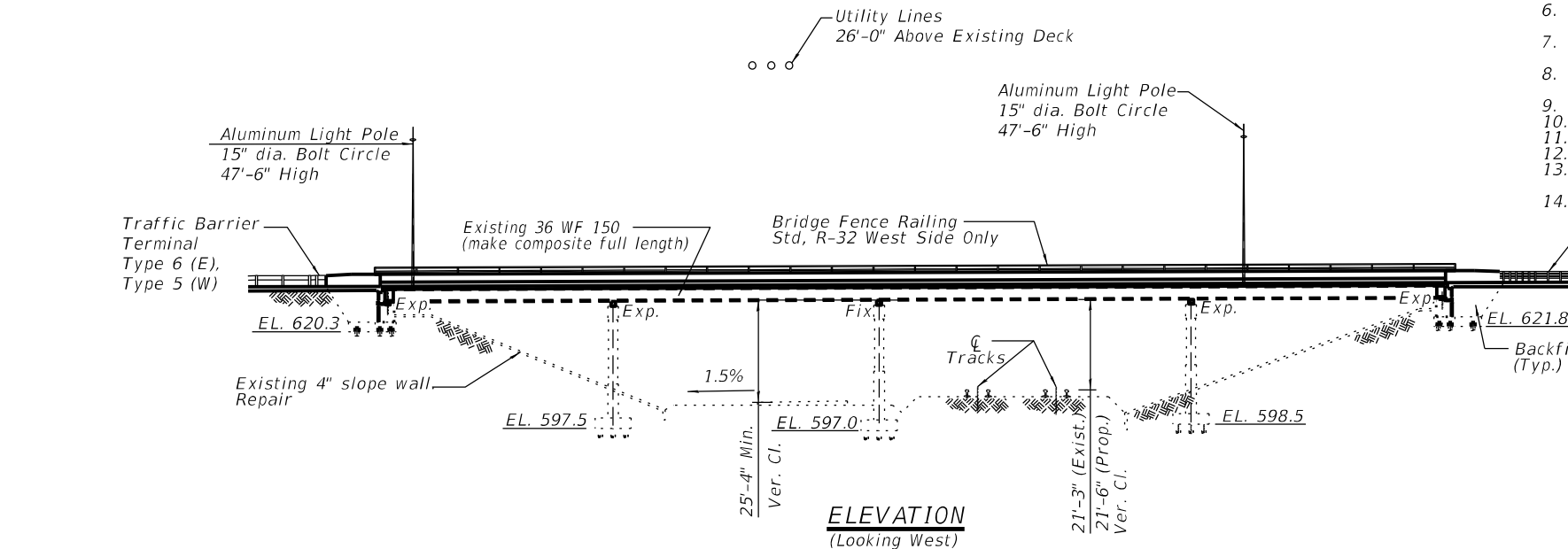
FIELD UNITS (Existing Construction)
 $f_c = 1,400$ psi (without earth pressure)
 $f_c = 1,000$ psi (with earth pressure)
 $f_s = 20,000$ psi (reinforcing steel)
 $f_s = 18,000$ psi (structural steel)

SEISMIC DATA

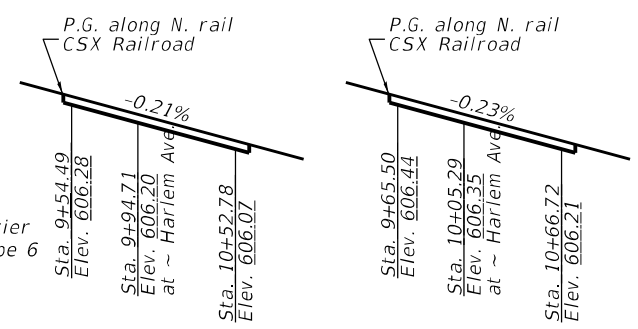
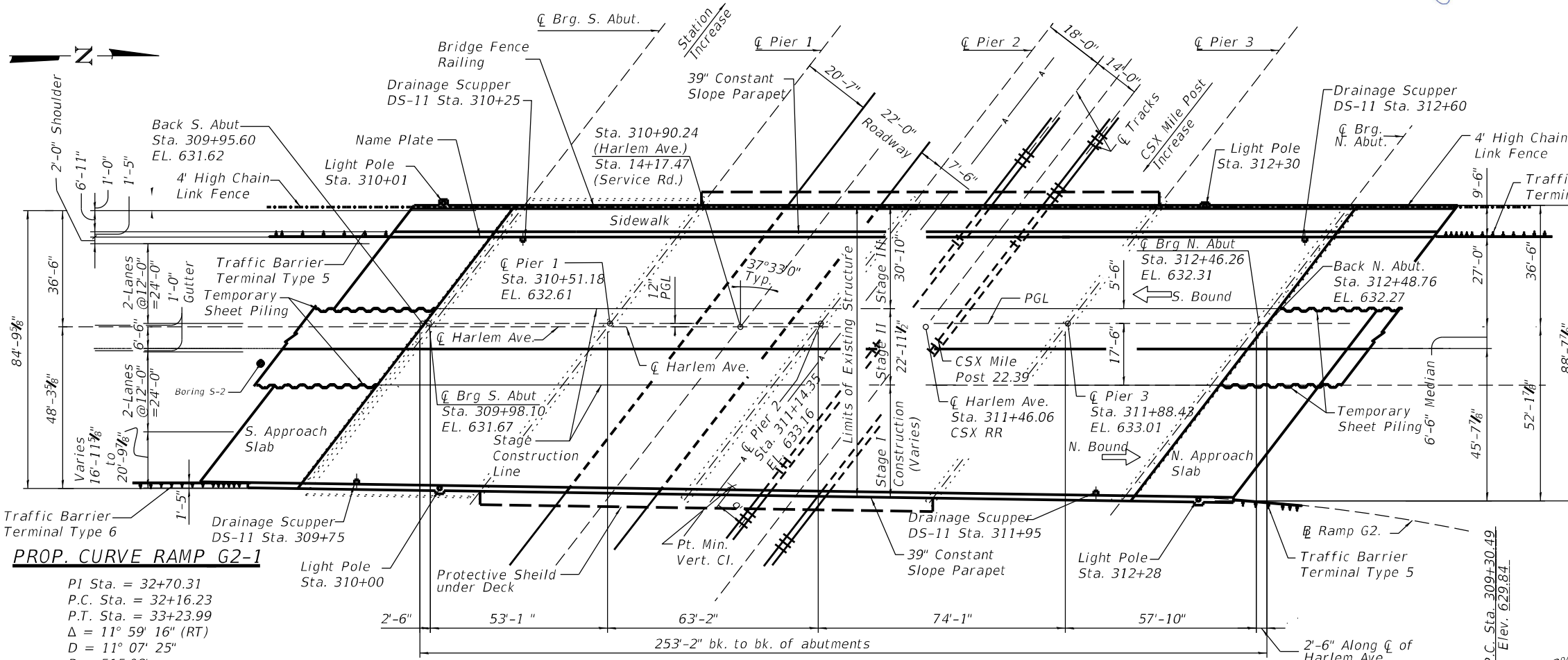
Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.04g
 Site Coefficient (S) = 1.0

LOADING HL-93

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

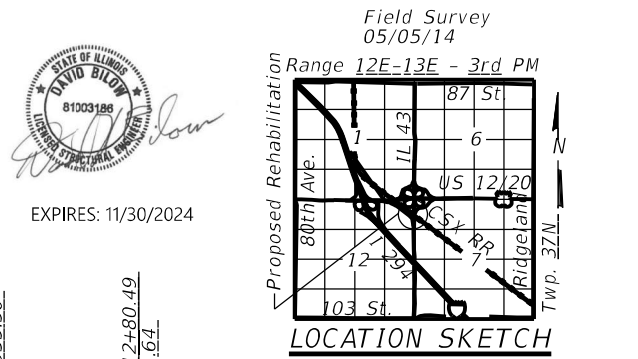


APPROVED
 For Structural Adequacy Only
 Jay F. [Signature]
 Engineer of Bridges & Structures



PROFILE GRADE CSX RAILROAD
 (North Track)
 (CSX Mile Post 22.39)

PROFILE GRADE CSX RAILROAD
 (South Track)



GENERAL PLAN & ELEVATION
IL 43 (HARLEM AVE.). FA RTE 348
OVER CSX RAILROAD
SECTION 3128-Z-1-R&RS
COOK COUNTY
STATION 311+46.06
STRUCTURE NO. 016-0321

PROP. CURVE RAMP G2-1

PI Sta. = 32+70.31
 P.C. Sta. = 32+16.23
 P.T. Sta. = 33+23.99
 $\Delta = 11^\circ 59' 16"$ (RT)
 $D = 11^\circ 07' 25"$
 $R = 515.08'$
 $T = 54.08'$
 $L = 107.77'$
 $E = 2.83'$
 $e = 6.00\%$
 BT Sta. = 31+63 @ 2.50%
 BFS Sta. = 32+43 @ 6.00%

FILE NAME: SFILES

THE HOH GROUP, INC.
 ARCHITECTS | ENGINEERS

USER NAME =	DESIGNED - RS	REVISED -
PILOT SCALE =	CHECKED - DNB	REVISED -
PLOT DATE =	DRAWN - JPM	REVISED -
	CHECKED - DNB	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	406
CONTRACT NO. 60R49				

ILLINOIS FED. AID PROJECT

GENERAL NOTES:

1. Fasteners shall be ASTM F 3125 Grade A325 Type 1, mechanically galvanized bolts in painted areas. Bolts 7/8 in. diameter, holes 15/16in. diameter, unless otherwise noted.
2. Calculated weight of Structural Steel Gr. 36=21,426 pounds.
3. No field welding is permitted except as specified in the contract documents.
4. The Contractor shall test the existing welds by non-destructive methods within 2 ft. of the end of the existing cover plates for cracks after removal of the existing concrete deck. Dye penetrant (PT), magnetic particle (MT), or other approved testing method shall be performed by qualified personnel approved by the Engineer. If cracks are found, report them to the Bureau of Bridges & Structures for disposition. The cost of testing is included in Removal of Existing Concrete Deck. The cost of crack repair, if necessary, will be paid for according to Article 109.04 of the Standard Specifications
5. Reinforcement bars designated (E) shall be epoxy coated.
6. Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose detrimental foreign material shall be removed from the surfaces in contact with concrete(SSPC - SP3 standards). Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be paid for according to Article 109.04 of the Standard Specifications. As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/4 in. deep shall be identified and reported to the Bureau of Bridges & Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
7. Slipforming of the parapets is not allowed.
8. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/4 in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
9. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to address the presence of lead on this project.
10. For new structural steel within 10 ft of beam ends, the new steel shall be shop painted with an inorganic zinc rich primer per AASHTO M 300, Type 1.
11. For new structural steel not within 10 ft of beam ends, the Organic Zinc Rich Primer / Epoxy / Urethane paint system shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that field installed fasteners shall all be touched up and finish coated in the field. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue Munsell No. 10B 3/6.
12. Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All existing and new beams, bearings, and other structural steel within 10 ft (measured along the beam) of the end of the beam shall be cleaned per Near White Blast Cleaning - SSPC- SP10. The exterior surfaces and bottom of the bottom flange of the fascia beams shall be cleaned per Commercial Grade Power Tool Cleaning - SSPC- SP15. The designated areas cleaned per Near White Blast Cleaning and per Commercial Grade Power Tool Cleaning shall be painted according to the requirements of the Organic Zinc Rich Primer / Epoxy / Urethane paint system. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue Munsell No. 10B 3/6.
13. SSPC QP1 and QP2 Certification is required for this Contract.
14. A minimum of 4 air monitors will be required to monitor abrasive blasting operations at this site. See special provision for "Containment and Disposal of Lead Paint Cleaning Residues."
15. Plan dimensions and details relative to the existing structure have been taken from existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
16. Parapet Railing and Bridge Fence Railing shall be painted in accordance with Section 506 of the SSRBC using the shop coated Organic Zinc-Rich/Epoxy/Urethane Paint System.

STATION 311+46.06
 BUILT 20__ BY
 STATE OF ILLINOIS
 FAP 348 Sec. 3128-Z-1-R&RS
 LOADING HL-93
 STR. NO. 016-0321

NAME PLATE
 See Std. 515001

Existing Name Plates shall be cleaned and relocated next to New Name Plates

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PN: 3730	PLOT DATE =	

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA
 STRUCTURE NO. 016-0321**

SHEET 2 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
E	3128-Z-1-R&RS	COOK	659	407
CONTRACT NO. 60R49				
		ILLINOIS	FED. AID PROJECT	

DATE = \$Date\$

INDEX OF SHEETS	
Sheet Number	Sheet Name
1	General Plan
2	General Data
3	General Data
4	Construction Staging
5	Construction Staging
6	Temporary Cantilevered Sheet Piling
7	Drainage Scuppers - Plan, Sections & Details
8	Temporary Concrete Barrier
9	Bar Splicer Assembly & Mechanical Splicer Details
10	SHEET NOT USED
11	T/Slab Elev's - Plan, D. L. Deflection Diagram, Fillet Heights
12	T/Deck Elevation Tables - Beams 1 to 3
13	T/Deck Elevation Tables - Beams 4, 5 & Stage II/III
14	T/Deck Elevation Tables - Beam 6, PGL & CL, Harlem Ave.
15	T/Deck Elevation Tables - Beams 7 to 9
16	T/Deck Elevation Tables - Stage I/II, Beams 10 & 11
17	T/Deck Elevation Tables - Beams 12 to 14
18	T/Deck Elevation Tables - Beam 15
19	T/South Approach Slab Elevations
20	T/North Approach Slab Elevations
21	Plan 1 of 2, Plan & Reinforcing Table
22	Plan 2 of 2, Plan & Reinforcing Table
23	Deck Cross Section
24	Deck Sections, Details
25	Diaphragm Details Sheet 1
26	Diaphragm Details Sheet 2
27	Superstructure Details Sheet 1
28	Superstructure Details Sheet 2
29	Superstructure Details Sheet 3
30	Superstructure Details Sheet 4
31	Superstructure Details Sheet 5
32	Superstructure Details Sheet 6
33	Bridge Approach Details Sheet 1

INDEX OF SHEETS	
Sheet Number	Sheet Name
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35	Bridge Approach Details Sheet 3
36	Bridge Approach Details Sheet 4
37	Drainage Scuppers - DS-11
38	Parapet Railing
39	Bridge Fence Railing, Parapet Mounted
40	Steel Framing - Reinstallation Plan
41	Moment & Reaction Tables
42	Steel Framing - Typical Beam Stud Elevation
43	Steel Framing - Diaphragm Modifications
44	Steel Framing - Diaphragm Modifications
45	Cover Plate Retrofit
46	Bearing Details - Sheet 1 of 3
47	Bearing Details - Sheet 2 of 3
48	Bearing Details - Sheet 3 of 3
49	Removal Details - North Abutment
50	Removal Details - South Abutment
51	South Abutment - Plan, Elevation, Sections
52	North Abutment - Plan, Elevation, Sections
53	Abutments - Sections & Details
54	South Wing Walls - Plans, & Elevations
55	North Wing Walls - Plans, & Elevations
56	Pier #1 Bearing Replacement Plan, Sections, & B.O.M.
57	Pier #2 Bearing Replacement Plan, Sections, & B.O.M.
58	Pier #3 Bearing Replacement Plan, Sections, & B.O.M.
59	Pier #1 Repairs
60	Pier #2 Repairs
61	Pier #3 Repairs
62	Slope Wall Replacement - Plans & B.O.M.
63	Soil Bores

TOTAL BILL OF MATERIAL

ITEM DESCRIPTION	UNITS	SUPER	SUB	TOTAL
Protective Coat	SQ YD	3,420.0		3,420.0
Concrete Removal	CU YD	42.4		42.4
Structure Excavation	CU YD		562	562
Concrete Superstructure	CU YD	769.1		769.1
Concrete Superstructure (approach Slab)	CU YD	240.6		240.6
Concrete Structures	CU YD		92.6	92.6
Removal Of Existing Concrete Deck No.1	EACH	1		1
Furnishing And Erecting Structural Steel	POUNDS	21,426		21,426
Stud Shear Connectors	EACH	20,133		20,133
Reinforcement Bars, Epoxy Coated	LB	309,600	4,350	313,950
Bar Splicers	EACH	2,084		2,084
Parapet Railing	FT	313		313
Name Plates	EACH	1		1
Elastomeric Bearing Assembly, Type 1	EACH	60		60
Anchor Bolts, 1"	EACH		150	150
Temporary Sheet Piling	SQ FT		1460	1460
Geocomposite Wall Drain	SQ YD		171	171
Pipe Underdrains For Structures, 4"	FT		236	236
Granular Backfill For Structures	CU YD		246	246
Bridge Fence Railing, Curved	FT	312		312
Drainage Scuppers Ds 11	EACH	4		4
Cleaning and Painting Steel Bridge No. 1	L SUM	1		1
Containment and Disposal of Lead Paint Cleaning Residues No. 1	L SUM	1		1
Removal of Existing Bearings	EACH		75	75
Structural Repair Of Concrete (Depth equal to 0r less than 5 Inches)	SQ FT		193	193
Structural Steel Repair	L SUM		1	1
Jacking Existing Superstructure	L SUM	1		1
Epoxy Crack Injection	FT		86	86
Protective Shield	SQ YD	1444		1444
Slope Wall Crack Sealing	FT		841	841
Bar Terminators	EACH	972		972

ABBREVIATIONS

ABV	ABOVE	MATL	MATERIAL
AGG	AGGREGATE	MED	MEDIAN
AVE	AVENUE	MIX	MIXTURE
BK	BACK	MOD	MODIFIED
B-B	BACK TO BACK	NB	NORTHBOUND
BF	BACKFACE	NE	NORTHEAST
BKPL	BACKPLATE	NW	NORTHWEST
BS	BOTHSIDES	NS	NEARSIDE
BTM	BOTTOM	O/S	OFFSET
BLDG	BUILDING	PVD	PAVED
C-C	CENTER TO CENTER	PVMT	PAVEMENT
		PM	PAVEMENT MARKING
CL	CENTERLINE OR CLEARANCE CENTERS	PED	PEDESTAL
		PNT	POINT
CTS	CONCRETE	PCC	PORTLAND CEMENT CONCRETE
CONST	CONSTRUCT		
CONTD	CONTINUED	PROJ	PROJECT
CONT	CONTINUOUS	RR	RAILROAD
CU YD	CUBIC YARD	REINF	REINFORCEMENT
DIA	DIAMETER	REM	REMOVAL
EA	EACH	REP	REPLACEMENT
EB	EASTBOUND	RT	RIGHT
EOP	EDGE OF PAVEMENT	ROW	RIGHT-OF-WAY
		SH	SHEET
ELEC	ELECTRICAL	SHLD	SHOULDER
EL	ELEVATION	SW	SIDEWALK OR SOUTHWEST
EXC	EXCAVATION		
EX	EXISTING	SB	SOUTHBOUND
F-F	FACE TO FACE	SE	SOUTHEAST
FDN	FOUNDATION	SQ FT	SQUARE FEET
FR	FRAME	SQ YD	SQUARE YARD
FS	FARSIDE	STD	STANDARD
FT	FOOT	STA	STATION
GAL	GALLON	ST	STREET
GALV	GALVANIZED	STR	STRUCTURE
GR	GRATE	SURF	SURFACE
GRVL	GRAVEL	TEL	TELEPHONE
GND	GROUND	TEMP	TEMPORARY
GUT	GUTTER	TYP	TYPICAL
HDUTY	HEAVY DUTY	UN	UNLESS NOTED
HORIZ	HORIZONTAL	UTIL	UTILITY
IL	ILLINOIS	VERT	VERTICAL
IMP	IMPROVEMENT	VIF	VERIFY IN FIELD
IN DIA	INCH DIAMETER	W	WITH
JT	JOINT	WB	WESTBOUND
Kg	KILOGRAM	W/O	WITH OUT
Km	KILOMETER		
LB	POUND		
LN	LANE		
LT	LEFT		
LP	LIGHT POLE		
LF	LINEAL FEET OR LINEAR FEET		
LNG	LONGITUDINAL		
L SUM	LUMP SUM		

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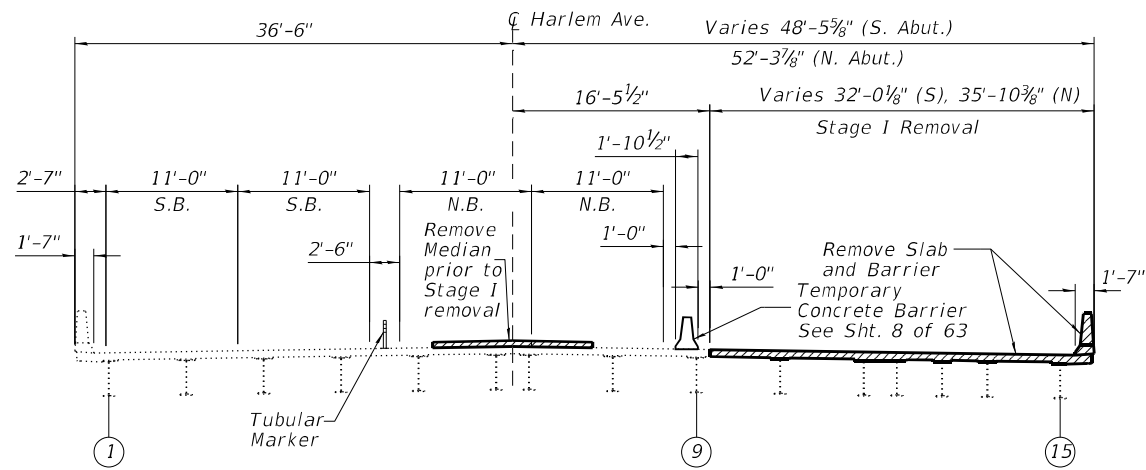
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DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA
STRUCTURE NO. 016-0321**

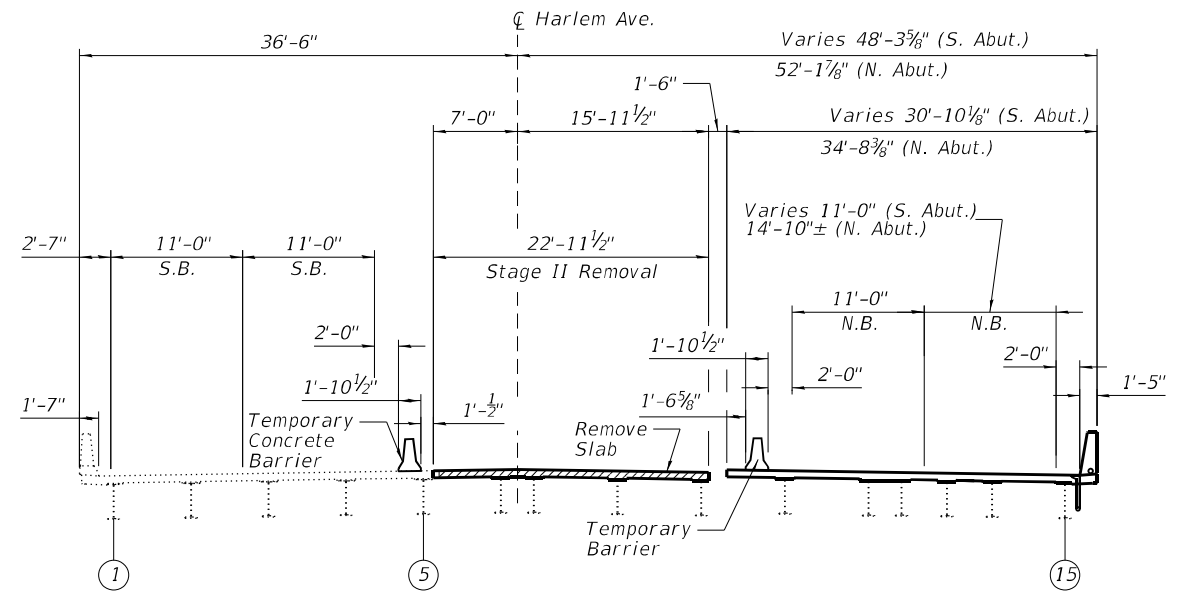
SHEET 3 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

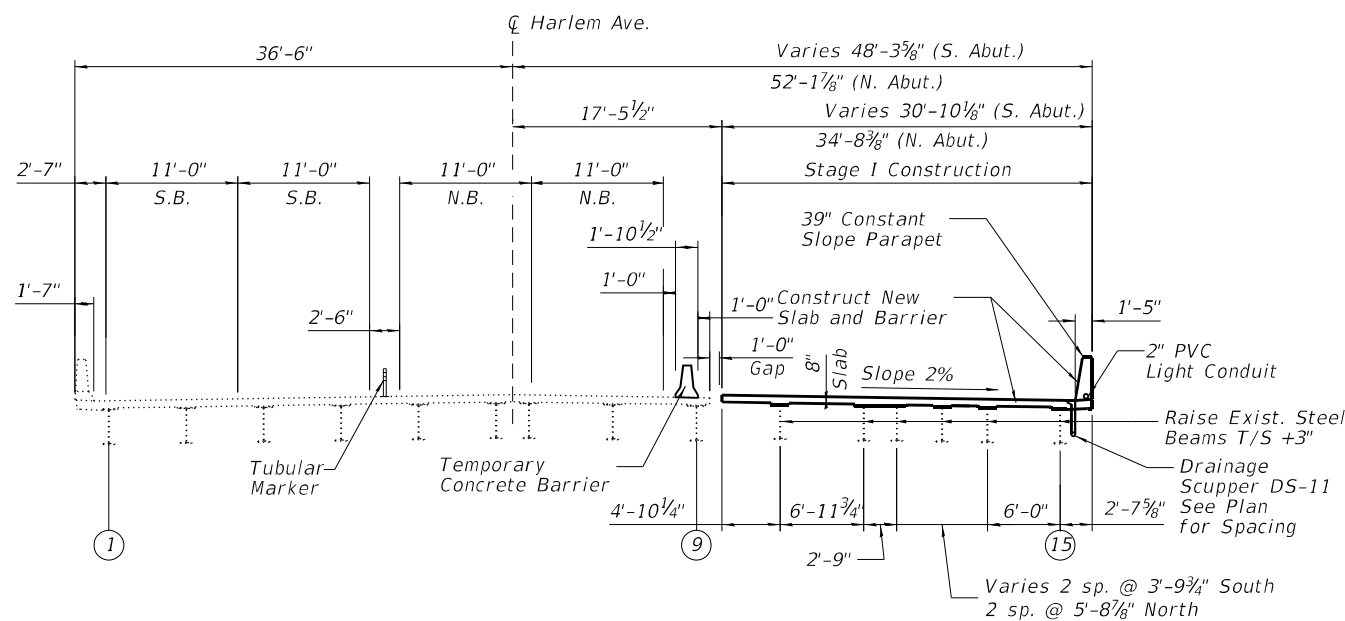
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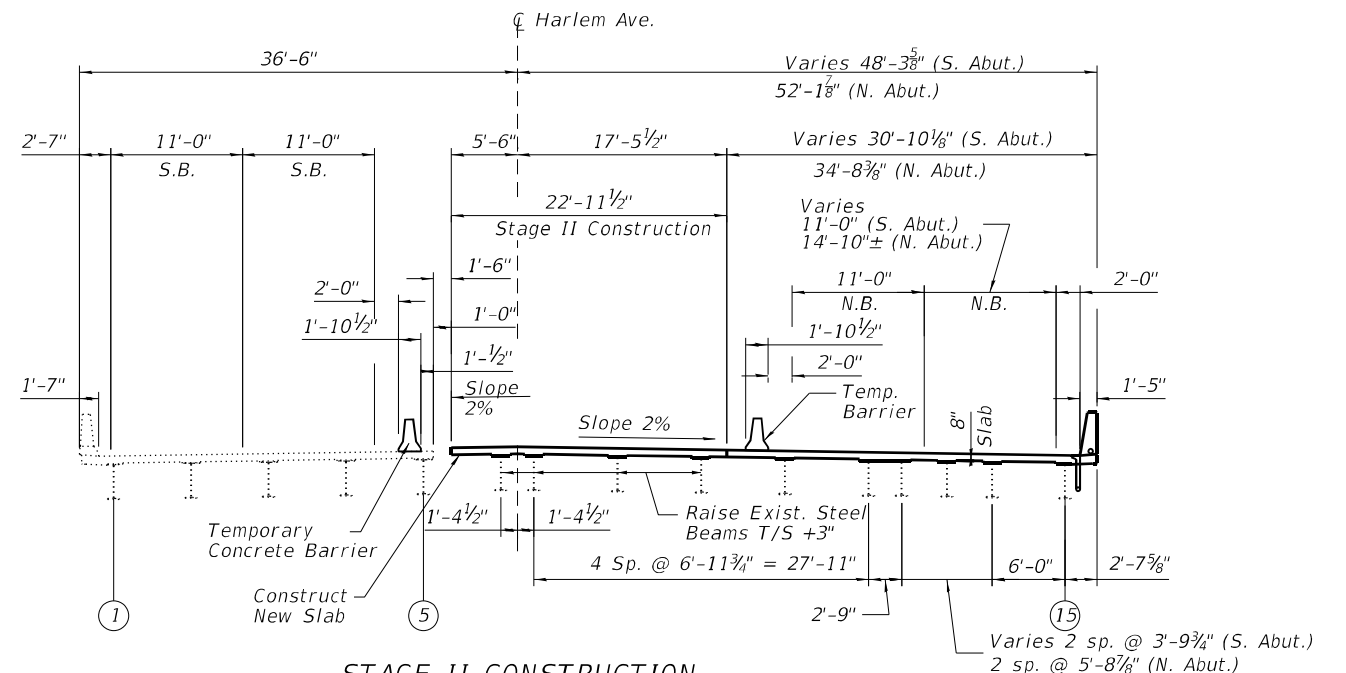
STAGE I REMOVAL
(Looking North)



STAGE II REMOVAL
(Looking North)



STAGE I CONSTRUCTION
(Looking North)



STAGE II CONSTRUCTION
(Looking North)

- Note:
1. Stage I, II, & III construction shown is for the superstructure.
 2. Stage I, II, & II construction for the abutments is different. See Shts. 51 & 52 of 63.
 3. For quantities of temporary concrete barrier, see roadway plans.
 4. Hatched area indicates Removal of Existing Concrete Deck No. 1.

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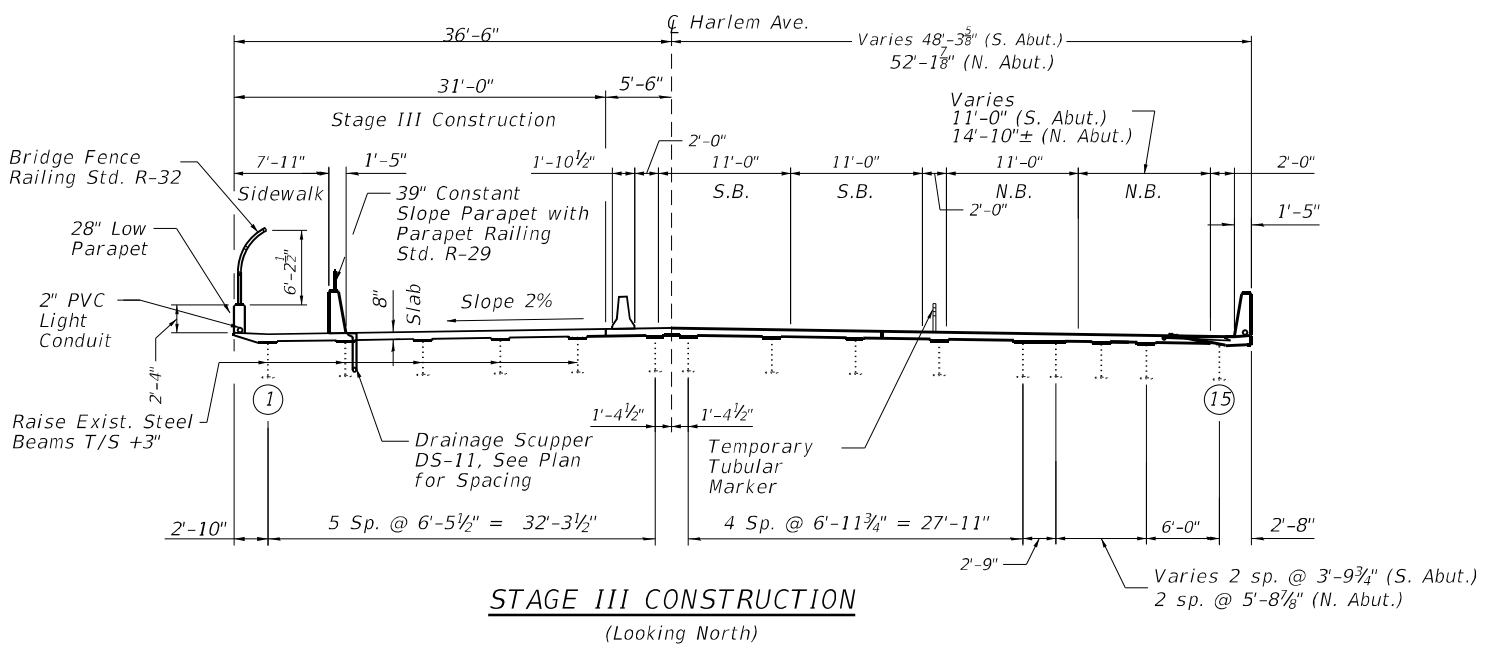
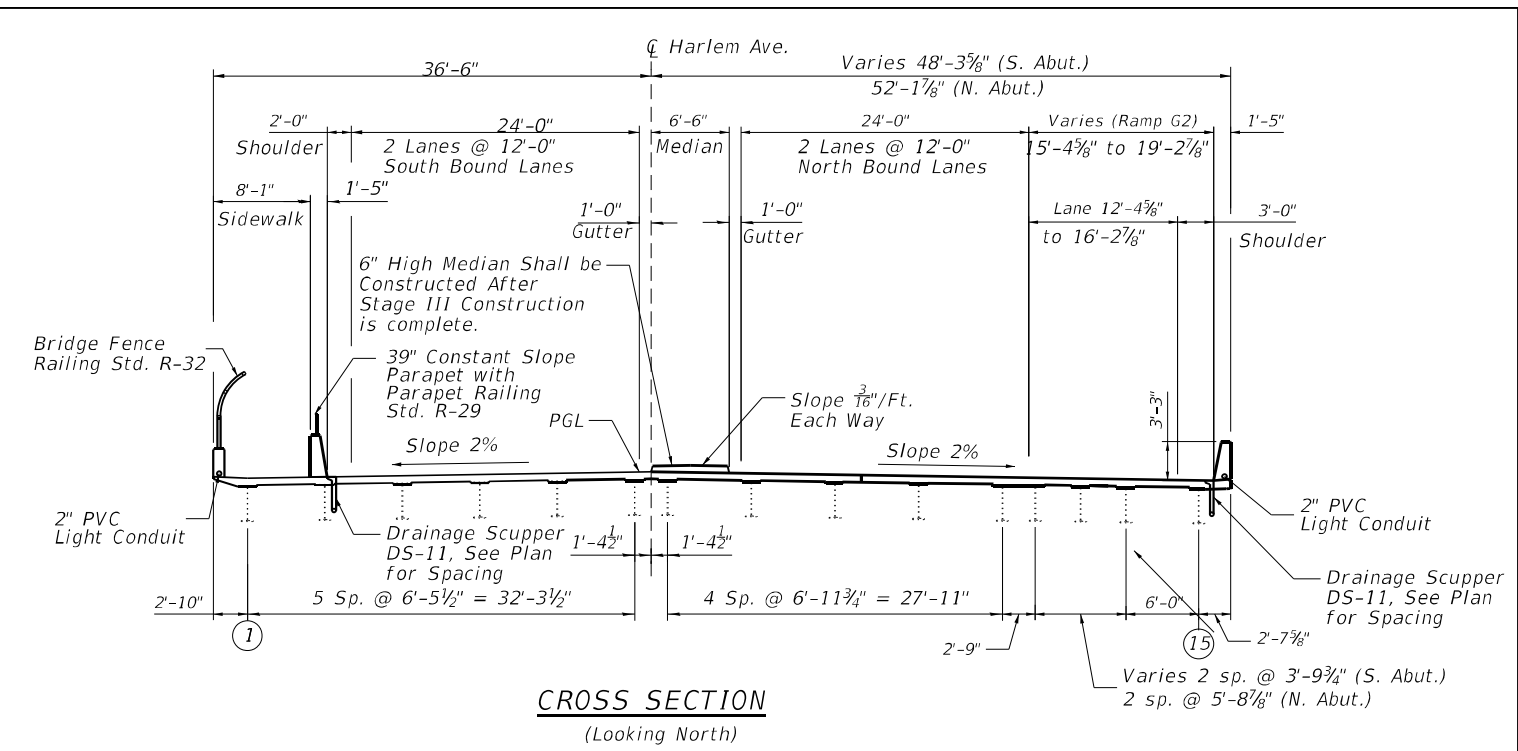
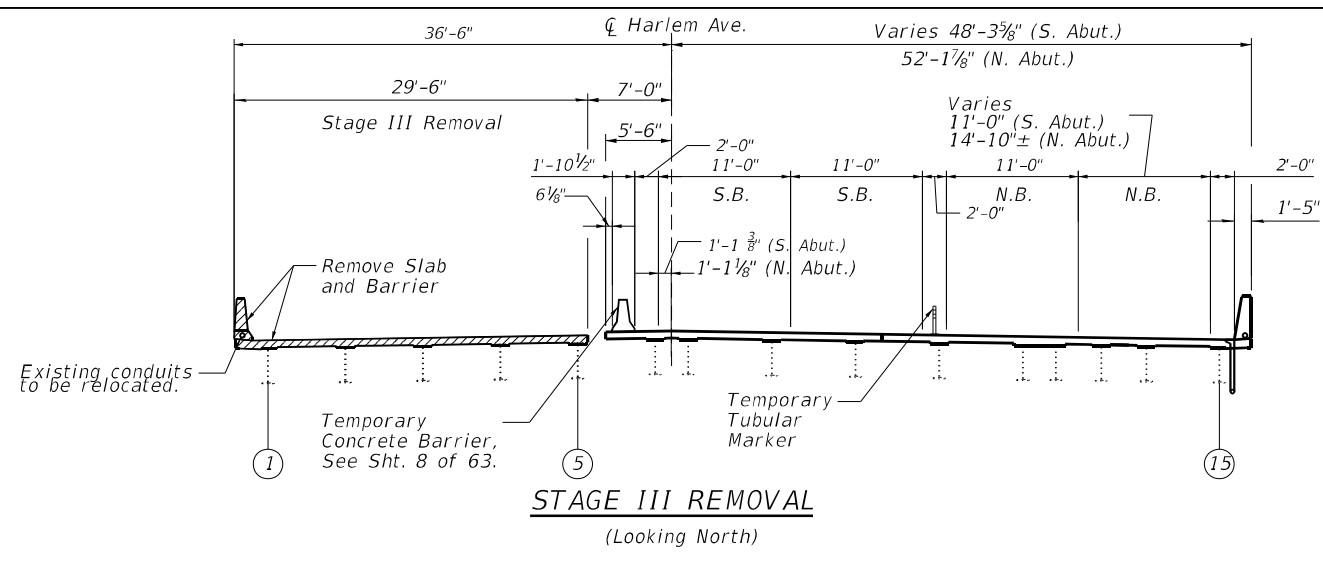
CONSTRUCTION STAGING
STRUCTURE NO. 016-0321

SHEET 4 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	409
CONTRACT NO. 60R49				

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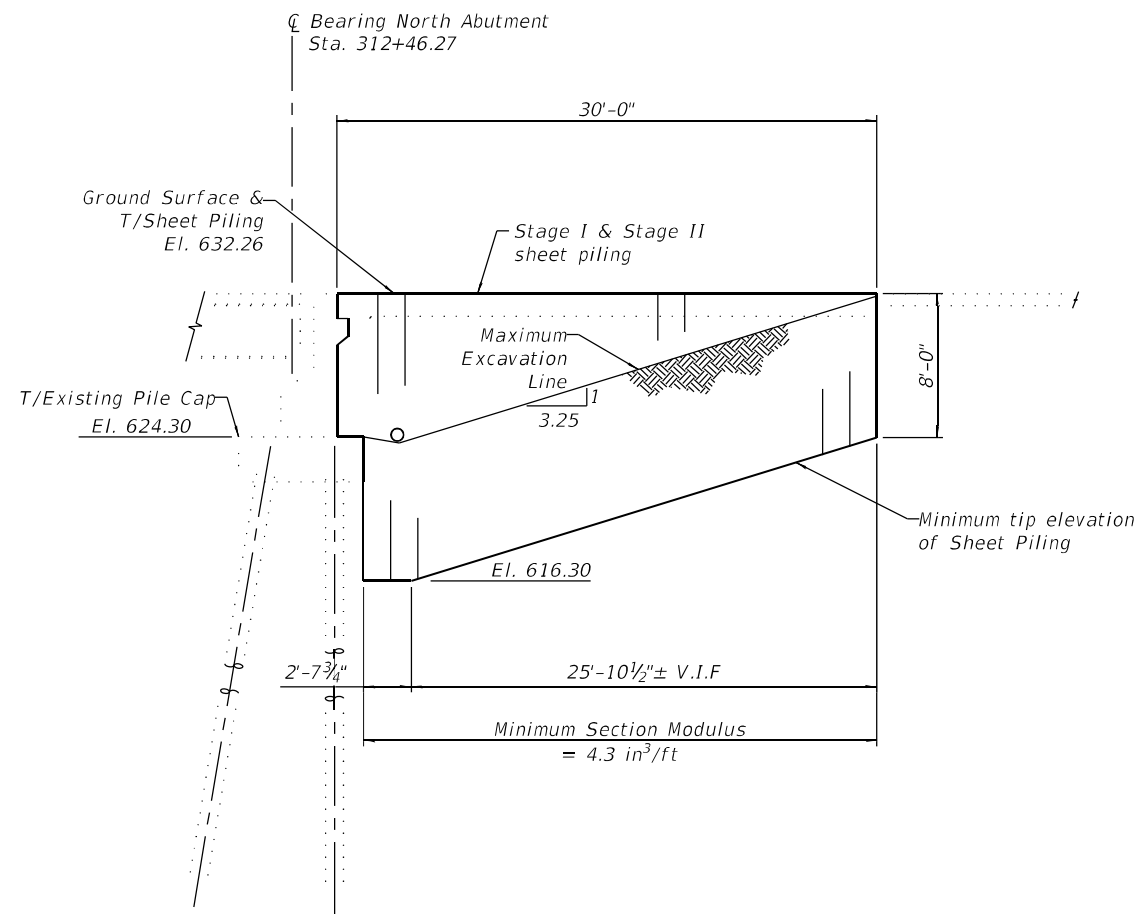
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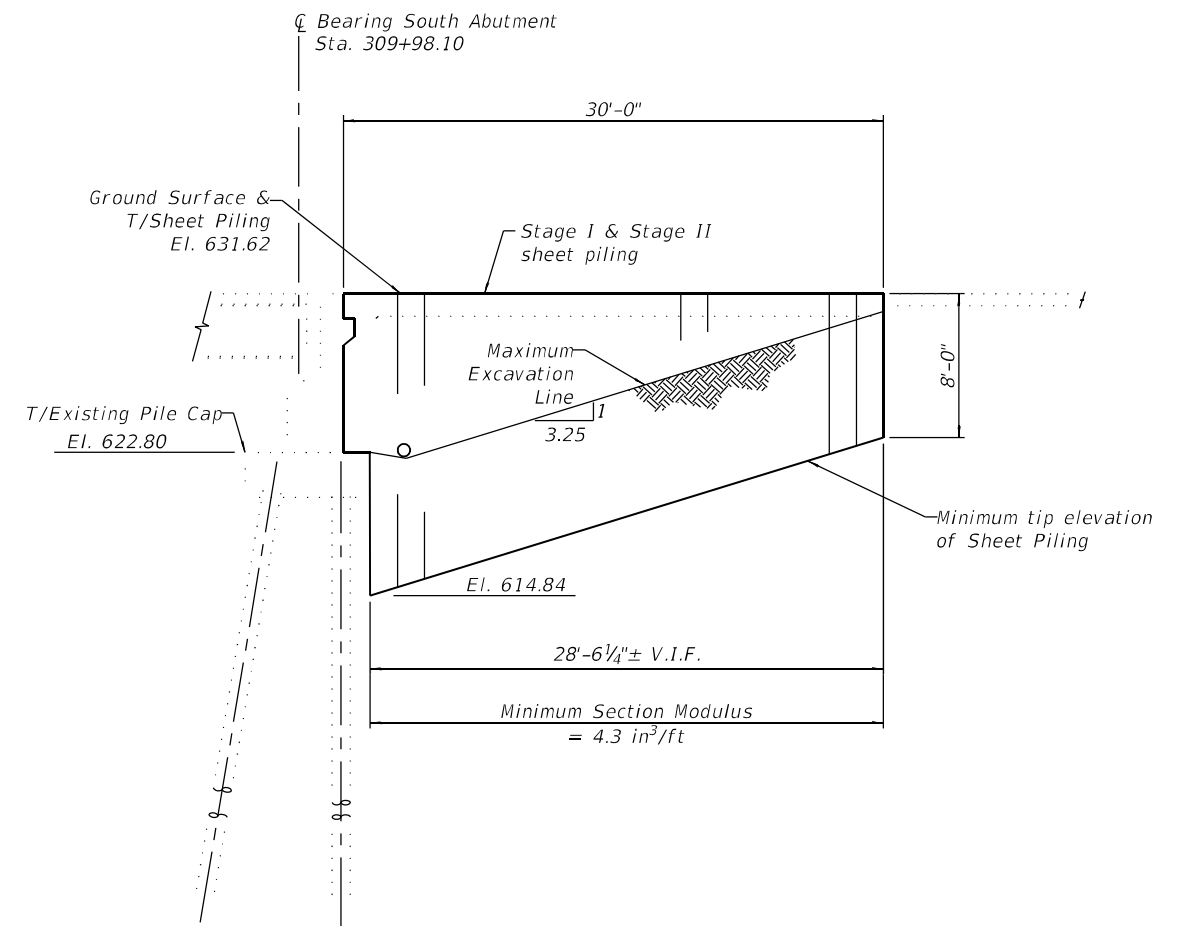
Note:
1. See sht. 4 of 63 for Notes.

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PLOT DATE =	CHECKED - DNB	REVISED -

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		



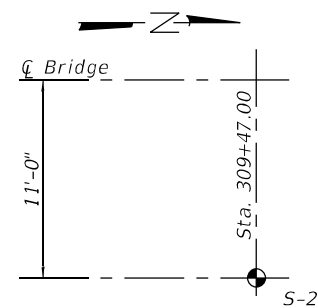
TEMPORARY CANTILEVERED SHEET PILING @ NORTH ABUTMENT S. B. LANES ELEVATION
 TEMPORARY CANTILEVERED SHEET PILING @ NORTH ABUTMENT N. B. LANES ELEVATION
 (Looking West)



TEMPORARY CANTILEVERED SHEET PILING @ SOUTH ABUTMENT S. B. LANES ELEVATION
 TEMPORARY CANTILEVERED SHEET PILING @ SOUTH ABUTMENT N. B. LANES ELEVATION
 (Looking East)

BILL OF MATERIAL - 4 LOCATIONS

Item	Unit	Total
Temporary Sheet Piling	SQ. Ft.	1460



SOIL BORING LOCATION PLAN
 (Soil Boring Log on Sht. 63)

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.

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TEMPORARY CANTILEVERED SHEET PILING
 STRUCTURE NO. 016-0321

SHEET 6 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	411
CONTRACT NO. 60R49				

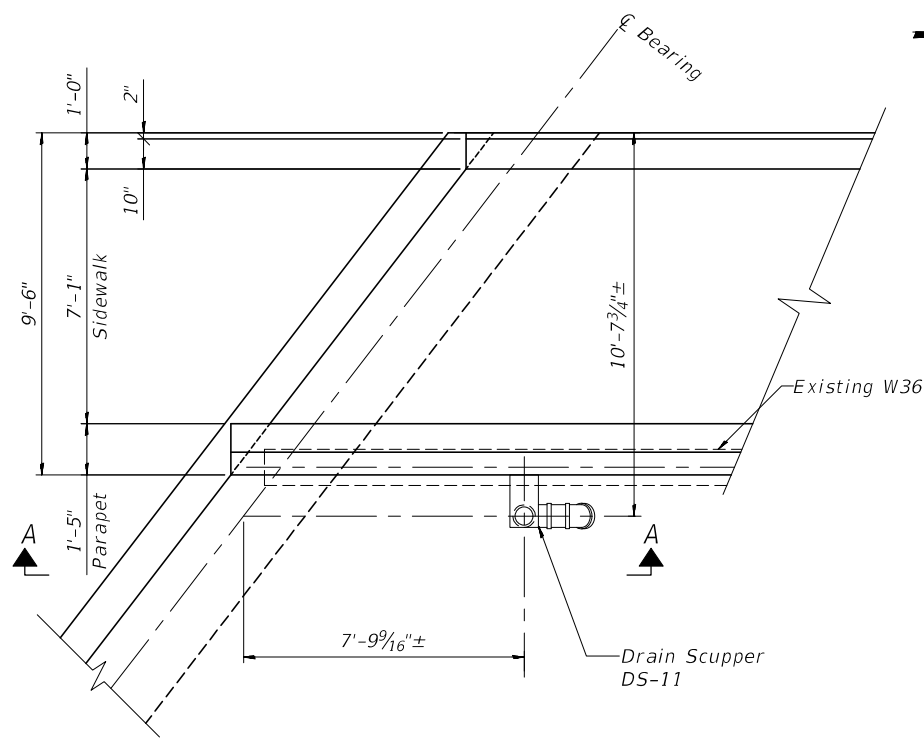
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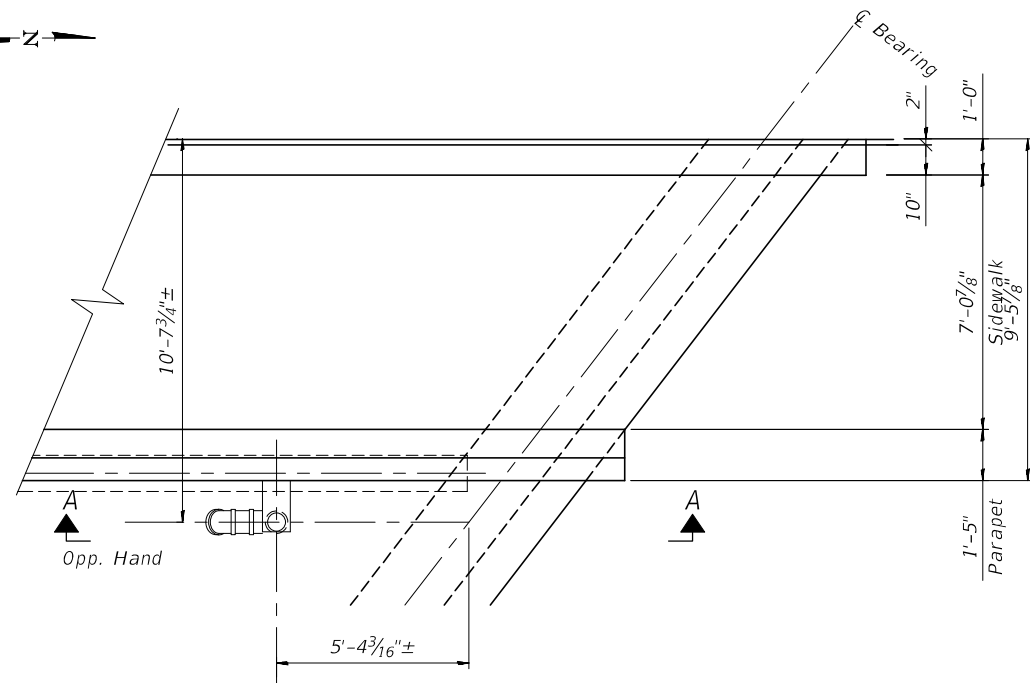
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PN: 3730		

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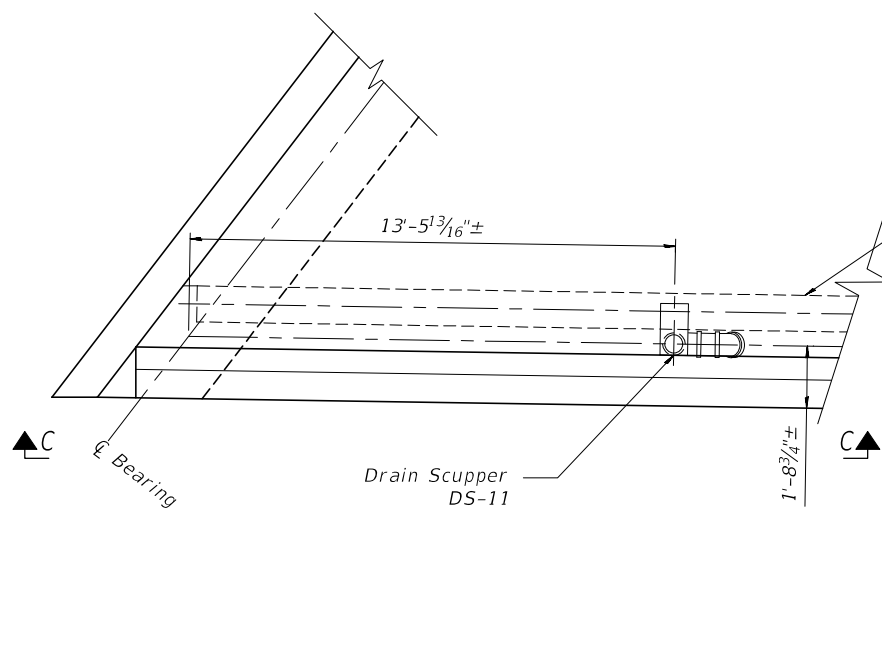
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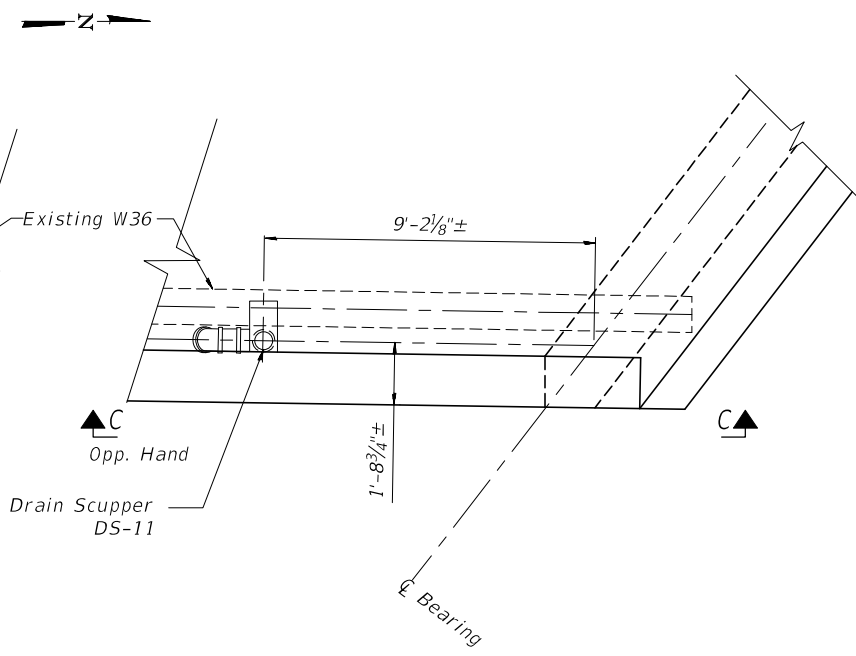
SCUPPER DS-11 PARTIAL PLAN @ SOUTH-WEST



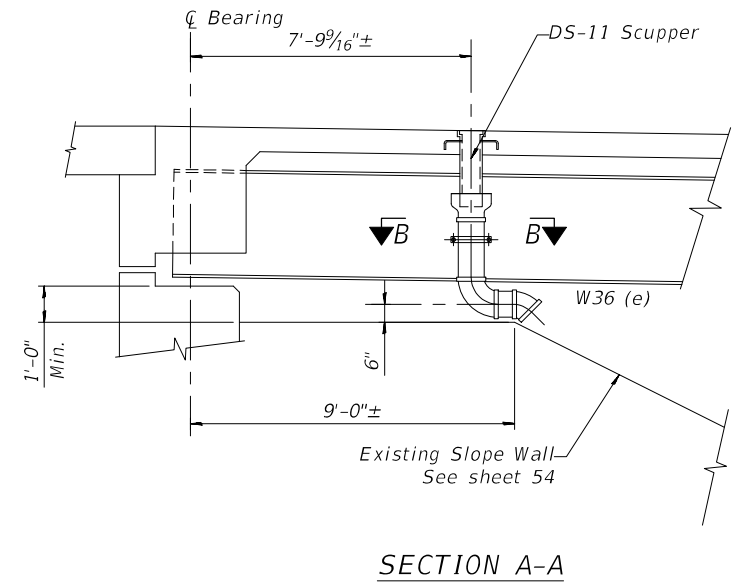
SCUPPER DS-11 PARTIAL PLAN @ NORTH - WEST



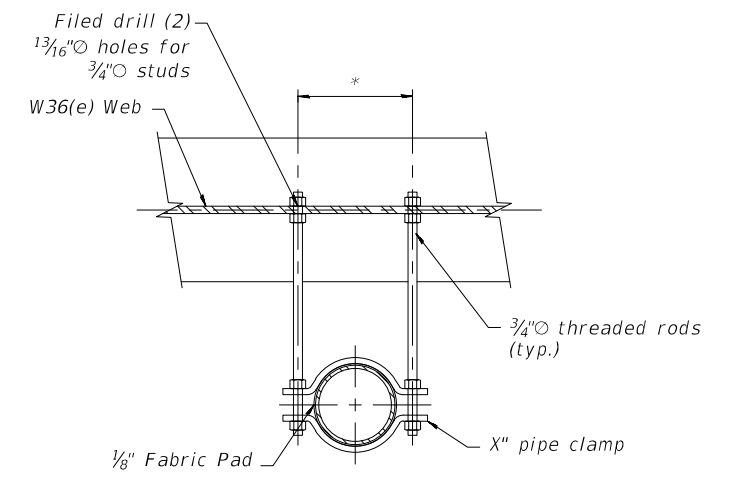
SCUPPER DS-11 PARTIAL PLAN @ SOUTH - EAST



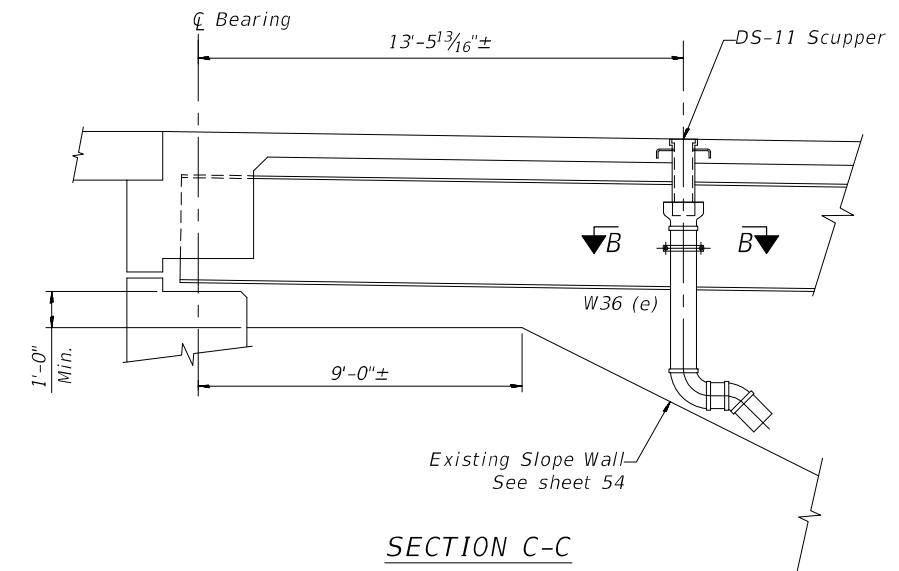
SCUPPER DS-11 PARTIAL PLAN @ NORTH - EAST



SECTION A-A



SECTION B-B * Dimension as required for X" pipe clamp



SECTION C-C

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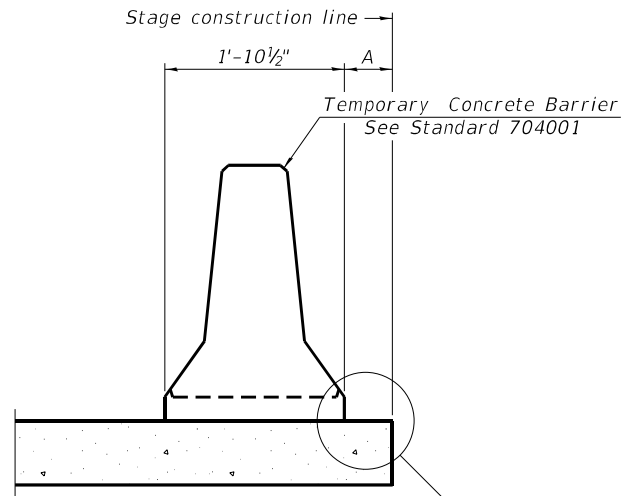
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DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPERS - PLAN, SECTIONS & DETAILS
STRUCTURE NO. 016-0321

SHEET 7 OF 63 SHEETS

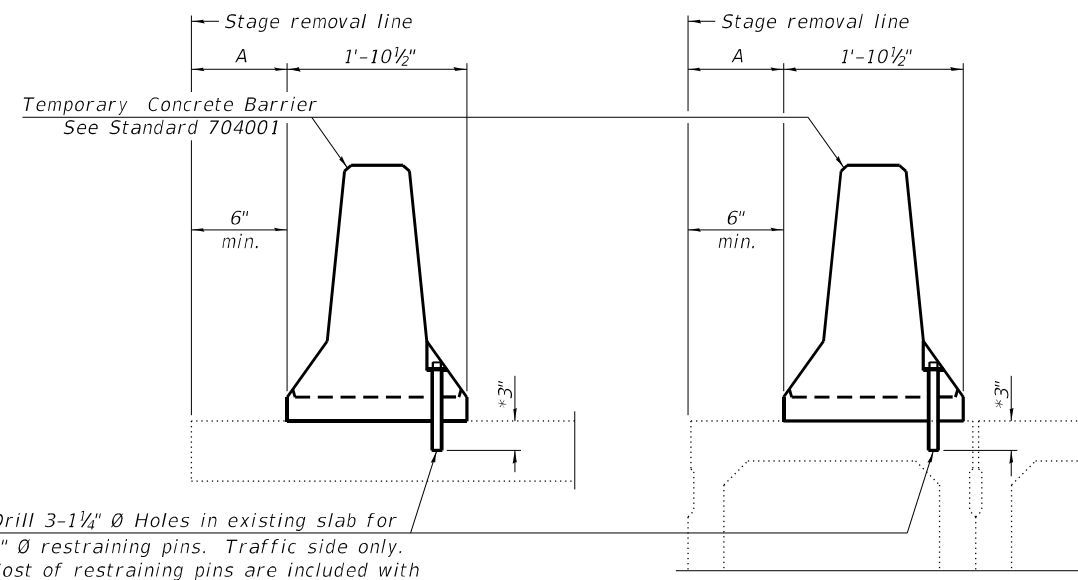
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348	3128-Z1-R&RS	COOK	659	412
CONTRACT NO. 60R49				
		ILLINOIS	FED. AID PROJECT	

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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



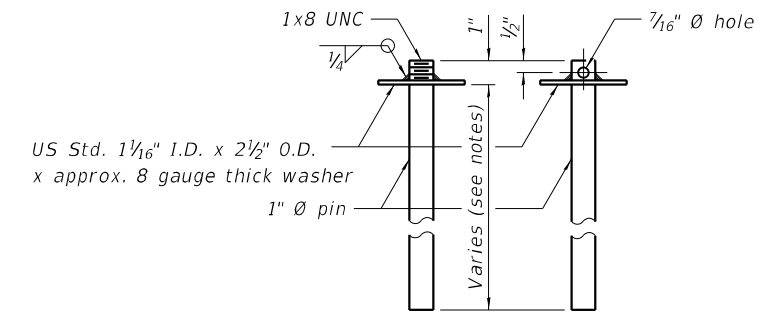
Drill 3-1 1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins is included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

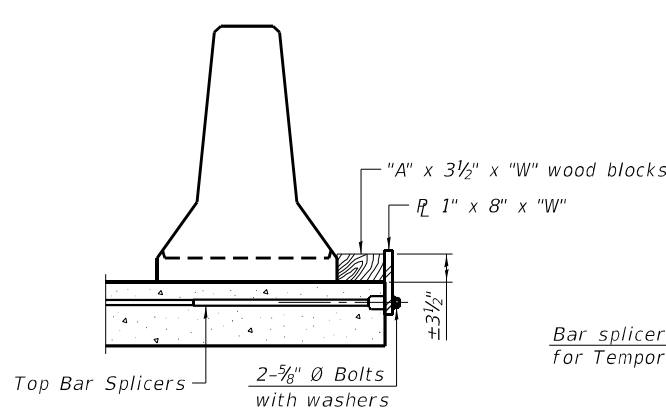
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

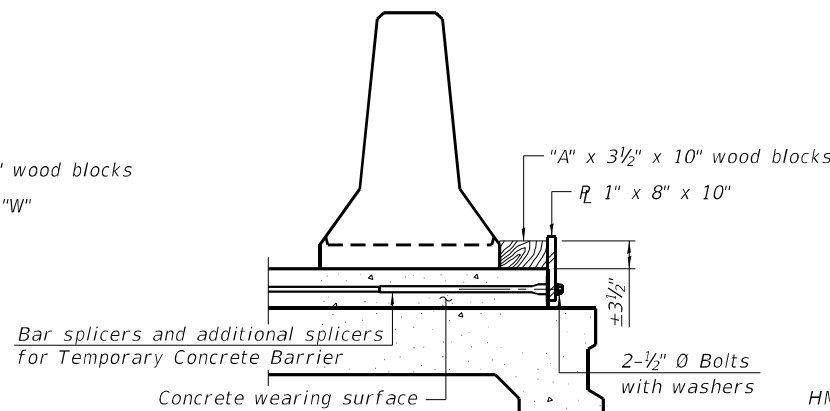
SECTIONS THRU SLAB OR DECK BEAM



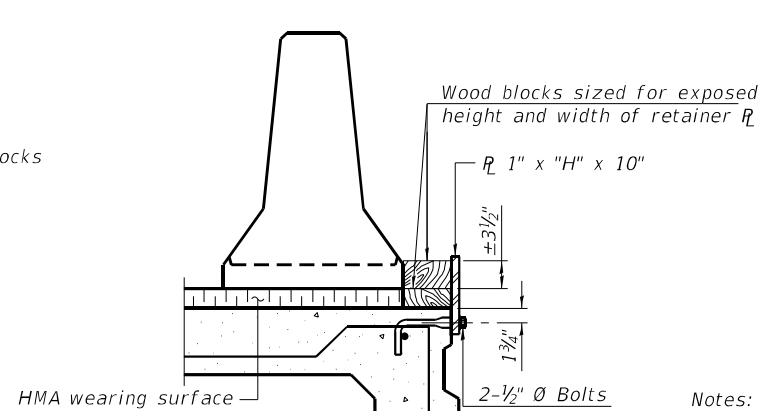
RESTRAINING PIN



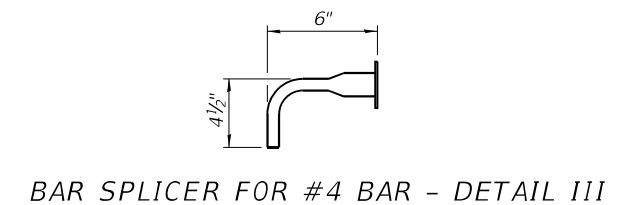
DETAIL I



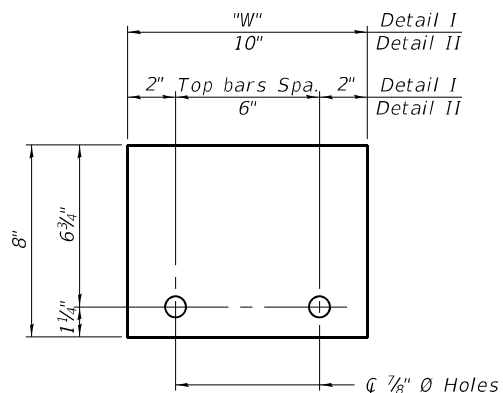
DETAIL II



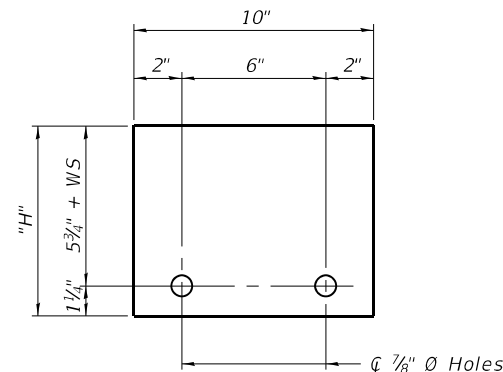
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER R 1" x 8" x "W"
(Detail I and II)



STEEL RETAINER R 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 C 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.

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27 10-12-2021

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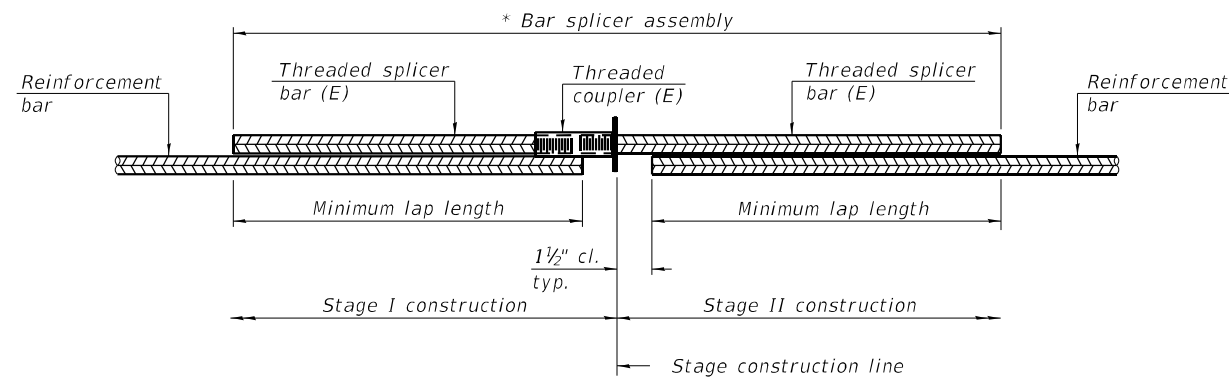
TEMPORARY CONCRETE BARRIER
STRUCTURE NO. 016-0321

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	413
CONTRACT NO. 60R49				

SHEET 8 OF 63 SHEETS

ILLINOIS FED. AID PROJECT

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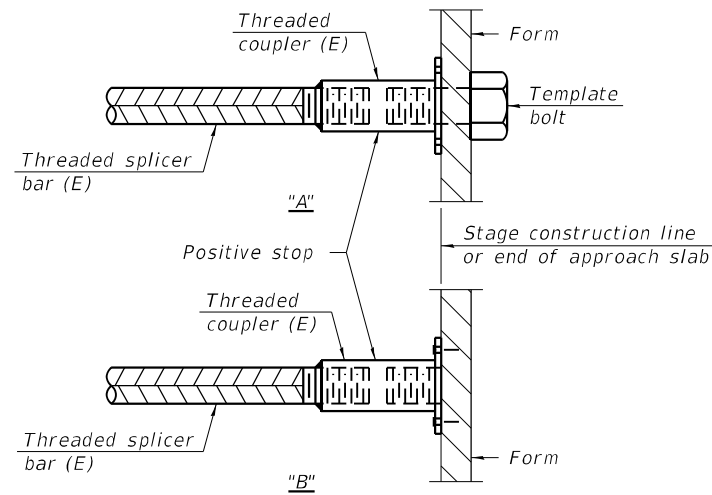
STANDARD BAR SPLICER ASSEMBLY PLAN

Only bar splicer assemblies as presented on the approved QPL list may be used.

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

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

Location	Bar size	No. assemblies required	Minimum lap length
Deck	#5	1560	3'-9"
South & North Diaphr.	#6	24	4'-4"
South & North Diaphr.	#4	8	2'-11"
South & North Abut.	#5	12	3'-9"
Approach Slab	#5	240	Top 3'-7"
Approach Slab	#8	240	Bot. 5'-1"



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.

Notes:

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

2-1-2023

THE HOH GROUP, INC.
ARCHITECTS | ENGINEERS

USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPICER ASSEMBLY AND MECHANICAL SPICER DETAILS
STRUCTURE NO. 016-0321

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	414
CONTRACT NO. 60R49				

SHEET 9 OF 63 SHEETS

ILLINOIS FED. AID PROJECT

SHEET NOT USED

FILE = \$File\$

THE HOH GROUP, INC.
ARCHITECTS | ENGINEERS

USER NAME =	DESIGNED - RS	REVISED -
	CHECKED - DNB	REVISED -
PLOT SCALE =	DRAWN - JPM	REVISED -
	CHECKED - DNB	REVISED -
PLOT DATE =		

PN: 3730

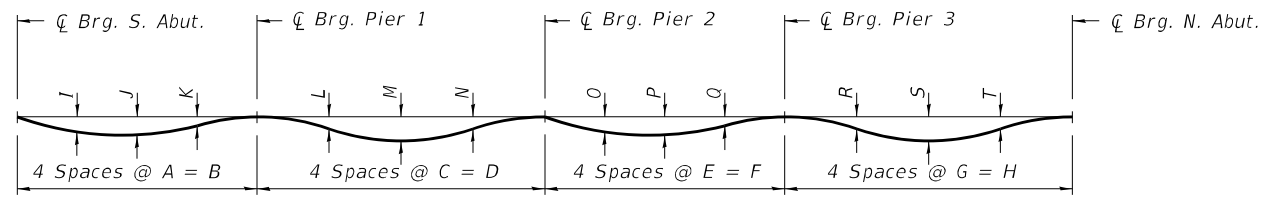
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NOT USED
STRUCTURE NO. 016-0321

SHEET 10 OF 63 SHEETS

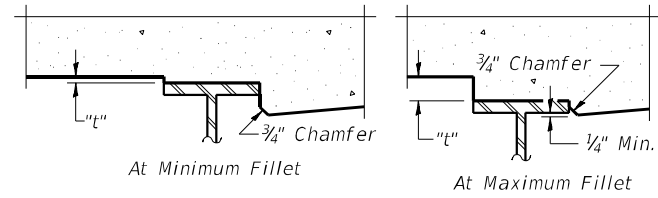
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	415
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

DATE = \$Date\$



Note:
The below deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 12 thru 18 of 63.

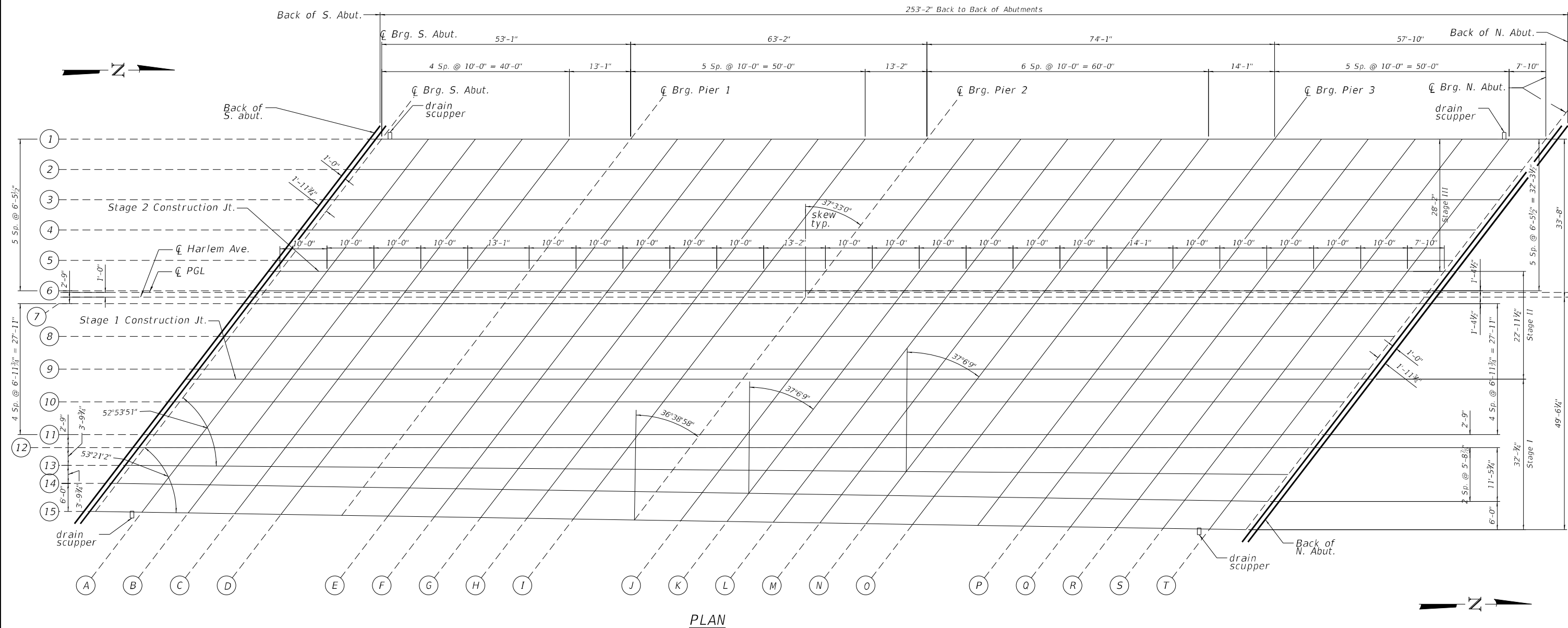
DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only.)



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheets 12 thru 18 of 63, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

Beam	DIMENSIONS FOR DEAD LOAD DEFLECTION DIAGRAM								DEAD LOAD DEFLECTIONS											
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	13'-3 1/4"	53'-1"	15'-9 1/2"	63'-2"	18'-6 1/4"	74'-1"	14'-5 1/2"	57'-10"	1/4"	3/8"	1/8"	1/8"	1/8"	1/8"	3/8"	5/8"	3/8"	1/8"	3/8"	1/4"
2	13'-3 1/4"	53'-1"	15'-9 1/2"	63'-2"	18'-6 1/4"	74'-1"	14'-5 1/2"	57'-10"	1/4"	3/8"	1/8"	1/8"	1/4"	1/8"	1/2"	3/4"	1/2"	1/8"	3/8"	1/4"
3	13'-3 1/4"	53'-1"	15'-9 1/2"	63'-2"	18'-6 1/4"	74'-1"	14'-5 1/2"	57'-10"	1/4"	3/8"	1/8"	1/8"	1/8"	1/8"	3/8"	5/8"	3/8"	1/8"	3/8"	1/4"
4	13'-3 1/4"	53'-1"	15'-9 1/2"	63'-2"	18'-6 1/4"	74'-1"	14'-5 1/2"	57'-10"	1/4"	1/4"	1/8"	1/8"	1/8"	1/8"	3/8"	5/8"	3/8"	1/8"	3/8"	1/4"
5	13'-3 1/4"	53'-1"	15'-9 1/2"	63'-2"	18'-6 1/4"	74'-1"	14'-5 1/2"	57'-10"	1/4"	1/4"	1/8"	1/8"	1/8"	1/8"	3/8"	5/8"	3/8"	1/8"	3/8"	1/4"
6	13'-3 1/4"	53'-1"	15'-9 1/2"	63'-2"	18'-6 1/4"	74'-1"	14'-5 1/2"	57'-10"	1/4"	1/4"	1/8"	1/8"	1/8"	1/8"	3/8"	5/8"	3/8"	1/8"	3/8"	1/4"
7	13'-3 1/4"	53'-1"	15'-9 1/2"	63'-2"	18'-6 1/4"	74'-1"	14'-5 1/2"	57'-10"	1/4"	1/4"	1/8"	1/8"	1/8"	1/8"	3/8"	5/8"	3/8"	1/8"	3/8"	1/4"
8	13'-3 1/4"	53'-1"	15'-9 1/2"	63'-2"	18'-6 1/4"	74'-1"	14'-5 1/2"	57'-10"	1/4"	1/4"	1/8"	1/8"	1/8"	1/8"	3/8"	5/8"	3/8"	1/8"	3/8"	1/4"
9	13'-3 1/4"	53'-1"	15'-9 1/2"	63'-2"	18'-6 1/4"	74'-1"	14'-5 1/2"	57'-10"	1/4"	1/4"	1/8"	1/8"	1/8"	1/8"	3/8"	5/8"	3/8"	1/8"	3/8"	1/4"
10	13'-3 1/4"	53'-1"	15'-9 1/2"	63'-2"	18'-6 1/4"	74'-1"	14'-5 1/2"	57'-10"	1/4"	1/4"	1/8"	1/8"	1/8"	1/8"	3/8"	5/8"	3/8"	1/8"	3/8"	1/4"
11	13'-3 1/4"	53'-1"	15'-9 1/2"	63'-2"	18'-6 1/4"	74'-1"	14'-5 1/2"	57'-10"	1/4"	1/4"	1/8"	1/8"	1/8"	1/8"	3/8"	5/8"	3/8"	1/8"	3/8"	1/4"
12	13'-3 1/4"	53'-1"	15'-9 1/2"	63'-2"	18'-6 1/4"	74'-1"	14'-5 1/2"	57'-10"	1/4"	1/4"	1/8"	1/8"	1/8"	1/8"	3/8"	5/8"	3/8"	1/8"	3/8"	1/4"
13	13'-2 7/16"	52'-9 3/16"	15'-8 3/8"	62'-9 1/2"	18'-4 15/16"	73'-7 3/4"	14'-4 1/16"	57'-5 5/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	3/8"	5/8"	3/8"	1/8"	3/8"	1/4"
14	13'-1 3/8"	52'-5 1/2"	15'-7 1/4"	62'-5 1/16"	18'-3 3/8"	73'-2 1/2"	14'-3 3/16"	57'-1 13/16"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	3/8"	5/8"	3/8"	1/8"	3/8"	1/4"
15	13'-1 3/8"	52'-5 1/2"	15'-7 1/4"	62'-5 1/16"	18'-3 3/8"	73'-2 1/2"	14'-3 3/16"	57'-1 13/16"	1/8"	3/8"	1/8"	1/8"	1/8"	1/8"	3/8"	5/8"	3/8"	1/8"	3/8"	1/4"



PLAN

THE HOH GROUP, INC. ARCHITECTS ENGINEERS PN: 3730 1/26/2024	USER NAME = PLOT SCALE = PLOT DATE =	DESIGNED - MY CHECKED - RS DRAWN - HE CHECKED - DNB	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	T/SLAB ELEV'S - PLAN, D.L. DEFLECTION DIAGRAM, FILLET HEIGHTS STRUCTURE NO. 016-0321	F.A. RTE. 348 SECTION 3128-Z-1-R&RS COUNTY COOK TOTAL SHEETS 659 SHEET NO. 416 CONTRACT NO. 60R49	ILLINOIS FED. AID PROJECT
	SHEET 11 OF 63 SHEETS				ILLINOIS FED. AID PROJECT		

BEAM 1				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	310+20.71	-33.67	631.48	631.48
CL Brg. S. Abut	310+23.21	-33.67	631.52	631.52
A	310+33.21	-33.67	631.69	631.73
B	310+43.21	-33.67	631.85	631.90
C	310+53.21	-33.67	631.99	632.04
D	310+63.21	-33.67	632.11	632.14
CL Brg. Pier 1	310+76.29	-33.67	632.25	632.25
E	310+86.29	-33.67	632.34	632.37
F	310+96.29	-33.67	632.42	632.45
G	311+06.29	-33.67	632.48	632.51
H	311+16.29	-33.67	632.52	632.55
I	311+26.29	-33.67	632.54	632.57
CL Brg. Pier 2	311+39.46	-33.67	632.56	632.56
J	311+49.46	-33.67	632.55	632.60
K	311+59.46	-33.67	632.52	632.58
L	311+69.46	-33.67	632.48	632.55
M	311+79.46	-33.67	632.43	632.50
N	311+89.46	-33.67	632.36	632.42
O	311+99.46	-33.67	632.27	632.32
CL Brg. Pier 3	312+13.54	-33.67	632.12	632.12
P	312+23.54	-33.67	632.00	632.03
Q	312+33.54	-33.67	631.86	631.90
R	312+43.54	-33.67	631.70	631.75
S	312+53.54	-33.67	631.53	631.57
T	312+63.54	-33.67	631.35	631.38
CL Brg. N. Abut	312+71.37	-33.67	631.19	631.19
Back N. Abut	312+73.87	-33.67	631.14	631.14

BEAM 2				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	310+15.74	-27.21	631.51	631.51
CL Brg. S. Abut	310+18.24	-27.21	631.56	631.56
A	310+28.24	-27.21	631.74	631.78
B	310+38.24	-27.21	631.90	631.95
C	310+48.24	-27.21	632.05	632.10
D	310+58.24	-27.21	632.18	632.21
CL Brg. Pier 1	310+71.32	-27.21	632.33	632.33
E	310+81.32	-27.21	632.43	632.46
F	310+91.32	-27.21	632.51	632.54
G	311+01.32	-27.21	632.58	632.62
H	311+11.32	-27.21	632.63	632.66
I	311+21.32	-27.21	632.66	632.69
CL Brg. Pier 2	311+34.49	-27.21	632.68	632.68
J	311+44.49	-27.21	632.68	632.74
K	311+54.49	-27.21	632.67	632.74
L	311+64.49	-27.21	632.63	632.71
M	311+74.49	-27.21	632.59	632.67
N	311+84.49	-27.21	632.52	632.59
O	311+94.49	-27.21	632.44	632.50
CL Brg. Pier 3	312+08.57	-27.21	632.31	632.31
P	312+18.57	-27.21	632.19	632.22
Q	312+28.57	-27.21	632.06	632.10
R	312+38.57	-27.21	631.91	631.96
S	312+48.57	-27.21	631.75	631.80
T	312+58.57	-27.21	631.57	631.61
CL Brg. N. Abut	312+66.40	-27.21	631.42	631.42
Back N. Abut	312+68.90	-27.21	631.37	631.37

BEAM 3				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	310+10.78	-20.75	631.55	631.55
CL Brg. S. Abut	310+13.28	-20.75	631.59	631.59
A	310+23.28	-20.75	631.78	631.81
B	310+33.28	-20.75	631.95	631.99
C	310+43.28	-20.75	632.11	632.15
D	310+53.28	-20.75	632.25	632.28
CL Brg. Pier 1	310+66.36	-20.75	632.41	632.41
E	310+76.36	-20.75	632.51	632.54
F	310+86.36	-20.75	632.60	632.63
G	310+96.36	-20.75	632.68	632.71
H	311+06.36	-20.75	632.73	632.76
I	311+16.36	-20.75	632.78	632.81
CL Brg. Pier 2	311+29.53	-20.75	632.81	632.81
J	311+39.53	-20.75	632.81	632.86
K	311+49.53	-20.75	632.81	632.87
L	311+59.53	-20.75	632.78	632.85
M	311+69.53	-20.75	632.74	632.81
N	311+79.53	-20.75	632.69	632.75
O	311+89.5308	-20.75	632.61	632.66
CL Brg. Pier 3	312+03.61	-20.75	632.49	632.49
P	312+13.61	-20.75	632.38	632.41
Q	312+23.61	-20.75	632.26	632.30
R	312+33.61	-20.75	632.12	632.16
S	312+43.61	-20.75	631.96	632.00
T	312+53.61	-20.75	631.79	631.82
CL Brg. N. Abut	312+61.44	-20.75	631.65	631.65
Back N. Abut	312+63.94	-20.75	631.60	631.60

FILE = \$File\$

THE HOH GROUP, INC.
ARCHITECTS | ENGINEERS

USER NAME =	DESIGNED - RS	REVISED -
PLOT SCALE =	CHECKED - DNB	REVISED -
PN: 3730	DRAWN - JPM	REVISED -
PLOT DATE =	CHECKED - DNB	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**T/DECK ELEVATION TABLES - BEAMS 1 TO 3
STRUCTURE NO. 016-0321**

SHEET 12 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	417
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

DATE = \$Date\$

BEAM 4				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	310+05.82	-14.29	631.57	631.57
CL Brg. S. Abut	310+08.32	-14.29	631.63	631.63
A	310+18.32	-14.29	631.82	631.85
B	310+28.32	-14.29	632.00	632.04
C	310+38.32	-14.29	632.16	632.20
D	310+48.32	-14.29	632.31	632.34
CL Brg. Pier 1	310+61.40	-14.29	632.48	632.48
E	310+71.40	-14.29	632.59	632.62
F	310+81.40	-14.29	632.69	632.72
G	310+91.40	-14.29	632.77	632.80
H	311+01.40	-14.29	632.84	632.87
I	311+11.40	-14.29	632.89	632.93
CL Brg. Pier 2	311+24.57	-14.29	632.93	632.95
J	311+34.57	-14.29	632.94	632.99
K	311+44.57	-14.29	632.94	633.00
L	311+54.57	-14.29	632.92	632.99
M	311+64.57	-14.29	632.89	632.96
N	311+74.57	-14.29	632.84	632.90
O	311+84.57	-14.29	632.78	632.83
CL Brg. Pier 3	311+98.65	-14.29	632.67	632.67
P	312+08.65	-14.29	632.56	632.59
Q	312+18.65	-14.29	632.45	631.49
R	312+28.65	-14.29	632.32	631.36
S	312+38.65	-14.29	632.17	631.21
T	312+48.65	-14.29	632.01	631.04
CL Brg. N. Abut	312+56.48	-14.29	631.87	631.87
Back N. Abut	312+58.98	-14.29	631.82	631.82

BEAM 5				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	310+00.85	-7.83	631.60	631.60
CL Brg. S. Abut	310+03.35	-7.83	631.65	631.65
A	310+13.35	-7.83	631.85	631.88
B	310+23.35	-7.83	632.04	631.08
C	310+33.35	-7.83	632.21	632.25
D	310+43.35	-7.83	632.37	632.40
CL Brg. Pier 1	310+56.43	-7.83	632.55	632.55
E	310+66.43	-7.83	632.67	632.70
F	310+76.43	-7.83	632.77	632.80
G	310+86.43	-7.83	632.86	632.89
H	310+96.43	-7.83	632.93	632.96
I	311+06.43	-7.83	632.99	633.02
CL Brg. Pier 2	311+19.60	-7.83	633.04	633.04
J	311+29.60	-7.83	633.07	633.12
K	311+39.60	-7.83	633.07	633.13
L	311+49.60	-7.83	633.06	633.13
M	311+59.60	-7.83	633.04	633.11
N	311+69.60	-7.83	633.00	633.06
O	311+79.60	-7.83	632.94	632.99
CL Brg. Pier 3	311+93.68	-7.83	632.84	632.84
P	312+03.68	-7.83	632.75	632.78
Q	312+13.68	-7.83	632.64	632.68
R	312+23.68	-7.83	632.51	631.55
S	312+33.68	-7.83	632.37	631.41
T	312+43.68	-7.83	632.22	631.25
CL Brg. N. Abut	312+51.51	-7.83	632.09	632.09
Back N. Abut	312+54.01	-7.83	632.04	632.04

STAGE LINE II/III				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	309+99.06	-5.50	631.61	631.61
CL Brg. S. Abut	310+01.56	-5.50	631.66	631.66
A	310+11.56	-5.50	631.86	631.88
B	310+21.56	-5.50	632.05	632.07
C	310+31.56	-5.50	632.23	632.25
D	310+41.56	-5.50	632.39	632.40
CL Brg. Pier 1	310+54.64	-5.50	632.57	632.57
E	310+64.64	-5.50	632.69	632.69
F	310+74.64	-5.50	632.80	632.81
G	310+84.64	-5.50	632.89	632.90
H	310+94.64	-5.50	632.97	632.98
I	311+04.64	-5.50	633.03	633.03
CL Brg. Pier 2	311+17.81	-5.50	633.08	633.08
J	311+27.81	-5.50	633.11	633.12
K	311+37.81	-5.50	633.12	633.15
L	311+47.81	-5.50	633.11	633.15
M	311+57.81	-5.50	633.09	633.13
N	311+67.81	-5.50	633.05	633.08
O	311+77.81	-5.50	633.00	633.01
CL Brg. Pier 3	311+91.89	-5.50	632.90	632.90
P	312+01.89	-5.50	632.81	632.81
Q	312+11.89	-5.50	632.70	632.71
R	312+21.89	-5.50	632.58	632.60
S	312+31.89	-5.50	632.44	632.46
T	312+41.89	-5.50	632.29	632.30
CL Brg. N. Abut	312+49.73	-5.50	632.16	632.16
Back N. Abut	312+52.23	-5.50	632.11	632.11

FILE = \$File\$

THE HOH GROUP, INC.
ARCHITECTS | ENGINEERS

USER NAME =
PLOT SCALE =
PLOT DATE =

DESIGNED - RS
CHECKED - DNB
DRAWN - JPM
CHECKED - DNB

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

T/DECK ELEVATION TABLES - BEAMS 4, 5 & STAGE II/III
STRUCTURE NO. 016-0321

SHEET 13 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	418
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

DATE = \$Date\$

BEAM 6				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	309+95.89	-1.38	631.62	631.62
CL Brg. S. Abut	309+98.39	-1.38	631.68	631.68
A	310+08.39	-1.38	631.89	631.92
B	310+18.39	-1.38	632.08	632.11
C	310+28.39	-1.38	632.26	632.29
D	310+38.39	-1.38	632.42	632.45
CL Brg. Pier 1	310+51.48	-1.38	632.61	632.61
E	310+61.48	-1.38	632.74	632.77
F	310+71.48	-1.38	632.85	632.88
G	310+81.48	-1.38	632.95	632.98
H	310+91.48	-1.38	633.03	633.06
I	311+01.48	-1.38	633.09	633.12
CL Brg. Pier 2	311+14.64	-1.38	633.16	633.16
J	311+24.64	-1.38	633.19	633.23
K	311+34.64	-1.38	633.20	633.25
L	311+44.64	-1.38	633.20	633.26
M	311+54.64	-1.38	633.18	633.24
N	311+64.64	-1.38	633.15	633.20
O	311+74.64	-1.38	633.10	633.14
CL Brg. Pier 3	311+88.72	-1.38	633.01	633.01
P	311+98.72	-1.38	632.92	632.95
Q	312+08.72	-1.38	632.82	632.86
R	312+18.72	-1.38	632.71	632.75
S	312+28.72	-1.38	632.57	632.61
T	312+38.72	-1.38	632.43	632.46
CL Brg. N. Abut	312+46.55	-1.38	632.30	632.30
Back N. Abut	312+49.05	-1.38	632.26	632.26

Profile Grade Line				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	309+95.60	-1.00	631.62	631.62
CL Brg. S. Abut	309+98.10	-1.00	631.68	631.68
A	310+08.10	-1.00	631.89	631.90
B	310+18.10	-1.00	632.08	632.10
C	310+28.10	-1.00	632.26	632.28
D	310+38.10	-1.00	632.43	632.43
CL Brg. Pier 1	310+51.18	-1.00	632.62	632.62
E	310+61.18	-1.00	632.74	632.75
F	310+71.18	-1.00	632.86	632.86
G	310+81.18	-1.00	632.95	632.96
H	310+91.18	-1.00	633.03	633.04
I	311+01.18	-1.00	633.10	633.10
CL Brg. Pier 2	311+14.35	-1.00	633.16	633.16
J	311+24.35	-1.00	633.19	633.20
K	311+34.35	-1.00	633.21	633.23
L	311+44.35	-1.00	633.21	633.24
M	311+54.35	-1.00	633.19	633.22
N	311+64.35	-1.00	633.16	633.18
O	311+74.35	-1.00	633.11	633.12
CL Brg. Pier 3	311+88.43	-1.00	633.02	633.02
P	311+98.43	-1.00	632.93	632.94
Q	312+08.43	-1.00	632.83	632.84
R	312+18.43	-1.00	632.72	632.73
S	312+28.43	-1.00	632.59	632.60
T	312+38.43	-1.00	632.44	632.44
CL Brg. N. Abut	312+46.26	-1.00	632.31	632.31
Back N. Abut	312+48.76	-1.00	632.27	632.27

C.L. of Harlem Ave.				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	309+94.83	0.00	631.62	631.62
CL Brg. S. Abut	309+97.33	0.00	631.68	631.68
A	310+07.33	0.00	631.89	631.90
B	310+17.33	0.00	632.09	632.11
C	310+27.33	0.00	632.27	632.29
D	310+37.33	0.00	632.43	632.44
CL Brg. Pier 1	310+50.41	0.00	632.63	632.63
E	310+60.41	0.00	632.75	632.76
F	310+70.41	0.00	632.87	632.88
G	310+80.41	0.00	632.97	632.98
H	310+90.41	0.00	633.05	633.06
I	311+00.41	0.00	633.12	633.12
CL Brg. Pier 2	311+13.58	0.00	633.18	633.18
J	311+23.58	0.00	633.21	633.22
K	311+33.58	0.00	633.23	633.25
L	311+43.58	0.00	633.23	633.27
M	311+53.58	0.00	633.21	633.25
N	311+63.58	0.00	633.18	633.21
O	311+73.58	0.00	633.14	633.15
CL Brg. Pier 3	311+87.66	0.00	633.04	633.04
P	311+97.66	0.00	632.96	632.96
Q	312+07.66	0.00	632.86	632.87
R	312+17.66	0.00	632.75	632.77
S	312+27.66	0.00	632.62	632.64
T	312+37.66	0.00	632.47	632.48
CL Brg. N. Abut	312+45.49	0.00	632.35	632.35
Back N. Abut	312+47.99	0.00	632.30	632.30

FILE = \$File\$

THE HOH GROUP, INC.
ARCHITECTS | ENGINEERS

USER NAME =	DESIGNED - RS	REVISED -
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PN: 3730	DRAWN - JPM	REVISED -
PLOT DATE =	CHECKED - DNB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

T/DECK ELEVATION TABLES - BEAM 6, PGL & CL. HARLEM AVE.
STRUCTURE NO. 016-0321

SHEET 14 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	419
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

DATE = \$Date\$

BEAM 7				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	309+93.77	1.38	631.57	631.57
CL Brg. S. Abut	309+96.27	1.38	631.63	631.63
A	310+06.27	1.38	631.84	631.87
B	310+16.27	1.38	632.04	632.08
C	310+26.27	1.38	632.22	632.26
D	310+36.27	1.38	632.39	632.42
CL Brg. Pier 1	310+49.35	1.38	632.58	632.58
E	310+59.35	1.38	632.71	632.74
F	310+69.35	1.38	632.83	632.86
G	310+79.35	1.38	632.93	632.96
H	310+89.35	1.38	633.01	633.04
I	310+99.35	1.38	633.08	633.11
CL Brg. Pier 2	311+12.52	1.38	633.15	633.15
J	311+22.52	1.38	633.18	633.23
K	311+32.52	1.38	633.20	633.26
L	311+42.52	1.38	633.20	633.27
M	311+52.52	1.38	633.19	633.26
N	311+62.52	1.38	633.16	633.22
O	311+72.52	1.38	633.11	633.16
CL Brg. Pier 3	311+86.60	1.38	633.02	633.02
P	311+96.60	1.38	632.94	632.97
Q	312+06.60	1.38	632.84	632.88
R	312+16.60	1.38	632.73	632.77
S	312+26.60	1.38	632.60	632.64
T	312+36.60	1.38	632.46	632.49
CL Brg. N. Abut	312+44.43	1.38	632.33	632.33
Back N. Abut	312+46.93	1.38	632.29	632.29

BEAM 8				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	309+88.41	8.35	631.31	631.31
CL Brg. S. Abut	309+90.91	8.35	631.37	631.37
A	310+00.91	8.35	631.59	631.62
B	310+10.91	8.35	631.80	631.84
C	310+20.91	8.35	631.99	633.03
D	310+30.91	8.35	632.16	632.19
CL Brg. Pier 1	310+43.99	8.35	632.37	632.37
E	310+53.99	8.35	632.51	632.54
F	310+63.99	8.35	632.63	632.66
G	310+73.99	8.35	632.74	632.77
H	310+83.99	8.35	632.83	632.86
I	310+93.99	8.35	632.91	632.94
CL Brg. Pier 2	311+07.16	8.35	632.99	632.99
J	311+17.16	8.35	633.03	633.08
K	311+27.16	8.35	633.05	633.11
L	311+37.16	8.35	633.06	633.13
M	311+47.16	8.35	633.06	633.13
N	311+57.16	8.35	633.04	633.10
O	311+67.16	8.35	633.00	633.05
CL Brg. Pier 3	311+81.24	8.35	632.92	632.92
P	311+91.24	8.35	632.85	632.88
Q	312+01.24	8.35	632.76	632.79
R	312+11.24	8.35	632.65	632.70
S	312+21.24	8.35	632.53	632.57
T	312+31.24	8.35	632.40	632.43
CL Brg. N. Abut	312+39.07	8.35	632.28	631.28
Back N. Abut	312+41.57	8.35	632.24	632.24

BEAM 9				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	309+83.04	15.33	631.04	631.04
CL Brg. S. Abut	309+85.54	15.33	631.10	631.10
A	309+95.54	15.33	631.33	631.36
B	310+05.54	15.33	631.55	631.59
C	310+15.54	15.33	631.75	631.79
D	310+25.54	15.33	631.93	631.96
CL Brg. Pier 1	310+38.62	15.33	632.15	632.15
E	310+48.62	15.33	632.29	632.32
F	310+58.62	15.33	632.43	632.46
G	310+68.62	15.33	632.54	632.57
H	310+78.62	15.33	632.64	632.67
I	310+88.62	15.33	632.73	632.76
CL Brg. Pier 2	311+01.79	15.33	632.82	632.82
J	311+11.79	15.33	632.87	632.92
K	311+21.79	15.33	632.90	632.96
L	311+31.79	15.33	632.92	632.99
M	311+41.79	15.33	632.92	632.99
N	311+51.79	15.33	632.91	632.97
O	311+61.79	15.33	632.88	632.93
CL Brg. Pier 3	311+75.87	15.33	632.82	632.82
P	311+85.87	15.33	632.75	632.78
Q	311+95.87	15.33	632.67	632.71
R	312+05.87	15.33	632.57	632.61
S	312+15.87	15.33	632.46	632.50
T	312+25.87	15.33	632.33	632.36
CL Brg. N. Abut	312+33.70	15.33	632.22	632.22
Back N. Abut	312+36.20	15.33	632.19	632.19

FILE = sFile\$

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

T/DECK ELEVATION TABLES - BEAMS 7 TO 9
STRUCTURE NO. 016-0321

SHEET 15 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	420
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

DATE = sDate\$

STAGE LINE I/II				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	309+81.41	17.46	631.37	631.37
CL Brg. S. Abut	309+83.91	17.46	631.42	631.42
A	309+93.91	17.46	631.62	631.64
B	310+03.91	17.46	631.81	631.84
C	310+13.91	17.46	631.99	632.01
D	310+23.91	17.46	632.15	632.16
CL Brg. Pier 1	310+36.99	17.46	632.33	632.33
E	310+46.99	17.46	632.45	632.46
F	310+56.99	17.46	632.56	632.57
G	310+66.99	17.46	632.65	632.66
H	310+76.99	17.46	632.73	632.74
I	310+86.99	17.46	632.79	632.79
CL Brg. Pier 2	311+00.16	17.46	632.84	632.84
J	311+10.16	17.46	632.87	632.88
K	311+20.16	17.46	632.88	632.91
L	311+30.16	17.46	632.87	632.92
M	311+40.16	17.46	632.85	632.90
N	311+50.16	17.46	632.81	632.85
O	311+60.16	17.46	632.76	632.78
CL Brg. Pier 3	311+74.24	17.46	632.66	632.66
P	311+84.24	17.46	632.57	632.57
Q	311+94.24	17.46	632.46	632.48
R	312+04.24	17.46	632.34	632.36
S	312+14.24	17.46	632.20	632.23
T	312+24.24	17.46	632.05	632.06
CL Brg. N. Abut	312+35.54	17.46	631.92	631.92
Back N. Abut	312+38.04	17.46	631.88	631.88

BEAM 10				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	309+77.68	22.31	630.77	630.77
CL Brg. S. Abut	309+80.18	22.31	630.83	630.83
A	309+90.18	22.31	631.07	631.10
B	310+00.18	22.31	631.30	631.34
C	310+10.18	22.31	631.50	631.54
D	310+20.18	22.31	631.69	632.72
CL Brg. Pier 1	310+33.26	22.31	631.92	632.92
E	310+43.26	22.31	632.08	632.11
F	310+53.26	22.31	632.22	632.25
G	310+63.26	22.31	632.34	632.37
H	310+73.26	22.31	632.45	632.48
I	310+83.26	22.31	632.55	632.58
CL Brg. Pier 2	310+96.43	22.31	632.65	632.65
J	311+06.43	22.31	632.70	632.75
K	311+16.43	22.31	632.75	632.81
L	311+26.43	22.31	632.77	632.84
M	311+36.43	22.31	632.78	632.85
N	311+46.43	22.31	632.78	632.84
O	311+56.43	22.31	632.76	632.81
CL Brg. Pier 3	311+70.51	22.31	632.71	632.71
P	311+80.51	22.31	632.65	632.68
Q	311+90.51	22.31	632.58	632.62
R	312+00.51	22.31	632.49	632.53
S	312+10.51	22.31	632.38	632.42
T	312+20.51	22.31	632.26	632.29
CL Brg. N. Abut	312+28.34	22.31	632.16	631.16
Back N. Abut	312+30.84	22.31	632.12	632.12

BEAM 11				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	309+72.31	29.29	630.50	630.50
CL Brg. S. Abut	309+74.81	29.29	630.56	630.56
A	309+84.81	29.29	630.81	630.84
B	309+94.81	29.29	631.04	631.08
C	310+04.81	29.29	631.25	631.29
D	310+14.81	29.29	631.45	631.48
CL Brg. Pier 1	310+27.89	29.29	631.69	631.69
E	310+37.89	29.29	631.86	631.89
F	310+47.89	29.29	632.00	632.03
G	310+57.89	29.29	632.14	632.17
H	310+67.89	29.29	632.26	632.29
I	310+77.89	29.29	632.36	632.39
CL Brg. Pier 2	310+91.06	29.29	632.47	632.47
J	311+01.06	29.29	632.53	632.56
K	311+11.06	29.29	632.58	632.62
L	311+21.06	29.29	632.62	632.67
M	311+31.06	29.29	632.64	632.69
N	311+41.06	29.29	632.64	632.68
O	311+51.06	29.29	632.63	632.66
CL Brg. Pier 3	311+65.14	29.29	632.59	632.59
P	311+75.14	29.29	632.54	632.57
Q	311+85.14	29.29	632.48	632.52
R	311+95.14	29.29	632.40	631.44
S	312+05.14	29.29	632.30	631.34
T	312+15.14	29.29	632.19	631.22
CL Brg. N. Abut	312+22.97	29.29	632.09	632.09
Back N. Abut	312+25.47	29.29	632.06	632.06

FILE = \$File\$

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PN: 3730	DRAWN - JPM	REVISED -
PLOT DATE =	CHECKED - DNB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

T/DECK ELEVATION TABLES - STAGE I/II, BEAMS 10 & 11
STRUCTURE NO. 016-0321

SHEET 16 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	421
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

DATE = \$Date\$

BEAM 12				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	309+70.20	32.04	630.39	630.39
CL Brg. S. Abut	309+72.70	32.04	630.45	630.45
A	309+82.70	32.04	630.70	630.73
B	309+92.70	32.04	630.94	630.97
C	310+02.70	32.04	631.15	631.19
D	310+12.70	32.04	631.36	631.39
CL Brg. Pier 1	310+25.78	32.04	631.60	631.60
E	310+35.78	32.04	631.77	631.80
F	310+45.78	32.04	631.92	631.95
G	310+55.78	32.04	632.06	632.09
H	310+65.78	32.04	632.18	632.21
I	310+75.78	32.04	632.28	632.31
CL Brg. Pier 2	310+88.95	32.04	632.40	632.40
J	310+98.95	32.04	632.47	632.50
K	311+08.95	32.04	632.52	632.55
L	311+18.95	32.04	632.56	632.60
M	311+28.95	32.04	632.58	632.62
N	311+38.95	32.04	632.59	632.62
O	311+48.95	32.04	632.58	632.61
CL Brg. Pier 3	311+63.03	32.04	632.54	632.54
P	311+73.03	32.04	632.50	632.53
Q	311+83.03	32.04	632.44	632.47
R	311+93.03	32.04	632.36	632.39
S	312+03.03	32.04	632.27	632.30
T	312+13.03	32.04	632.16	632.19
CL Brg. N. Abut	312+20.86	32.04	632.07	632.07
Back N. Abut	312+23.36	32.04	632.03	632.03

BEAM 13				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	309+67.27	36.85	630.23	630.23
CL Brg. S. Abut	309+69.75	36.87	630.30	630.30
A	309+79.75	36.95	630.55	630.58
B	309+89.75	37.03	630.79	630.82
C	309+99.75	37.10	631.01	631.05
D	310+09.75	37.18	631.22	631.25
CL Brg. Pier 1	310+22.52	37.28	631.46	631.46
E	310+32.52	37.35	631.63	631.66
F	310+42.52	37.43	631.78	631.81
G	310+52.52	37.51	631.92	631.95
H	310+62.52	37.58	632.05	632.08
I	310+72.52	37.66	632.16	632.19
CL Brg. Pier 2	310+85.32	37.76	632.27	632.27
J	310+95.32	37.83	632.35	632.38
K	311+05.32	37.91	632.41	632.45
L	311+15.32	37.99	632.45	632.45
M	311+25.32	37.06	632.47	632.51
N	311+35.32	37.14	632.49	632.52
O	311+45.32	37.22	632.48	632.50
CL Brg. Pier 3	311+58.97	37.32	632.45	632.47
P	311+68.97	37.40	632.41	632.44
Q	311+78.97	37.48	632.35	632.38
R	311+88.97	37.55	632.28	632.31
S	311+98.97	37.63	632.20	632.23
T	312+08.97	37.70	632.09	632.12
CL Brg. N. Abut	312+16.46	37.76	632.01	632.01
Back N. Abut	312+18.95	37.78	631.97	631.97

BEAM 14				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	309+64.34	39.67	630.08	630.08
CL Brg. S. Abut	309+66.81	39.70	630.14	630.14
A	309+76.81	39.86	630.40	630.43
B	309+86.81	40.01	630.64	630.68
C	309+96.80	40.17	630.87	630.91
D	310+06.80	40.32	631.07	631.10
CL Brg. Pier 1	310+19.27	40.51	631.31	631.31
E	310+29.27	40.67	631.49	631.52
F	310+39.26	40.82	631.65	631.68
G	310+49.26	40.97	631.79	631.82
H	310+59.26	41.13	631.92	631.95
I	310+69.26	41.28	632.03	632.06
CL Brg. Pier 2	310+81.70	41.47	632.15	632.15
J	310+91.70	41.63	632.23	632.26
K	311+01.70	41.78	632.29	632.33
L	311+11.69	41.94	632.33	632.38
M	311+21.69	42.09	632.37	632.41
N	311+31.69	42.24	632.38	632.41
O	311+41.69	42.40	632.38	632.40
CL Brg. Pier 3	311+54.91	42.60	632.36	632.36
P	311+64.91	42.76	632.32	632.35
Q	311+74.91	42.91	632.27	632.31
R	311+84.91	43.06	632.20	632.24
S	311+94.91	43.22	632.12	632.16
T	312+04.91	43.37	632.02	632.05
CL Brg. N. Abut	312+12.06	43.48	631.94	631.94
Back N. Abut	312+14.53	43.52	631.91	631.91

FILE = \$File\$

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PLOT SCALE =	CHECKED - DNB	REVISED -
PN: 3730	DRAWN - JPM	REVISED -
PLOT DATE =	CHECKED - DNB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

T/DECK ELEVATION TABLES - BEAMS 12 TO 14
STRUCTURE NO. 016-0321

SHEET 17 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	422
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

DATE = \$Date\$

BEAM 15				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut	309+59.73	45.67	629.83	629.83
CL Brg. S. Abut	309+62.20	45.70	629.90	629.90
A	309+72.20	45.86	630.16	630.20
B	309+82.20	46.01	630.41	630.46
C	309+92.19	46.17	630.64	630.69
D	310+02.19	46.32	630.86	630.89
CL Brg. Pier 1	310+14.65	46.51	631.11	631.11
E	310+24.65	46.67	631.29	631.32
F	310+34.65	46.82	631.45	631.48
G	310+44.65	46.97	631.60	631.64
H	310+54.65	47.13	631.74	631.77
I	310+64.65	47.28	631.86	631.89
CL Brg. Pier 2	310+77.09	47.47	631.99	631.99
J	310+87.08	47.63	632.07	632.10
K	310+97.08	47.78	632.14	632.18
L	311+07.08	47.94	632.19	632.24
M	311+17.08	48.09	632.23	632.27
N	311+27.08	48.24	632.25	632.28
O	311+37.08	48.40	632.26	632.28
CL Brg. Pier 3	311+50.30	48.60	632.25	632.25
P	311+60.30	48.76	632.22	632.25
Q	311+70.30	48.91	632.17	632.21
R	311+80.30	49.06	632.11	632.16
S	311+90.30	49.22	632.04	632.09
T	312+00.30	49.37	631.95	631.99
CL Brg. N. Abut	312+07.45	49.48	631.87	631.87
Back N. Abut	312+09.92	49.52	631.85	631.85

FILE = sFilea\$

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USER NAME =
PLOT SCALE =
PLOT DATE =

DESIGNED - RS
CHECKED - DNB
DRAWN - JPM
CHECKED - DNB

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

T/DECK ELEV TABLES - BEAM 15
STRUCTURE NO. 016-0321

SHEET 18 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	423
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

DATE = sDate\$

INSIDE EDGE OF WEST CURB LINE			
Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	309+93.38	-35.50	630.88
A1	309+03.38	-35.50	631.10
A2	310+13.38	-35.50	631.30
N. End S. Appr. Slab	310+23.38	-35.50	631.49

WEST EDGE OF SHOULDER S.B. LANES			
Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	309+86.85	-27.00	630.90
A1	309+96.85	-27.00	631.13
A2	310+06.85	-27.00	631.34
N. End S. Appr. Slab	310+16.85	-27.00	631.54

WEST EDGE OF PAVEMENT S.B. LANES			
Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	309+85.31	-25.00	630.91
A1	309+95.31	-25.00	631.14
A2	310+05.31	-25.00	631.35
N. End S. Appr. Slab	310+15.31	-25.00	631.55

EDGE OF STAGE LINE 2-3			
Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	309+70.32	-5.50	630.92
A1	309+80.32	-5.50	631.17
A2	309+90.32	-5.50	631.41
N. End S. Appr. Slab	310+00.32	-5.50	631.63

CENTERLINE / CROWN			
Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	309+66.09	0.00	630.92
A1	309+76.09	0.00	631.18
A2	309+86.09	0.00	631.42
N. End S. Appr. Slab	309+96.09	0.00	631.65

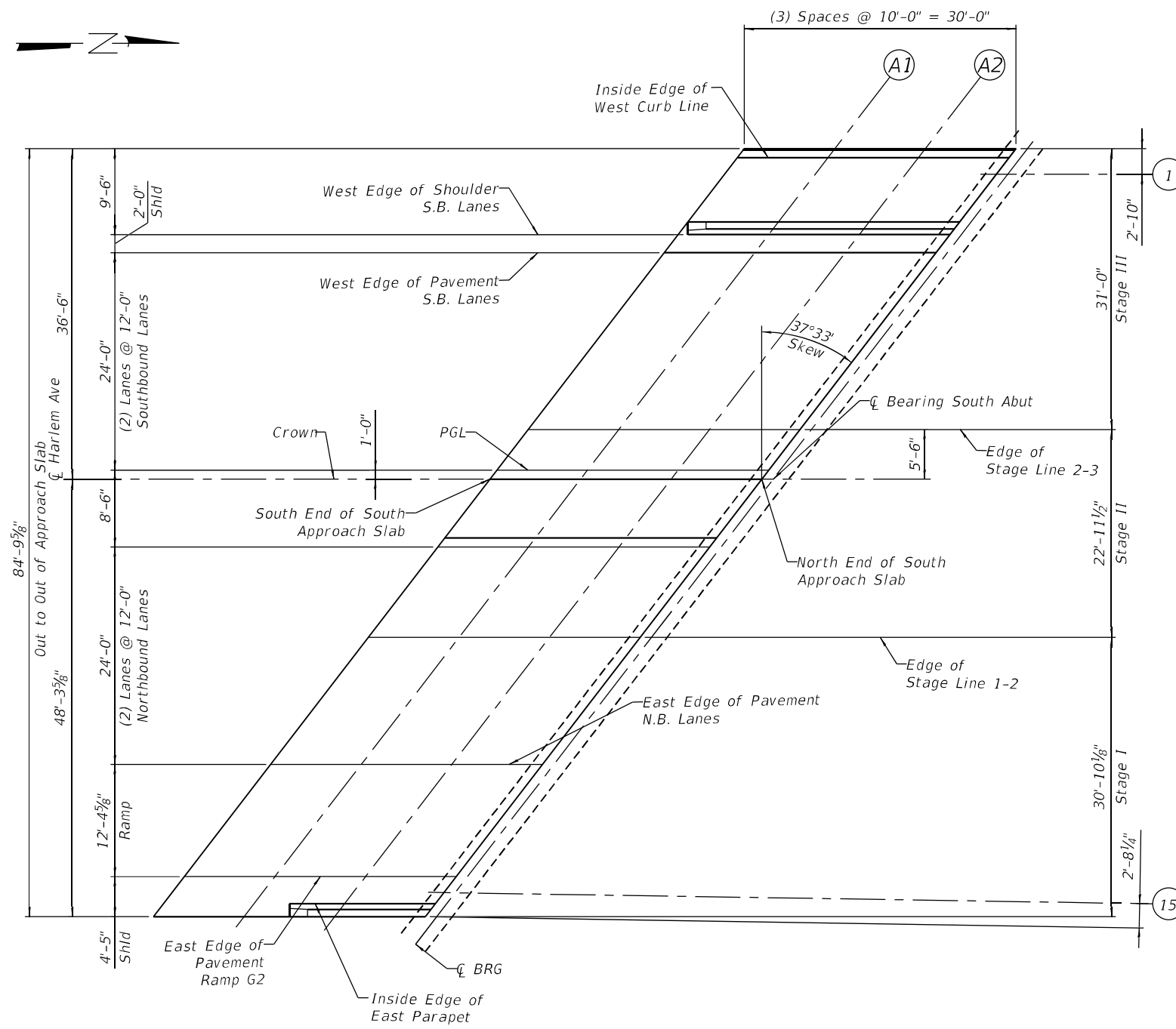
PGL			
Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	309+66.86	1.00	630.92
A1	309+76.86	1.00	631.18
A2	309+86.86	1.00	631.42
N. End S. Appr. Slab	309+96.86	1.00	631.65

EDGE OF STAGE LINE 1-2			
Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	309+52.67	17.46	630.20
A1	309+62.67	17.46	630.48
A2	309+72.67	17.46	630.74
N. End S. Appr. Slab	309+82.67	17.46	630.99

EAST EDGE OF PAVEMENT N.B. LANES			
Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	309+41.88	31.50	629.60
A1	309+51.88	31.50	629.89
A2	309+61.88	31.50	630.17
N. End S. Appr. Slab	309+71.88	31.50	630.44

EAST EDGE OF PAVEMENT RAMP G2			
Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	309+32.36	43.89	629.05
A1	309+42.36	43.89	629.36
A2	309+52.36	43.89	629.66
N. End S. Appr. Slab	309+62.36	43.89	629.94

INSIDE EDGE OF EAST PARAPET			
Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	309+30.05	46.89	628.92
A1	309+40.05	46.89	629.23
A2	309+50.05	46.89	629.53
N. End S. Appr. Slab	309+60.05	46.89	629.82



SOUTH APPROACH SLAB PLAN

FILE = \$FileA\$

THE HOH GROUP, INC.
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PN: 3730

USER NAME =	DESIGNED - RS	REVISED -
PLOT SCALE =	CHECKED - DNB	REVISED -
PLOT DATE =	DRAWN - JPM	REVISED -
	CHECKED - DNB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

T/SOUTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 016-0321

SHEET 19 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	424
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

DATE = \$Date\$

INSIDE EDGE OF WEST CURB LINE			
Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	312+74.03	-35.50	631.09
A3	312+84.03	-35.50	630.88
A4	312+94.03	-35.50	630.66
N. End N. Appr. Slab	313+04.03	-35.50	630.43

WEST EDGE OF SHOULDER S.B. LANES			
Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	312+67.50	-27.00	631.40
A3	312+77.50	-27.00	631.19
A4	312+87.50	-27.00	630.97
N. End N. Appr. Slab	312+97.50	-27.00	630.75

WEST EDGE OF PAVEMENT S.B. LANES			
Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	312+65.96	-25.00	631.47
A3	312+75.96	-25.00	631.26
A4	312+85.96	-25.00	631.04
N. End N. Appr. Slab	312+95.96	-25.00	630.82

EDGE OF STAGE LINE 2-3			
Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	312+50.97	-5.50	632.14
A3	312+60.97	-5.50	631.95
A4	312+70.97	-5.50	631.76
N. End N. Appr. Slab	312+80.97	-5.50	631.54

CENTERLINE / CROWN			
Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	312+46.74	0.00	632.32
A3	312+56.74	0.00	632.14
A4	312+66.74	0.00	631.95
N. End N. Appr. Slab	313+76.74	0.00	631.75

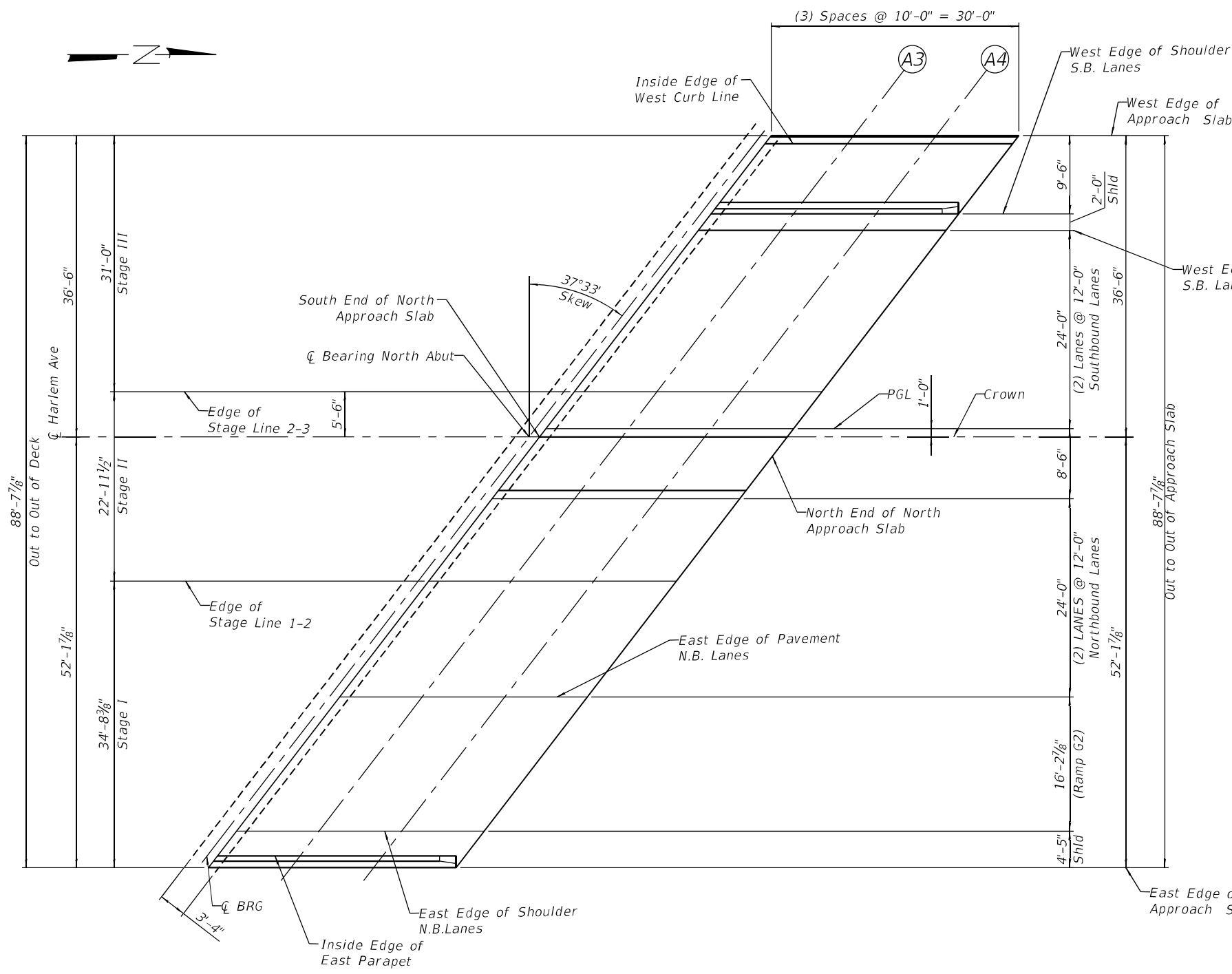
PGL			
Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	312+47.51	-1.00	632.29
A3	312+57.51	-1.00	632.11
A4	312+67.51	-1.00	631.92
N. End N. Appr. Slab	312+77.51	-1.00	631.71

EDGE OF STAGE LINE 1-2			
Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	312+33.32	17.46	632.18
A3	312+43.32	17.46	632.03
A4	312+53.32	17.46	631.86
N. End N. Appr. Slab	312+63.32	17.46	631.67

EAST EDGE PAVEMENT OF N.B. LANES			
Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	312+22.53	31.50	632.05
A3	312+32.53	31.50	631.91
A4	312+42.53	31.50	631.76
N. End N. Appr. Slab	312+52.53	31.50	631.59

EAST EDGE OF SHOULDER N.B. LANES			
Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	312+10.04	47.74	631.88
A3	312+20.04	47.74	631.76
A4	312+30.04	47.74	631.62
N. End N. Appr. Slab	312+40.04	47.74	631.47

INSIDE EDGE OF EAST PARAPET			
Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	312+07.74	50.74	631.84
A3	312+17.74	50.74	631.73
A4	312+27.74	50.74	631.60
N. End N. Appr. Slab	312+37.74	50.74	631.45



NORTH APPROACH SLAB PLAN

FILE = \$FileA\$
DATE = \$Date\$

THE HOH GROUP, INC.
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PN: 3730

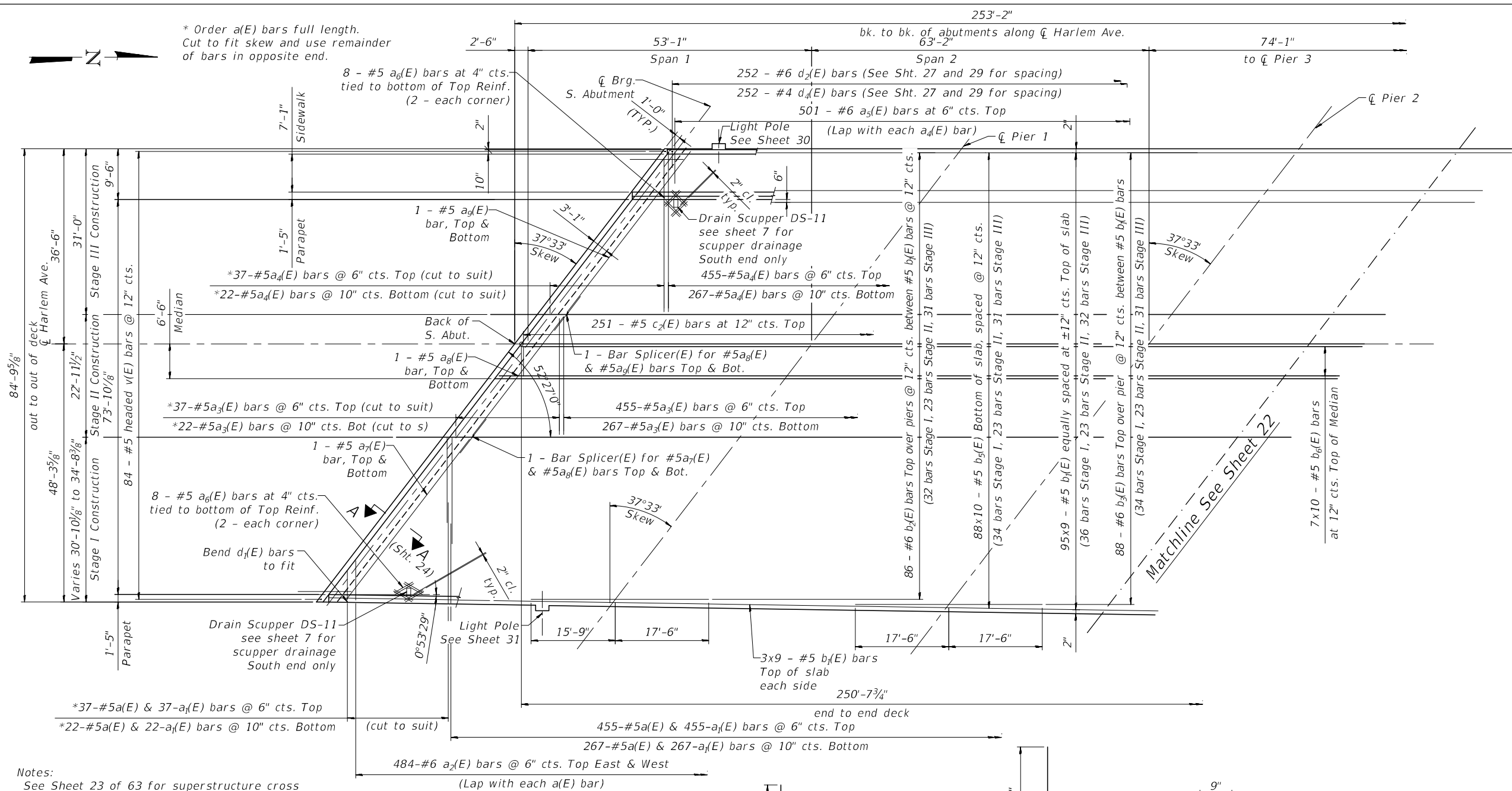
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PLOT SCALE =	CHECKED - DNB	REVISED -
PLOT DATE = 01/25/2024	DRAWN - JPM	REVISED -
	CHECKED - DNB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

T/NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 016-0321
SHEET 20 OF 63 SHEETS

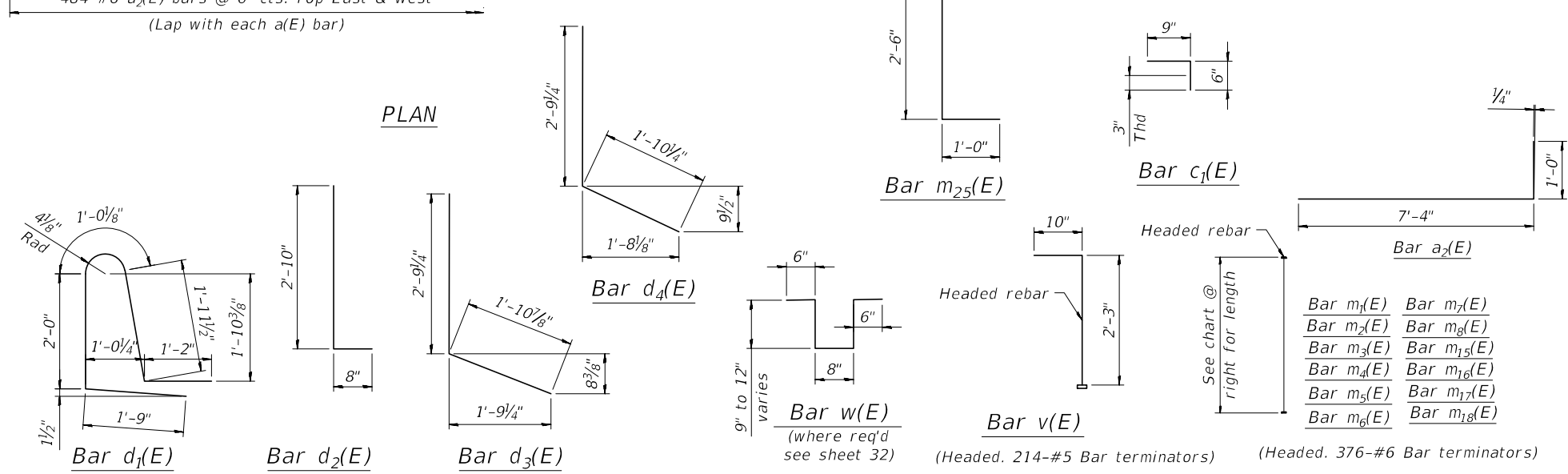
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	425
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

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



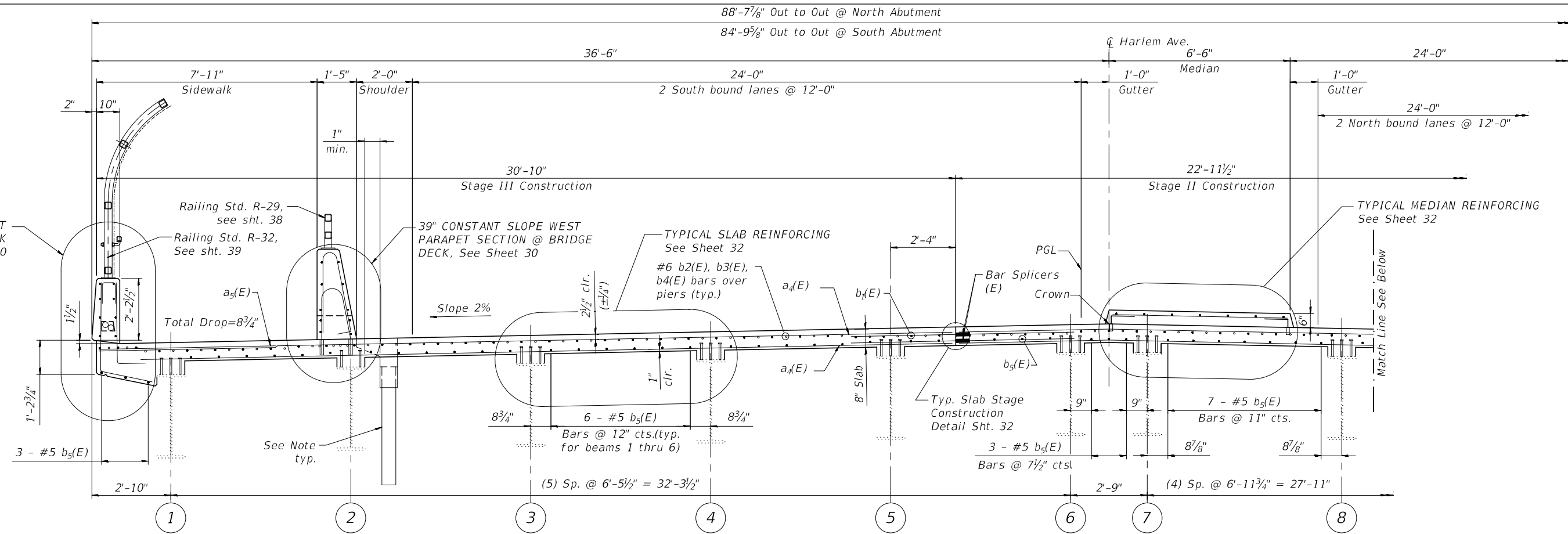
Notes:
See Sheet 23 of 63 for superstructure cross section.
See Sheet 24 of 63 for superstructure details.
Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet 27 to 32 of 63 for parapet reinforcement.
See TYPICAL SLAB REINFORCING detail on sheet 32 for Fillet reinforcing requirements.
Bar terminators, paid for separately. see Total Bill of Material

Minimum Lap Lengths for 8" Deck & Concrete Diaphragm Reinforcement			
	Bot Bars	Top Bars	CLASS B
#4	2'-7"	2'-7"	
#5	3'-9"	3'-2"	
#6	5'-2"	3'-10"	



DECK & DIAPHRAGM - BILL OF MATERIAL

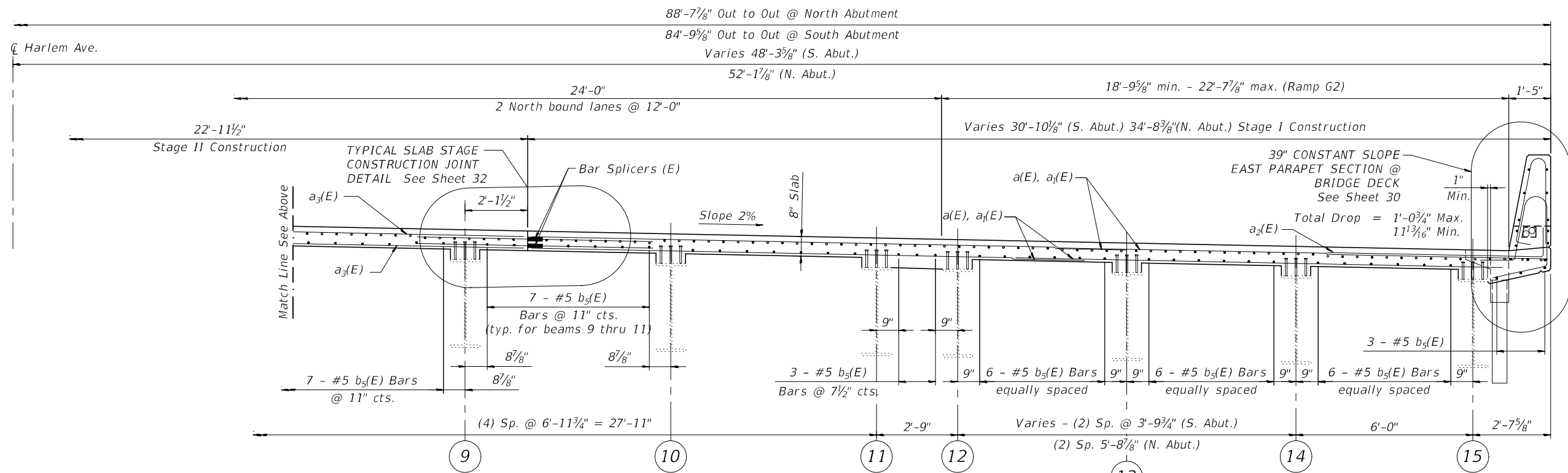
Bar	No.	Size	Length	Shape
a1(E)	865	#5	20'-01"	
a2(E)	865	#5	18'-0"	
a3(E)	484	#6	8'-4"	
a3(E)	840	#5	22'-7"	
a4(E)	840	#5	30'-8"	
a5(E)	501	#6	7'-4"	
a6(E)	32	#5	1'-6"	
a7(E)	2	#5	38'-7"	
a8(E)	4	#5	28'-8"	
a9(E)	4	#5	38'-10"	
a11(E)	4	#5	23'-8"	
a12(E)	300	#4	28'-0"	
b1(E)	882	#5	30'-8"	
b2(E)	86	#6	33'-3"	
b3(E)	88	#6	35'-0"	
b4(E)	88	#6	31'-4"	
b5(E)	880	#5	28'-5"	
b6(E)	70	#5	28'-2"	
c1(E)	502	#5	1'-3"	
c2(E)	251	#5	6'-0"	
d1(E)	376	#5	7'-11"	
d2(E)	252	#6	3'-6"	
d3(E)	376	#4	4'-10"	
d4(E)	252	#4	4'-8"	
m1(E)	8	#6	3'-0"	
m2(E)	8	#6	7'-4"	
m3(E)	8	#6	4'-5"	
m4(E)	16	#6	3'-1"	
m5(E)	24	#6	8'-5"	
m6(E)	32	#6	7'-9"	
m7(E)	8	#6	3'-2"	
m8(E)	8	#6	6'-11"	
m9(E)	6	#6	38'-8"	
m10(E)	12	#6	28'-8"	
m11(E)	6	#6	38'-10"	
m12(E)	6	#6	38'-10"	
m13(E)	12	#6	23'-3"	
m15(E)	4	#6	4'-10"	
m16(E)	4	#6	5'-9"	
m17(E)	4	#6	5'-1"	
m18(E)	4	#6	6'-0"	
m20(E)	2	#4	38'-8"	
m21(E)	4	#4	28'-8"	
m22(E)	2	#4	38'-10"	
m23(E)	2	#4	38'-10"	
m24(E)	4	#4	23'-1"	
m25(E)	16	#6	3'-6"	
s10(E)	37	#5	9'-8"	
s11(E)	73	#5	10'-0"	
s12(E)	14	#5	10'-2"	
s13(E)	100	#5	6'-8"	
s14(E)	7	#5	9'-10"	
s15(E)	16	#5	10'-4"	
s16(E)	16	#5	10'-7"	
s17(E)	15	#5	10'-8"	
s18(E)	10	#5	10'-10"	
s19(E)	10	#5	6'-5"	
s20(E)	7	#5	6'-6"	
s21(E)	14	#5	6'-7"	
s22(E)	3	#5	6'-9"	
s23(E)	16	#5	6'-10"	
s24(E)	16	#5	6'-11"	
s25(E)	15	#5	7'-0"	
s26(E)	10	#5	7'-1"	
u10(E)	219	#4	3'-2"	
v(E)	214	#5	3'-1"	
w(E)	2,175	#4	3'-4"	
x(E)	182	#4	40'-0"	
Concrete Superstr.	Cu. Yd.		667.2	
Reinforcement Bars, Epoxy Coated	Pound		195,200	
Protective Coat	Sq. Yd.		2,310	



TYPICAL CROSS SECTION

(Looking North)

Note : See Sheet 30 of 63 for Superstructure Details.



TYPICAL CROSS SECTION

(Looking North)

FILE = \$FileA\$

THE HOH GROUP, INC.
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PN: 3730

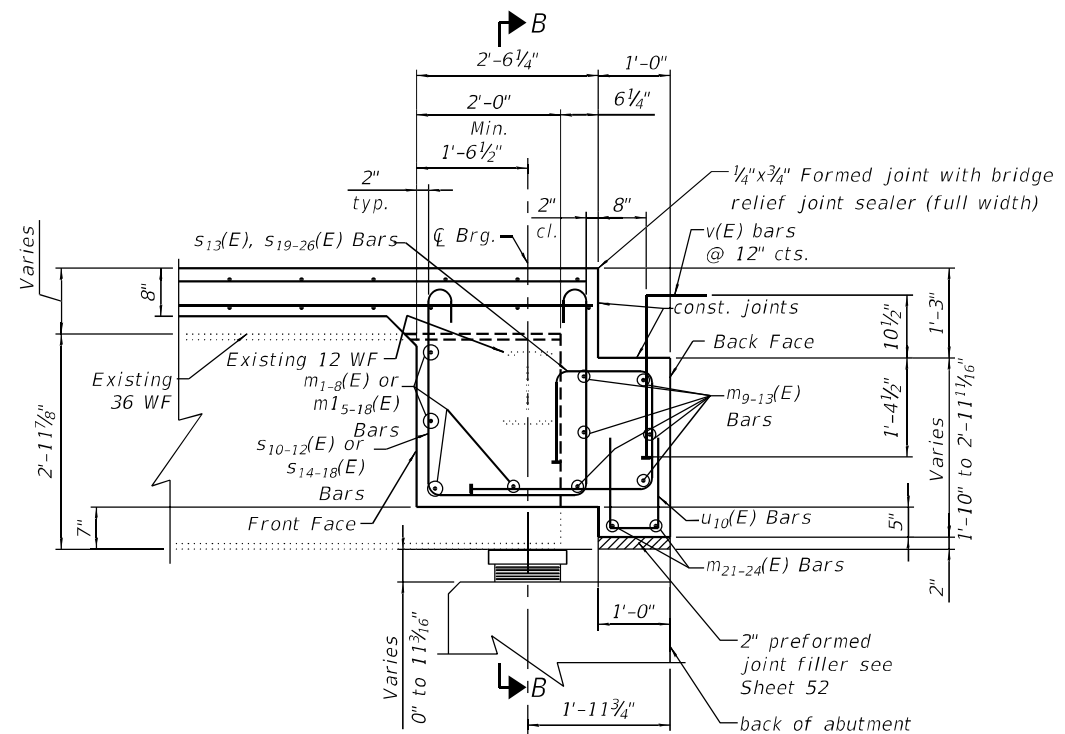
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PLOT SCALE =	CHECKED - DNB	REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

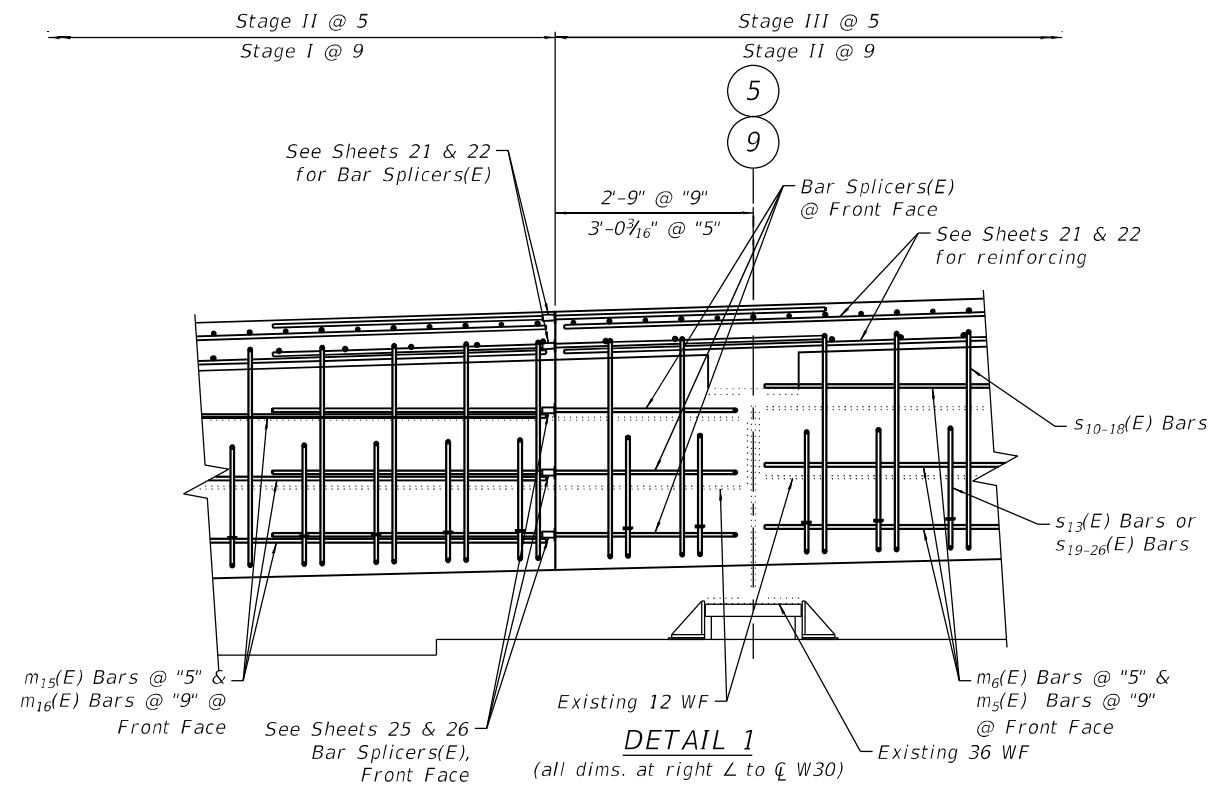
**DECK CROSS SECTION
STRUCTURE NO. 016-0321**
SHEET 23 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	428
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

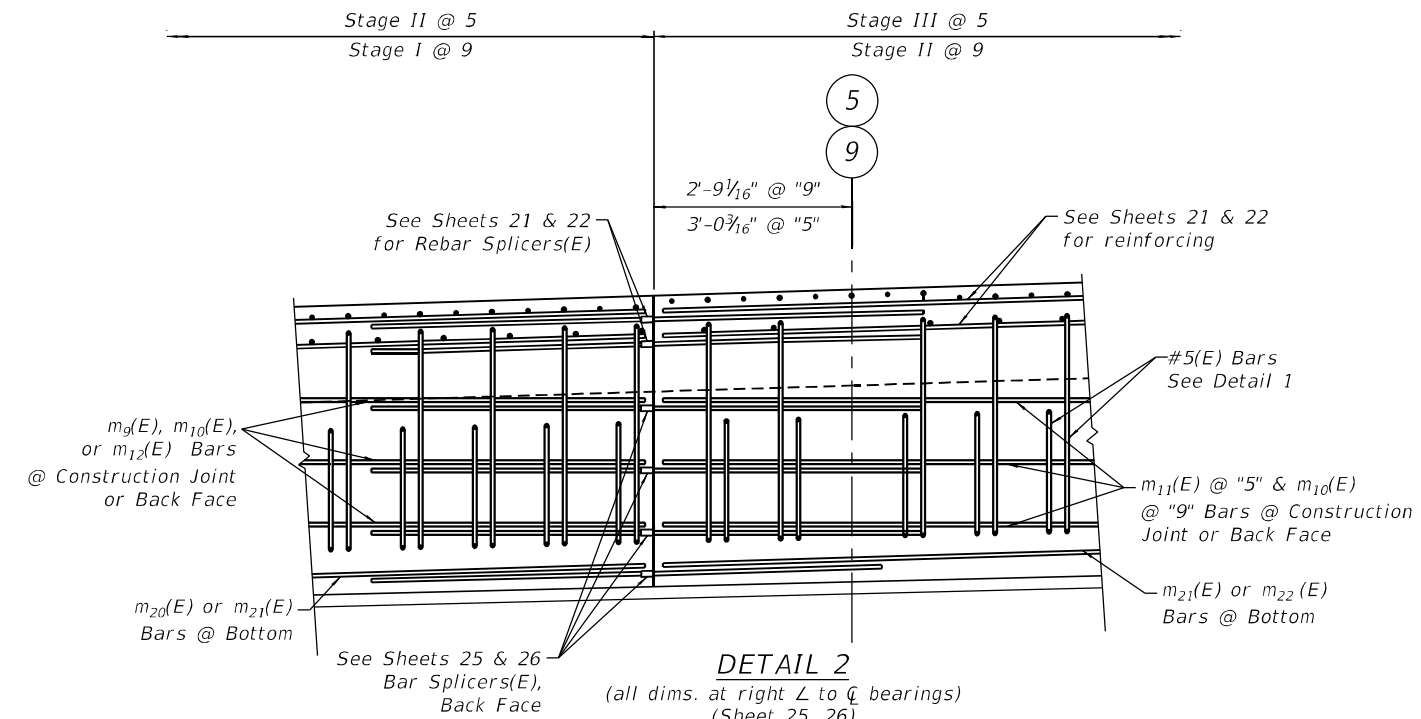
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SECTION A-A
(all dims. at right \perp to \bar{c} bearings)



DETAIL 1
(all dims. at right \perp to \bar{c} W30)



DETAIL 2
(all dims. at right \perp to \bar{c} bearings)
(Sheet 25, 26)

Notes:
See Sheet 21 of 63 for bar details and B.O.M.

FILE = \$FileA\$

THE HOH GROUP, INC.
ARCHITECTS | ENGINEERS
PN: 3730

USER NAME =	DESIGNED - RS	REVISED -
PLOT SCALE =	CHECKED - DNB	REVISED -
PLOT DATE =	DRAWN - JPM	REVISED -
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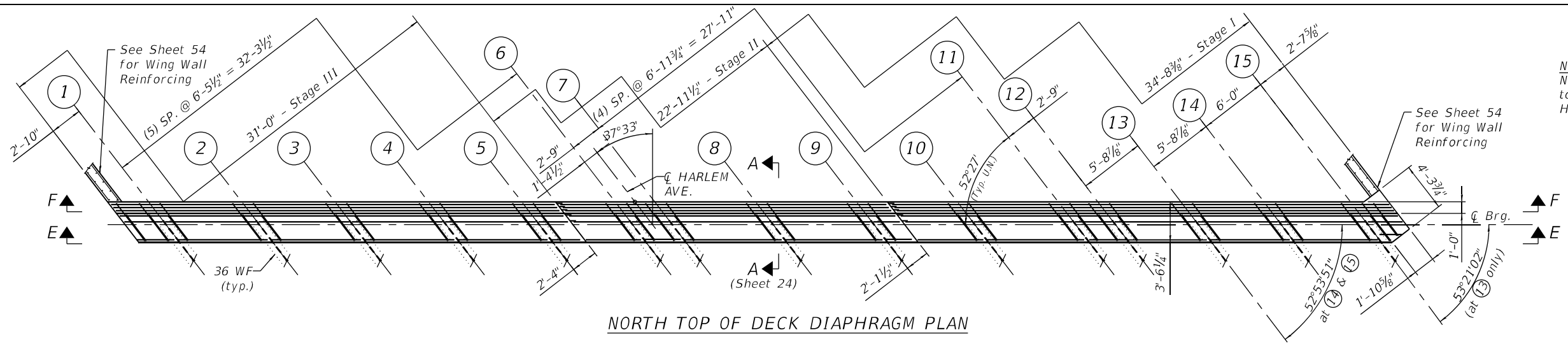
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK SECTIONS, DETAILS
STRUCTURE NO. 016-0321

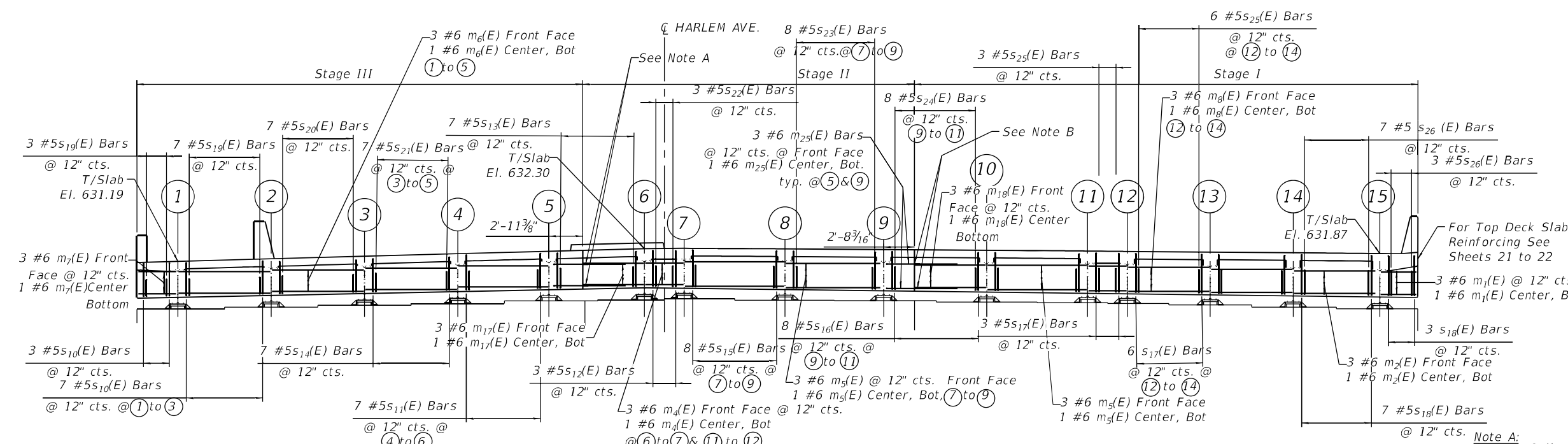
SHEET 24 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	429
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

DATE = \$Date\$

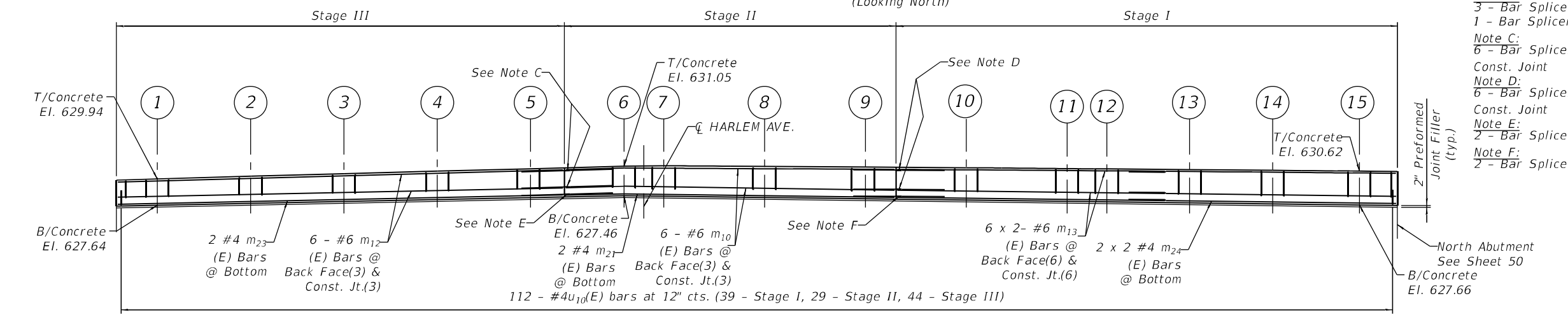


NORTH TOP OF DECK DIAPHRAGM PLAN



SECTION E-E

(Spacing for bars shall be @ Rt L to Beams) (Looking North)



SECTION F-F

(Spacing for bars shall be @ Rt L to Beams) (Looking North)

Minimum Lap Lengths			
	Bot Bars	Top Bars	
#4	2'-7"	2'-7"	CLASS B
#6	5'-10"	5'-10"	

- Note A:
3 - Bar Splicers (E) for #5m17(E) Bars @ Front Face,
1 - Bar Splicer (E) for #5m17(E) Bar @ Bottom
- Note B:
3 - Bar Splicers (E) for #5m18(E) Bars @ Front Face,
1 - Bar Splicer (E) for #5m18(E) Bar @ Bottom
- Note C:
6 - Bar Splicers (E) for #5m10(E) Bars @ Back Face & Const. Joint
- Note D:
6 - Bar Splicers (E) for #5m13(E) Bars @ Back Face & Const. Joint
- Note E:
2 - Bar Splicers (E) for #4m21(E) Bars @ Bottom
- Note F:
2 - Bar Splicers (E) for #4m24(E) Bars @ Bottom

Bars indicated thus 3 x 5 - #5 etc. indicates 3 lines of bars with 5 lengths per line. Bars #5s10(E), #5s11(E), #5s12(E), & #5s14(E) to #5s26(E), shall be placed parallel to beams and spaced at right angles to beams.

FILE = sFilea5

THE HOH GROUP, INC.
ARCHITECTS | ENGINEERS
PN: 3730

USER NAME =	DESIGNED - RS	REVISED -
PLOT SCALE =	CHECKED - DNB	REVISED -
PLOT DATE =	DRAWN - JPM	REVISED -
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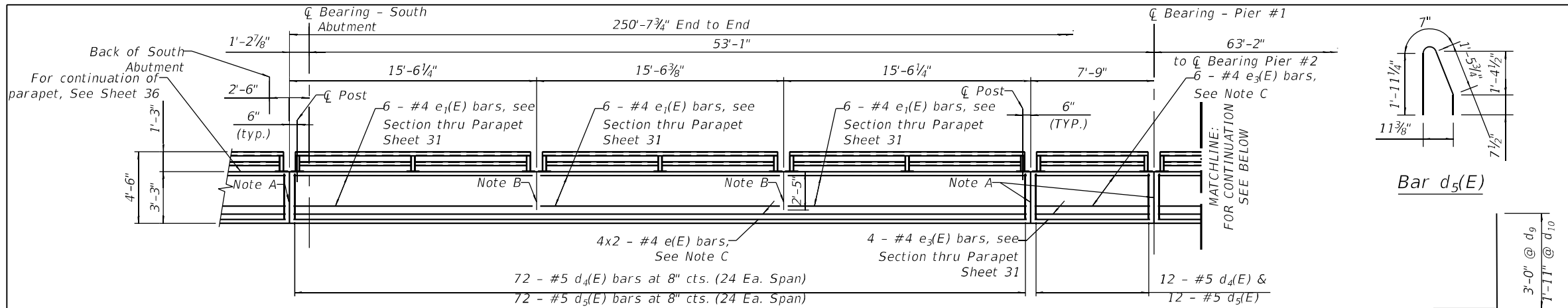
STATE OF ILLINOIS
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DIAPHRAGM DETAILS SHEET 2
STRUCTURE NO. 016-0321

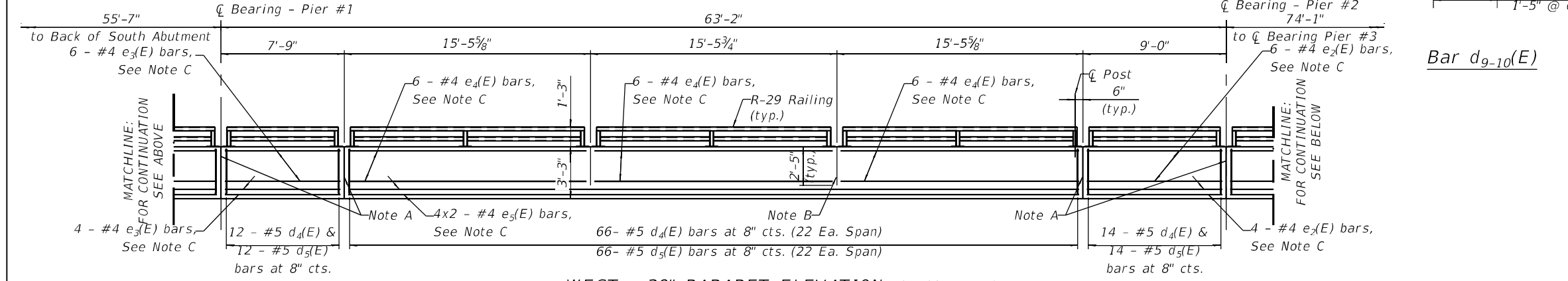
SHEET 26 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	431
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

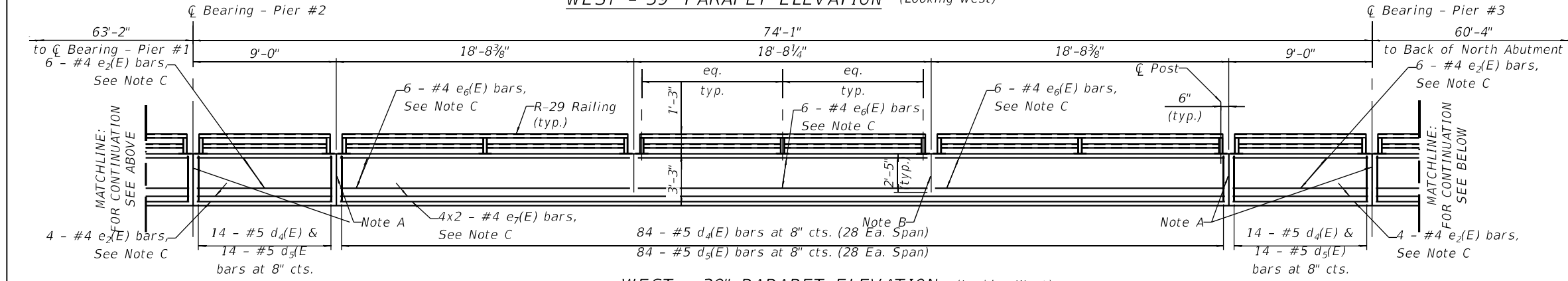
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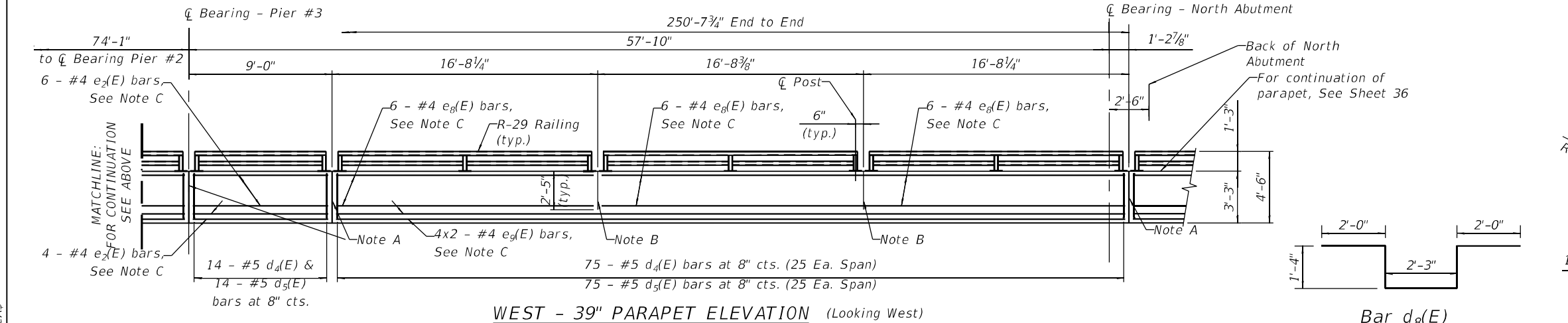
WEST - 39" PARAPET ELEVATION (Looking West)



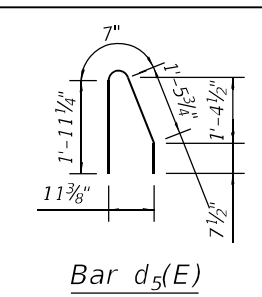
WEST - 39" PARAPET ELEVATION (Looking West)



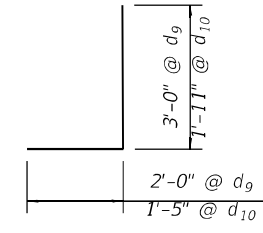
WEST - 39" PARAPET ELEVATION (Looking West)



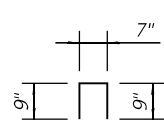
WEST - 39" PARAPET ELEVATION (Looking West)



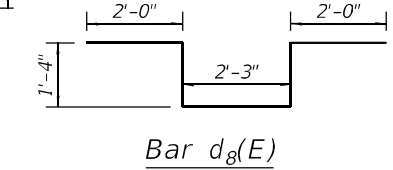
Bar d₅(E)



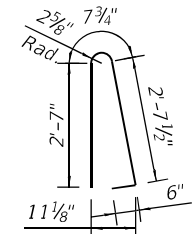
Bar d₉₋₁₀(E)



Bar d₆(E)



Bar d₈(E)



Bar d₄(E)

CONCRETE PARAPETS - BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d ₄ (E)	665	#5	6'-5"	U
d ₅ (E)	293	#6	4'-8"	U
d ₆ (E)	252	#5	2'-1"	U
d ₈ (E)	12	#5	8'-11"	U
d ₉ (E)	3	#5	4'-10"	U
d ₁₀ (E)	3	#5	3'-4"	U
e(E)	8	#4	24'-5"	—
e ₁ (E)	42	#4	15'-2"	—
e ₂ (E)	94	#4	8'-8"	—
e ₃ (E)	56	#4	7'-5"	—
e ₄ (E)	42	#4	15'-1"	—
e ₅ (E)	8	#4	24'-6"	—
e ₆ (E)	42	#4	18'-4"	—
e ₇ (E)	8	#4	29'-2"	—
e ₈ (E)	18	#4	16'-4"	—
e ₉ (E)	8	#4	25'-7"	—
e ₁₀ (E)	6	#4	10'-4"	—
e ₁₁ (E)	12	#4	17'-3"	—
e ₁₂ (E)	8	#4	24'-1"	—
e ₁₃ (E)	18	#4	14'-10"	—
e ₁₄ (E)	8	#4	24'-0"	—
e ₁₅ (E)	18	#4	18'-0"	—
e ₁₆ (E)	8	#4	28'-9"	—
e ₁₇ (E)	18	#4	16'-10"	—
e ₁₈ (E)	8	#4	25'-10"	—
e ₁₉ (E)	8	#4	11'-4"	—
e ₂₀ (E)	16	#4	18'-10"	—
Concrete Superstructure		Cu. Yd.	83.8	
Reinforcement Bars, Epoxy Coated		Pound	11,520	
Protective Coat		Sq. Yd.	460	

(See Sheets 27 TO 29)

Minimum Lap Lengths for Concrete Parapet Reinforcement			
	Bot Bars	Top Bars	CLASS B
#4	2'-7"	2'-7"	
#5	3'-9"	3'-2"	
#6	5'-5"	3'-10"	

- Note A: Full Height Joint w/ Aluminum R
 - Note B: 2'-5" High Joint w/ Cork Joint Filler ONLY
 - Note C: See Section thru Parapets Sheet 30
- For Joint Detail See Sheet 30
For Railing Details See Sheet 39

See Sheet 24 of 63 for superstructure details. Bars indicated thus 4 x 2 - #5 etc. indicates 4 lines of bars with 2 lengths per line.

FILE = \$FileA\$

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PN: 3730

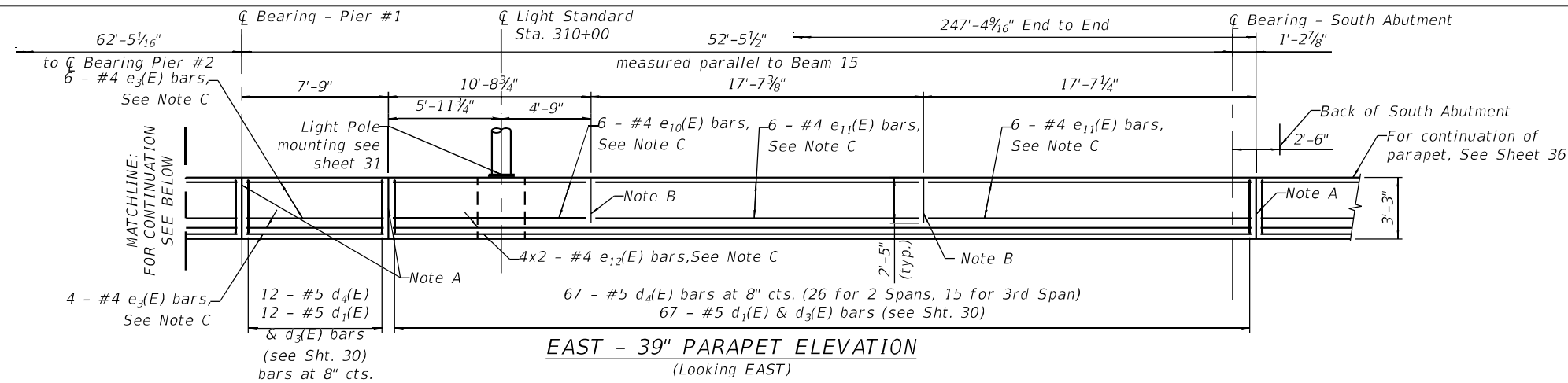
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PLOT DATE =	DRAWN - JPM	REVISED -
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STATE OF ILLINOIS
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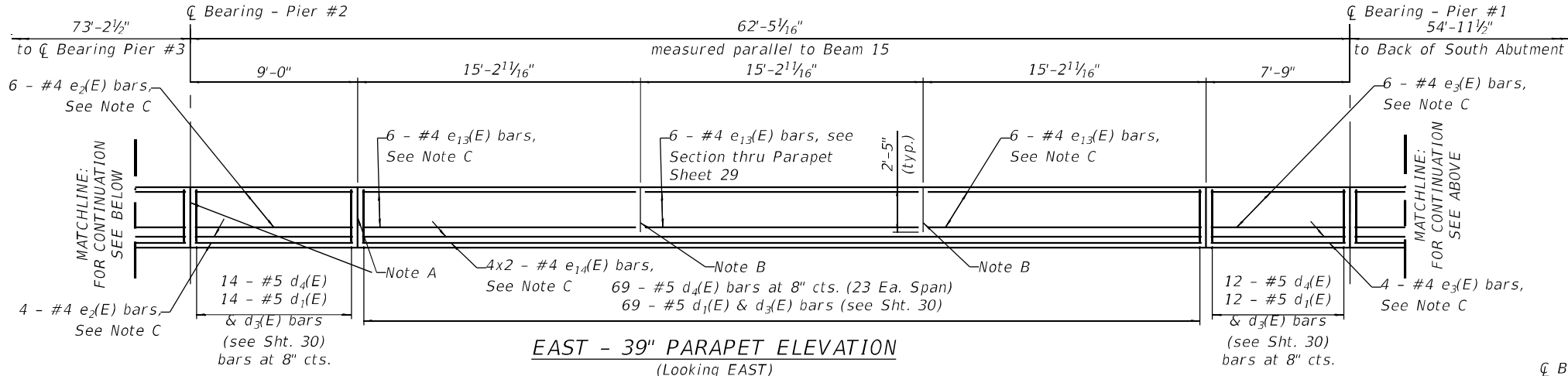
SUPERSTRUCTURE DETAILS SHEET 1
STRUCTURE NO. 016-0321
SHEET 27 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	432
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

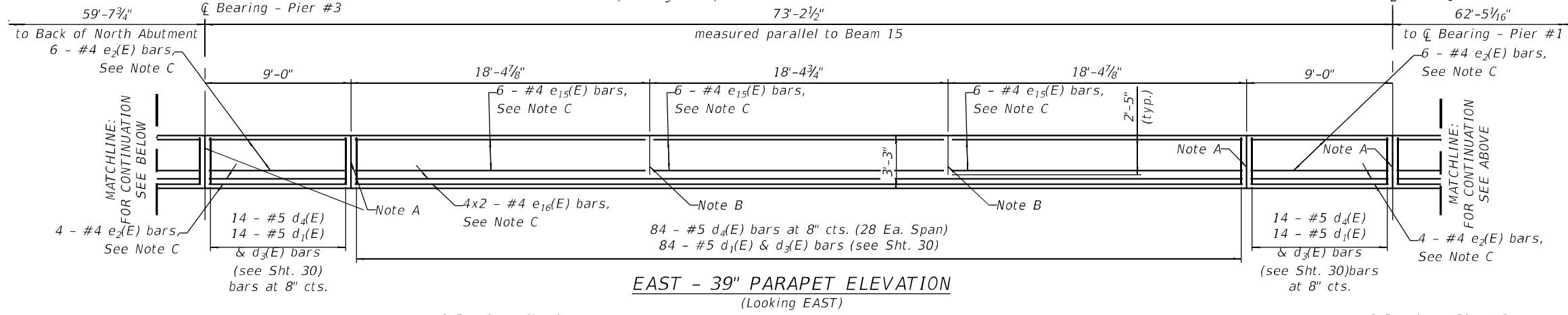
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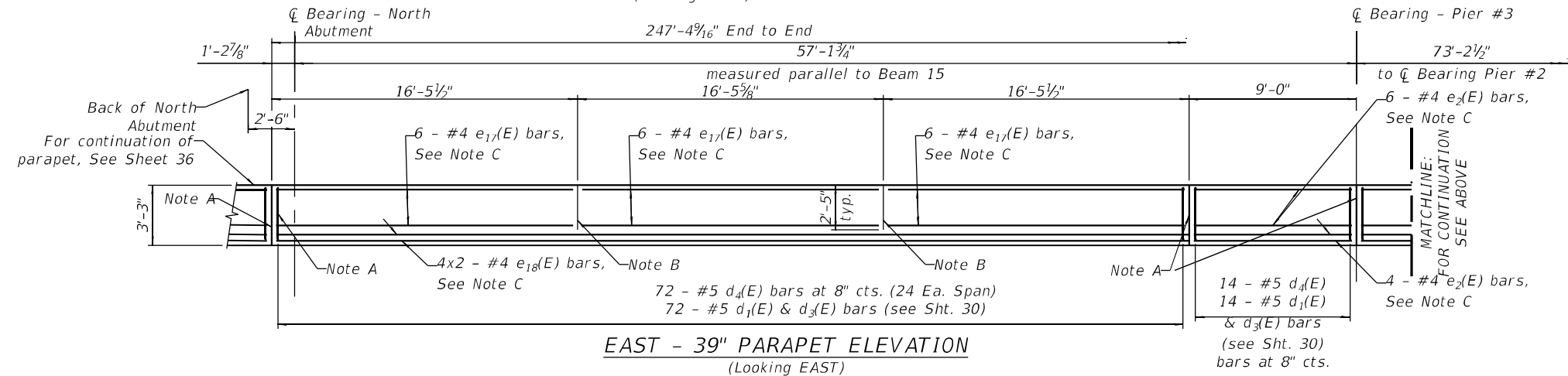
EAST - 39" PARAPET ELEVATION
(Looking EAST)



EAST - 39" PARAPET ELEVATION
(Looking EAST)



EAST - 39" PARAPET ELEVATION
(Looking EAST)



EAST - 39" PARAPET ELEVATION
(Looking EAST)

Note A:
Full Height Joint w/ Aluminum \bar{r}

Note B:
2'-5" High Joint w/ Cork Joint Filler ONLY

Note C:
See Section thru Parapets Sheet 30

For Joint Detail See Sheet 30

See Sheet 24 of 63 for superstructure details. Bars indicated thus 4 x 2 - #5 etc. indicates 4 lines of bars with 2 lengths per line.

FILE = \$Filea\$

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USER NAME =	DESIGNED - RS	REVISED -
PLOT SCALE =	CHECKED - DNB	REVISED -
PLOT DATE =	DRAWN - JPM	REVISED -
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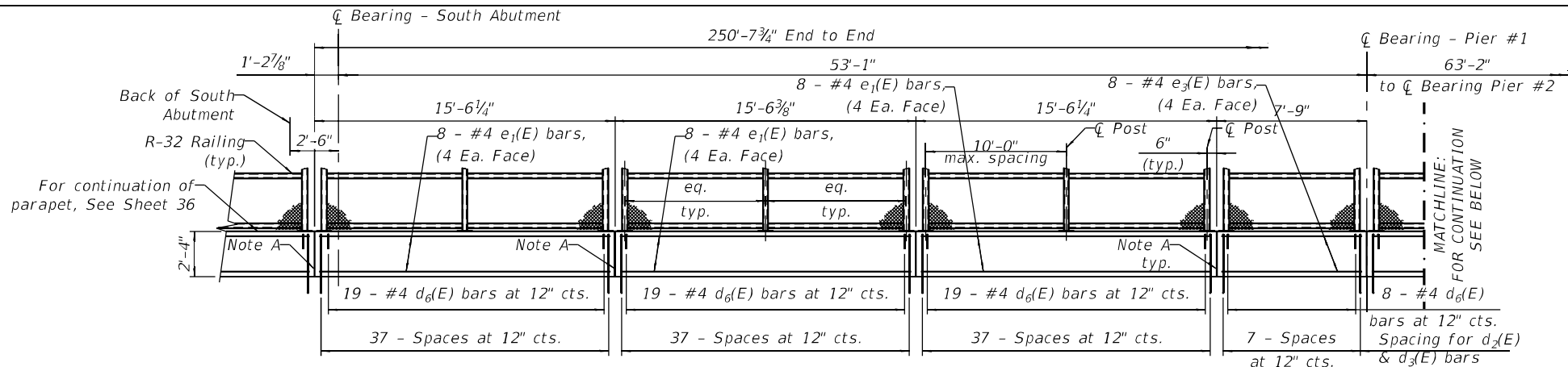
STATE OF ILLINOIS
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SUPERSTRUCTURE DETAILS SHEET 2
STRUCTURE NO. 016-0321

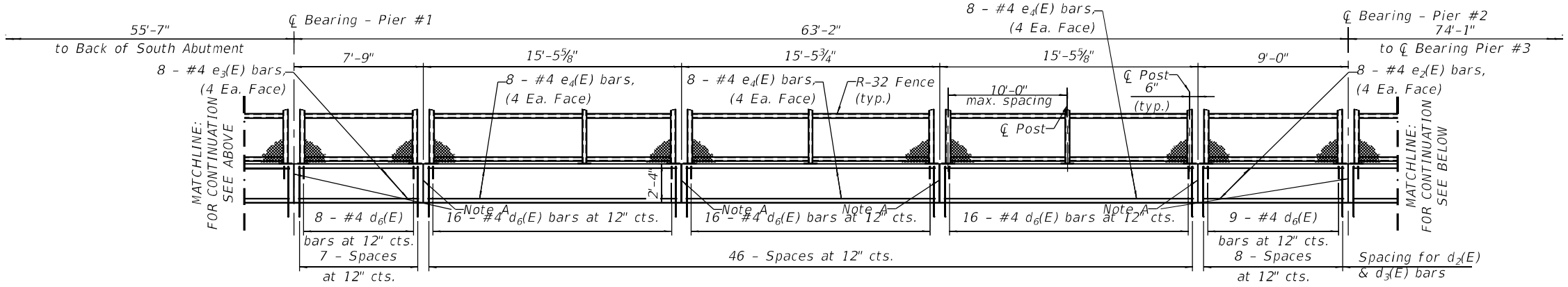
SHEET 28 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	433
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

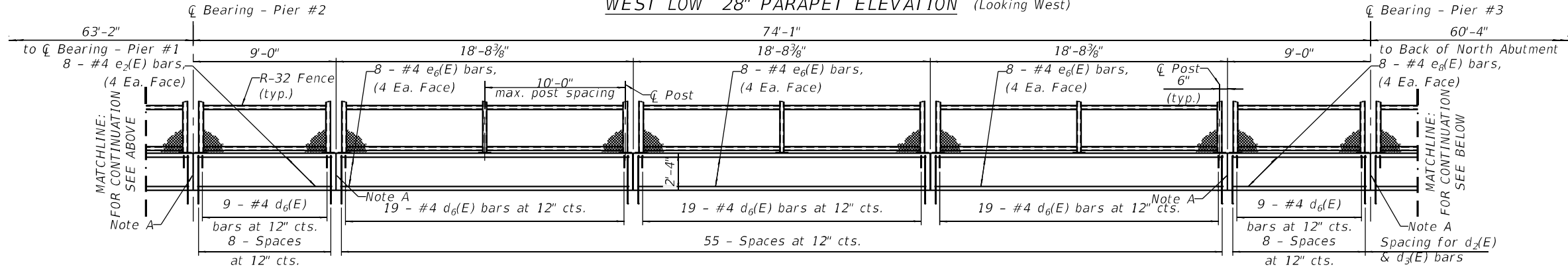
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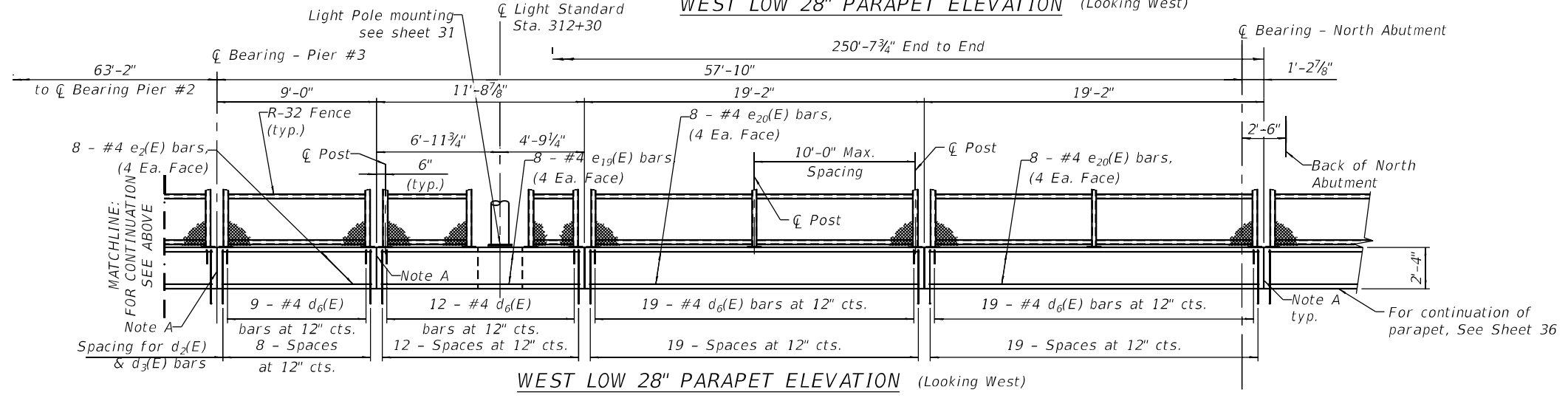
WEST LOW 28" PARAPET ELEVATION
(Looking West)



WEST LOW 28" PARAPET ELEVATION (Looking West)



WEST LOW 28" PARAPET ELEVATION (Looking West)



WEST LOW 28" PARAPET ELEVATION (Looking West)

Note A:
Full Height Joint w/ Aluminum R
For Joint Detail See Sheet 30
For Railing Details See Sheet 38

See Sheet 24 of 63 for superstructure details. Bars indicated thus 4 x 2 - #5 etc. indicates 4 lines of bars with 2 lengths per line.

FILE = \$FileAs

THE HOH GROUP, INC.
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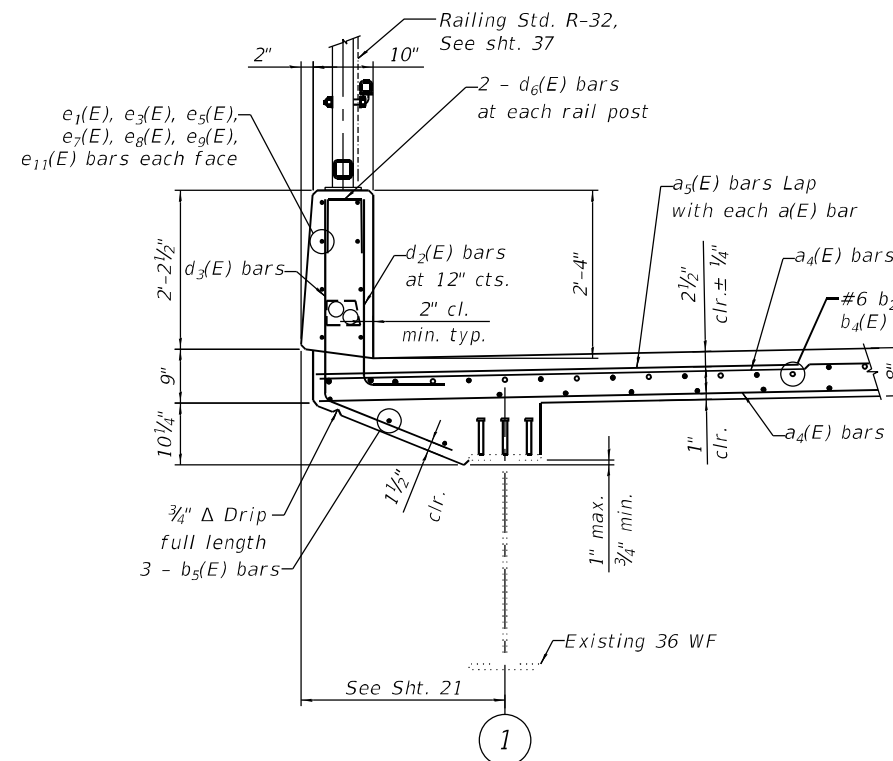
USER NAME =	DESIGNED - RS	REVISED -
PLOT SCALE =	CHECKED - DNB	REVISED -
PLOT DATE =	DRAWN - JPM	REVISED -
	CHECKED - DNB	REVISED -

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SUPERSTRUCTURE DETAILS SHEET 3
STRUCTURE NO. 016-0321
SHEET 29 OF 63 SHEETS

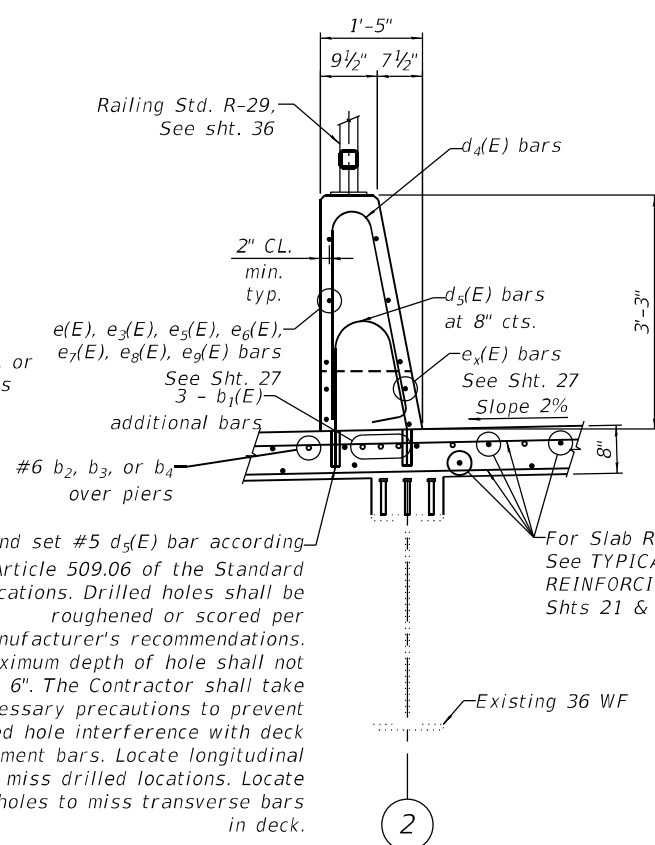
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	434
CONTRACT NO. 60R49				
		ILLINOIS	FED. AID PROJECT	

DATE = \$Date\$

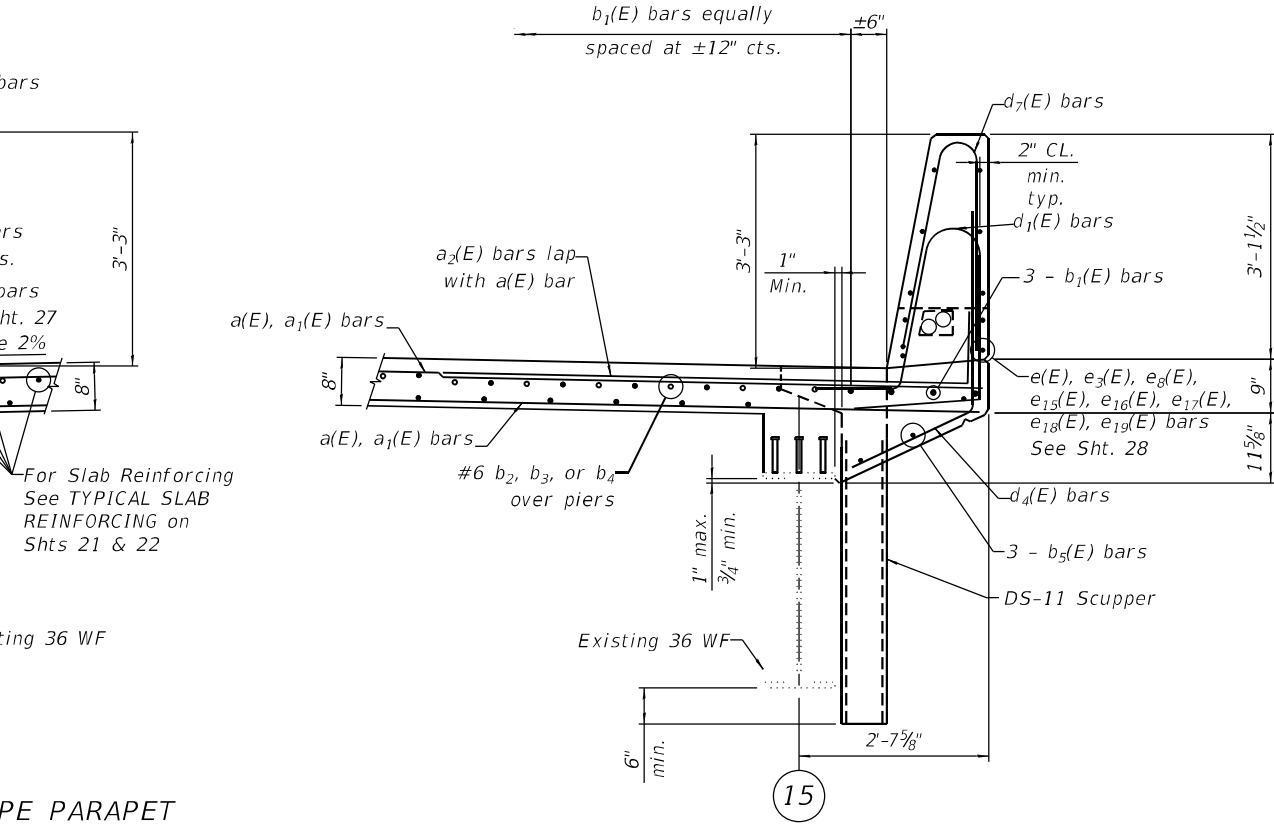


WEST LOW 28" PARAPET SECTION @ BRIDGE DECK

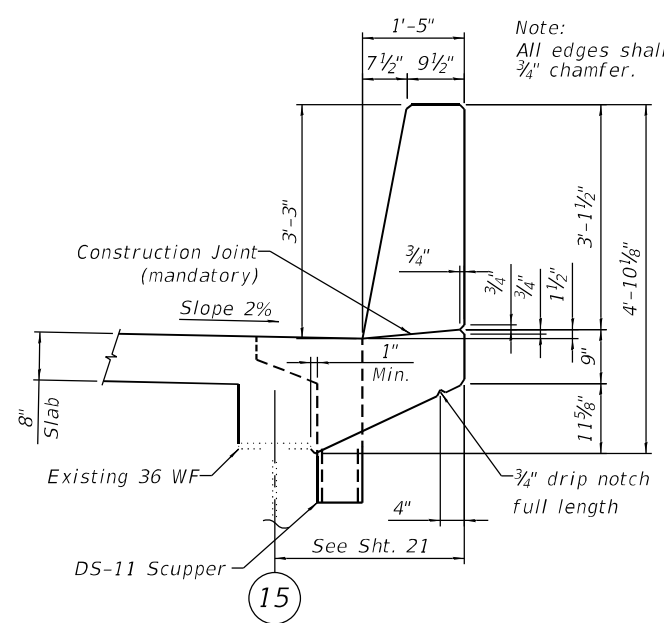
Drill and set #5 $d_5(E)$ bar according to Article 509.06 of the Standard Specifications. Drilled holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 6". The Contractor shall take all necessary precautions to prevent drilled hole interference with deck reinforcement bars. Locate longitudinal bars to miss drilled locations. Locate drilled holes to miss transverse bars in deck.



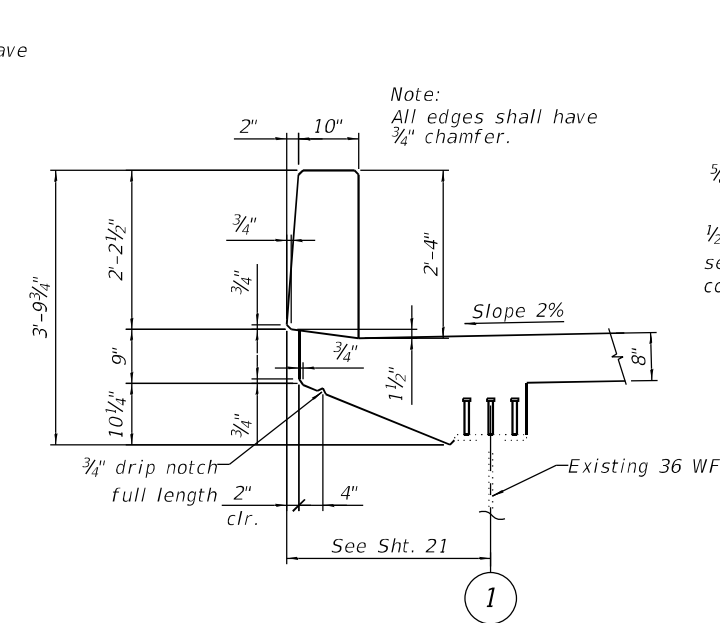
WEST 39" CONSTANT SLOPE PARAPET SECTION @ BRIDGE DECK



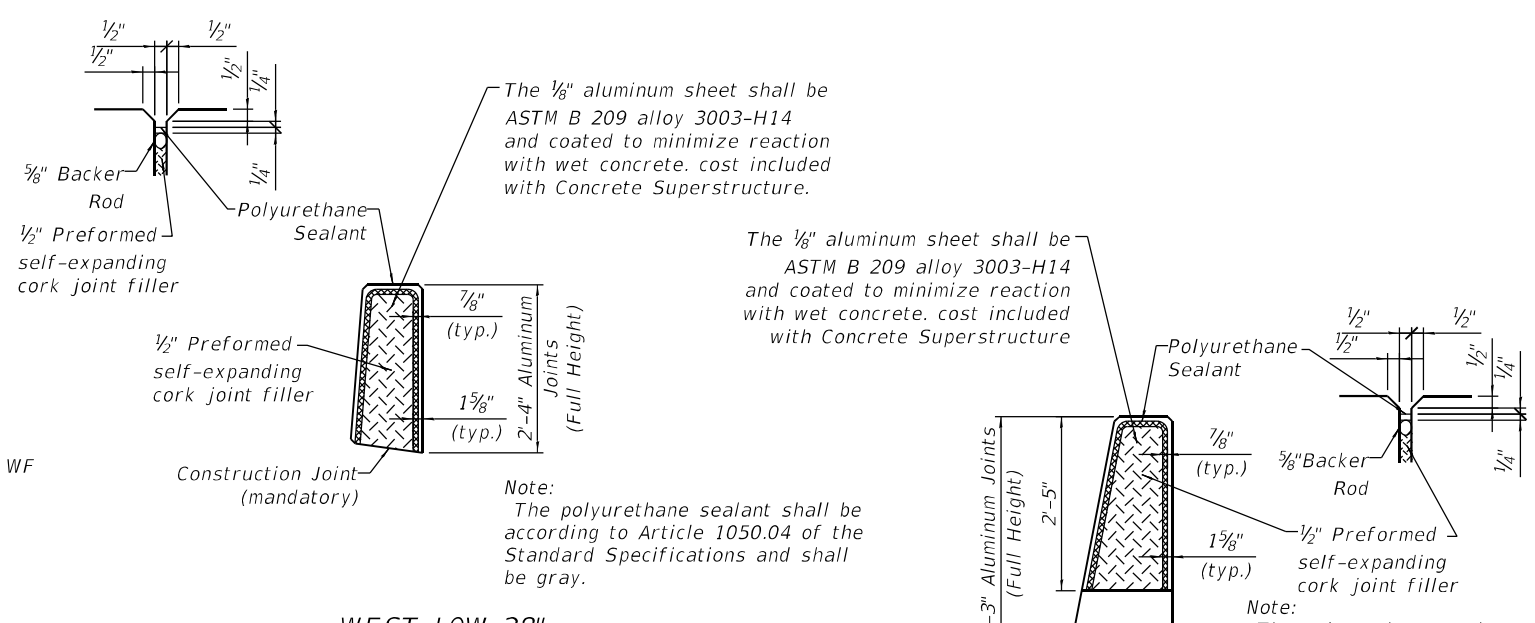
EAST 39" CONSTANT SLOPE PARAPET SECTION @ BRIDGE DECK



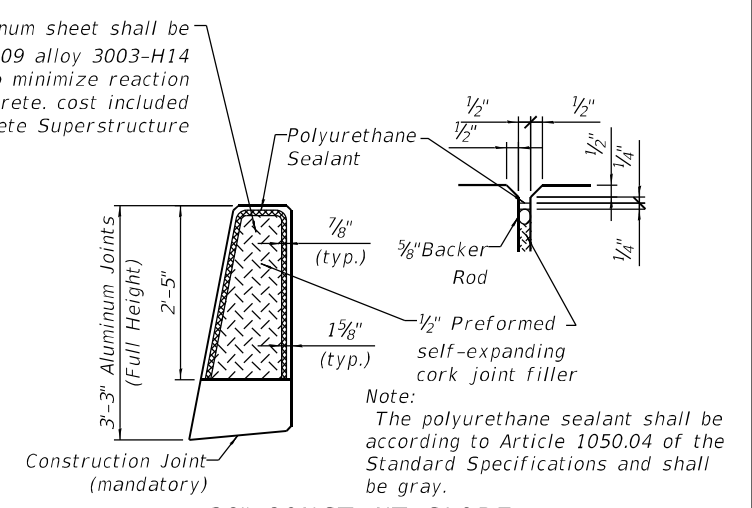
EAST 39" CONSTANT SLOPE EAST PARAPET CONFIGURATION



WEST LOW 28" PARAPET CONFIGURATION



WEST LOW 28" PARAPET JOINT DETAIL



39" CONSTANT SLOPE PARAPET JOINT DETAIL

FILE = \$File\$

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PLOT SCALE =	CHECKED - DNB	REVISED -
PN: 3730	DRAWN - JPM	REVISED -
PLOT DATE =	CHECKED - DNB	REVISED -

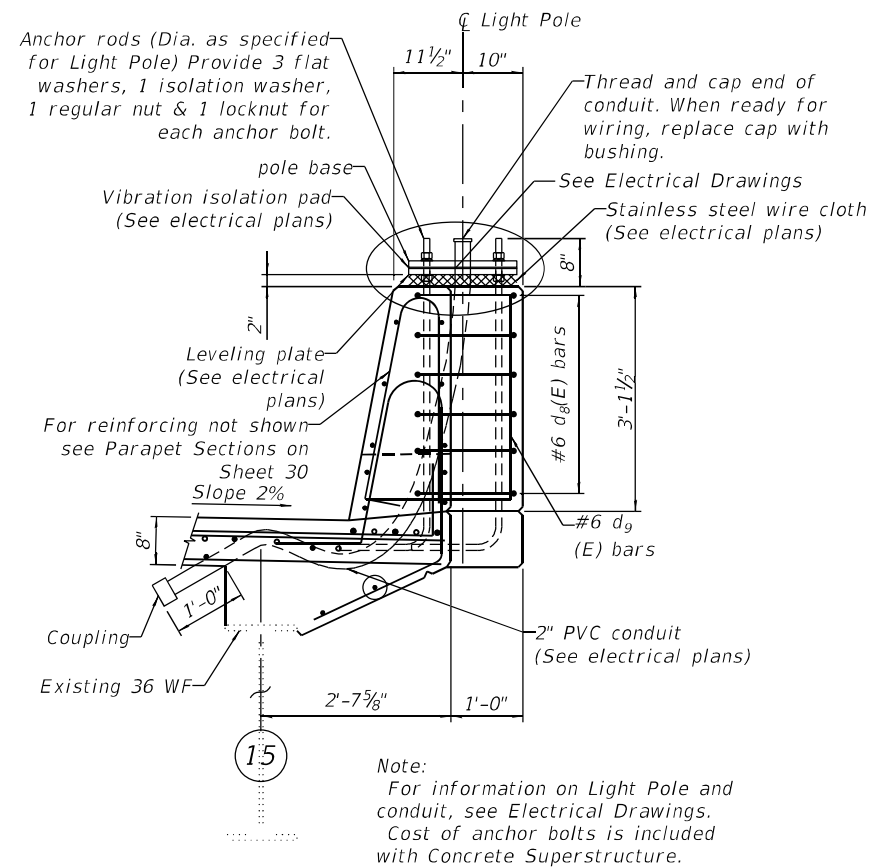
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE DETAILS SHEET 4
STRUCTURE NO. 016-0321**

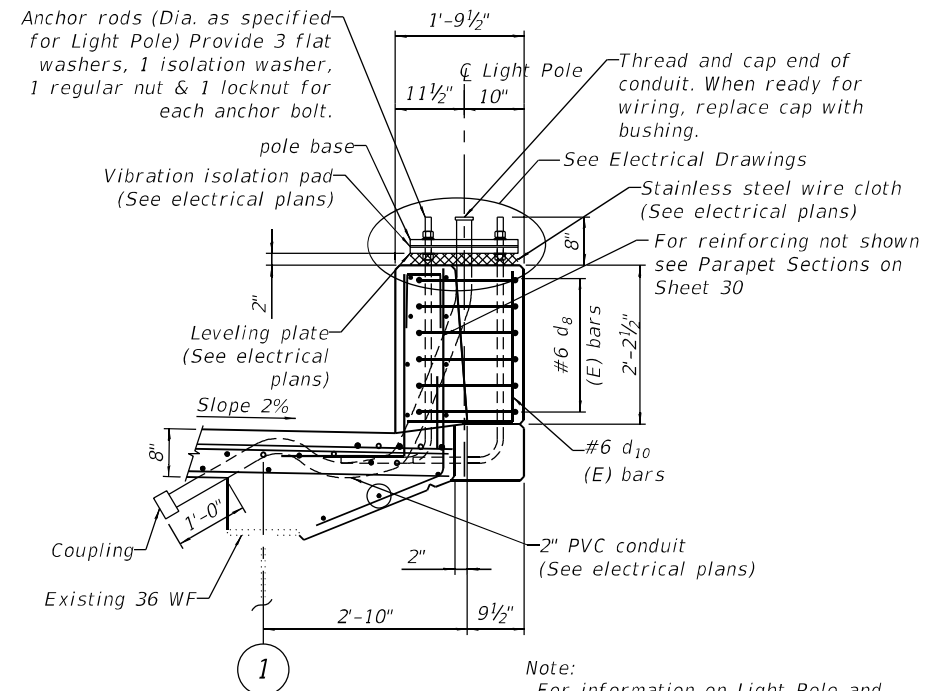
SHEET 30 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	435
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

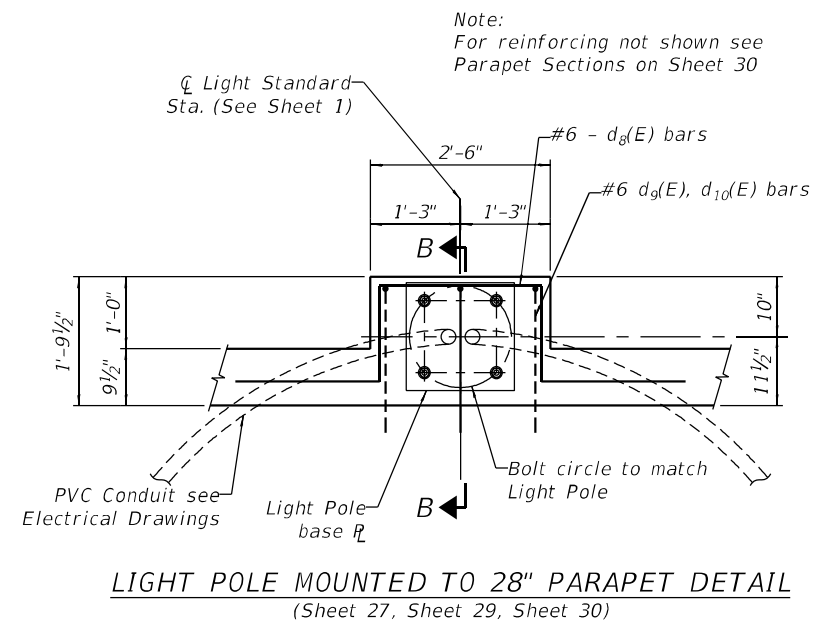
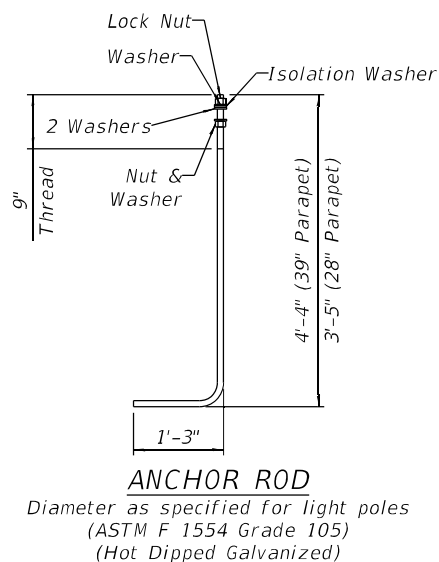
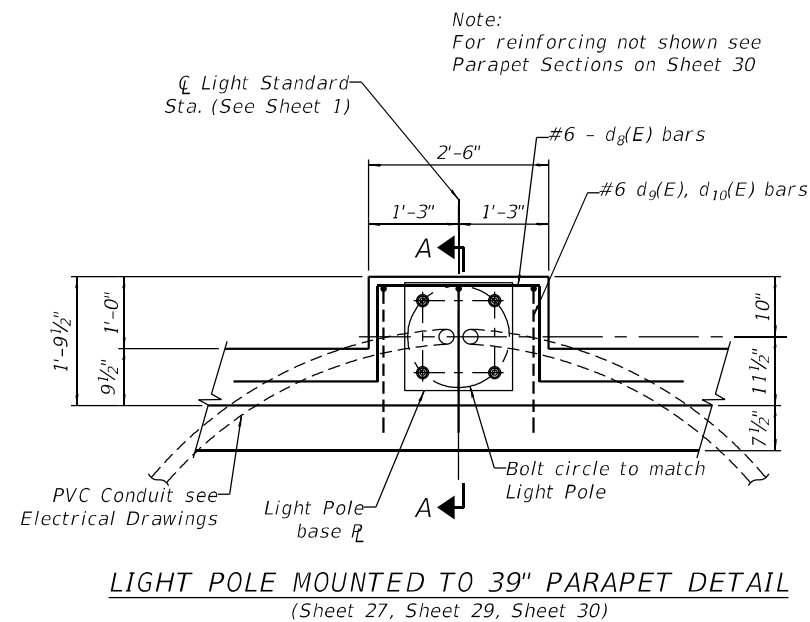
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SECTION A-A
LIGHT POLE MOUNTED TO 39"
CONSTANT SLOPE PARAPET SECTION
(Sheet 27, Sheet 29, Sheet 30)



SECTION B-B
LIGHT POLE MOUNTED TO
LOW 28" PARAPET SECTION
(Sheet 27, Sheet 29, Sheet 30)



FILE = sFilea4\$

THE HOH GROUP, INC.
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USER NAME =	RS	DESIGNED -	REVISED -
	DNB	CHECKED -	REVISED -
PLOT SCALE =		DRAWN - JPM	REVISED -
		CHECKED -	REVISED -
PN: 3730	DNB		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS SHEET 5
STRUCTURE NO. 016-0321

SHEET 31 OF 63 SHEETS

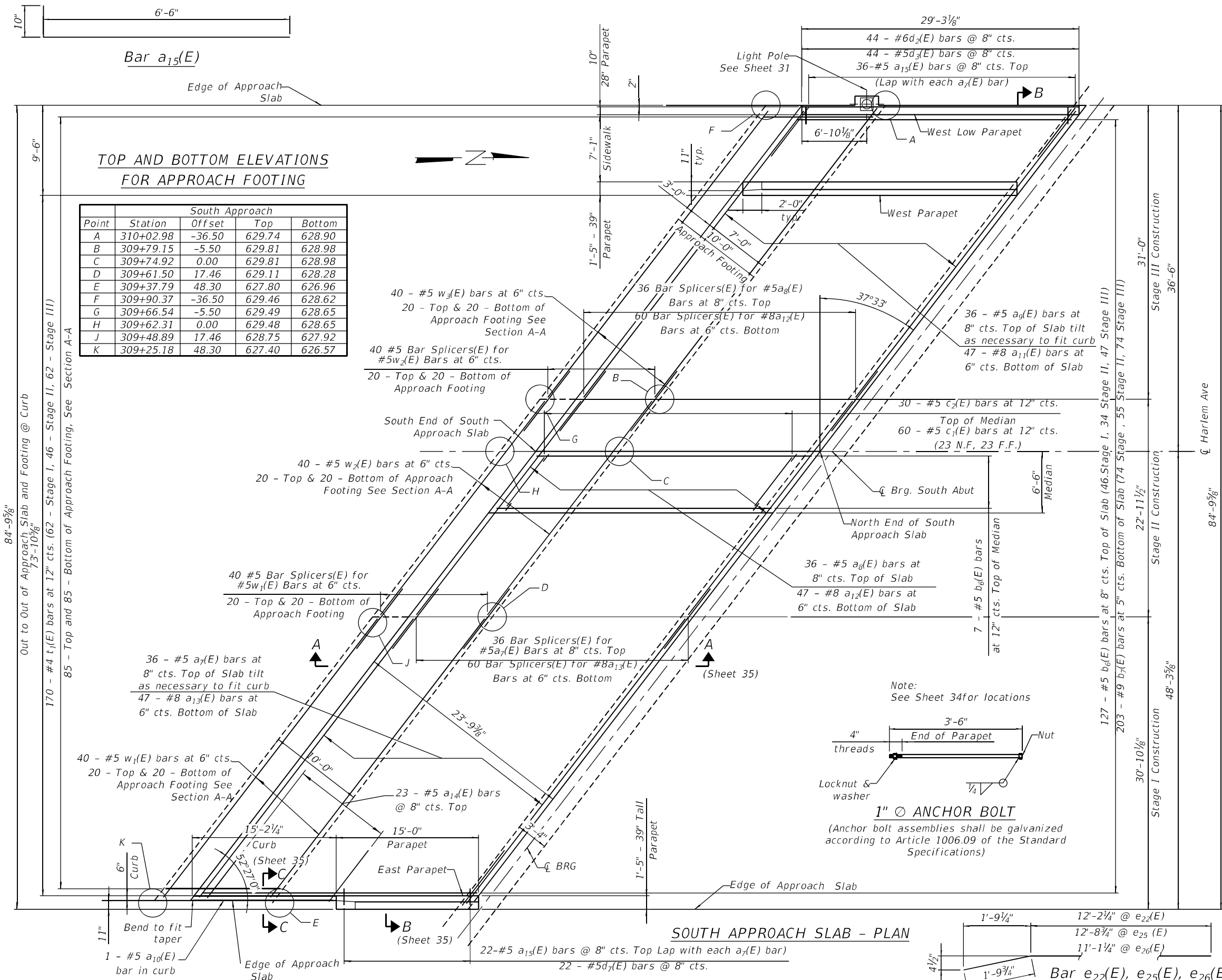
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	436
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

DATE = sDate\$

BILL OF MATERIAL

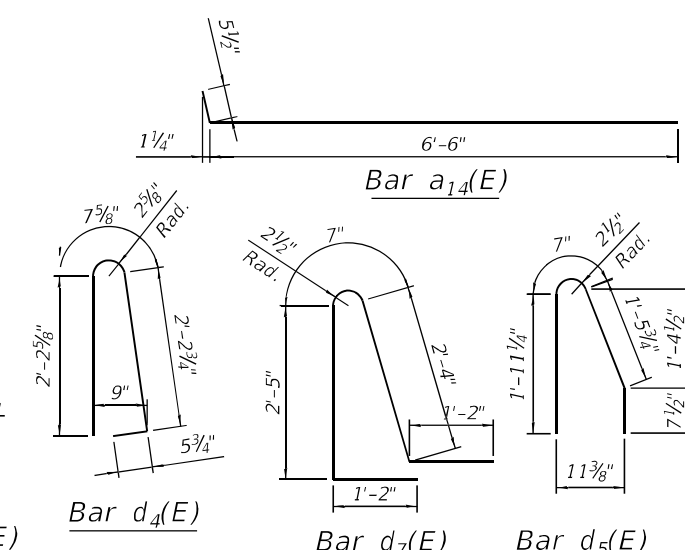
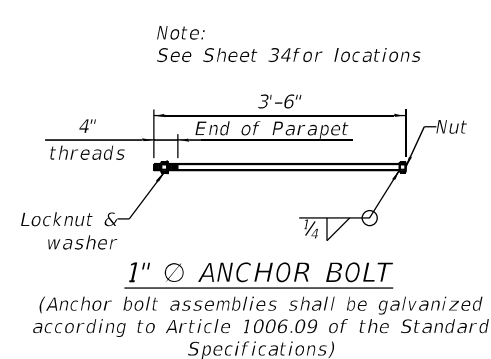
Bar	No.	Size	Length	Shape
a ₇ (E)	36	#5	38'-7"	
a ₈ (E)	36	#5	28'-8"	
a ₉ (E)	36	#5	38'-10"	
a ₁₀ (E)	1	#5	15'-0"	
a ₁₁ (E)	47	#8	38'-10"	
a ₁₂ (E)	47	#8	28'-8"	
a ₁₃ (E)	47	#8	38'-7"	
a ₁₄ (E)	23	#5	7'-0"	
a ₁₅ (E)	58	#5	7'-4"	
b ₆ (E)	127	#5	29'-6"	
b ₇ (E)	203	#9	29'-6"	
c ₁ (E)	60	#5	1'-2"	
c ₂ (E)	30	#5	7'-10"	
d ₃ (E)	44	#6	3'-6"	
d ₄ (E)	44	#5	4'-11"	
d ₅ (E)	66	#5	7'-0"	
d ₆ (E)	44	#5	4'-8"	
d ₇ (E)	44	#4	2'-1"	
d ₈ (E)	22	#5	7'-8"	
d ₉ (E)	6	#6	8'-11"	
d ₁₀ (E)	3	#6	3'-4"	
e ₁ (E)	10	#4	14'-0"	
e ₁₁ (E)	4	#4	14'-8"	
e ₂₂ (E)	2	#4	14'-6"	
e ₂₃ (E)	16	#4	14'-2"	
e ₂₄ (E)	4	#4	28'-6"	
e ₂₅ (E)	2	#4	14'-7"	
f ₁ (E)	170	#4	12'-3"	
w ₁ (E)	40	#5	37'-6"	
w ₂ (E)	40	#5	28'-8"	
w ₃ (E)	40	#5	38'-10"	
Concrete Superstructure, (Approach Slab)			Cu. Yd.	117.3
Concrete Structures			Cu. Yd.	32.7
Concrete Superstructure			Cu. Yd.	8.0
Reinforcement Bars, Epoxy Coated			Pound	50,170
Protective Coat			Sq. Yd.	320

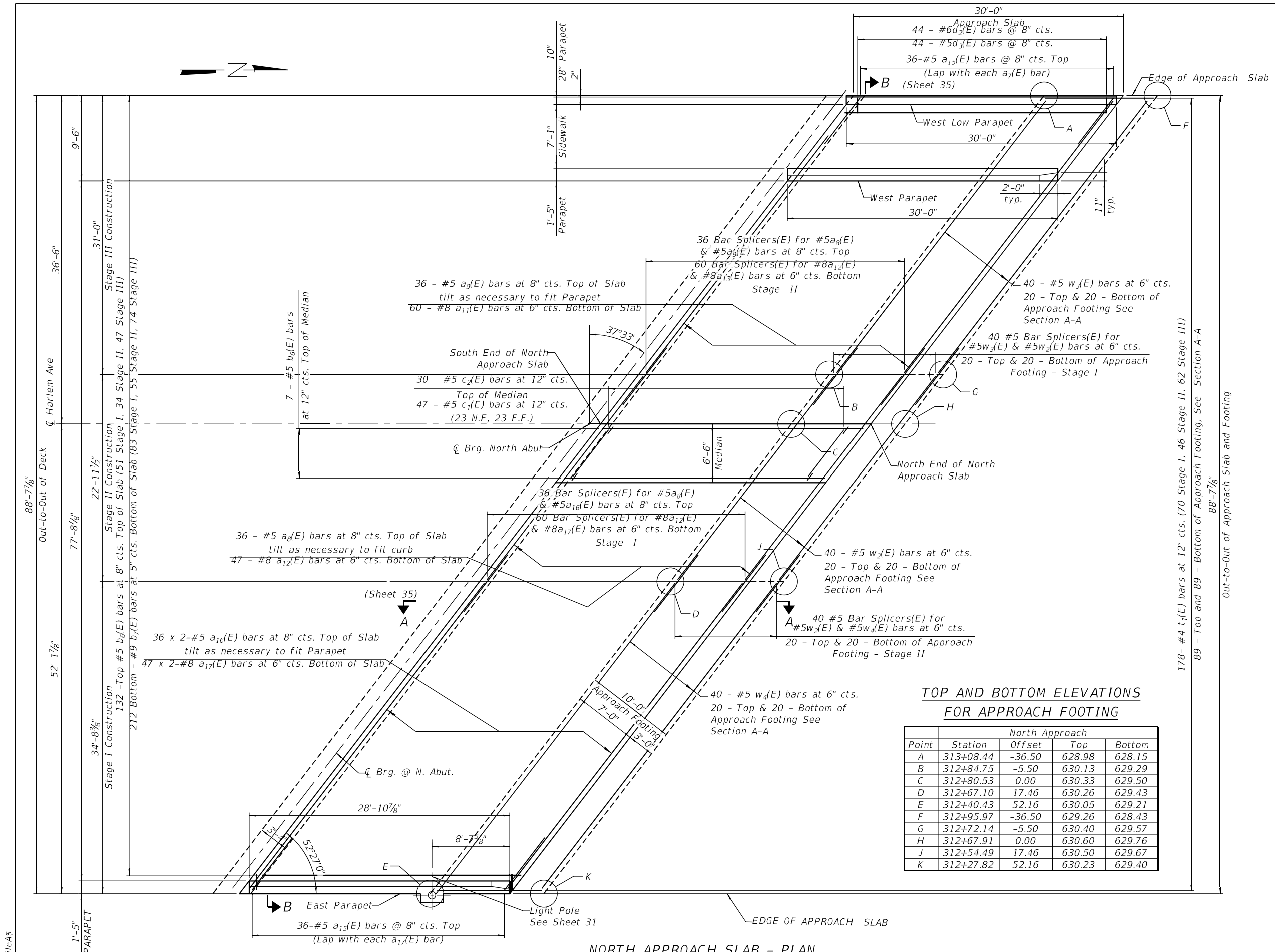
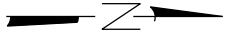
Note:
See Sheet 21 of 63 for c₁ rebar bending diagram



TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

Point	Station	Offset	Top	Bottom
A	310+02.98	-36.50	629.74	628.90
B	309+79.15	-5.50	629.81	628.98
C	309+74.92	0.00	629.81	628.98
D	309+61.50	17.46	629.11	628.28
E	309+37.79	48.30	627.80	626.96
F	309+90.37	-36.50	629.46	628.62
G	309+66.54	-5.50	629.49	628.65
H	309+62.31	0.00	629.48	628.65
J	309+48.89	17.46	628.75	627.92
K	309+25.18	48.30	627.40	626.57





BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₈ (E)	36	#5	28'-8"	—
a ₉ (E)	36	#5	38'-10"	—
a ₁₁ (E)	47	#8	38'-10"	—
a ₁₂ (E)	47	#8	28'-8"	—
a ₁₅ (E)	72	#5	7'-4"	—
a ₁₆ (E)	72	#5	23'-5"	—
a ₁₇ (E)	94	#8	24'-2"	—
b ₆ (E)	132	#5	29'-6"	—
b ₇ (E)	212	#9	29'-6"	—
c ₁ (E)	60	#5	1'-2"	J
c ₂ (E)	30	#5	6'-0"	—
d ₂ (E)	44	#6	3'-6"	J
d ₃ (E)	44	#5	4'-11"	J
d ₄ (E)	87	#5	7'-0"	N
d ₅ (E)	44	#5	4'-8"	N
d ₆ (E)	44	#4	2'-1"	n
d ₇ (E)	43	#5	7'-8"	U
d ₈ (E)	6	#6	8'-11"	U
d ₉ (E)	3	#6	5'-0"	J
e ₆ (E)	10	#4	15'-0"	—
e ₁₂ (E)	26	#4	14'-6"	—
e ₂₅ (E)	2	#4	14'-7"	—
e ₂₆ (E)	2	#4	12'-11"	—
e ₂₇ (E)	4	#4	29'-6"	—
e ₂₈ (E)	8	#4	12'-11"	—
t ₁ (E)	178	#4	9'-6"	—
w ₂ (E)	40	#5	28'-8"	—
w ₃ (E)	40	#5	38'-10"	—
w ₄ (E)	40	#5	43'-5"	—
Concrete Superstructure, (Approach Slab)		Cu. Yd.	123.3	
Concrete Structures		Cu. Yd.	32.7	
Concrete Superstructure		Cu. Yd.	10.1	
Reinforcement Bars, Epoxy Coated		Pound	52,710	
Protective Coat		Sq. Yd.	330	

Note: See Sheet 21 of 63 for c₁ rebar bending diagram

Minimum Lap Lengths for 16" Approach Slab			
	Bot Bars	Top Bars	CLASS B
#5	3'-2"	3'-7"	CLASS B
#8	5'-1"	5'-9"	

Superstructure Concrete f_c'=4000psi

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

Point	North Approach			
	Station	Offset	Top	Bottom
A	313+08.44	-36.50	628.98	628.15
B	312+84.75	-5.50	630.13	629.29
C	312+80.53	0.00	630.33	629.50
D	312+67.10	17.46	630.26	629.43
E	312+40.43	52.16	630.05	629.21
F	312+95.97	-36.50	629.26	628.43
G	312+72.14	-5.50	630.40	629.57
H	312+67.91	0.00	630.60	629.76
J	312+54.49	17.46	630.50	629.67
K	312+27.82	52.16	630.23	629.40

NORTH APPROACH SLAB - PLAN

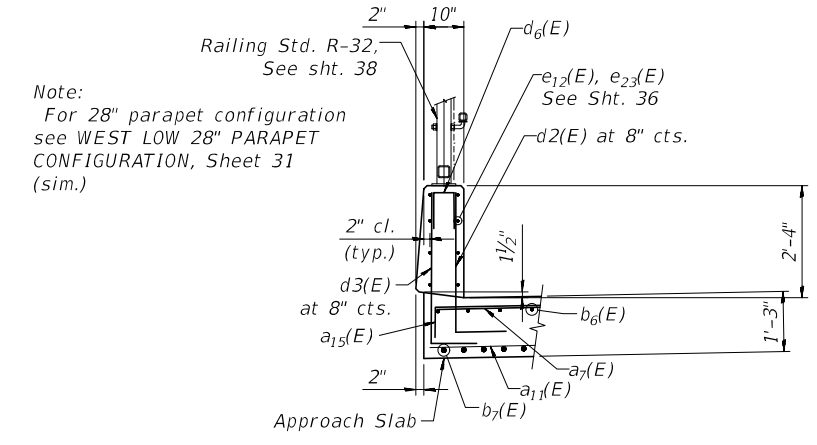
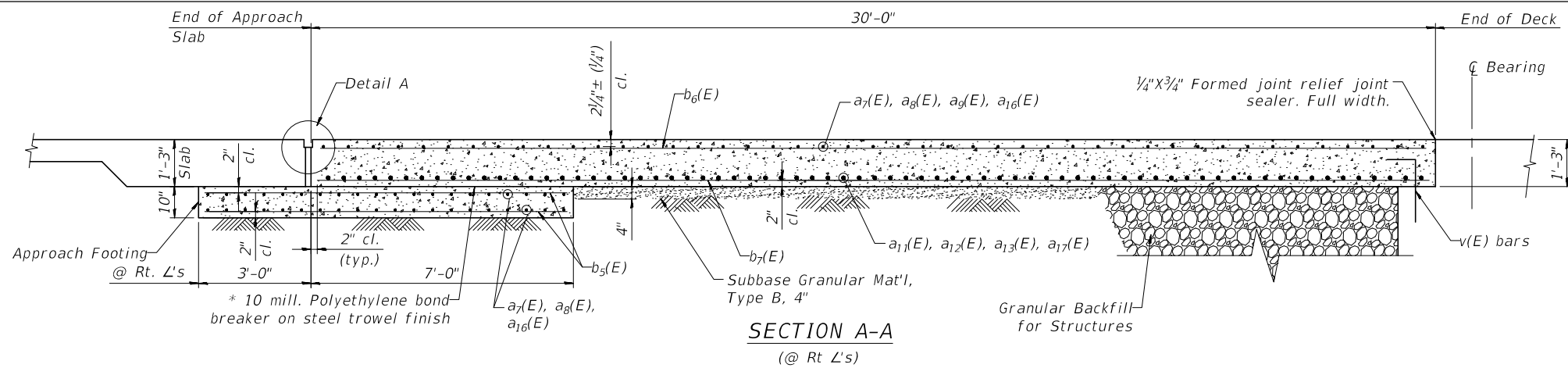
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THE HOH GROUP, INC.
ARCHITECTS | ENGINEERS
 PN: 3730
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PLOT SCALE =	CHECKED - DNB	REVISED -
PLOT DATE =	DRAWN - JPM	REVISED -
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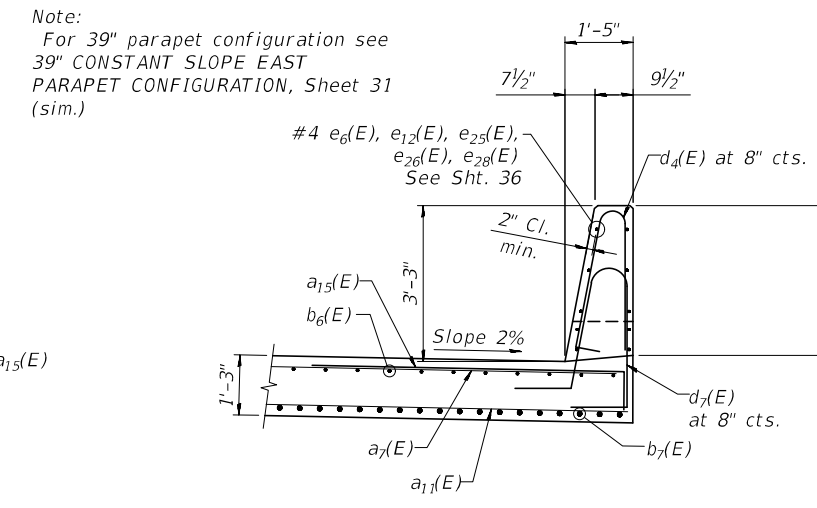
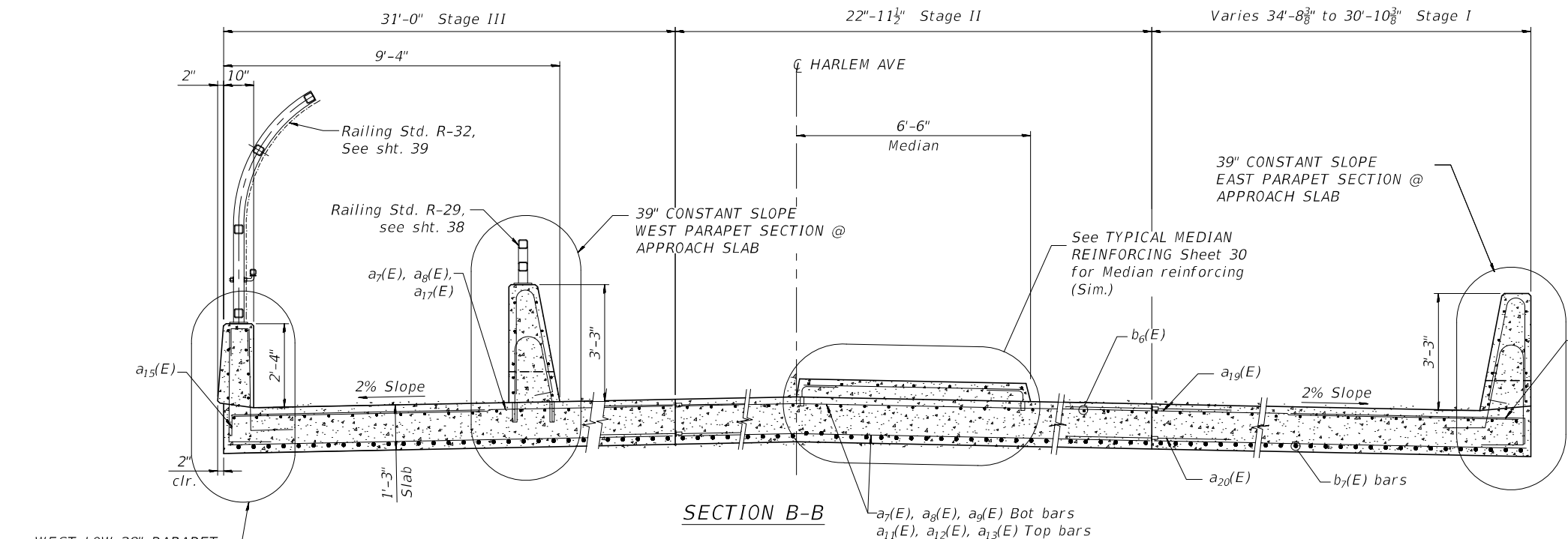
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH DETAILS SHEET 2
STRUCTURE NO. 016-0321
 SHEET 34 OF 63 SHEETS

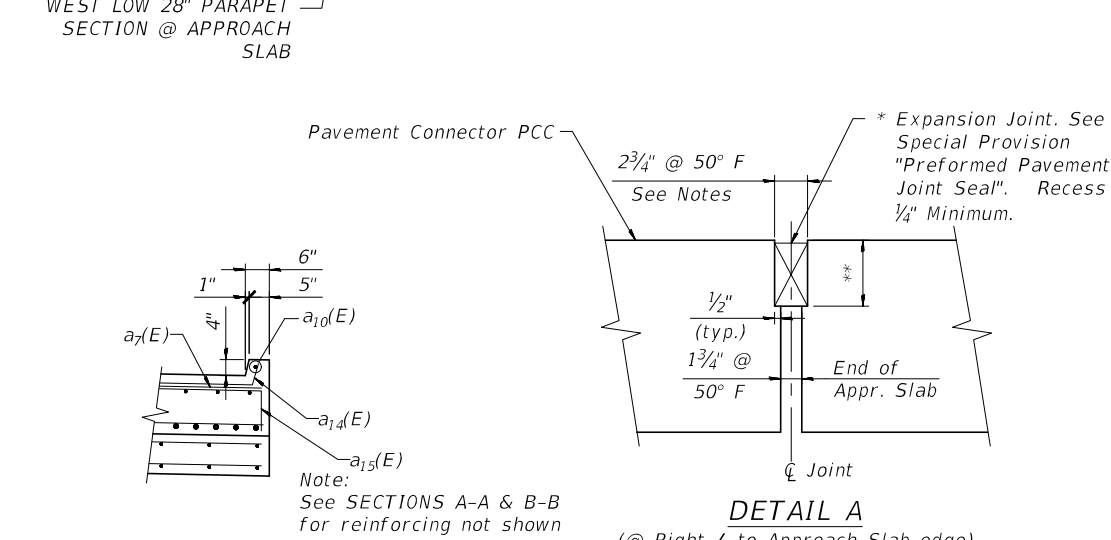
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	439
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				



WEST LOW 28" PARAPET SECTION @ APPROACH SLAB



39" CONSTANT SLOPE EAST PARAPET SECTION @ APPROACH SLAB



DETAIL A
 (@ Right \perp to Approach Slab edge)
 (Highway Standard 420401 applies)
 * Cost included with Concrete Superstructure (Approach Slab)
 ** Per manufacturers recommendations

Notes:
 The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the bridge length used to calculate the adjustment shall be equal to half of the total bridge length plus the length of the Approach Slab.
 Parapet concrete shall be paid for as Concrete Superstructures.
 Approach slab shall be paid for as Concrete Superstructures (Approach Slab).
 Approach footing concrete shall be paid for as Concrete Structures.
 The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
 Cost of excavation for approach footing included with Concrete Structures.
 For Granular Backfill for Structures and drainage treatment details, see sheet 53 of 63.

Drill and set #5 $d_5(E)$ bar according to Article 509.06 of the Standard Specifications. Drilled holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 6". The Contractor shall take all necessary precautions to prevent drilled hole interference with deck reinforcement bars. Locate longitudinal bars to miss drilled locations. Locate drilled holes to miss transverse bars in deck.

39" CONSTANT SLOPE WEST PARAPET SECTION @ APPROACH SLAB

FILE = sFilea5

THE HOH GROUP, INC.
 ARCHITECTS | ENGINEERS
 PN: 3730

USER NAME =	DESIGNED - RS	REVISED -
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	CHECKED - DNB	REVISED -

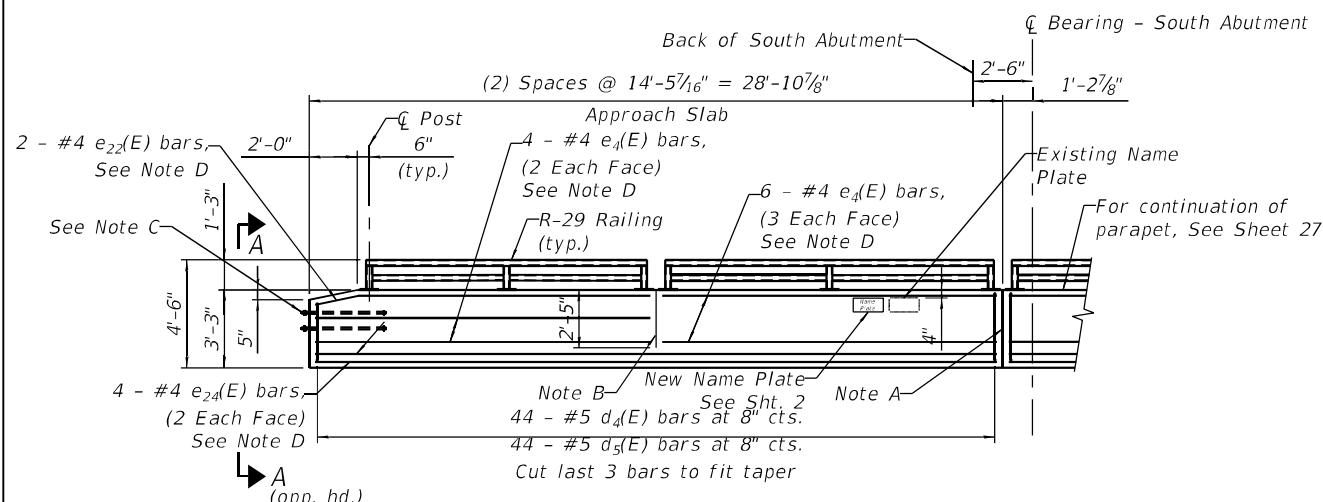
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH DETAILS SHEET 3
STRUCTURE NO. 016-0321

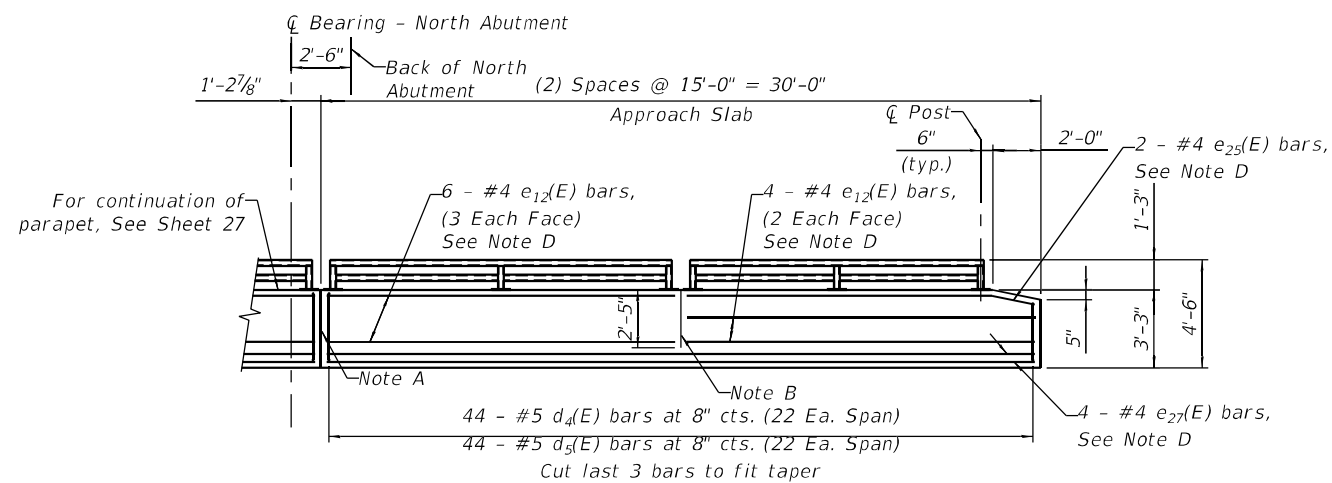
SHEET 35 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	440
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

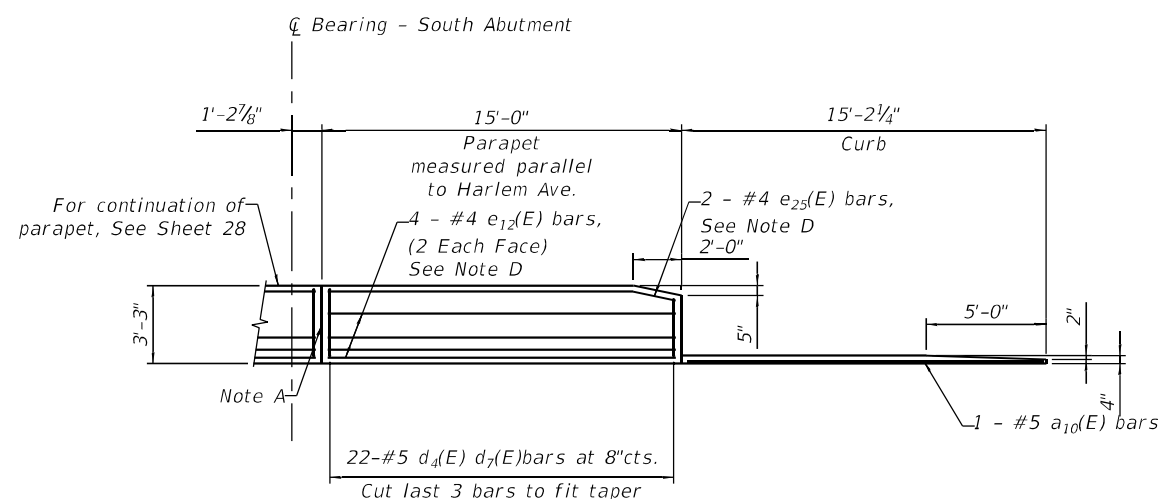
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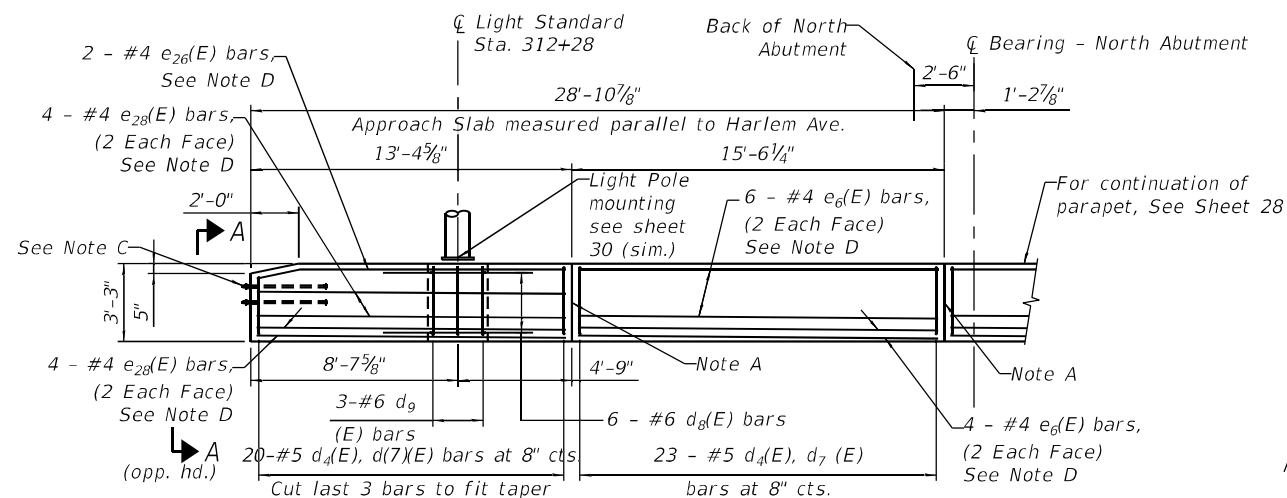
SOUTH APPROACH SLAB WEST PARAPET ELEVATION
(Looking West)



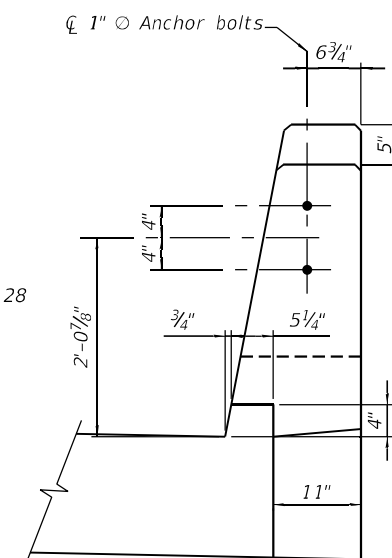
NORTH APPROACH SLAB WEST PARAPET ELEVATION
(Looking West)



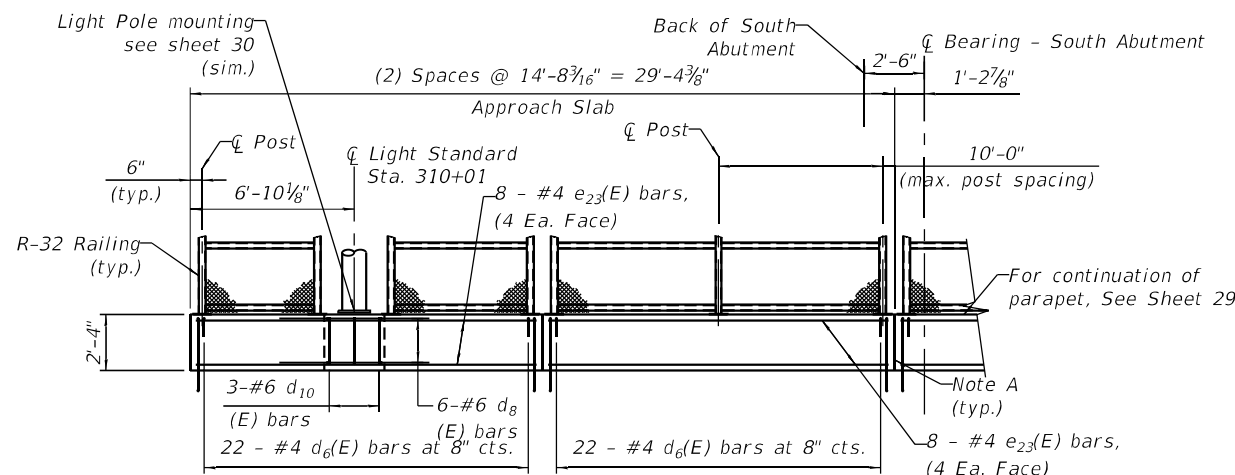
SOUTH APPROACH SLAB EAST PARAPET ELEVATION
(Looking East)



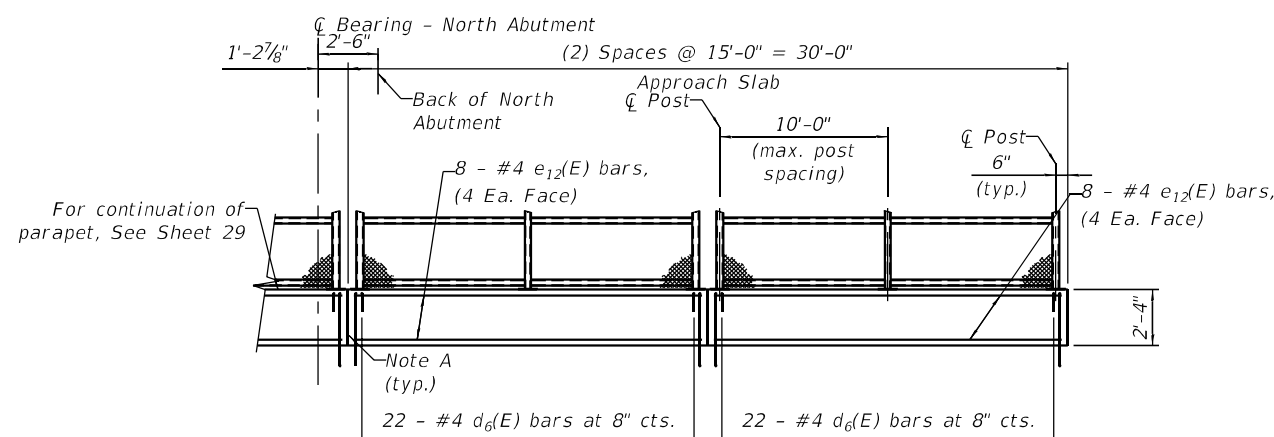
NORTH APPROACH SLAB EAST PARAPET ELEVATION
(Looking East)



SECTION A-A



SOUTH APPROACH SLAB WEST LOW 28" PARAPET ELEVATION
(Looking West)



NORTH APPROACH SLAB WEST LOW 28" PARAPET ELEVATION
(Looking West)

Note A:
Full Height Joint w/ Aluminum R & Cork Joint Filler.

Note B:
2'-5" High Joint w/ Cork Joint Filler ONLY.

Note C:
1" Anchor bolts for Type 5 terminal connections only. See View A-A and Highway Standard 631026. For Type 6 terminal connections see Highway Standard 631031.

Note D:
See Section thru Parapets Sheet 35.

For Joint Detail See Sheet 30
For Railing Details See Sheets 38 & 39.

FILE = \$File\$

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	CHECKED - DNB	REVISED -

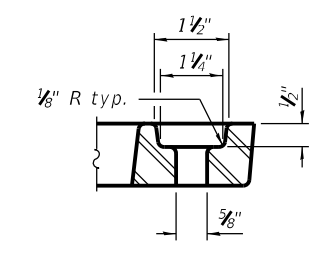
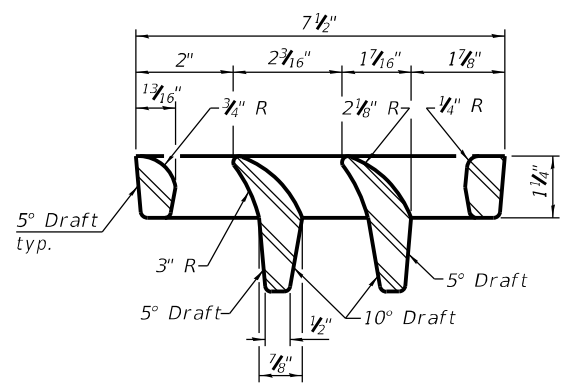
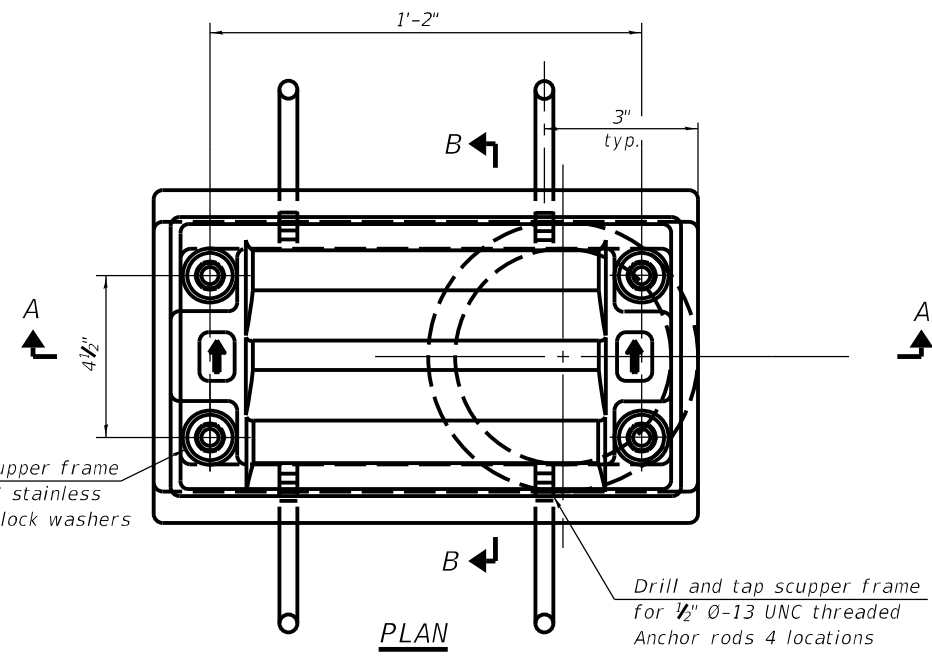
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH DETAILS SHEET 4
STRUCTURE NO. 016-0321

SHEET 36 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	441
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

DATE = \$Date\$



Drill and tap scupper frame for 1/2" Ø-13 UNC stainless steel bolts with lock washers 4 locations

Drill and tap scupper frame for 1/2" Ø-13 UNC threaded Anchor rods 4 locations

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105, Class 35B and AASHTO M306.

Bolts, anchor rods, nuts and washers shall be according to ASTM A307 and shall be galvanized according to AASHTO M232. As an alternate stainless steel may be used.

Stainless steel hardware shall be 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 frames and downspouts; however, the scupper grates shall remain cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

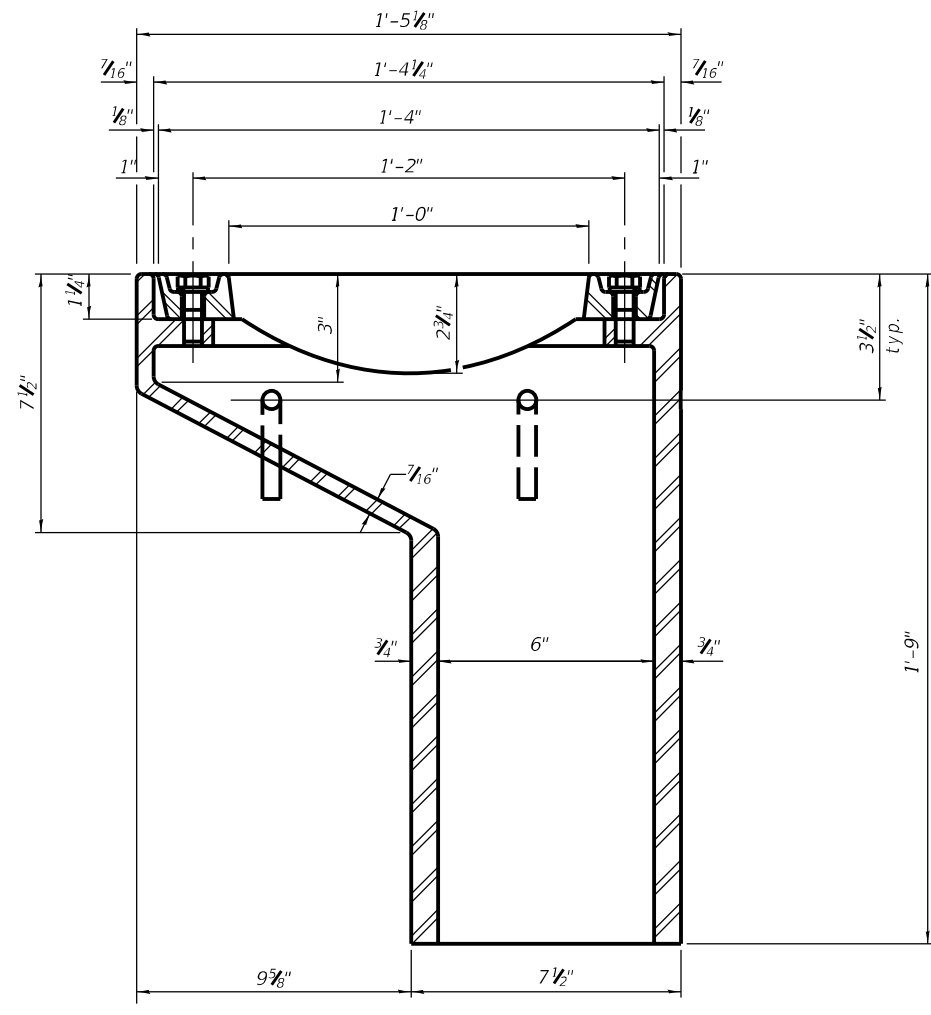
Structural steel scupper frames and downspouts, when utilized, shall be galvanized according to AASHTO M111.

As an alternate, fiberglass may be used for downspouts according to ASTM D2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. in lieu of the cast iron or structural steel.

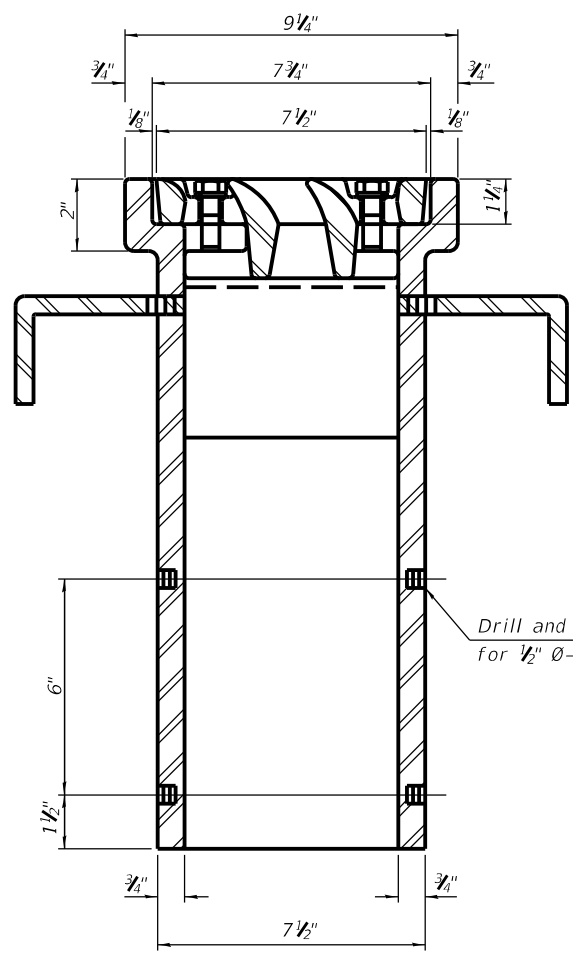
Exterior surfaces of downspouts and exterior exposed surfaces of the scupper frame below deck shall be pigmented or painted to match color of the adjacent beam.

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

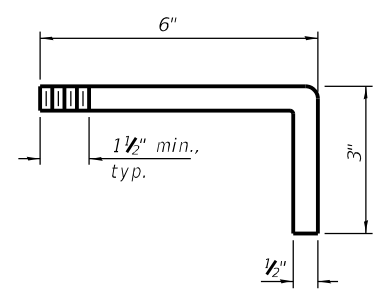
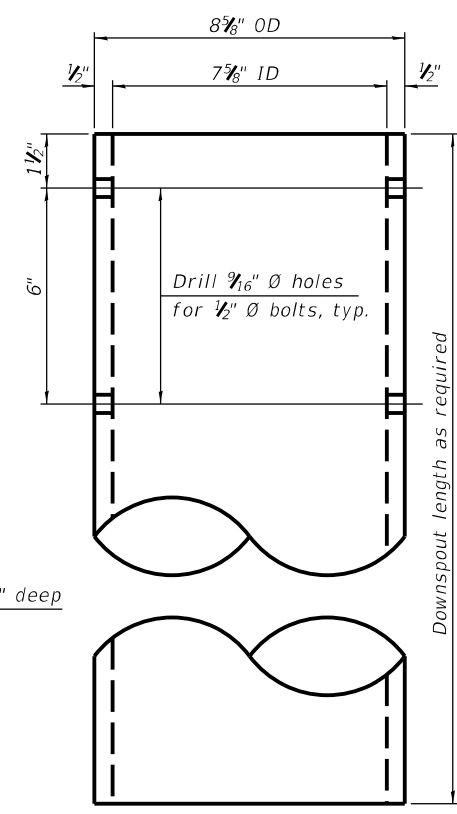
Cost of the grate, frame, downspout, anchor rods, nuts and washers including complete installation of the scupper shall be paid for at the contract unit price for Drainage Scupper, DS-11.



SECTION A-A
See sheet 22 of 63 for scupper location relative to parapet.



Drill and tap 4 holes 1/2" deep for 1/2" Ø-13 UNC bolts.



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	4

DS-11 1-1-2020

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PLOT DATE =	DRAWN - JPM	REVISED -
	CHECKED - DNB	REVISED -

STATE OF ILLINOIS
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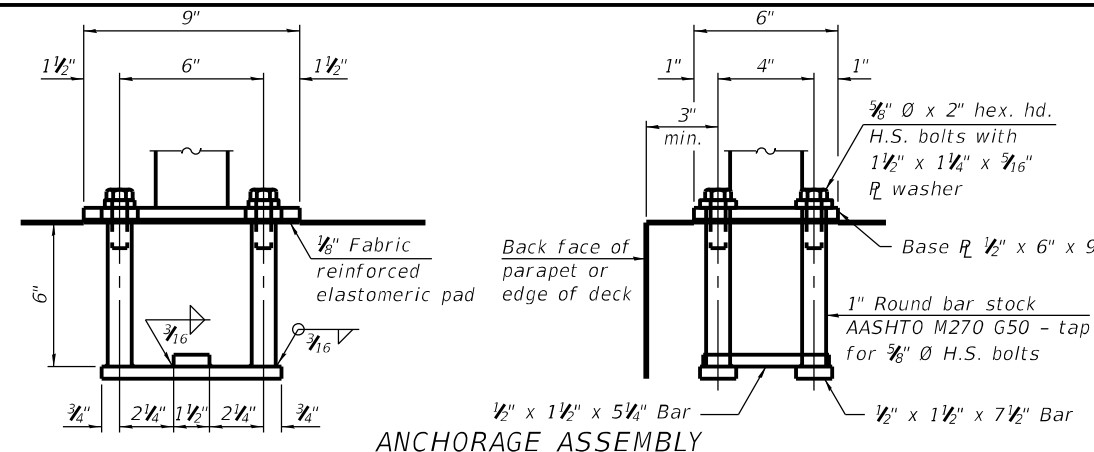
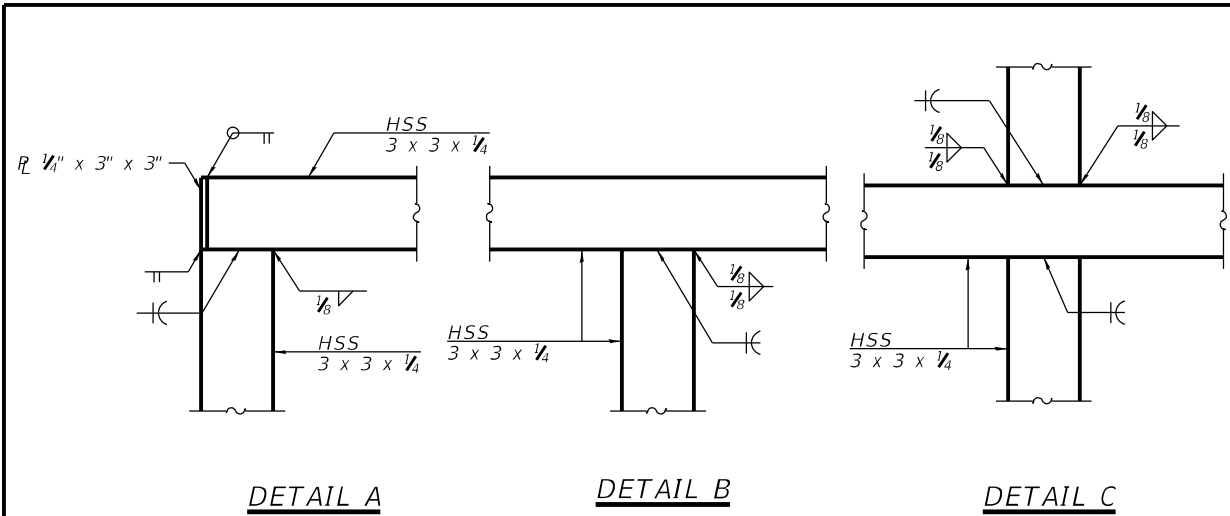
DRAINAGE SCUPPERS - DS-11
STRUCTURE NO. 016-0321

SHEET 37 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	442
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

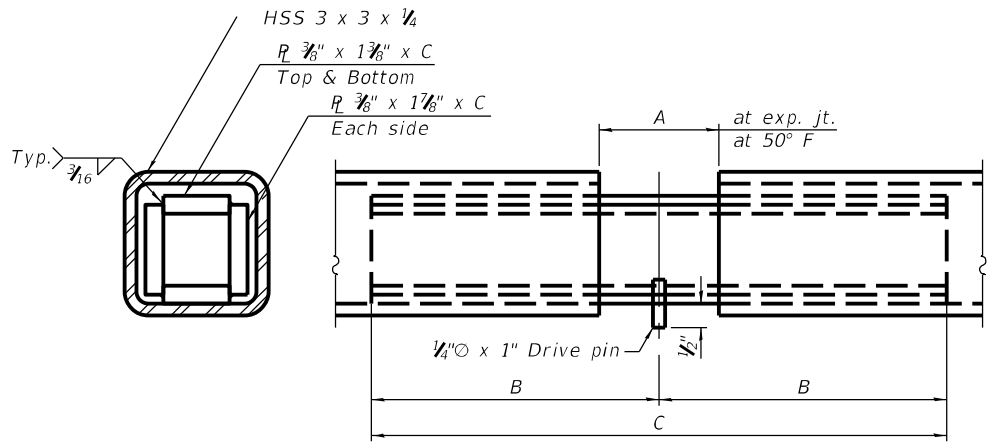
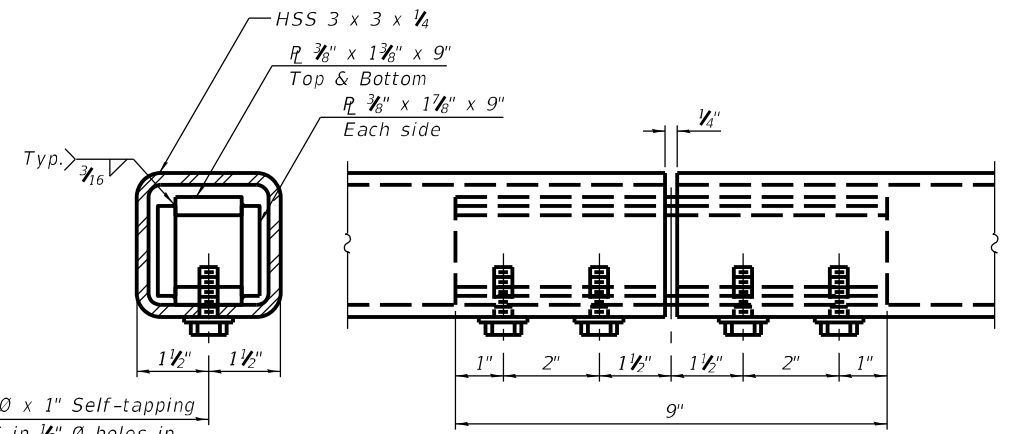
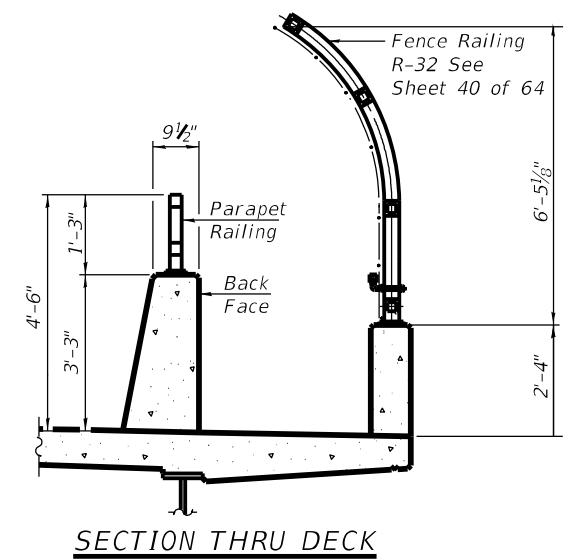
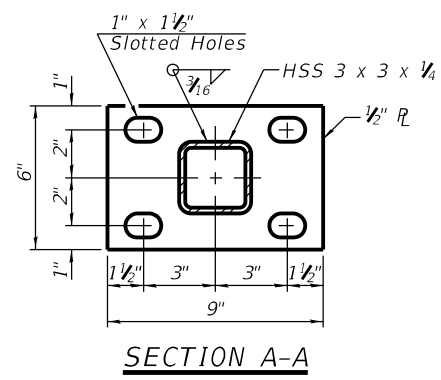
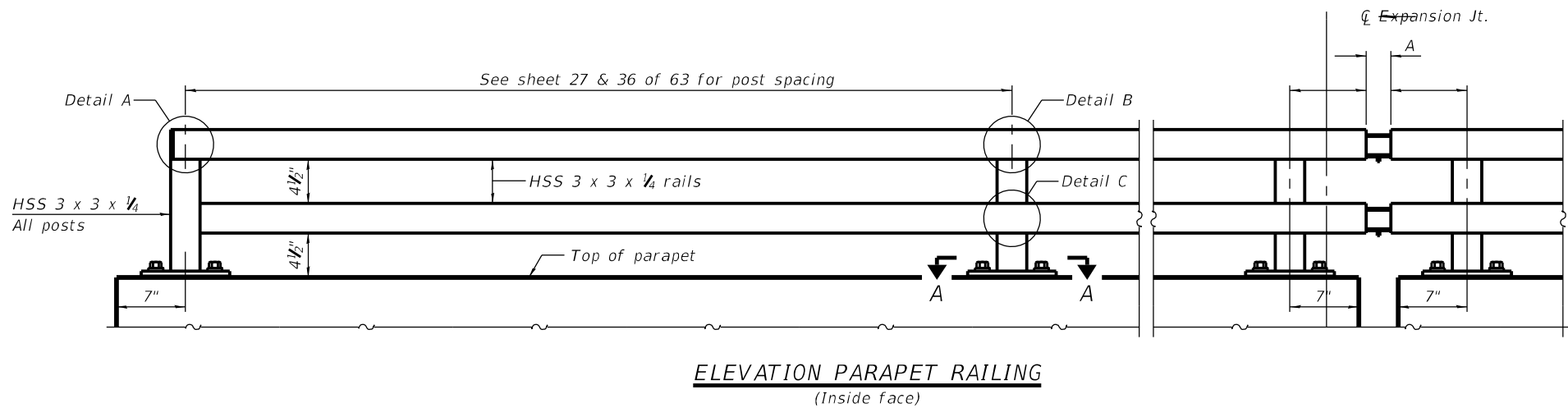
FILE NAME: SFILES

SDATE\$



Notes:
 Place reinforcement bars to miss anchor rod locations.
 All HSS tubing used for the Parapet Railing shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.
 All HSS tubing used for the Parapet Railing shall be ASTM A500 grade C.
 All base plates used for the Parapet Railing shall be AASHTO M270 grade 50.
 All heavy hex nuts shall be according to ASTM A 563 grade DH.
 All fully threaded anchor rods shall be ASTM F1554 grade 105.
 The post base plate shall be fastened to the curb snug tight and given an additional 1/8" turn.
 Rail splice inserts may be built out of bent plates of the same thicknesses and outside geometry limits as the 4 plate rail splice inserts shown.
 The contract specifies a painted railing, all posts, rail, splices, anchor devices and plates of the railing shall be painted according to the paint system for railings as specified in the General Notes.

The Bicycle Railing fasteners for end posts near expansion joints may need to be installed prior to installing the bent plates.
 In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 3/8" Ø fully threaded anchor rods with the same plate washers as specified above and heavy hex lock nuts according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



RAILING CRITERIA

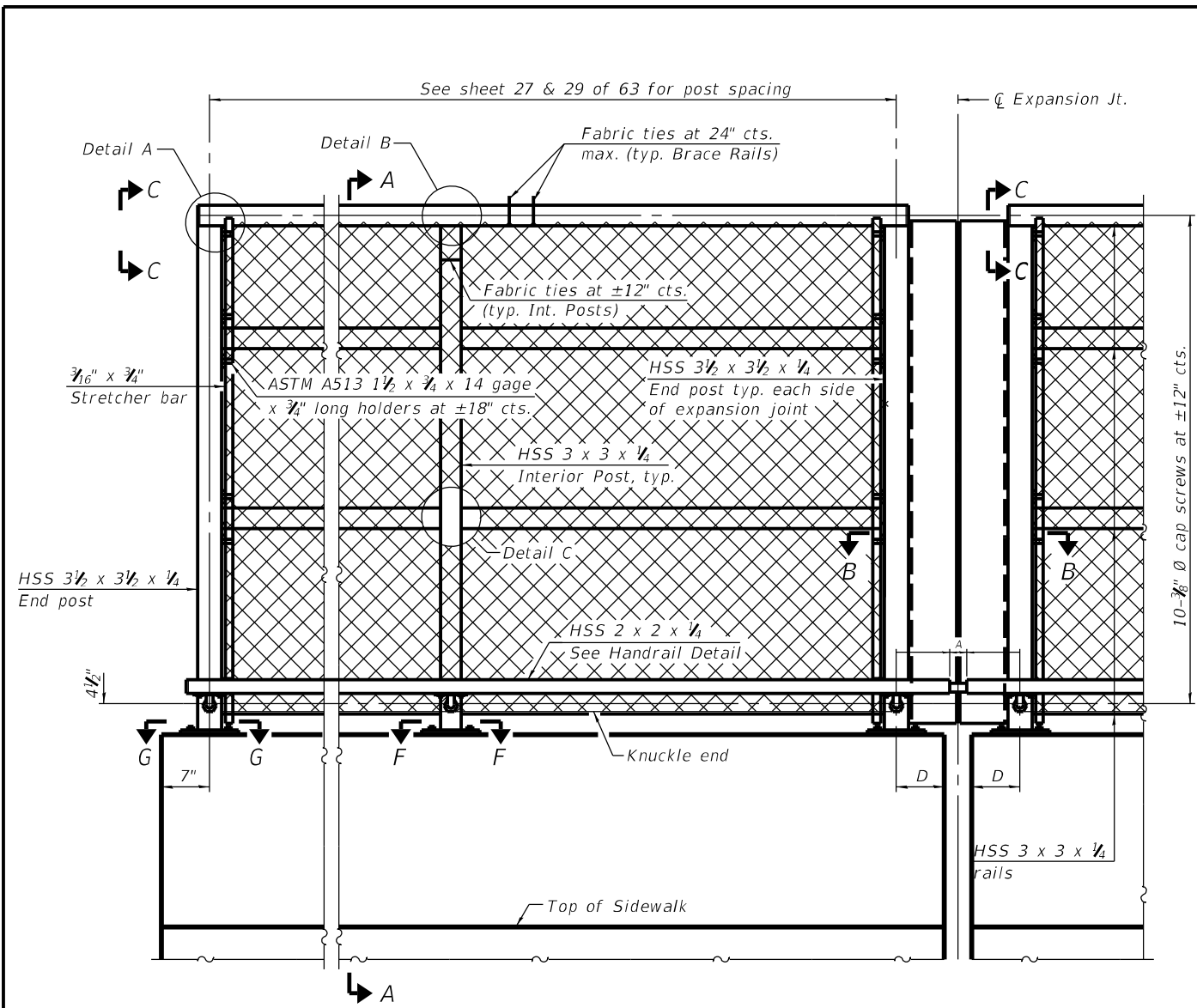
MASH 2016 Test Level	4
Parapet Railing Weight (plf)	25
Max Post Spacing	10'-0"

TABLE OF DIMENSIONS

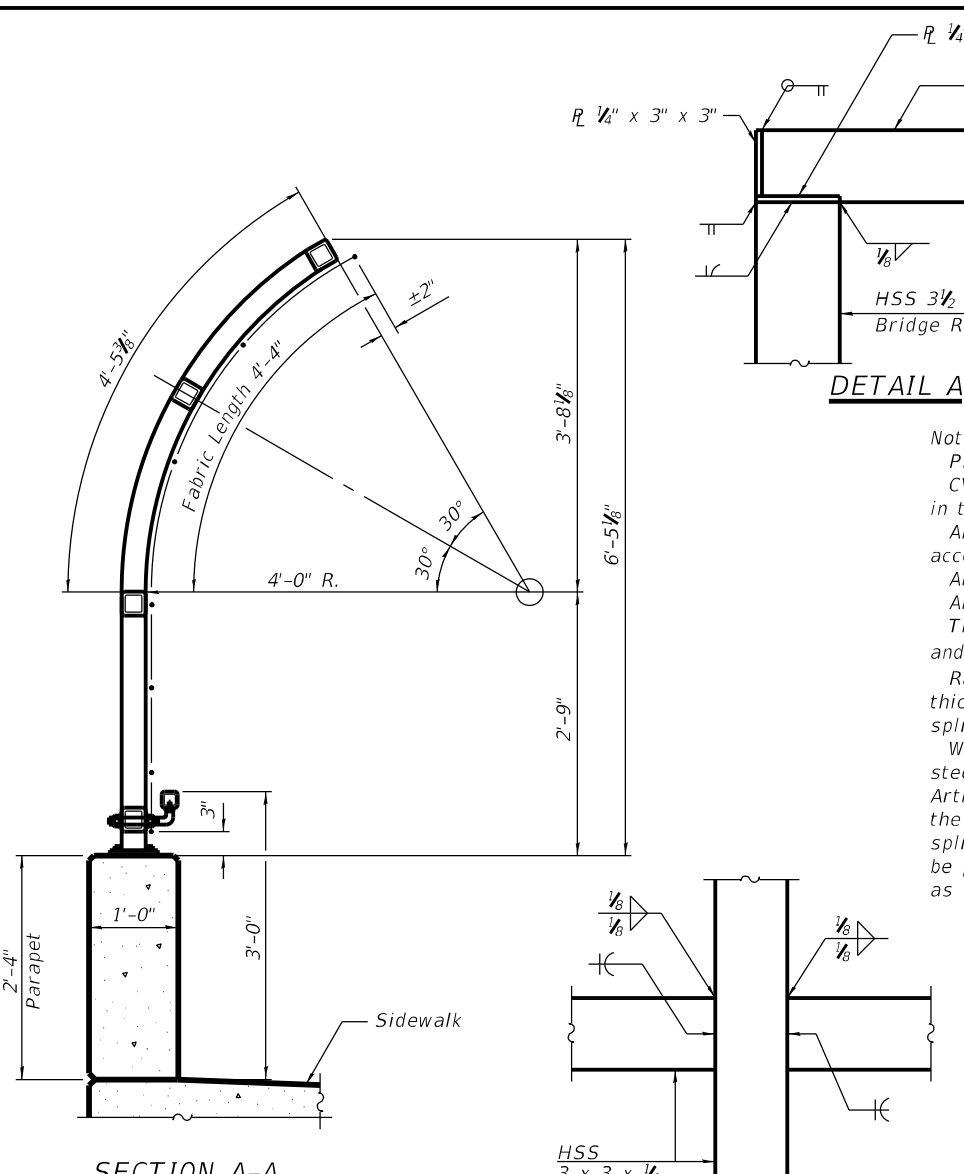
Location	T	A	B	C	D	E
Over Strip Seal Jt.	≤4"	2 1/2"	1'-2"	2'-4"	7 1/4"	7"
Over Finger or Modular Jt.	≤9 1/2"	5 1/2"	1'-7 1/4"	3'-3 1/2"		
Over Finger or Modular Jt.	≤15"	8 1/4"	2'-1 1/4"	4'-2 1/2"		

BILL OF MATERIAL

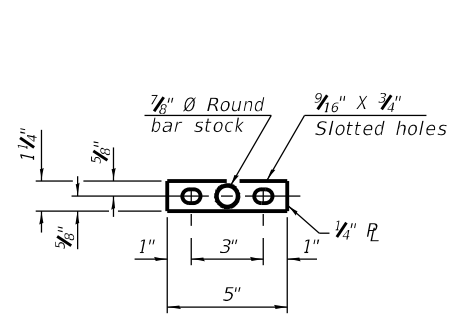
Item	Unit	Quantity
Parapet Railing	Foot	313



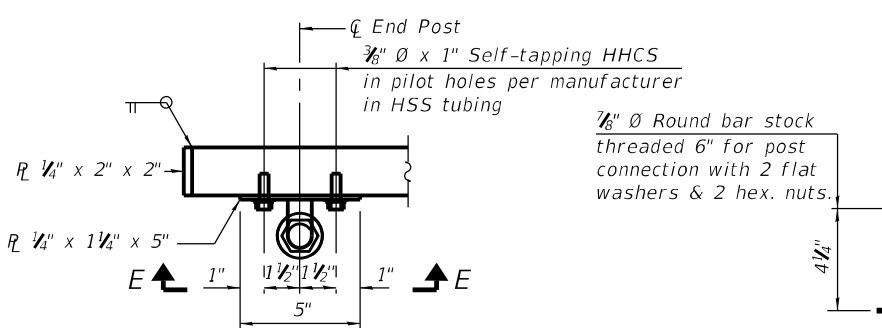
ELEVATION BRIDGE FENCE RAILING, CURVED
(Inside face)



SECTION A-A



VIEW E-E
(Handrail)

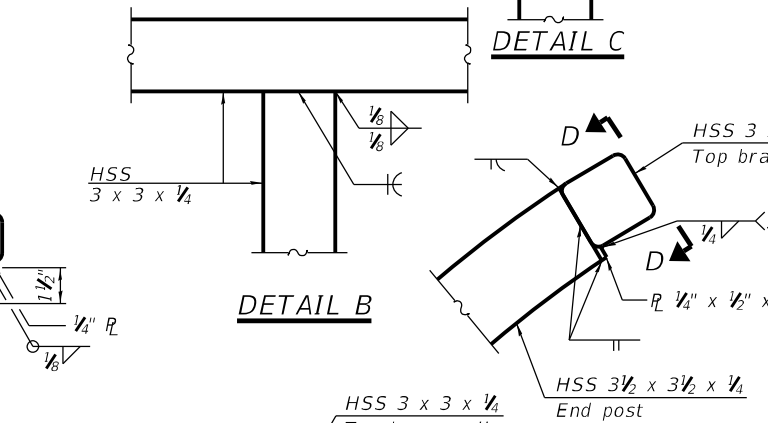


HANDRAIL DETAIL

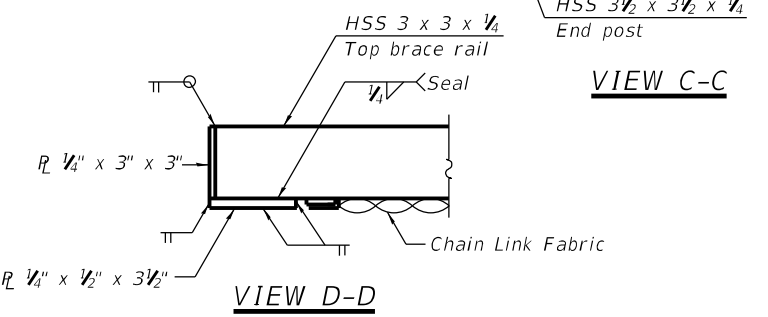
TABLE OF DIMENSIONS

Location	T	A	B	C	D
Over Strip Seal Jt.	≤4"	2 1/2"	1'-5 1/8"	7 1/4"	7"
Over Finger or Modular Jt.	≤9 1/2"	5 1/2"	1'-11 1/8"		
Over Finger or Modular Jt.	≤15"	8 1/4"	2'-5 1/8"		

T = ; total movement based on total temperature range from -20°F to 120°F along centerline of roadway at expansion joint.

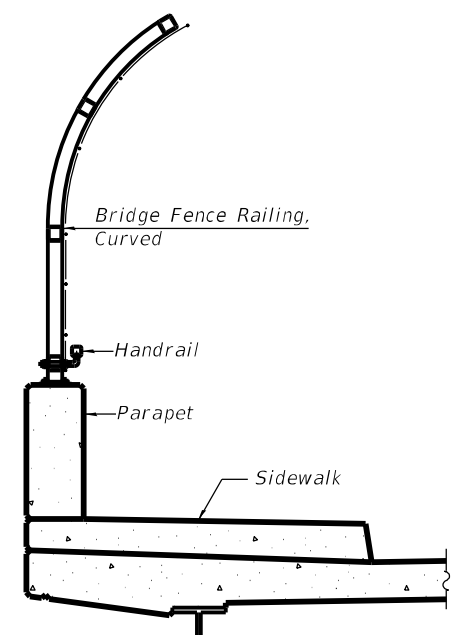


DETAIL B



VIEW D-D

Notes:
Place reinforcement bars to miss anchor rod locations. CVN testing is not required for the HSS tubing used in the Bridge Fence Railing, Curved.
All HSS tubing used for the Handrail shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.
All heavy hex nuts shall be according to ASTM A 563 grade DH.
All fully threaded anchor rods shall be ASTM F1554 grade 10S.
The post base plate shall be fastened to the curb snug tight and given an additional 1/8" turn.
Rail splice inserts may be built out of bent plates of the same thicknesses and outside geometry limits as the 4 plate rail splice inserts shown.
When the contract specifies a galvanized railing, all steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications. When the contract specifies a painted railing, all posts, rail, splices, anchor devices and plates of the railing shall be painted according to the paint system for railings as specified in the General Notes.



SECTION THRU DECK

Item	Unit	Quantity
Bridge Fence Railing, Curved	Foot	312

R-32 Modified 9-1-2022

THE HOH GROUP, INC.
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USER NAME	DESIGNED	REVISIONS
=	- RS	-
=	- DNB	-
=	- JPM	-
=	- DNB	-

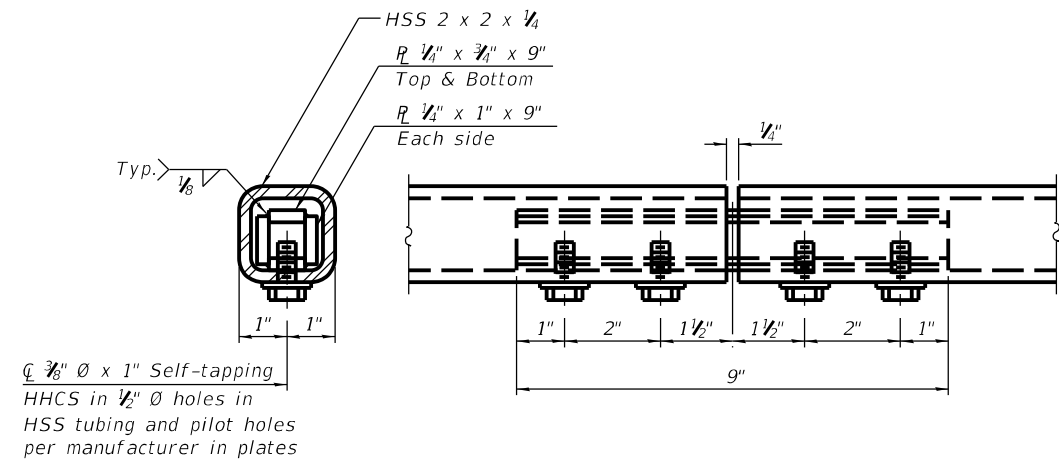
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE FENCE RAILING, PARAPET MOUNTED
STRUCTURE NO. 016-0321

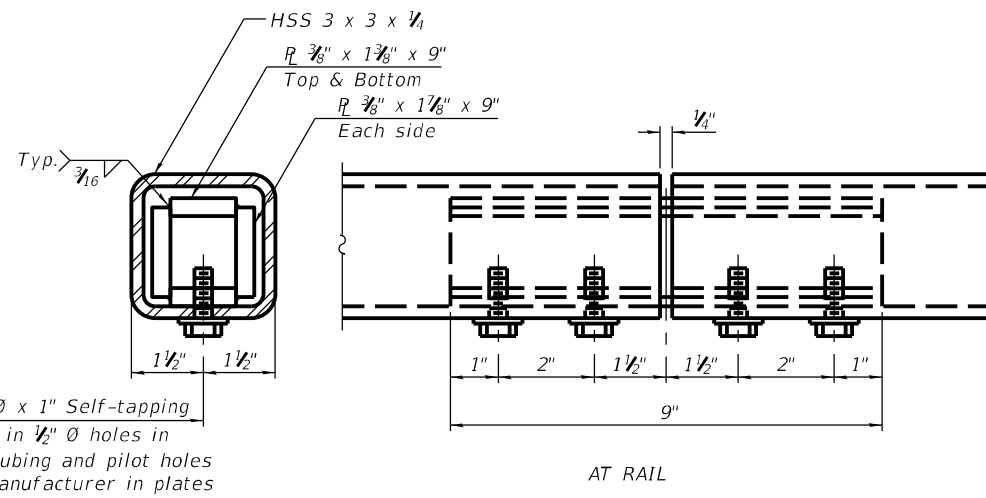
SHEET 39 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	444
CONTRACT NO. 60R49				

ILLINOIS FED. AID PROJECT

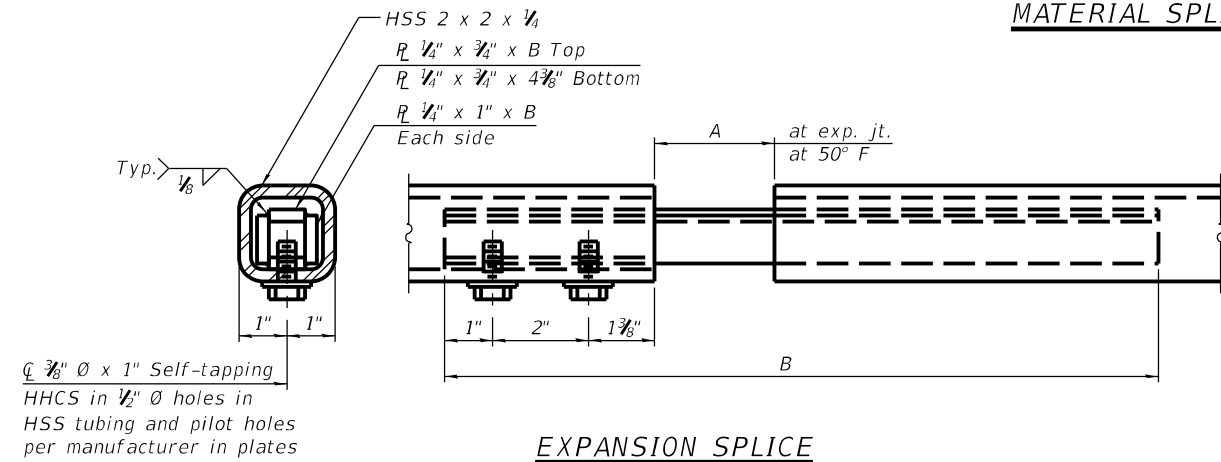


AT HANDRAIL



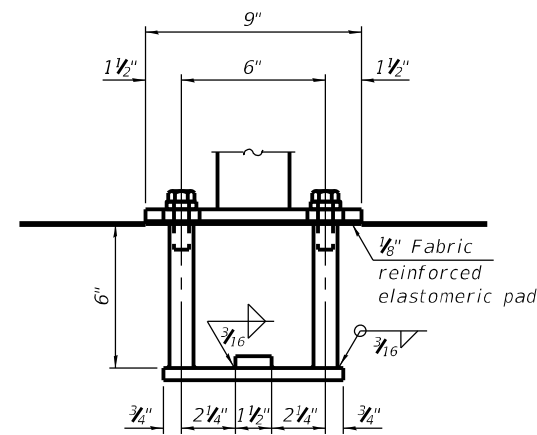
AT RAIL

MATERIAL SPLICE



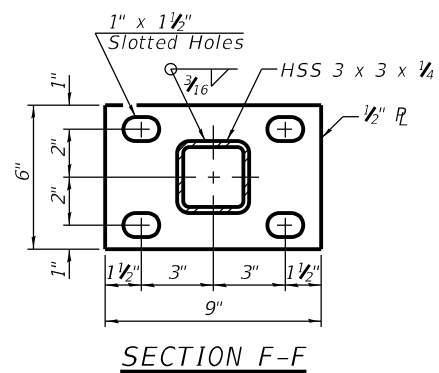
EXPANSION SPLICE

(Weld bottom plate on bolt side)

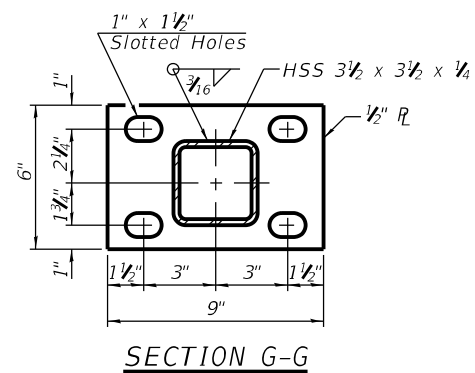


ANCHORAGE ASSEMBLY

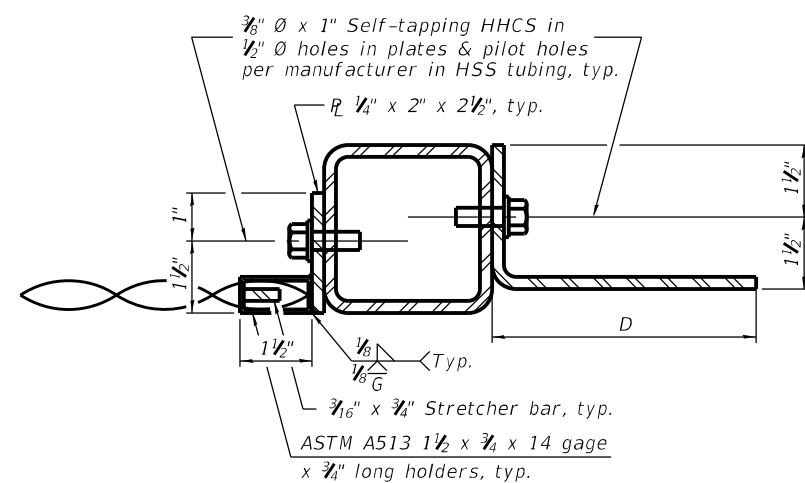
The Bridge Fence Railing, Curved Fasteners for end posts near expansion joints may need to be installed prior to installing the bent plates. In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" diameter fully threaded anchor rods with the same plate washers as specified above and heavy hex lock nuts according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



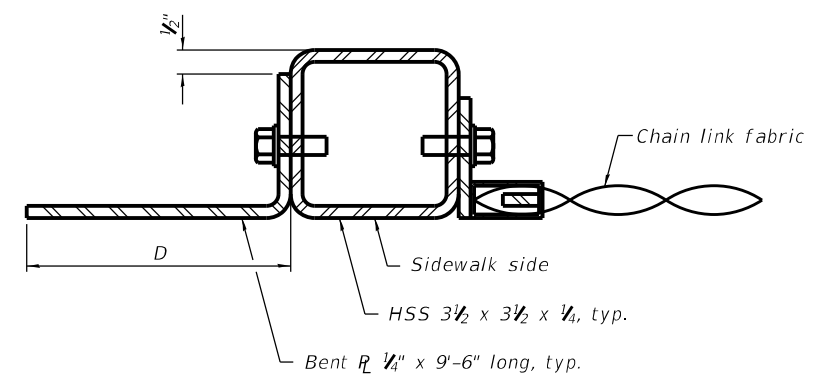
SECTION F-F



SECTION G-G



SECTION B-B



(Sheet 2 of 2)

R-32 9-1-2022

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PLOT DATE =	DRAWN - JPM	REVISED -
	CHECKED - DNB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE FENCE RAILING, CURVED
STRUCTURE NO. 0160321

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-2-1-R&RS	COOK	659	444A
CONTRACT NO. 60R49				

SHEET 39A OF 63 SHEETS

ILLINOIS FED. AID PROJECT

FILE NAME: SFILES

\$DATE\$

PN: 3780

INTERIOR BEAM MOMENT TABLE							
	0.4 SP. 1	PIER 1	0.5 SP. 2	PIER 2	0.5 SP. 3	PIER 3	0.6 SP. 4
I_s (in^4)	8946	8946	8946	12589	8946	12589	8946
$I_c(n)$ (in^4)	27323	11281	27323	14968	27323	14968	27323
$I_c(3n)$ (in^4)	19887	9774	19887	13423	19887	13423	19887
$I_c(cr)$ (in^4)	-	8946	-	8946	-	8946	-
S_s (in^3)	498.4	498.4	498.4	682.3	498.4	682.3	498.4
$S_c(n)$ (in^3)	791.9	560.2	791.9	739.9	791.9	739.9	791.9
$S_c(3n)$ (in^3)	712.6	522.0	712.6	703.7	712.6	703.7	712.6
$S_c(cr)$ (in^3)	-	522.0	-	703.7	-	703.7	-
DC1 (k/ft)	0.77	0.77	0.77	0.77	0.77	0.77	0.77
MDC1 (ft-k)	184.1	276.5	106.8	371.3	199.5	421.0	184.6
DC2 (k/ft)	0.11	0.11	0.11	0.11	0.11	0.11	0.11
MDC2 (ft-k)	27.9	38.2	17.6	52.6	31.9	58.5	28.2
DW (k/ft)	0.29	0.29	0.29	0.29	0.29	0.29	0.29
MDW (ft-k)	62.6	86.3	40.0	120.2	73.27	135.4	66.0
f_s DC1 (ksi)	4.43	6.66	2.57	6.53	4.80	7.40	4.45
f_s DC2 (ksi)	0.42	0.82	0.27	0.85	0.48	0.95	0.43
f_s DW (ksi)	0.95	1.85	0.6	1.95	1.11	2.20	1.00
f_s ($M_{LL} + im$) (ksi)	8.46	10.44	8.20	9.67	9.32	9.83	8.83
f_s (SERVICE II) (ksi)	16.80	22.90	14.10	21.91	18.51	23.32	17.35
$0.95R_h F_y f$ (ksi)	31.35	31.35	31.35	31.35	31.35	31.35	31.35
f_s (TOTAL STRENGTH I) (ksi)	22.26	30.39	18.79	29.09	24.58	30.93	23.04
$\phi_f F_n$ (ksi)	33	33	33	33	33	33	33
Vf (k)	25.49	36.26	25.13	34.82	25.49	25.49	36.26
LLDF	0.55	0.54	0.53	0.52	0.51	0.52	0.54
$M_{LL} + im$ (ft-k)	558.4	487.5	541.1	594.2	615.1	605.9	582.5
M_u (STRENGTH I) (ft-k)	1336	1376	1162	1750	1475	1863	1384
$\phi_f M_n$ (ft-k)	-	-	-	-	-	-	-

INTERIOR BEAM REACTION TABLE										
	SOUTH ABUT.		PIER 1		PIER 2		PIER 3		NORTH ABUT.	
	INTERIOR	EXTERIOR	INTERIOR	EXTERIOR	INTERIOR	EXTERIOR	INTERIOR	EXTERIOR	INTERIOR	EXTERIOR
LLDF	0.82	0.64	0.82	0.64	0.83	0.65	0.83	0.65	0.83	0.65
OCF	--	1	--	--	--	--	--	--	--	1
RDC1(k)*	31.9	29.8	54.2	47.9	60.9	53.7	65.6	58.8	31.9	29.6
RDC2(k)	2.7	2.6	7.9	7.9	7.9	8.8	9.5	9.5	2.7	2.7
RDW (k)	5.9	6.0	17.7	17.9	20.3	20.3	21.8	22.1	6.2	6.2
R_{LL} (k)	80.3	66.0	140.8	116.2	151.3	124.4	150.9	124.3	81.9	58.8
R im (k)	26.3	22.0	46.8	38.6	50.3	41.5	50.2	41.4	27.2	41.4
RTOTAL (k)	147.5	126.6	267.4	228.5	291.6	249.1	298.1	249.1	149.9	128.6

* RDC1 at the abutment includes includes service reaction due to weight of approach slab and parapet on the approach slab.

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 REINFORCING, 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.)

MDC1: 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.)

MDC2: 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.)

MDW: UN-FACTORED MOMENT DUE TO LONG-TERM COMPOSITE (SUPERIMPOSED FUTURE WEARING SURFACE ONLY) DEAD LOAD (kip-ft.)

$M_{LL} + im$: UN-FACTORED LIVE LOAD MOMENT PLUS DYNAMIC LOAD ALLOWANCE (IMPACT) (kip-ft.)

f_s DC1: UN-FACTORED STRESS AT THE EDGE OF FLANGE FOR CONTROLLING STEEL FLANGE DUE TO VERTICAL NON-COMPOSITE DEAD LOADS AS CALCULATED BELOW (ksi).
MDC1/ S_{nc} .

f_s DC2: UN-FACTORED STRESS AT THE EDGE OF FLANGE FOR CONTROLLING STEEL FLANGE DUE TO VERTICAL COMPOSITE DEAD LOADS AS CALCULATED BELOW (ksi).
MDC2/ $S_c(3n)$ OR MDC2/ $S_c(cr)$ AS APPLICABLE.

f_s DW: UN-FACTORED STRESS AT THE EDGE OF FLANGE FOR CONTROLLING STEEL FLANGE DUE TO VERTICAL COMPOSITE FUTURE WEARING SURFACE LOADS AS CALCULATED BELOW (ksi).
MDW/ $S_c(3n)$ OR MDW/ $S_c(cr)$ AS APPLICABLE.

f_s ($M_{LL} + im$): UN-FACTORED STRESS AT THE EDGE OF FLANGE FOR CONTROLLING STEEL FLANGE DUE TO VERTICAL COMPOSITE live load plus impact load (ksi).
 $M_L + im$ / $S_c(n)$ OR $M_L + im$ / $S_c(cr)$ AS APPLICABLE.

f_s (SERVICE II): SUM OF STRESSES AS COMPUTED BELOW (ksi).
 $f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s(M_L + im)$

$0.95R_h F_y f$: 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).
 $1.25 (f_s DC1 + f_s DC2) + 1.5 f_s DW + 1.75 f_s(M_L + im)$

$\phi_f F_n$: NON-COMPACT COMPOSITE POSITIVE OR NEGATIVE STRESS CAPACITY FOR STRENGTH I LOADING ACCORDING TO ARTICLE 6.10.7 OR 6.10.8 (ksi).

Vf: MAXIMUM FACTORED SHEAR RANGE IN SPAN COMPUTED ACCORDING TO ARTICLE 6.10.10.

LLDF: LIVE LOAD DISTRIBUTION FACTOR

OCF: OBTUSE CORRECTION FACTOR

M_u (Strength I): FACTORED DESIGN MOMENT (kip-ft.) $1.25 (MDC1 + MDC2) + 1.5 MDW + 1.75 M_L + im$

$\phi_f M_n$: NON-COMPACT COMPOSITE POSITIVE OR NEGATIVE STRESS CAPACITY FOR STRENGTH I LOADING ACCORDING TO ARTICLE 6.10.7 OR 6.10.8 (ksi).

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PN: 3730	DRAWN - JPM	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MOMENT AND REACTION TABLES
STRUCTURE NO. 016-0321

SHEET 41 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	446
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

DATE = sDate\$

TABLE 1

BEAM	SPAN LENGTHS ALONG BEAM (C. BRG./C. BRG.)				BEAM SEGMENT LENGTHS - SEE BEAM ELEVATION FOR POINT LOCATIONS						
	SPAN 1	SPAN 2	SPAN 3	SPAN 4	A	B	C	D	E	F	G
1	53'-1"	63'-2"	74'-1"	57'-10"	53'-1"	13'-0"	50'-2"	14'-6"	59'-7"	15'-6"	42'-4"
2	53'-1"	63'-2"	74'-1"	57'-10"	53'-1"	13'-0"	50'-2"	14'-6"	59'-7"	15'-6"	42'-4"
3	53'-1"	63'-2"	74'-1"	57'-10"	53'-1"	13'-0"	50'-2"	14'-6"	59'-7"	15'-6"	42'-4"
4	53'-1"	63'-2"	74'-1"	57'-10"	53'-1"	13'-0"	50'-2"	14'-6"	59'-7"	15'-6"	42'-4"
5	53'-1"	63'-2"	74'-1"	57'-10"	53'-1"	13'-0"	50'-2"	14'-6"	59'-7"	15'-6"	42'-4"
6	53'-1"	63'-2"	74'-1"	57'-10"	53'-1"	13'-0"	50'-2"	14'-6"	59'-7"	15'-6"	42'-4"
7	53'-1"	63'-2"	74'-1"	57'-10"	53'-1"	13'-0"	50'-2"	14'-6"	59'-7"	15'-6"	42'-4"
8	53'-1"	63'-2"	74'-1"	57'-10"	53'-1"	13'-0"	50'-2"	14'-6"	59'-7"	15'-6"	42'-4"
9	53'-1"	63'-2"	74'-1"	57'-10"	53'-1"	13'-0"	50'-2"	14'-6"	59'-7"	15'-6"	42'-4"
10	53'-1"	63'-2"	74'-1"	57'-10"	53'-1"	13'-0"	50'-2"	14'-6"	59'-7"	15'-6"	42'-4"
11	53'-1"	63'-2"	74'-1"	57'-10"	53'-1"	13'-0"	50'-2"	14'-6"	59'-7"	15'-6"	42'-4"
12	53'-1"	63'-2"	74'-1"	57'-10"	53'-1"	13'-0"	50'-2"	14'-6"	59'-7"	15'-6"	42'-4"
13	52'-9 ³ / ₁₆ "	62'-9 ¹ / ₂ "	73'-7 ³ / ₄ "	57'-5 ⁷ / ₈ "	52'-9 ³ / ₁₆ "	12'-11 ¹ / ₁₆ "	49'-10 ⁷ / ₁₆ "	14'-5"	58'-2 ³ / ₄ "	15'-4 ⁷ / ₈ "	42'-1"
14	52'-5 ¹ / ₂ "	62'-5 ¹ / ₁₆ "	73'-2 ¹ / ₂ "	57'-1 ³ / ₁₆ "	52'-5 ¹ / ₂ "	12'-10 ³ / ₁₆ "	49'-6 ⁷ / ₈ "	14'-3 ¹ / ₁₆ "	58'-10 ⁹ / ₁₆ "	15'-3 ¹ / ₁₆ "	41'-10"
15	52'-5 ¹ / ₂ "	62'-5 ¹ / ₁₆ "	73'-2 ¹ / ₂ "	57'-1 ³ / ₁₆ "	52'-5 ¹ / ₂ "	12'-10 ³ / ₁₆ "	49'-6 ⁷ / ₈ "	14'-3 ¹ / ₁₆ "	58'-10 ⁹ / ₁₆ "	15'-3 ¹ / ₁₆ "	41'-10"

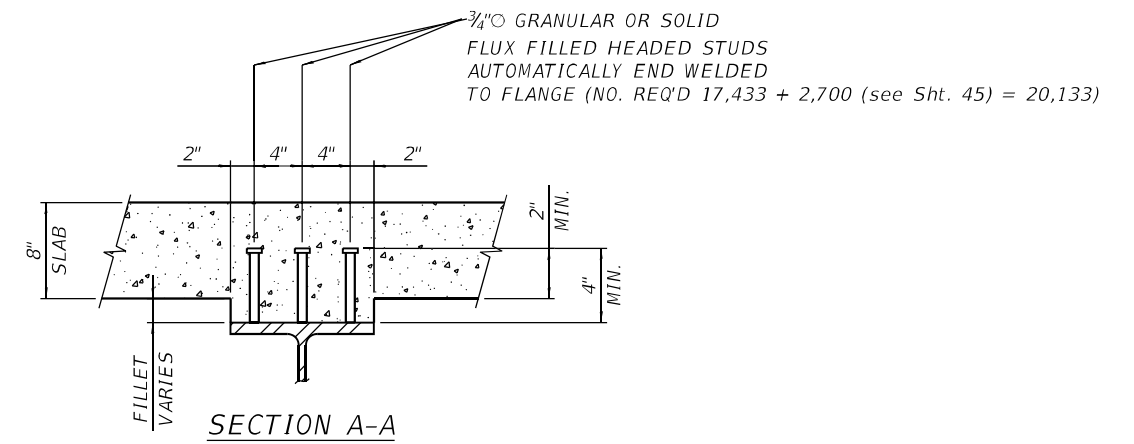
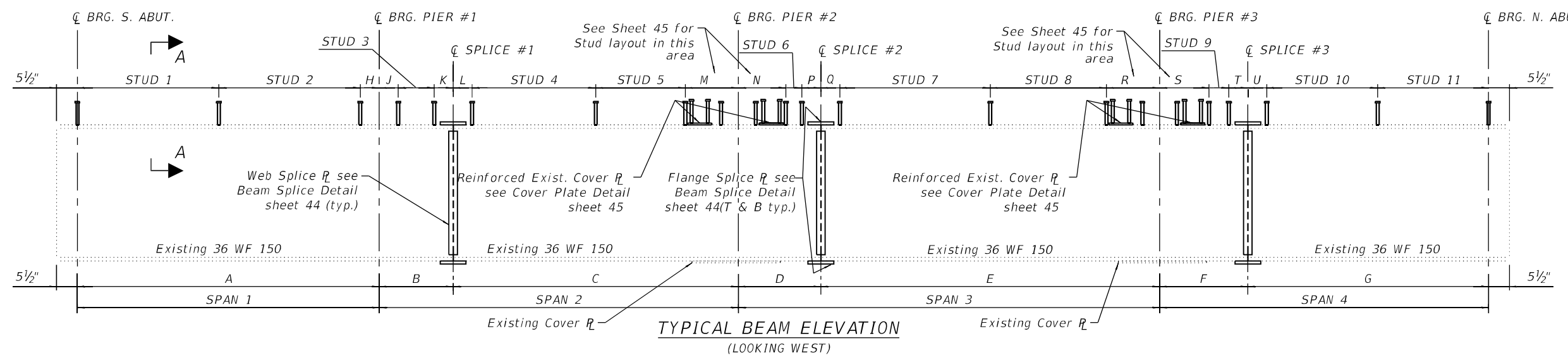


TABLE 2 - STUD SHEAR CONNECTOR SPACING

BEAM	STUD 1	STUD 2	H	J	STUD 3	K	L	STUD 4	STUD 5	M	N	STUD 6	P	Q	STUD 7	STUD 8	R	S	STUD 9	T	U	STUD 10	STUD 11
1	51@5"=21'-3"	61@6"=30'-7 ¹ / ₂ "	1'-2 ¹ / ₂ "	1'-0"	23@5"=9'-7 ¹ / ₂ "	2'-4 ¹ / ₂ "	2'-4 ¹ / ₂ "	41@7"=23'-7 ¹ / ₂ "	25@7"=14'-9"	9'-5"	9'-5"	7@5"=2'-9"	2'-4"	2'-4"	57@6"=28'-8 ¹ / ₄ "	38@6"=19'-1 ³ / ₄ "	9'-5"	9'-5"	8@6"=3'-9"	2'-4"	2'-5 ¹ / ₂ "	31@7"=18'-2 ¹ / ₂ "	43@6"=21'-8"
2	51@5"=21'-3"	61@6"=30'-7 ¹ / ₂ "	1'-2 ¹ / ₂ "	1'-0"	23@5"=9'-7 ¹ / ₂ "	2'-4 ¹ / ₂ "	2'-4 ¹ / ₂ "	41@7"=23'-7 ¹ / ₂ "	25@7"=14'-9"	9'-5"	9'-5"	7@5"=2'-9"	2'-4"	2'-4"	49@7"=28'-8 ¹ / ₄ "	38@6"=19'-1 ³ / ₄ "	9'-5"	9'-5"	8@6"=3'-9"	2'-4"	2'-5 ¹ / ₂ "	31@7"=18'-2 ¹ / ₂ "	43@6"=21'-8"
3	51@5"=21'-3"	61@6"=30'-7 ¹ / ₂ "	1'-2 ¹ / ₂ "	1'-0"	23@5"=9'-7 ¹ / ₂ "	2'-4 ¹ / ₂ "	2'-4 ¹ / ₂ "	41@7"=23'-7 ¹ / ₂ "	25@7"=14'-9"	9'-5"	9'-5"	7@5"=2'-9"	2'-4"	2'-4"	49@7"=28'-8 ¹ / ₄ "	38@6"=19'-1 ³ / ₄ "	9'-5"	9'-5"	8@6"=3'-9"	2'-4"	2'-5 ¹ / ₂ "	31@7"=18'-2 ¹ / ₂ "	43@6"=21'-8"
4	51@5"=21'-3"	61@6"=30'-7 ¹ / ₂ "	1'-2 ¹ / ₂ "	1'-0"	23@5"=9'-7 ¹ / ₂ "	2'-4 ¹ / ₂ "	2'-4 ¹ / ₂ "	41@7"=23'-7 ¹ / ₂ "	25@7"=14'-9"	9'-5"	9'-5"	7@5"=2'-9"	2'-4"	2'-4"	49@7"=28'-8 ¹ / ₄ "	38@6"=19'-1 ³ / ₄ "	9'-5"	9'-5"	8@6"=3'-9"	2'-4"	2'-5 ¹ / ₂ "	31@7"=18'-2 ¹ / ₂ "	43@6"=21'-8"
5	51@5"=21'-3"	61@6"=30'-7 ¹ / ₂ "	1'-2 ¹ / ₂ "	1'-0"	23@5"=9'-7 ¹ / ₂ "	2'-4 ¹ / ₂ "	2'-4 ¹ / ₂ "	41@7"=23'-7 ¹ / ₂ "	25@7"=14'-9"	9'-5"	9'-5"	7@5"=2'-9"	2'-4"	2'-4"	49@7"=28'-8 ¹ / ₄ "	38@6"=19'-1 ³ / ₄ "	9'-5"	9'-5"	8@6"=3'-9"	2'-4"	2'-5 ¹ / ₂ "	31@7"=18'-2 ¹ / ₂ "	43@6"=21'-8"
6	51@5"=21'-3"	61@6"=30'-7 ¹ / ₂ "	1'-2 ¹ / ₂ "	1'-0"	23@5"=9'-7 ¹ / ₂ "	2'-4 ¹ / ₂ "	2'-4 ¹ / ₂ "	41@7"=23'-7 ¹ / ₂ "	25@7"=14'-9"	9'-5"	9'-5"	7@5"=2'-9"	2'-4"	2'-4"	49@7"=28'-8 ¹ / ₄ "	38@6"=19'-1 ³ / ₄ "	9'-5"	9'-5"	8@6"=3'-9"	2'-4"	2'-5 ¹ / ₂ "	31@7"=18'-2 ¹ / ₂ "	43@6"=21'-8"
7	51@5"=21'-3"	61@6"=30'-7 ¹ / ₂ "	1'-2 ¹ / ₂ "	1'-0"	23@5"=9'-7 ¹ / ₂ "	2'-4 ¹ / ₂ "	2'-4 ¹ / ₂ "	41@7"=23'-7 ¹ / ₂ "	25@7"=14'-9"	9'-5"	9'-5"	7@5"=2'-9"	2'-4"	2'-4"	49@7"=28'-8 ¹ / ₄ "	38@6"=19'-1 ³ / ₄ "	9'-5"	9'-5"	8@6"=3'-9"	2'-4"	2'-5 ¹ / ₂ "	31@7"=18'-2 ¹ / ₂ "	43@6"=21'-8"
8	51@5"=21'-3"	61@6"=30'-7 ¹ / ₂ "	1'-2 ¹ / ₂ "	1'-0"	23@5"=9'-7 ¹ / ₂ "	2'-4 ¹ / ₂ "	2'-4 ¹ / ₂ "	41@7"=23'-7 ¹ / ₂ "	25@7"=14'-9"	9'-5"	9'-5"	7@5"=2'-9"	2'-4"	2'-4"	57@6"=28'-8 ¹ / ₄ "	38@6"=19'-1 ³ / ₄ "	9'-5"	9'-5"	8@6"=3'-9"	2'-4"	2'-5 ¹ / ₂ "	31@7"=18'-2 ¹ / ₂ "	43@6"=21'-8"
9	51@5"=21'-3"	61@6"=30'-7 ¹ / ₂ "	1'-2 ¹ / ₂ "	1'-0"	23@5"=9'-7 ¹ / ₂ "	2'-4 ¹ / ₂ "	2'-4 ¹ / ₂ "	41@7"=23'-7 ¹ / ₂ "	25@7"=14'-9"	9'-5"	9'-5"	7@5"=2'-9"	2'-4"	2'-4"	57@6"=28'-8 ¹ / ₄ "	38@6"=19'-1 ³ / ₄ "	9'-5"	9'-5"	8@6"=3'-9"	2'-4"	2'-5 ¹ / ₂ "	31@7"=18'-2 ¹ / ₂ "	43@6"=21'-8"
10	51@5"=21'-3"	61@6"=30'-7 ¹ / ₂ "	1'-2 ¹ / ₂ "	1'-0"	23@5"=9'-7 ¹ / ₂ "	2'-4 ¹ / ₂ "	2'-4 ¹ / ₂ "	41@7"=23'-7 ¹ / ₂ "	25@7"=14'-9"	9'-5"	9'-5"	7@5"=2'-9"	2'-4"	2'-4"	57@6"=28'-8 ¹ / ₄ "	38@6"=19'-1 ³ / ₄ "	9'-5"	9'-5"	8@6"=3'-9"	2'-4"	2'-5 ¹ / ₂ "	31@7"=18'-2 ¹ / ₂ "	43@6"=21'-8"
11	51@5"=21'-3"	61@6"=30'-7 ¹ / ₂ "	1'-2 ¹ / ₂ "	1'-0"	23@5"=9'-7 ¹ / ₂ "	2'-4 ¹ / ₂ "	2'-4 ¹ / ₂ "	41@7"=23'-7 ¹ / ₂ "	25@7"=14'-9"	9'-5"	9'-5"	7@5"=2'-9"	2'-4"	2'-4"	49@7"=28'-8 ¹ / ₄ "	38@6"=19'-1 ³ / ₄ "	9'-5"	9'-5"	8@6"=3'-9"	2'-4"	2'-5 ¹ / ₂ "	31@7"=18'-2 ¹ / ₂ "	43@6"=21'-8"
12	51@5"=21'-3"	61@6"=30'-7 ¹ / ₂ "	1'-2 ¹ / ₂ "	1'-0"	23@5"=9'-7 ¹ / ₂ "	2'-4 ¹ / ₂ "	2'-4 ¹ / ₂ "	41@7"=23'-7 ¹ / ₂ "	25@7"=14'-9"	9'-5"	9'-5"	7@5"=2'-9"	2'-4"	2'-4"	49@7"=28'-8 ¹ / ₄ "	38@6"=19'-1 ³ / ₄ "	9'-5"	9'-5"	8@6"=3'-9"	2'-4"	2'-5 ¹ / ₂ "	31@7"=18'-2 ¹ / ₂ "	43@6"=21'-8"
13	51@5"=21'-3"	61@6"=30'-7 ¹ / ₂ "	0'-10 ¹ / ₁₆ "	1'-0"	23@5"=9'-7 ¹ / ₂ "	2'-3 ¹ / ₂ "	2'-4 ¹ / ₂ "	41@7"=23'-7 ¹ / ₂ "	25@7"=14'-5.44"	9'-5"	9'-5"	7@5"=2'-8"	2'-5"	2'-4"	49@7"=28'-8 ¹ / ₄ "	36@6"=17'-9 ¹ / ₂ "	9'-5"	9'-5"	7@6"=3'-7 ¹ / ₂ "	2'-4 ³ / ₈ "	2'-6 ³ / ₈ "	31@7"=18'-2 ¹ / ₂ "	43@6"=21'-4.128"
14	51@5"=21'-3"	60@6"=29'-9"	1'-5 ¹ / ₂ "	1'-2"	22@5"=9'-2"	2'-6"	2'-4"	41@7"=23'-7 ¹ / ₂ "	25@7"=14'-2.37	9'-5"	9'-5"	7@5"=2'-8"	2'-4"	2'-4"	49@7"=28'-8 ¹ / ₄ "	37@6"=18'-5.3"	9'-5"	9'-5"	7@6"=3'-6.8"	2'-4"	2'-4"	31@7"=18'-2 ¹ / ₂ "	43@6"=21'-3 ¹ / ₂ "
15	51@5"=21'-3"	60@6"=29'-9"	1'-5 ¹ / ₂ "	1'-2"	22@5"=9'-2"	2'-6"	2'-4"	41@7"=23'-7 ¹ / ₂ "	25@7"=14'-2.37	9'-5"	9'-5"	7@5"=2'-8"	2'-4"	2'-4"	49@7"=28'-8 ¹ / ₄ "	37@6"=18'-5.3"	9'-5"	9'-5"	7@6"=3'-6.8"	2'-4"	2'-4"	31@7"=18'-2 ¹ / ₂ "	43@6"=21'-3 ¹ / ₂ "



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PLOT DATE =	CHECKED - DNB	REVISED -

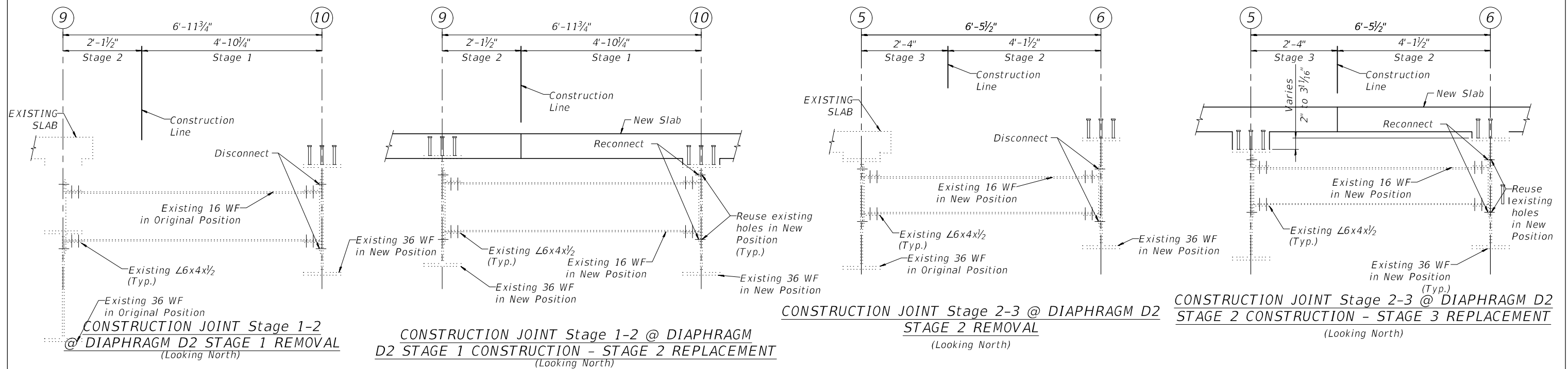
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL FRAMING - TYPICAL BEAM STUD ELEVATION,
STRUCTURE NO. 016-0321

SHEET 42 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	447
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

DATE = sDate\$



CONSTRUCTION PROCEDURE

1. Install temporary concrete barriers & signs for traffic control.
2. Install Protective Shield for Stage 1.
3. Install Temporary Sheet Piling.
4. Remove existing Stage One Deck Slab.
5. Remove existing Back Wall @ Stage One down to T/Abutment.
6. Add new Diaphragms D6 & D7 between Beams 11 & 12 on Sheets 40 & 44.
7. Disconnect existing D1, D2, & D3 diaphragms from Beam 10 web @ Stage Line 1-2.
8. Jack existing steel beams in Stage One and provide temporary cribbing. Use Pay Item Jacking Existing Superstructures for this work.
9. Remove existing Bearings. Use Pay Item Removal of Existing Bearings for this work.
10. Install New Bearings with steel extensions at Piers 1, 2, & 3.
11. Clean steel beams.
12. Install cover plate
13. Install New Studs on Existing 36 WF Beams as shown.
14. Form & pour New Back Wall and New T/Abutment to Construction Stage Line 1-2.
15. Let New Back Wall and Abutment Concrete cure.
16. Install New Bearings under existing 36 WF beams at Abutments.
17. Remove Temporary Cribbing.
18. Place New Stage 1 Concrete Deck and New Stage 1 Approach Slabs and cure.
19. Repeat Steps 1 - 7 for Stage 2 except as noted below.
20. Add new Diaphragms D6 & D7 between Beams 6 & 7 on Sheets 40 & 44 before disconnecting existing D1, D2, & D3 diaphragms from Beam 6 web @ Stage Line 2-3.
21. Reconnect Diaphragm connections to Beam 10.
22. Repeat Steps 8 - 18 for Stage 2.
23. Reconnect Diaphragm connections to Beam 6.
24. Repeat Steps 1 - 5 & 7 for Stage Three except as noted below.
25. Reconnect Diaphragm connections to Beam 6.
26. Repeat Steps 8 - 18 for Stage 3.

Note F:
Contractor note existing connectors are 3/4"Ø rivets.

Note H:
Thickness of existing web of 36WF is 5/8".

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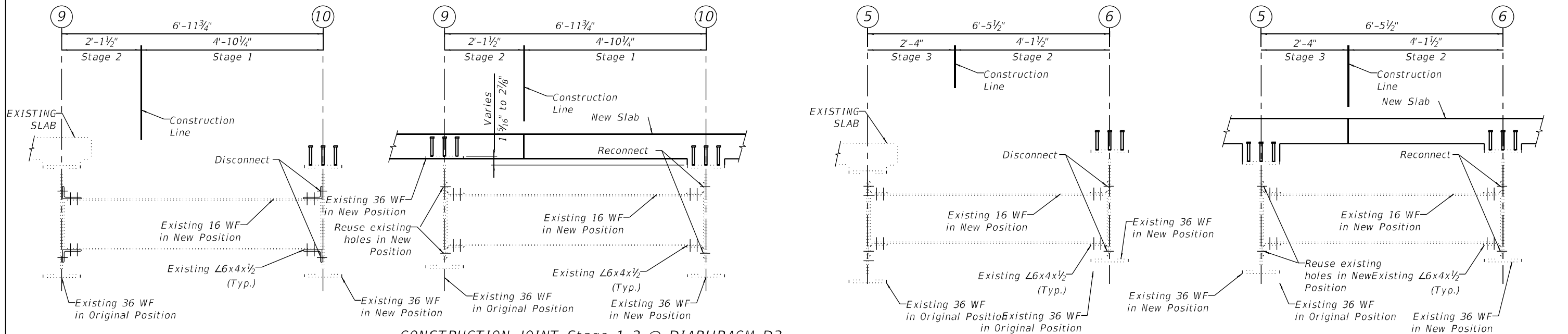
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STEEL FRAMING - DIAPHRAGM MODIFICATIONS
STRUCTURE NO. 016-0321**

SHEET 43 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	448
CONTRACT NO. 60R49				
		ILLINOIS	FED. AID PROJECT	

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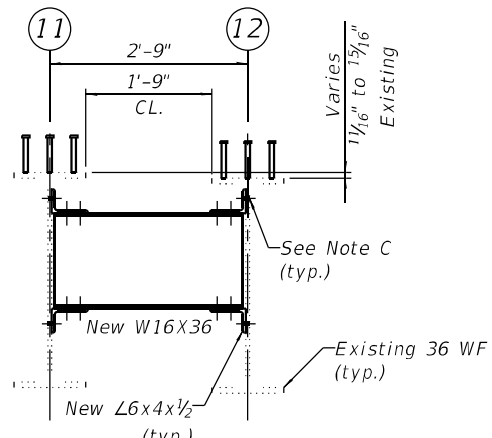


CONSTRUCTION JOINT Stage 1-2 @ DIAPHRAGM D3
STAGE 1 REMOVAL
 (Looking North)

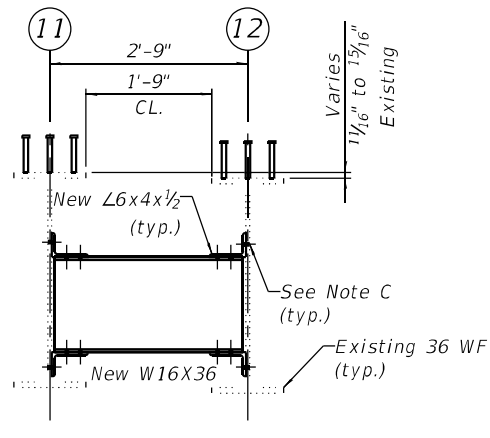
CONSTRUCTION JOINT Stage 1-2 @ DIAPHRAGM D3
STAGE 1 CONSTRUCTION - STAGE 2 REPLACEMENT
 (Looking North)

CONSTRUCTION JOINT Stage 2-3 @ DIAPHRAGM D3
STAGE 2 REMOVAL
 (Looking North)

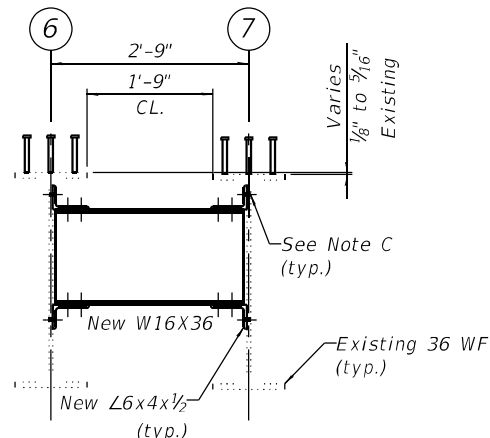
CONSTRUCTION JOINT Stage 2-3 @ DIAPHRAGM D3
STAGE 2 CONSTRUCTION - STAGE 3 REPLACEMENT
 (Looking North)



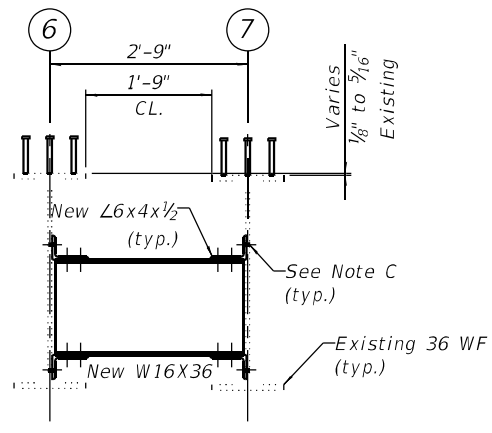
EXISTING CONSTRUCTION JOINT
Stage 1 @ DIAPHRAGM D6
 (Looking North)



EXISTING CONSTRUCTION JOINT
Stage 1 @ DIAPHRAGM D7
 (Looking North)



EXISTING CONSTRUCTION JOINT
Stage 2 @ DIAPHRAGM D6
 (Looking North)



EXISTING CONSTRUCTION JOINT
Stage 2 @ DIAPHRAGM D7
 (Looking North)

Note C:
 Field drill (8) new holes in Existing 36 WF web to match existing bolt pattern & diameter as used @ other D2 Diaphragms.

Note E:
 Use Pay Item Furnishing and Erecting Structural Steel for new diaphragms.

Note F:
 Use Pay Item Structural Steel Repairs for field drilling and relocating diaphragms.

Note G:
 Contractor note existing connectors are 3/4"Ø rivets.

FILE = \$File\$

THE HOH GROUP, INC.
 ARCHITECTS | ENGINEERS
 PN: 3730

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PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DRAWN - JPM	REVISED -
	CHECKED -	REVISED -

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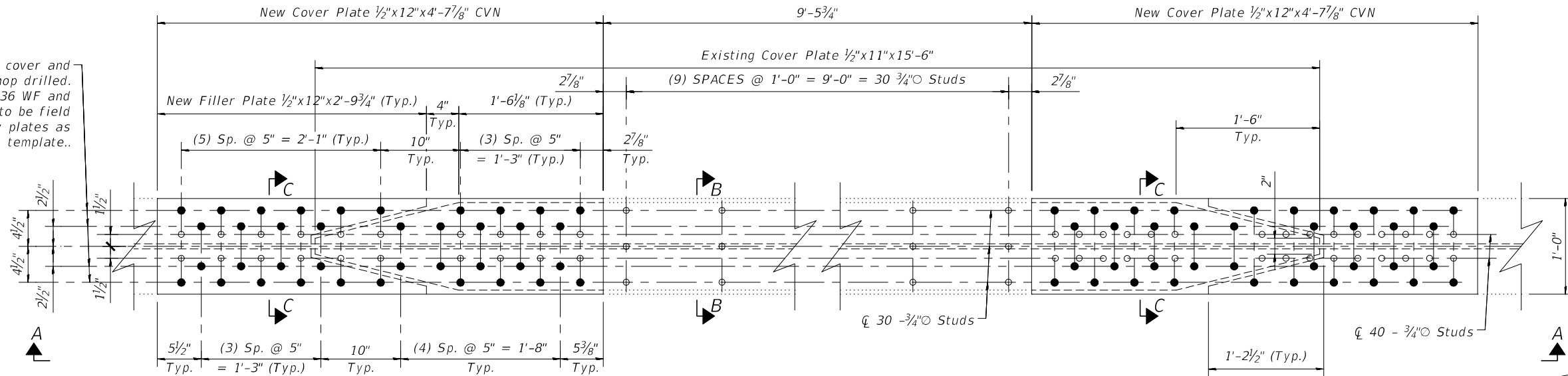
STEEL FRAMING - DIAPHRAGM MODIFICATIONS
STRUCTURE NO. 016-0321

SHEET 44 OF 63 SHEETS

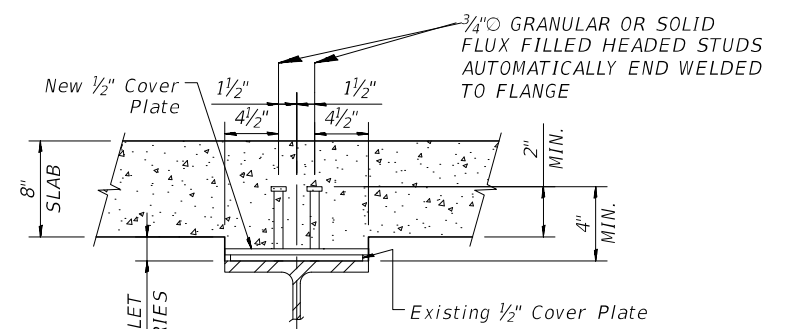
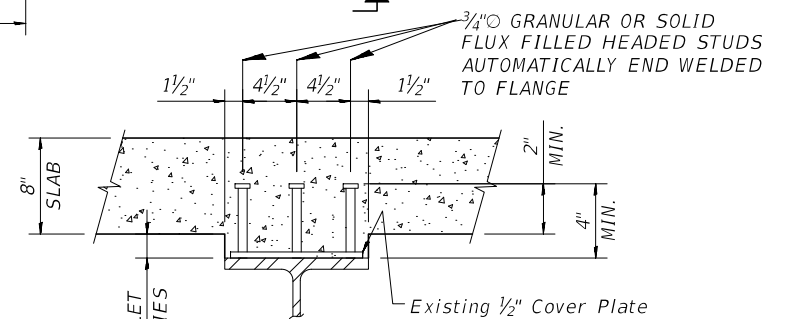
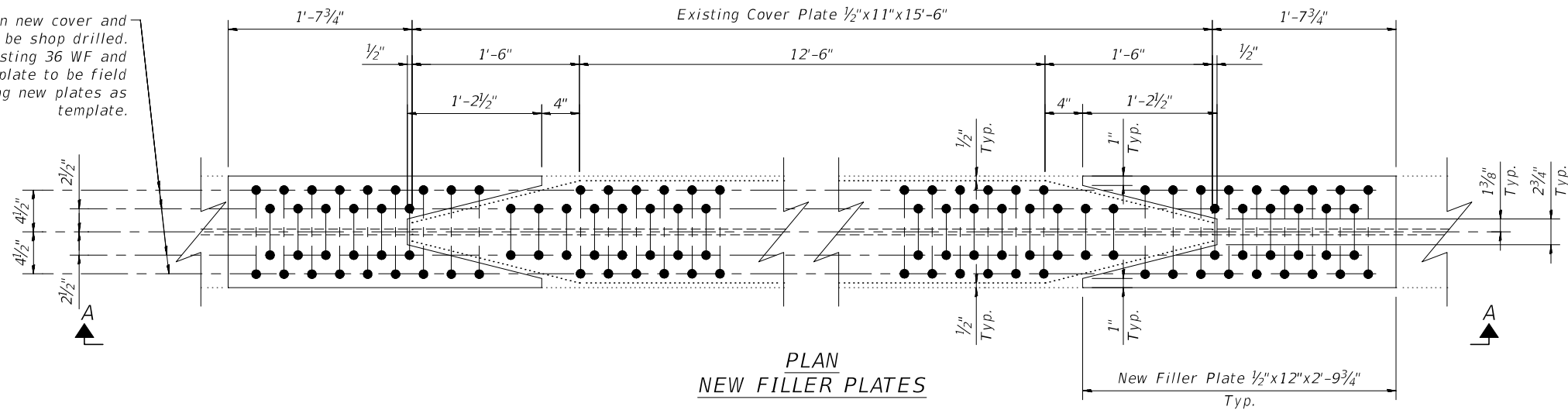
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	449
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

DATE = \$Date\$

All holes in new cover and filler plates to be shop drilled. All holes in existing 36 WF and existing cover plate to be field drilled using new plates as template..



All holes in new cover and filler plates to be shop drilled. All holes in existing 36 WF and existing cover plate to be field drilled using new plates as template.



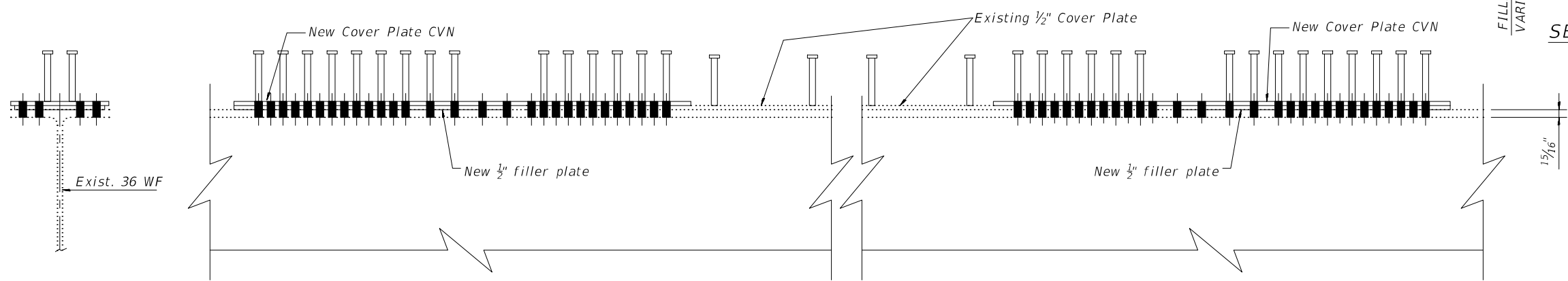
Notes: All Holes are $\varnothing 5/8"$ for $\varnothing 7/8"$ bolts. New Cover Plates holes, shop drilled. Existing beams and existing cover plate holes, field drilled.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures". All contact surfaces on this sheet shall be treated as primary connections.

Cover $R @$ Piers 2 & 3 Only

Use Pay Item Structural Steel Repairs for field drillings.

Use pay item Furnishing And Erecting Structural Steel for the cover plate and filler plates, field drilled holes and 7/8" bolts shown on this sheet.



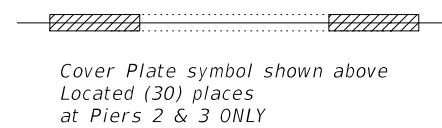
SECTION A - A

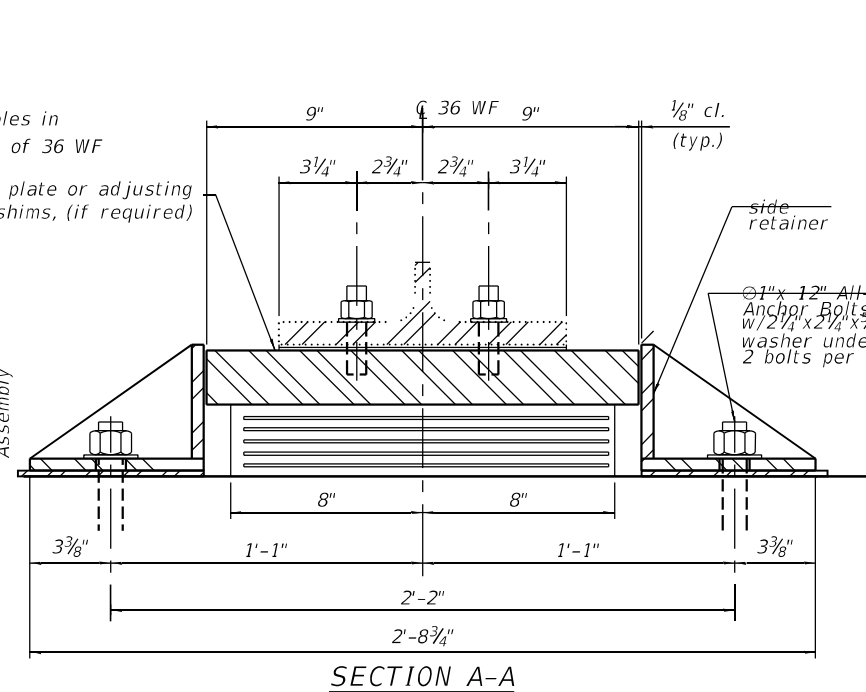
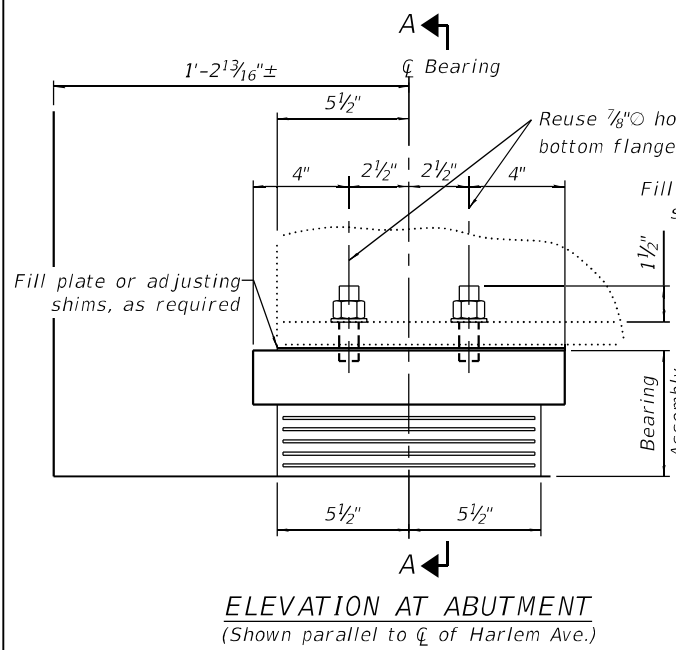
Note: CVN denotes Charpy-V-Notch impact energy requirements, zone 2.

BILL OF MATERIAL

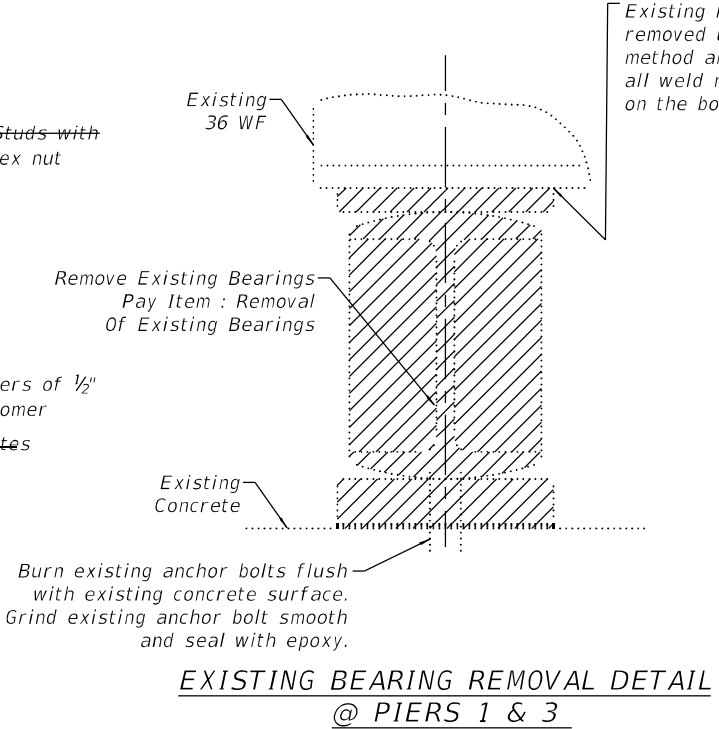
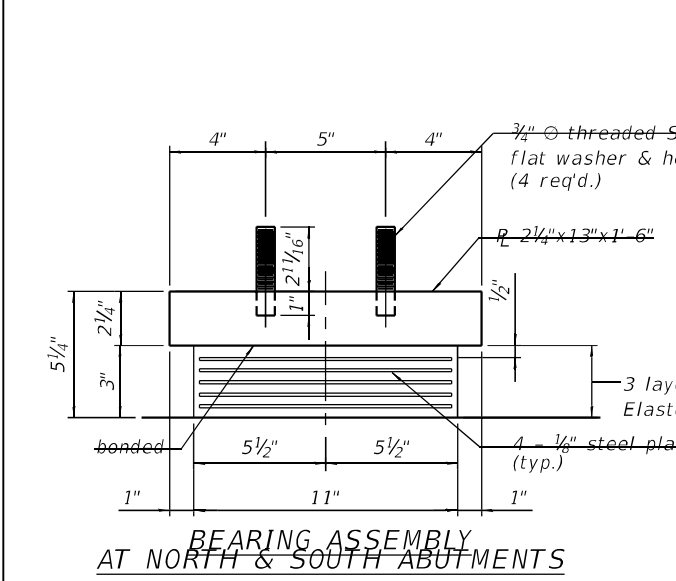
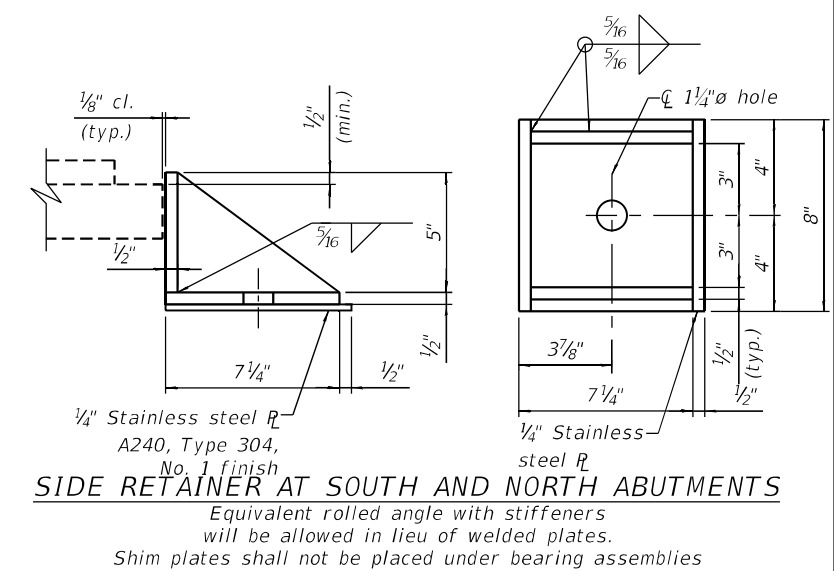
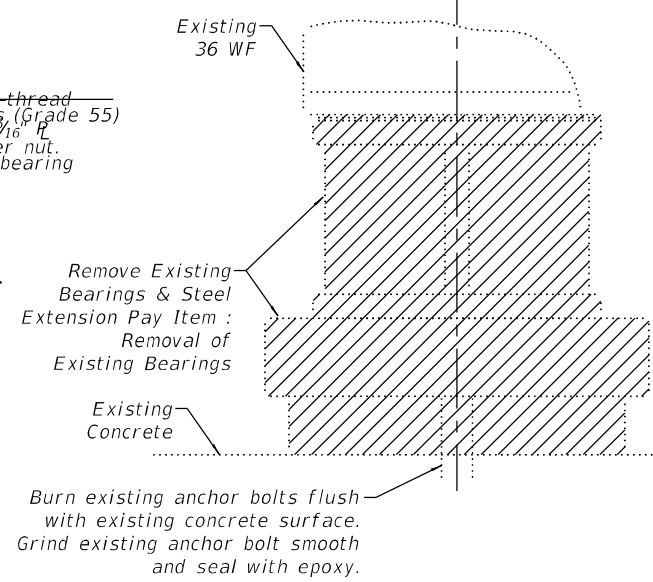
Item	Unit	Total
Structural Steel Repair	Lump Sum	1

For Cover Plate locations see Sht. 40.

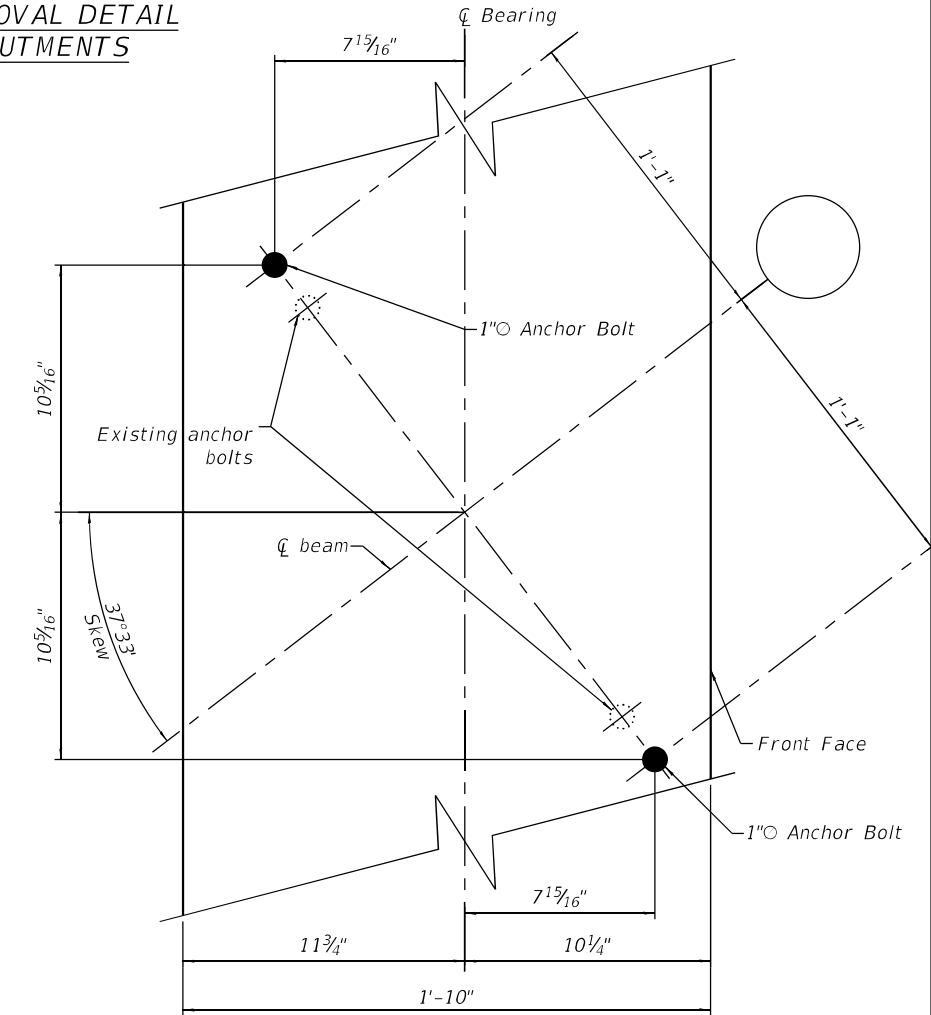




TYPE I ELASTOMERIC EXPANSION BEARING AT NORTH & SOUTH ABUTMENTS



NOTES:
Anchor bolts shall be ASTM F1554 (Grade 55) all-thread (or an Engineer - approved alternate material) of the grade(s) and diameters specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts for Type I 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.
Side retainers and stainless steel plates required for the elastomeric bearing assembly shall be included in the cost of the Elastomeric Bearing Assembly, Type I.
Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.
See Sheet 43 for sequence of removal of existing bearings and jacking existing super structure.
Prior to ordering any material, the contractor shall verify in the field all bearing height and shim thickness dimensions.



FILL PLATE TABLE

Abutment	South														
Beam No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Fill Plate Thickness (in.)	1/4"	3/16"	3/4"	5/16"	1/8"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
Abutment	North														
Beam No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Fill Plate Thickness (in.)	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"

BILL OF MATERIAL - 2 ABUTMENTS

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	30
Anchor Bolts, 1"	Each	60
Removal of Existing Bearings	Each	30

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BEARING DETAILS - SHEET 1 OF 3
STRUCTURE NO. 016-0321

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	451

CONTRACT NO. 60R49

FILE = \$File\$

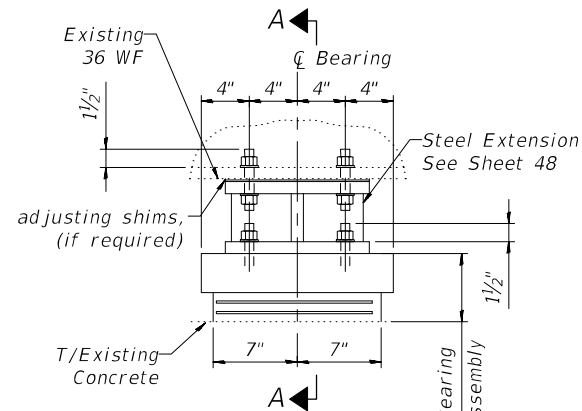
DATE = \$Date\$

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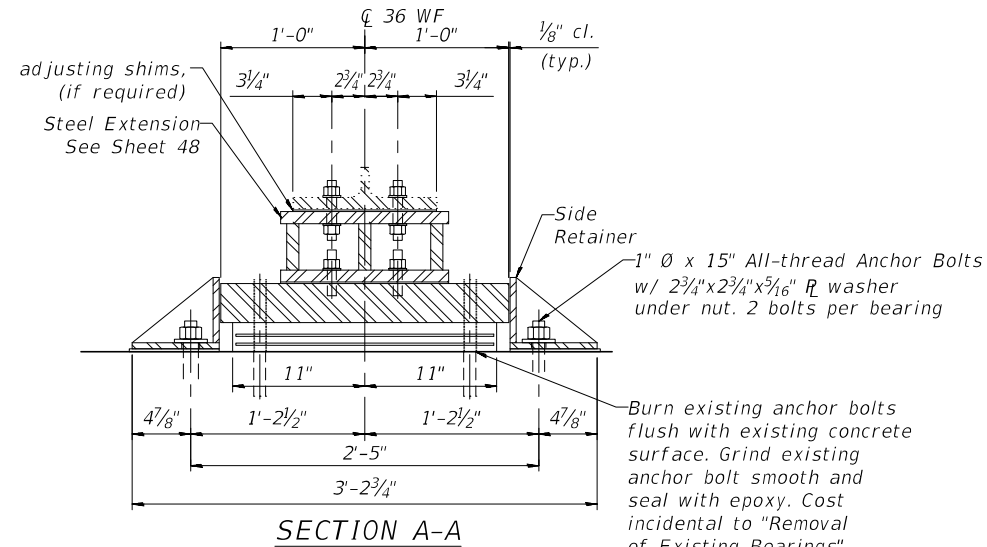
USER NAME =	DESIGNED - RS	REVISED -
PLOT SCALE =	CHECKED - DNB	REVISED -
PN: 3730	DRAWN - JPM	REVISED -
PLOT DATE =	CHECKED - DNB	REVISED -

SHEET 46 OF 63 SHEETS

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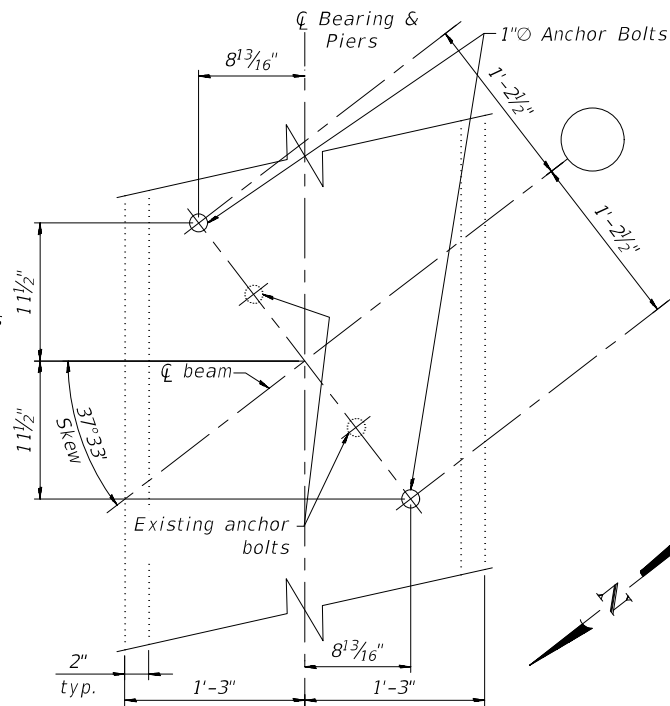


ELEVATION AT PIER #1 & #3
(Shown parallel to \bar{C} of Harlem Ave.)

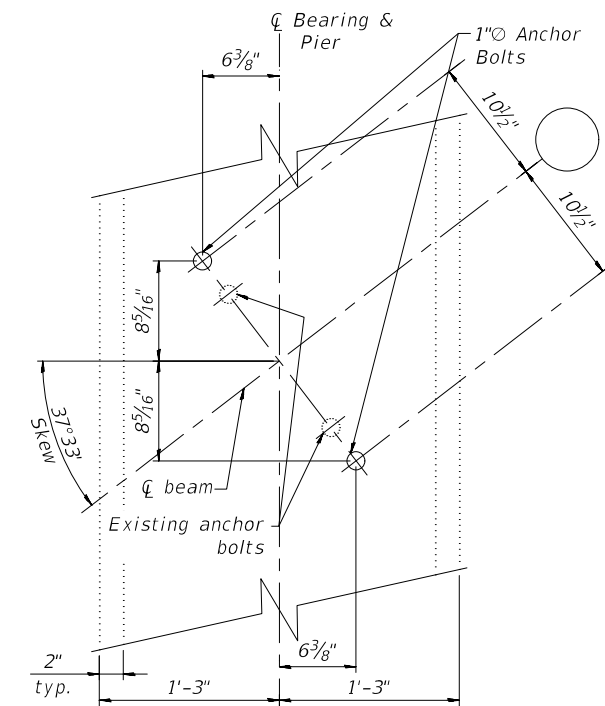


SECTION A-A

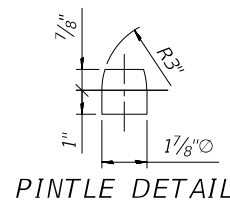
TYPE I ELASTOMERIC EXPANSION BEARING AT PIER #1 & #3



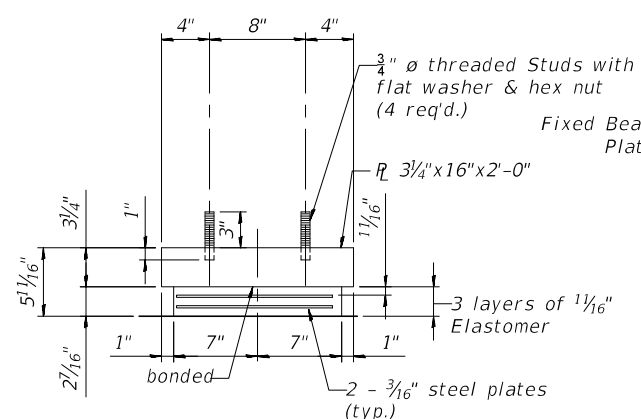
TYPICAL ANCHOR BOLT PLAN AT PIERS #1 & #3
(Pier #1 shown)



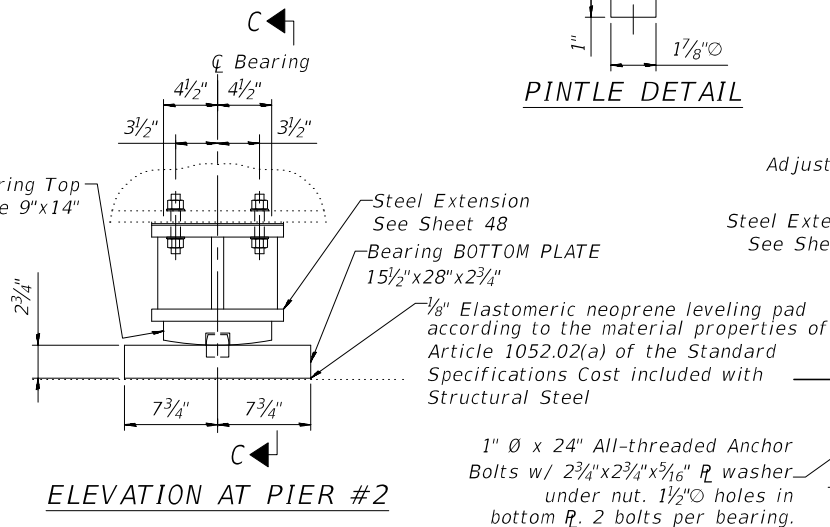
TYPICAL ANCHOR BOLT PLAN AT PIER #2



PINTLE DETAIL

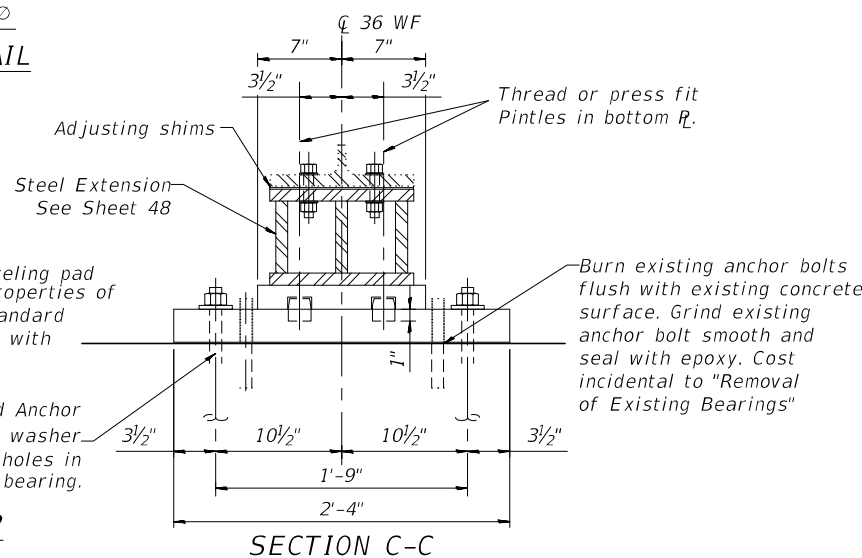


BEARING ASSEMBLY AT PIER #1 & #3



ELEVATION AT PIER #2

FIXED BEARING AT PIER #2



SECTION C-C

BILL OF MATERIAL - 3 PIERS

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	30
Furnishing And Erecting Structural Steel	Pounds	18,976
Anchor Bolts, 1"	Each	90
Removal of Existing Bearings	Each	45

NOTES:
Anchor bolts shall be ASTM F1554 (Grade 55) all-thread (or an Engineer - approved alternate material) of the grade(s) and diameters 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 Type I 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.

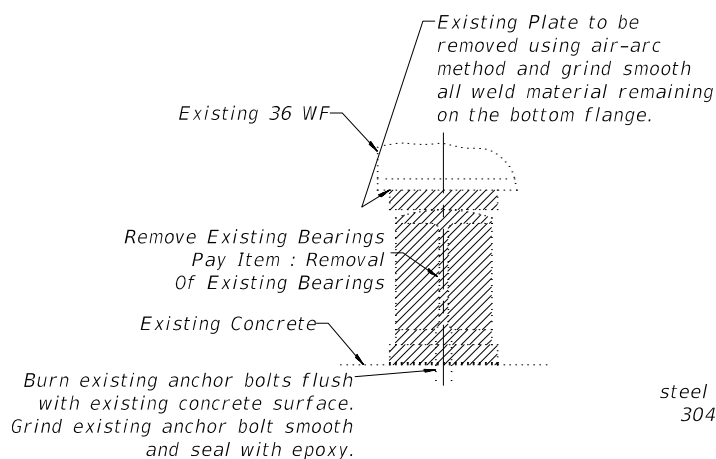
Side retainers and stainless steel plates required for the Elastomeric bearing assembly shall be included in the cost of the Elastomeric Bearing Assembly, Type I.

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

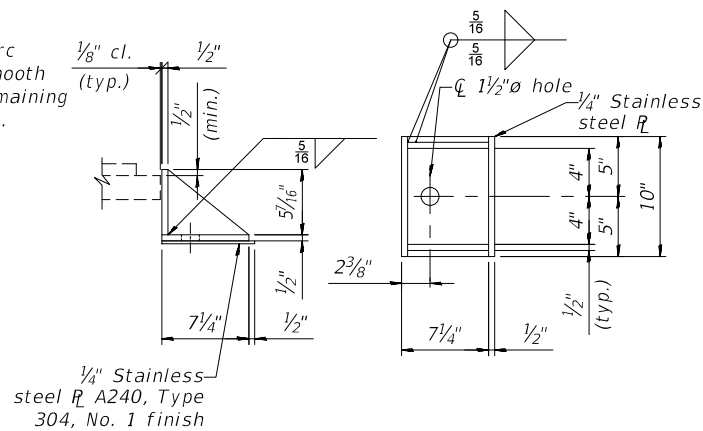
Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

See Sheet 43 for sequence of removal of existing bearings and jacking existing super structure.

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

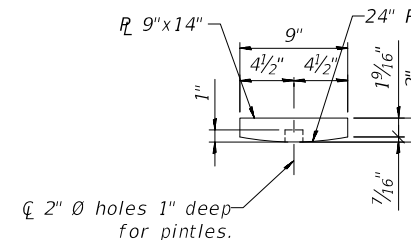


EXISTING BEARING REMOVAL DETAIL @ PIER 2



SIDE RETAINER AT PIERS #1 & #3

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Shim plates shall not be placed under bearing assemblies



FIXED BEARING TOP PLATE DETAIL

FILE = sFileA5

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PLOT SCALE =
PLOT DATE =

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DRAWN - JPM
CHECKED - DNB

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

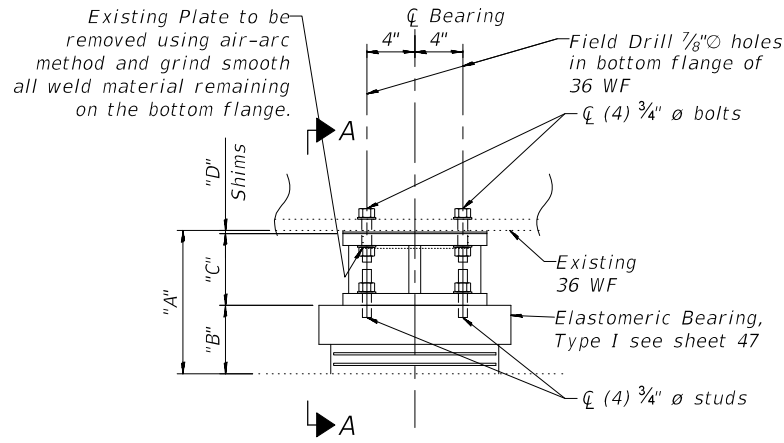
BEARING DETAILS - SHEET 2 OF 3
STRUCTURE NO. 016-0321

SHEET 47 OF 63 SHEETS

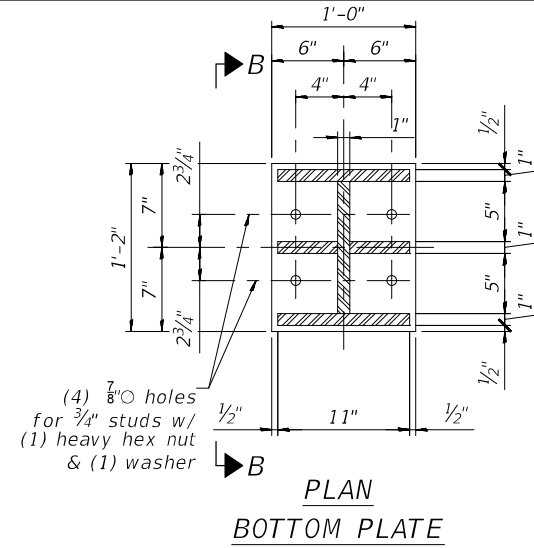
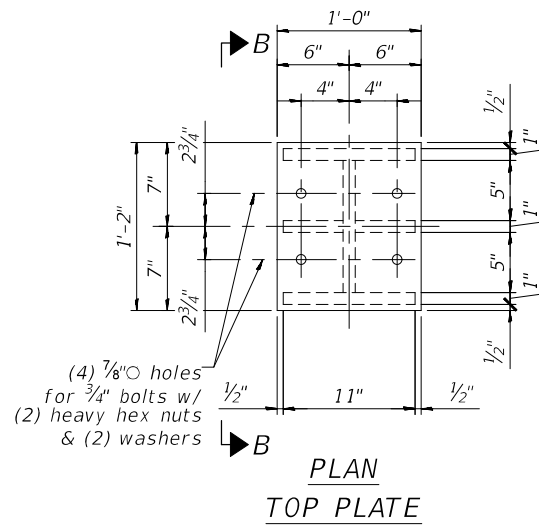
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	452
CONTRACT NO. 60R49				

ILLINOIS FED. AID PROJECT

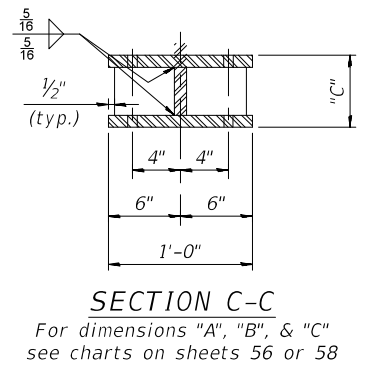
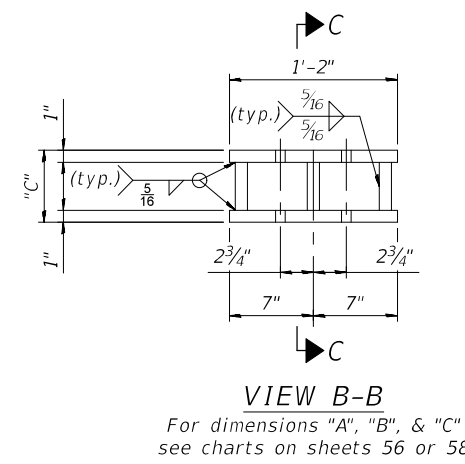
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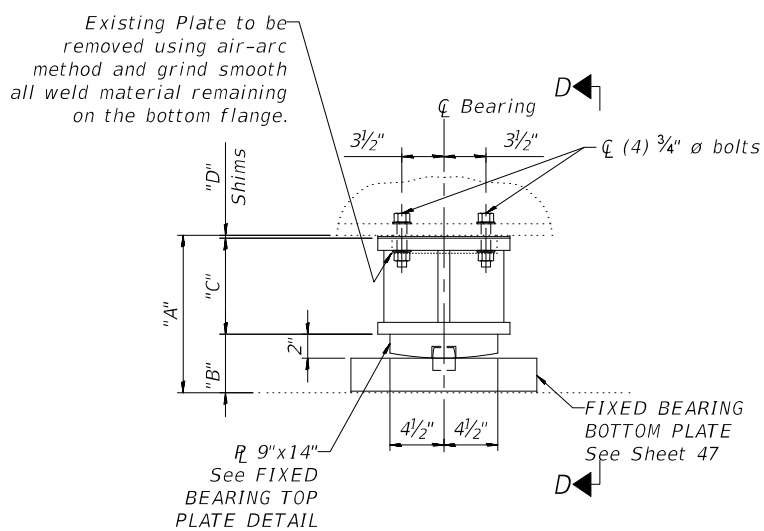
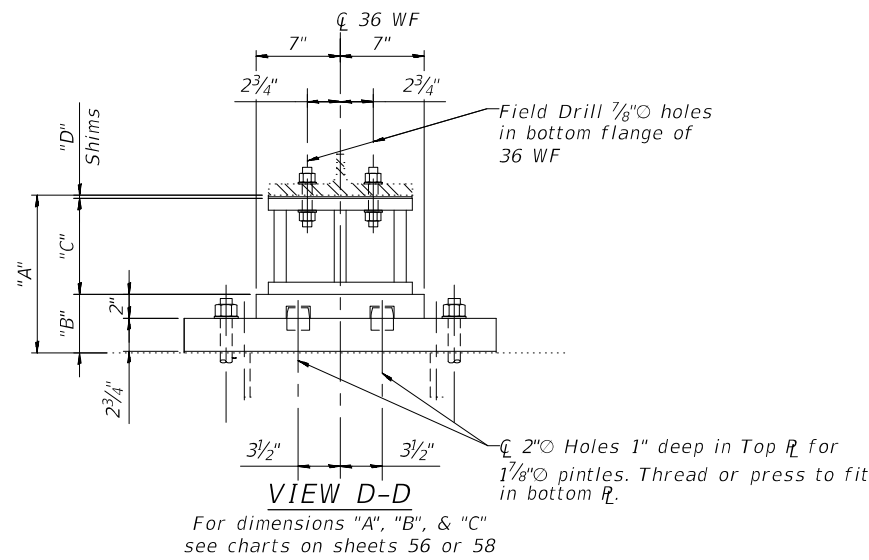
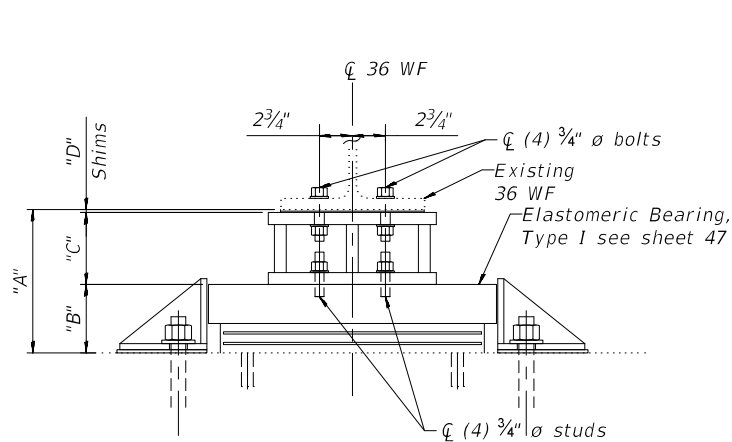
STEEL EXTENSION ELEVATIONS - PIERS #1 & #3
For dimensions "A", "B", & "C" see charts on sheets 56 or 58



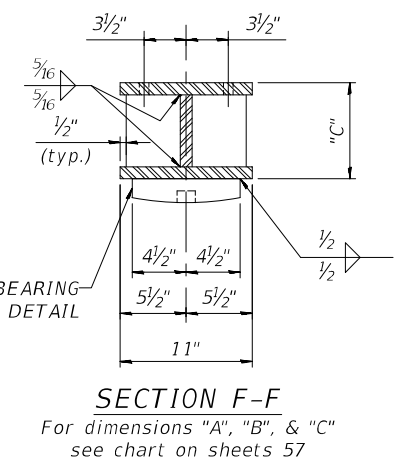
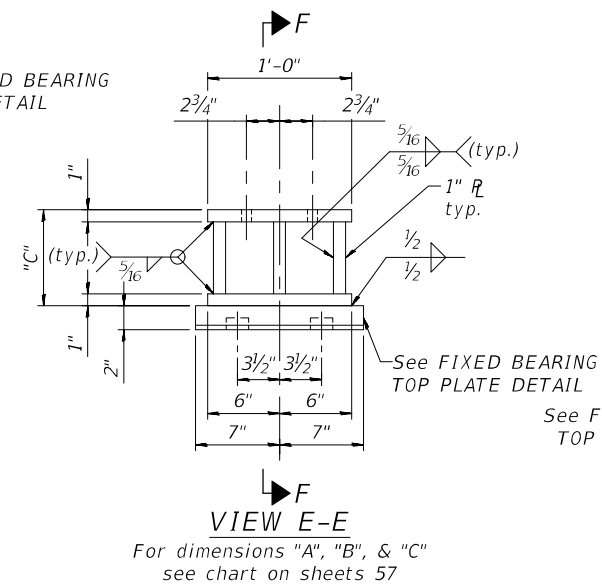
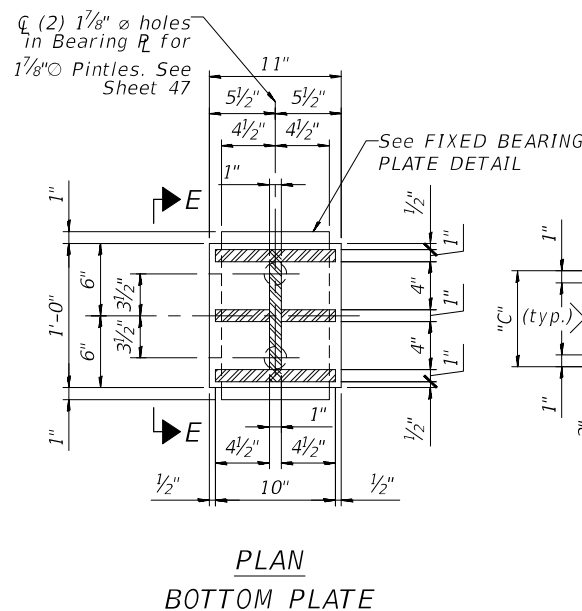
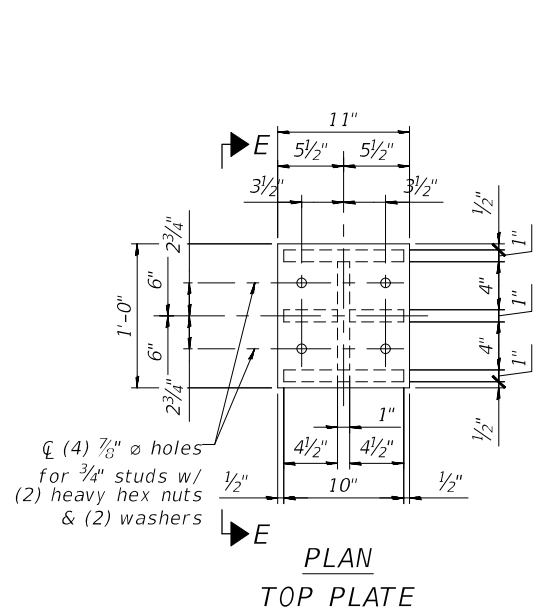
STEEL EXTENSION DETAILS - PIERS #1 & #3



Use Pay Item Structural Steel Repairs for field drillings.



STEEL EXTENSION ELEVATIONS - PIER#2
For dimensions "A", "B", & "C" see chart on sheets 57



STEEL EXTENSION DETAILS - PIER #2

FILE = sFileA5

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	CHECKED - DNB	REVISED -

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DEPARTMENT OF TRANSPORTATION

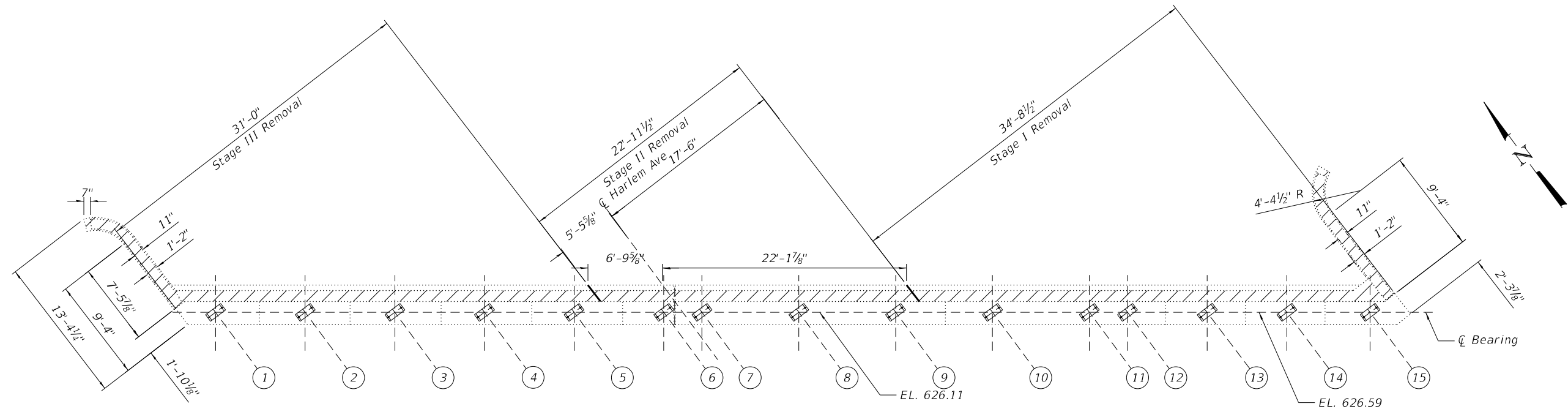
BEARING DETAILS - SHEET 3 OF 3
STRUCTURE NO. 016-0321

SHEET 48 OF 63 SHEETS

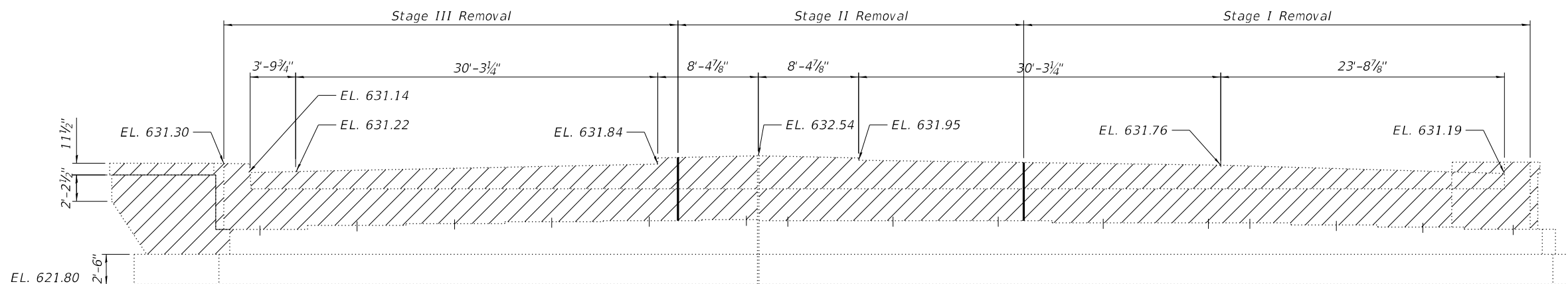
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z1-R&RS	COOK	659	453
CONTRACT NO. 60R49				

ILLINOIS FED. AID PROJECT

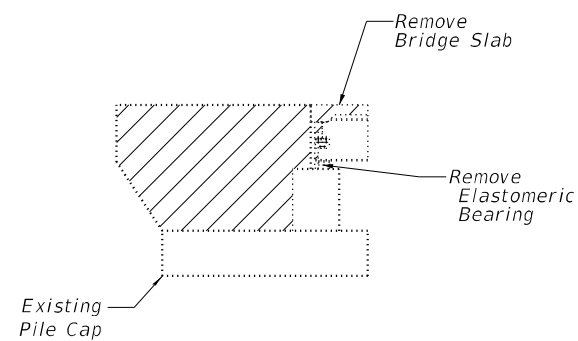
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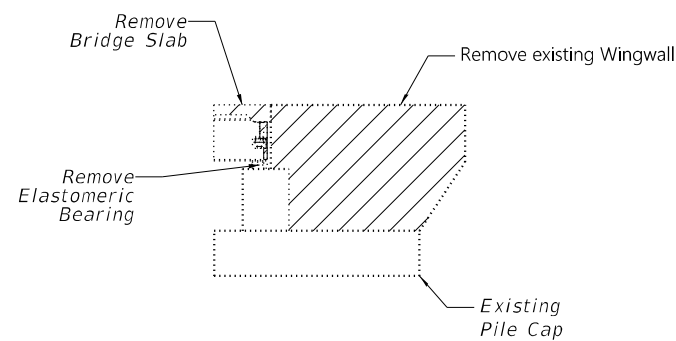
NORTH ABUTMENT - PLAN



NORTH ABUTMENT - ELEVATION



WEST WINGWALL- ELEVATION



EAST WINGWALL- ELEVATION

BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
Concrete Removal	CU. YD	23.6

FILE NAME: H:\Projects\3730\Drawings\CADD_SHEETS\STRUCTURAL\0321-Harlem-CSXI\Design Drawings\0160321-1-60R49-049.dgn

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PLOT DATE =	DRAWN - HE	REVISED -
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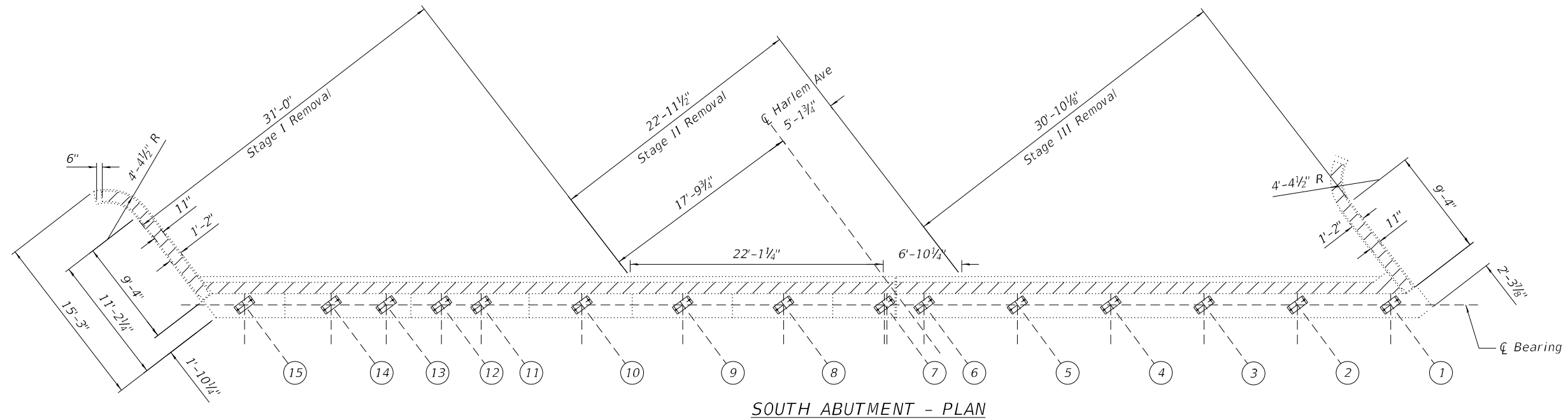
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**REMOVAL DETAILS - NORTH ABUTMENT
STRUCTURE NO. 016-0321**

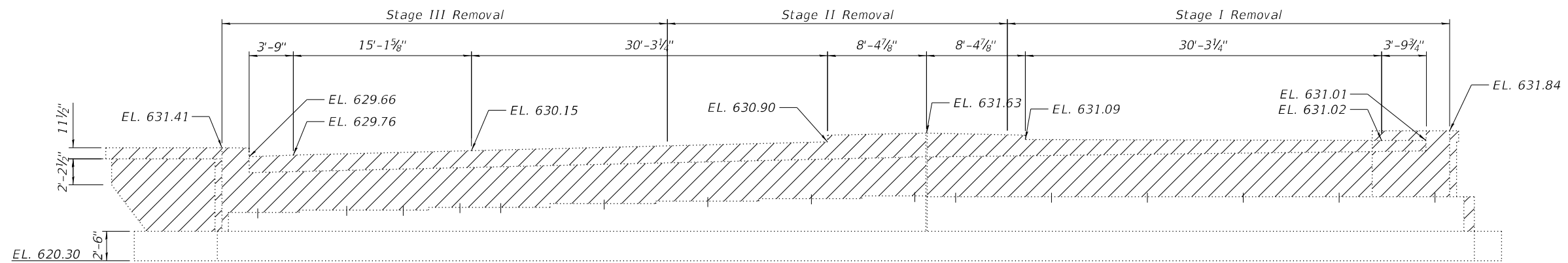
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	454
CONTRACT NO. 60R49				

SHEET 49 OF 63 SHEETS

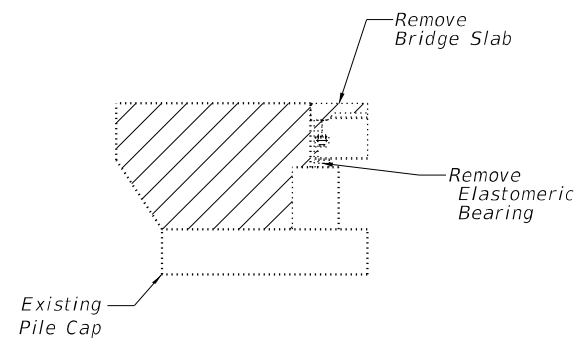
ILLINOIS FED. AID PROJECT



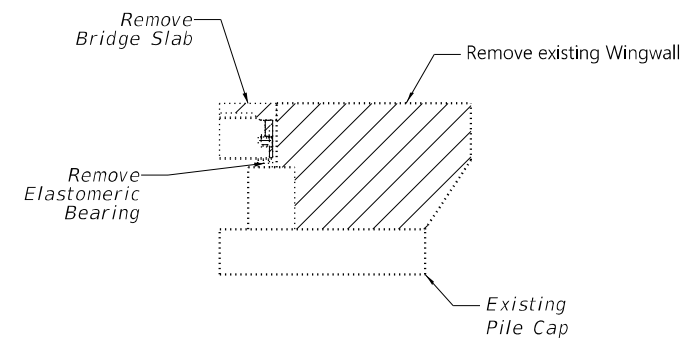
SOUTH ABUTMENT - PLAN



SOUTH ABUTMENT - ELEVATION



WEST WINGWALL- ELEVATION



EAST WINGWALL- ELEVATION

BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
Concrete Removal	CU. YD	18.8

FILE NAME: H:\Projects\3730\Drawings\CADD_SHEETS\STRUCTURAL\0321-Harlem-CSXI\Design_Drawings\0160321-60R49-050.dgn

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	CHECKED - DNB	REVISED -

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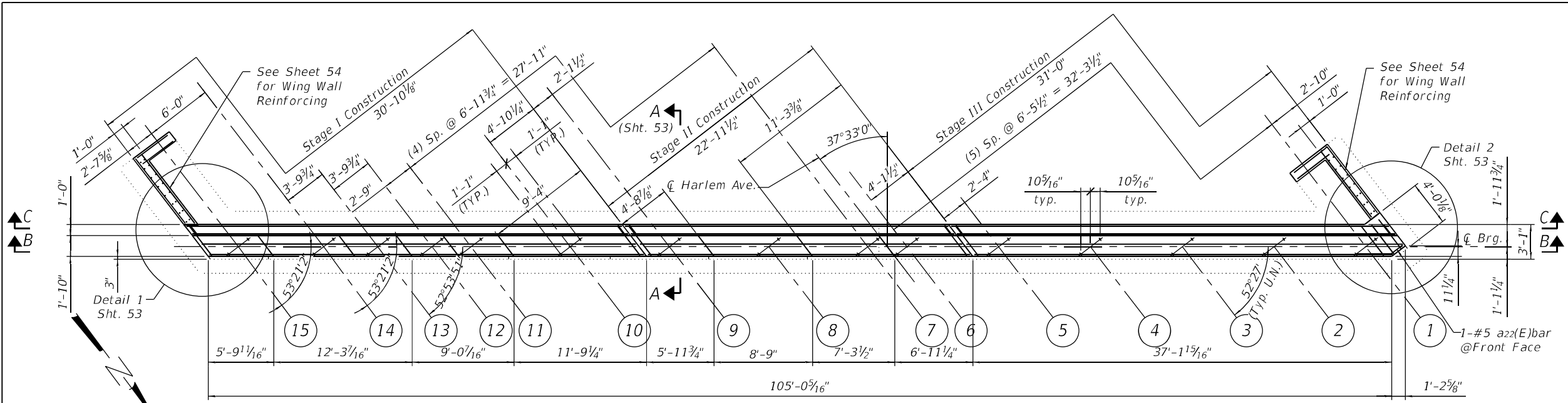
REMOVAL DETAILS - SOUTH ABUTMENT
STRUCTURE NO. 016-0321

SHEET 50 OF 63 SHEETS

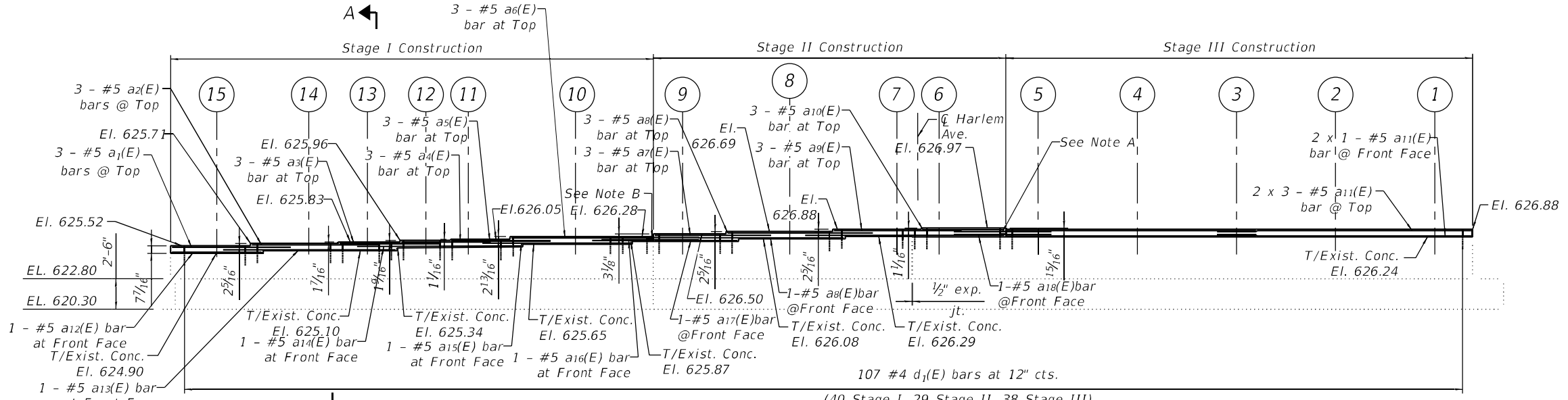
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	455
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₁ (E)	3	#5	9'-8"	—
a ₂ (E)	3	#5	10'-4"	—
a ₃ (E)	3	#5	8'-3"	—
a ₄ (E)	3	#5	7'-3"	—
a ₅ (E)	3	#5	8'-0"	—
a ₆ (E)	3	#5	11'-6"	—
a ₇ (E)	3	#5	9'-6"	—
a ₈ (E)	4	#5	11'-11"	—
a ₉ (E)	3	#5	10'-5"	—
a ₁₀ (E)	3	#5	6'-8"	—
a ₁₁ (E)	8	#5	20'-10"	—
a ₁₂ (E)	1	#5	7'-4"	—
a ₁₃ (E)	1	#5	14'-2"	—
a ₁₄ (E)	1	#5	13'-6"	—
a ₁₅ (E)	1	#5	12'-2"	—
a ₁₆ (E)	1	#5	4'-10"	—
a ₁₇ (E)	1	#5	6'-9"	—
a ₁₈ (E)	1	#5	16'-4"	—
a ₁₉ (E)	2	#5	38'-11"	—
a ₂₀ (E)	2	#5	28'-8"	—
a ₂₁ (E)	4	#5	21'-1"	—
a ₂₂ (E)	1	#5	4'-6"	—
d ₁ (E)	107	#4	4'-9"	□
d ₂ (E)	102	#4	5'-1"	□
d ₃ (E)	5	#4	4'-11"	□
Structure Excavation		Cu. Yd.	275	
Concrete Structures		Cu. Yd.	9.1	
Reinforcement Bars, Epoxy Coated		Pound	1,550	
Granular Backfill for Structures		Cu. Yd.	130	
Geocomposite Wall Drain		Sq. Yd.	88	
Pipe Underdrains for Structures, 4"		Feet	116	



SOUTH ABUTMENT - PLAN



SECTION B-B
(Looking South @ \bar{C} of Bearing)

Note A:
3 - Bar Splicers(E) for #5a₁₀(E) Bars @ Top
1 - Bar Splicers(E) for #5a₁₈(E) Bars @ Front Face

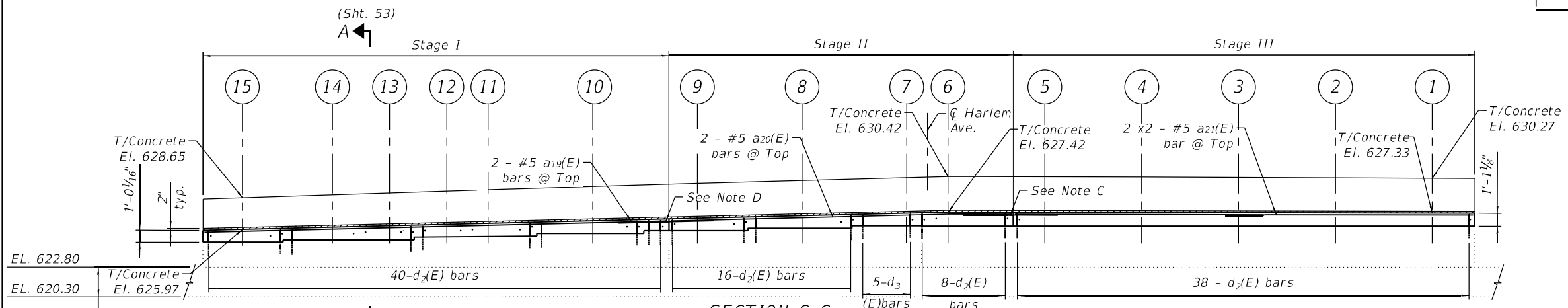
Note B:
3 - Bar Splicers(E) for #5a₆(E) Bars @ Top
1 - Bar Splicers(E) for #5a₁₆(E) Bars @ Front Face

Note C:
2 - Bar Splicers(E) for #5a₂₀(E) Bars @ Top

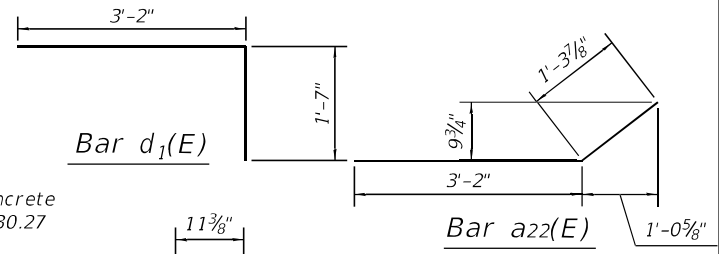
Note D:
2 - Bar Splicers(E) for #5a₁₉(E) Bars @ Top

Minimum Lap Lengths for Concrete Abutment Reinforcement			
	Bot Bars	Top Bars	
#5	3'-2"	3'-7"	CLASS B

Concrete Structure $f'_c=3500$ psi



SECTION C-C
(Looking South @ Front of Back Wall)



Reinforcement Dimension Table	
Pc Mark	"X"
d ₂ (E)	2'-0 1/2"
d ₃ (E)	1'-11 1/2"

Notes:
Bars indicated thus 4 x 2 - #5 etc. indicates 4 lines of bars with 2 lengths per line. Space reinforcement to miss anchor bolts.

FILE = sFile.e5

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PN: 3730

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	CHECKED - DNB	REVISED -

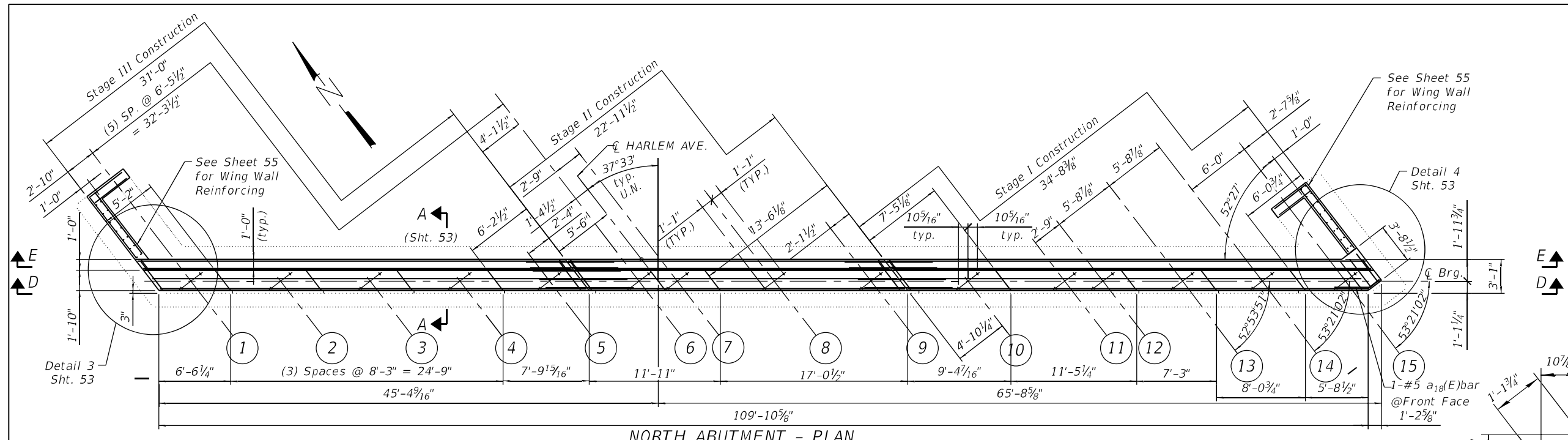
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT - PLAN, ELEVATION, SECTIONS
STRUCTURE NO. 016-0321

SHEET 51 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	456
CONTRACT NO. 60R49				
		ILLINOIS	FED. AID PROJECT	

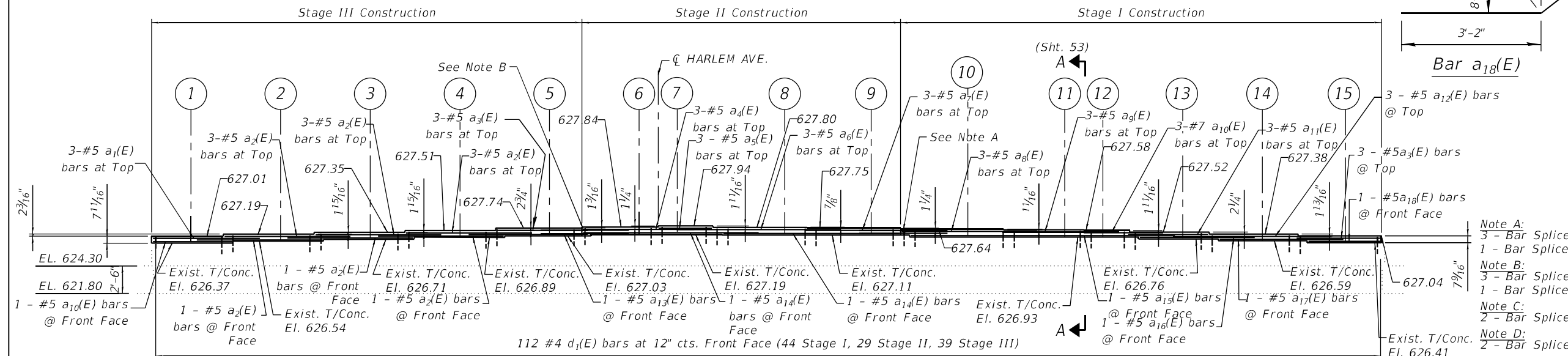
DATE = sDate\$



NORTH ABUTMENT - PLAN

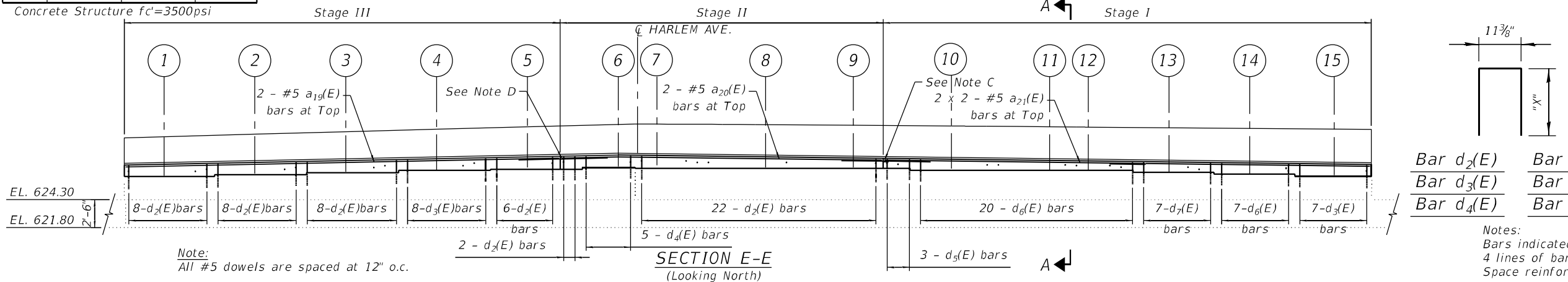
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₁ (E)	3	#5	9'-8"	▬
a ₂ (E)	12	#5	11'-5"	▬
a ₃ (E)	6	#5	7'-6"	▬
a ₄ (E)	3	#5	10'-0"	▬
a ₅ (E)	3	#5	4'-9"	▬
a ₆ (E)	3	#5	14'-10"	▬
a ₇ (E)	3	#5	8'-6"	▬
a ₈ (E)	3	#5	12'-3"	▬
a ₉ (E)	3	#5	10'-7"	▬
a ₁₀ (E)	4	#5	7'-2"	▬
a ₁₁ (E)	3	#5	7'-3"	▬
a ₁₂ (E)	3	#5	14'-4"	▬
a ₁₃ (E)	1	#5	10'-2"	▬
a ₁₄ (E)	2	#5	15'-11"	▬
a ₁₅ (E)	1	#5	23'-11"	▬
a ₁₆ (E)	1	#5	10'-5"	▬
a ₁₇ (E)	1	#5	11'-2"	▬
a ₁₈ (E)	1	#5	6'-6"	▬
a ₁₉ (E)	2	#5	38'-10"	▬
a ₂₀ (E)	2	#5	28'-8"	▬
a ₂₁ (E)	4	#5	23'-7"	▬
d ₁ (E)	112	#4	4'-8"	┘
d ₂ (E)	54	#4	5'-1"	┘
d ₃ (E)	15	#4	5'-0"	┘
d ₄ (E)	5	#4	4'-11"	┘
d ₅ (E)	3	#4	4'-6"	┘
d ₆ (E)	27	#4	4'-10"	┘
d ₇ (E)	7	#4	4'-8"	┘
Structure Excavation		Cu. Yd.	287	
Concrete Structures		Cu. Yd.	9.3	
Reinforcement Bars, Epoxy Coated		Pound	1,530	
Granular Backfill for Structures		Cu. Yd.	116	
Geocomposite Wall Drain		Sq. Yd.	83	
Pipe Underdrains for Structures, 4"		Feet	120	

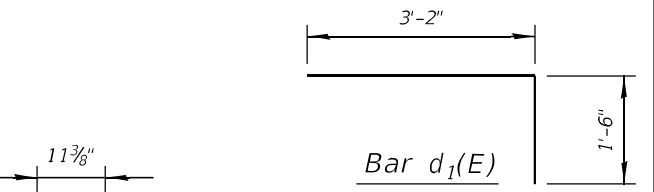


SECTION D-D (Looking North)

#5	CLASS B	
	Bot Bars	Top Bars
	3'-2"	3'-7"

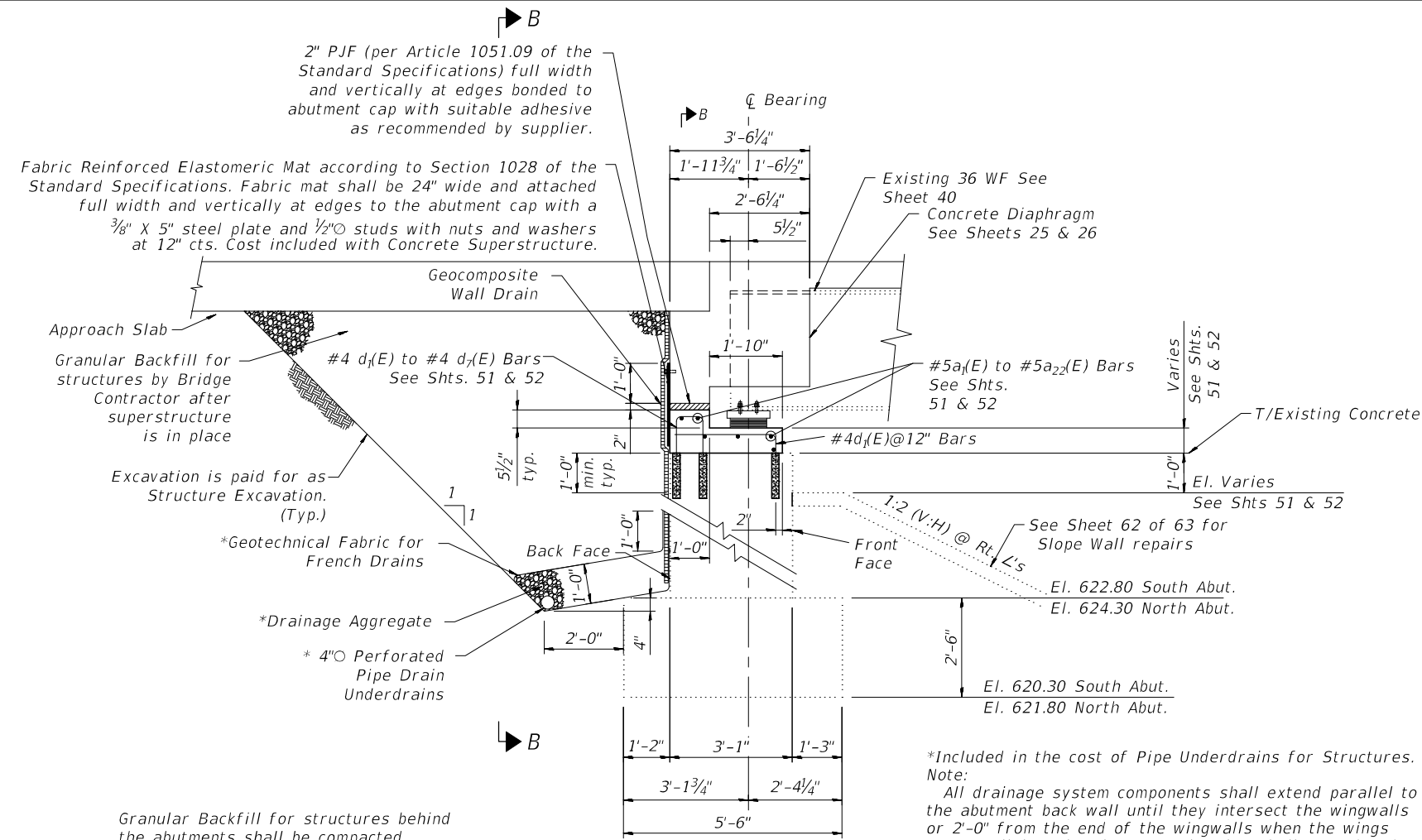


SECTION E-E (Looking North)



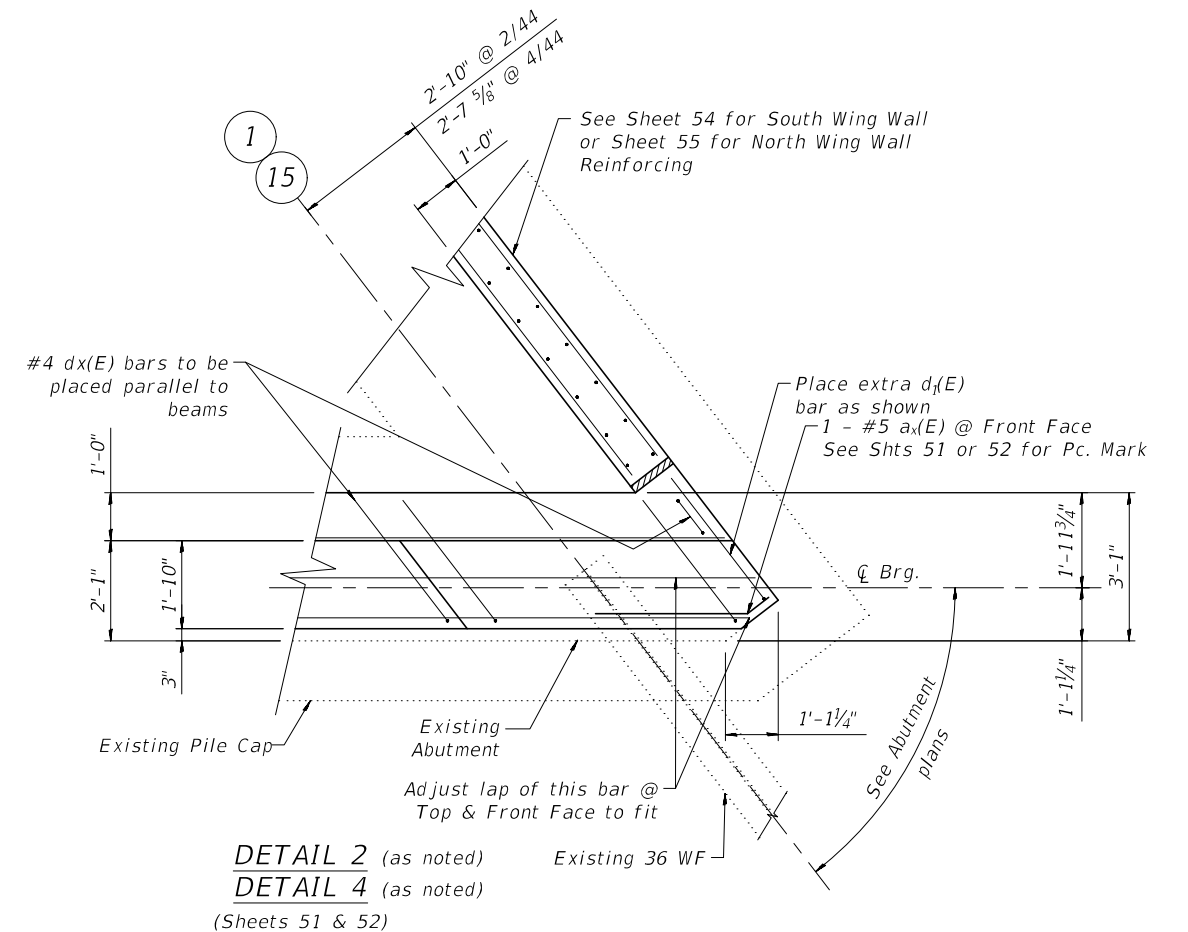
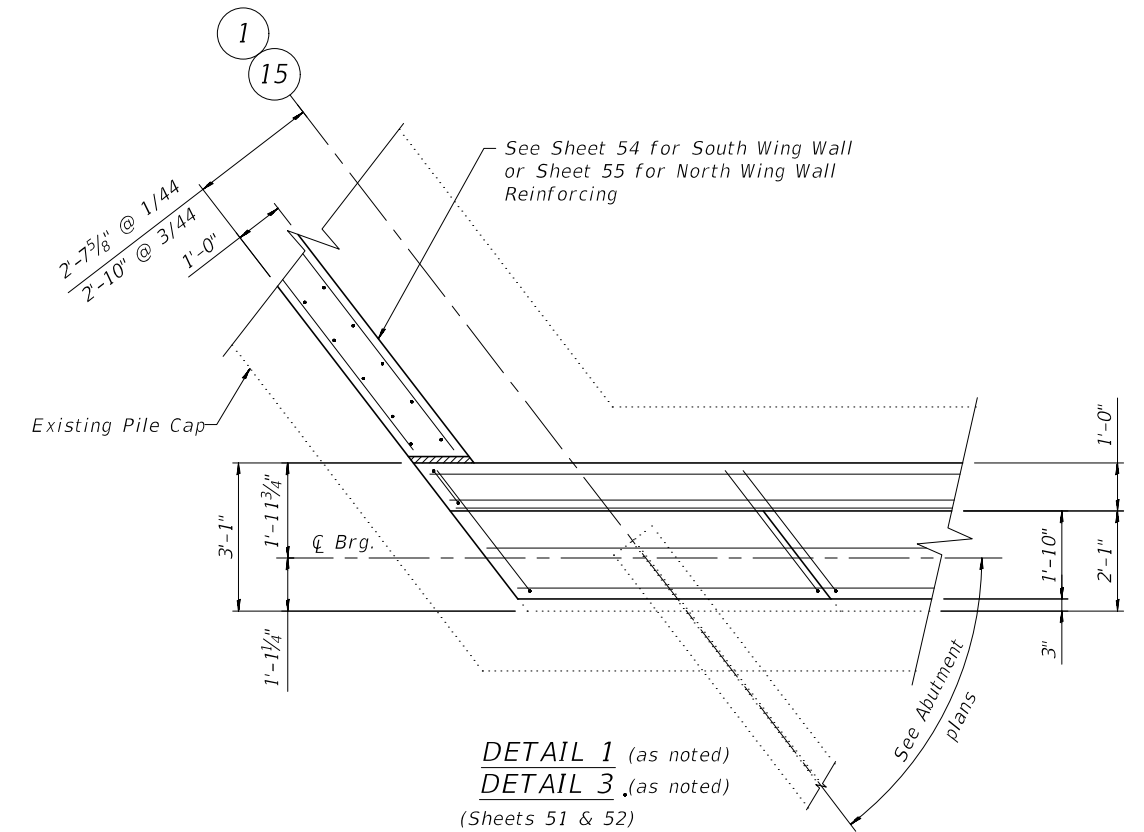
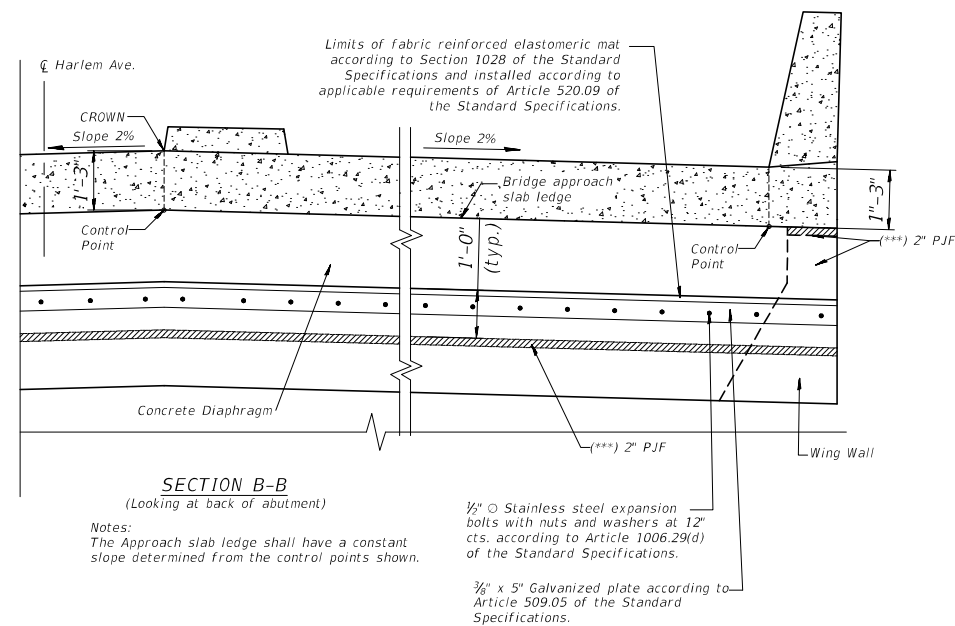
Pc Mark	"X"
d ₂ (E)	2'-0 1/2"
d ₃ (E)	2'-0"
d ₄ (E)	1'-11 1/2"
d ₅ (E)	1'-9"
d ₆ (E)	1'-11"
d ₇ (E)	1'-10"

Notes:
 Bars indicated thus 4 x 2 - #5 etc. indicates 4 lines of bars with 2 lengths per line.
 Space reinforcement to miss anchor bolts.



Granular Backfill for structures behind the abutments shall be compacted according to Article 205.06 of the Standard Specifications.

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



FILE = \$FileA\$

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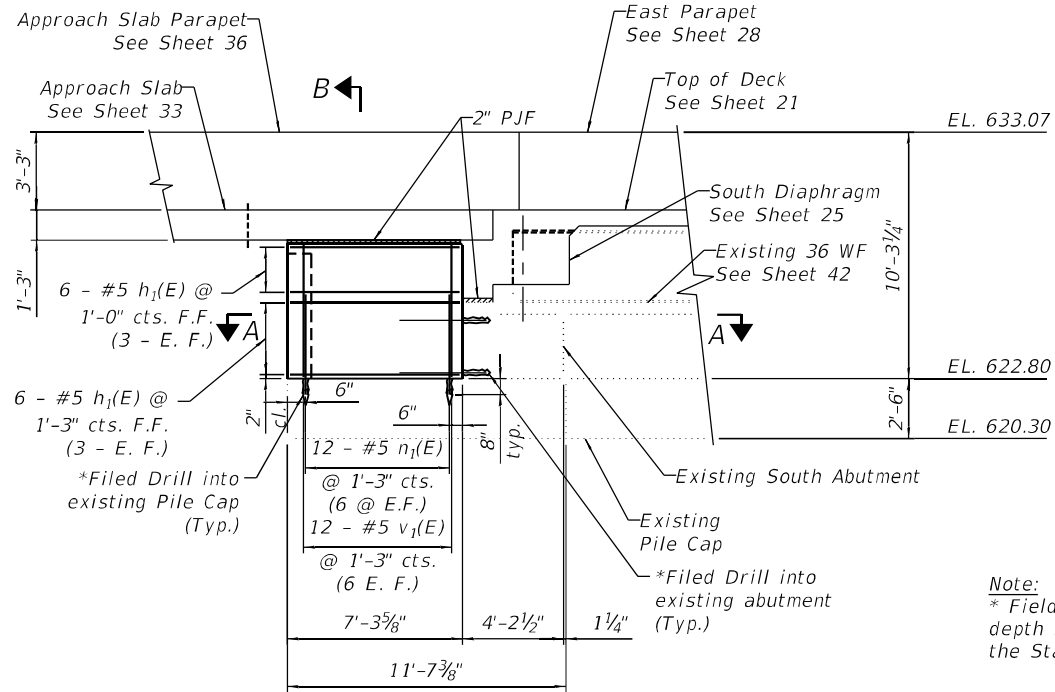
ABUTMENTS - SECTIONS & DETAILS
STRUCTURE NO. 016-0321

SHEET 53 OF 63 SHEETS

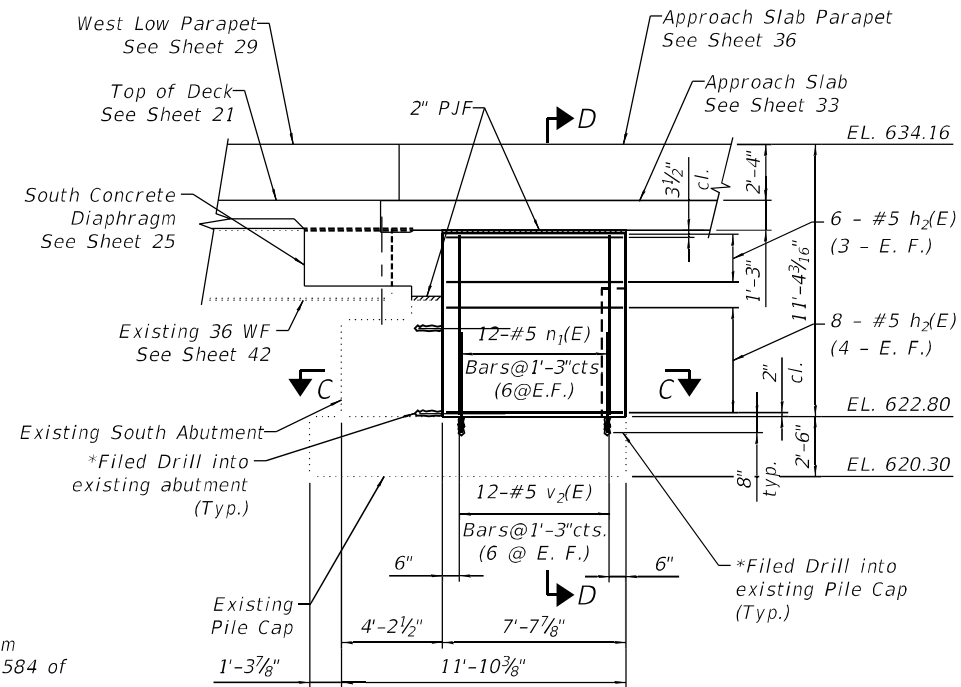
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	458
CONTRACT NO. 60R49				

ILLINOIS FED. AID PROJECT

DATE = \$Date\$



SOUTH EAST WING WALL ELEVATION

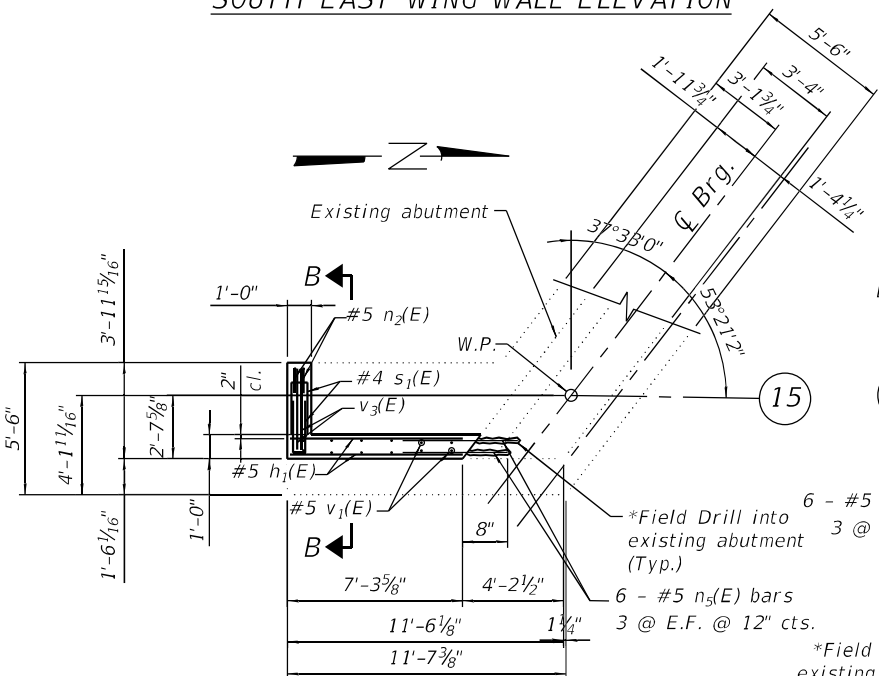


SOUTH WEST WING WALL ELEVATION

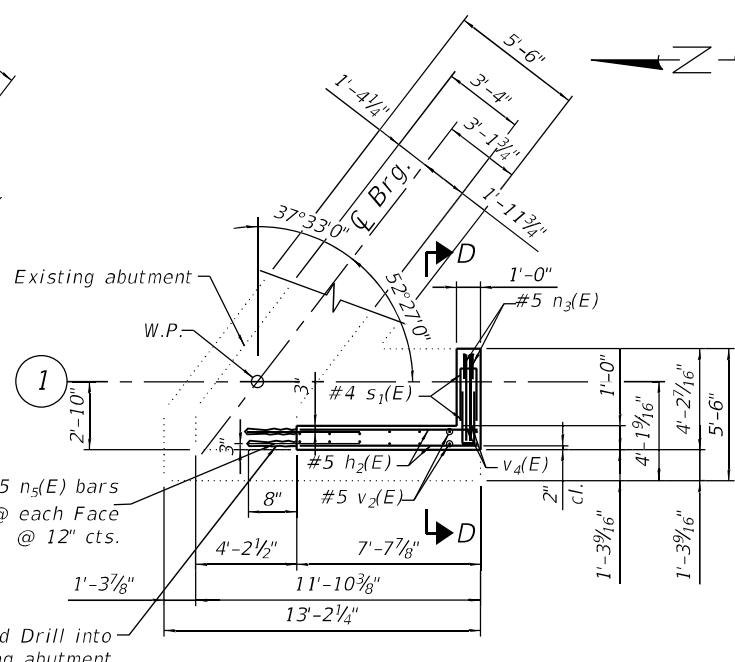
Note:
* Field drill and grout dowels to minimum depth shown according to article 584 of the Standard Specifications.

BILL OF MATERIAL

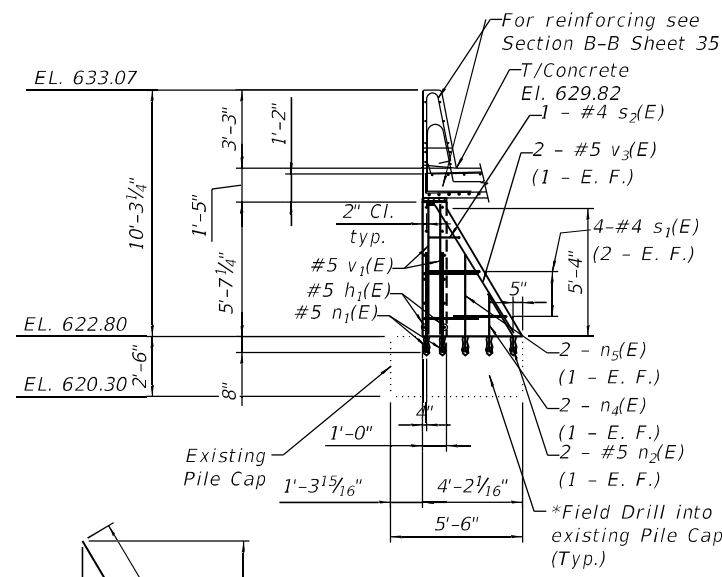
Bar	No.	Size	Length	Shape
h ₁ (E)	12	#5	7'-0"	—
h ₂	14	#5	7'-5"	—
n ₁ (E)	24	#5	4'-6"	—
n ₂ (E)	2	#5	3'-1"	—
n ₃ (E)	2	#5	3'-1"	—
n ₄ (E)	4	#5	2'-9"	—
n ₅ (E)	16	#5	4'-5"	—
s ₁ (E)	8	#4	5'-1"	□
s ₂ (E)	2	#4	2'-11"	□
v ₁ (E)	24	#5	5'-7"	—
v ₂ (E)	24	#5	7'-7"	—
v ₃ (E)	2	#5	6'-10"	—
v ₄ (E)	2	#5	6'-6"	—
Concrete Structures			Cu. Yd.	4.4
Reinforcement Bars, Epoxy Coated			Pound	750



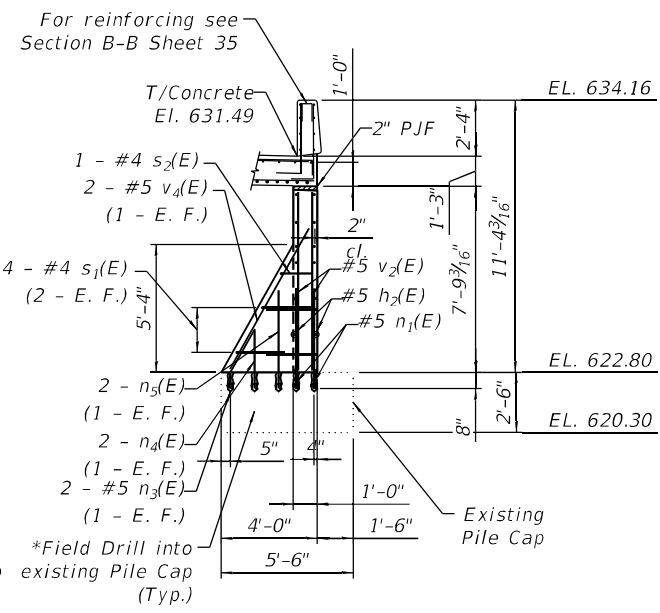
SECTION A-A



SECTION C-C

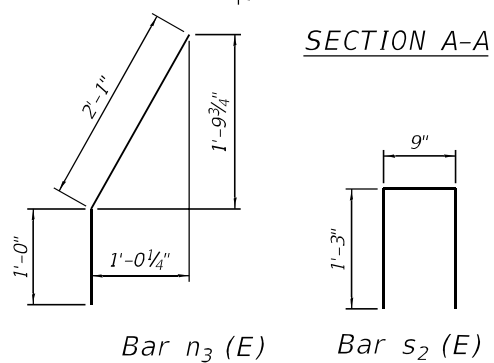


SECTION B-B



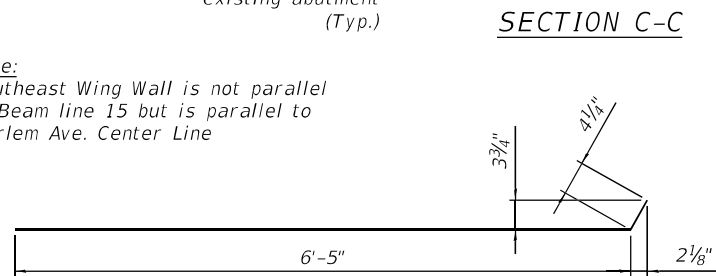
SECTION D-D

Note:
Southeast Wing Wall is not parallel to Beam line 15 but is parallel to Harlem Ave. Center Line

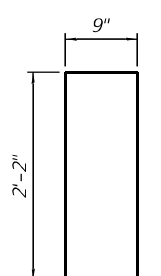


Bar n₃ (E)

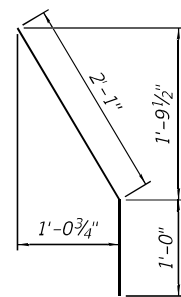
Bar s₂ (E)



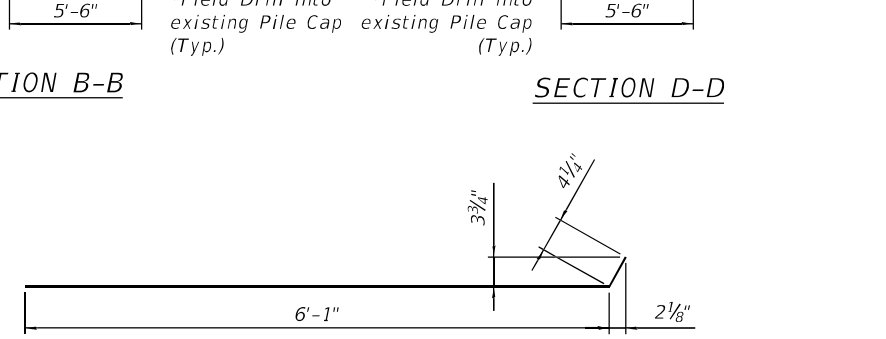
Bar v₃ (E)



Bar s₁ (E)



Bar n₂ (E)



Bar v₄ (E)

FILE = sFilea5

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PN: 3730	DRAWN - JPM
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DRAWN - JPM	REVISED -
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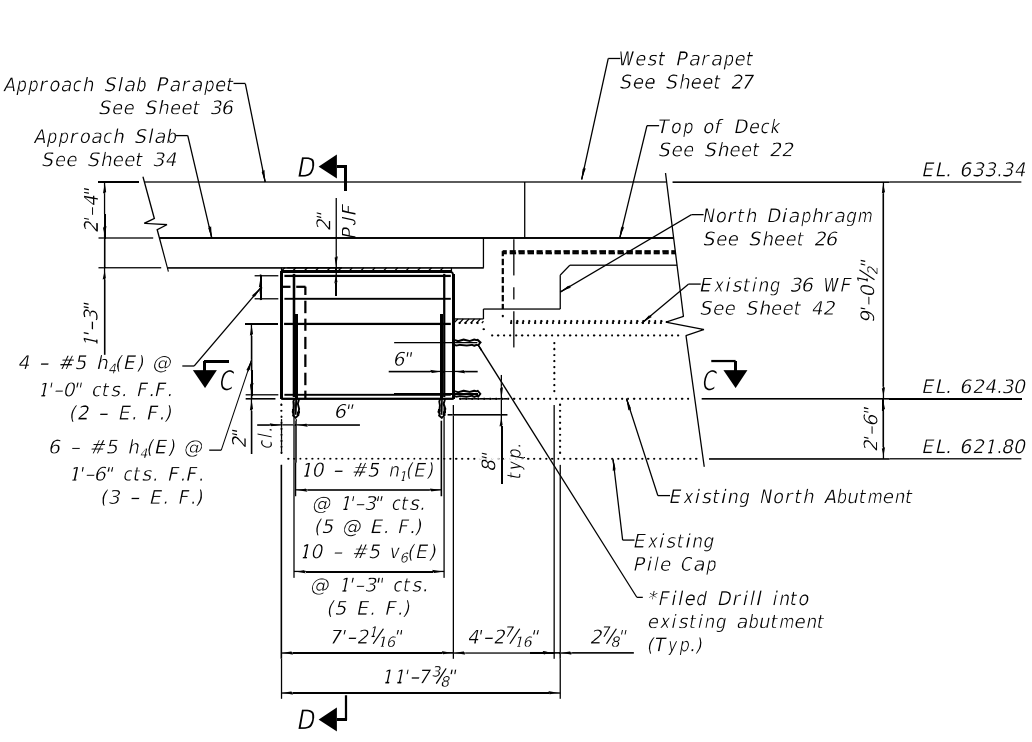
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SOUTH WING WALLS - PLANS, & ELEVATIONS
STRUCTURE NO. 016-0321**

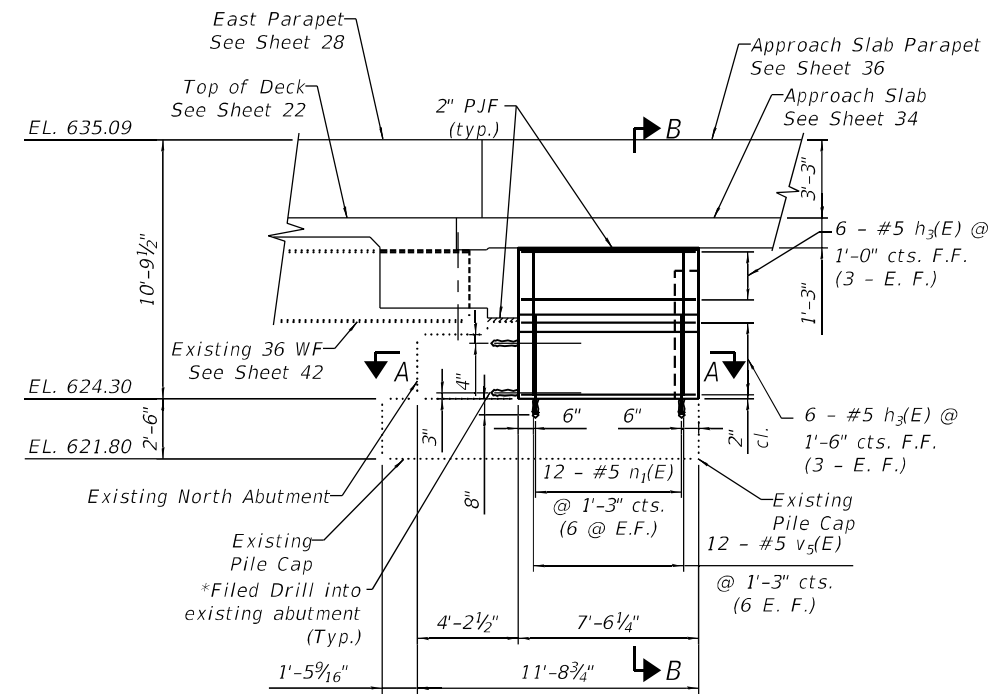
SHEET 54 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&R5	COOK	659	459
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

DATE = sDate5



NORTH WEST WING WALL ELEVATION

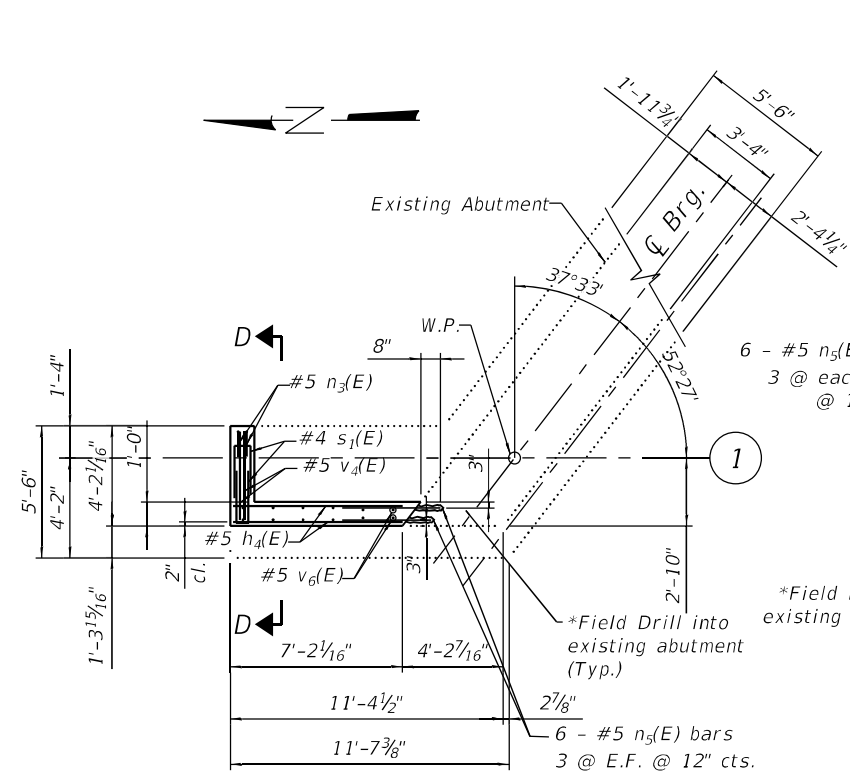


NORTH EAST WING WALL ELEVATION

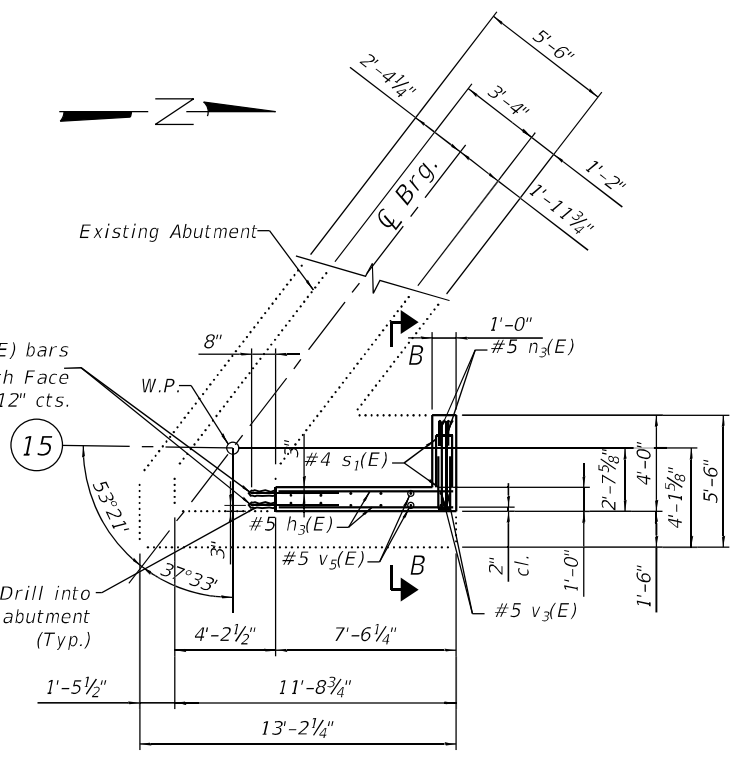
Note:
* Field drill and grout dowels to minimum depth shown according to article 584 of the Standard Specifications.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_3(E)$	12	#5	7'-4"	▬
h_4	10	#5	7'-1"	▬
$n_1(E)$	22	#5	4'-6"	▬
$n_2(E)$	2	#5	3'-1"	▬
$n_3(E)$	2	#5	3'-1"	▬
$n_4(E)$	4	#5	2'-9"	▬
$n_5(E)$	16	#5	4'-5"	▬
$s_1(E)$	8	#4	5'-1"	□
$s_2(E)$	2	#4	2'-11"	□
$v_3(E)$	2	#5	6'-10"	▬
$v_4(E)$	2	#5	6'-6"	▬
$v_5(E)$	12	#5	6'-1"	▬
$v_6(E)$	10	#5	5'-4"	▬
Concrete Structures			Cu. Yd.	4.4
Reinforcement Bars, Epoxy Coated			Pound	520

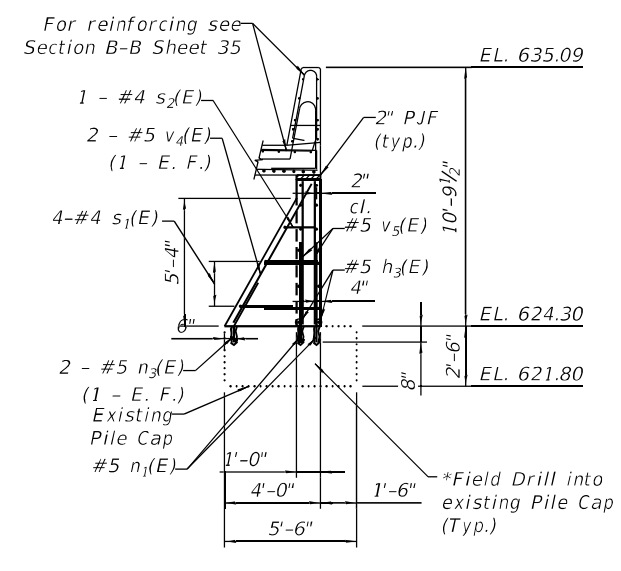


SECTION C-C
North West Wing Wall

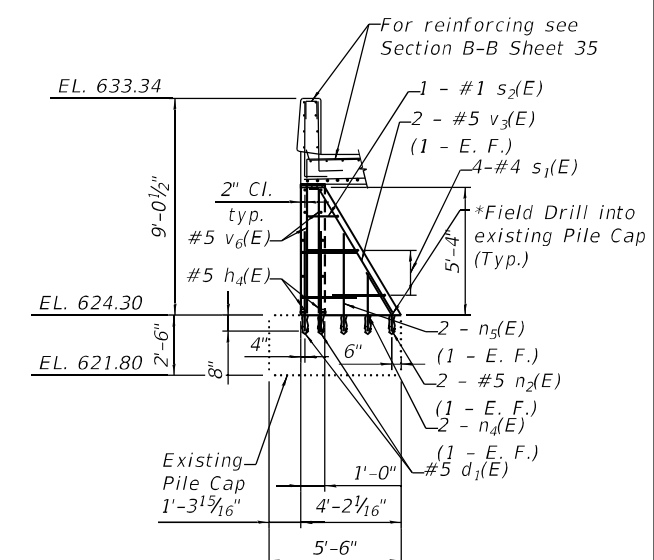


SECTION A-A
North East Wing Wall

Note:
Northeast Wing Wall is not parallel to Beam line 15 but is parallel to Harlem Ave. Center Line



SECTION B-B



SECTION D-D

FILE = sFile.eas

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PLOT DATE =	CHECKED - DNB	REVISED -

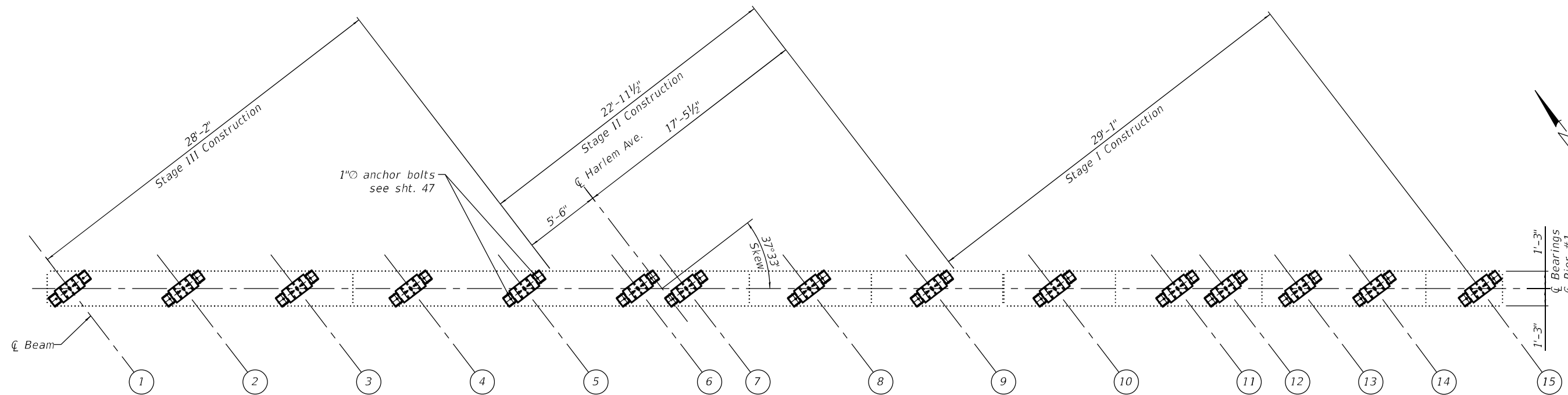
STATE OF ILLINOIS
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NORTH WING WALLS - PLANS, & ELEVATIONS
STRUCTURE NO. 016-0321

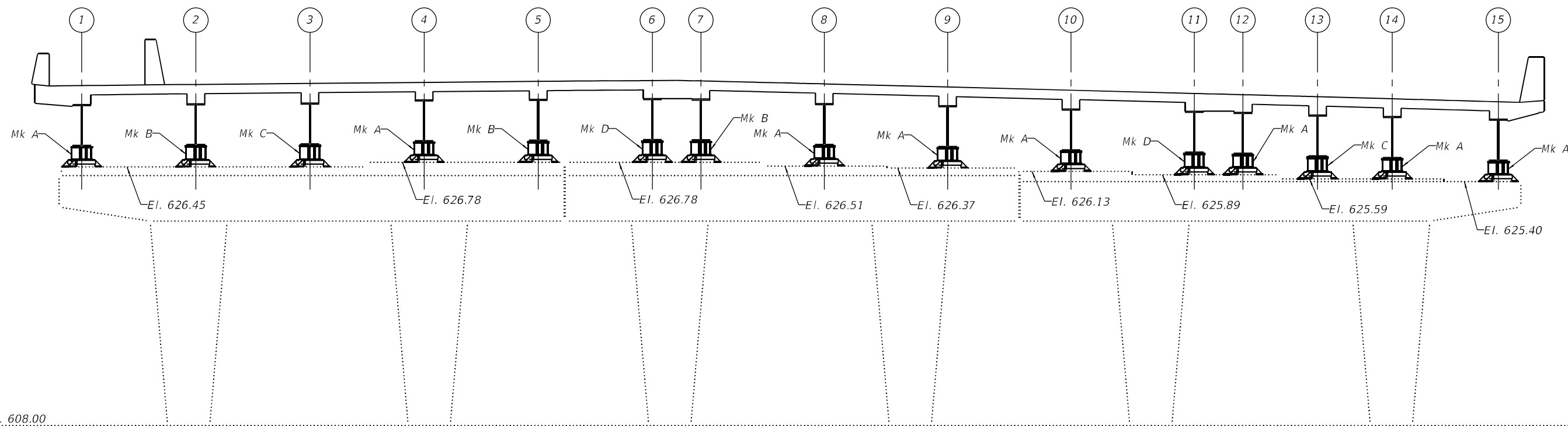
SHEET 55 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	460
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

DATE = sDate\$



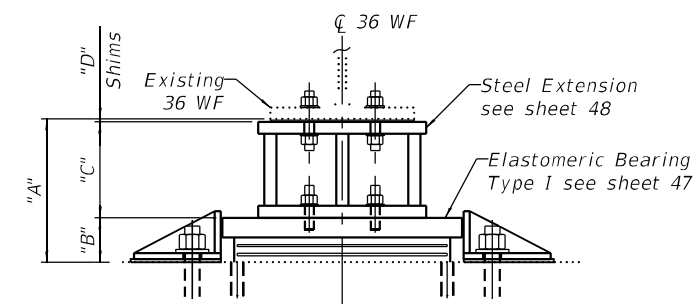
PIER #1 BEARING REPLACEMENT PLAN



PIER #1 BEARING REPLACEMENT ELEVATION
(Looking North)

Note:
Existing T/Concrete Pier (beam seat)
Elevation per Sanchez Survey dated
12/07/2018

Beam #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Mark	A	B	C	A	B	D	B	A	A	A	D	A	C	A	A
"A"	17 ⁹ / ₁₆ "	18 ³ / ₁₆ "	18 ⁷ / ₁₆ "	17 ⁹ / ₁₆ "	18 ¹ / ₁₆ "	18 ⁵ / ₁₆ "	18 ⁹ / ₁₆ "	17 ⁹ / ₁₆ "	17 ⁹ / ₁₆ "	17 ⁹ / ₁₆ "	18 ¹ / ₂ "	17 ⁹ / ₁₆ "	18 ¹⁵ / ₁₆ "	17 ⁹ / ₁₆ "	17 ⁹ / ₁₆ "
"B"	5 ¹ / ₁₆ "	5 ¹ / ₁₆ "	5 ¹ / ₁₆ "	5 ¹ / ₁₆ "	5 ¹ / ₁₆ "	5 ¹ / ₁₆ "	5 ¹ / ₁₆ "	5 ¹ / ₁₆ "	5 ¹ / ₁₆ "	5 ¹ / ₁₆ "	5 ¹ / ₁₆ "	5 ¹ / ₁₆ "	5 ¹ / ₁₆ "	5 ¹ / ₁₆ "	5 ¹ / ₁₆ "
"C"	11 ⁵ / ₈ "	12 ¹ / ₈ "	12 ¹⁵ / ₁₆ "	11 ⁵ / ₈ "	12 ¹ / ₈ "	12 ¹ / ₈ "	12 ¹ / ₈ "	11 ⁵ / ₈ "	11 ⁵ / ₈ "	11 ⁵ / ₈ "	12 ¹ / ₂ "	11 ⁵ / ₈ "	12 ¹⁵ / ₁₆ "	11 ⁵ / ₈ "	11 ⁵ / ₈ "
"D"	1/4"	3/8"	1/4"	1/4"	1/4"	7/16"	1/2"	1/4"	1/4"	1/4"	3/16"	1/4"	5/16"	1/4"	1/4"



Typical Bearing/Extension Assembly

FILE = sFilea\$

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PLOT DATE =	DRAWN - JPM	REVISED -
	CHECKED - DNB	REVISED -

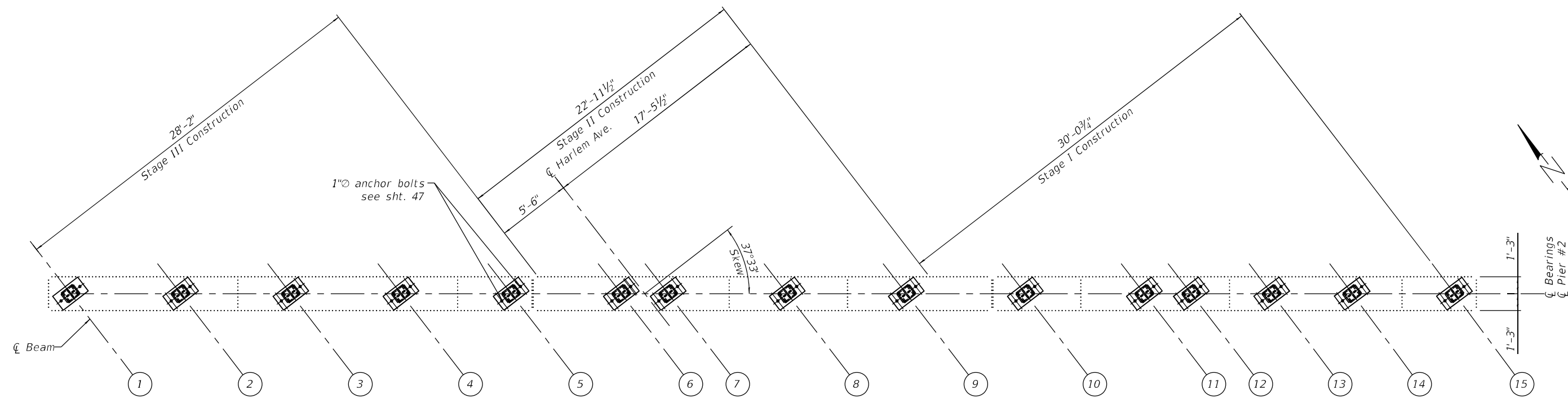
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER #1 BEARING REPLACEMENT PLAN, SECTIONS, & B.O.M.
STRUCTURE NO. 016-0321

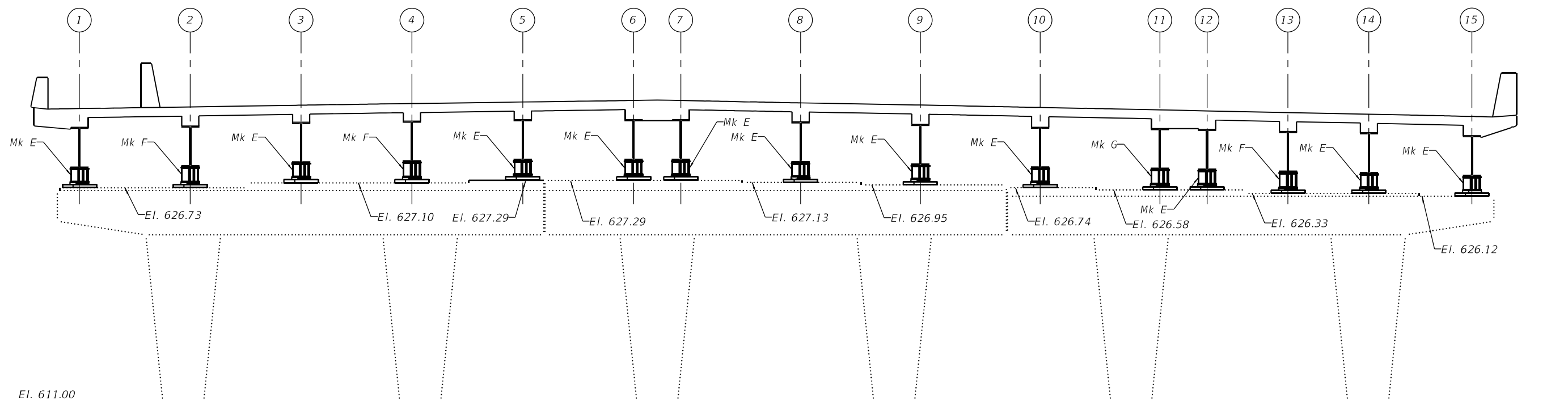
SHEET 56 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	461
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

DATE = sDate\$



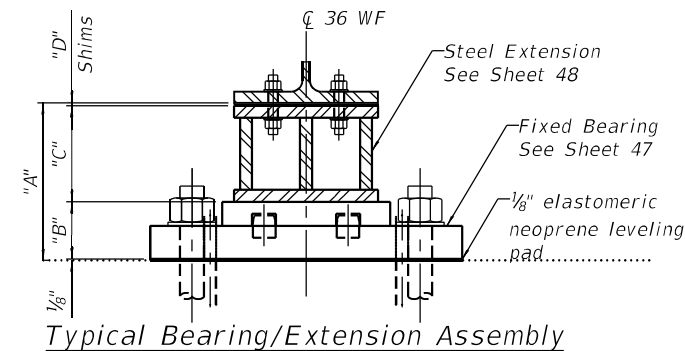
PIER #2 BEARING REPLACEMENT PLAN



PIER #2 BEARING REPLACEMENT ELEVATION
(Looking North)

Note:
Existing T/Concrete Pier (beam seat)
Elevation per Sanchez Survey dated
12/07/2018

		Pier #2 Extensions														
Beam #		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Mark		E	F	E	F	E	E	E	E	E	E	G	E	F	E	E
"A"		17 9/16"	18 1/16"	17 9/16"	18 3/8"	17 9/16"	17 9/16"	17 9/16"	17 9/16"	17 9/16"	17 9/16"	18 1/4"	17 9/16"	18 3/4"	17 9/16"	17 9/16"
"B"		4 3/4"	4 3/4"	4 3/4"	4 3/4"	4 3/4"	4 3/4"	4 3/4"	4 3/4"	4 3/4"	4 3/4"	4 3/4"	4 3/4"	4 3/4"	4 3/4"	4 3/4"
"C"		12 7/16"	13 1/2"	12 7/16"	13 1/2"	12 7/16"	12 7/16"	12 7/16"	12 7/16"	12 7/16"	12 7/16"	13 1/8"	12 7/16"	13 1/2"	12 7/16"	12 7/16"
"D"		1/4"	5/16"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	3/8"	1/4"	1/4"



FILE = sFilea\$

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PN: 3730

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PLOT DATE =	DRAWN - JPM	REVISED -
	CHECKED - DNB	REVISED -

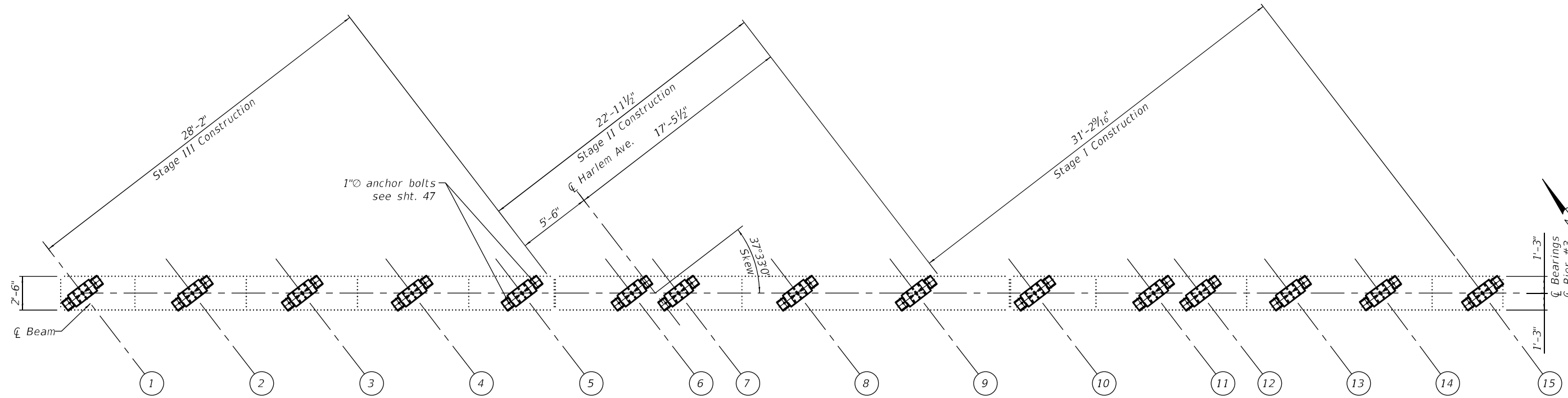
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER #2 BEARING REPLACEMENT PLAN, SECTION, & B.O.M.
STRUCTURE NO. 016-0321

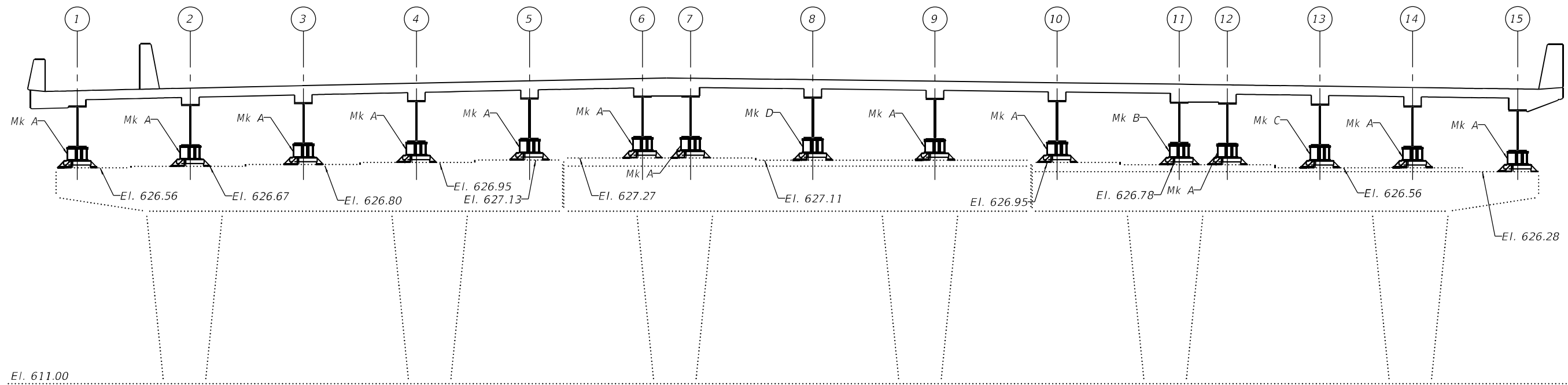
SHEET 57 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	462
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

DATE = sDate\$



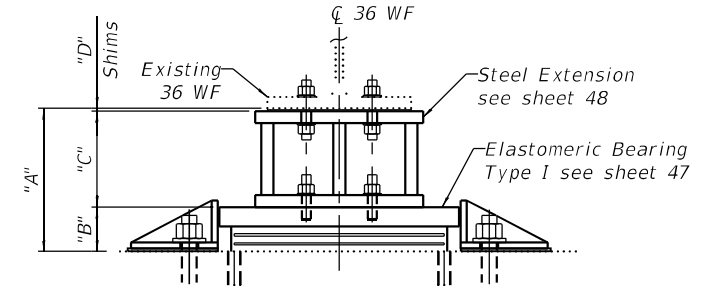
PIER #3 BEARING REPLACEMENT PLAN



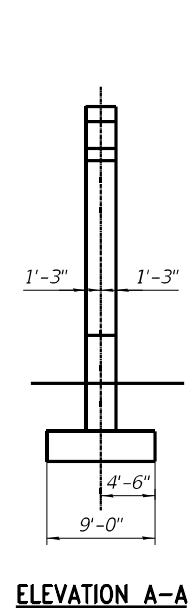
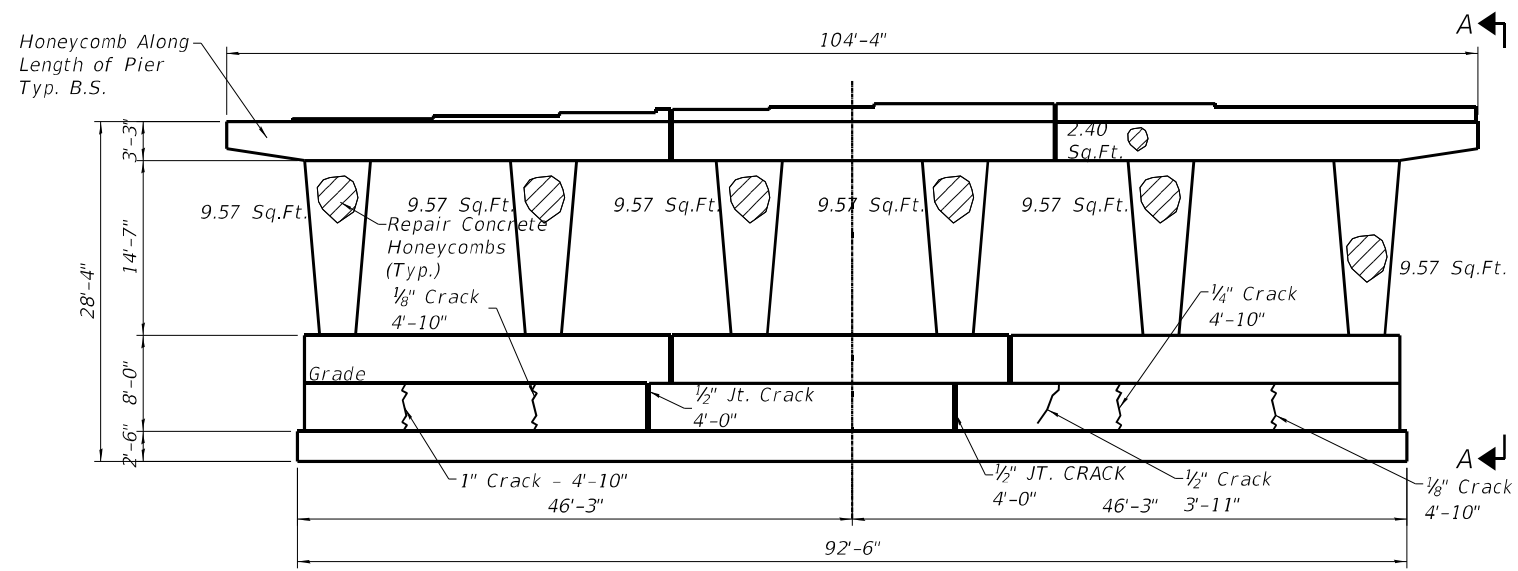
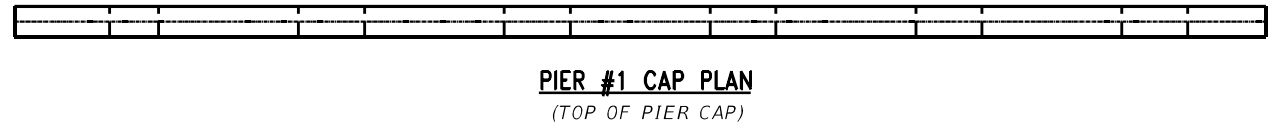
PIER #3 BEARING REPLACEMENT ELEVATION
(Looking North)

Note:
Existing T/Concrete Pier (beam seat)
Elevation per Sanchez Survey dated
12/07/2018

		Pier #3 Extensions														
Beam #		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Mark	A	A	A	A	A	A	A	D	A	A	B	A	C	A	A	
"A"	17 1/16"	17 1/16"	17 1/16"	17 1/16"	17 1/16"	17 1/16"	17 1/16"	18 3/4"	17 1/16"	17 1/16"	18 3/8"	17 1/16"	19 3/16"	17 1/16"	17 1/16"	
"B"	5 1/16"	5 1/16"	5 1/16"	5 1/16"	5 1/16"	5 1/16"	5 1/16"	5 1/16"	5 1/16"	5 1/16"	5 1/16"	5 1/16"	5 1/16"	5 1/16"	5 1/16"	
"C"	11 1/16"	11 1/16"	11 1/16"	11 1/16"	11 1/16"	11 1/16"	11 1/16"	12 1/16"	11 1/16"	11 1/16"	12 1/16"	11 1/16"	13 1/16"	11 1/16"	11 1/16"	
"D"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/8"	3/16"	3/16"	3/8"	3/16"	3/8"	3/16"	3/16"	



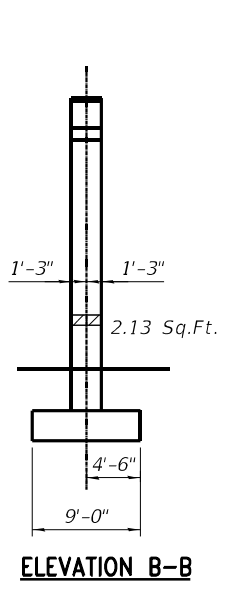
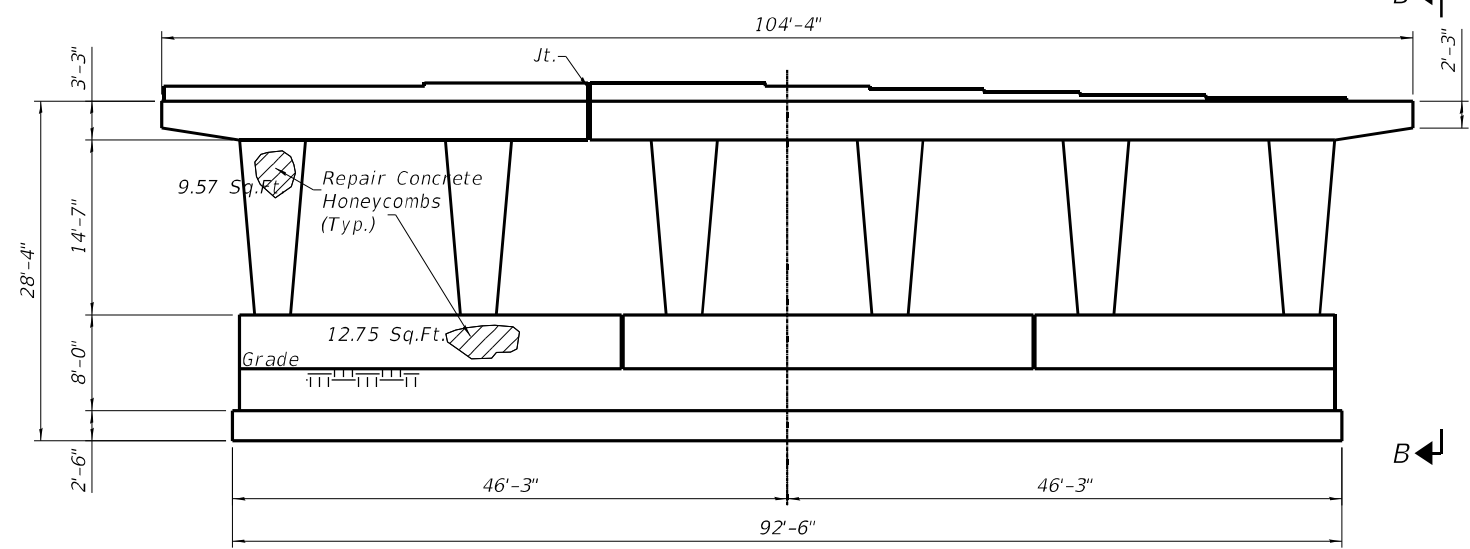
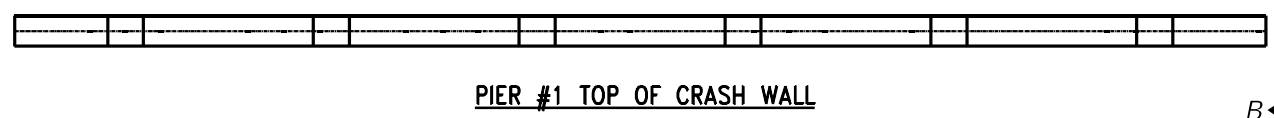
Typical Bearing/Extension Assembly



BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth equal to or less than 5")	Sq. Ft.	88
EPOXY CRACK INJECTION	Feet	32

PIER #1 - SOUTH FACE
(LOOKING NORTH)



LEGEND
 Structural Repair of Concrete (Depth equal to or less than 5")
 EPOXY CRACK INJECTION

PIER #1 - NORTH FACE
(LOOKING SOUTH)

FILE NAME: H:\Projects\3730\Drawings\CADD_SHEETS\STRUCTURAL\0321-Hardem-CSXI\Design_Drawing\0160321-1-60R49-059.dgn

THE HOH GROUP, INC.
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PN: 3730

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

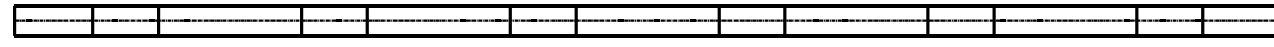
PIER 1 REPAIRS
STRUCTURE NO. 016-0321

SHEET 59 OF 63 SHEETS

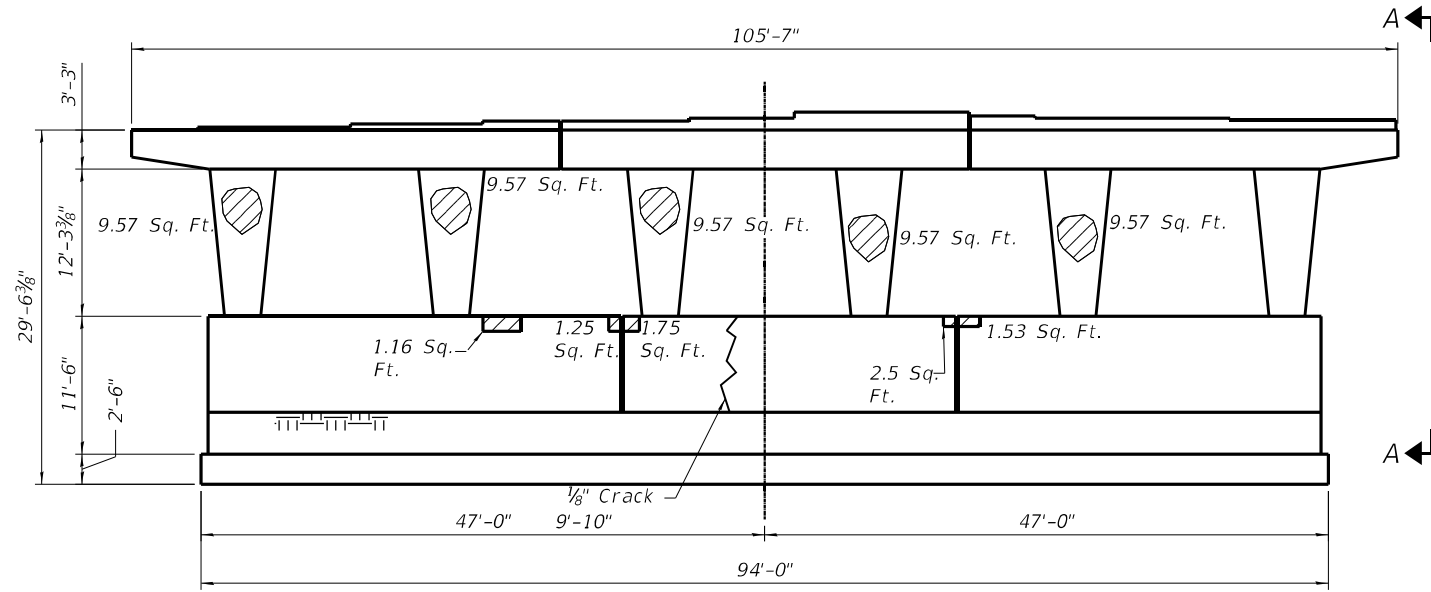
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	464
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				



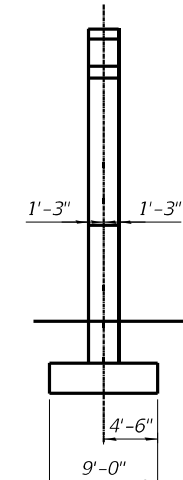
PIER #2 CAP PLAN
(TOP OF PIER CAP)



PIER #2 REFLECTED CAP PLAN
(UNDERSIDE OF PIER CAP)



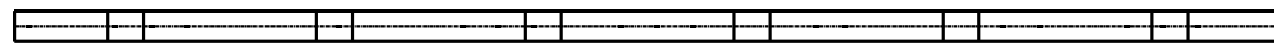
PIER #2 NORTH FACE
(LOOKING SOUTH)



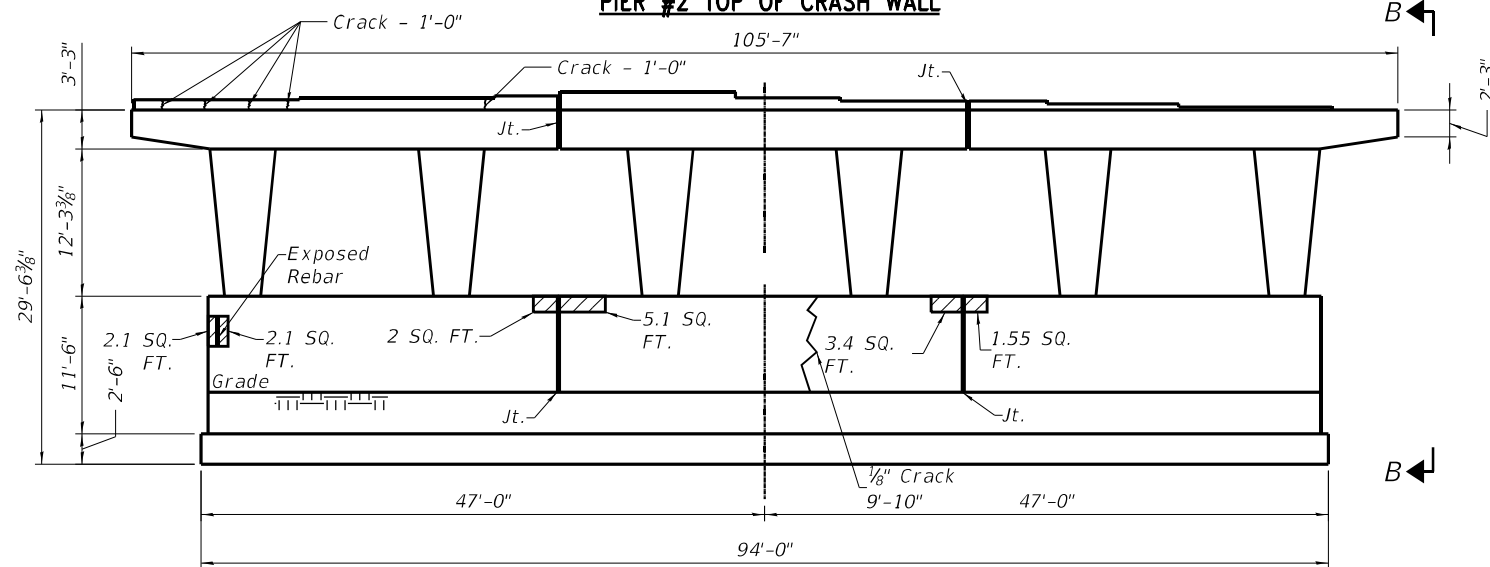
ELEVATION A-A

BILL OF MATERIAL

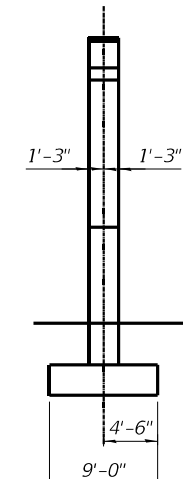
Item	Unit	Total
Structural Repair of Concrete (Depth equal to or less than 5')	Sq. Ft.	73
EPOXY CRACK INJECTION	Ft.	25



PIER #2 TOP OF CRASH WALL



PIER #2 - SOUTH FACE
(LOOKING NORTH)



ELEVATION B-B

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5')
- EPOXY CRACK INJECTION

FILE NAME: H:\Projects\3730\Drawings\CADD_SHEETS\STRUCTURAL\0321-Hardem-CSXI\Design_Drawing\160321-1-60R49-060.dgn

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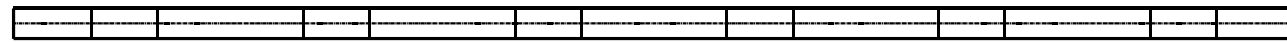
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 REPAIRS
STRUCTURE NO. 016-0321

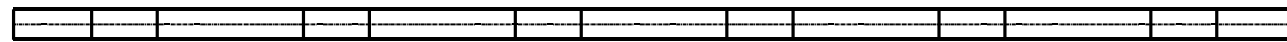
SHEET 60 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	465
CONTRACT NO. 60R49				

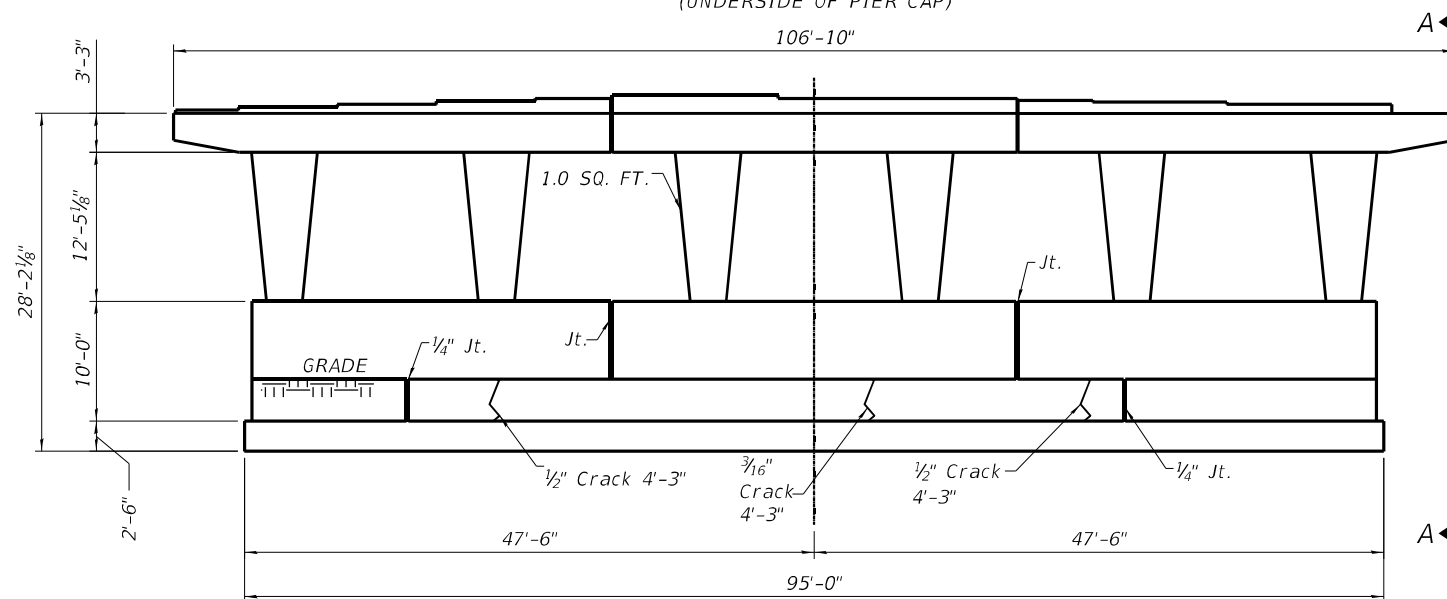
ILLINOIS FED. AID PROJECT



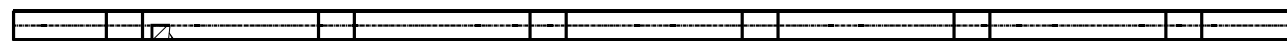
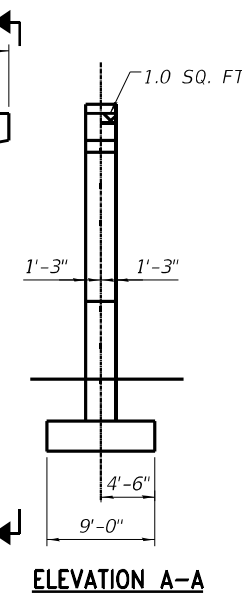
PIER #3 CAP PLAN
(TOP OF PIER CAP)



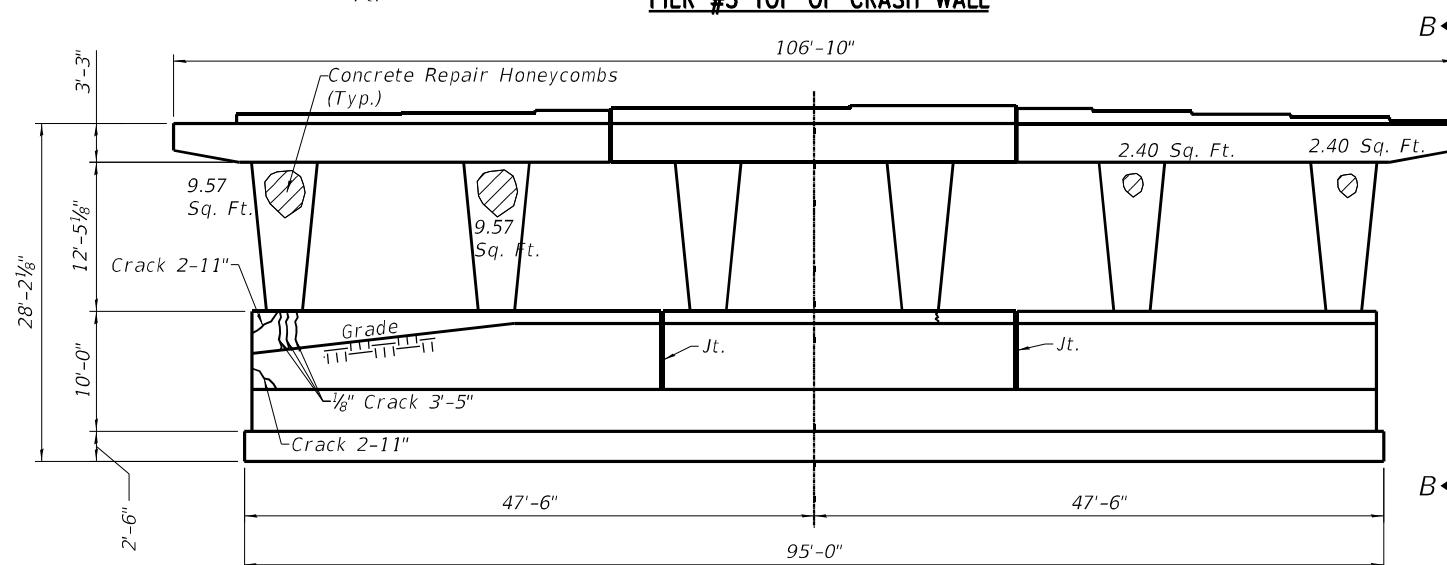
PIER #3 REFLECTED CAP PLAN
(UNDERSIDE OF PIER CAP)



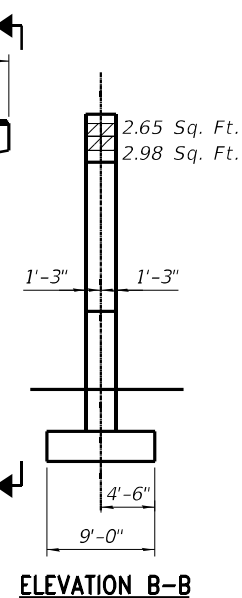
PIER #3 - NORTH FACE
(LOOKING SOUTH)



PIER #3 TOP OF CRASH WALL



PIER #3 - SOUTH FACE
(LOOKING NORTH)



BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth equal to or less than 5")	Sq. Ft.	32
EPOXY CRACK INJECTION	Ft.	29

LEGEND

- Structural Repair of Concrete (Depth equal to or less than 5")
- EPOXY CRACK INJECTION

FILE NAME: H:\Projects\3730\Drawings\CADD_SHEETS\STRUCTURAL\0321-Hardem-CSX\Design_Drawings\0160321-1-60R49-061.dgn

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ARCHITECTS | ENGINEERS

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PLOT DATE =	DRAWN - JPM	REVISED -
	CHECKED - DNB	REVISED -

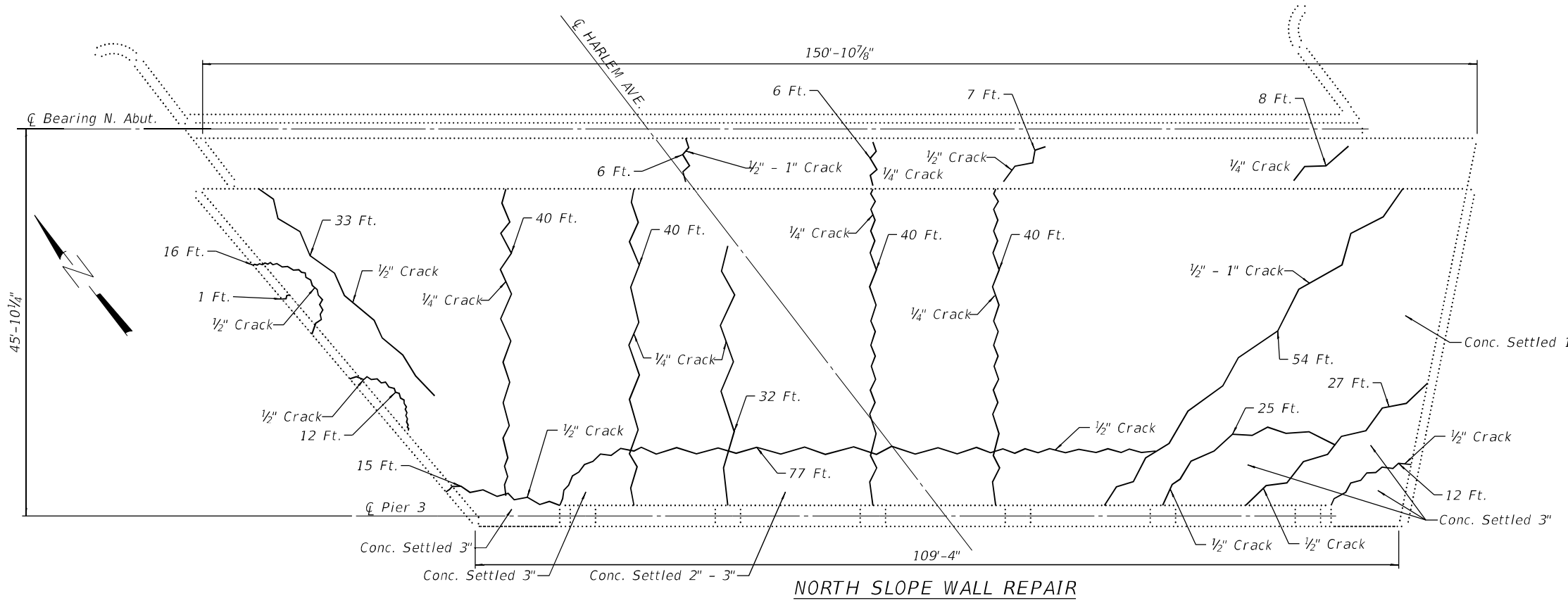
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 3 REPAIRS
STRUCTURE NO. 016-0321

SHEET 61 OF 63 SHEETS

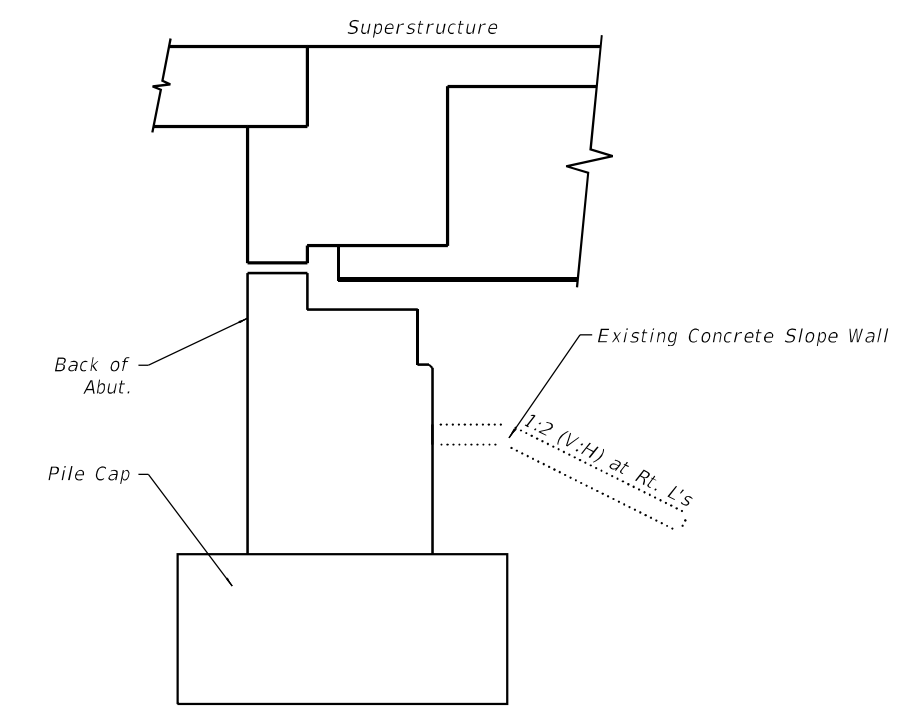
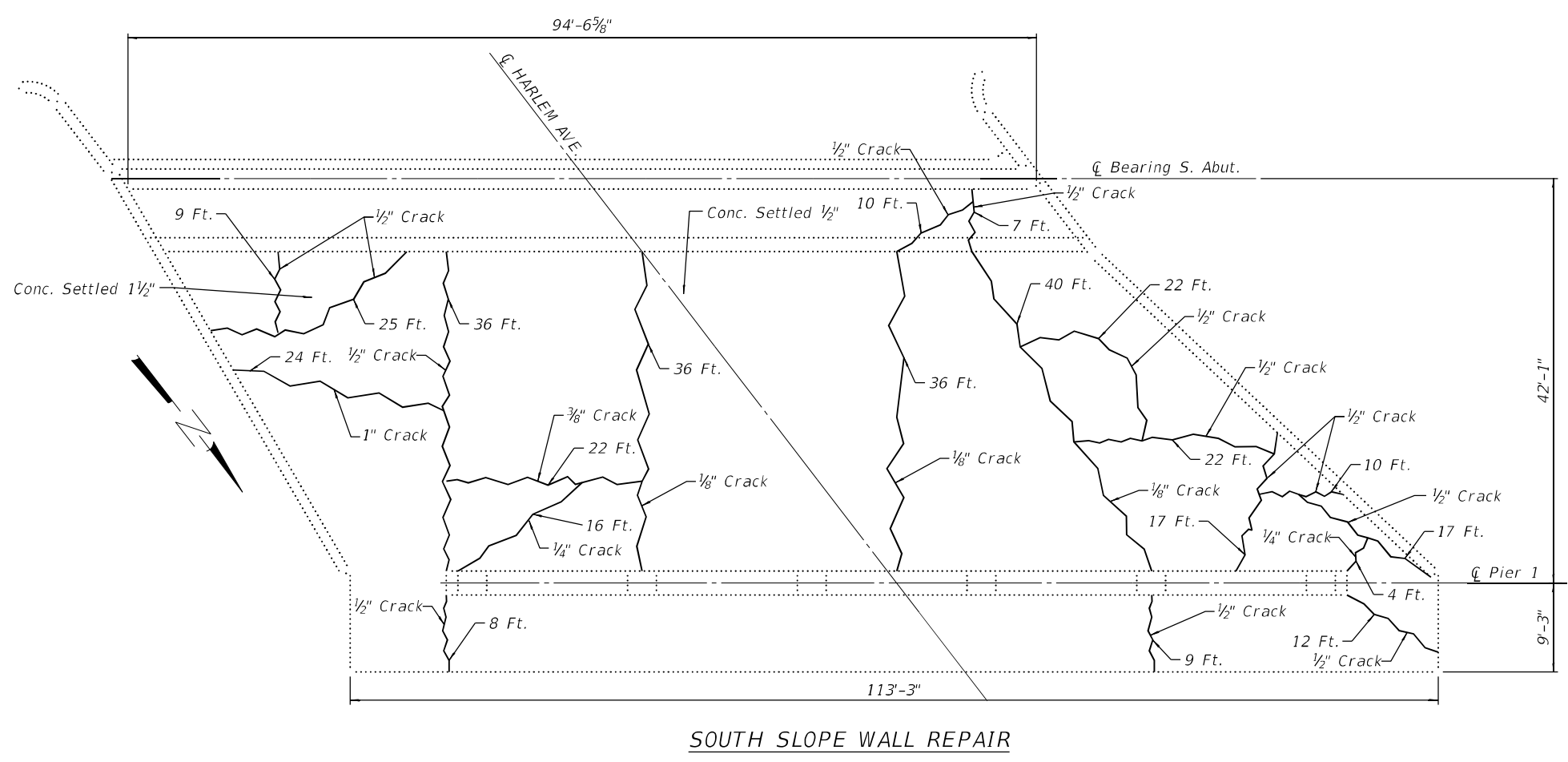
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	466
CONTRACT NO. 60R49				

ILLINOIS FED. AID PROJECT



BILL OF MATERIAL - 2 SLOPE WALLS

Item	Unit	Total
Slopedwall Crack Sealing	Feet	841



LEGEND
 Slopedwall Crack Sealing

FILE = sFilea5

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PN: 3730	DRAWN - JPM	REVISED -
DATE = sDate\$	CHECKED - DNB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPE WALL REPLACEMENT - PLANS & B.O.M.
STRUCTURE NO. 016-0321

SHEET 62 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	467
CONTRACT NO. 60R49				

ILLINOIS FED. AID PROJECT



Applied GeoScience, Inc. **SOIL BORING LOG**

Page 1 of 2

Date 5/31/16

ROUTE FAP 348 & 29 DESCRIPTION CSX Bridge LOGGED BY JG
 SECTION 3128Z-HB-R LOCATION SEC. 12, TWP. 37N, RNG. 12E
 COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE AU

STRUCT. NO.	DEPTH	BLOW	UCS	MOIST	Surface Water Elev.	DEPTH	BLOW	UCS	MOIST
Station	H	S	Qu	T	ft	H	S	Qu	T
016-0321									
BORING NO. S-2					Groundwater Elev.:				
Station 309+47					First Encounter 585.9 ft				
Offset 11.00ft RT					Upon Completion				
Ground Surface Elev. 629.40 ft	(ft)	(/6")	(tsf)	(%)	After Hrs.	(ft)	(/6")	(tsf)	(%)
5.5 inches of asphalt over 9 inches of concrete over crushed stone	2				FILL, silty clay, trace sand & gravel, brown-gray, trace black, stiff to very stiff (continued)				
	827.90								
FILL, silty clay, trace sand & gravel, brown-gray, trace black, stiff to very stiff	2	1.3	16.0						
	2	B							
	4								
	5	2.3	16.0						
	6	B							
	-5								
	4								
	5	2.1	19.0						
	8	B							
	3								
	4	2.0	19.0		FILL, sand, gravel & silty clay, with recycled stone & asphalt grindings, brown & black				
	7	B							
	-10								
	2								
	5	2.2	18.0						
	6	B							
	3								
	4	1.8	16.0						
	6	B							
	-15								
	3								
	4	2.3	19.0						
	6	B							
	-20								

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



Applied GeoScience, Inc. **SOIL BORING LOG**

Page 2 of 2

Date 5/31/16

ROUTE FAP 348 & 29 DESCRIPTION CSX Bridge LOGGED BY JG
 SECTION 3128Z-HB-R LOCATION SEC. 12, TWP. 37N, RNG. 12E
 COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE AU

STRUCT. NO.	DEPTH	BLOW	UCS	MOIST	Surface Water Elev.	DEPTH	BLOW	UCS	MOIST
Station	H	S	Qu	T	ft	H	S	Qu	T
016-0321									
BORING NO. S-2					Groundwater Elev.:				
Station 309+47					First Encounter 585.9 ft				
Offset 11.00ft RT					Upon Completion				
Ground Surface Elev. 629.40 ft	(ft)	(/6")	(tsf)	(%)	After Hrs.	(ft)	(/6")	(tsf)	(%)
SILTY CLAY, trace sand & gravel, brown-gray, stiff (continued)	1.4	20.0							
	B								
	10								
SILTY CLAY, with limestone pieces, gray, hard	18	5.8	8.0						
	20	S							
	-45								
	20								
	25	6.2	9.0						
	28	S							
SILTY LOAM, with limestone pieces, gray, very dense Auger and spoon refusal on obstruction at 54.7 feet									
	16								
	4								
	6		8.0						
	-55	30/2"							
End of Boring									

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

FILE = sFile45

THE HOH GROUP, INC.
 ARCHITECTS | ENGINEERS

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SOIL BORES
 STRUCTURE NO. 016-0321

SHEET 63 OF 63 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	468
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

DATE = sDate\$

B.M.: #203 Square "□" cut on westerly bridge wall at SW corner of IL 43 bridge over 95th Street at Sta. 318+38.41, 47.9' LT. with Elev.: 622.23

Existing Structure: S.N. 016-0320 was constructed in 1961, rehabilitated in 1981, 1992 & 1999. Structure consists of 4 continuous spans carrying concrete deck over wide flange beams with three reinforced concrete piers and two pile bent abutments. Structure measures 196'-11" (bk. to bk. abut.) long and 102'-9" (out to out) wide.

Salvage: None

Notes: 1. All proposed Drainage Scuppers will discharge into a closed drainage system.
2. See dimension note on sheet 2.

Staging Note:
Staged construction will be utilized.
Ramp F/H will be closed during Stage I.

SCOPE OF WORK

1. Remove deck and approach pavements.
2. Remove existing beams and bearings.
3. Remove abutment backwall and replace with semi-integral abutment.
4. Modify existing wing walls.
5. Perform epoxy crack injection and formed concrete repairs at abutments and piers.
6. Pour new top of cap concrete extensions for piers 1, 2, & 3 and for abutments for 1-0" raise in bridge deck elevation.
7. Install elastomeric expansion bearings at abutments, piers 1 & 3. Install low profile fixed bearings at pier 2.
8. Install new steel beams with stud shear connectors.
9. Pour new deck and approach slabs.
10. Install guardrails.
11. Raise crash wall to 5'-0" above grade.
12. Perform concrete slope wall repairs.

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications Customary US Units Eighth Edition.

DESIGN STRESSES

FIELD UNITS (New Construction)
 $f'_c = 4,000$ psi (superstructure concrete)
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinf.)
 $f_y = 50,000$ psi (M270 Grade 50 structural steel)

FIELD UNITS (Existing Construction)
 $f_c = 1,400$ psi (without earth pressure)
 $f_c = 1,000$ psi (with earth pressure)
 $f_s = 20,000$ psi (reinforcing steel)
 $f_s = 18,000$ psi (structural steel)

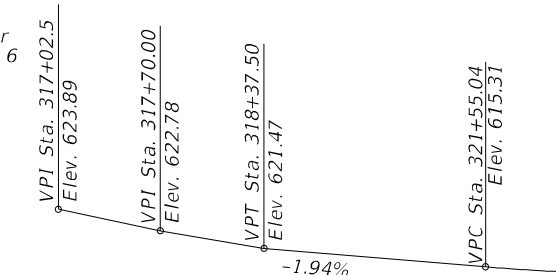
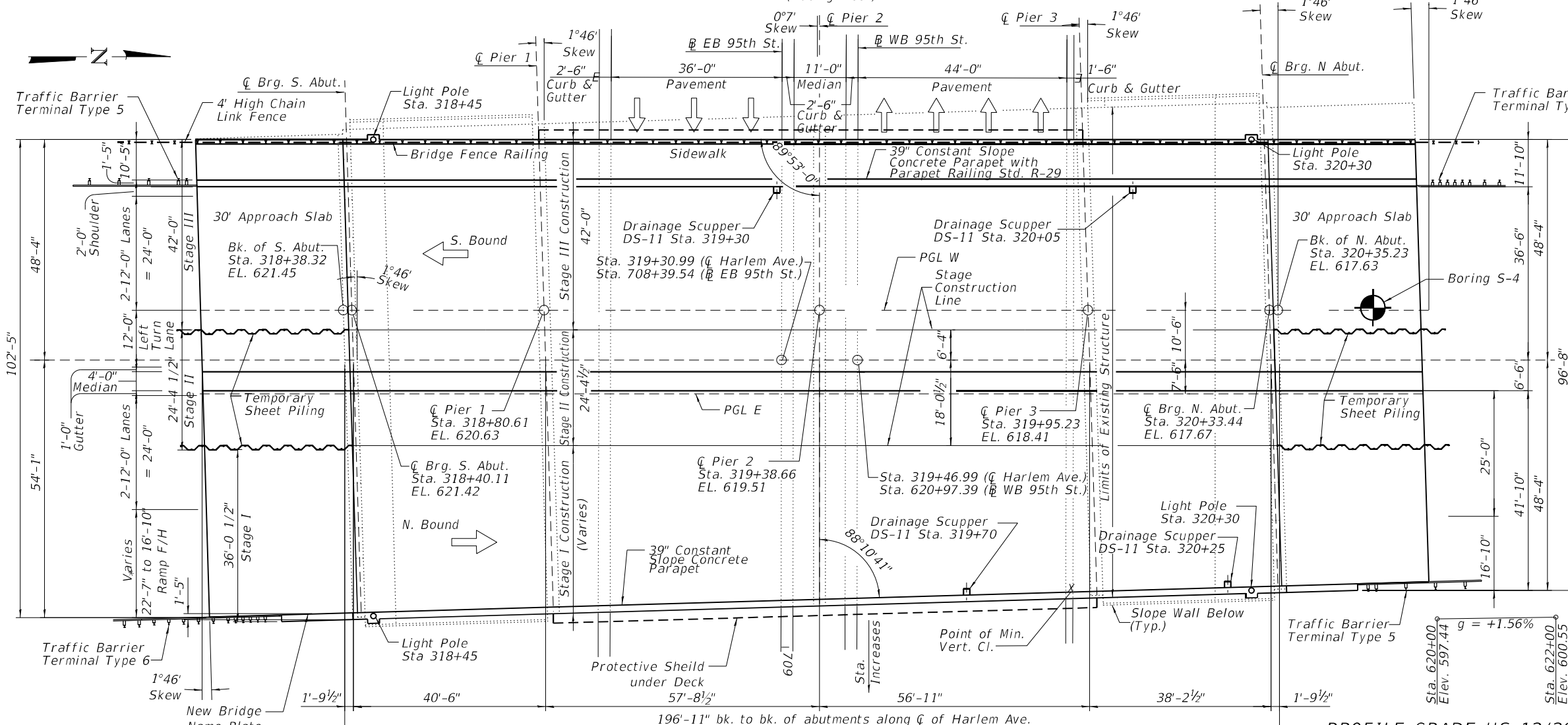
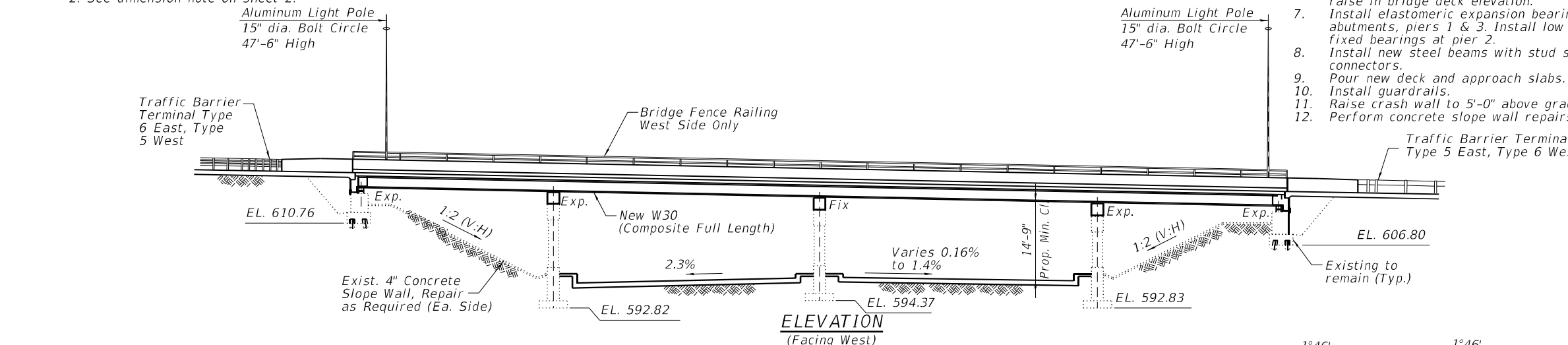
SEISMIC DATA

Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.04g
 Site Coefficient (S) = 1.0

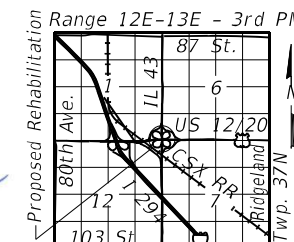
LOADING HL-93

Allow 25#/sq. ft. for future wearing surface.

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



**PROFILE GRADE LINE
 IL 43 (HARLEM AVE.)
 (10.5' Left)**



STATE OF ILLINOIS
 DAVID BILCO
 81003186
 LICENSED PROFESSIONAL ENGINEER
 EXPIRES: 11/30/2024

**LOCATION SKETCH
 SCOPE OF WORK**

**GENERAL PLAN & ELEVATION
 IL 43 (HARLEM AVE.), FAP 348 OVER
 US12/20 (95th ST.), FAP 29
 SECTION 3128-Z-1-R&RS
 COOK COUNTY
 STATION 319+30.99
 STRUCTURE NO. 016-0320**

**PROFILE GRADE US 12/20 (95th St.)
 WESTBOUND BASE LINE**

FILE NAME: H:\Projects\3730\Drawings\CADD SHEETS\STRUCTURAL\0320-Harlem-95th\Design Drawings\0160320-60R49-001.dgn

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PLOT DATE	DRAWN - HE	REVISED -
	CHECKED - DNS	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SHEET 1 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	469
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES:

1. Fasteners shall be ASTM F 3125 Grade A325 Type 1, mechanically galvanized bolts. Bolts 7/8in. diameter, holes 15/16 in. diameter, unless otherwise noted.
2. Calculated weight of M270 Gr50 Structural Steel = 529,000 pounds
Calculated weight of M270 Gr36 Structural Steel = 45,000 pounds
3. No field welding is permitted except as specified in the contract documents.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. Slip forming of the parapets is not allowed.
6. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/4 in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
7. If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
8. Plan dimensions and details relative to the existing structure have been taken from existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
9. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to address the presence of lead on this project.
10. The Inorganic Zinc Rich Primer/ Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue, Munsell No. 10B 3/6.
11. Parapet Railing and Bridge Fence Railing shall be painted in accordance with Section 506 of the SSRBC using the shop coated Organic Zinc-Rich/Epoxy/Urethane Paint System.

TOTAL BILL OF MATERIAL

ITEM DESCRIPTION	UNITS	SUPER	SUB	TOTAL
Removal Of Existing Superstructures No1	EACH	1	-	1
Protective Shield	SQ YD	2,300	-	2,300
Protective Coat	SQ YD	3,180	-	3,180
Structure Excavation	CU YD	-	491	491
Concrete Structures	CU YD	-	195.6	195.6
Concrete Superstructure	CU YD	709.4	-	709.4
Concrete Superstructure (Approach Slab)	CU YD	-	274.7	274.7
Furnishing And Erecting Structural Steel	L SUM	1	-	1
Stud Shear Connectors	EACH	34,461	-	34,461
Reinforcement Bars Epoxy Coated	POUND	275,260	16,870	292,130
Bar Splicers	EACH	1910	-	1910
Bridge Fence Railing, Curved	FOOT	257	-	257
Name Plates	EACH	-	1	1
Elastomeric Bearing Assembly, Type I	EACH	-	64	64
Anchor Bolts, 1"	EACH	-	160	160
Temporary Sheet Piling	SQ FT	-	1,290	1,290
Parapet Railing	FOOT	257	-	257
Granular Backfill For Structures	CU YD	-	341	341
Geocomposite Wall Drain	SQ YD	150	-	150
Pipe Underdrains For Structure, 4"	FOOT	212	-	212
Epoxy Crack Injection	FOOT	-	304	304
Concrete Removal	CU YD	-	82	82
Drainage System For Structures	L SUM	1	-	1
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	SQ FT	-	933	933
Drainage Scuppers, Ds-11	EACH	4	-	4
Slope Wall Crack Sealing	FOOT	-	531	531
Bar Terminators	EACH	1,140	-	1,140

STATION 319+30.99
BUILT 20__ BY
STATE OF ILLINOIS
FAP 348 Sec. 3128-Z-1-R&RS
LOADING HL-93
Str. No. 016-0320

NAME PLATE
See Std. 515001

Existing Name Plates shall be cleaned
and relocated next to New Name Plates

FILE = \$FileA\$

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ARCHITECTS | ENGINEERS
PN: 3730

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PLOT DATE =	CHECKED - DNB	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA
STRUCTURE NO. 016-0320**

SHEET 2 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	470
CONTRACT NO. 60R49				
		ILLINOIS	FED. AID PROJECT	

DATE = \$Date\$

INDEX OF SHEETS

Sheet Number	Sheet Name
1	General Plan & Elevation
2	General Data
3	General Data
4	Construction Staging
5	Construction Staging
6	Temporary Sheet Piling
7	Temporary Concrete Barrier
8	Sheet Not Used
9	T/Slab Elevations - Fillet Heights
10	T/Deck Elevation Tables - Beams 1 to 3
11	T/Deck Elevation Tables - Beams 4 to 6
12	T/Deck Elevation Tables - PGL & Beam 7 & C Harlem
13	T/Deck Elevation Tables - Beams 8, 9, & East PGL
14	T/Deck Elevation Tables - Beams 10 to 12
15	Beams T/Deck Elevation Tables - Beams 13 to 15
16	T/Deck Elevation Tables - Beam 16
17	T/Deck Elev Tables - Stage Construction Joint
18	T/North Approach Slab Elevations
19	T/Deck Elevations - South Approach Slab - Plan, Elevation Tables
20	Top of Deck Plan Sheet 1 of 2
21	Top of Deck Plan Sheet 2 of 2
22	Deck Cross Section
23	North Diaphragm - Plan & Elevation
24	South Diaphragm - Plan & Elevation
25	Diaphragm Details
26	West Parapet Elevations
27	East Parapet Elevations
28	Low West Parapet Elevations
29	Parapet - Details
30	Light Pole Mounting At Parapets - Details
31	North Approach Slab - Plan & B.O.M.
32	South Approach Slab - Plan & B.O.M.
33	Approach Slabs - Parapet Elevations

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34	Approach Slabs - Sections & Details
35	Misc. Details
36	Drainage System - Plan
37	Drainage System - Elevations, Sections
38	Drainage Scupper, DS-11
39	Parapet Railing
40	Bridge Fence Railing, Parapet Mounted
40A	Bridge Fence Railing, Curved
41	Moment & Reaction Tables
42	Steel Framing - Plan
43	Typ. Beam Elev's, Beam Table, Stud Spacing Table, T/Web Table
44	Steel Beam - Sections & Details Diaphragms
45	Bearings @ Abutments - Details & Tables
46	Bearings @ Piers - Details & Tables
47	Removal Details - North Abutment
48	Removal Details - South Abutment
49	Sheet Not Used
50	North Abutment - Plan, Elevation, & Section
51	South Abutment - Plan, Elevation, & Section
52	Abutment Sections & Details
53	North Wing Walls - Plans, & Elevations
54	South Wing Walls - Plans, & Elevations
55	Pier #1 - Plan, Elevation, Sections, & B.O.M.
56	Pier #2 - Plan, Elevation, Sections, & B.O.M.
57	Pier #3 - Plan, Elevation, Sections, & B.O.M.
58	Piers - Concrete Extensions- Sections & Details
59	Pier #1 Repairs
60	Pier #2 Repairs
61	Pier #3 Repairs
62	Slope Wall Repairs
63	Bar Splicer & Mechanical Splicer Details
64	Soil Borings

ABBREVIATIONS

ABV	ABOVE	MATL	MATERIAL
AGG	AGGREGATE	MED	MEDIAN
AVE	AVENUE	MIX	MIXTURE
BK	BACK	MOD	MODIFIED
B-B	BACK TO BACK	NB	NORTHBOUND
BF	BACKFACE	NE	NORTHEAST
BKPL	BACKPLATE	NW	NORTHWEST
BS	BOTHSIDES	NS	NEARSIDE
BTM	BOTTOM	O/S	OFFSET
BLDG	BUILDING	PVD	PAVED
C-C	CENTER TO CENTER	PVMT	PAVEMENT
		PM	PAVEMENT MARKING
CL	CENTERLINE OR CLEARANCE	PED	PEDESTAL
CTS	CENTERS	PNT	POINT
CONC	CONCRETE	PCC	PORTLAND CEMENT
CONST	CONSTRUCT		CONCRETE
CONTD	CONTINUED		CONCRETE
CONT	CONTINUOUS	PROJ	PROJECT
CU YD	CUBIC YARD	RR	RAILROAD
DIA	DIAMETER	REINF	REINFORCEMENT
EA	EACH	REM	REMOVAL
EB	EASTBOUND	REP	REPLACEMENT
EOP	EDGE OF PAVEMENT	RT	RIGHT
		ROW	RIGHT-OF-WAY
ELEC	ELECTRICAL	SH	SHEET
EL	ELEVATION	SHLD	SHOULDER
EXC	EXCAVATION	SW	SIDEWALK OR SOUTHWEST
EX	EXISTING		SOUTHWEST
F-F	FACE TO FACE	SB	SOUTHBOUND
FDN	FOUNDATION	SE	SOUTHEAST
FR	FRAME	SQ FT	SQUARE FEET
FS	FARSIDE	SQ YD	SQUARE YARD
FT	FOOT	STD	STANDARD
GAL	GALLON	STA	STATION
GALV	GALVANIZED	ST	STREET
GR	GRATE	STR	STRUCTURE
GRVL	GRAVEL	SURF	SURFACE
GND	GROUND	TEL	TELEPHONE
GUT	GUTTER	TEMP	TEMPORARY
HDUTY	HEAVY DUTY	TYP	TYPICAL
HORIZ	HORIZONTAL	UN	UNLESS NOTED
IL	ILLINOIS	UTIL	UTILITY
IMP	IMPROVEMENT	VERT	VERTICAL
IN DIA	INCH DIAMETER	VIF	VERIFY IN FIELD
JT	JOINT	W	WITH
Kg	KILOGRAM	WB	WESTBOUND
Km	KILOMETER	W/O	WITH OUT
LB	POUND		
LN	LANE		
LT	LEFT		
LP	LIGHT POLE		
LF	LINEAL FEET OR LINEAR FEET		
LNG	LONGITUDINAL		
L SUM	LUMP SUM		

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PN: 3730	CHECKED - DNB	REVISED -
PLOT DATE =		

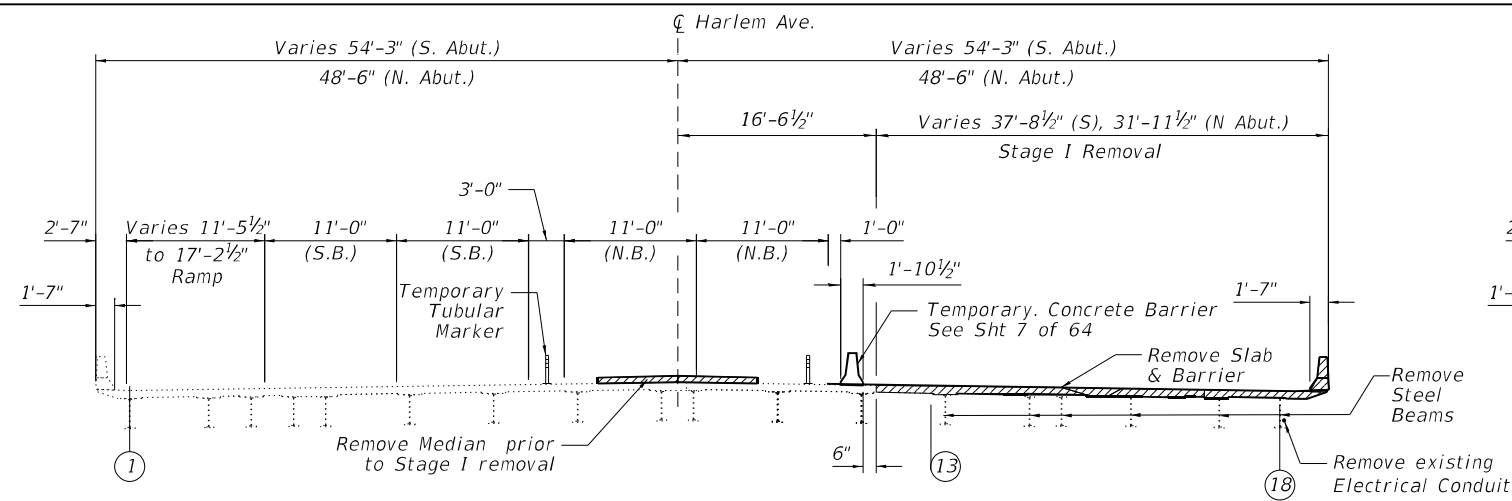
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 016-0320

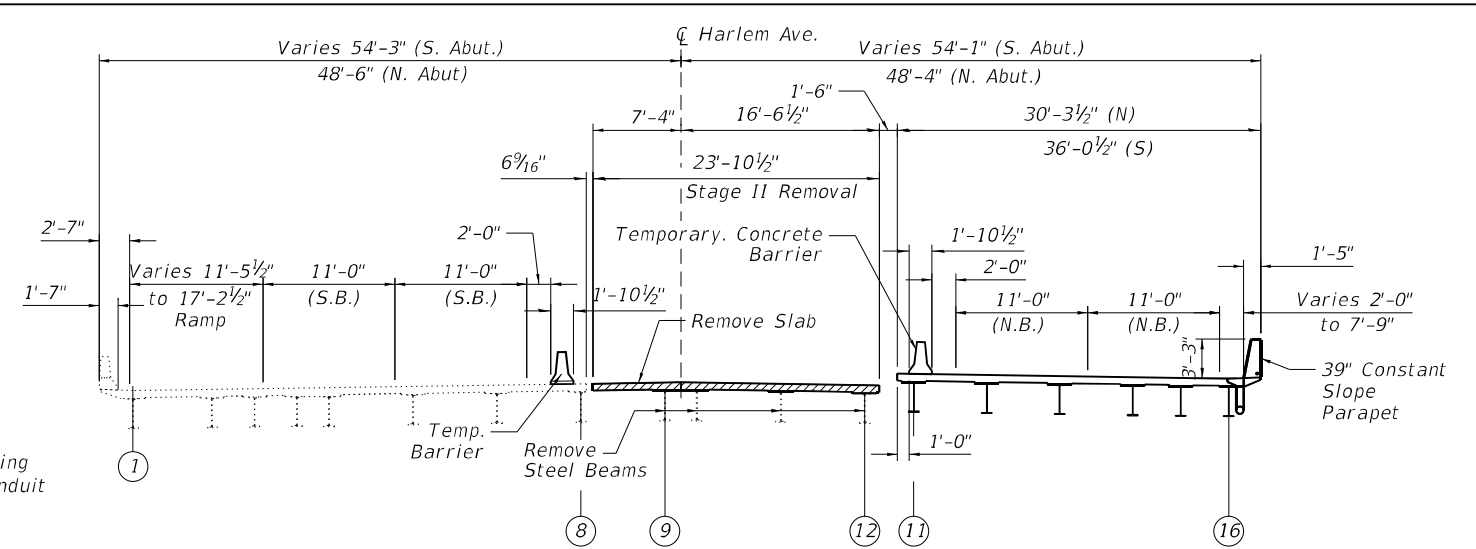
SHEET 3 OF 64 SHEETS 64

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	471
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

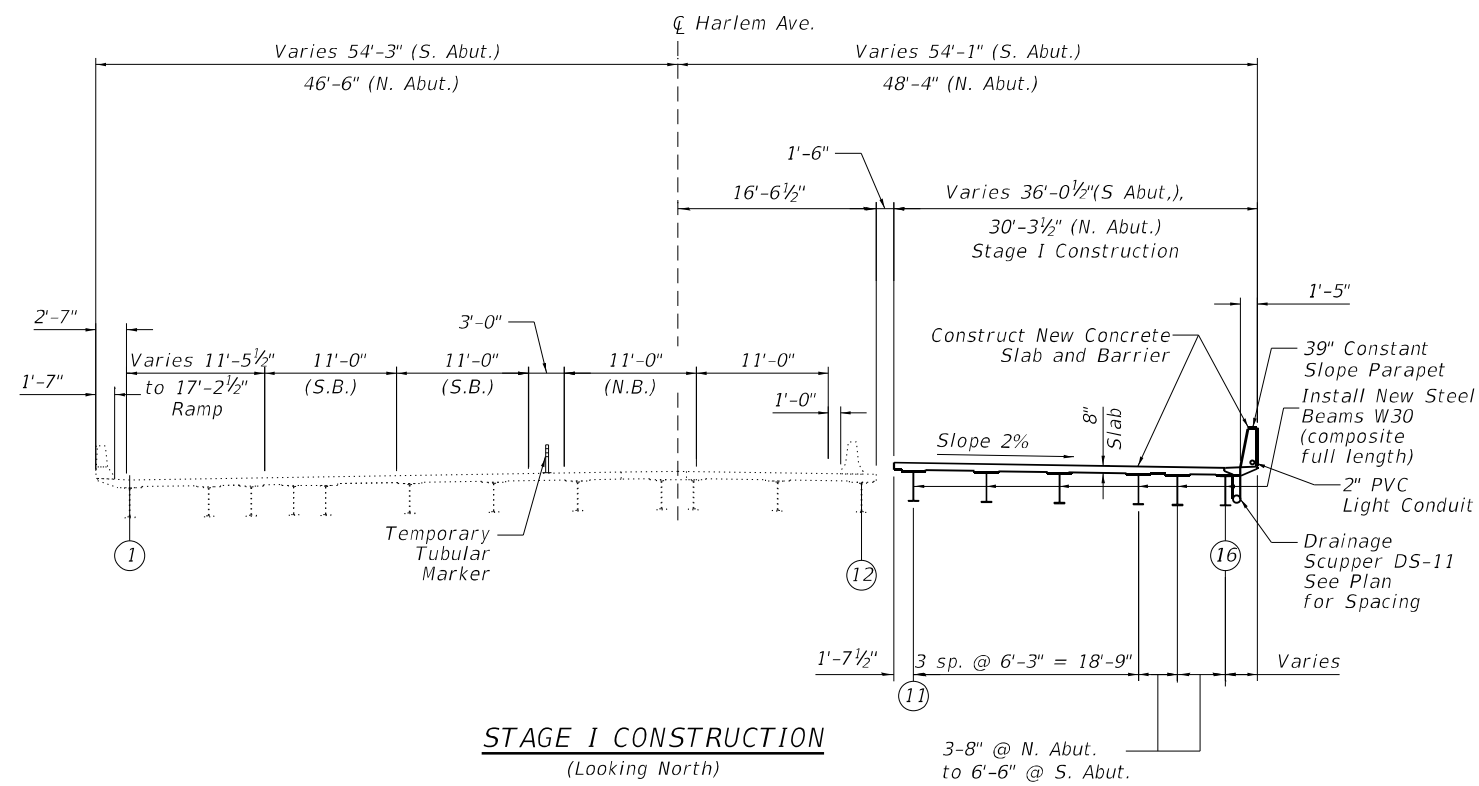
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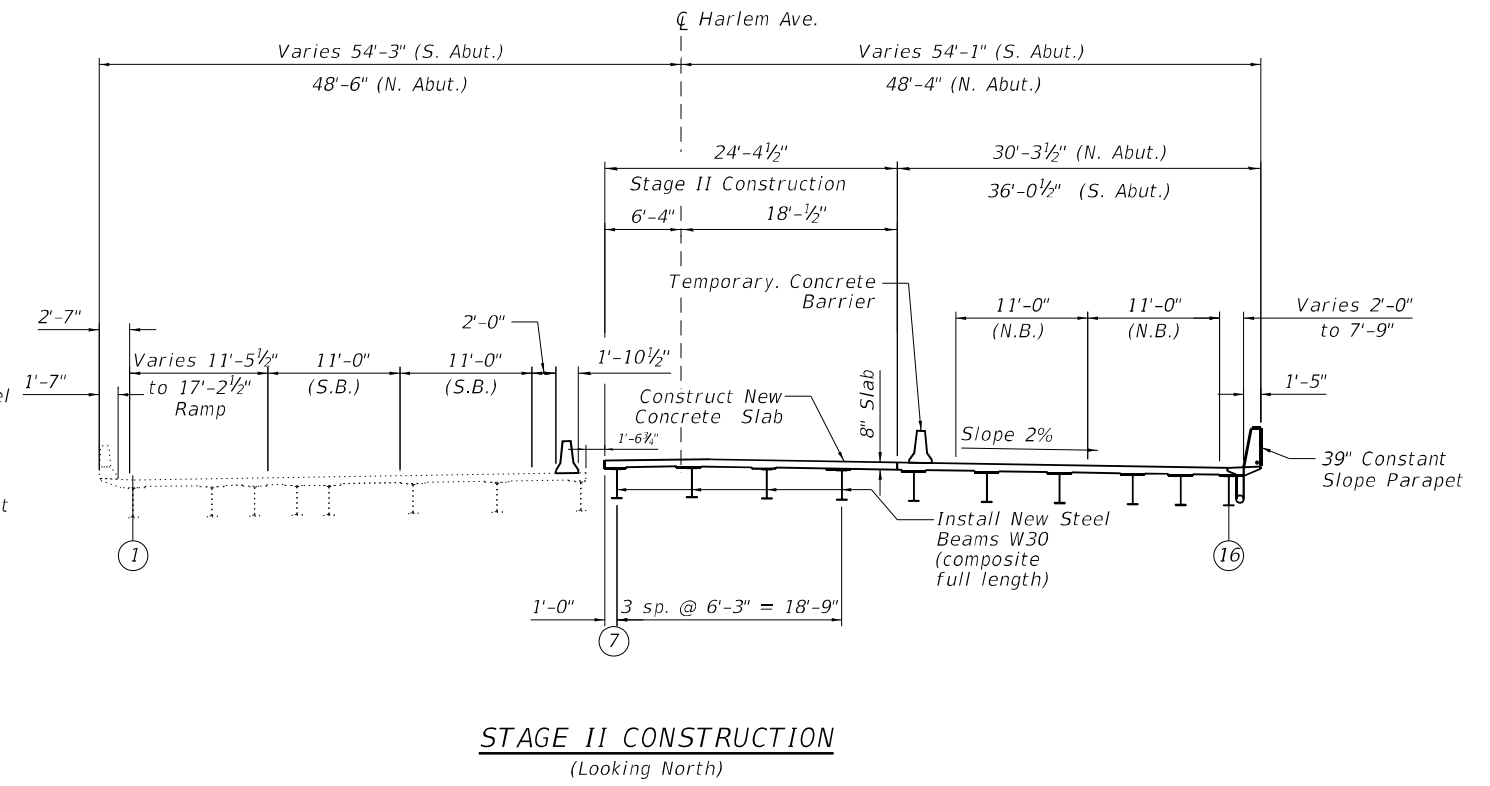
STAGE I REMOVAL
(Looking North)



STAGE II REMOVAL
(Looking North)



STAGE I CONSTRUCTION
(Looking North)



STAGE II CONSTRUCTION
(Looking North)

Note:
Horizontal dimensions are at Right \perp
to the CL of Harlem Ave. except as
noted.

Notes:

1. Stage I, II, & III construction shown is for the superstructure.
2. Stage I, II, & III construction for the abutment is different. See Sheets 50 & 51 of 64.
3. For quantities of temporary concrete barrier, see roadway plans.
4. Hatched area indicates Removal of Existing Superstructures NO. 1

FILE NAME: H:\Projects\31730\Drawings\CADD_SHEETS\STRUCTURAL\0320-Harlem-95th\Design_Drawings\0160320-60R49-004.dgn

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PN: 3730

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PLOT DATE	CHECKED - DNS	REVISED -

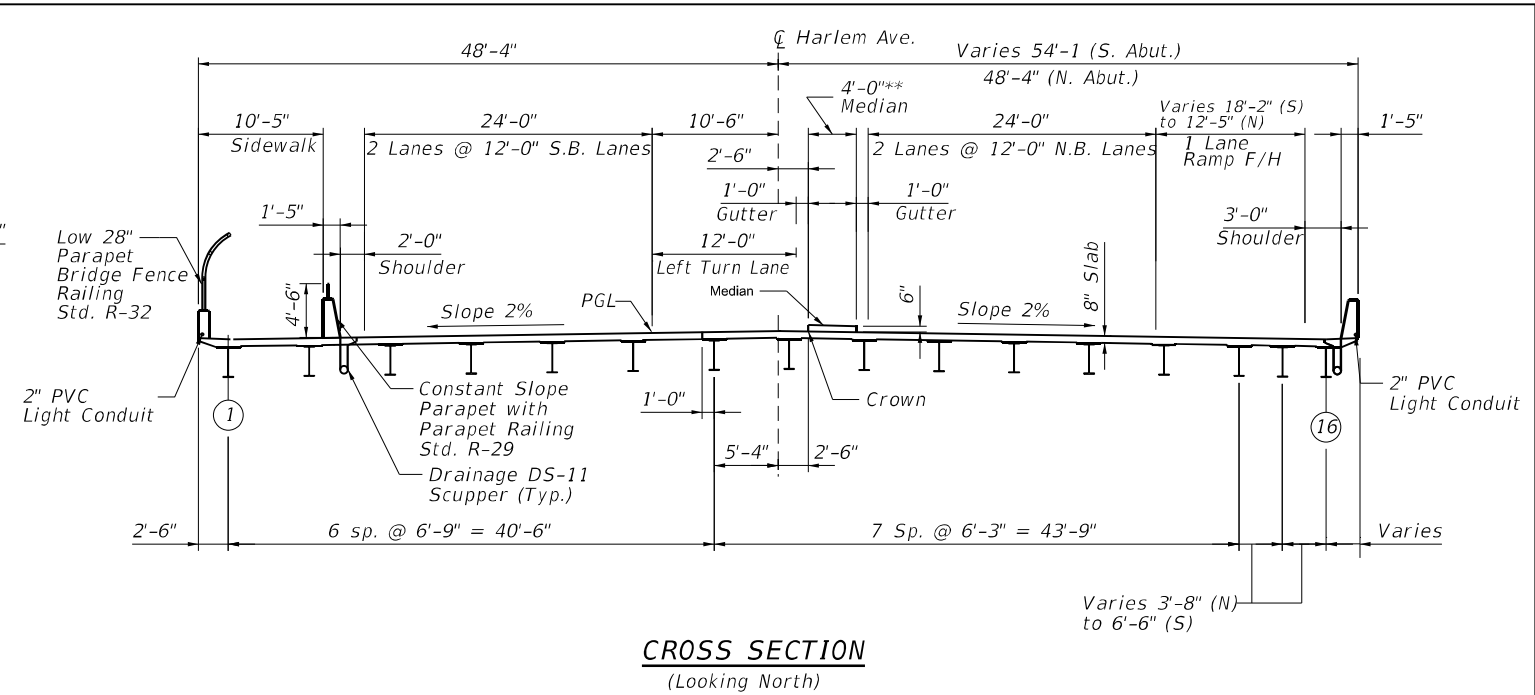
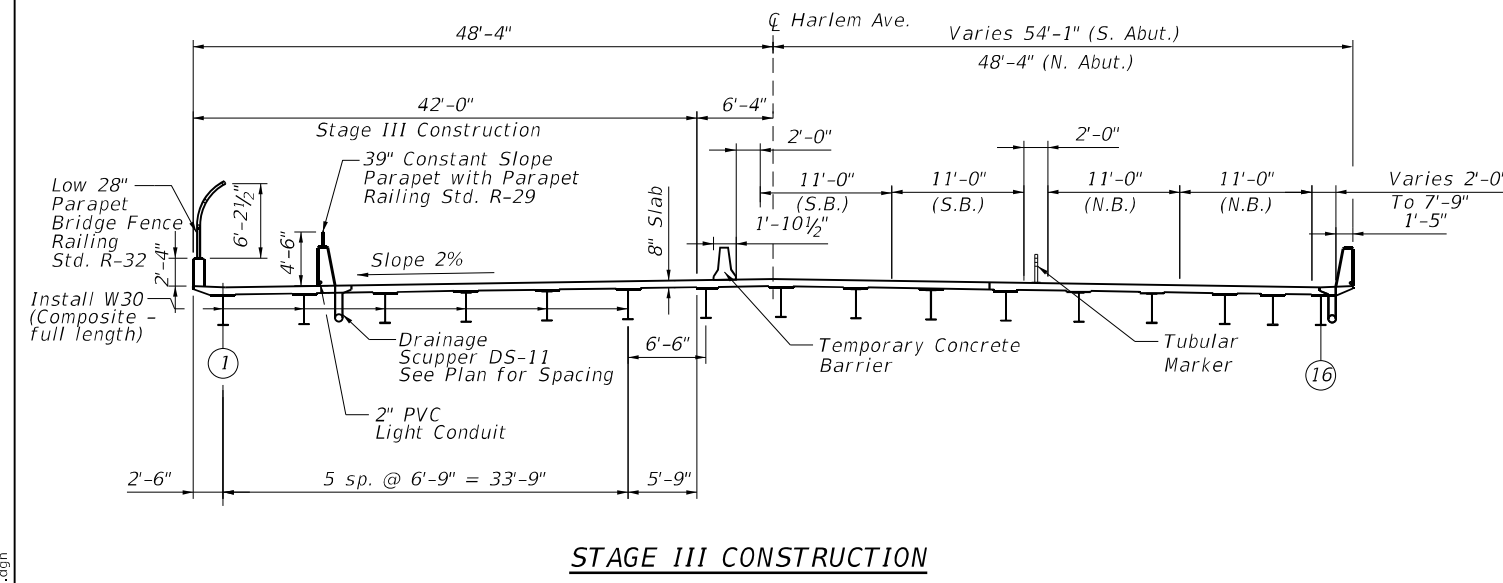
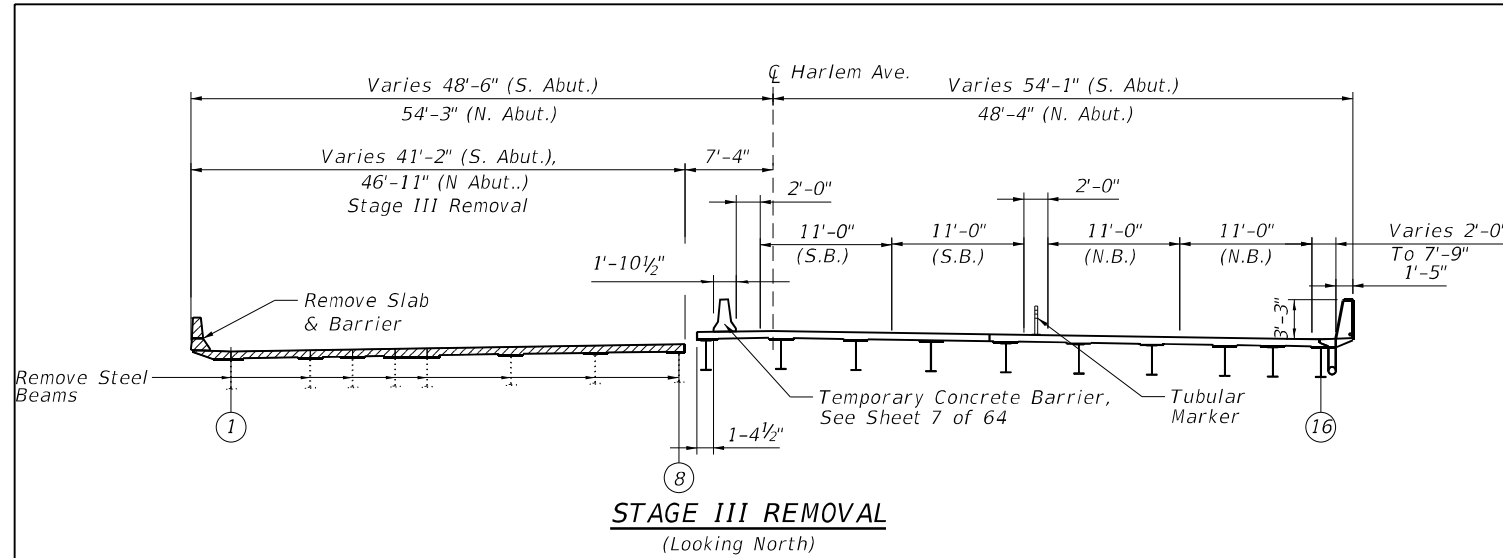
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION STAGING
STRUCTURE NO. 016-0320

SHEET 4 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	472
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

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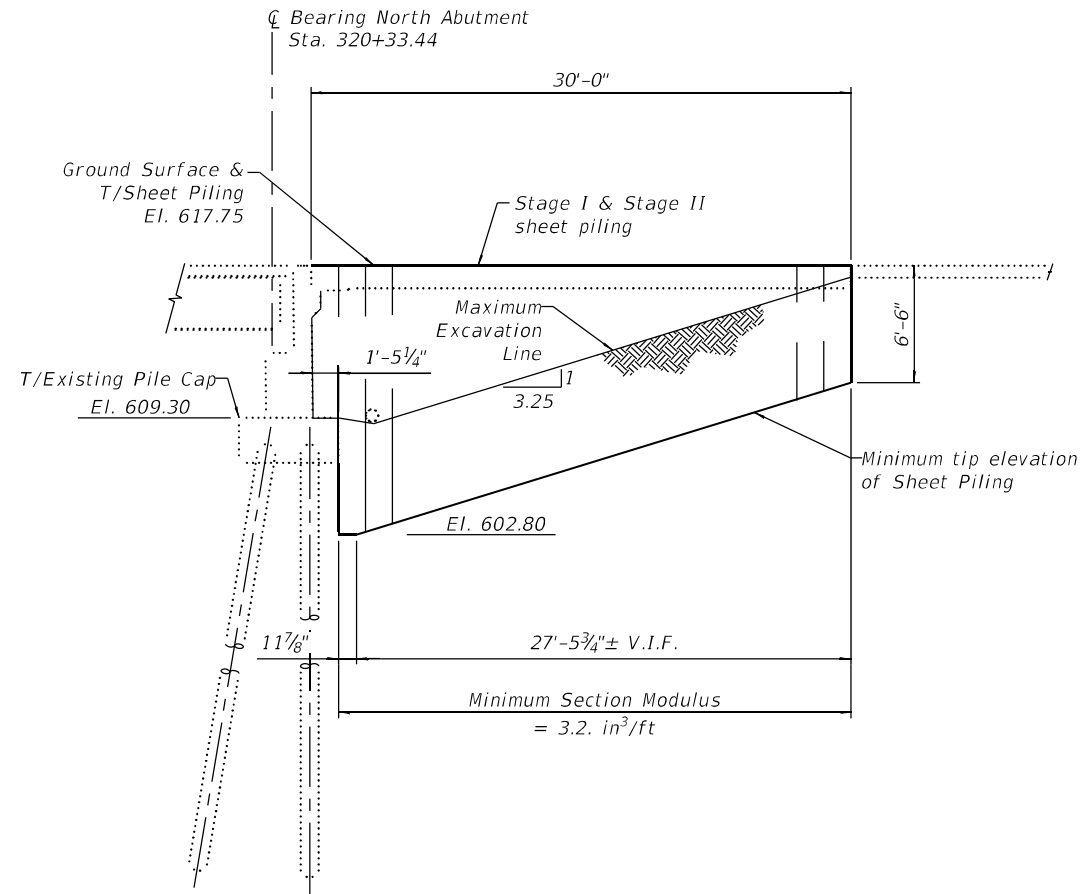
Notes:
Horizontal dimensions are at Right \angle to the CL of Harlem Ave. except as noted.
** Proposed median to be constructed after Stage III is complete.

Notes:
1. See Sheet 4 of 64 for notes.

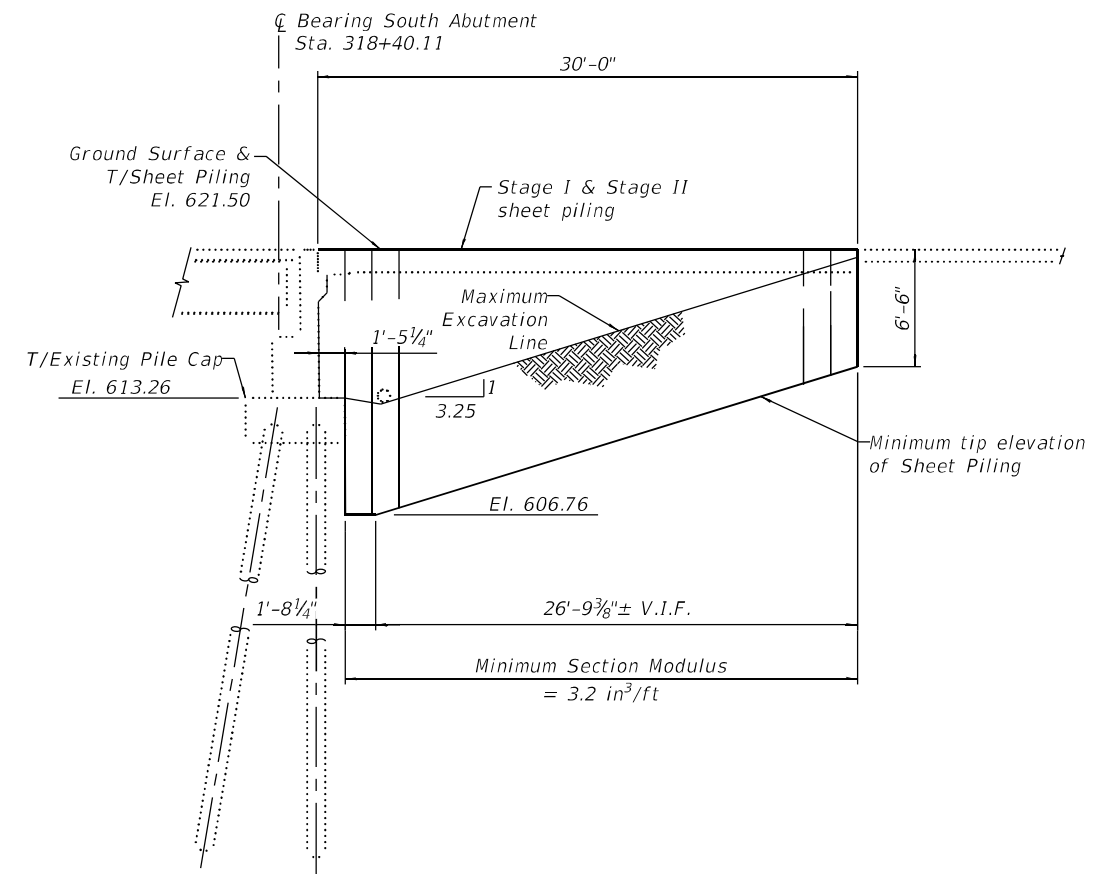
See sheet 4 of 64 for Notes.

(Horiz. dim. @ Rt. {s})

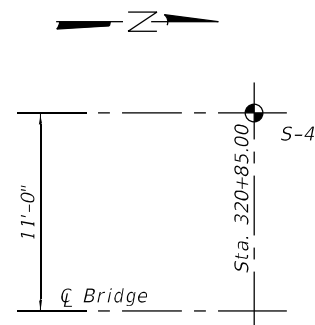
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	PLOT SCALE	DRAWN - HE	REVISED -			CONTRACT NO. 60R49				
	PLOT DATE	CHECKED - DNS	REVISED -			ILLINOIS FED. AID PROJECT				



TEMPORARY CANTILEVERED SHEET PILING @ NORTH ABUTMENT S. B. LANES ELEVATION
 TEMPORARY CANTILEVERED SHEET PILING @ NORTH ABUTMENT N. B. LANES ELEVATION
 (Looking West)



TEMPORARY CANTILEVERED SHEET PILING @ SOUTH ABUTMENT S. B. LANES ELEVATION
 TEMPORARY CANTILEVERED SHEET PILING @ SOUTH ABUTMENT N. B. LANES ELEVATION
 (Looking East)



SOIL BORING LOCATION PLAN
 (Soil Boring Log on Sht. 64)

1. If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
2. The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.

BILL OF MATERIAL - 4 LOCATIONS

Item	Unit	Total
Temporary Sheet Piling	SQ. Ft.	1290

FILE = \$File\$

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PN: 3730	DRAWN - JPM	REVISED -
PLOT DATE =	CHECKED - DNB	REVISED -

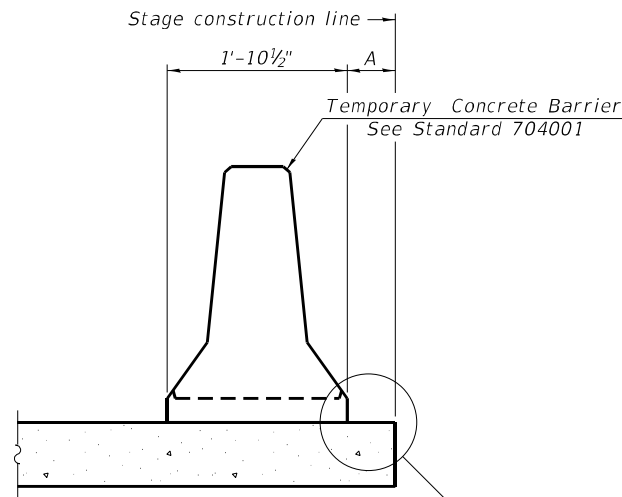
STATE OF ILLINOIS
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TEMPORARY SHEET PILING
 STRUCTURE NO. 016-0320

SHEET 6 OF 64 SHEETS

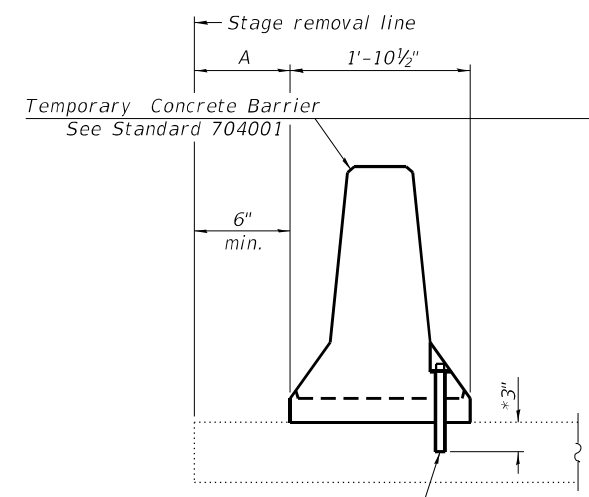
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349	3128-Z4-R&RS	COOK	659	474
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

DATE = \$Date\$



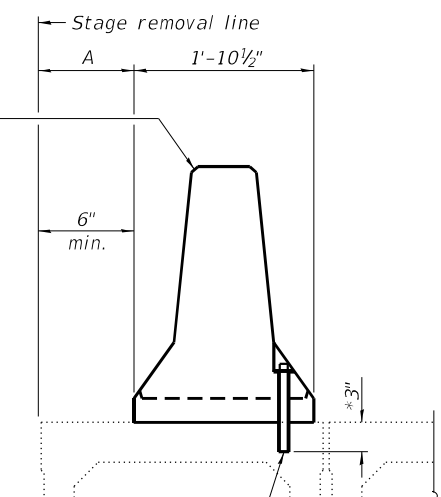
When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



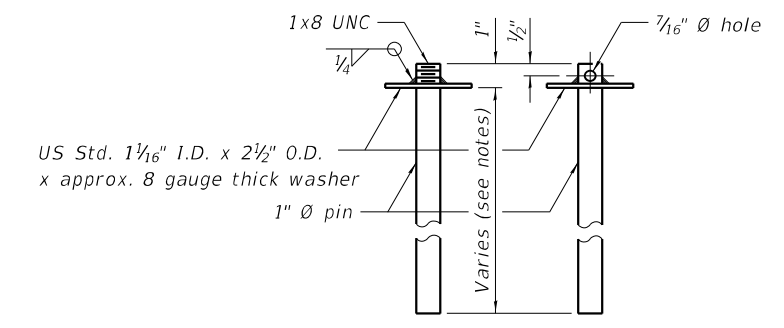
Drill 3-1 1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB



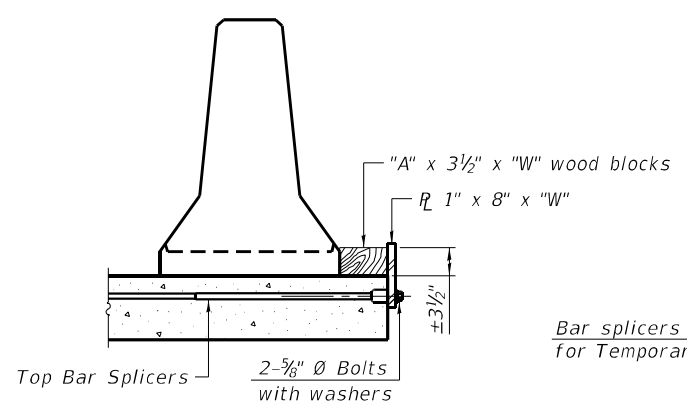
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

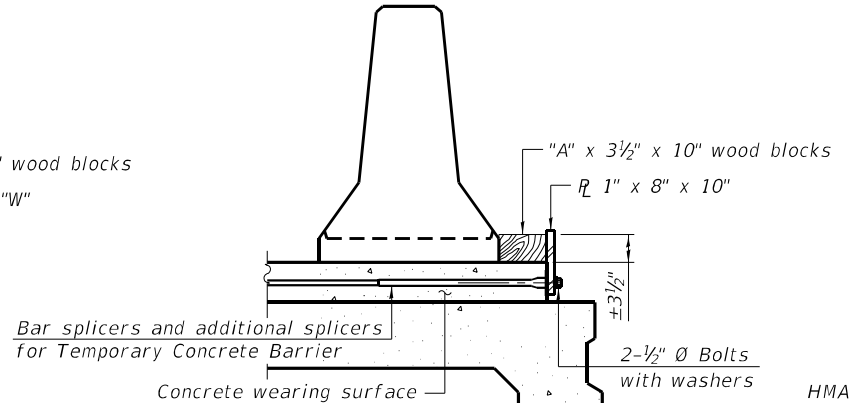


RESTRAINING PIN

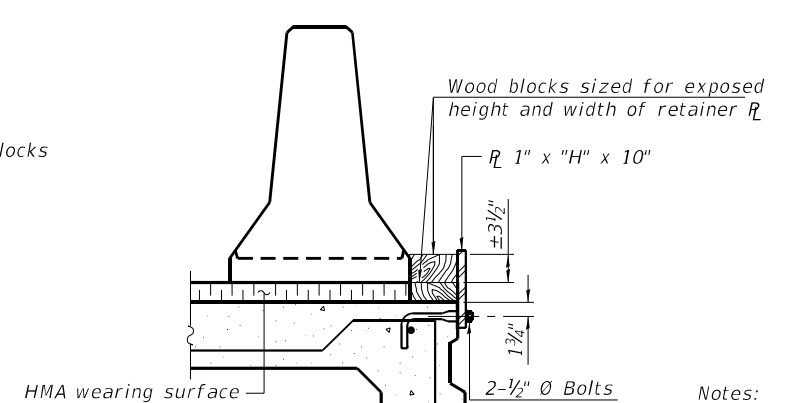
SECTIONS THRU SLAB OR DECK BEAM



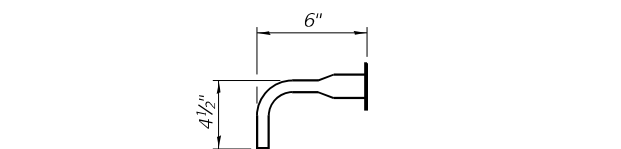
DETAIL I



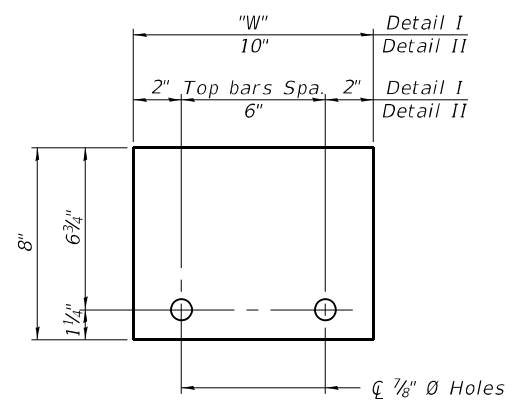
DETAIL II



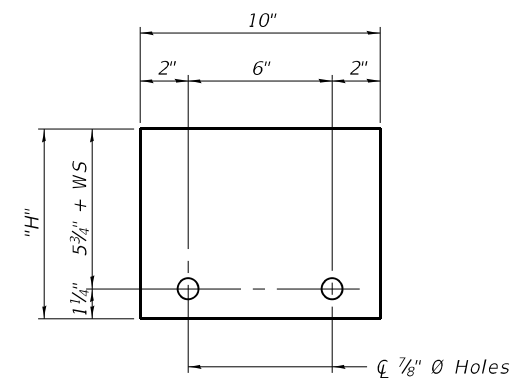
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER 1" x 8" 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 center 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 along the length of the beam, as detailed, 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.

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27 10-12-2021

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TEMPORARY CONCRETE BARRIER
STRUCTURE NO. 016-0320

SHEET 7 OF 64 SHEETS

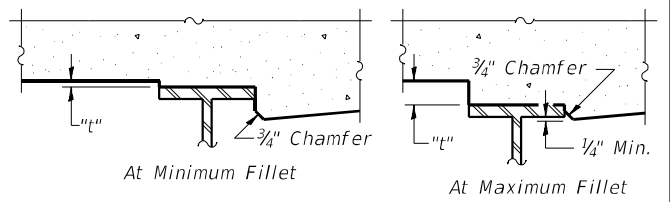
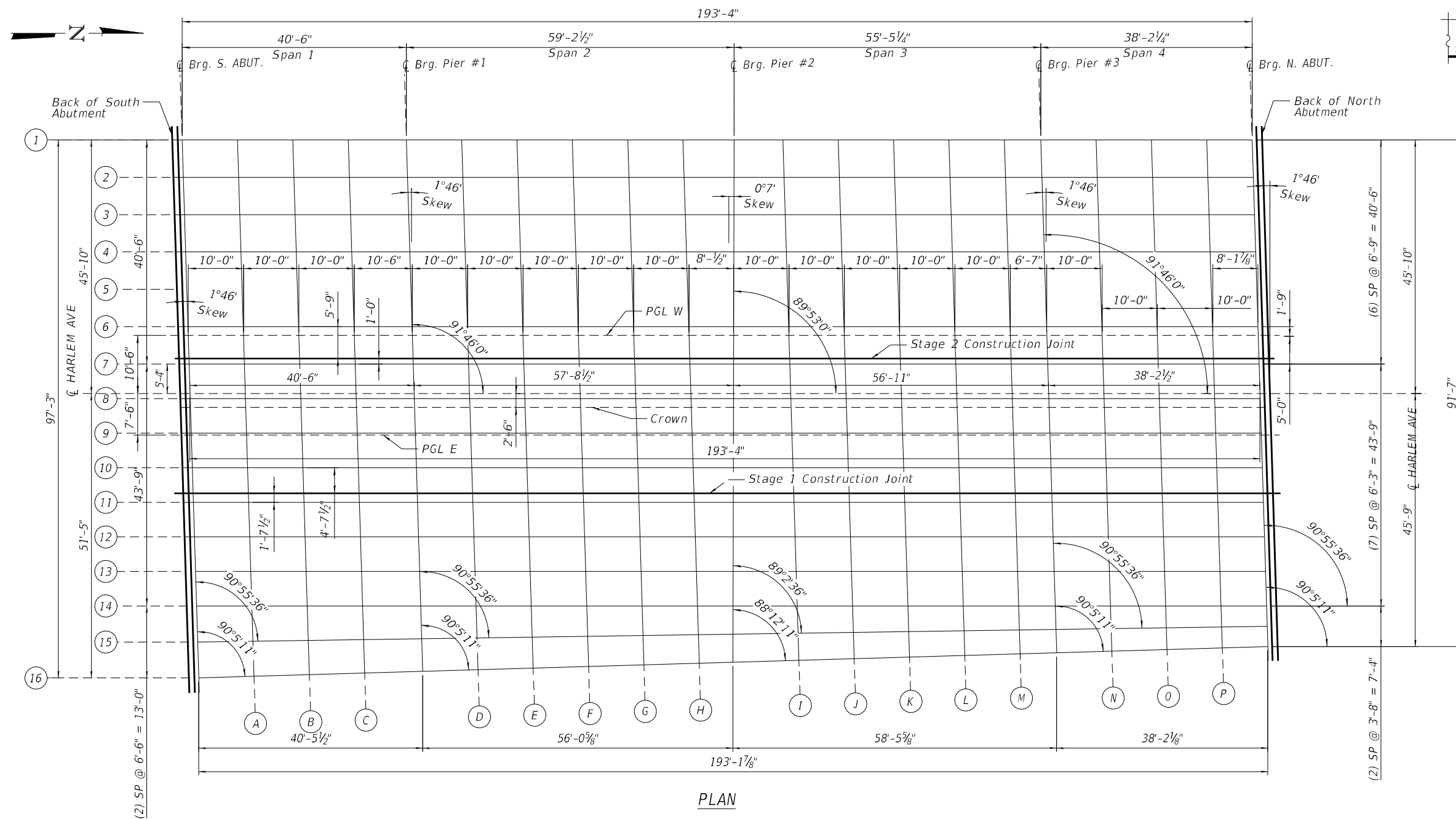
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	475
CONTRACT NO. 60R49				

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SHEET NOT USED

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					SHEET 8 OF 64 SHEETS					

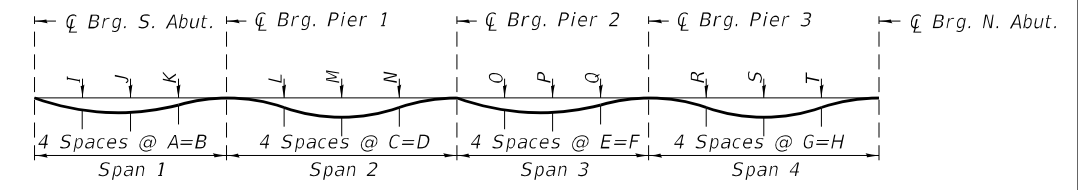


To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheets 10 thru 17 of 64. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 10 thru 17 of 64 minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

PLAN

Beam	DIMENSIONS FOR DEAD LOAD DEFLECTION DIAGRAM																DEAD LOAD DEFLECTIONS									
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T						
1	10'-1 1/2"	40'-6"	14'-9 1/16"	59'-0 1/4"	13'-10 3/16"	55'-7 1/4"	9'-6 3/8"	38'-2 1/4"	1/8"	1/8"	0"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	0"	0"	0"						
2	10'-1 1/2"	40'-6"	14'-8 1/16"	58'-11 7/8"	13'-10 1/16"	55'-7 7/8"	9'-6 3/8"	38'-2 1/4"	1/8"	1/8"	0"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	0"	0"	0"						
3	10'-1 1/2"	40'-6"	14'-8 3/16"	58'-9 1/4"	13'-11 1/16"	55'-10 1/4"	9'-6 3/8"	38'-2 1/4"	1/8"	1/8"	0"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	0"	0"	0"						
4	10'-1 1/2"	40'-6"	14'-7 7/16"	58'-6 1/2"	14'-0 1/4"	56'-1"	9'-6 3/8"	38'-2 1/4"	1/8"	1/8"	0"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	0"	0"	0"						
5	10'-1 1/2"	40'-6"	14'-6 1/16"	58'-3 7/8"	14'-0 1/16"	56'-3 3/8"	9'-6 3/8"	38'-2 1/4"	1/8"	1/8"	0"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	0"	0"	0"						
6	10'-1 1/2"	40'-6"	14'-6 3/16"	58'-1 1/4"	14'-1 1/16"	56'-6 1/4"	9'-6 3/8"	38'-2 1/4"	1/8"	1/8"	0"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	0"	0"	0"						
7	10'-1 1/2"	40'-6"	14'-5 7/16"	57'-10 1/2"	14'-2 1/4"	56'-9"	9'-6 3/8"	38'-2 1/4"	1/8"	1/8"	0"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	0"	0"	0"						
8	10'-1 1/2"	40'-6"	14'-5 3/16"	57'-8 3/4"	14'-2 3/4"	56'-11"	9'-6 3/8"	38'-2 1/4"	1/8"	1/8"	0"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	0"	0"	0"						
9	10'-1 1/2"	40'-6"	14'-4 7/16"	57'-5 3/8"	14'-3 1/16"	57'-1 1/8"	9'-6 3/8"	38'-2 1/4"	1/8"	1/8"	0"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	0"	0"	0"						
10	10'-1 1/2"	40'-6"	14'-3 7/16"	57'-3 3/8"	14'-4"	57'-4"	9'-6 3/8"	38'-2 1/4"	1/8"	1/8"	0"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	0"	0"	0"						
11	10'-1 1/2"	40'-6"	14'-3 1/16"	57'-0 3/4"	14'-4 1/16"	57'-6 3/4"	9'-6 3/8"	38'-2 1/4"	1/8"	1/8"	0"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	0"	0"	0"						
12	10'-1 1/2"	40'-6"	14'-2 7/16"	56'-10 1/4"	14'-5 1/16"	57'-9 1/4"	9'-6 3/8"	38'-2 1/4"	1/8"	1/8"	0"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	0"	0"	0"						
13	10'-1 1/2"	40'-6"	14'-1 7/16"	56'-7 3/4"	14'-5 1/16"	57'-11 3/8"	9'-6 3/8"	38'-2 1/4"	1/8"	1/8"	0"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	0"	0"	0"						
14	10'-1 1/2"	40'-6"	14'-1 1/16"	56'-5 1/4"	14'-6 3/4"	58'-3"	9'-6 3/8"	38'-2 1/4"	1/8"	1/8"	0"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	0"	0"	0"						
15	10'-1 1/2"	40'-6"	14'-0 7/16"	56'-3"	14'-7"	58'-4"	9'-6 3/8"	38'-2 1/4"	1/8"	1/8"	0"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	0"	0"	0"						
16	10'-1 1/2"	40'-6"	13'-11 1/16"	55'-10 3/4"	14'-8 1/16"	58'-8 1/8"	9'-6 3/8"	38'-2 1/4"	1/8"	1/8"	0"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	0"	0"	0"						



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 10 thru 17 of 64.

THE HOH GROUP, INC.
ARCHITECTS | ENGINEERS
PN: 3730

USER NAME	DESIGNED - RS	REVISED -
PLOT SCALE	CHECKED - DNS	REVISED -
PLOT DATE	DRAWN - HE	REVISED -
	CHECKED - DNS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS - FILLET HEIGHTS
STRUCTURE NO. 016-0320

SHEET 9 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	477
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

<i>BEAM 1</i>				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+37.23	45.85	617.05	617.05
CL Brg. S. Abut	318+39.02	45.85	620.71	620.71
A	318+49.02	45.85	620.32	620.60
B	318+59.02	45.85	620.32	620.43
C	318+69.02	45.85	620.13	620.18
CL Brg. Pier 1	318+79.52	45.85	619.92	619.92
D	318+89.52	45.85	619.73	619.80
E	318+99.52	45.85	619.53	619.71
F	319+09.52	45.85	619.34	619.56
G	319+19.52	45.85	619.15	619.30
H	319+29.52	45.85	618.95	619.04
CL Brg. Pier 2	319+38.73	45.85	618.80	618.80
I	319+47.23	45.85	618.64	618.66
J	319+57.23	45.85	618.44	618.59
K	319+67.23	45.85	618.25	618.46
L	319+77.23	45.85	618.06	618.25
M	319+87.23	45.85	617.86	617.95
CL Brg. Pier 3	319+94.14	45.85	617.70	617.70
N	320+04.14	45.85	617.51	617.53
O	320+14.14	45.85	617.31	617.39
P	320+24.14	45.85	617.12	617.18
CL Brg. N. Abut	320+32.35	45.85	616.96	616.96
Back N. Abut	320+34.14	45.85	616.93	616.93

<i>BEAM 2</i>				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+37.44	39.10	620.81	620.81
CL Brg. S. Abut	318+39.23	39.10	620.85	620.85
A	318+49.23	39.10	620.65	620.71
B	318+59.23	39.10	620.46	620.49
C	318+69.23	39.10	620.27	620.30
CL Brg. Pier 1	318+79.73	39.10	620.06	620.06
D	318+89.73	39.10	619.86	619.89
E	318+99.73	39.10	619.67	619.70
F	319+09.73	39.10	619.48	619.52
G	319+19.73	39.10	619.28	619.31
H	319+29.73	39.10	619.09	619.12
CL Brg. Pier 2	319+38.72	39.10	618.94	618.94
I	319+47.44	39.10	618.77	618.80
J	319+57.44	39.10	618.57	618.60
K	319+67.44	39.10	618.38	618.42
L	319+77.44	39.10	618.19	618.22
M	319+87.44	39.10	617.99	618.02
CL Brg. Pier 3	319+94.35	39.10	617.84	617.84
N	320+04.35	39.10	617.64	617.67
O	320+14.35	39.10	617.45	617.48
P	320+24.35	39.10	617.26	617.29
CL Brg. N. Abut	320+32.56	39.10	617.10	617.10
Back N. Abut	320+34.35	39.10	617.06	617.06

<i>BEAM 3</i>				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+37.64	32.35	620.95	620.95
CL Brg. S. Abut	318+39.44	32.35	620.98	620.98
A	318+49.44	32.35	620.79	620.85
B	318+59.44	32.35	620.60	620.63
C	318+69.44	32.35	620.40	620.43
CL Brg. Pier 1	318+79.94	32.35	620.19	620.19
D	318+89.94	32.35	620.00	620.03
E	318+99.94	32.35	619.81	619.84
F	319+09.94	32.35	619.61	619.65
G	319+19.94	32.35	619.42	619.45
H	319+29.94	32.35	619.22	619.25
CL Brg. Pier 2	319+38.70	32.35	619.07	619.07
I	319+47.64	32.35	618.90	618.93
J	319+57.64	32.35	618.71	618.74
K	319+67.64	32.35	618.51	618.55
L	319+77.64	32.35	618.32	618.35
M	319+87.64	32.35	618.12	618.15
CL Brg. Pier 3	319+94.56	32.35	617.97	617.97
N	320+04.56	32.35	617.78	617.81
O	320+14.56	32.35	617.59	617.62
P	320+24.56	32.35	617.39	617.42
CL Brg. N. Abut	320+32.77	32.35	617.23	617.23
Back N. Abut	320+34.56	32.35	617.20	617.20

NOTE
Adjusted Grade Elevation is Theoretical Grade Elevation
adjusted for dead load deflection.

FILE = \$File\$

THE HOH GROUP, INC.
ARCHITECTS | ENGINEERS

USER NAME =	DESIGNED - RS	REVISED -
	CHECKED - DNB	REVISED -
PLOT SCALE =	DRAWN - JPM	REVISED -
PN: 3730	CHECKED - DNB	REVISED -
PLOT DATE =		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

T/DECK ELEVATION TABLES - BEAMS 1 TO 3
STRUCTURE NO. 016-0320

SHEET 10 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	478
CONTRACT NO. 60R49				
		ILLINOIS	FED. AID PROJECT	

DATE = \$Date\$

BEAM 4				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
CL Back S. Abut	318+37.85	25.59	621.08	621.08
CL Brg. S. Abut	318+39.64	25.59	621.12	621.12
A	318+49.64	25.59	620.92	620.98
B	318+59.64	25.59	620.73	620.76
C	318+69.64	25.59	620.54	620.57
CL Brg. Pier 1	318+80.14	25.59	620.33	620.33
D	318+90.14	25.59	620.13	620.16
E	319+00.14	25.59	619.94	619.97
F	319+10.14	25.59	619.75	619.79
G	319+20.14	25.59	619.55	619.58
H	319+30.14	25.59	619.36	619.39
CL Brg. Pier 2	319+38.69	25.59	619.21	619.21
I	319+47.85	25.59	618.03	618.06
J	319+57.85	25.59	618.84	618.87
K	319+67.85	25.59	618.64	618.68
L	319+77.85	25.59	618.45	618.48
M	319+87.85	25.59	618.25	618.28
CL Brg. Pier 3	319+94.76	25.59	618.11	618.11
N	320+04.76	25.59	617.91	617.94
O	320+14.76	25.59	617.72	617.75
P	320+24.76	25.59	617.53	617.56
CL Brg. N. Abut	320+32.97	25.59	617.37	617.37
Back N. Abut	320+34.77	25.59	617.33	617.33

BEAM 5				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+38.06	18.84	621.22	621.22
CL Brg. S. Abut	318+39.85	18.84	621.25	621.25
A	318+49.85	18.84	621.06	620.12
B	318+59.85	18.84	620.87	620.90
C	318+69.85	18.84	620.67	620.70
CL Brg. Pier 1	318+80.35	18.84	620.46	620.46
D	318+90.35	18.84	620.27	620.30
E	319+00.35	18.84	620.08	619.11
F	319+10.35	18.84	619.88	619.92
G	319+20.35	18.84	619.69	619.72
H	319+30.35	18.84	619.49	619.52
CL Brg. Pier 2	319+38.68	18.84	619.34	619.34
I	319+48.07	18.84	619.16	619.19
J	319+58.07	18.84	618.97	619.00
K	319+68.07	18.84	618.77	618.81
L	319+78.07	18.84	618.58	618.61
M	319+88.07	18.84	618.38	618.41
CL Brg. Pier 3	319+94.97	18.84	618.24	618.24
N	320+04.97	18.84	618.05	618.08
O	320+14.97	18.84	617.86	617.89
P	320+24.97	18.84	617.66	617.69
CL Brg. N. Abut	320+33.18	18.84	617.50	617.50
Back N. Abut	320+34.97	18.84	617.47	617.47

BEAM 6				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+38.27	12.09	621.35	621.35
CL Brg. S. Abut	318+40.06	12.09	621.39	621.39
A	318+50.06	12.09	621.19	621.25
B	318+60.06	12.09	621.00	621.03
C	318+70.06	12.09	620.81	620.84
CL Brg. Pier 1	318+80.56	12.09	620.60	620.60
D	318+90.56	12.09	620.40	620.43
E	319+00.56	12.09	620.21	620.24
F	319+10.56	12.09	620.02	620.06
G	319+20.56	12.09	619.82	619.85
H	319+30.56	12.09	619.63	619.66
CL Brg. Pier 2	319+38.66	12.09	619.48	619.48
I	319+48.07	12.09	619.30	619.33
J	319+58.07	12.09	619.10	619.13
K	319+68.07	12.09	618.91	618.95
L	319+78.07	12.09	618.71	618.74
M	319+88.07	12.09	618.52	618.55
CL Brg. Pier 3	319+95.18	12.09	618.38	618.38
N	320+05.18	12.09	618.18	618.21
O	320+15.18	12.09	617.99	618.02
P	320+25.18	12.09	617.80	617.83
CL Brg. N. Abut	320+33.39	12.09	617.64	617.64
Back N. Abut	320+35.18	12.09	617.60	617.60

NOTE
Adjusted Grade Elevation is Theoretical Grade Elevation
adjusted for dead load deflection.

FILE = \$File\$

DATE = \$Date\$

PGL W				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+38.32	10.50	621.38	621.38
CL Brg. S. Abut	318+40.11	10.50	621.42	621.42
A	318+50.11	10.50	621.23	621.25
B	318+60.11	10.50	621.03	621.055
C	318+70.11	10.50	620.84	620.86
CL Brg. Pier 1	318+80.61	10.50	620.63	620.63
D	318+90.61	10.50	620.44	620.46
E	319+00.61	10.50	620.24	620.26
F	319+10.61	10.50	620.05	620.07
G	319+20.61	10.50	619.85	619.87
H	319+30.61	10.50	619.66	619.68
CL Brg. Pier 2	319+38.66	10.50	619.51	619.51
I	319+48.07	10.50	619.33	619.35
J	319+58.07	10.50	619.13	619.15
K	319+68.07	10.50	618.94	618.96
L	319+78.07	10.50	618.75	618.77
M	319+88.07	10.50	618.55	618.57
CL Brg. Pier 3	319+95.23	10.50	618.41	618.41
N	320+05.23	10.50	618.22	618.24
O	320+15.23	10.50	618.02	618.04
P	320+25.23	10.50	617.83	617.85
CL Brg. N. Abut	320+33.44	10.50	617.67	617.67
Back N. Abut	320+35.23	10.50	617.63	617.63

BEAM 7				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+38.48	5.33	621.49	621.49
CL Brg. S. Abut	318+40.27	5.33	621.52	621.52
A	318+50.27	5.33	621.33	621.42
B	318+60.27	5.33	621.14	621.26
C	318+70.27	5.33	620.94	621.00
CL Brg. Pier 1	318+80.77	5.33	620.73	620.73
D	318+90.77	5.33	620.54	620.62
E	319+00.77	5.33	620.35	620.55
F	319+10.77	5.33	620.15	620.40
G	319+20.77	5.33	619.96	620.14
H	319+30.77	5.33	619.76	619.86
CL Brg. Pier 2	319+38.65	5.33	619.61	619.61
I	319+48.48	5.33	619.42	619.46
J	319+58.48	5.33	619.23	619.30
K	319+68.48	5.33	619.03	619.27
L	319+78.48	5.33	618.84	619.04
M	319+88.48	5.33	618.65	618.75
CL Brg. Pier 3	319+95.39	5.33	618.51	618.51
N	320+05.39	5.33	618.32	618.34
O	320+15.39	5.33	618.13	618.21
P	320+25.39	5.33	617.93	617.98
CL Brg. N. Abut	320+33.60	5.33	617.77	617.77
Back N. Abut	320+35.39	5.33	617.74	617.74

NOTE
Adjusted Grade Elevation is Theoretical Grade Elevation adjusted for dead load deflection.

CL HARLEM AVE				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+38.64	0.00	621.59	621.59
CL Brg. S. Abut	318+40.43	0.00	621.63	621.63
A	318+50.43	0.00	621.44	621.46
B	318+60.43	0.00	621.24	621.26
C	318+70.43	0.00	621.05	621.07
CL Brg. Pier 1	318+80.93	0.00	620.84	620.84
D	318+90.93	0.00	620.65	620.67
E	319+00.93	0.00	620.45	620.47
F	319+10.93	0.00	620.26	620.28
G	319+20.93	0.00	620.06	620.08
H	319+30.93	0.00	619.87	619.89
CL Brg. Pier 2	319+38.64	0.00	619.72	619.72
I	319+48.48	0.00	619.53	619.55
J	319+58.48	0.00	619.34	619.36
K	319+68.48	0.00	619.14	619.16
L	319+78.48	0.00	618.95	618.97
M	319+88.48	0.00	618.75	618.77
CL Brg. Pier 3	319+95.55	0.00	618.62	618.62
N	320+05.55	0.00	618.43	618.45
O	320+15.55	0.00	618.23	618.25
P	320+25.55	0.00	618.04	618.06
CL Brg. N. Abut	320+33.76	0.00	617.88	617.90
Back N. Abut	320+35.56	0.00	617.84	617.84

FILE = \$File\$

THE HOH GROUP, INC.
ARCHITECTS | ENGINEERS

USER NAME =
PLOT SCALE =
PLOT DATE =

DESIGNED - RS
CHECKED - DNB
DRAWN - HE
CHECKED - DNB

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

T/DECK ELEVATION TABLES - PGL & BEAM 7 & CL HARLEM
STRUCTURE NO. 016-0320

SHEET 12 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	480
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

DATE = \$Date\$

BEAM 8				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+38.67	-0.92	621.61	621.61
CL Brg. S. Abut	318+40.46	-0.92	621.65	621.65
A	318+50.46	-0.92	621.45	621.51
B	318+60.46	-0.92	621.26	621.29
C	318+70.46	-0.92	621.07	621.10
CL Brg. Pier 1	318+80.96	-0.92	620.86	620.86
D	318+90.96	-0.92	620.66	620.69
E	319+00.96	-0.92	620.47	620.50
F	319+10.96	-0.92	620.28	620.32
G	319+20.96	-0.92	620.08	620.11
H	319+30.96	-0.92	619.89	619.92
CL Brg. Pier 2	319+38.64	-0.92	619.74	619.74
I	319+48.68	-0.92	619.54	619.57
J	319+58.68	-0.92	619.35	619.38
K	319+68.68	-0.92	619.16	619.20
L	319+78.68	-0.92	618.96	619.99
M	319+88.68	-0.92	618.77	618.80
CL Brg. Pier 3	319+95.58	-0.92	618.63	618.63
N	320+05.58	-0.92	618.44	618.47
O	320+15.58	-0.92	618.25	618.28
P	320+25.58	-0.92	618.06	618.93
CL Brg. N. Abut	320+33.79	-0.92	617.90	617.90
Back N. Abut	320+35.58	-0.92	617.86	617.86

BEAM 9				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+38.86	-7.17	621.63	621.63
CL Brg. S. Abut	318+40.66	-7.17	621.41	621.41
A	318+50.66	-7.17	621.21	621.28
B	318+60.66	-7.17	621.02	621.05
C	318+70.66	-7.17	620.82	620.85
CL Brg. Pier 1	318+81.16	-7.17	620.62	620.62
D	318+91.16	-7.17	620.38	620.41
E	319+01.16	-7.17	620.13	620.16
F	319+11.16	-7.17	619.89	619.93
G	319+21.16	-7.17	619.64	619.67
H	319+31.16	-7.17	619.64	619.67
CL Brg. Pier 2	319+38.62	-7.17	619.38	619.38
I	319+48.86	-7.17	619.03	619.06
J	319+58.86	-7.17	618.9	618.93
K	319+68.86	-7.17	618.78	618.82
L	319+78.86	-7.17	618.65	618.68
M	319+88.86	-7.17	618.65	618.68
CL Brg. Pier 3	319+95.78	-7.17	618.40	618.40
N	320+05.78	-7.17	618.22	618.24
O	320+15.78	-7.17	618.03	618.87
P	320+25.78	-7.17	617.85	617.68
CL Brg. N. Abut	320+33.99	-7.17	617.66	617.66
Back N. Abut	320+35.78	-7.17	617.88	617.88

PGL E				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+38.32	7.50	621.38	621.38
CL Brg. S. Abut	318+40.11	7.50	621.42	621.42
A	318+50.11	7.50	621.23	621.32
B	318+60.11	7.50	621.03	621.15
C	318+70.11	7.50	620.84	620.90
CL Brg. Pier 1	318+80.61	7.50	620.63	620.63
D	318+90.61	7.50	620.44	620.52
E	319+00.61	7.50	620.24	620.44
F	319+10.61	7.50	620.05	620.30
G	319+20.61	7.50	619.85	620.03
H	319+30.61	7.50	619.66	619.76
CL Brg. Pier 2	319+38.66	7.50	619.51	619.51
I	319+48.07	7.50	619.33	619.37
J	319+58.07	7.50	619.13	619.20
K	319+68.07	7.50	618.94	619.18
L	319+78.07	7.50	618.75	618.95
M	319+88.07	7.50	618.55	618.65
CL Brg. Pier 3	319+95.23	7.50	618.41	618.41
N	320+05.23	7.50	618.22	618.24
O	320+15.23	7.50	618.02	618.10
P	320+25.23	7.50	617.83	617.88
CL Brg. N. Abut	320+33.44	7.50	617.67	617.67
Back N. Abut	320+35.23	7.50	617.63	617.63

NOTE
Adjusted Grade Elevation is Theoretical Grade Elevation
adjusted for dead load deflection.

FILE = \$File\$

THE HOH GROUP, INC.
ARCHITECTS | ENGINEERS

USER NAME =	DESIGNED - RS	REVISED -
	CHECKED - DNB	REVISED -
PLOT SCALE =	DRAWN - HE	REVISED -
PN: 3730	CHECKED - DNB	REVISED -
PLOT DATE =		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

T/DECK ELEVATION TABLES - BEAMS 8, 9 & EAST PGL
STRUCTURE NO. 016-0320

SHEET 13 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	481
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

DATE = \$Date\$

<i>BEAM 10</i>				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+39.06	-13.42	621.51	621.51
CL Brg. S. Abut	318+40.85	-13.42	621.30	621.30
A	318+50.85	-13.42	621.10	621.17
B	318+60.85	-13.42	620.91	620.94
C	318+70.85	-13.42	620.71	620.74
CL Brg. Pier 1	318+81.35	-13.42	620.51	620.51
D	318+91.35	-13.42	620.32	620.35
E	319+01.35	-13.42	620.14	620.17
F	319+11.35	-13.42	619.95	619.99
G	319+21.35	-13.42	619.76	619.79
H	319+31.35	-13.42	619.76	619.79
CL Brg. Pier 2	319+38.61	-13.42	619.39	619.39
I	319+49.06	-13.42	619.21	619.24
J	319+59.06	-13.42	619.02	619.05
K	319+69.06	-13.42	618.84	618.88
L	319+79.06	-13.42	618.66	618.69
M	319+89.06	-13.42	618.66	618.69
CL Brg. Pier 3	319+95.97	-13.42	618.29	618.29
N	320+05.97	-13.42	618.11	618.13
O	320+15.97	-13.42	617.92	617.95
P	320+25.97	-13.42	617.74	617.76
CL Brg. N. Abut	320+34.18	-13.42	617.55	617.55
Back N. Abut	320+35.97	-13.42	617.76	617.76

<i>BEAM 11</i>				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+39.25	-19.68	621.38	621.38
CL Brg. S. Abut	318+41.04	-19.68	621.18	621.18
A	318+51.04	-19.68	620.98	621.05
B	318+61.04	-19.68	620.79	621.82
C	318+71.04	-19.68	620.59	620.62
CL Brg. Pier 1	318+81.54	-19.68	620.39	620.39
D	318+91.54	-19.68	620.20	620.23
E	319+01.54	-19.68	620.02	620.05
F	319+11.54	-19.68	619.83	619.87
G	319+21.54	-19.68	619.64	619.67
H	319+31.54	-19.68	619.64	619.67
CL Brg. Pier 2	319+38.60	-19.68	619.27	619.27
I	319+49.25	-19.68	619.09	619.12
J	319+59.25	-19.68	619.9	618.93
K	319+69.25	-19.68	618.72	618.76
L	319+79.25	-19.68	618.54	618.57
M	319+89.25	-19.68	618.54	618.57
CL Brg. Pier 3	319+96.16	-19.68	618.17	618.17
N	320+06.16	-19.68	617.99	618.01
O	320+16.16	-19.68	617.8	617.83
P	320+26.16	-19.68	617.62	617.64
CL Brg. N. Abut	320+34.37	-19.68	617.43	617.43
Back N. Abut	320+36.16	-19.68	617.63	617.63

<i>BEAM 12</i>				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+39.44	-25.93	621.26	621.26
CL Brg. S. Abut	318+41.23	-25.93	621.05	621.05
A	318+51.23	-25.93	621.10	621.17
B	318+61.23	-25.93	620.16	621.19
C	318+71.23	-25.93	620.21	620.24
CL Brg. Pier 1	31881.73	-25.93	620.26	620.26
D	318+91.73	-25.93	620.07	620.10
E	319+01.73	-25.93	619.89	620.92
F	319+11.73	-25.93	619.7	620.74
G	319+21.73	-25.93	619.51	619.54
H	319+31.73	-25.93	619.51	619.54
CL Brg. Pier 2	319+38.59	-25.93	619.14	619.14
I	319+49.45	-25.93	618.96	618.99
J	319+59.45	-25.93	618.77	618.80
K	319+69.45	-25.93	618.59	618.63
L	319+79.45	-25.93	618.41	618.44
M	319+89.45	-25.93	618.41	618.44
CL Brg. Pier 3	319+96.35	-25.93	618.04	618.04
N	320+06.35	-25.93	617.86	617.88
O	32016.35	-25.93	617.67	617.70
P	320+26.35	-25.93	617.49	617.51
CL Brg. N. Abut	320+34.56	-25.93	617.30	617.30
Back N. Abut	320+36.36	-25.93	617.51	617.32

NOTE
Adjusted Grade Elevation is Theoretical Grade Elevation
adjusted for dead load deflection.

FILE = \$File\$

THE HOH GROUP, INC. <small>ARCHITECTS ENGINEERS</small>	USER NAME =	DESIGNED - RS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	T/DECK ELEVATION TABLES - BEAMS 10 TO 12 STRUCTURE NO. 016-0320	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	DRAWN - HE	REVISED -			348	3128-Z4-R&RS	COOK	659	482
PN: 3730	PLOT DATE =	CHECKED - DNB	REVISED -	SHEET 14 OF 64 SHEETS		ILLINOIS FED. AID PROJECT CONTRACT NO. 60R49				

DATE = \$Date\$

<i>BEAM 13</i>				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+39.63	-32.18	621.13	621.13
CL Brg. S. Abut	318+41.43	-32.18	620.93	620.93
A	318+51.43	-32.18	620.73	620.80
B	318+61.43	-32.18	620.54	620.57
C	318+71.43	-32.18	620.38	620.37
CL Brg. Pier 1	318+81.93	-32.18	620.14	620.14
D	318+91.93	-32.18	619.95	619.98
E	319+01.93	-32.18	619.77	619.80
F	319+11.93	-32.18	619.58	619.62
G	319+21.93	-32.18	619.39	619.42
H	319+31.93	-32.18	619.39	619.42
CL Brg. Pier 2	319+38.57	-32.18	619.02	619.02
I	319+49.63	-32.18	618.84	618.87
J	319+59.63	-32.18	618.65	618.68
K	319+69.63	-32.18	618.47	618.51
L	319+79.63	-32.18	618.29	618.32
M	319+89.63	-32.18	618.29	618.32
CL Brg. Pier 3	319+96.55	-32.18	617.92	617.92
N	320+06.55	-32.18	617.74	617.76
O	320+16.55	-32.18	617.55	617.58
P	320+26.55	-32.18	617.37	617.39
CL Brg. N. Abut	320+34.76	-32.18	617.18	617.18
Back N. Abut	320+36.55	-32.18	617.38	617.38

<i>BEAM 14</i>				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+39.83	-38.44	621.01	620.82
CL Brg. S. Abut	318+41.62	-38.44	620.80	620.80
A	318+51.62	-38.44	620.6	620.67
B	318+61.62	-38.44	620.41	620.44
C	318+71.62	-38.44	620.21	620.24
CL Brg. Pier 1	318+82.12	-38.44	620.01	620.01
D	318+92.12	-38.44	619.82	619.85
E	319+02.12	-38.44	619.64	619.67
F	319+12.12	-38.44	619.45	619.49
G	319+22.12	-38.44	619.26	619.29
H	319+32.12	-38.44	619.26	619.29
CL Brg. Pier 2	319+38.56	-38.44	618.89	618.89
I	319+49.83	-38.44	618.71	618.74
J	319+59.83	-38.44	618.52	618.55
K	319+69.83	-38.44	618.34	618.38
L	319+79.83	-38.44	618.16	618.19
M	319+89.83	-38.44	618.16	618.19
CL Brg. Pier 3	319+96.74	-38.44	617.79	617.79
N	320+06.74	-38.44	617.61	617.63
O	320+16.74	-38.44	617.42	617.45
P	320+26.74	-38.44	617.24	617.26
CL Brg. N. Abut	320+34.95	-38.44	617.05	617.05
Back N. Abut	320+36.74	-38.44	617.26	617.26

<i>BEAM 15</i>				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+40.03	-44.91	620.88	620.88
CL Brg. S. Abut	318+41.82	-44.94	620.67	620.67
A	318+51.82	-44.79	620.48	620.80
B	318+61.82	-44.64	620.28	620.65
C	318+71.82	-44.50	620.09	620.40
CL Brg. Pier 1	318+82.30	-44.34	619.89	619.89
D	318+92.30	-44.19	619.71	620.00
E	319+02.30	-44.05	619.52	619.91
F	319+12.30	-43.90	619.34	619.76
G	319+22.30	-43.75	619.16	619.50
H	319+32.30	-43.61	619.16	619.23
CL Brg. Pier 2	319+38.55	-43.49	618.79	618.79
I	319+49.83	-43.33	618.61	618.88
J	319+59.83	-43.18	618.43	618.77
K	319+69.83	-43.04	618.25	618.64
L	319+79.83	-42.89	618.07	618.44
M	319+89.83	-42.74	618.07	618.15
CL Brg. Pier 3	319+96.87	-42.66	617.71	617.71
N	320+06.87	-42.51	617.53	617.77
O	320+16.87	-42.37	617.35	617.61
P	320+26.87	-42.22	617.16	617.39
CL Brg. N. Abut	320+35.06	-42.10	616.98	616.98
Back N. Abut	320+36.85	-42.13	617.18	617.18

NOTE
Adjusted Grade Elevation is Theoretical Grade Elevation
adjusted for dead load deflection.

FILE = \$File\$

THE HOH GROUP, INC. <small>ARCHITECTS ENGINEERS</small>	USER NAME =	DESIGNED - RS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	T/DECK ELEVATION TABLE - BEAMS 13 TO 15 STRUCTURE NO. 016-0320	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	DRAWN - HE	REVISED -			348	3128-Z4-R&RS	COOK	659	483
PN: 3730	PLOT DATE =	CHECKED - DNB	REVISED -	SHEET 15 OF 64 SHEETS		ILLINOIS FED. AID PROJECT CONTRACT NO. 60R49				

DATE = \$Date\$

<i>BEAM 16</i>				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+40.23	-51.43	620.75	620.75
CL Brg. S. Abut	318+42.02	-51.44	620.67	620.67
A	318+52.02	-51.14	620.48	620.54
B	318+62.02	-50.85	620.28	620.31
C	318+72.02	-50.56	620.09	620.11
CL Brg. Pier 1	318+82.48	-50.25	619.89	619.89
D	318+92.48	-49.95	619.71	619.74
E	319+02.48	-49.66	619.52	619.55
F	319+12.48	-49.37	619.34	619.38
G	319+22.48	-48.78	619.16	619.19
H	319+32.48	-49.07	619.16	619.19
CL Brg. Pier 2	319+38.54	-48.58	618.79	618.79
I	319+50.08	-48.25	618.61	618.64
J	319+60.08	-47.95	618.43	618.46
K	319+70.08	-47.66	618.25	618.29
L	319+80.08	-47.37	618.07	617.10
M	319+90.08	-46.82	618.07	618.10
CL Brg. Pier 3	319+97.00	-46.89	617.71	617.71
N	320+07.00	-46.59	617.53	617.56
O	320+17.00	-46.30	617.35	617.37
P	320+27.00	-46.01	617.16	617.19
CL Brg. N. Abut	320+35.18	-45.77	616.98	616.98
Back N. Abut	320+36.97	-45.77	617.11	617.11

NOTE
Adjusted Grade Elevation is Theoretical Grade Elevation
adjusted for dead load deflection.

FILE = \$File\$

THE HOH GROUP, INC.
ARCHITECTS | ENGINEERS

PN: 3730

USER NAME =	DESIGNED - RS	REVISED -
	CHECKED - DNB	REVISED -
PLOT SCALE =	DRAWN - JPM	REVISED -
PLOT DATE =	CHECKED - DNB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

T/DECK ELEVATION TABLES - BEAM 16
STRUCTURE NO. 016-0320

SHEET 16 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	484
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

DATE = \$Date\$

STAGE LINE 1/2				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+38.45	-18.04	621.24	621.24
CL Brg. S. Abut	318+40.24	-18.04	621.21	621.50
A	318+50.24	-18.04	621.01	620.97
B	318+60.24	-18.04	621.82	620.80
C	318+70.24	-18.04	620.62	620.61
CL Brg. Pier 1	318+80.74	-18.04	620.42	620.42
D	318+90.74	-18.04	620.23	620.22
E	319+00.74	-18.04	620.05	620.04
F	319+10.74	-18.04	620.86	619.84
G	319+20.74	-18.04	619.67	619.66
H	319+30.74	-18.04	619.49	619.48
CL Brg. Pier 2	319+38.65	-18.04	619.30	619.30
I	319+48.07	-18.04	619.12	619.11
J	319+58.07	-18.04	618.93	618.92
K	319+68.07	-18.04	618.75	618.73
L	319+78.07	-18.04	618.57	618.56
M	319+88.07	-18.04	618.38	618.37
CL Brg. Pier 3	319+95.36	-18.04	618.20	618.20
N	320+05.36	-18.04	618.02	618.01
O	320+15.36	-18.04	617.83	617.82
P	320+25.36	-18.04	617.65	617.64
CL Brg. N. Abut	320+33.57	-18.04	617.46	617.46
Back N. Abut	320+35.36	-18.04	617.43	617.43

STAGE LINE 2/3				
Location	Station	Offset	Theoretical Grade Elevation	Adjusted Grade Elevation
Back S. Abut	318+39.20	6.33	621.53	621.53
CL Brg. S. Abut	318+40.99	6.33	621.50	620.50
A	318+50.99	6.33	620.55	620.51
B	318+60.99	6.33	620.61	620.59
C	318+70.99	6.33	620.66	620.65
CL Brg. Pier 1	318+81.49	6.33	620.71	620.71
D	318+91.49	6.33	620.52	620.51
E	319+01.49	6.33	620.34	620.33
F	319+11.49	6.33	619.15	620.13
G	319+21.49	6.33	619.96	619.95
H	319+31.49	6.33	619.78	619.77
CL Brg. Pier 2	319+38.60	6.33	619.59	619.59
I	319+49.06	6.33	619.41	619.40
J	319+59.06	6.33	619.22	619.21
K	319+69.06	6.33	619.04	619.02
L	319+79.06	6.33	618.86	618.85
M	319+89.06	6.33	618.67	618.66
CL Brg. Pier 3	319+96.11	6.33	618.49	618.49
N	320+06.11	6.33	618.31	618.30
O	320+16.11	6.33	618.12	618.11
P	320+26.11	6.33	617.94	617.93
CL Brg. N. Abut	320+34.32	6.33	617.75	617.75
Back N. Abut	320+36.11	6.33	617.72	617.72

NOTE
Adjusted Grade Elevation is Theoretical Grade Elevation
adjusted for dead load deflection.

FILE = \$File\$

THE HOH GROUP, INC.
ARCHITECTS | ENGINEERS

USER NAME =	DESIGNED - RS	REVISED -
PLOT SCALE =	CHECKED - DNB	REVISED -
PLOT DATE =	DRAWN - JPM	REVISED -
PN: 3730	CHECKED - DNB	REVISED -

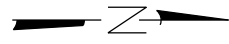
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

T/DECK ELEV TABLES - STAGE CONSTRUCTION JOINT
STRUCTURE NO. 016-0320

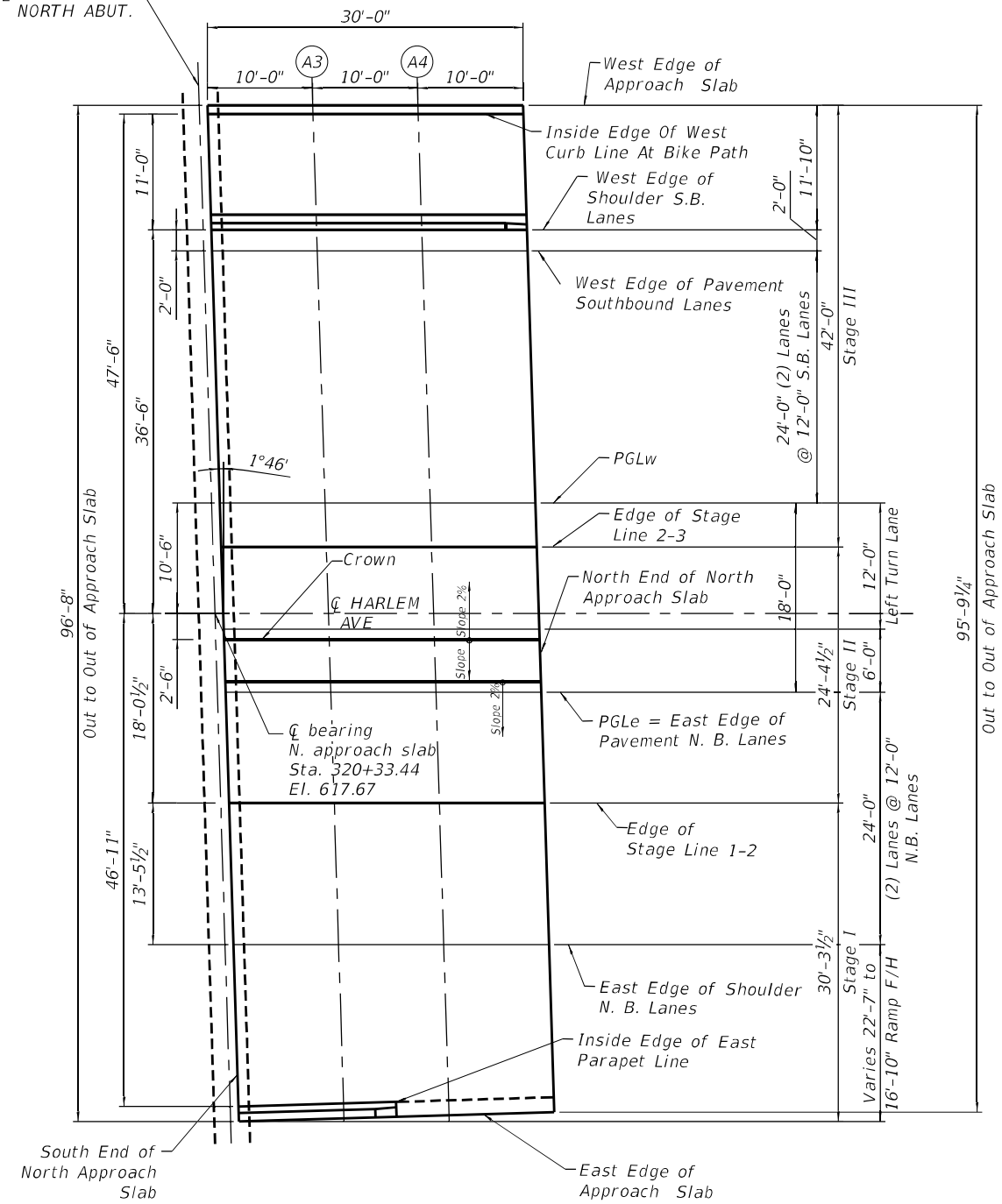
SHEET 17 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	485
CONTRACT NO. 60R49				
ILLINOIS		FED. AID PROJECT		

DATE = \$Date\$



CL BEARING @ NORTH ABUT.



NORTH APPROACH SLAB T/ELEVATION PLAN

INSIDE EDGE OF WEST CURB LINE AT BIKE PATH			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END N. APPR. SLAB	320+33.09	-47.0	616.94
A3	320+43.09	-47.0	616.74
A4	320+53.09	-47.0	616.55
N. END N. APPR. SLAB	320+63.09	-47.0	616.36

CROWN			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END N. APPR. SLAB	320+34.63	2.50	617.89
A3	320+44.63	2.50	617.71
A4	320+54.63	2.50	617.52
N. END N. APPR. SLAB	320+64.63	2.50	617.32

WEST EDGE OF SHOULDER S.B. LANES			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END N. APPR. SLAB	320+33.43	-36.50	617.15
A3	320+43.43	-36.50	616.95
A4	320+53.43	-36.50	616.76
N. END N. APPR. SLAB	320+63.43	-36.50	616.57

PGLW			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END N. APPR. SLAB	320+34.79	7.50	617.64
A3	320+44.79	7.50	617.45
A4	320+54.79	7.50	617.25
N. END N. APPR. SLAB	320+64.79	7.50	617.06

WEST EDGE OF PAVEMENT S.B. LANES			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END N. APPR. SLAB	320+33.49	-34.50	617.19
A3	320+43.49	-34.50	616.99
A4	320+53.49	-34.50	616.80
N. END N. APPR. SLAB	320+63.49	-34.50	616.61

EDGE of STAGE LINE 1-2			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END N. APPR. SLAB	320+35.11	18.04	617.43
A3	320+45.11	18.04	617.23
A4	320+55.11	18.04	617.04
N. END N. APPR. SLAB	320+65.11	18.04	616.84

PGLW			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END N. APPR. SLAB	320+34.23	-10.50	617.65
A3	320+44.23	-10.50	617.46
A4	320+54.23	-10.50	617.27
N. END N. APPR. SLAB	320+64.23	-10.50	617.07

EAST EDGE OF SHOULDER N.B. LANES			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END N. APPR. SLAB	320+35.53	31.50	617.15
A3	320+45.53	31.50	617.95
A4	320+55.53	31.50	616.76
N. END N. APPR. SLAB	320+65.53	31.50	616.57

EDGE of STAGE LINE 2-3			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END N. APPR. SLAB	320+34.36	-6.33	617.73
A3	320+44.36	-6.33	617.54
A4	320+54.36	-6.33	617.35
N. END N. APPR. SLAB	320+64.36	-6.33	617.15

INSIDE EDGE OF EAST PARAPET LINE			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END N. APPR. SLAB	320+36.00	46.92	616.83
A3	320+46.00	46.92	616.65
A4	320+56.00	46.92	616.44
N. END N. APPR. SLAB	320+66.00	46.92	616.25

FILE = sFileA\$

THE HOH GROUP, INC.
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USER NAME =	DESIGNED - RS	REVISED -
CHECKED - DNB	REVISOR -	
PLOT SCALE =	DRAWN - HE	REVISED -
CHECKED - DNB	REVISOR -	
PN: 3730	PLOT DATE =	

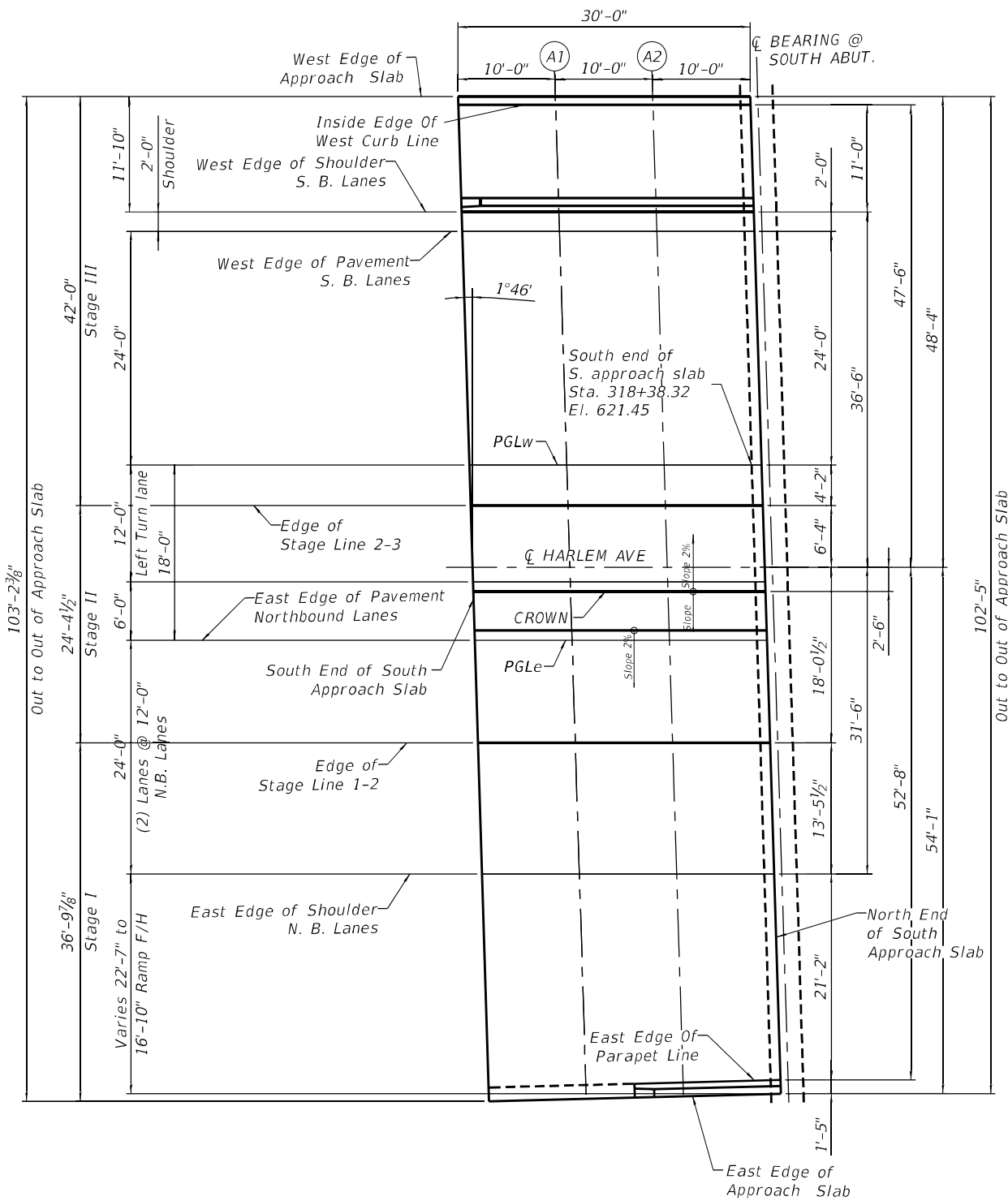
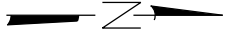
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

T/NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 016-0320

SHEET 18 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	486
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

DATE = sDate\$



SOUTH APPROACH SLAB T/ELEVATION PLAN

INSIDE EDGE OF WEST CURB LINE			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END S. APPR. SLAB	318+08.18	-47.0	621.39
A1	318+18.18	-47.0	621.10
A2	318+28.18	-47.0	620.91
N. END S. APPR. SLAB	318+38.18	-47.0	620.72

CROWN			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END S. APPR. SLAB	318+09.72	2.50	622.24
A1	318+19.72	2.50	622.07
A2	318+29.72	2.50	621.88
N. END S. APPR. SLAB	318+39.72	2.50	621.69

WEST EDGE OF SHOULDER S.B. LANES			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END S. APPR. SLAB	318+08.52	-36.50	621.50
A1	318+18.52	-36.50	621.31
A2	318+28.52	-36.50	621.12
N. END S. APPR. SLAB	318+38.52	-36.50	620.93

EDGE OF STAGE LINE 1-2			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END S. APPR. SLAB	318+10.20	18.04	621.78
A1	318+20.20	18.04	621.59
A2	318+30.20	18.04	621.40
N. END S. APPR. SLAB	318+40.20	18.04	621.23

WEST EDGE OF PAVEMENT S.B. LANES			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END S. APPR. SLAB	318+08.58	-34.50	621.54
A1	318+18.58	-34.50	621.35
A2	318+28.58	-34.50	621.16
N. END S. APPR. SLAB	318+38.58	-34.50	620.97

EAST EDGE OF SHOULDER N.B. LANES			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END S. APPR. SLAB	318+10.62	31.50	621.50
A1	318+20.62	31.50	621.31
A2	318+30.62	31.50	621.12
N. END S. APPR. SLAB	318+40.62	31.50	620.93

PGLW			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END N. APPR. SLAB	318+09.32	-10.50	622.01
A3	318+19.32	-10.50	621.82
A4	318+29.32	-10.50	621.63
N. END N. APPR. SLAB	318+39.32	-10.50	621.44

EAST EDGE OF PARAPET LINE			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END S. APPR. SLAB	318+11.27	52.67	621.07
A1	318+21.27	52.67	620.88
A2	318+31.27	52.67	620.69
N. END S. APPR. SLAB	318+41.27	52.67	620.49

EDGE OF STAGE LINE 2-3			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END S. APPR. SLAB	318+09.45	-6.33	622.09
A1	318+19.45	-6.33	621.90
A2	318+29.45	-6.33	621.71
N. END S. APPR. SLAB	318+39.45	-6.33	621.52

PGLC			
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
S. END N. APPR. SLAB	318+09.88	7.50	622.00
A3	318+19.88	7.50	621.81
A4	318+29.88	7.50	621.62
N. END N. APPR. SLAB	318+39.88	7.50	621.42

FILE = sFileA5

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USER NAME =	DESIGNED - RS	REVISED -
CHECKED - DNB	REVISOR -	
PLOT SCALE =	DRAWN - HE	REVISED -
PLOT DATE =	CHECKED - DNB	REVISED -

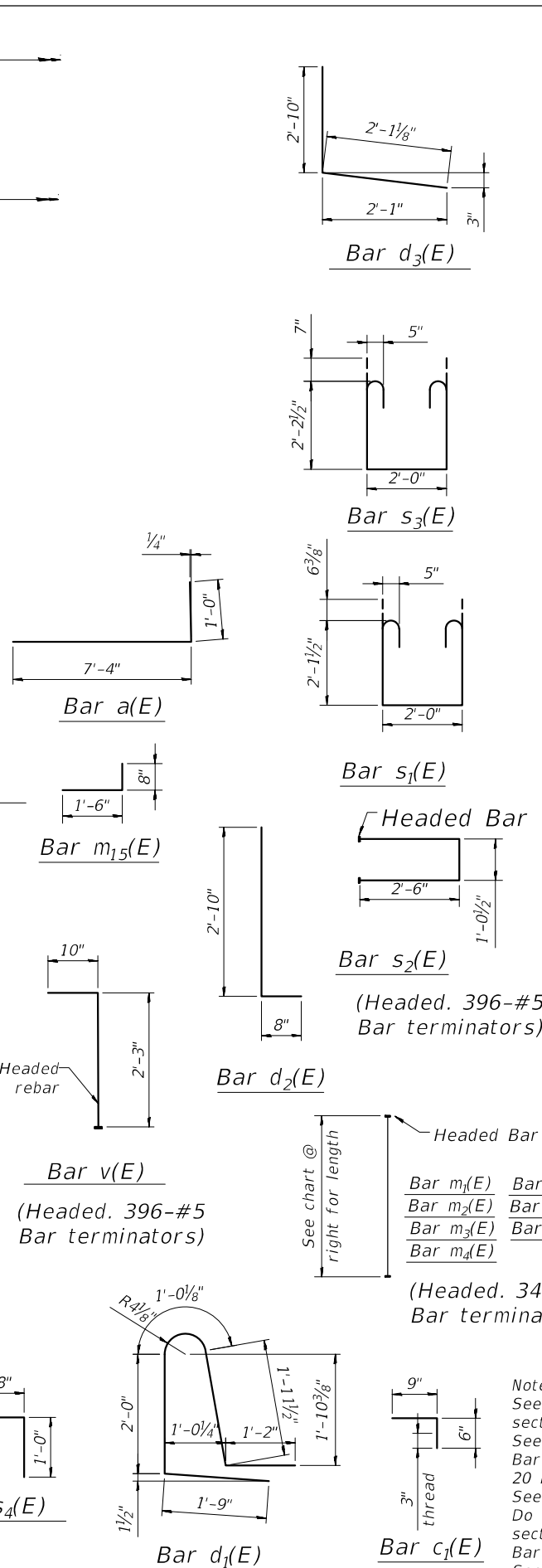
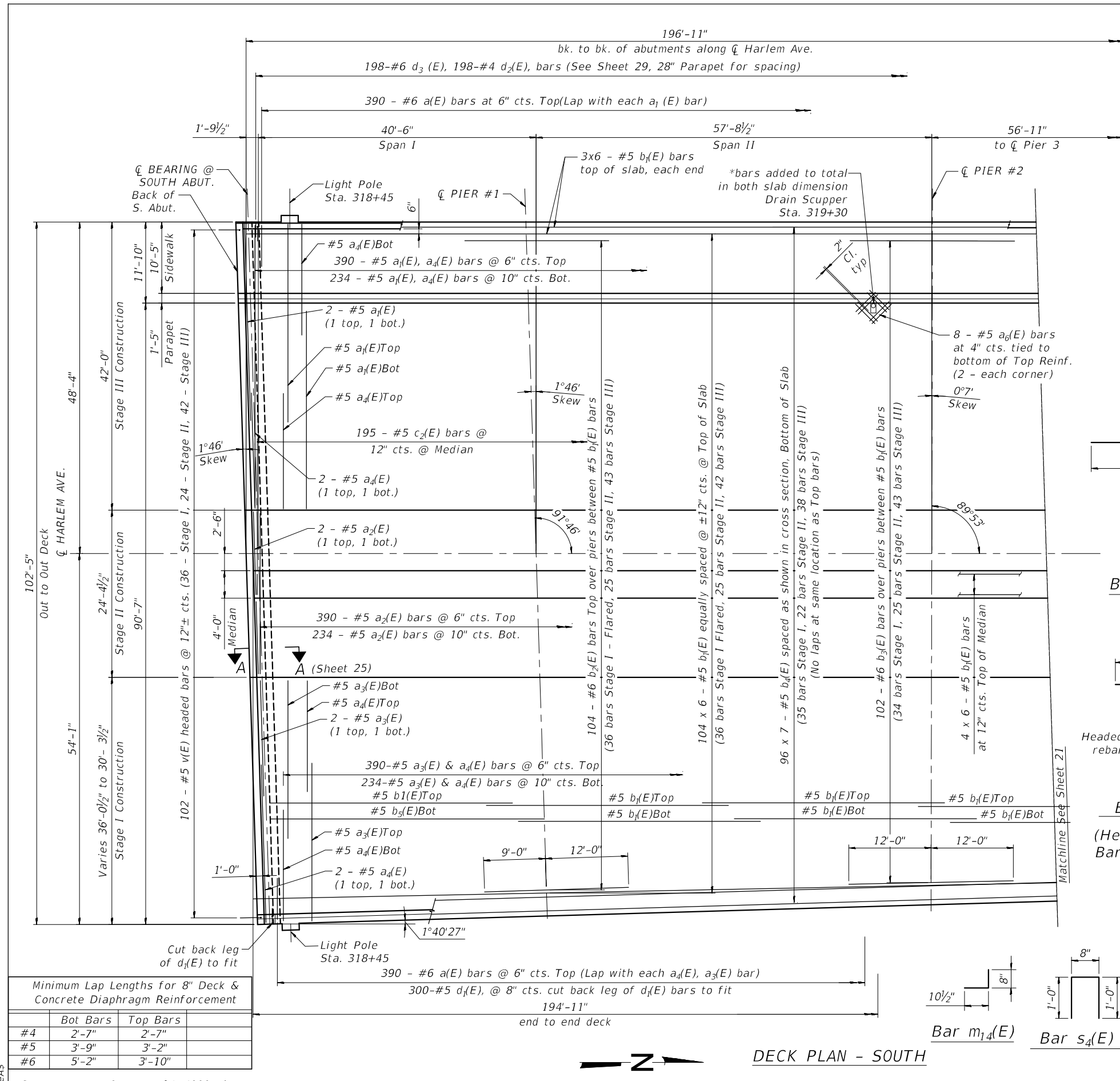
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**T/DECK ELEVATIONS - SOUTH APPROACH SLAB - PLAN, ELEVATION TABLES
STRUCTURE NO. 016-0320**

SHEET 19 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	487
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

DATE = sDate\$



Bar	No.	Size	Length	Shape	
a ₁ (E)	780	#6	8'-4"	—	
a ₂ (E)	624	#5	28'-10"	—	
a ₃ (E)	624	#5	24'-2"	—	
a ₄ (E)	624	#5	23'-0"	—	
a ₅ (E)	1248	#5	16'-2"	—	
a ₆ (E)	32	#5	1'-6"	—	
b ₁ (E)	666	#5	34'-10"	—	
b ₂ (E)	204	#6	21'-0"	—	
b ₃ (E)	102	#6	24'-0"	—	
b ₄ (E)	672	#5	30'-9"	—	
c ₁ (E)	390	#5	1'-2"	└	
c ₂ (E)	195	#5	3'-6"	—	
d ₁ (E)	300	#5	7'-11"	└	
d ₂ (E)	198	#6	3'-6"	└	
d ₃ (E)	198	#4	4'-11"	└	
m ₁ (E)	22	#6	2'-2"	—	
m ₂ (E)	48	#6	6'-5"	—	
m ₃ (E)	56	#6	5'-11"	—	
m ₄ (E)	8	#6	3'-5"	—	
m ₅ (E)	4	#6	2'-3"	—	
m ₆ (E)	24	#6	22'-10"	—	
m ₇ (E)	12	#6	24'-1"	—	
m ₈ (E)	6	#6	33'-9"	—	
m ₉ (E)	8	#4	22'-2"	—	
m ₁₀ (E)	4	#4	24'-1"	—	
m ₁₁ (E)	2	#4	33'-9"	—	
m ₁₂ (E)	8	#6	5'-6"	—	
m ₁₃ (E)	8	#6	4'-5"	—	
m ₁₄ (E)	8	#6	1'-7"	└	
m ₁₅ (E)	8	#6	2'-0"	—	
m ₁₇ (E)	8	#6	6'-2"	—	
m ₁₈ (E)	4	#6	2'-4"	—	
m ₁₉ (E)	6	#6	35'-9"	—	
m ₂₀ (E)	2	#4	35'-9"	—	
s ₁ (E)	90	#5	7'-4"	└	
s ₂ (E)	198	#5	6'-1"	└	
s ₃ (E)	96	#5	7'-7"	└	
s ₄ (E)	198	#4	2'-8"	└	
v(E)	198	#5	3'-1"	└	
Concrete Superstructure				Cu. Yd.	626.7
Reinforcement Bars, Epoxy Coated				Pound	148,850
Protective Coat				Sq. Yd.	2,100

Minimum Lap Lengths for 8" Deck & Concrete Diaphragm Reinforcement	
Bar	Minimum Lap Length
#4	2'-7"
#5	3'-9"
#6	5'-2"

Superstructure Concrete $f_c' = 4000\text{psi}$

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USER NAME	DESIGNED	CHECKED	PLOT SCALE	PLOT DATE
=	RS	DNB	=	=
=	HE	DNB	=	=

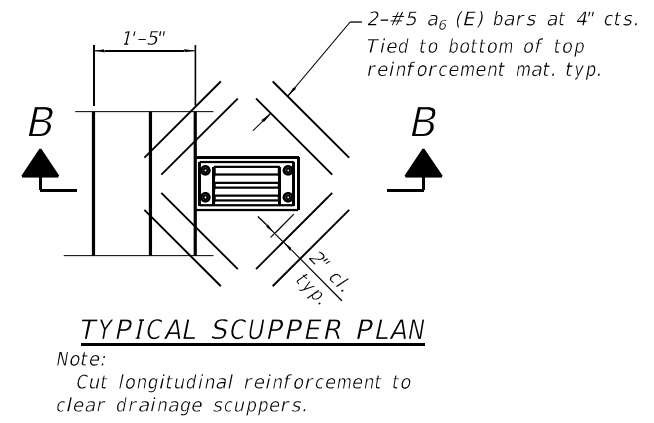
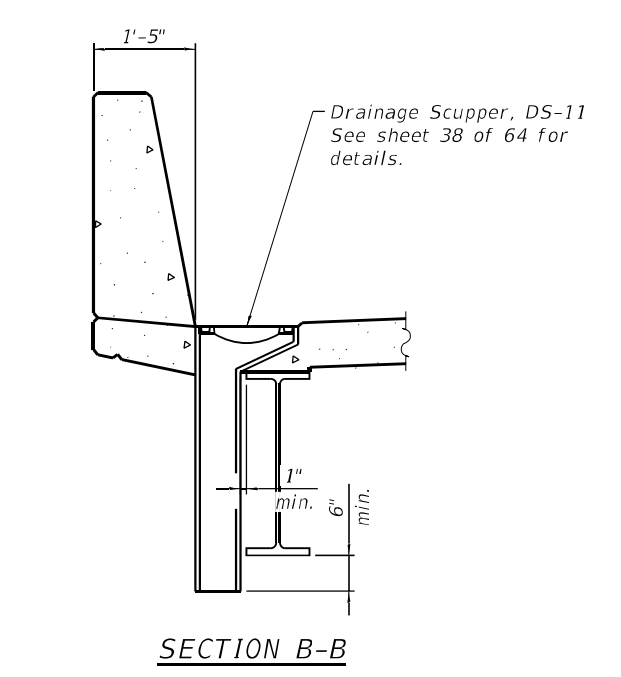
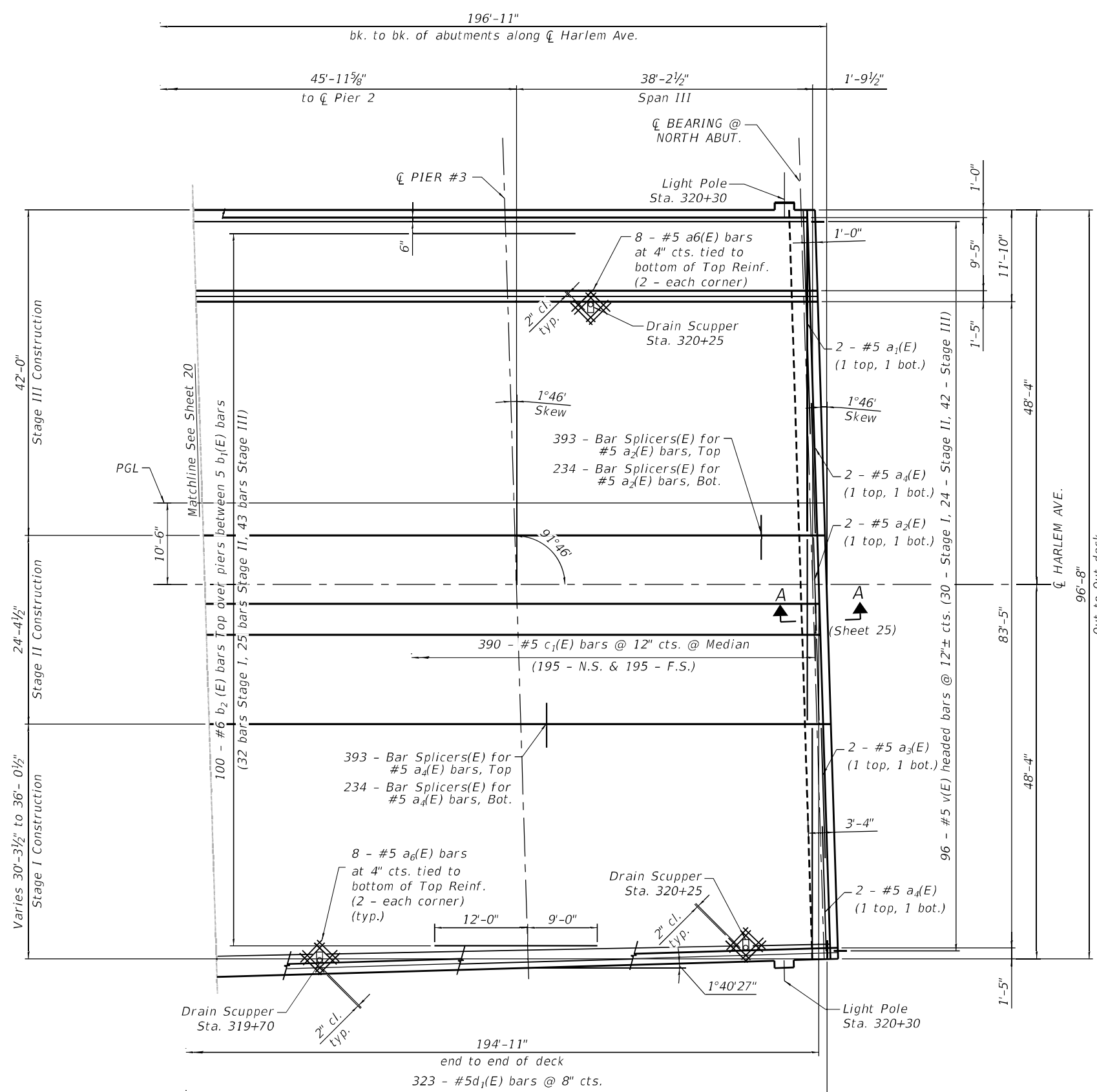
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF DECK PLAN SHEET 1 OF 2
STRUCTURE NO. 016-0320

SHEET 20 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z1-R&RS	COOK	659	488
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

Notes:
See Sheet 22 of 64 for superstructure cross section.
See Sheet 25 of 64 for superstructure details. Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet 29 of 64 for parapet reinforcement. Do not lap top & bottom bars at the same cross section.
Bar terminators paid for separately. See Total Bill of Material.



DECK PLAN - NORTH

Notes:
See Sheet 22 of 60 for superstructure cross section.
See Sheet 25 of 60 for superstructure details.
Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet 29 of 60 for parapet reinforcement.

FILE = sFileA\$

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USER NAME =	DESIGNED - RS	REVISED -
PLOT SCALE =	CHECKED - DNB	REVISED -
PN: 3730	DRAWN - HE	REVISED -
PLOT DATE =	CHECKED - DNB	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

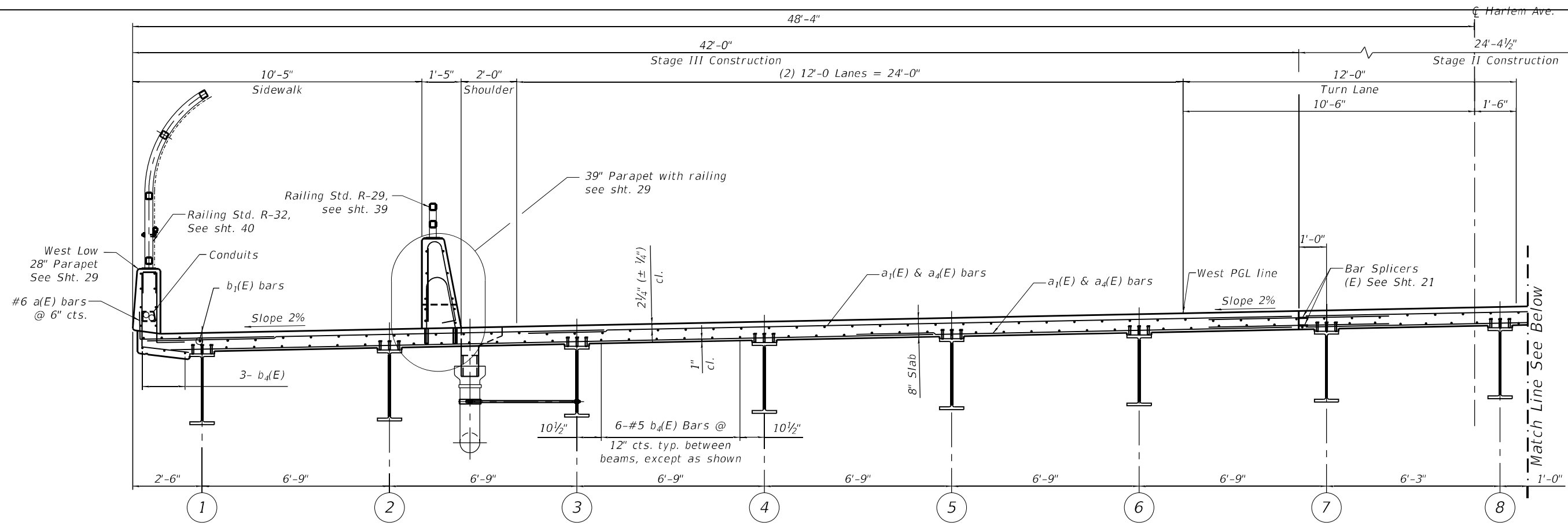
**TOP OF DECK PLAN SHEET 2 OF 2
STRUCTURE NO. 016-0320**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	489
CONTRACT NO. 60R49				

SHEET 21 OF 64 SHEETS

ILLINOIS FED. AID PROJECT

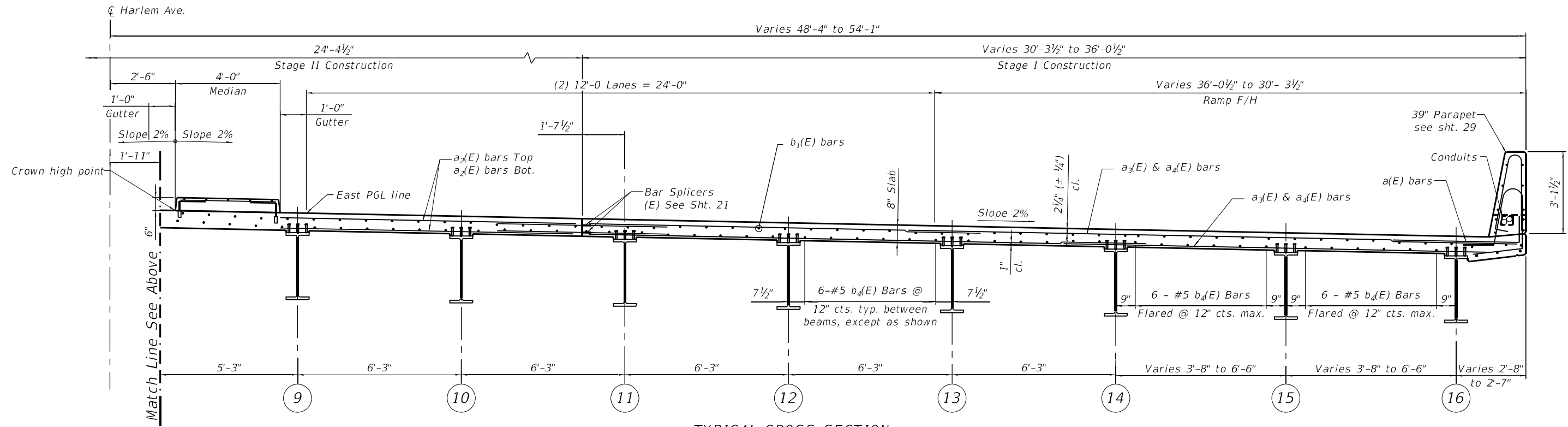
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TYPICAL CROSS SECTION
(Looking North)

Deck Drop min & max		
Abutment	West Side	East Side
South	12 ³ / ₁₆ "	14 ³ / ₁₆ "
North	12 ³ / ₁₆ "	12 ⁵ / ₁₆ "

Notes:
See sheet 20 of 64 for Superstructure B.O.M.
See sheet 35 of 64 for Superstructure details



TYPICAL CROSS SECTION
(Looking North)

FILE = \$File\$
THE HOH GROUP, INC.
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PN: 3730

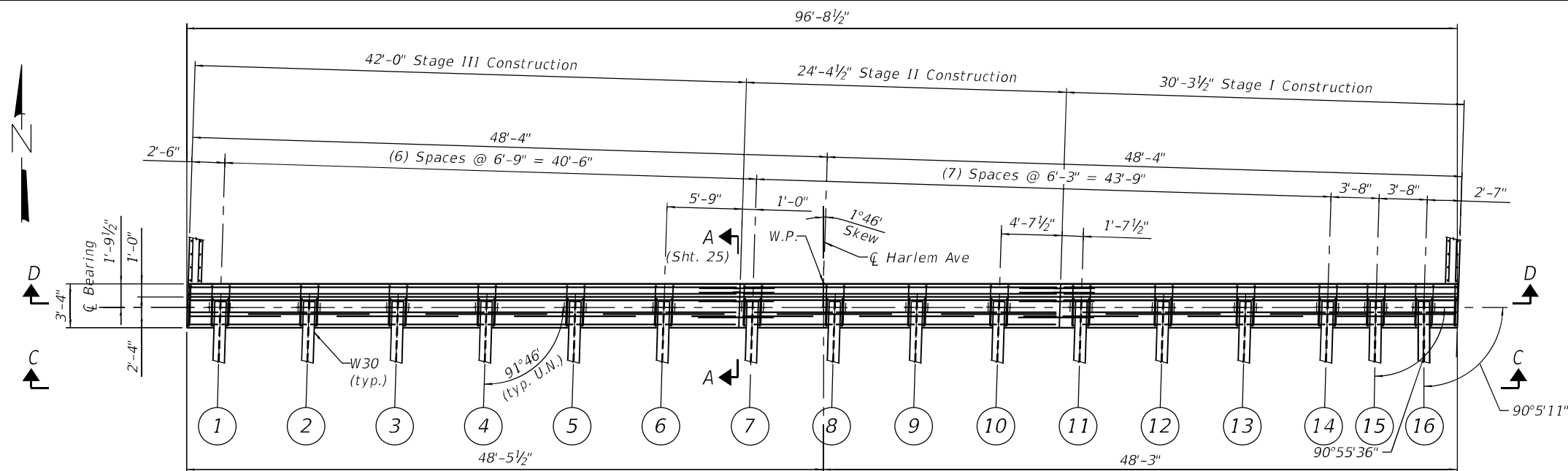
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PLOT SCALE =	CHECKED - DNB	REVISED -
PLOT DATE =	DRAWN - HE	REVISED -
	CHECKED - DNB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK CROSS SECTION
STRUCTURE NO. 016-0320
SHEET 22 OF 64 SHEETS

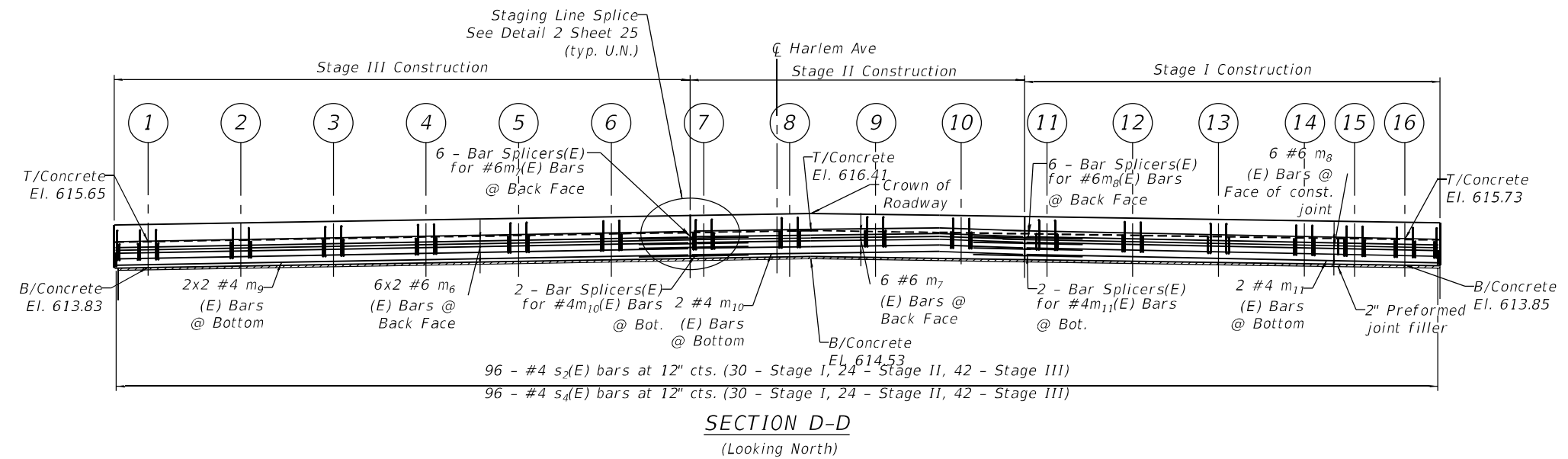
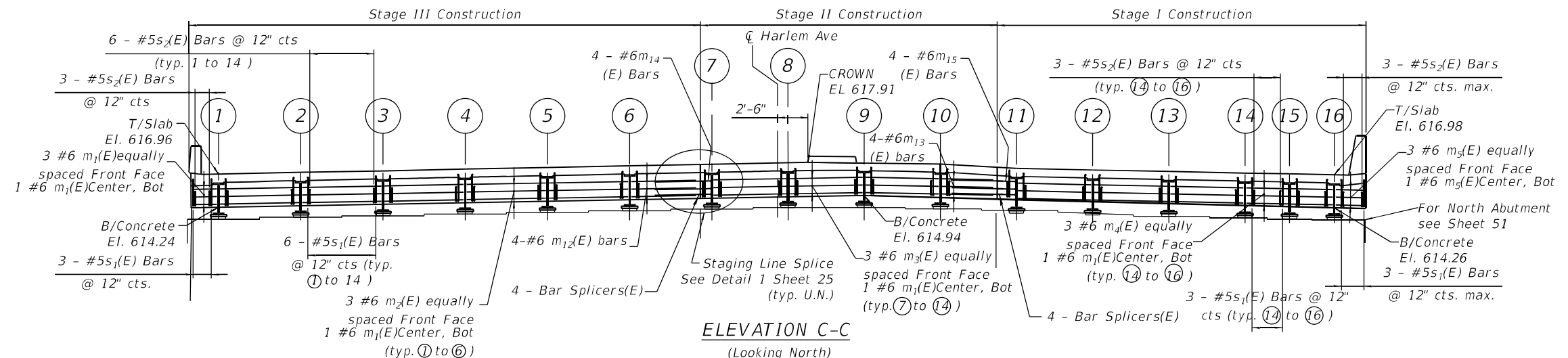
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	490
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

DATE = \$Date\$



NORTH TOP OF DECK DIAPHRAGM PLAN

Notes:
 See Sheet 20 for bar details and B.O.M.
 The s₁(E), s₂(E), s₃(E), s₄(E), v(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angle to the beams.
 Bars indicated thus 3x5 - #5 etc. indicates 3 lines of bars with 5 lengths per line.



FILE = sFilea4\$

THE HOH GROUP, INC.
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 PN: 3730

USER NAME =	DESIGNED - RS	REVISED -
CHECKED - DNB	CHECKED - DNB	REVISED -
PLOT SCALE =	DRAWN - JPM	REVISED -
PLOT DATE =	CHECKED - DNB	REVISED -

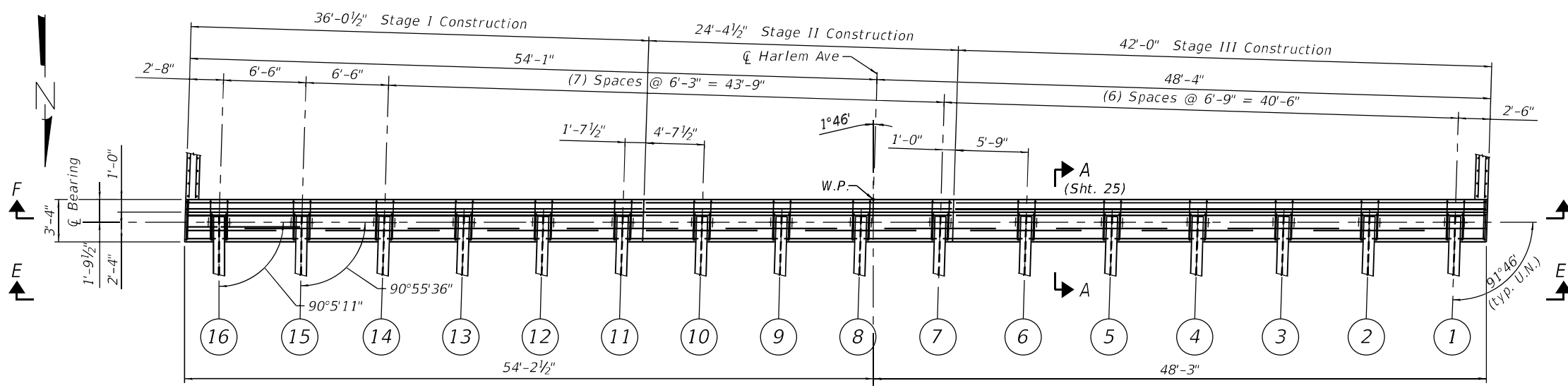
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

NORTH DIAPHRAGM - PLAN & ELEVATION
 STRUCTURE NO. 016-0320

SHEET 23 OF 64 SHEETS

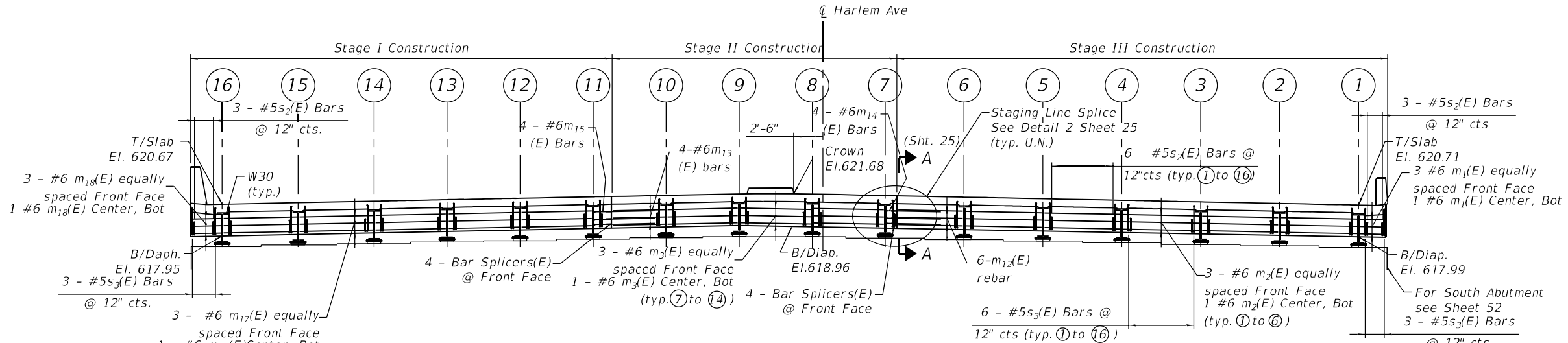
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	491
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

DATE = sDate\$

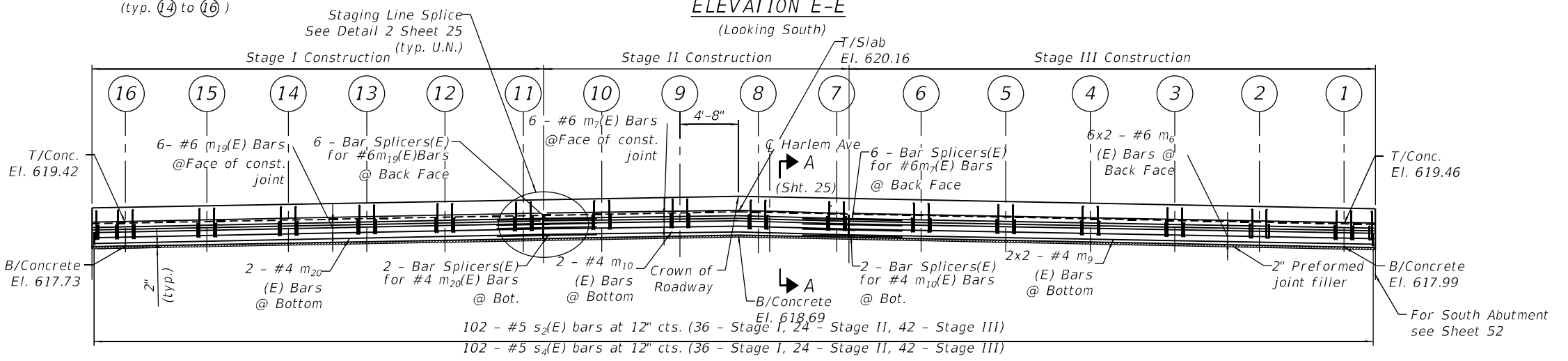


SOUTH TOP OF DECK DIAPHRAGM PLAN

Notes:
 See Sheet 20 for bar details and B.O.M.
 The s₁(E), s₂(E), s₃(E), s₄(E), v(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angle to the beams.
 Bars indicated thus 3x5 - #5 etc. indicates 3 lines of bars with 5 lengths per line.



ELEVATION E-E (Looking South)



SECTION F-F (Looking South)

FILE = sFile45

THE HOH GROUP, INC.
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 PN: 3730

USER NAME =	DESIGNED - RS	REVISED -
CHECKED - DNB	CHECKED - DNB	REVISED -
PLOT SCALE =	DRAWN - JPM	REVISED -
PLOT DATE =	CHECKED - DNB	REVISED -

STATE OF ILLINOIS
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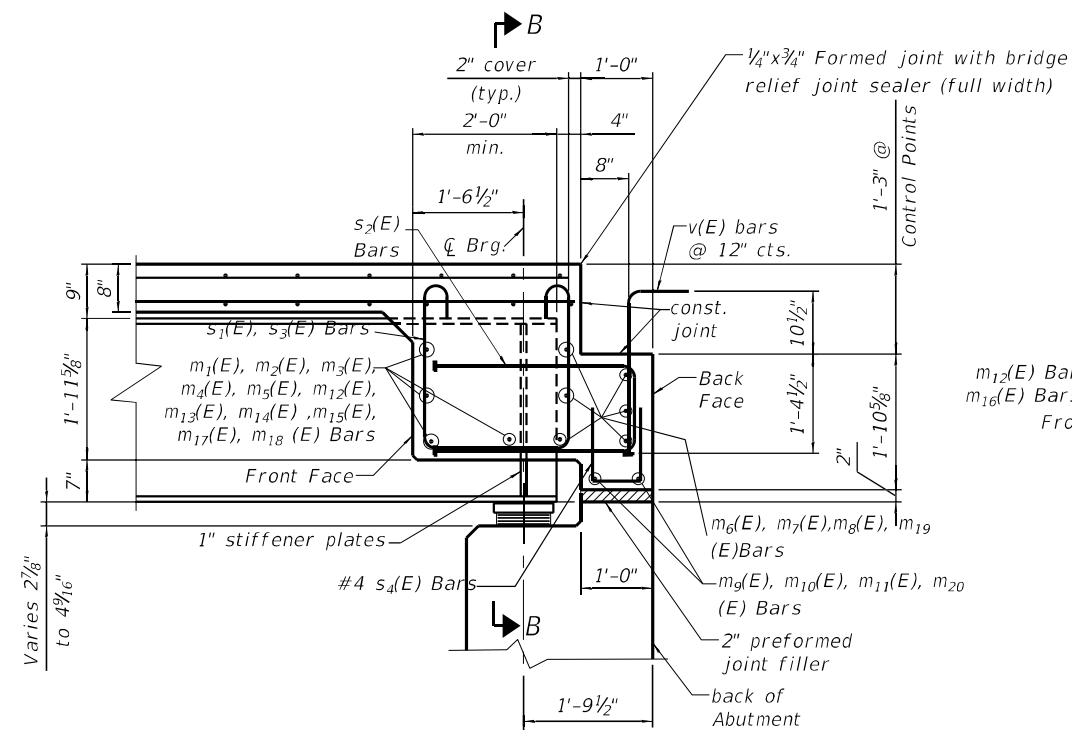
SOUTH DIAPHRAGM - PLAN & ELEVATION
 STRUCTURE NO. 016-0320

SHEET 24 OF 64 SHEETS

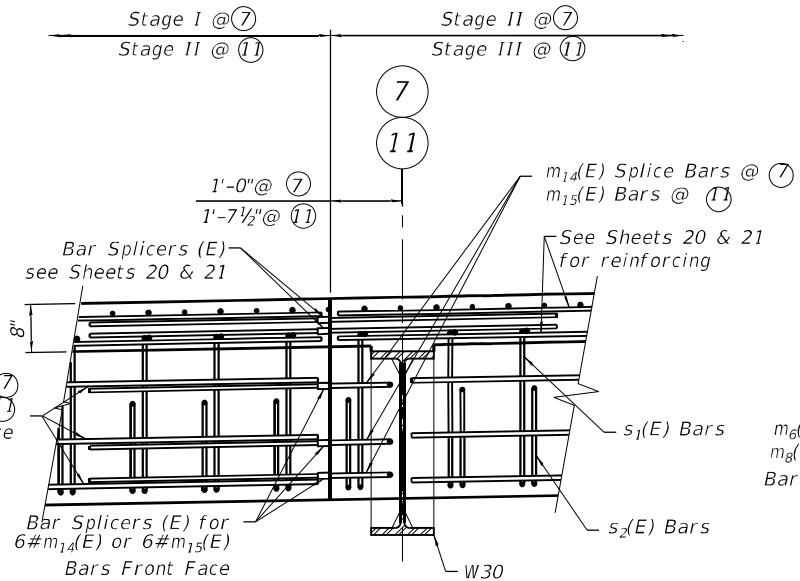
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	492
CONTRACT NO. 60R49				

ILLINOIS FED. AID PROJECT

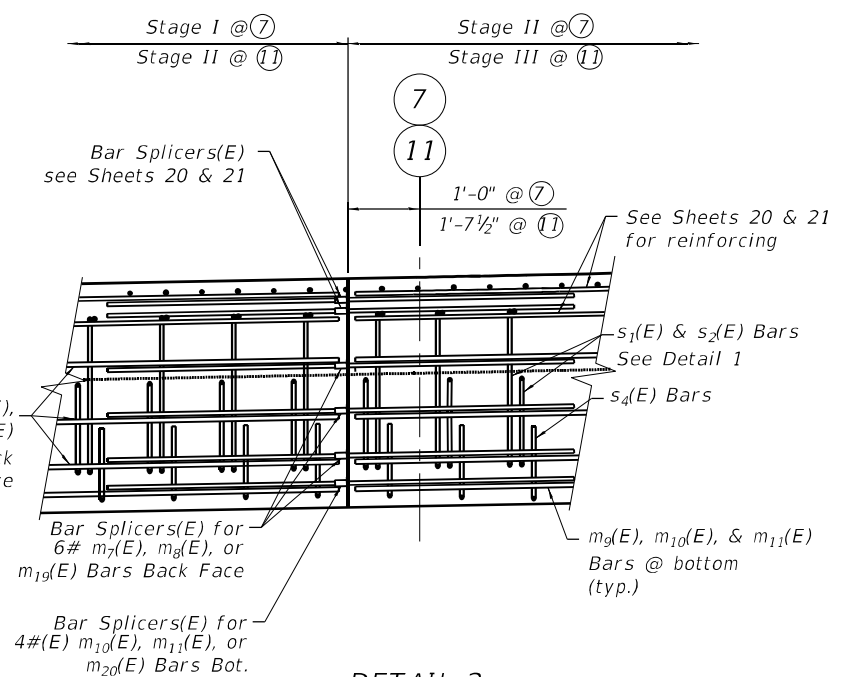
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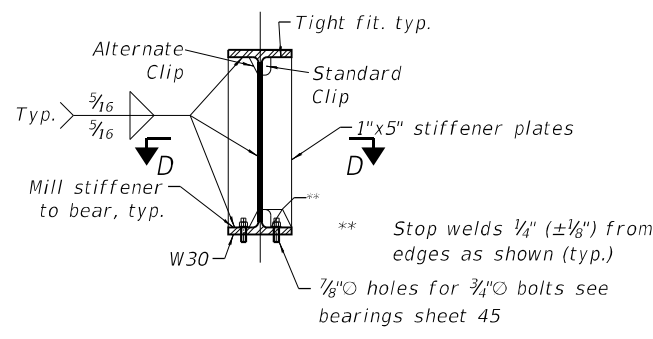
SECTION A-A
(all dims. at right \perp to \bar{C} bearings)
Note: See Section B-B on Sheet 52 of 64 for location of Control Points



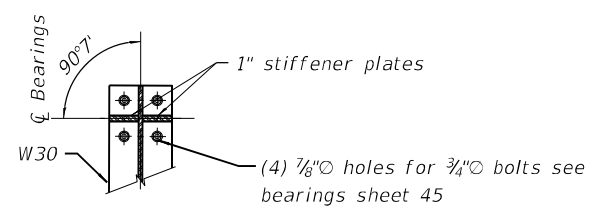
DETAIL 1
(all dims. at right \perp to \bar{C} W30)
(Shown @ North Diaphragm looking North)
(South Diaphragm is looking South and Opposite Hand)



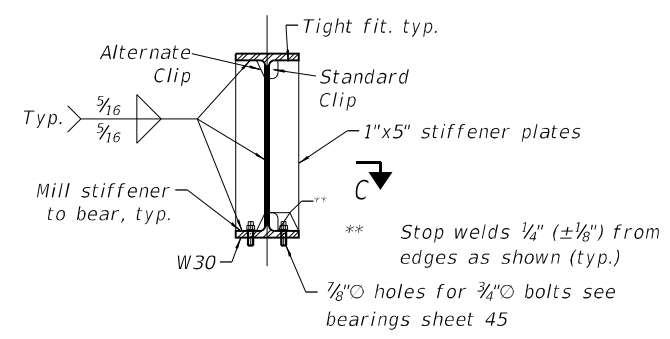
DETAIL 2
(all dims. at right \perp to \bar{C} W30)
Note: For information not shown see Detail 1



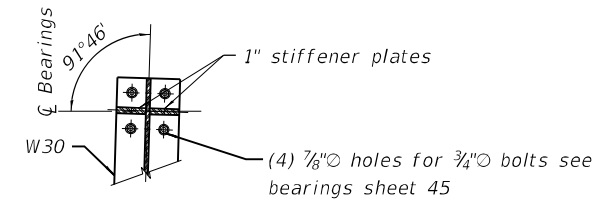
BEARING STIFFENER DETAIL @ PIER #2



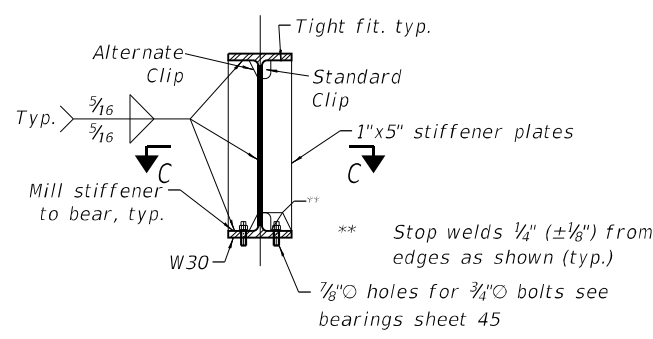
SECTION D-D



SECTION B-B
(all dims. perpendicular to \bar{C} W30)



SECTION C-C



BEARING STIFFENER DETAIL @ PIERS #1 & #3
(all dims. perpendicular to \bar{C} W30)

Note:
1. see, Sheet 44, Connection Plate Detail for Clip and weld details
2. see, sheet 20 of 64 for bar details and B.O.M.

Note:
See Sheet 20 of 64 for bar details and B.O.M.
See clip & weld details on sheet 44.

FILE = sFile45

THE HOH GROUP, INC.
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USER NAME =	DESIGNED - RS	REVISED -
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PLOT SCALE =	DRAWN - HE	REVISED -
PLOT DATE =	CHECKED - DNB	REVISED -

STATE OF ILLINOIS
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DIAPHRAGM DETAILS
STRUCTURE NO. 016-0320

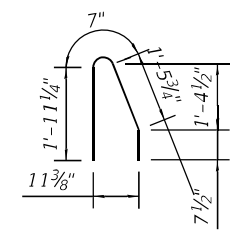
SHEET 25 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	493
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

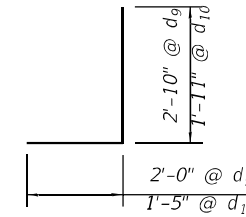
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CONCRETE PARAPETS - BILL OF MATERIAL

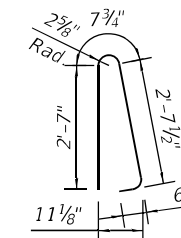
Bar	No.	Size	Length	Shape
d ₄ (E)	598	#5	6'-8"	⊏
d ₅ (E)	299	#5	4'-8"	⊏
d ₆ (E)	192	#4	2'-0"	⊏
d ₈ (E)	24	#5	8'-11"	⊏
d ₉ (E)	6	#5	4'-10"	⊏
d ₁₀ (E)	6	#5	3'-4"	⊏
e ₁ (E)	12	#4	16'-9"	—
e ₂ (E)	4	#4	33'-11"	—
e ₃ (E)	168	#4	6'-8"	—
e ₄ (E)	18	#4	14'-7"	—
e ₅ (E)	8	#4	23'-6"	—
e ₆ (E)	18	#4	13'-6"	—
e ₇ (E)	8	#4	21'-11"	—
e ₈ (E)	12	#4	15'-8"	—
e ₉ (E)	4	#4	31'-8"	—
e ₁₀ (E)	36	#4	19'-8"	—
e ₁₁ (E)	18	#4	13'-11"	—
e ₁₂ (E)	18	#4	13'-8"	—
e ₁₃ (E)	8	#4	22'-1"	—
e ₁₄ (E)	18	#4	14'-6"	—
e ₁₅ (E)	8	#4	23'-4"	—
e ₁₆ (E)	10	#4	11'-7"	—
e ₁₇ (E)	24	#4	14'-8"	—
e ₁₈ (E)	24	#4	13'-5"	—
e ₁₉ (E)	8	#4	11'-8"	—
Concrete Superstructure		Cu. Yd.	66.3	
Reinforcement Bars, Epoxy Coated		Pound	9,870	
Protective Coat		Sq. Yd.	360	



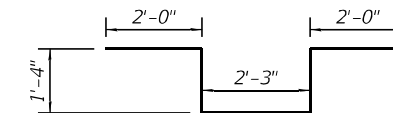
Bar d₅(E)



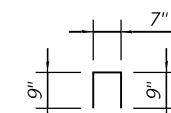
Bar d₉₋₁₀(E)



Bar d₄(E)



Bar d₈(E)



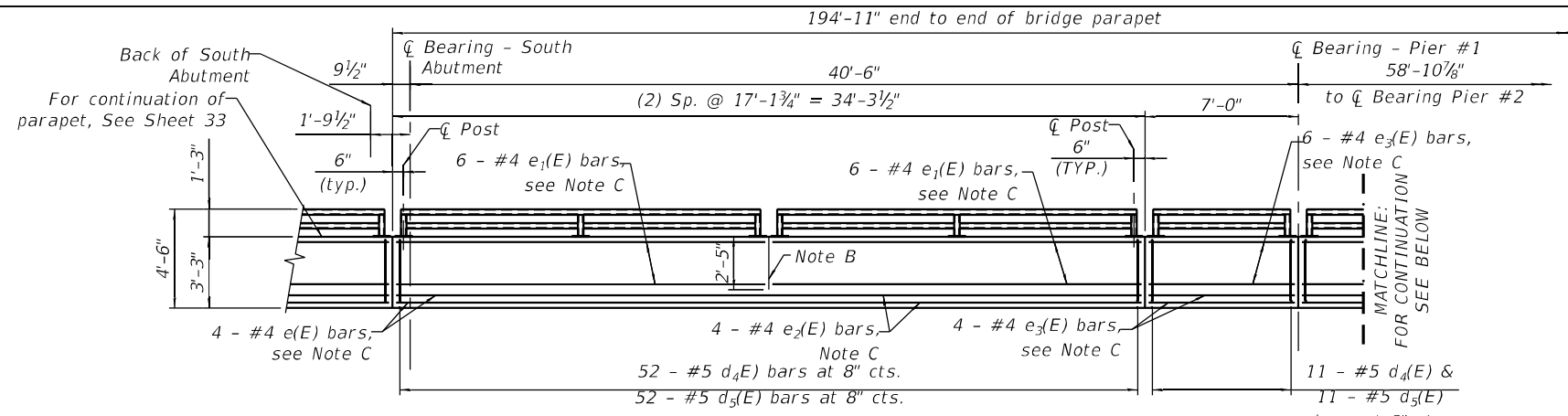
Bar d₆(E)

Minimum Lap Lengths for 8" Concrete Deck Reinforcement			
	Bot Bars	Top Bars	CLASS B
#4	2'-5"	2'-5"	
#5	3'-6"	3'-0"	
#6	4'-10"	3'-7"	

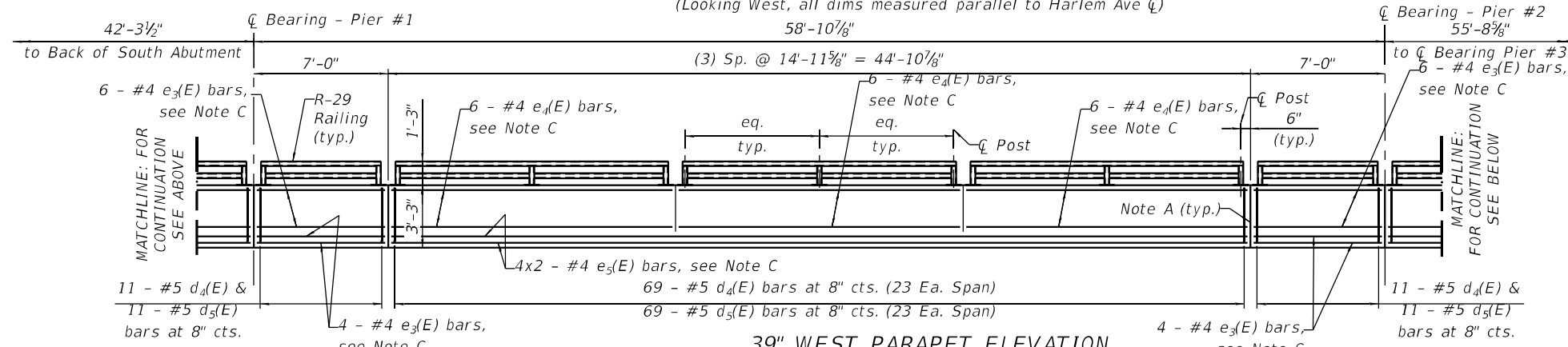
Note A: Full Height Joint w/ Aluminum R & Cork Joint Filler
 Note B: 2'-5" High Joint w/ Cork Joint Filler ONLY
 Note C: Parapet reinforcing details shown on Sht. 29

For Joint Detail See Sheet 29
 For Railing Details See Sheet 39

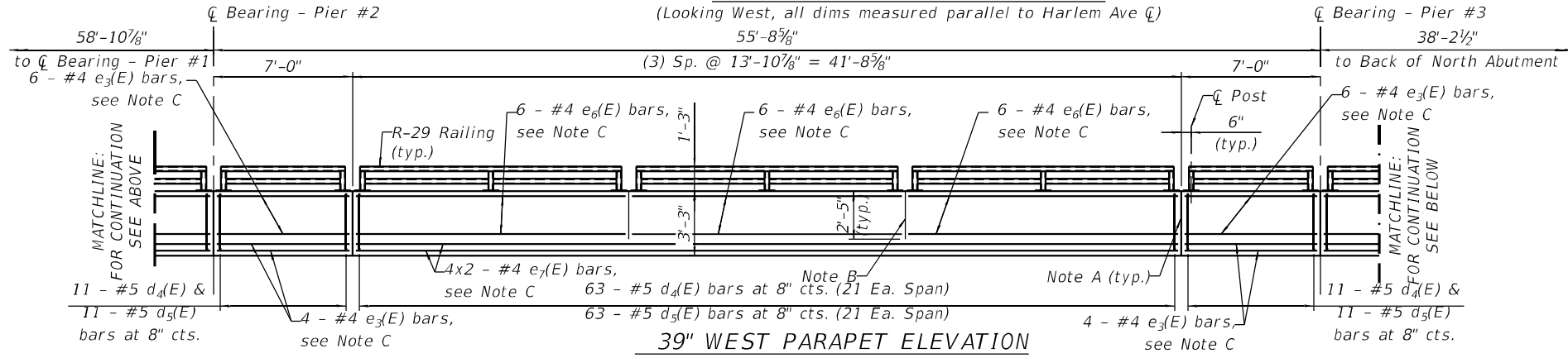
Bars indicated thus 4 x 2 - #5 etc. indicates 4 lines of bars with 2 lengths per line.



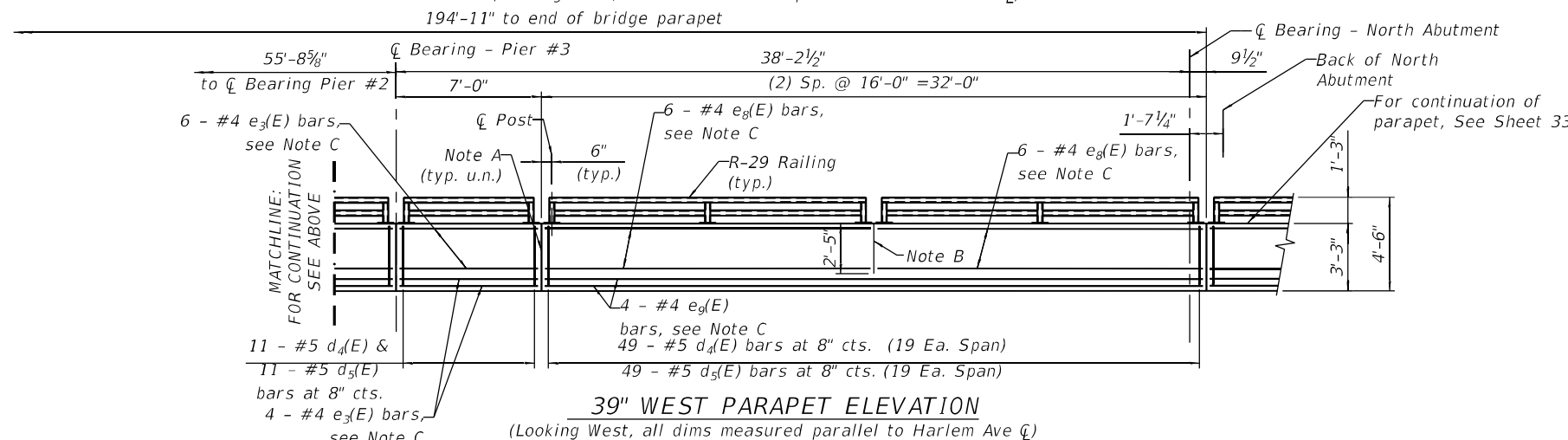
39" WEST PARAPET ELEVATION
 (Looking West, all dims measured parallel to Harlem Ave C)



39" WEST PARAPET ELEVATION
 (Looking West, all dims measured parallel to Harlem Ave C)

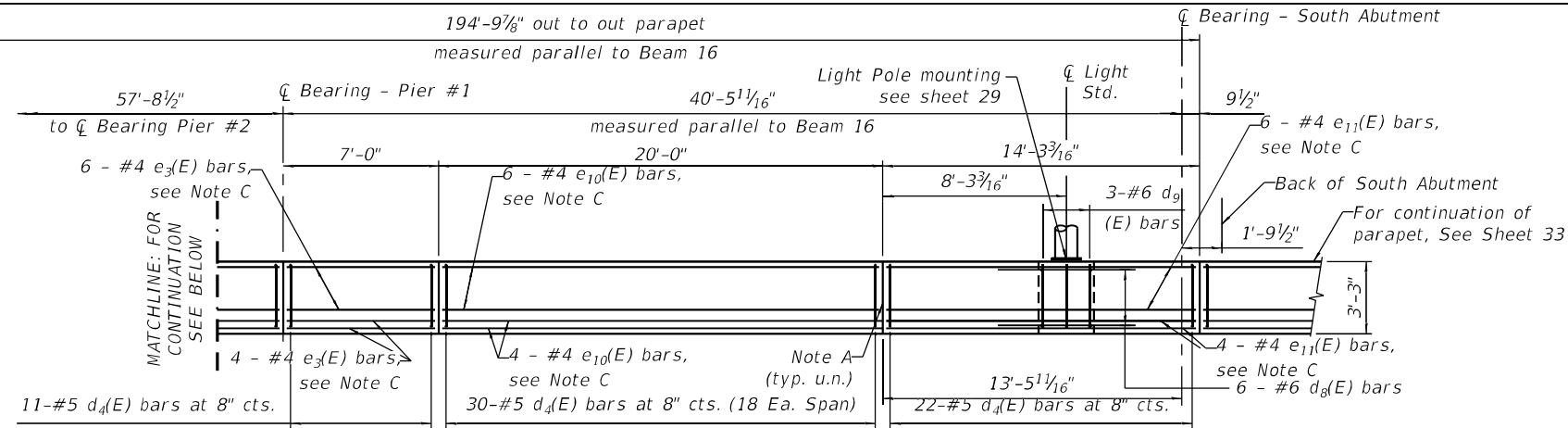


39" WEST PARAPET ELEVATION
 (Looking West, all dims measured parallel to Harlem Ave C)

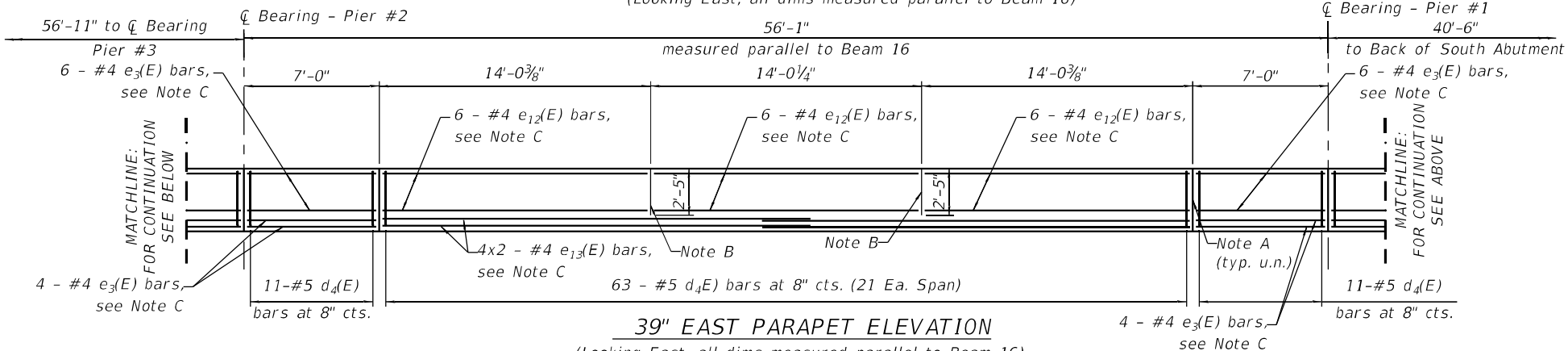


39" WEST PARAPET ELEVATION
 (Looking West, all dims measured parallel to Harlem Ave C)

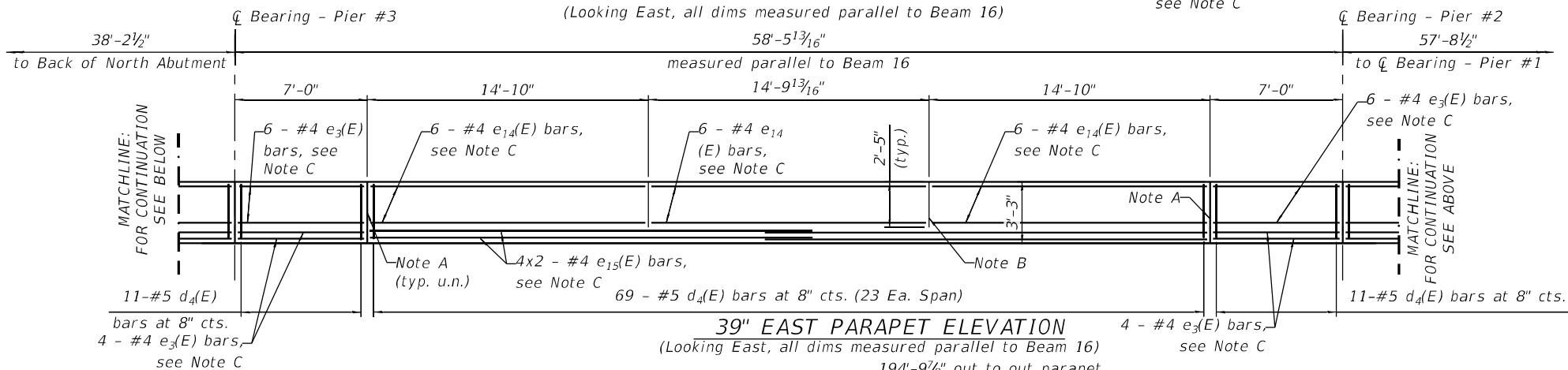
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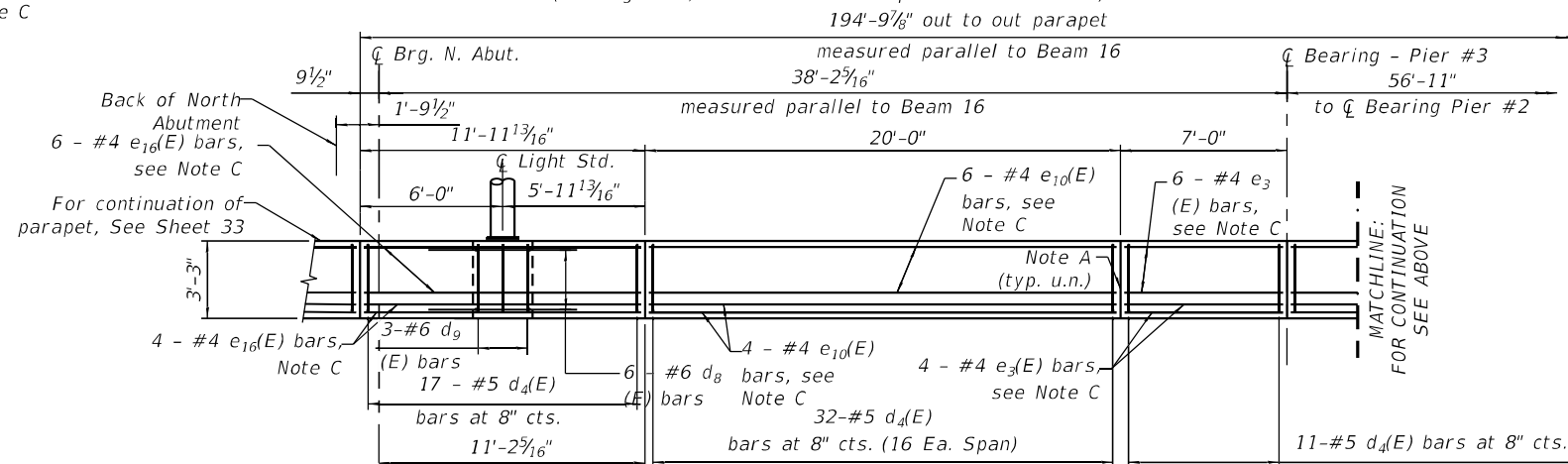
39" EAST PARAPET ELEVATION
(Looking East, all dims measured parallel to Beam 16)



39" EAST PARAPET ELEVATION
(Looking East, all dims measured parallel to Beam 16)



39" EAST PARAPET ELEVATION
(Looking East, all dims measured parallel to Beam 16)



39" EAST PARAPET ELEVATION
(Looking East, all dims measured parallel to Beam 16)

Minimum Lap Lengths for 8" Concrete Deck Reinforcement			
	Bot Bars	Top Bars	CLASS B
#4	2'-5"	2'-5"	

Superstructure Concrete $f'_c=4000\text{psi}$

- Note A:
Full Height Joint w/ Aluminum R & Cork Joint Filler
- Note B:
2'-5" High Joint w/ Cork Joint Filler ONLY
- Note C:
Parapet reinforcing details shown on Sht. 29

For Joint Detail See Sheet 29

Bars indicated thus 4 x 2 - #5 etc. indicates 4 lines of bars with 2 lengths per line.

FILE = \$FileA\$

THE HOH GROUP, INC.
ARCHITECTS | ENGINEERS

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PLOT SCALE =	CHECKED - DNB
PN: 3730	DRAWN - HE
PLOT DATE =	CHECKED - DNB

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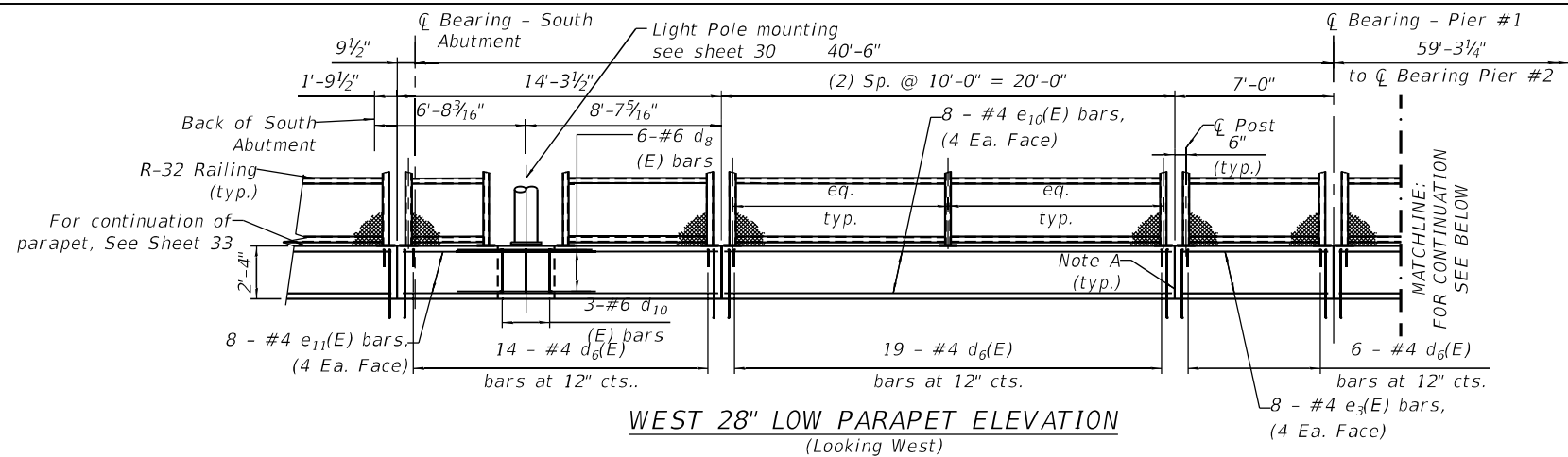
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EAST PARAPET ELEVATIONS
STRUCTURE NO. 016-0320**

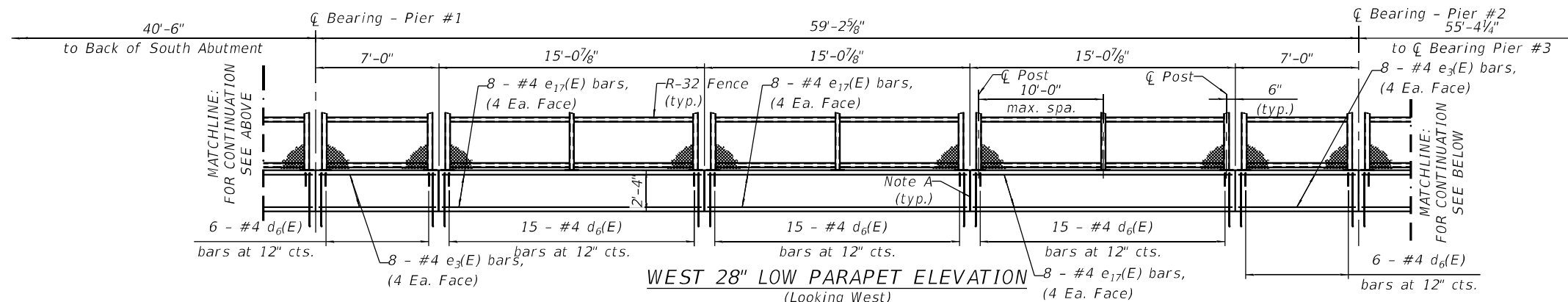
SHEET 27 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	495
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

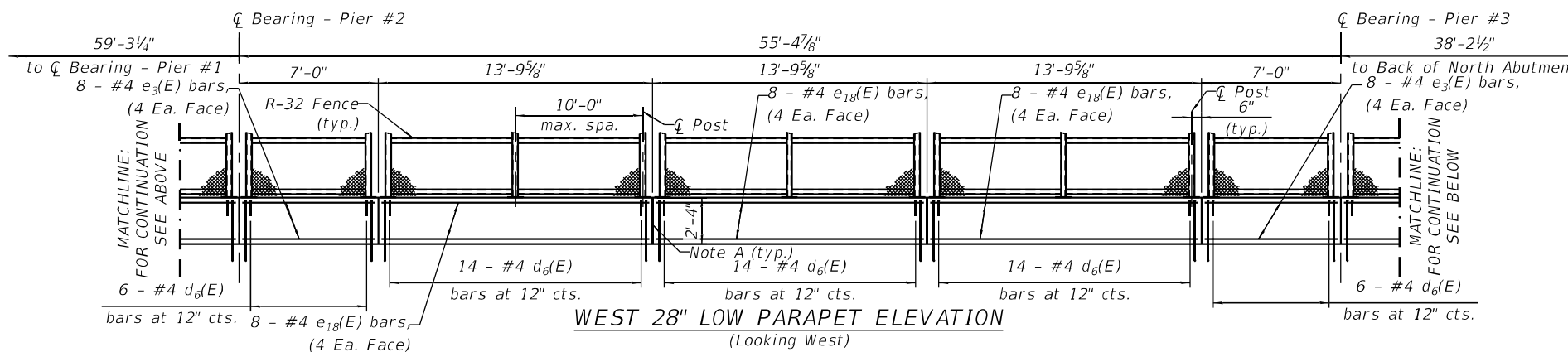
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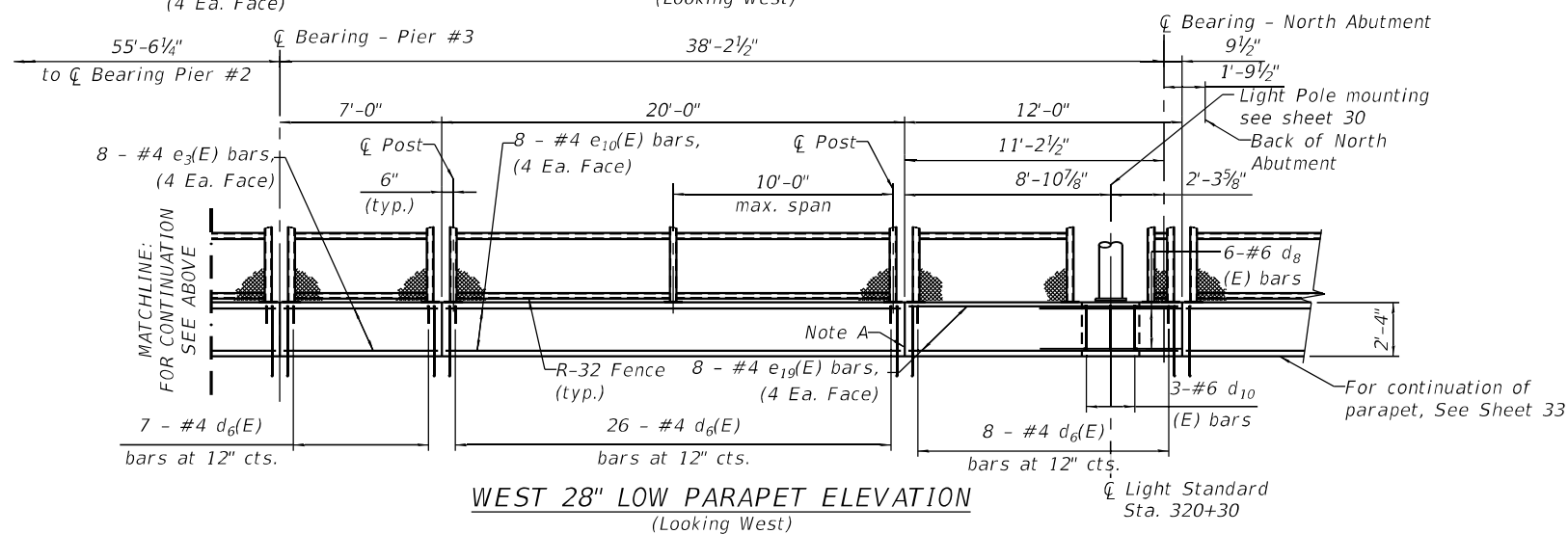
WEST 28" LOW PARAPET ELEVATION
(Looking West)



WEST 28" LOW PARAPET ELEVATION
(Looking West)



WEST 28" LOW PARAPET ELEVATION
(Looking West)



WEST 28" LOW PARAPET ELEVATION
(Looking West)

Note A:
Full Height Joint w/ Aluminum R & Cork
Joint Filler

For Joint Detail See Sheet 29
For Fence Details See Sheet 40

Bars indicated thus 4 x 2 - #5 etc.
indicates 4 lines of bars with 2 lengths
per line.

FILE = \$FileA\$

THE HOH GROUP, INC.
ARCHITECTS | ENGINEERS

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PN: 3730
PLOT DATE =

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

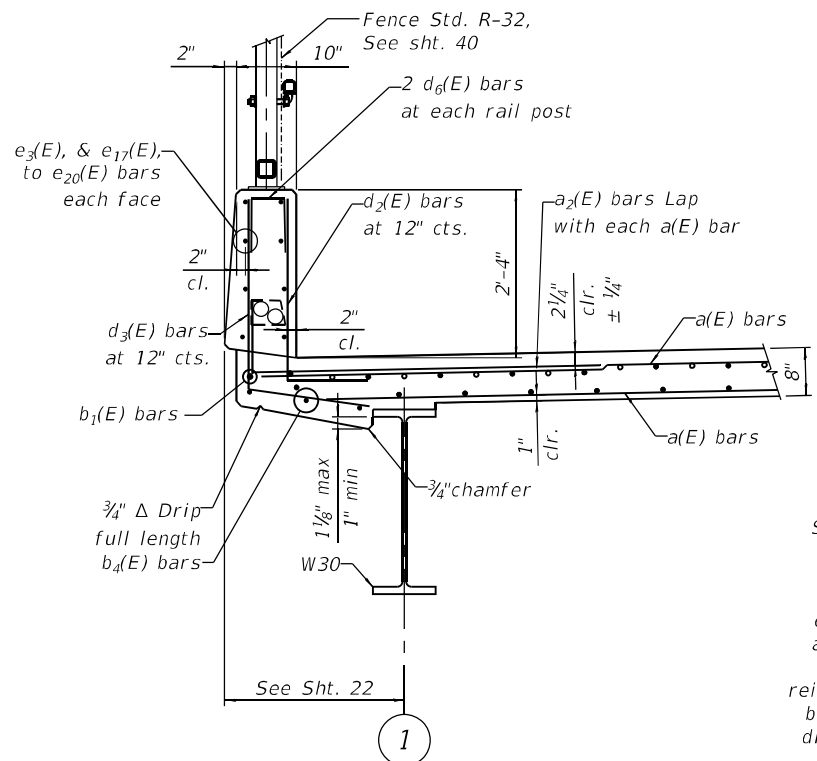
LOW WEST PARAPET ELEVATIONS
STRUCTURE NO. 016-0320

SHEET 28 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z-1-R&RS	COOK	659	496
CONTRACT NO. 60R49				

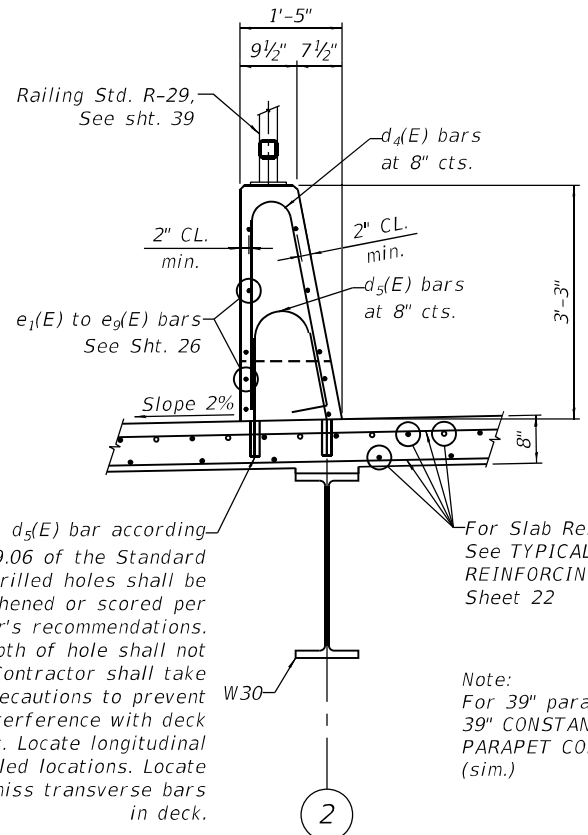
ILLINOIS FED. AID PROJECT

DATE = \$Date\$



WEST LOW 28" PARAPET SECTION

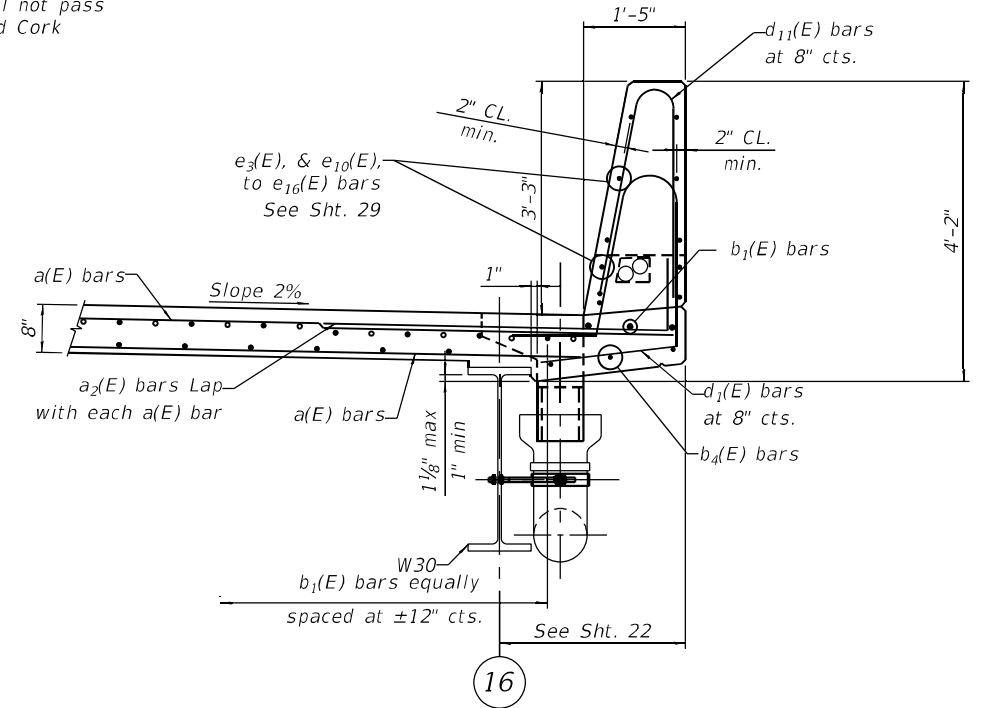
drill and set $d_3(E)$ bar according to Article 509.06 of the Standard Specifications. drilled holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 6". The Contractor shall take all necessary precautions to prevent drilled hole interference with deck reinforcement bars. Locate longitudinal bars to miss drilled locations. Locate drilled holes to miss transverse bars in deck.



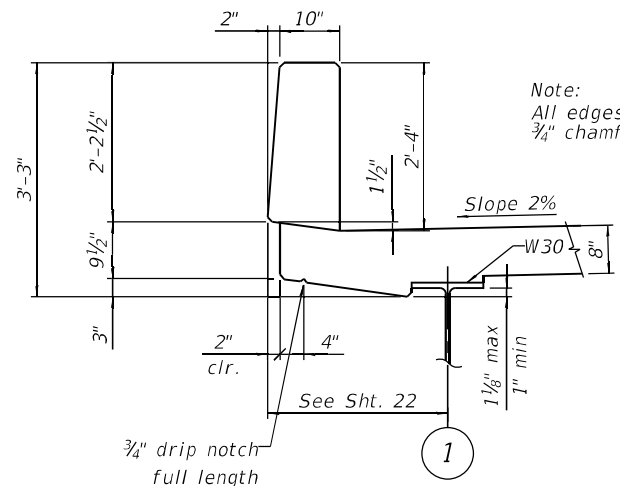
WEST 39" CONSTANT SLOPE PARAPET SECTION

Note:
For 39" parapet configuration see 39" CONSTANT SLOPE EAST PARAPET CONFIGURATION (sim.)

Note:
Reinforcement bars shall not pass thru Aluminum Sheet and Cork Joint Filler.

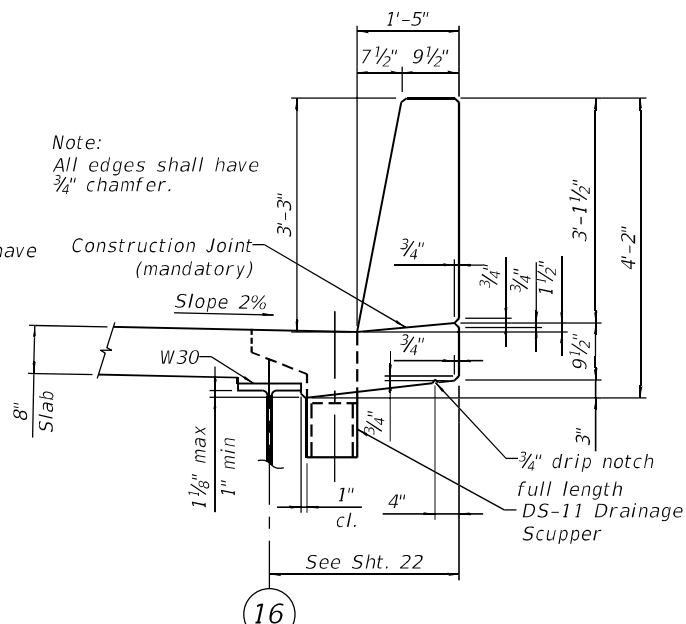


EAST 39" CONSTANT SLOPE PARAPET JOINT DETAIL



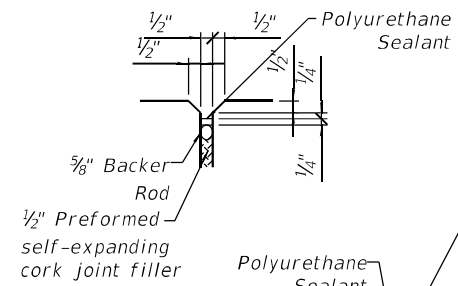
WEST LOW 28" PARAPET CONFIGURATION

Note:
All edges shall have $\frac{3}{4}$ " chamfer.



EAST 39" CONSTANT SLOPE PARAPET CONFIGURATION

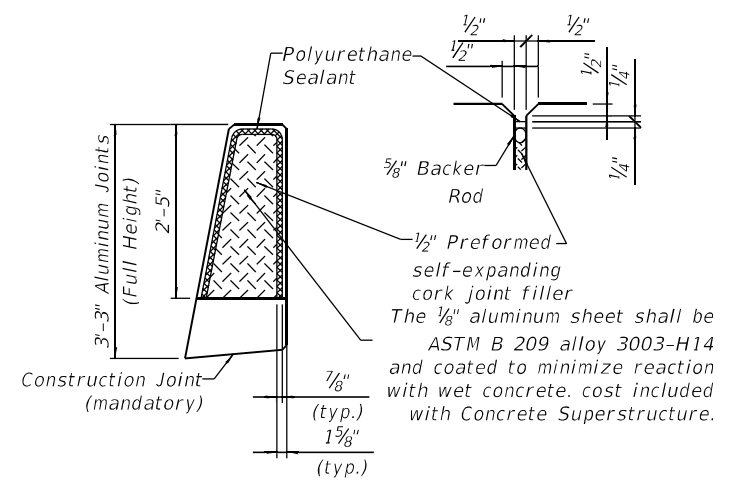
Note:
All edges shall have $\frac{3}{4}$ " chamfer.



WEST LOW 28" PARAPET JOINT DETAIL

Note: The polyurethane sealant shall be according to Article 1050.04 of the Standard Specifications and shall be gray.

The $\frac{1}{8}$ " aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. cost included with Concrete Superstructure.



CONSTANT SLOPE PARAPET JOINT DETAIL

Note: The polyurethane sealant shall be according to Article 1050.04 of the Standard Specifications and shall be gray.

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PN: 3730	CHECKED - DNB	REVISED -

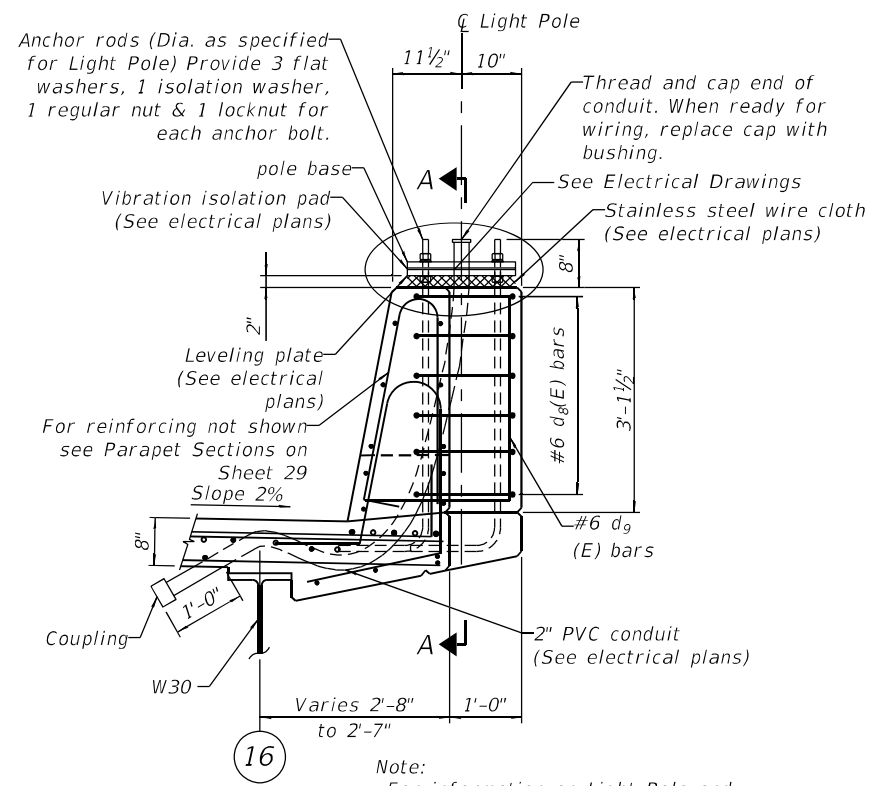
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PARAPET - DETAILS
STRUCTURE NO. 016-0320**

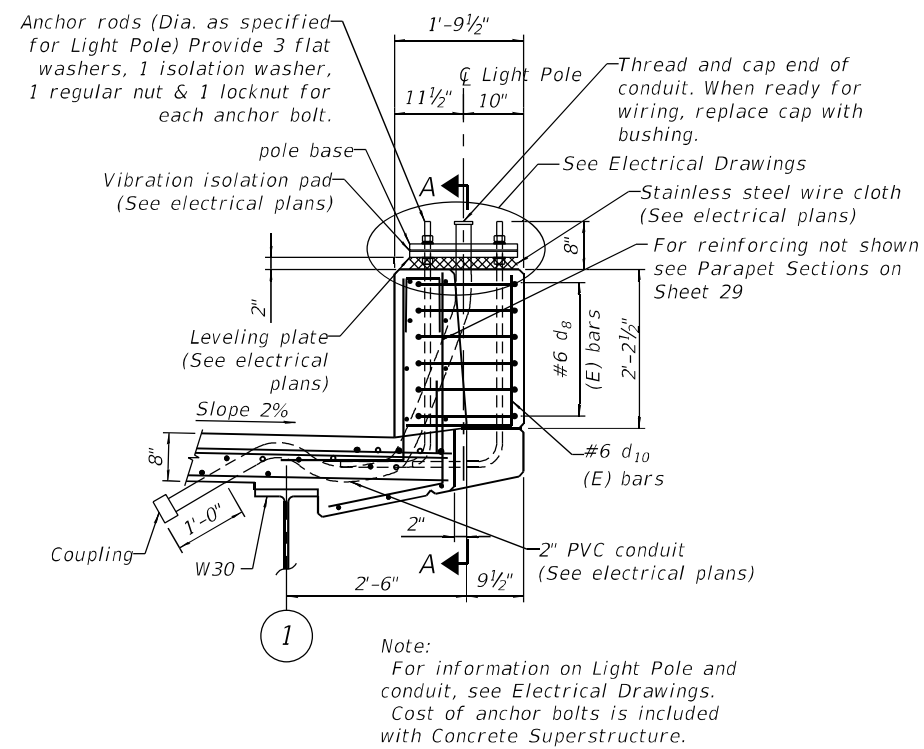
SHEET 29 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	497
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

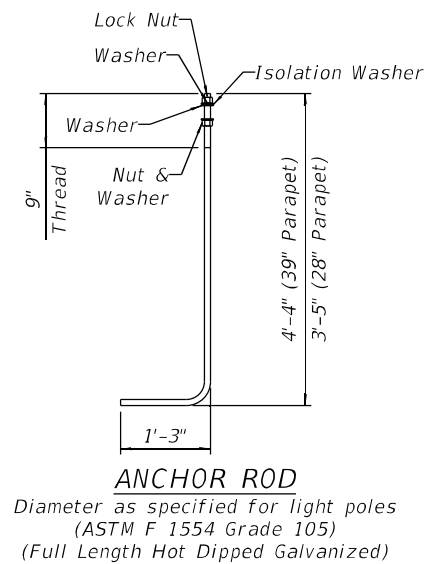
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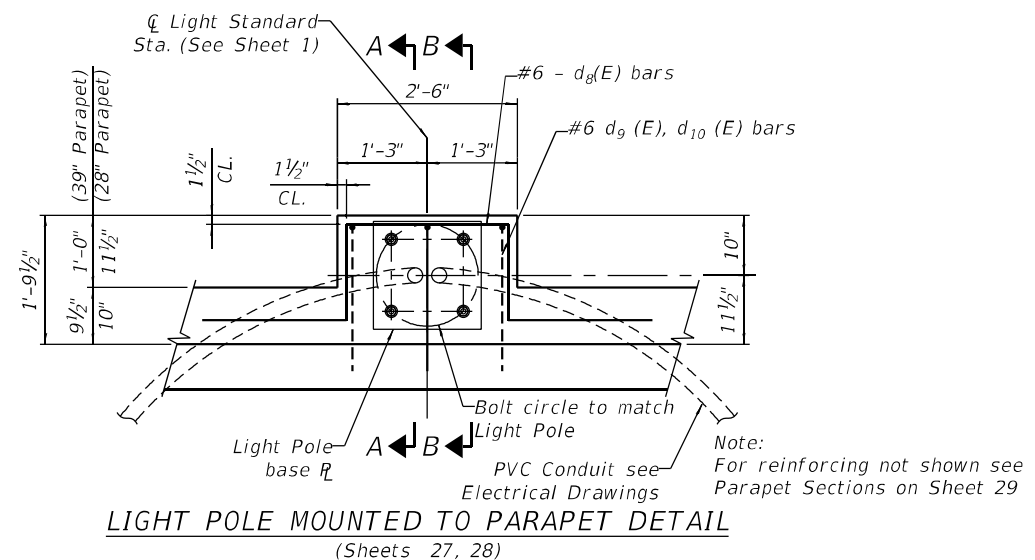
SECTION A-A
LIGHT POLE MOUNTED TO 39"
CONSTANT SLOPE PARAPET SECTION
 (Sheet 27)



SECTION B-B
LIGHT POLE MOUNTED TO
28\"/>



ANCHOR ROD
 Diameter as specified for light poles
 (ASTM F 1554 Grade 105)
 (Full Length Hot Dipped Galvanized)



LIGHT POLE MOUNTED TO PARAPET DETAIL
 (Sheets 27, 28)

FILE = \$FileA\$

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PN: 3730	DRAWN - JPM	REVISED -
PLOT DATE =	CHECKED - DNB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHT POLE MOUNTING AT PARAPETS - DETAILS
STRUCTURE NO. 016-0320

SHEET 30 OF 64 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	498
CONTRACT NO. 60R49				
ILLINOIS FED. AID PROJECT				

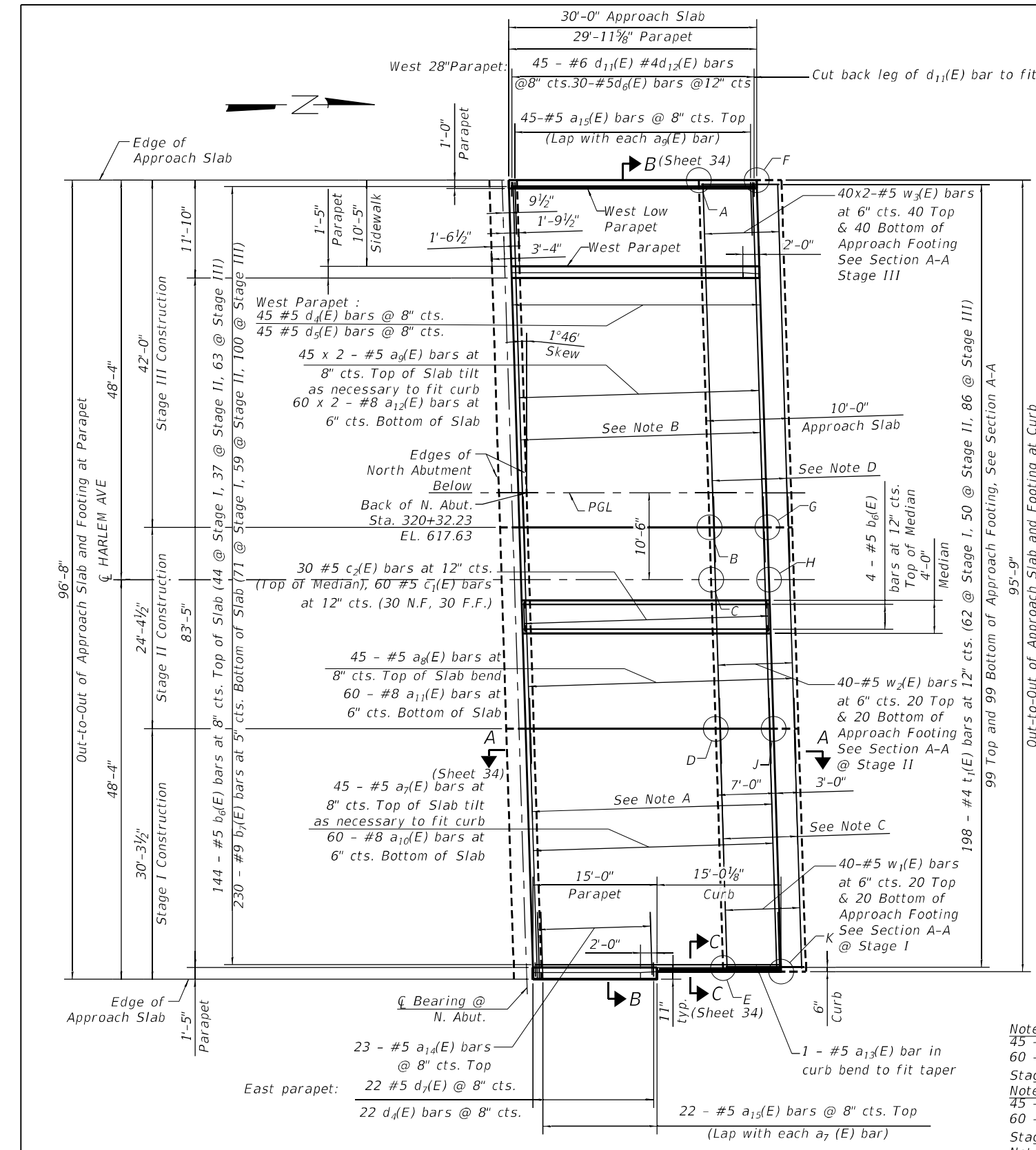
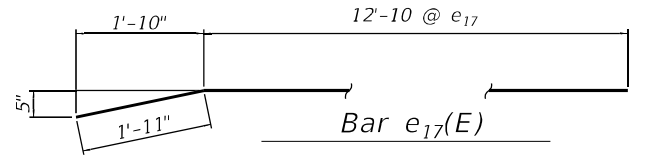
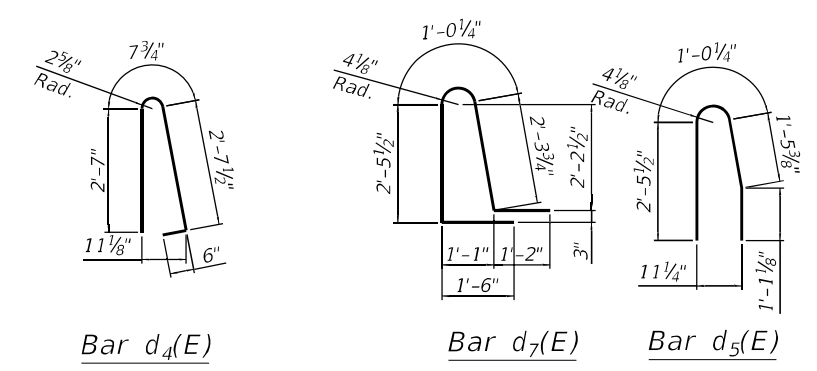
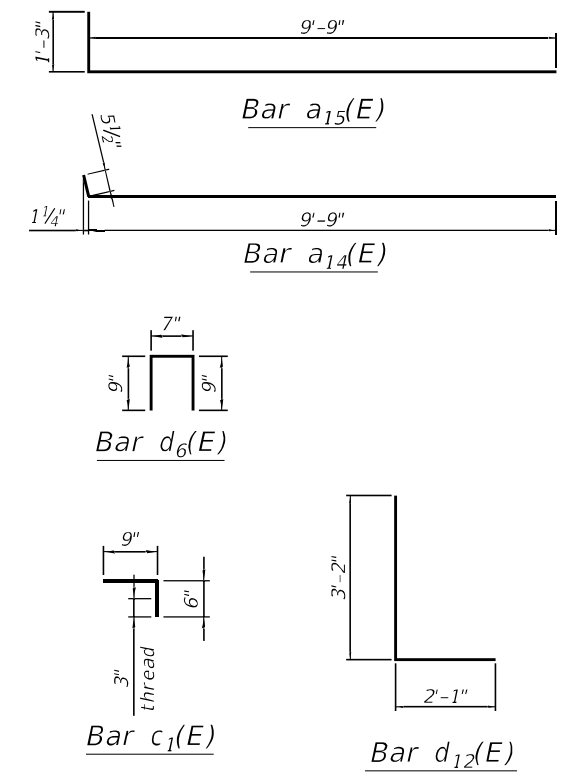
DATE = \$Date\$

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₇ (E)	45	#5	30'-0"	—
a ₈ (E)	45	#5	24'-1"	—
a ₉ (E)	90	#5	22'-7"	—
a ₁₀ (E)	60	#8	30'-0"	—
a ₁₁ (E)	60	#8	24'-1"	—
a ₁₂ (E)	120	#8	23'-4"	—
a ₁₃ (E)	1	#5	16'-0"	—
a ₁₄ (E)	23	#5	7'-0"	—
a ₁₅ (E)	67	#5	11'-0"	—
b ₆ (E)	148	#5	29'-6"	—
b ₇ (E)	230	#9	29'-6"	—
c ₁ (E)	60	#5	1'-2"	—
c ₂ (E)	30	#5	6'-0"	—
d ₄ (E)	67	#5	6'-11"	—
d ₅ (E)	45	#5	4'-8"	—
d ₆ (E)	30	#4	2'-1"	—
d ₇ (E)	22	#5	7'-8"	—
d ₁₁ (E)	45	#6	3'-10"	—
d ₁₂ (E)	45	#4	5'-3"	—
e ₁₇ (E)	4	#4	14'-9"	—
e ₁₈ (E)	34	#4	14'-6"	—
e ₁₉ (E)	4	#4	29'-6"	—
l ₁ (E)	198	#4	9'-6"	—
w ₁ (E)	40	#5	29'-5"	—
w ₂ (E)	40	#5	25'-6"	—
w ₃ (E)	80	#5	22'-7"	—
Concrete Superstructure (Approach Slab)		Cu. Yd.	134.3	
Concrete Structures		Cu. Yd.	29.6	
Concrete Superstructure		Cu. Yd.	8.2	
Reinforcement Bars, Epoxy Coated		Pound	56,850	
Protective Coat		Sq. Yd.	360	

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

Point	North Approach			
	Station	Offset	Top	Bottom
A	320+66.06	-48.33	614.95	614.11
B	320+67.36	-6.33	615.76	614.93
C	320+67.63	2.50	615.93	615.10
D	320+68.11	18.04	615.51	614.68
E	320+69.05	48.33	614.89	614.05
F	320+59.06	-48.33	615.08	614.25
G	320+60.36	-6.33	615.90	615.06
H	320+60.63	2.50	616.07	615.23
J	320+61.11	18.04	615.65	614.81
K	320+62.04	48.33	615.02	614.19

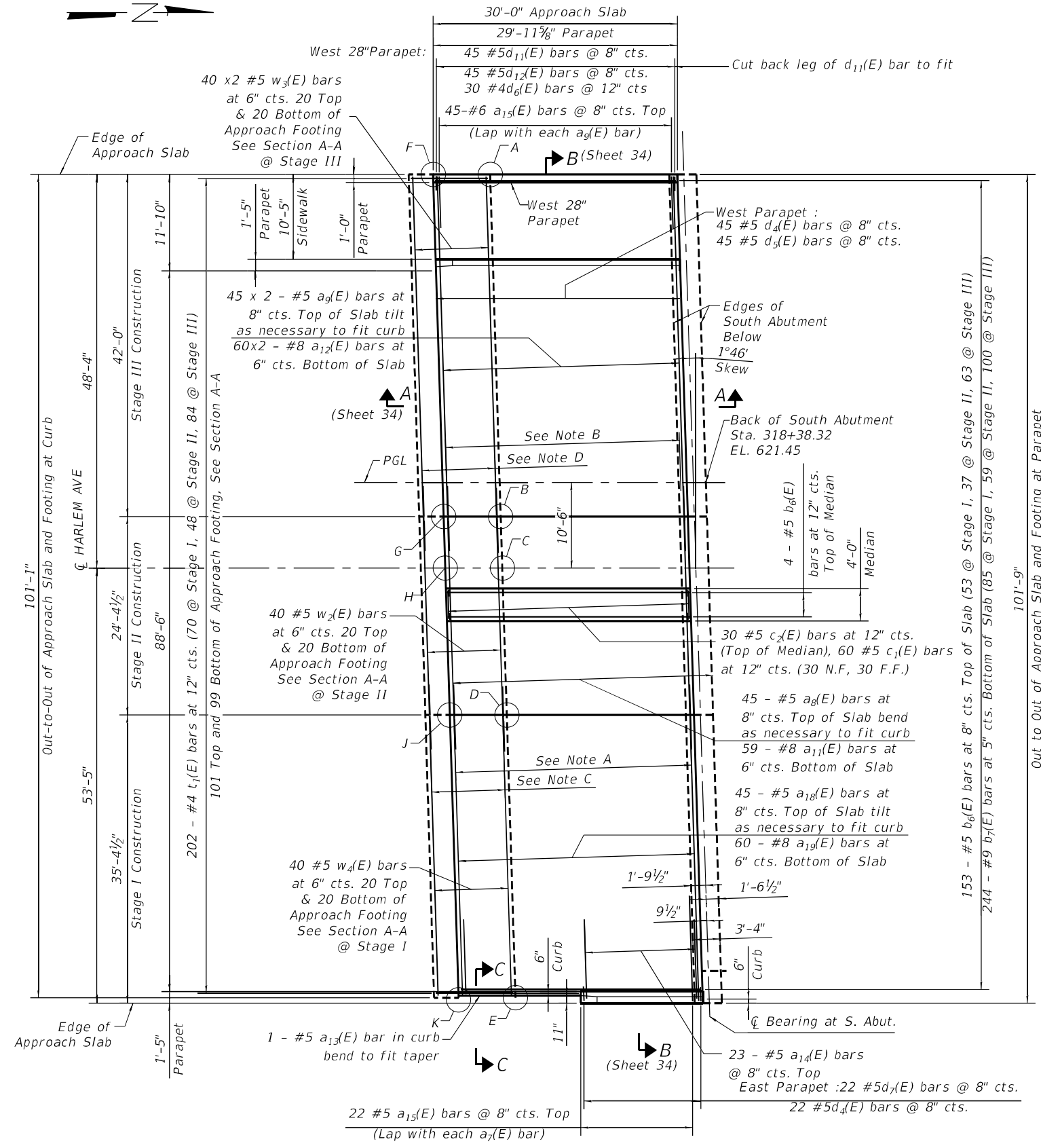


NORTH APPROACH SLAB

Note A:
 45 - Bar Splicers (E) for #5a₇(E) Bars @ 8" cts. Top,
 60 - Bar Splicers (E) for #8a₁₀(E) Bars @ 6" cts. Bottom
 Stage I
Note B:
 45 - Bar Splicers (E) for #5 a₈(E) Bars @ 8" cts. Top
 60 - Bar Splicers (E) for #8 a₁₁(E) Bars @ 6" cts. Bottom
 Stage II
Note C:
 40 - Bar Splicers (E) for #5 w₁(E) Bars @ 6" cts. 20 - Top & 20 - Bottom of Approach Slab Footing See Section A-A.
Note D:
 40 - Bar Splicers (E) for #5 w₂(E) Bars @ 6" cts. 20 - Top & 20 - Bottom of Approach Slab Footing See Section A-A.
Note E:
 Bars indicated thus 45 x 2 - #5 etc. indicate 45 lines of bars with 2 lengths per line.

Minimum Lap Lengths for Concrete Approach Slab Reinforcement			
	Bot Bars	Top Bars	
#5	3'-0"	3'-4"	CLASS B
#8	4'-9"	3'-4"	

Superstructure Concrete f'c=4000psi



SOUTH APPROACH SLAB

Minimum Lap Lengths for Concrete Approach Slab Reinforcement			
	Bot Bars	Top Bars	CLASS B
#5	3'-0"	3'-4"	
#8	4'-9"		

Superstructure Concrete $f'_c=4000\text{psi}$

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

South Approach				
Point	Station	Offset	Top	Bottom
A	318+15.16	-48.33	619.81	618.98
B	318+16.45	-6.33	620.63	619.80
C	318+16.72	2.50	620.80	619.97
D	318+17.20	18.04	620.38	619.55
E	318+18.32	54.08	619.64	618.80
F	318+05.15	-48.33	620.01	619.17
G	318+06.45	-6.33	620.82	619.99
H	318+06.72	2.50	620.99	620.16
J	318+07.20	18.04	620.57	619.74
K	318+08.31	54.08	619.83	619.00

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₈ (E)	45	#5	24'-1"	
a ₉ (E)	90	#5	22'-7"	
a ₁₁ (E)	60	#8	24'-1"	
a ₁₂ (E)	120	#8	23'-4"	
a ₁₃ (E)	1	#5	15'-0"	
a ₁₄ (E)	23	#5	7'-0"	
a ₁₅ (E)	67	#5	11'-0"	
a ₁₈ (E)	45	#5	34'-2"	
a ₁₉ (E)	60	#8	34'-2"	
b ₆ (E)	157	#5	29'-6"	
b ₇ (E)	244	#9	29'-6"	
c ₁ (E)	60	#5	1'-2"	
c ₂ (E)	30	#5	6'-0"	
d ₄ (E)	67	#5	6'-11"	
d ₅ (E)	45	#5	4'-8"	
d ₆ (E)	30	#4	2'-1"	
d ₇ (E)	22	#5	7'-8"	
d ₁₁ (E)	45	#6	4'-10"	
d ₁₂ (E)	45	#4	5'-3"	
e ₁₇ (E)	4	#4	17'-7"	
e ₁₈ (E)	34	#4	14'-6"	
e ₁₉ (E)	4	#4	29'-6"	
t ₁ (E)	202	#4	9'-6"	
w ₂ (E)	40	#5	25'-6"	
w ₃ (E)	80	#5	22'-7"	
w ₄ (E)	40	#5	34'-1"	
Concrete Superstructure (Approach Slab)			Cu. Yd.	140.4
Concrete Structures			Cu. Yd.	31.4
Concrete Superstructure			Cu. Yd.	8.2
Reinforcement Bars, Epoxy Coated			Pound	59,690
Protective Coat			Sq. Yd.	360

Note A:
45 - Bar Splicers (E) for #5a₁₈(E) Bars @ 8" cts. Top,
60 - Bar Splicers (E) for #8a₁₉(E) Bars @ 6" cts. Bottom

Note B:
45 - Bar Splicers (E) for #5 a₈(E) Bars @ 8" cts. Top
60 - Bar Splicers (E) for #8 a₁₁(E) Bars @ 6" cts. Bottom

Note C:
40 - Bar Splicers (E) for #5 w₄(E) Bars @ 6" cts. 20 - Top & 20 - Bottom of Approach Slab Footing See Section A-A.

Note D:
40 - Bar Splicers (E) for #5 w₂(E) & #5w₃(E) Bars @ 6" cts. 20 - Top & 20 - Bottom of Approach Slab Footing See Section A-A.

Note E:
Bars indicated thus 45 x 2 - #5 etc. indicate 45 lines of bars with 2 lengths per line.

FILE = \$FileA\$

THE HOH GROUP, INC.
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USER NAME =	DESIGNED - RS	REVISED -
PLOT SCALE =	CHECKED - DNB	REVISED -
PLOT DATE =	DRAWN - HE	REVISED -
	CHECKED - DNB	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SOUTH APPROACH SLAB - PLAN & B.O.M.
STRUCTURE NO. 016-0320**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	3128-Z4-R&RS	COOK	659	500
CONTRACT NO. 60R49				
SHEET 32 OF 64 SHEETS		ILLINOIS FED. AID PROJECT		

DATE = \$Date\$