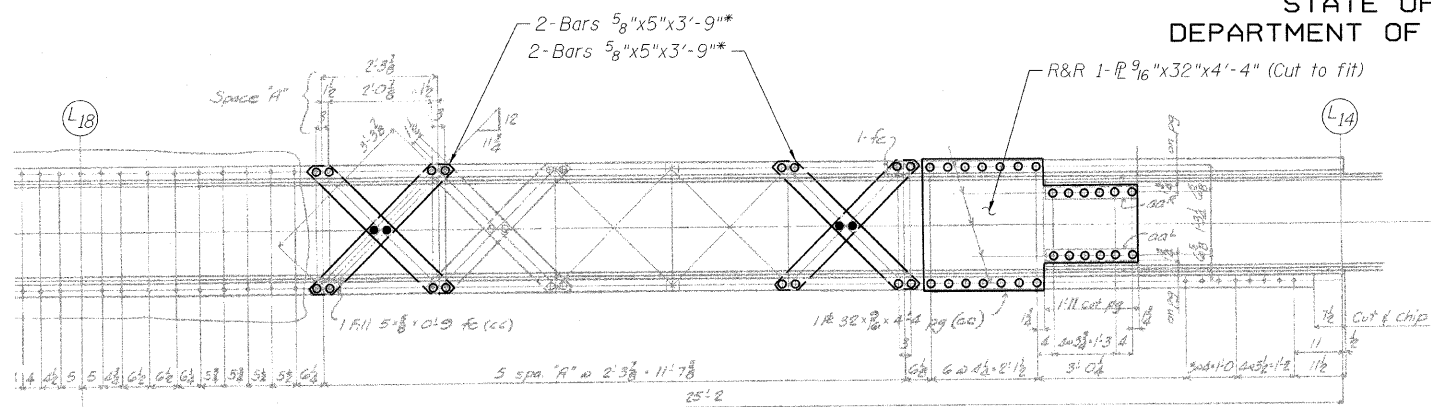
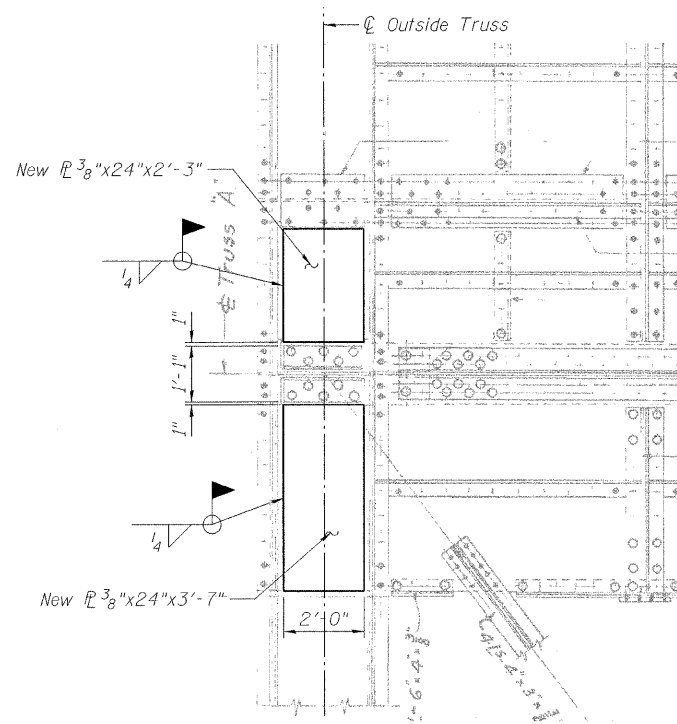


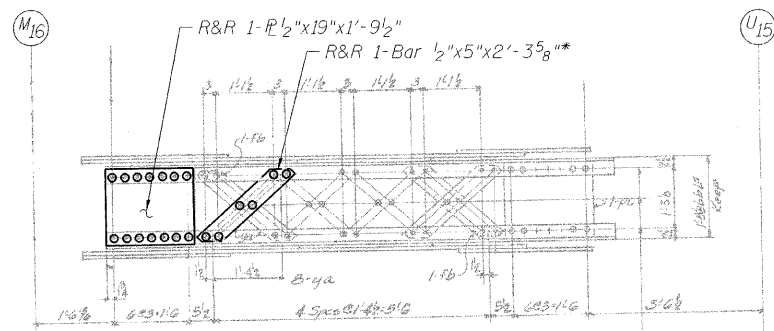
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



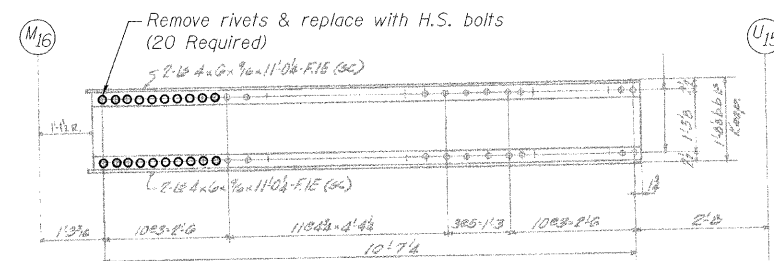
SECTION F-F



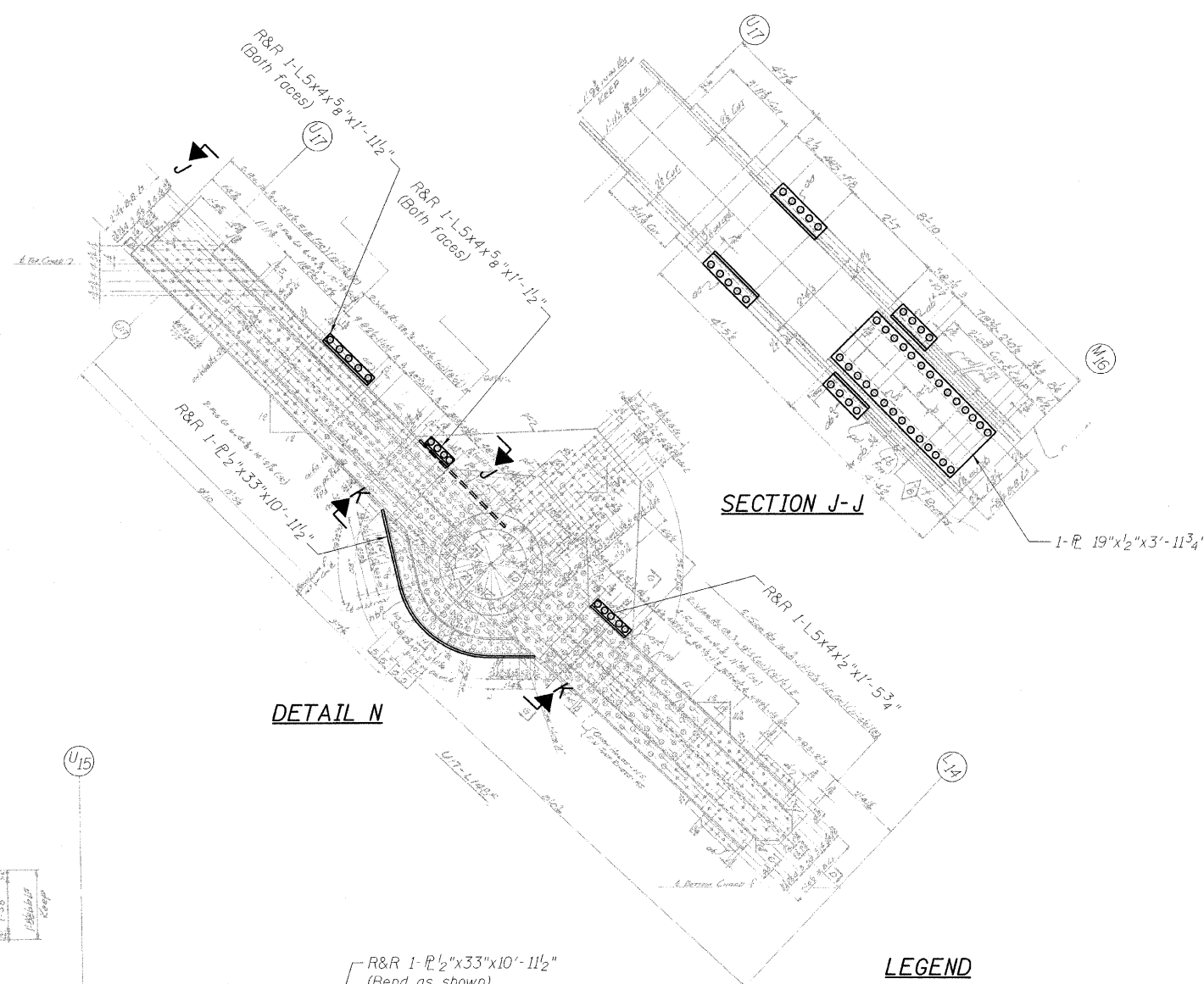
SECTION G-G



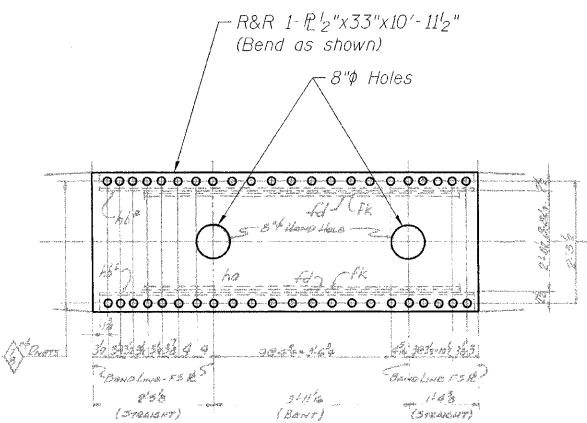
SECTION H-H



SECTION I-I



DETAIL N



SECTION K-K

LEGEND

- R&R Remove & replace
- Existing fastener to remain
- Hole to match existing location
- New hole
- Existing member to remain
- New member

Note:  
Portions of this drawing are extracted from original drawings for this bridge. Details shown are provided to illustrate the work to be performed.

DESIGNED	P. PETERSON
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

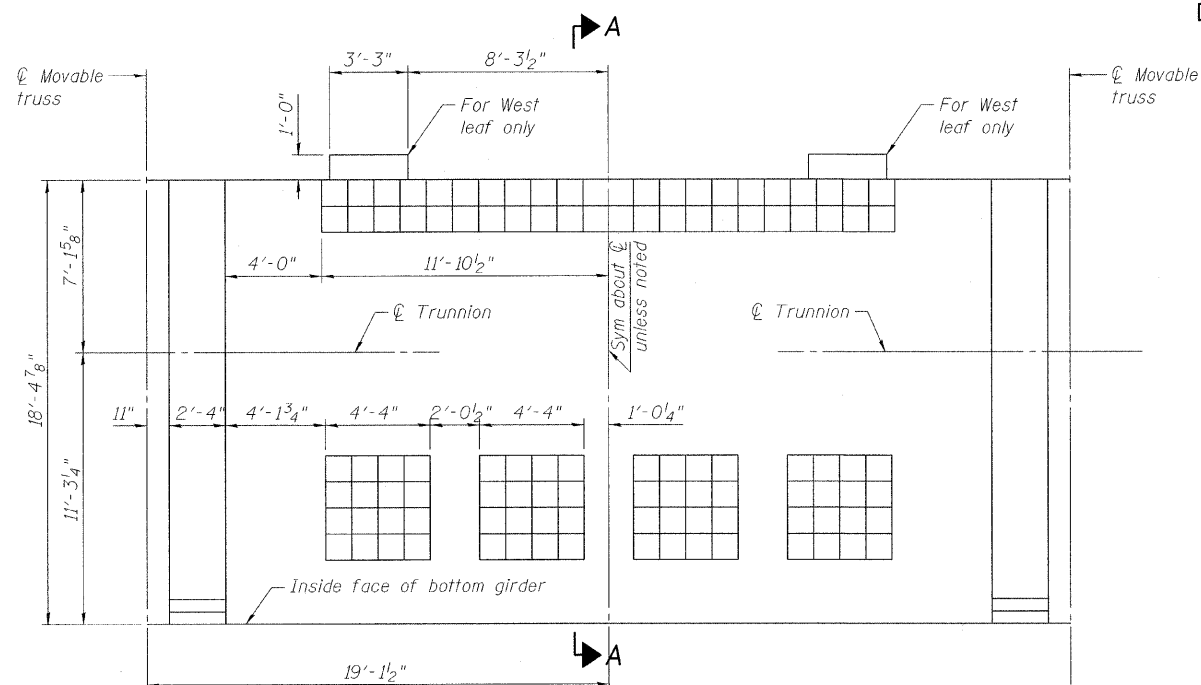
\* Measured Center-Center of holes.  
Proposed bar length and shape  
to match existing bars.

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SUITE 900  
CHICAGO, IL. 60606

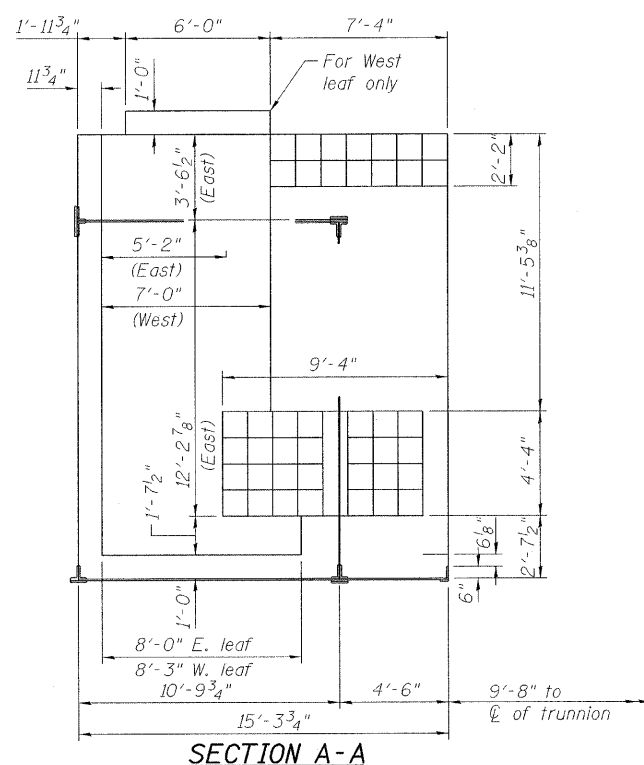
SHEET NO. 120 163 SHEETS	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	201
FED. ROAD DIST. NO. 7			ILLINOIS FED. AID PROJECT		
			CONTRACT NO. 60D61		

TRUSS REPAIRS  
OUTSIDE TRUSS (NORTHWEST)  
STRUCTURE NO. 016-2445

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



ELEVATION OF COUNTERWEIGHT



SECTION A-A

Notes:

- For preliminary counterweight adjustment, it has been assumed that the bridge is currently in a balanced condition. The Contractor shall perform independent balancing calculations based on actual shop weights and proposed rehabilitation configuration.
- Weight denotes the weight of member element replacement and not necessarily the total weight of members.
- The sum/product of the columns/rows may not be additive due to rounding error.
- The distances X and Y are measured from the center of trunnion.
- As far as practicable, exact measured weights and locations and moment of all material entering into the make-up of the movable leaf of the bridge shall be furnished to the Engineer by the Contractor.
- The final distribution for balancing the leaf will be determined as outlined in the special provisions. The Contractor shall make all adjustments and relocations necessary to attain that condition to the satisfaction of the Engineer. The Contractor shall furnish to the Engineer complete record of the final weights and distribution of the various counterweight materials as computed and as measured.
- All dimensions and elevations shown are based on existing drawings. Contractor shall verify.
- Existing and new center lock mechanical system are assumed to weigh the same. Contractor shall verify.

DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

ITEM	NORTHEAST LEAF					SOUTHWEST LEAF				
	WEIGHT W #	LOCATION		MOMENT		WEIGHT W #	LOCATION		MOMENT	
		X (ft)	Y (ft)	Mx (#-ft)	My (#-ft)		X (ft)	Y (ft)	Mx (#-ft)	My (#-ft)
<b>REMOVED</b>										
Existing Deck Removal (20.67 psf)	98,597	66.15	10.71	6,521,761	1,055,806	98,597	66.15	10.71	6,521,761	1,055,806
Existing Stringers Removal	82,090	63.57	9.72	5,218,321	797,873	82,090	63.57	9.72	5,218,321	797,873
Existing Sidewalk Removal	34,000	66.18	11.50	2,250,120	391,000	34,000	66.18	11.50	2,250,120	391,000
Existing Handrail Removal (38.4 plf)	4,335	64.99	13.13	281,732	56,926	4,335	64.99	13.13	281,732	56,926
Existing Steel Curb Removal	6,690	67.79	11.70	453,495	78,251	6,690	67.79	11.70	453,495	78,251
Lateral Bracing	37,840	44.12	-2.46	1,669,662	-93,073	37,840	44.12	-2.46	1,669,662	-93,073
Center Break	4,340	122.10	10.37	529,914	44,991	4,340	122.10	10.37	529,914	44,991
Rear Break	11,300	11.25	10.08	127,125	113,942	11,300	11.25	10.08	127,125	113,942
Floorbeams	69,920	75.29	5.16	5,264,405	360,846	71,214	66.03	4.80	4,702,394	341,806
<b>Total Removed</b>	<b>349,112</b>	<b>63.92</b>	<b>8.04</b>	<b>22,316,535</b>	<b>2,806,562</b>	<b>350,406</b>	<b>62.08</b>	<b>7.96</b>	<b>21,754,524</b>	<b>2,787,522</b>
<b>ADDED</b>										
Orthotropic Deck including WS (43.01 psf)	222,625	58.87	10.58	13,105,192	2,355,373	222,625	58.87	10.58	13,105,192	2,355,373
Orthotropic Sidewalk (30.64 psf)	25,512	65.92	12.10	1,681,666	308,695	25,512	65.92	12.10	1,681,666	308,695
Aluminum Handrail (31.7 plf)	3,575	64.99	13.13	232,368	46,952	3,575	64.99	13.13	232,368	46,952
Aluminum F Barrier (54 plf)	6,316	67.79	13.13	428,178	82,943	6,091	67.79	13.13	412,886	79,981
Lateral Bracing	34,128	44.54	-2.39	1,519,982	-81,698	34,021	44.32	-2.41	1,507,858	-82,031
Center Break	6,573	122.10	10.37	802,563	68,140	6,573	122.10	10.37	802,563	68,140
Rear Break	18,921	11.25	10.08	212,861	190,787	18,921	11.25	10.08	212,861	190,787
Truss Repairs	2,937	69.69	0.89	204,667	2,628	3,506	55.06	0.64	193,053	2,256
Floorbeams	65,336	73.75	5.21	4,818,494	340,117	71,080	62.84	5.01	4,466,382	356,382
<b>Total Added</b>	<b>385,923</b>	<b>59.61</b>	<b>8.59</b>	<b>23,005,972</b>	<b>3,313,936</b>	<b>391,905</b>	<b>57.70</b>	<b>8.49</b>	<b>22,614,828</b>	<b>3,326,533</b>

ITEM	NORTHWEST LEAF					SOUTHEAST LEAF				
	WEIGHT W #	LOCATION		MOMENT		WEIGHT W #	LOCATION		MOMENT	
		X (ft)	Y (ft)	Mx (#-ft)	My (#-ft)		X (ft)	Y (ft)	Mx (#-ft)	My (#-ft)
<b>REMOVED</b>										
Existing Deck Removal (20.67 psf)	98,810	65.34	10.71	6,456,589	1,058,086	98,945	65.34	10.71	6,465,463	1,059,540
Existing Stringers Removal	82,090	63.57	9.72	5,218,321	797,873	82,090	63.57	9.72	5,218,321	797,873
Existing Sidewalk Removal	34,000	66.18	11.50	2,250,120	391,000	34,000	66.18	11.50	2,250,120	391,000
Existing Handrail Removal (38.4 plf)	4,335	64.99	13.13	281,732	56,926	4,335	64.99	13.13	281,732	56,926
Existing Steel Curb Removal	6,690	67.79	11.70	453,495	78,251	6,690	67.79	11.70	453,495	78,251
Lateral Bracing	37,840	44.12	-2.46	1,669,662	-93,073	37,840	44.12	-2.46	1,669,662	-93,073
Center Break	4,340	122.10	10.37	529,914	44,991	4,340	122.10	10.37	529,914	44,991
Rear Break	11,300	11.25	10.08	127,125	113,942	11,300	11.25	10.08	127,125	113,942
Floorbeams	69,920	75.29	5.16	5,264,405	360,846	24,902	52.59	3.65	1,309,660	90,818
<b>Total Removed</b>	<b>349,325</b>	<b>63.70</b>	<b>8.04</b>	<b>22,251,363</b>	<b>2,808,842</b>	<b>304,443</b>	<b>60.13</b>	<b>8.34</b>	<b>18,305,492</b>	<b>2,540,268</b>
<b>ADDED</b>										
Orthotropic Deck including WS (43.01 psf)	222,625	58.87	10.58	13,105,192	2,355,373	222,625	58.87	10.58	13,105,192	2,355,373
Orthotropic Sidewalk (30.64 psf)	25,512	65.92	12.10	1,681,666	308,695	25,512	65.92	12.10	1,681,666	308,695
Aluminum Handrail (31.7 plf)	3,575	64.99	13.13	232,368	46,952	3,575	64.99	13.13	232,368	46,952
Aluminum F Barrier (54 plf)	6,091	67.79	13.13	412,886	79,981	6,091	67.79	13.13	412,886	79,981
Lateral Bracing	34,051	44.38	-2.41	1,511,227	-81,939	34,136	44.55	-2.39	1,520,899	-81,673
Center Break	6,573	122.10	10.37	802,563	68,140	6,573	122.10	10.37	802,563	68,140
Rear Break	18,921	11.25	10.08	212,861	190,787	18,921	11.25	10.08	212,861	190,787
Truss Repairs	2,959	66.88	0.84	197,895	2,474	2,552	62.01	-0.11	158,232	-273
Floorbeams	65,595	73.76	5.20	4,838,448	341,024	26,733	55.14	3.96	1,474,025	105,855
<b>Total Added</b>	<b>385,902</b>	<b>59.59</b>	<b>8.58</b>	<b>22,995,106</b>	<b>3,311,486</b>	<b>346,718</b>	<b>56.53</b>	<b>8.87</b>	<b>19,600,693</b>	<b>3,073,836</b>

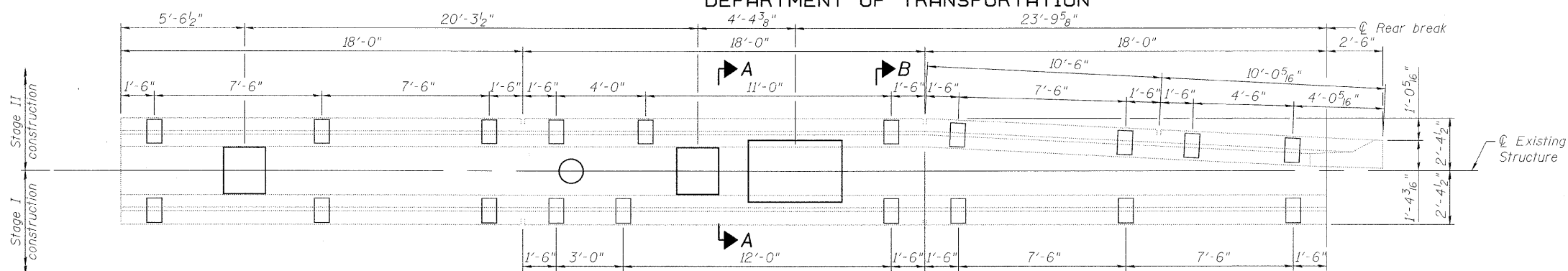
BRIDGE BALANCING  
STRUCTURE NO. 016-2445

SHEET NO. 121	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60D61			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT		

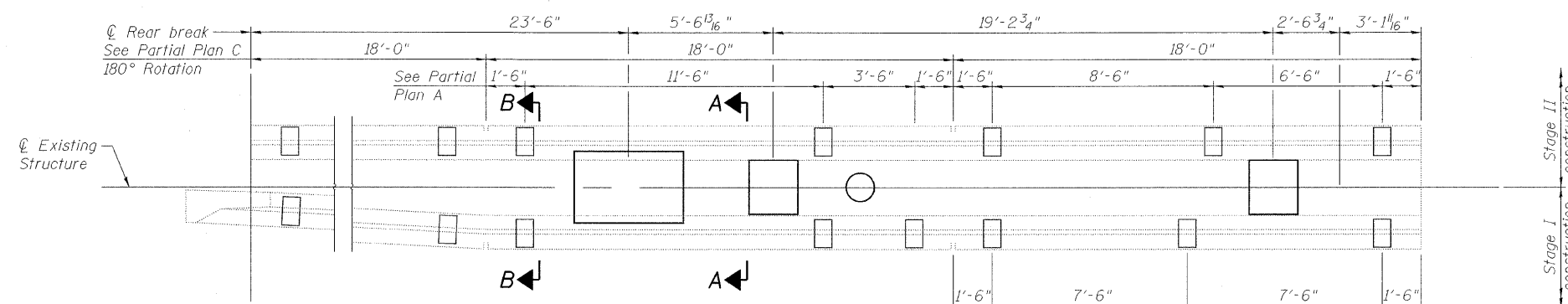
**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

163 SHEETS

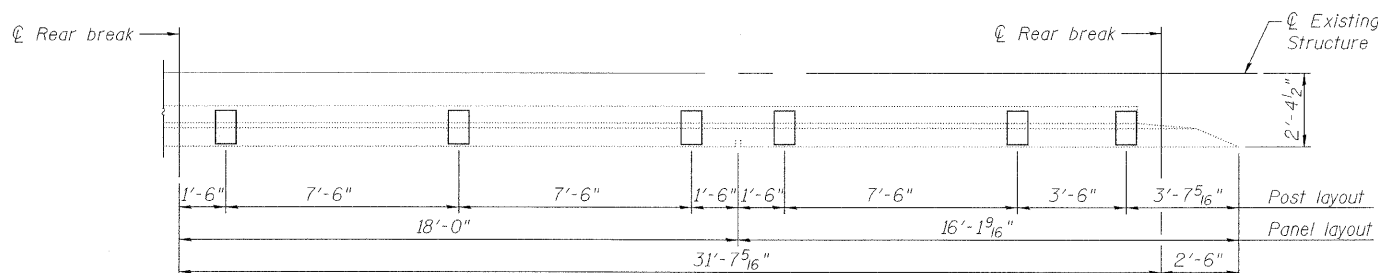
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



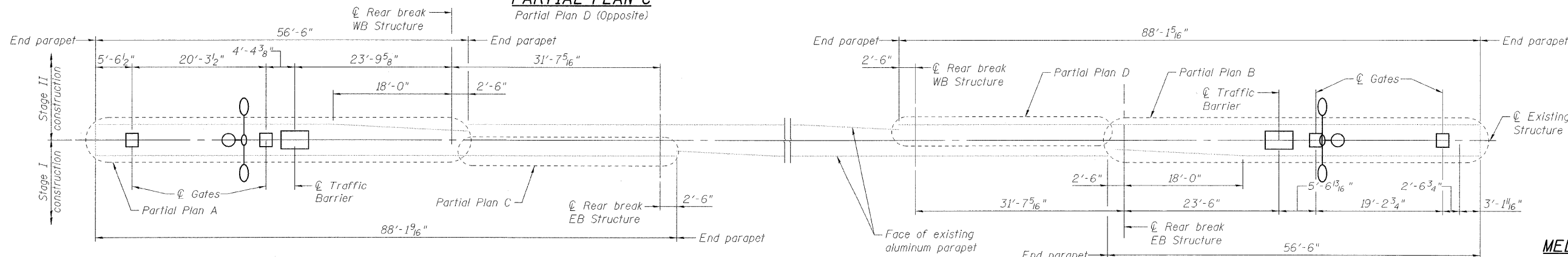
PARTIAL PLAN A



PARTIAL PLAN B



PARTIAL PLAN C



KEY PLAN

Note:  
See sheet 129 of 163 for Sections A-A  
and Section B-B.

**MEDIAN PARAPET  
FIXED SPAN  
STRUCTURE NO. 016-2445**

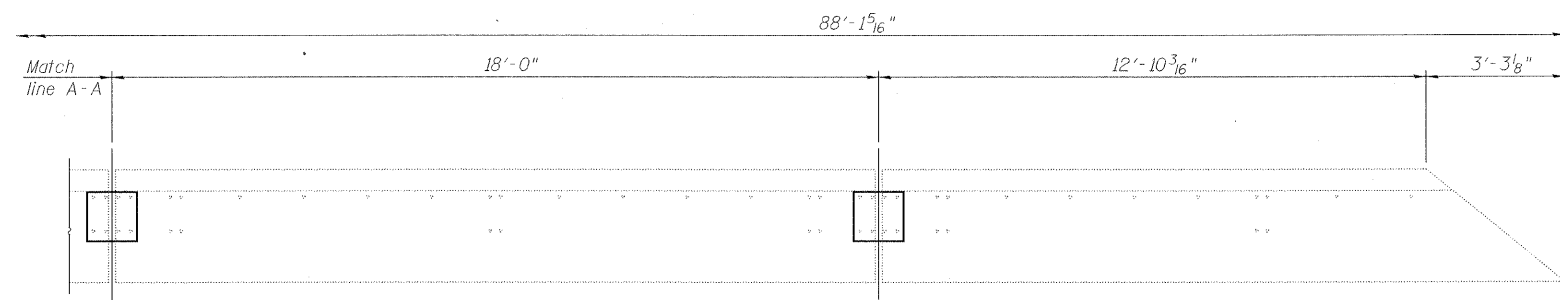
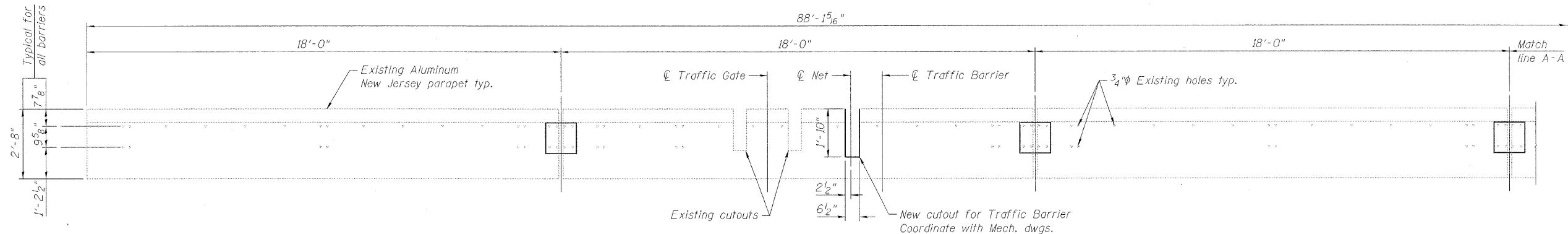
DESIGNED	P. PILARSKI
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

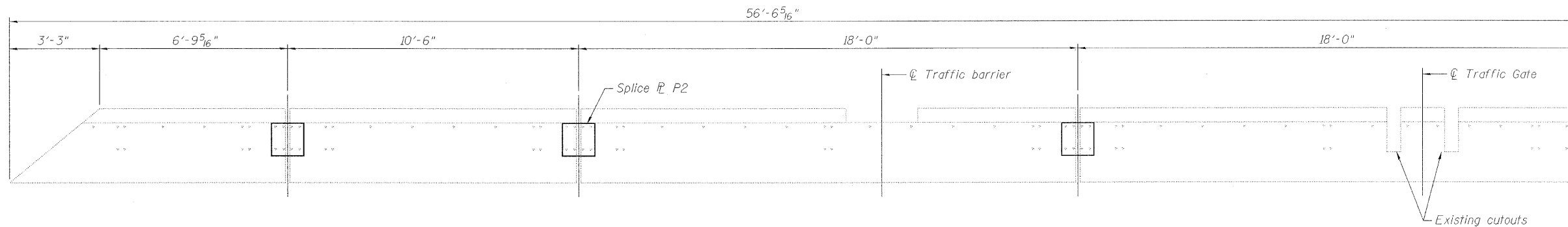
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CONTRACT NO. 60D61					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

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05-JUN-2009 10:02

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**SOUTHWEST MEDIAN PARAPET ELEVATION**



**SOUTHWEST MEDIAN PARAPET ELEVATION**

DESIGNED	P. PILARSKI
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

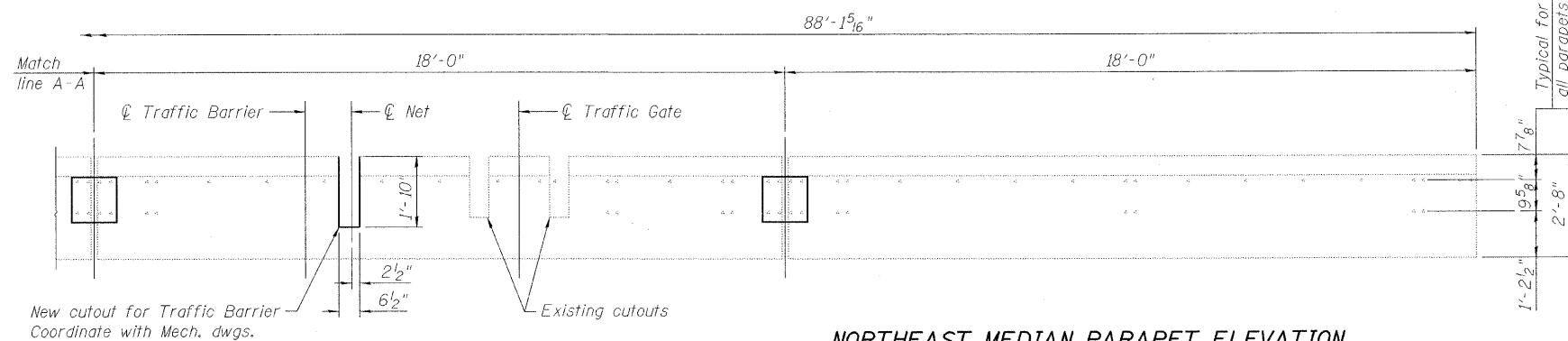
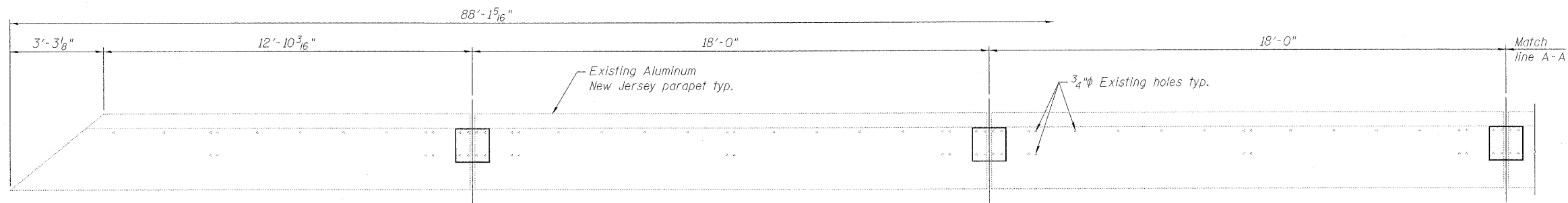
Notes:  
See sheet 127 of 163 for details  
of splice plates P1 and P2.  
All splice plates type P1  
unless otherwise noted.

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

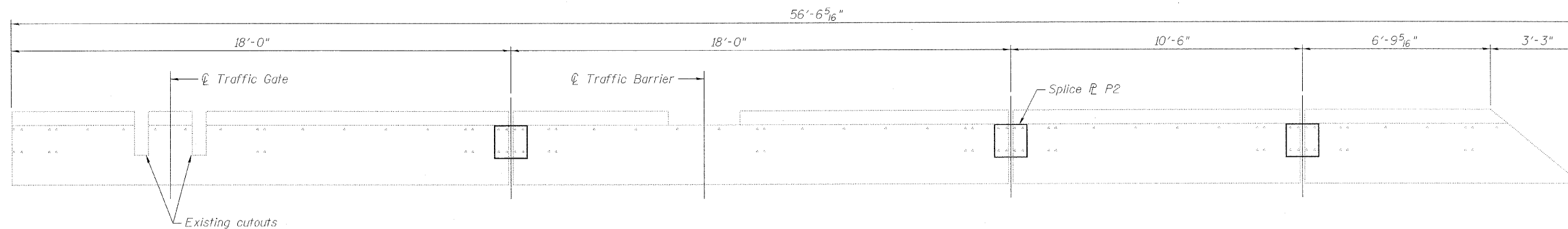
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CONTRACT NO. 60D61					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

**MEDIAN PARAPET  
FIXED SPAN (EB)  
STRUCTURE NO. 016-2445**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**NORTHEAST MEDIAN PARAPET ELEVATION**



**NORTHWEST MEDIAN PARAPET ELEVATION**

DESIGNED	P. PILARSKI
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

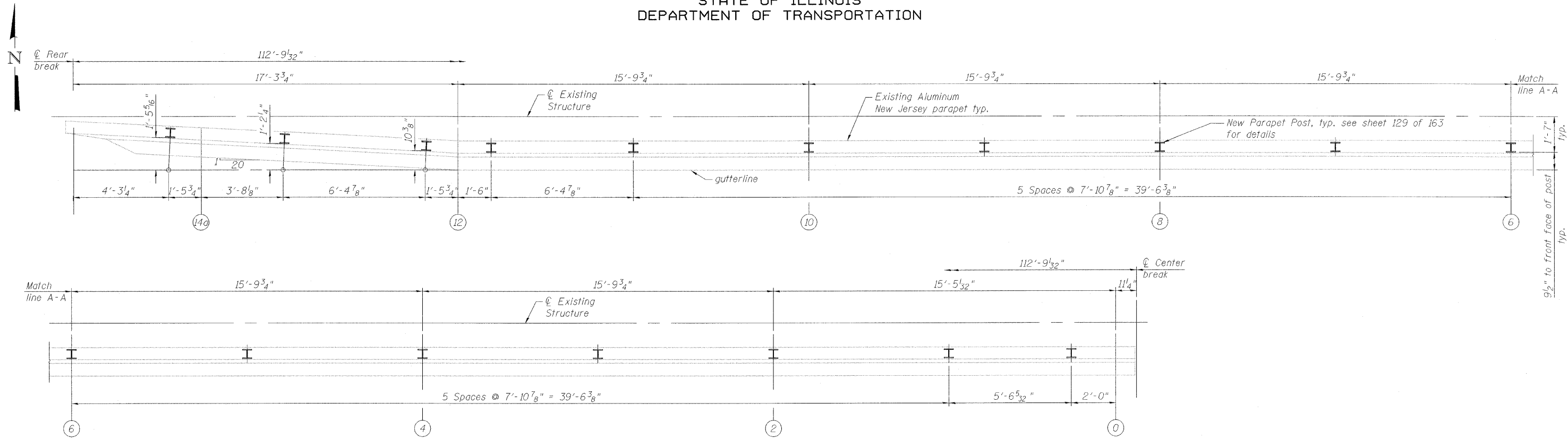
Notes:  
See sheet 127 of 163 for details  
of splice plates P1 and P2.  
All splice plates type P1  
unless otherwise noted.

**MEDIAN PARAPET  
FIXED SPAN (WB)  
STRUCTURE NO. 016-2445**

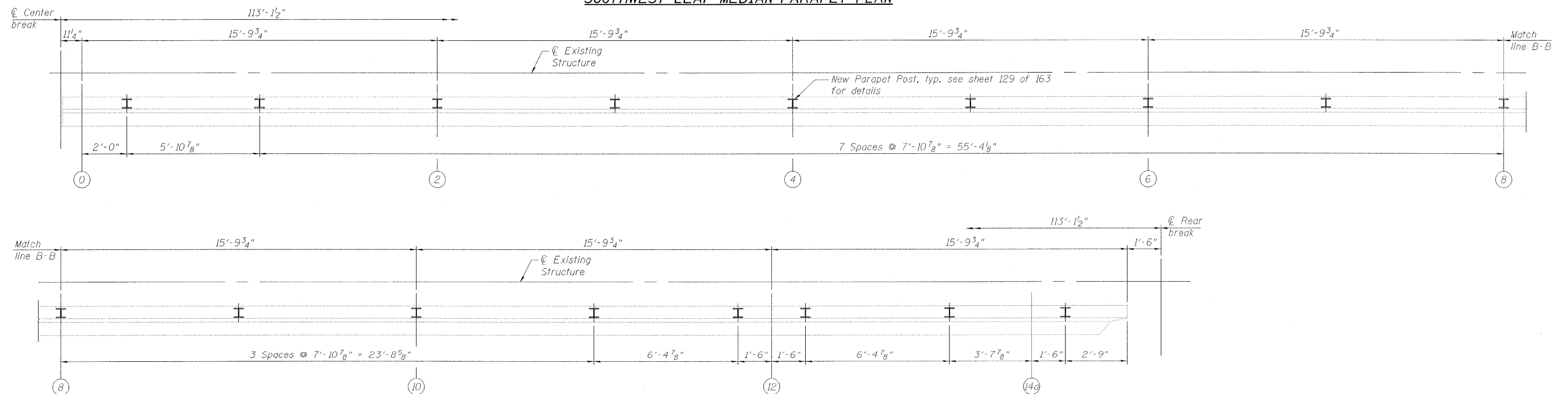
**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 124 163 SHEETS	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	205
CONTRACT NO. 60D61					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**SOUTHWEST LEAF MEDIAN PARAPET PLAN**



**SOUTHEAST LEAF MEDIAN PARAPET PLAN**

**MEDIAN PARAPET PLAN  
MOVABLE SPAN (EB)  
STRUCTURE NO. 016-2445**

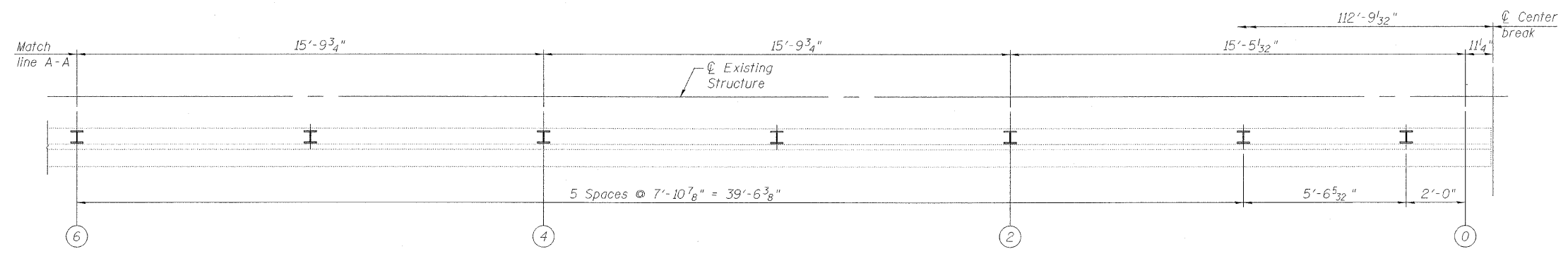
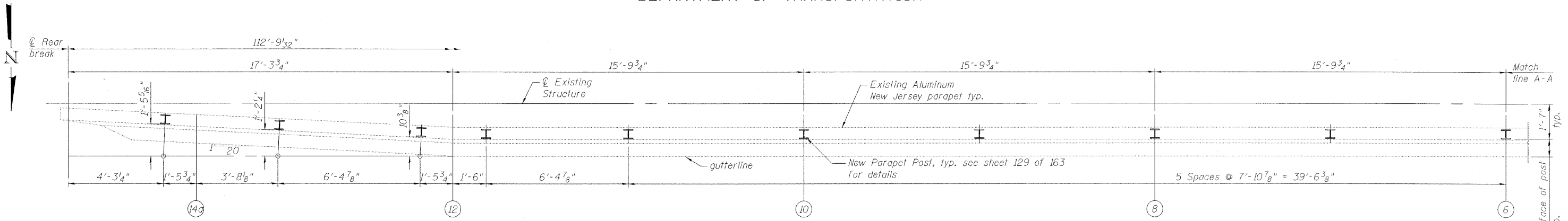
DESIGNED	P. PILARSKI
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

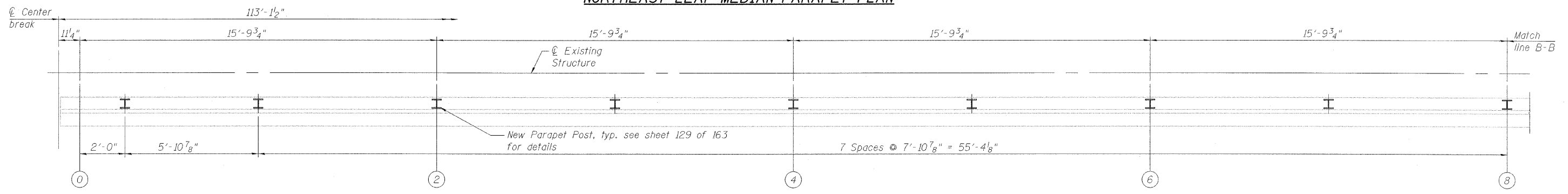
SHEET NO. 125 163 SHEETS	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT		
CONTRACT NO.				60661	

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07-MAY-2009

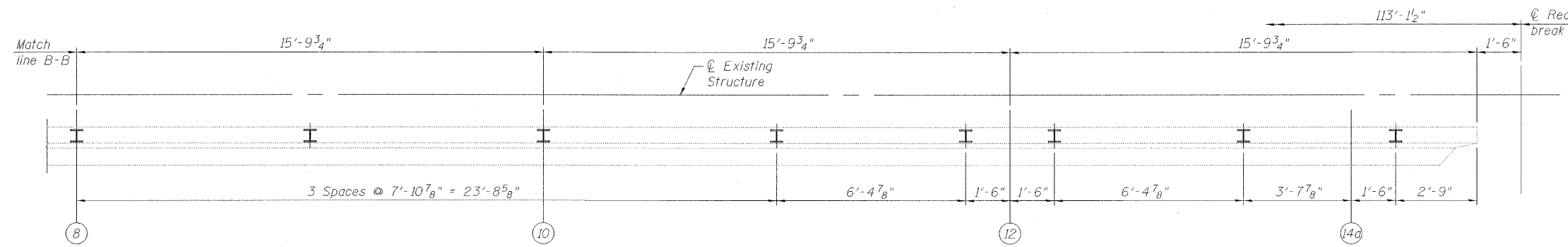
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**NORTHEAST LEAF MEDIAN PARAPET PLAN**



**NORTHWEST LEAF MEDIAN PARAPET PLAN**



**MEDIAN PARAPET PLAN  
MOVABLE SPAN (WB)  
STRUCTURE NO. 016-2445**

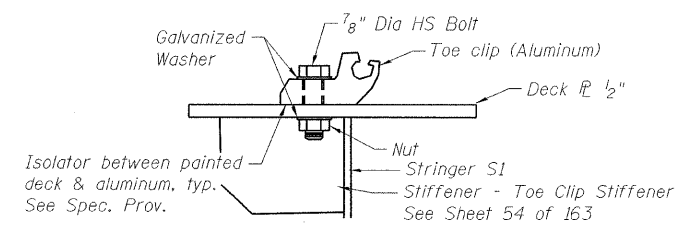
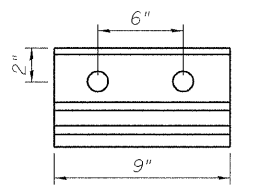
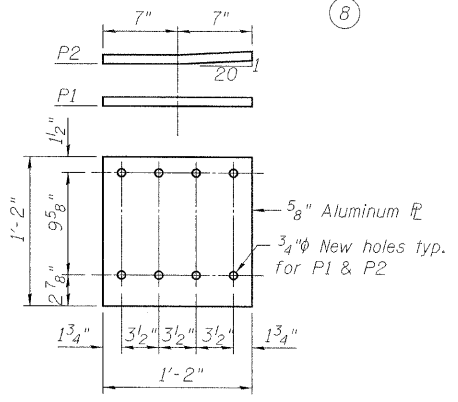
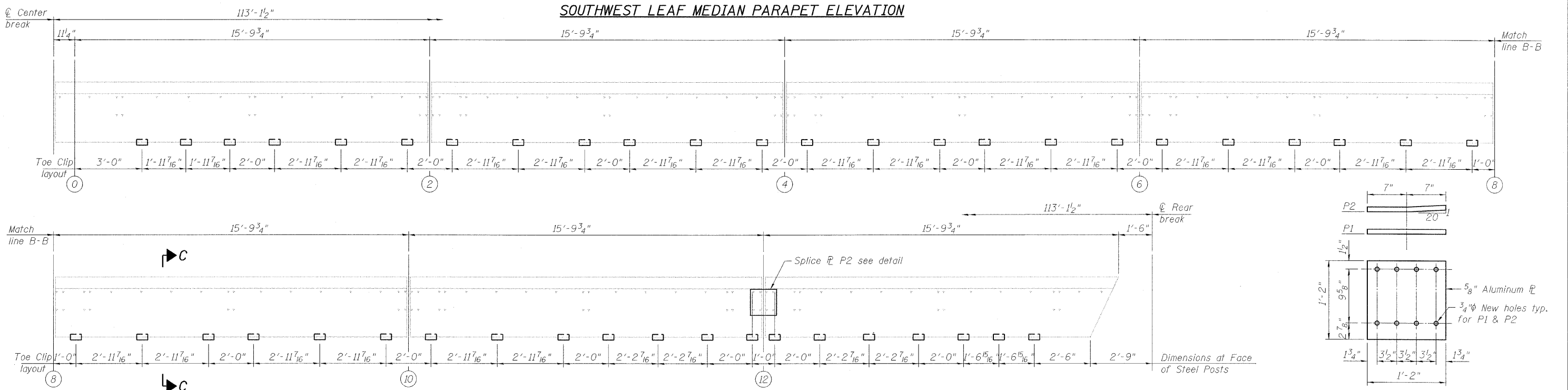
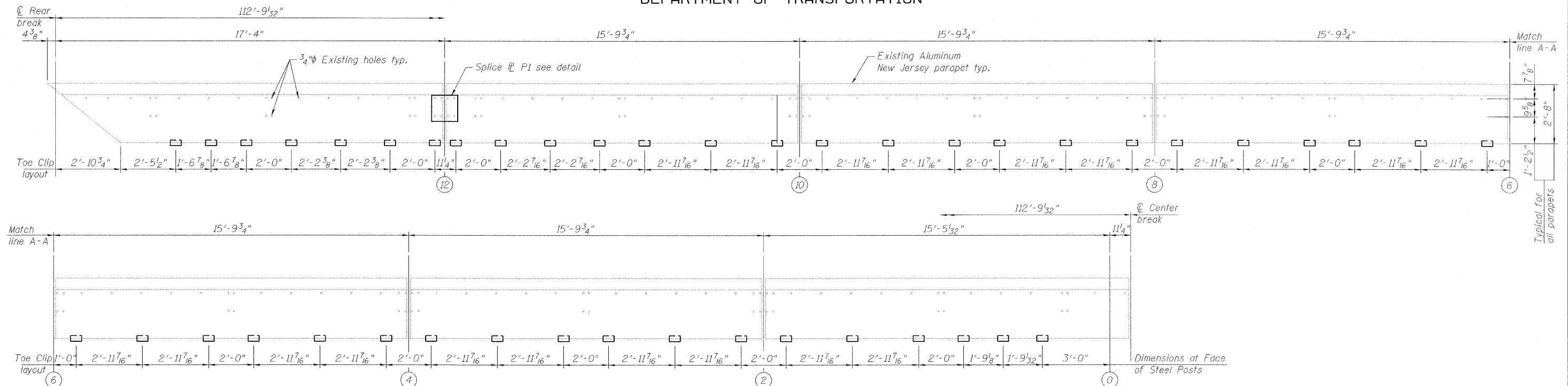
DESIGNED	P. PILARSKI
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 126 163 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	207
CONTRACT NO. 60D61					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

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07-MAY-2009

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



Note:  
See sheet 129 of 163 for section C-C.

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 127	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	208
163 SHEETS			CONTRACT NO. 60D61		
FED. ROAD DIST. NO. 7   ILLINOIS   FED. AID PROJECT					

**MEDIAN PARAPET ELEVATION  
MOVABLE SPAN (EB)  
STRUCTURE NO. 016-2445**

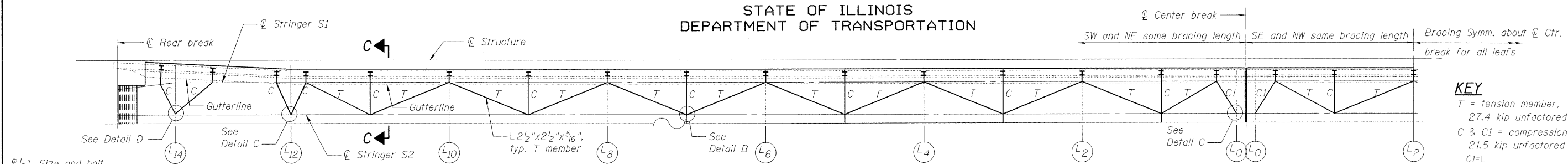
DESIGNED	P. PILARSKI
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

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05-JUN-2009 10:02



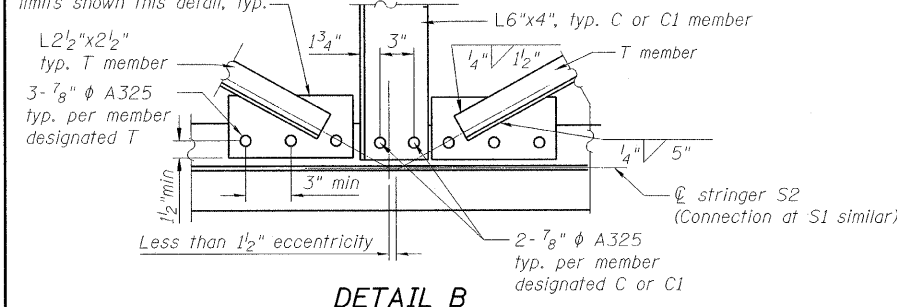


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



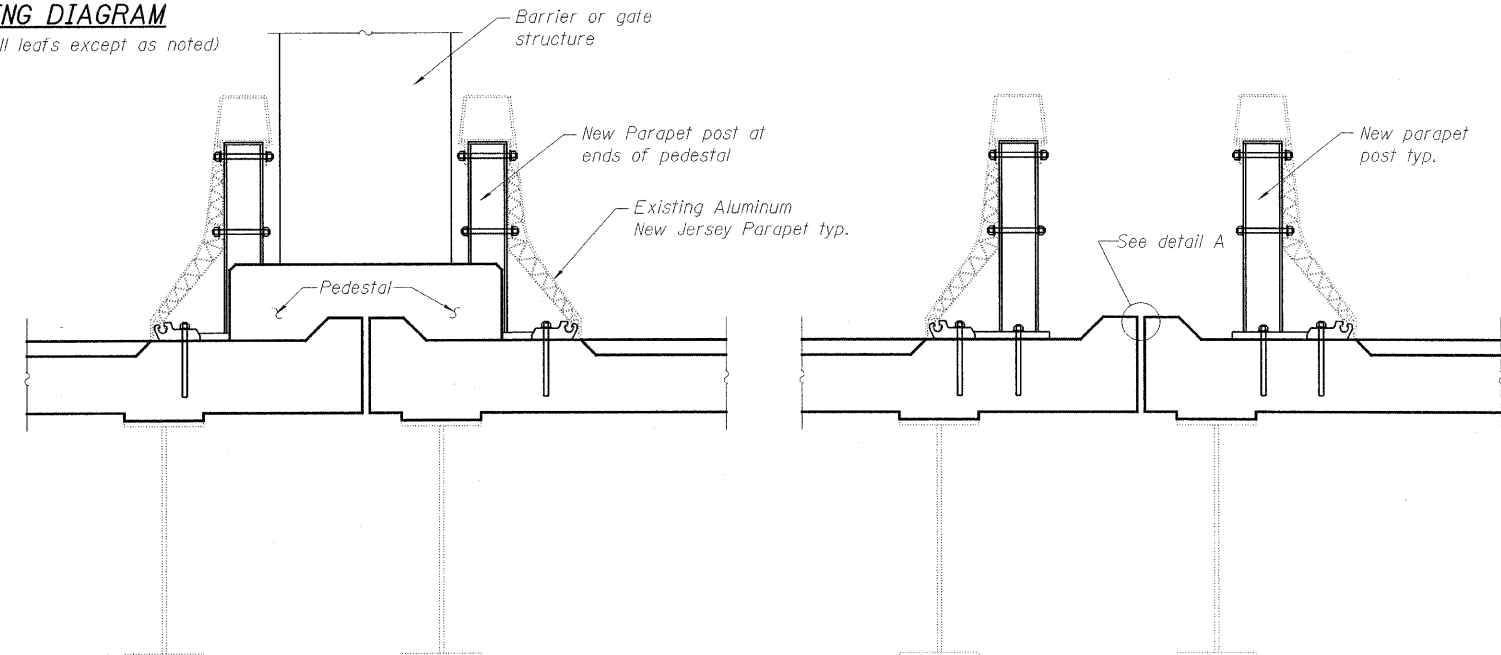
**KEY**  
T = tension member,  
27.4 kip unfactored  
C & CI = compression member,  
21.5 kip unfactored  
CI=L

$\frac{1}{2}$ " size and bolt arrangement by contractor within limits shown in this detail, typ.



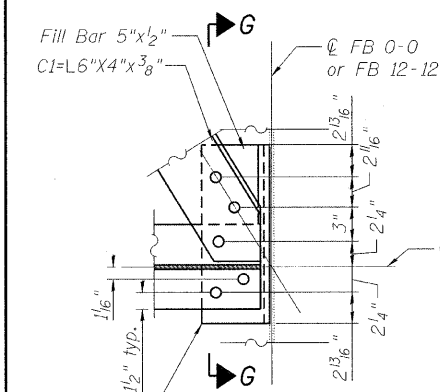
**DETAIL B**

**MEDIAN PARAPET BRACING DIAGRAM**  
(Southwest leaf shown - layout same for all leaves except as noted)

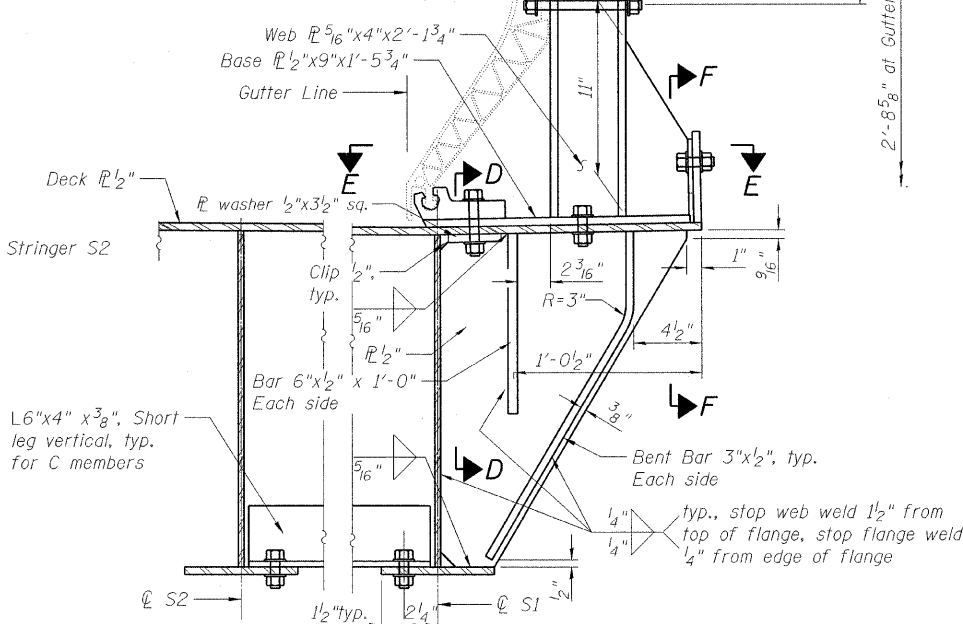


**SECTION A-A**  
(Double fixed part parapet pedestal)

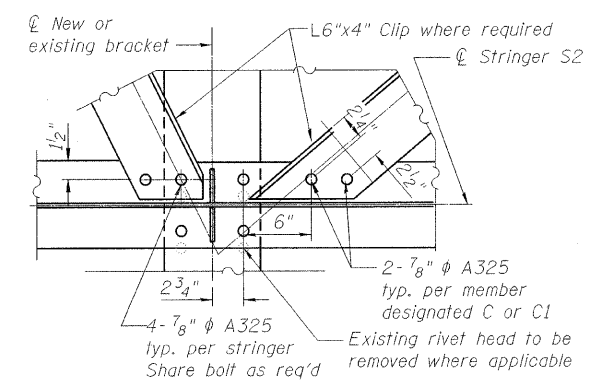
**SECTION B-B**  
(Double fixed part)



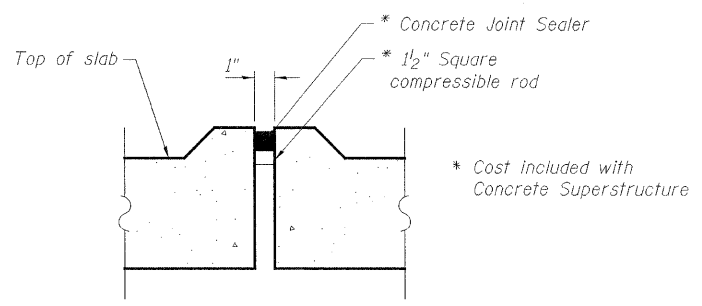
**DETAIL C**



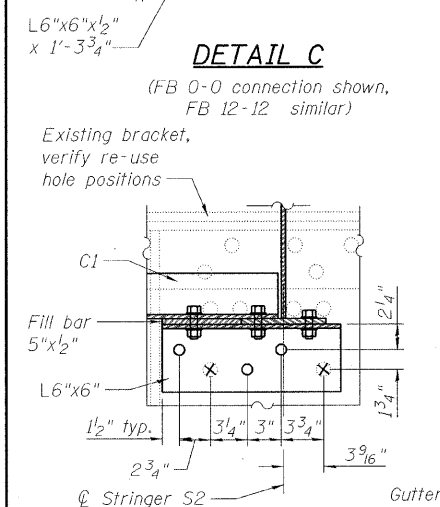
**SECTION C-C**



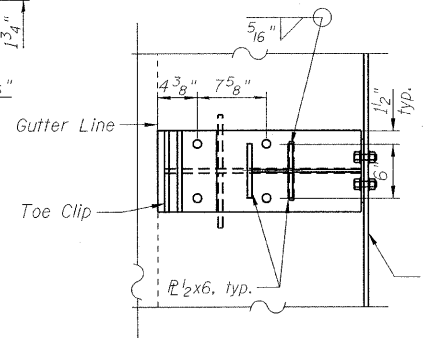
**DETAIL D**



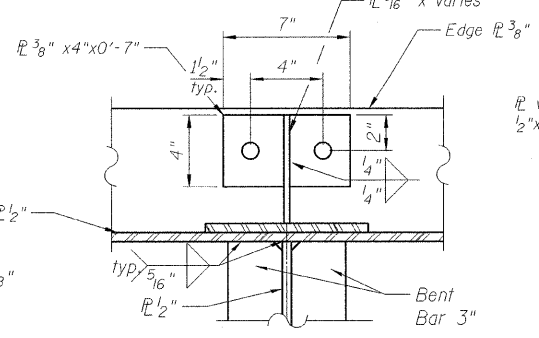
**DETAIL A**



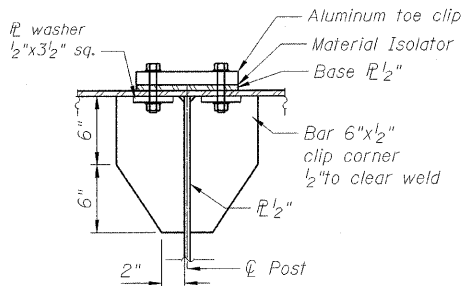
**SECTION G-G**



**SECTION E-E**



**SECTION F-F**



**SECTION D-D**

**MEDIAN PARAPET DETAILS**  
**STRUCTURE NO. 016-2445**

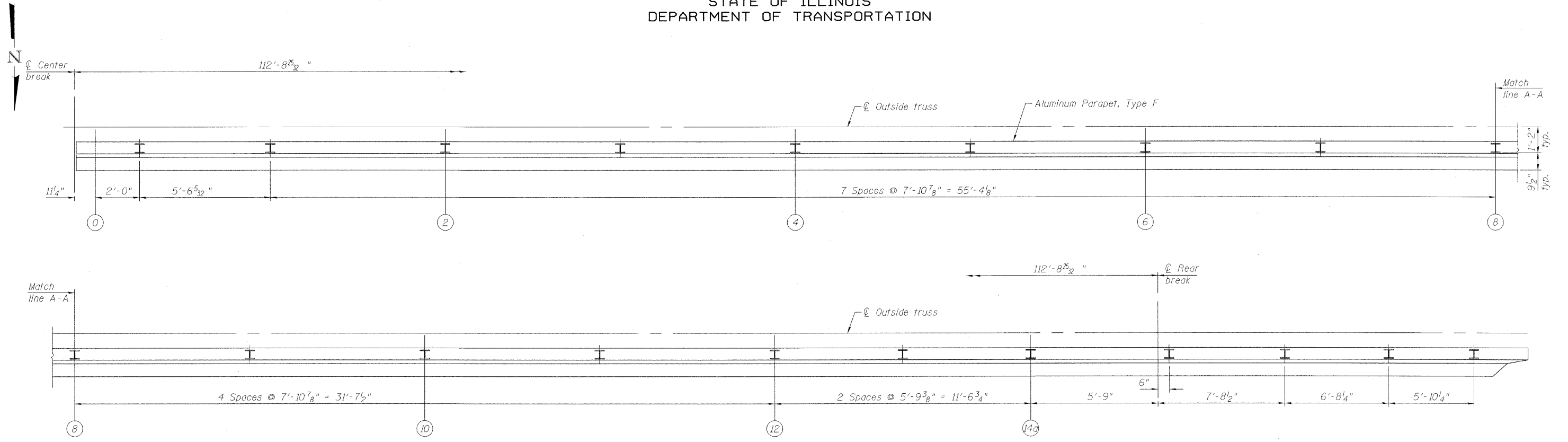
DESIGNED	P. PILARSKI
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

SHEET NO. 129	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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163 SHEETS			CONTRACT NO. 60D61		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

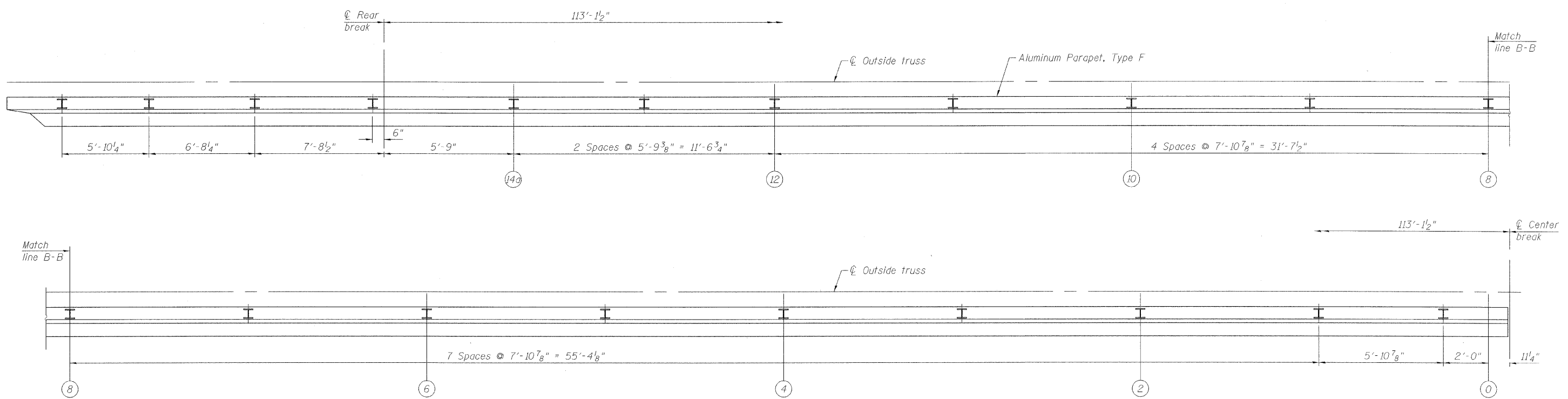
**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

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07-MAY-2009

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DEPARTMENT OF TRANSPORTATION



**SOUTHWEST LEAF ALUMINUM PARAPET PLAN**



**SOUTHEAST LEAF ALUMINUM PARAPET PLAN**

**SIDEWALK PARAPET PLAN  
MOVABLE SPAN (EB)  
STRUCTURE NO. 016-2445**

DESIGNED	P. PILARSKI
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

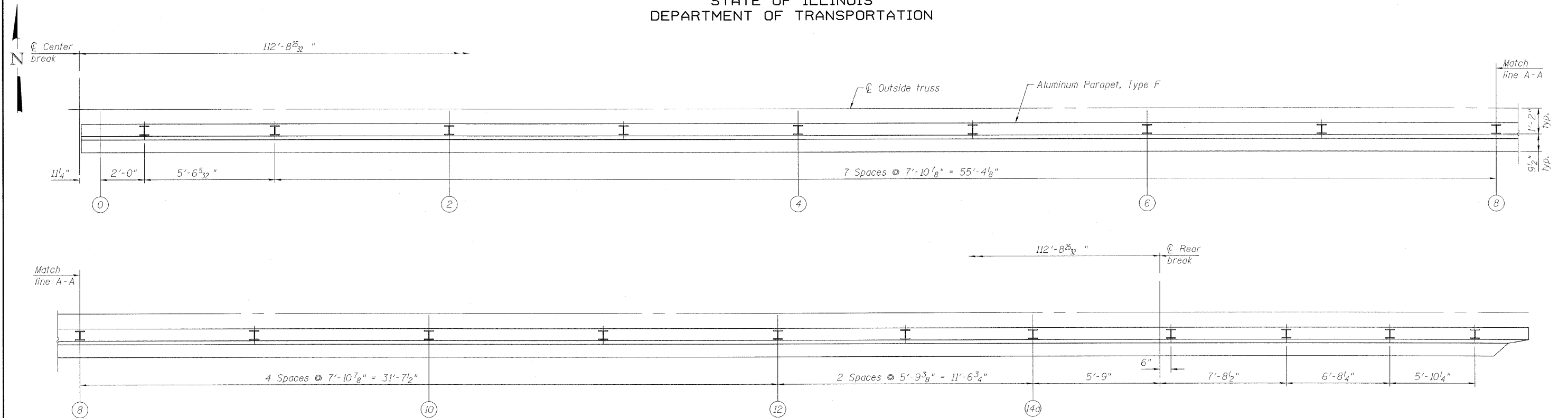
**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 130  
163 SHEETS

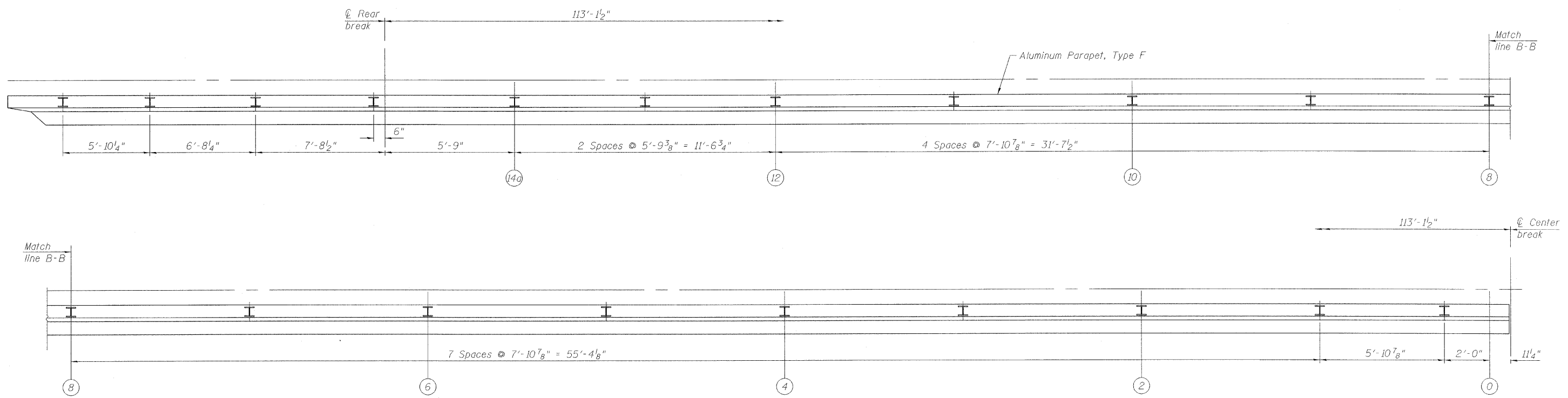
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CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

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NORTHEAST LEAF ALUMINUM PARAPET PLAN



NORTHWEST LEAF ALUMINUM PARAPET PLAN

SIDEWALK PARAPET PLAN  
MOVABLE SPAN (WB)  
STRUCTURE NO. 016-0445

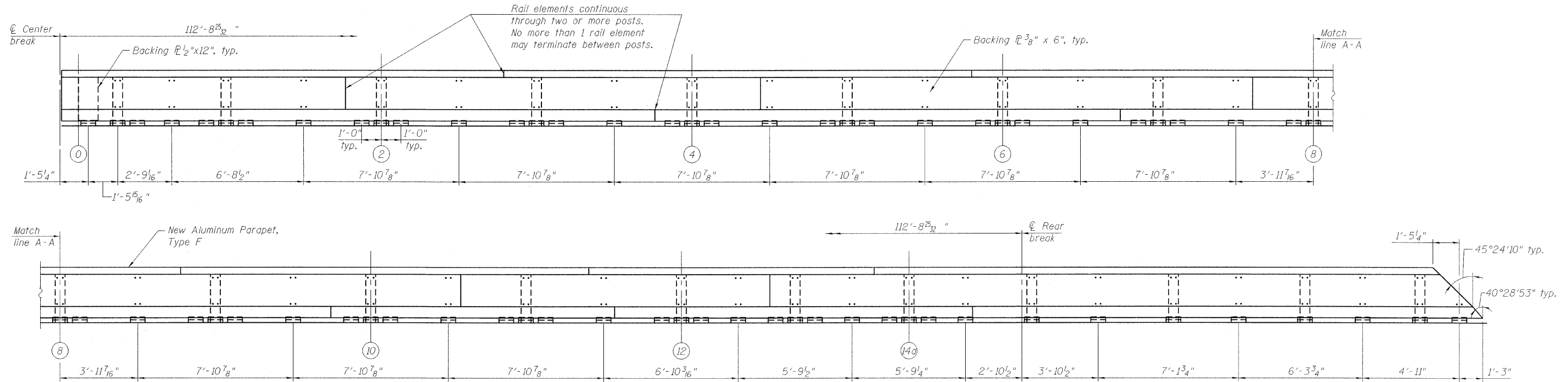
DESIGNED	P. PILARSKI
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

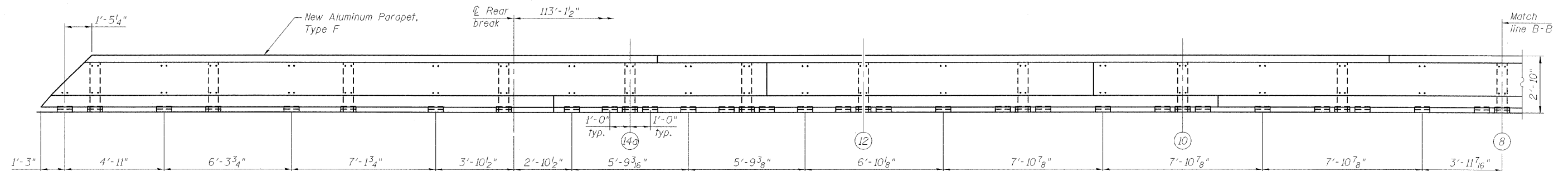
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CONTRACT NO. 60D61				FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT	

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**INSIDE ELEVATION OF ALUMINUM PARAPET, TYPE F**  
(Looking South at Southwest Parapet)



**INSIDE ELEVATION OF ALUMINUM PARAPET, TYPE F**  
(Looking South at Southeast Parapet)

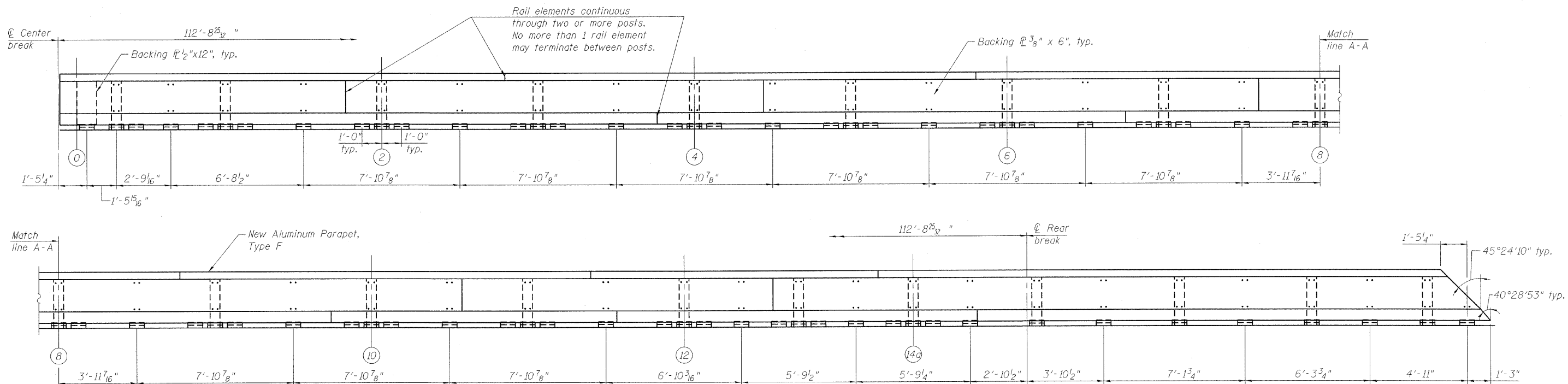
**SIDEWALK PARAPET ELEVATION  
MOVABLE SPAN (EB)  
STRUCTURE NO. 016-0445**

DESIGNED	P. PILARSKI
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

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230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

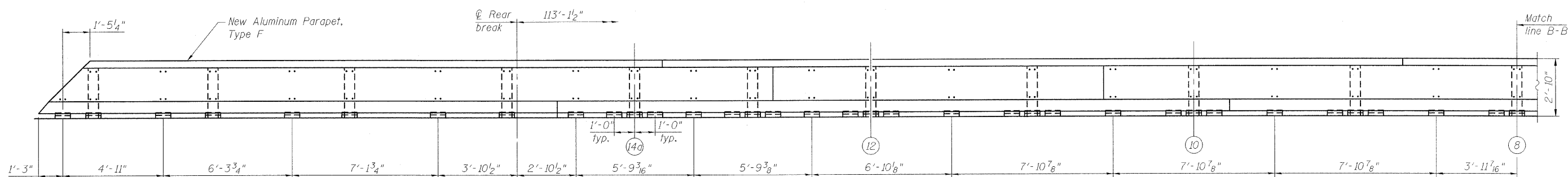
SHEET NO. 132  163 SHEETS	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60D61					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



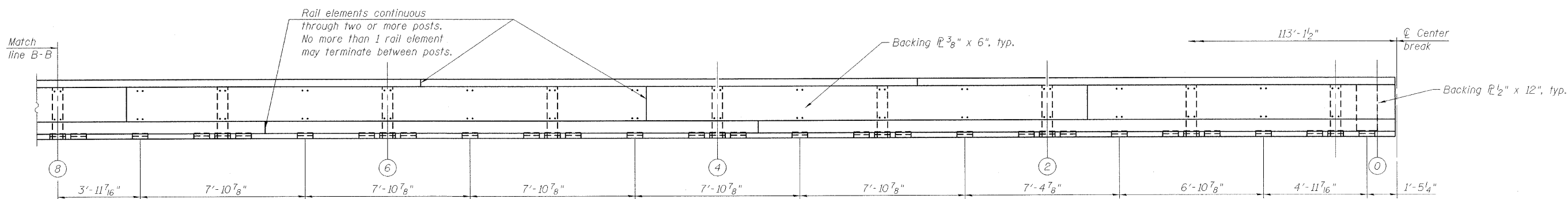
**INSIDE ELEVATION OF ALUMINUM PARAPET, TYPE F**

(Looking North at Northeast Parapet)



**INSIDE ELEVATION OF ALUMINUM PARAPET, TYPE F**

(Looking North at Northwest Parapet)



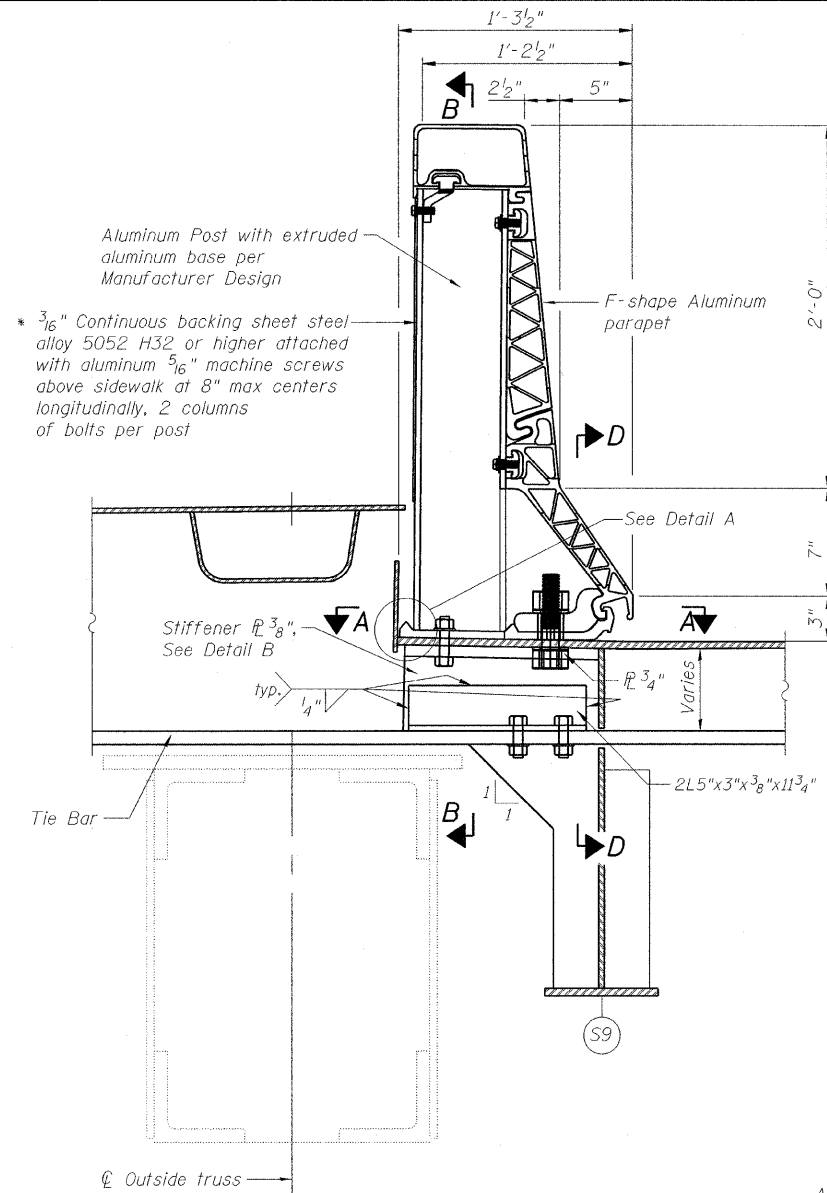
**SIDEWALK PARAPET ELEVATION  
MOVABLE SPAN (WB)  
STRUCTURE NO. 016-0445**

DESIGNED	P. PILARSKI
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

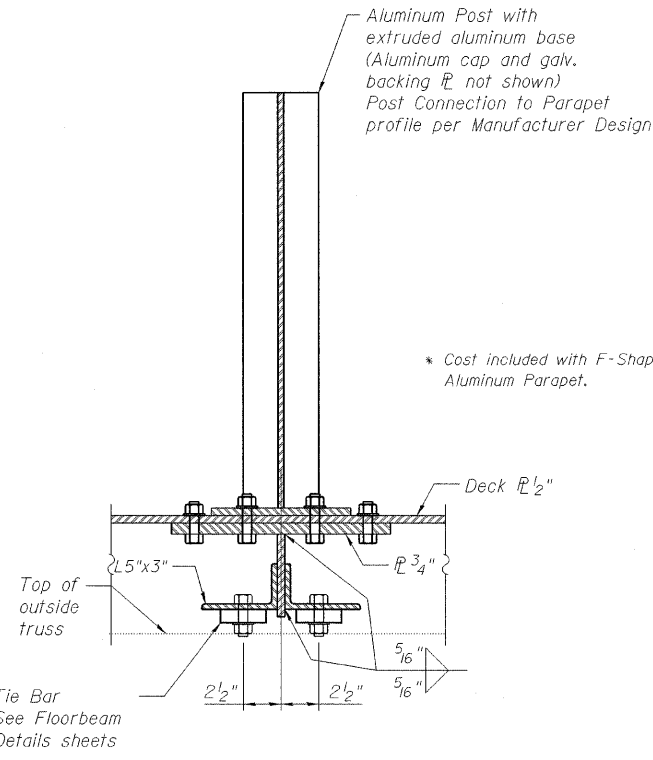
**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 133 163 SHEETS	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60D61					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

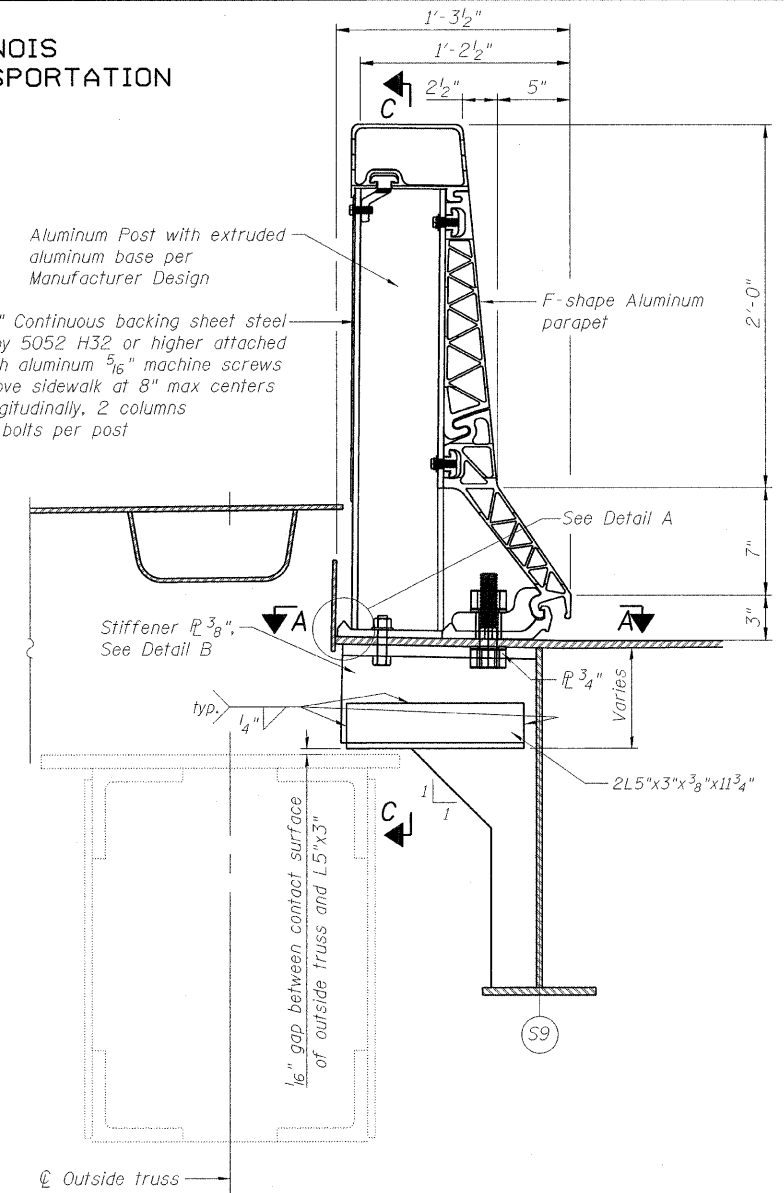
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



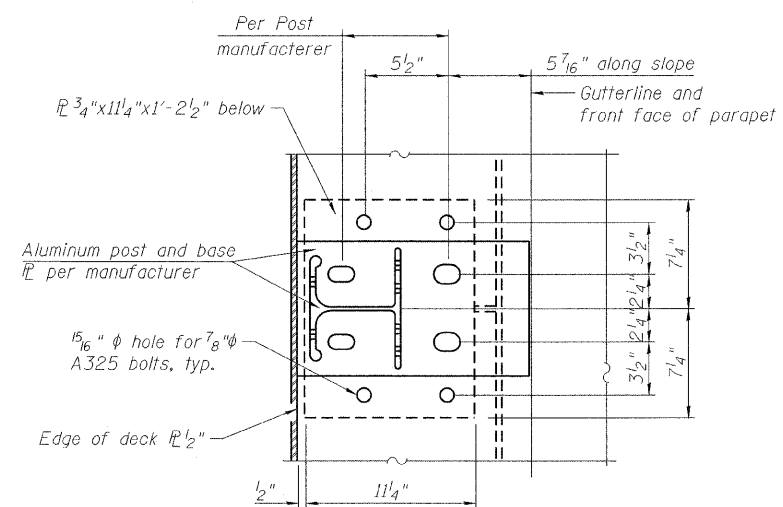
SECTION THROUGH SIDEWALK PARAPET POST AT FLOOR BEAMS



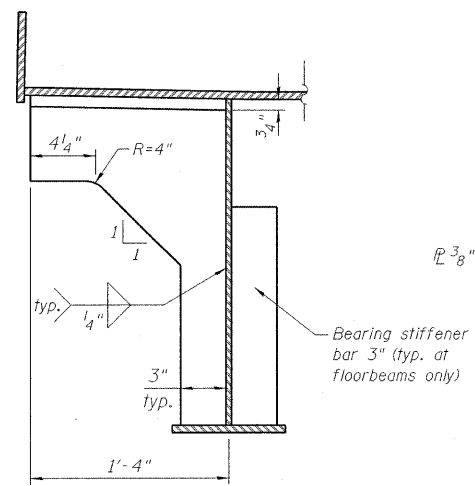
SECTION B-B



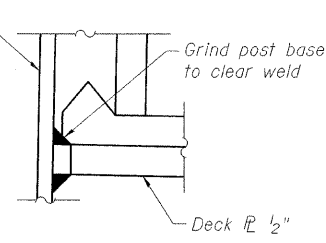
SECTION THROUGH SIDEWALK PARAPET AWAY FROM FLOOR BEAMS



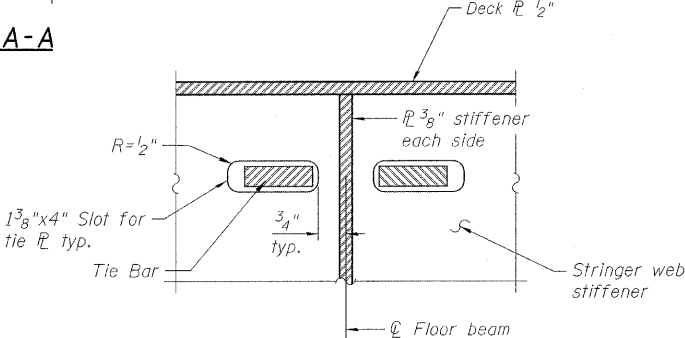
SECTION A-A



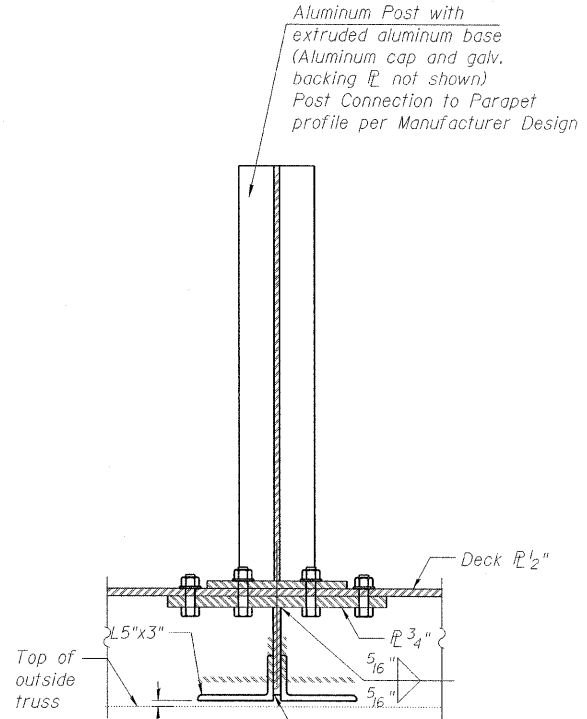
DETAIL B  
Showing typical stiffener each post location



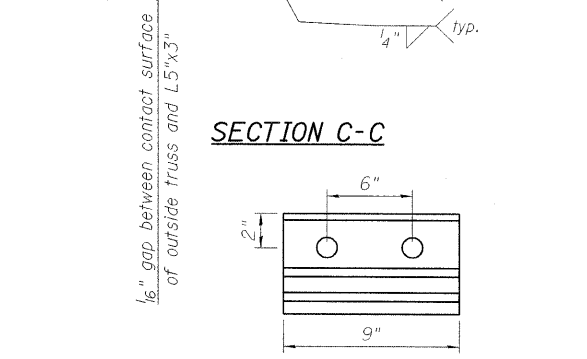
DETAIL A



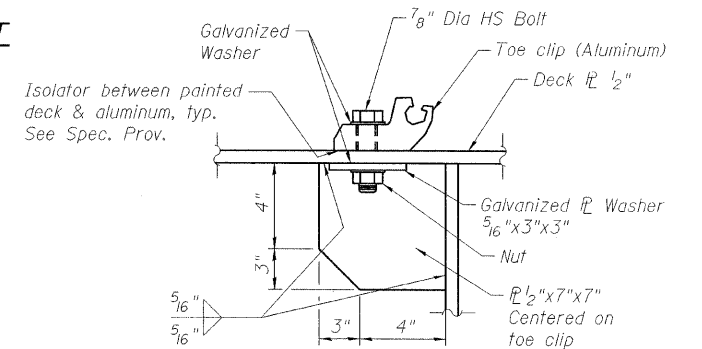
SECTION D-D



SECTION C-C



TOE CLIP DETAIL



TYPICAL TOE CLIP CONNECTION

Notes:  
Parapet shall be designed to resist impact as defined by AASHTO Standard Specification 17 TH Ed. with interims.  
All nongalvanized steel shall be protected from contact with aluminum material by approved isolator.

SIDEWALK PARAPET DETAILS  
MOVABLE SPAN  
STRUCTURE NO. 016-2445

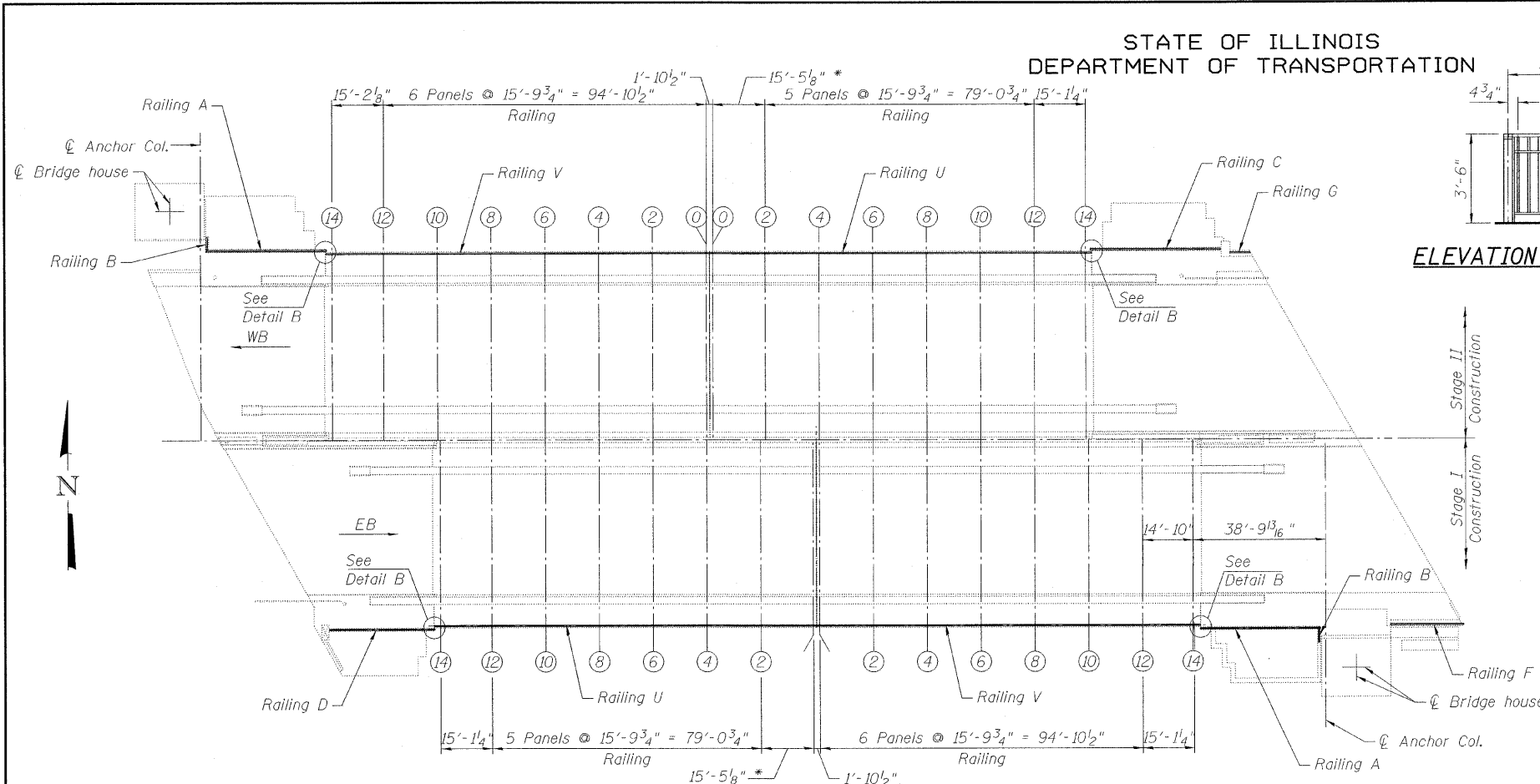
DESIGNED	P. PILARSKI
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

SHEET NO. 134	F.A.P RTE. 389	SECTION 2424.2B-R	COUNTY COOK	TOTAL SHEETS 398	SHEET NO. 215
CONTRACT NO. 60D61					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

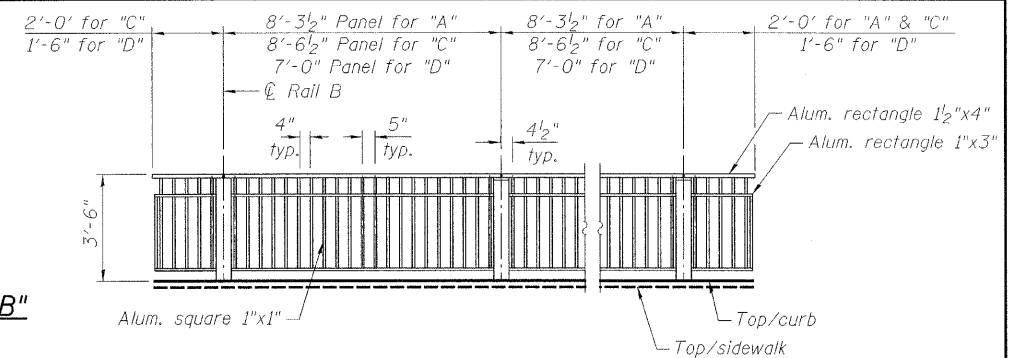
**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

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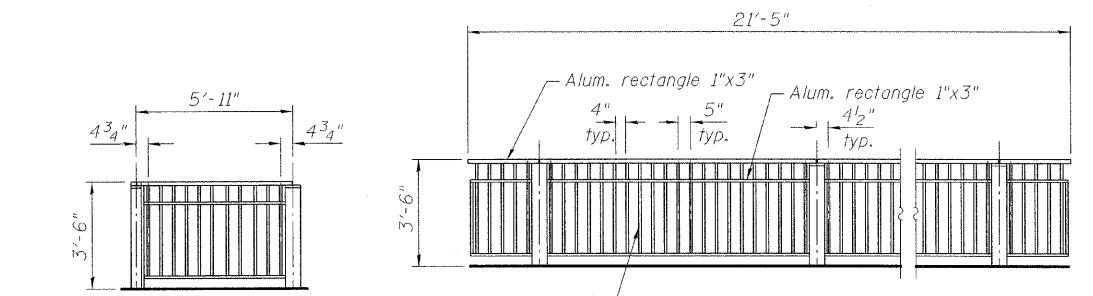


**LOCATION DIAGRAM**  
\* Verify in the field



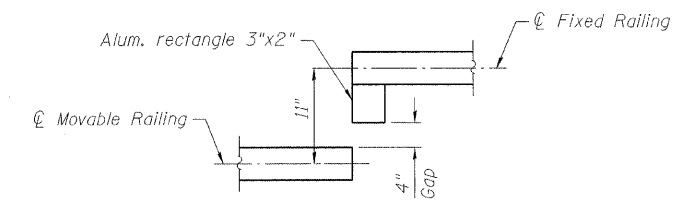
**ELEVATION RAILING "B"**

**TYPICAL SIDEWALK RAILING PANEL**  
For Railing A, C & D

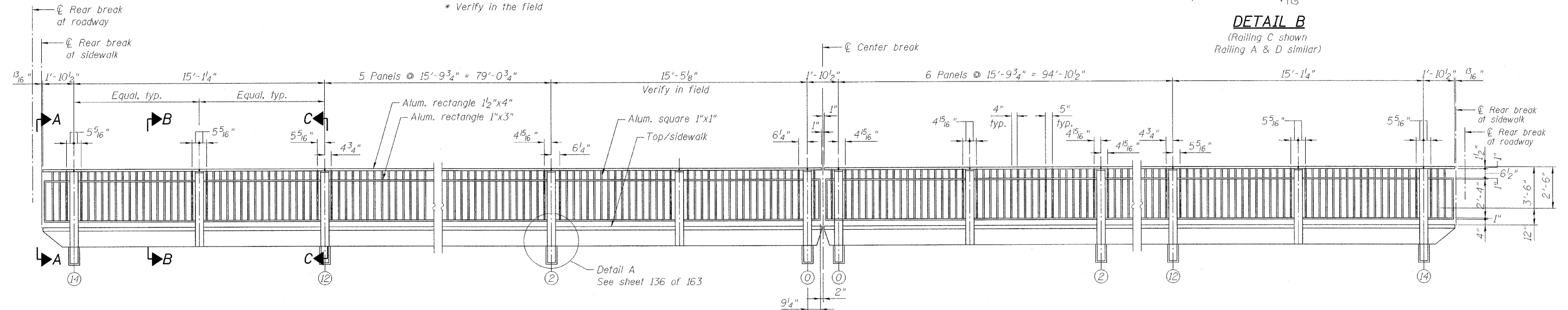


**ELEVATION RAILING "G"**

**ELEVATION RAILING "F"**



**DETAIL B**  
(Railing C shown  
Railing A & D similar)



**ELEVATION**  
Typical sidewalk railing for Railings U & V

Notes:  
See sheet 136 of 163 for section A-A, B-B, C-C and details.  
All posts and balusters shall be set perpendicular to grade in the fixed spans and shall be set plumb in the movable spans.  
All Aluminum shall have an anodized "Dull" finish.  
All Aluminum shall be cleaned with Aluminum Brightener.  
All material is structural Aluminum, Type 6061-T6 unless otherwise noted.  
Duralon plate washers shall be required between.  
All surfaces where Aluminum is in contact with concrete or steel.  
All fasteners shall be stainless steel conforming to ASTM 193 Type 304.  
Cost of Duralon plate washer and fasteners included in the cost of Aluminum Railings.

DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

**LEGEND**  
Remove Existing Railing

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SUITE 900  
CHICAGO, IL. 60606

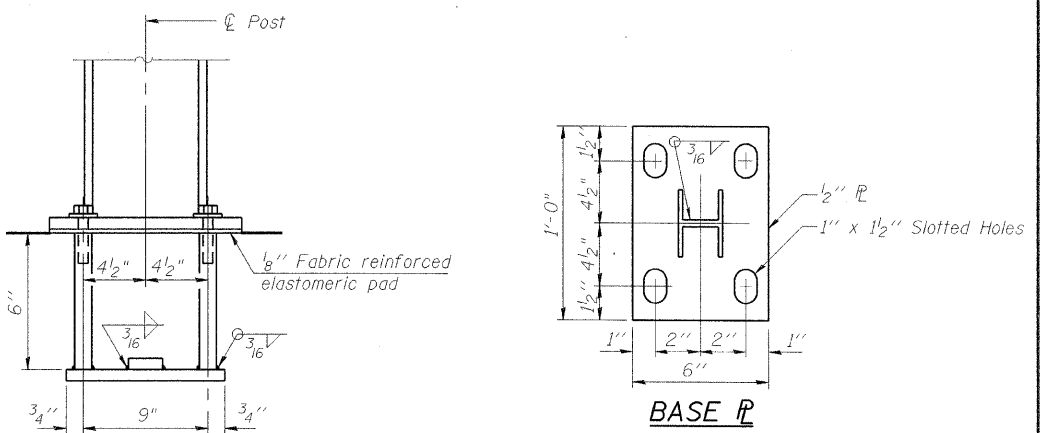
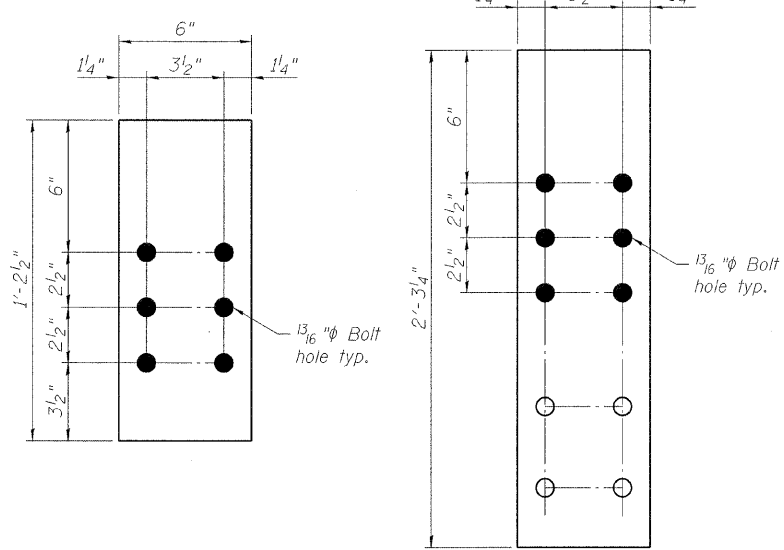
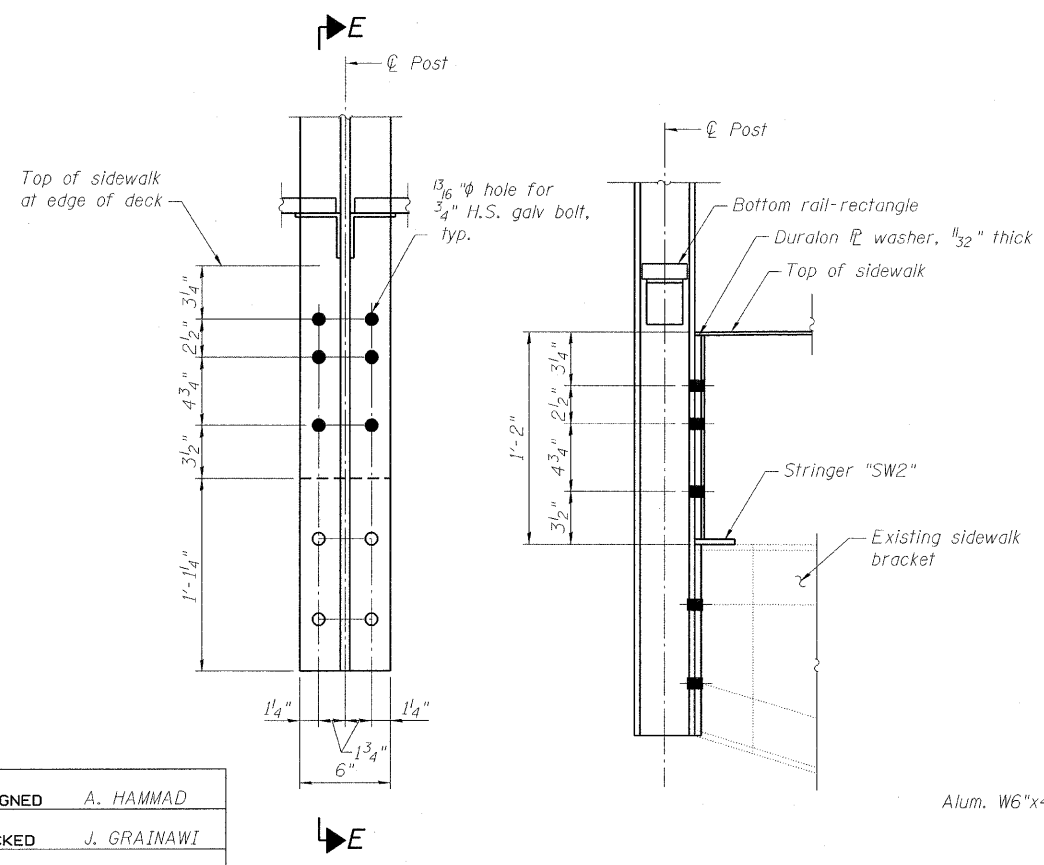
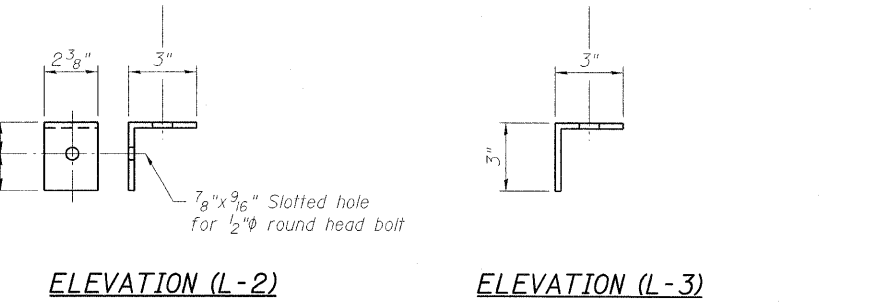
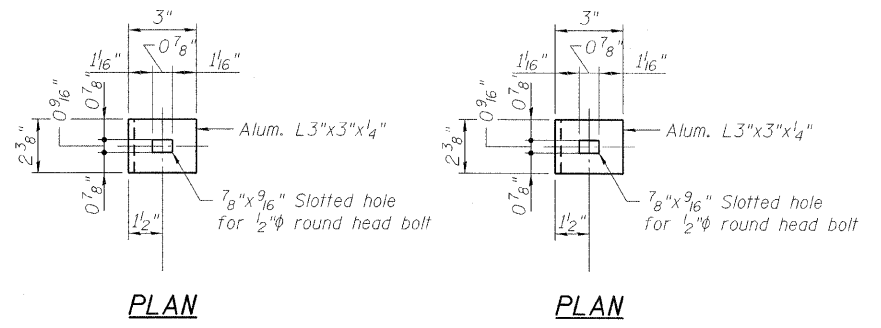
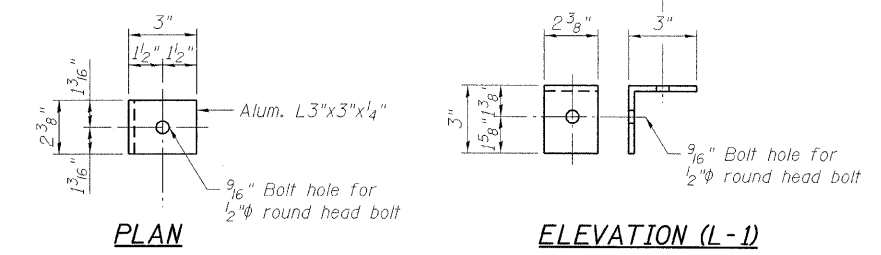
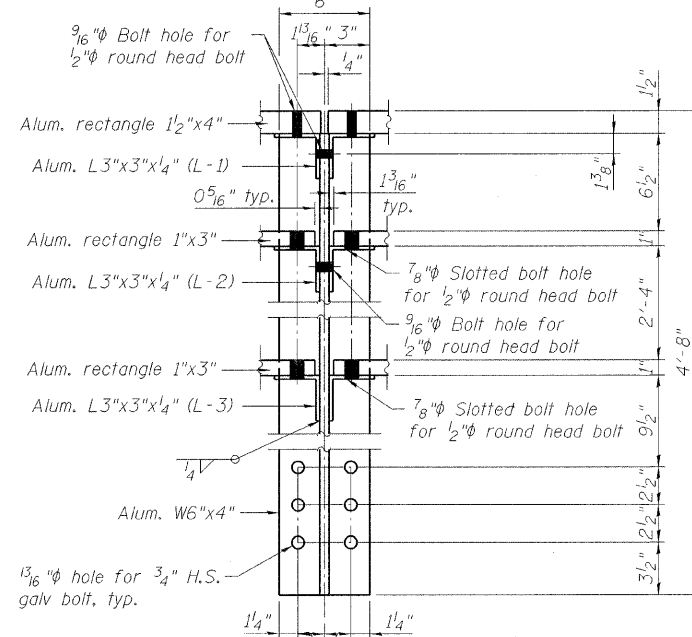
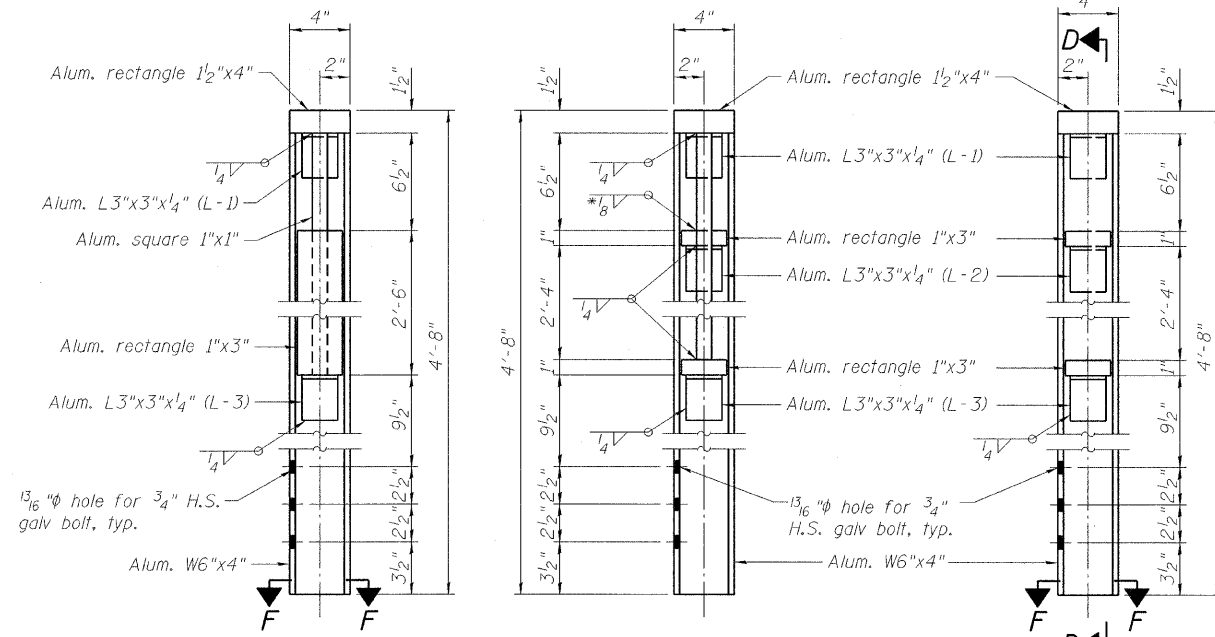
SHEET NO. 135 163 SHEETS	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	216
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT		
CONTRACT NO. 60D61					

**HANDRAIL REPAIRS/REPLACEMENT  
STRUCTURE NO. 016-2445**

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In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 3/8" φ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

**LEGEND**  
○ Hole to match existing location  
● New hole

DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

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230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 136	F.A.P RTE. 389	SECTION 2424.2B-R	COUNTY COOK	TOTAL SHEETS 398	SHEET NO. 217
163 SHEETS					
CONTRACT NO. 60061					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

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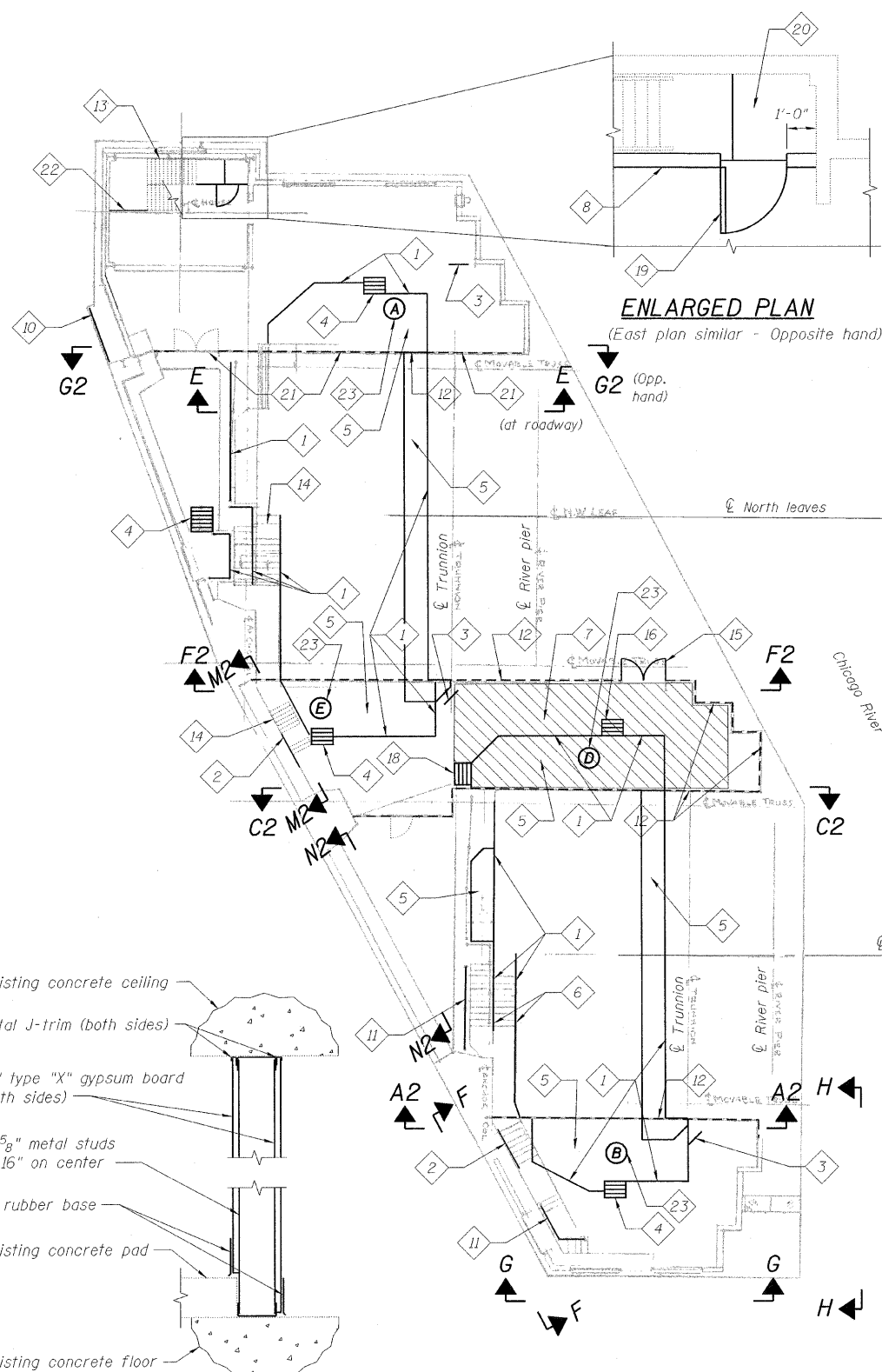
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DEPARTMENT OF TRANSPORTATION

**KEYED NOTES:**

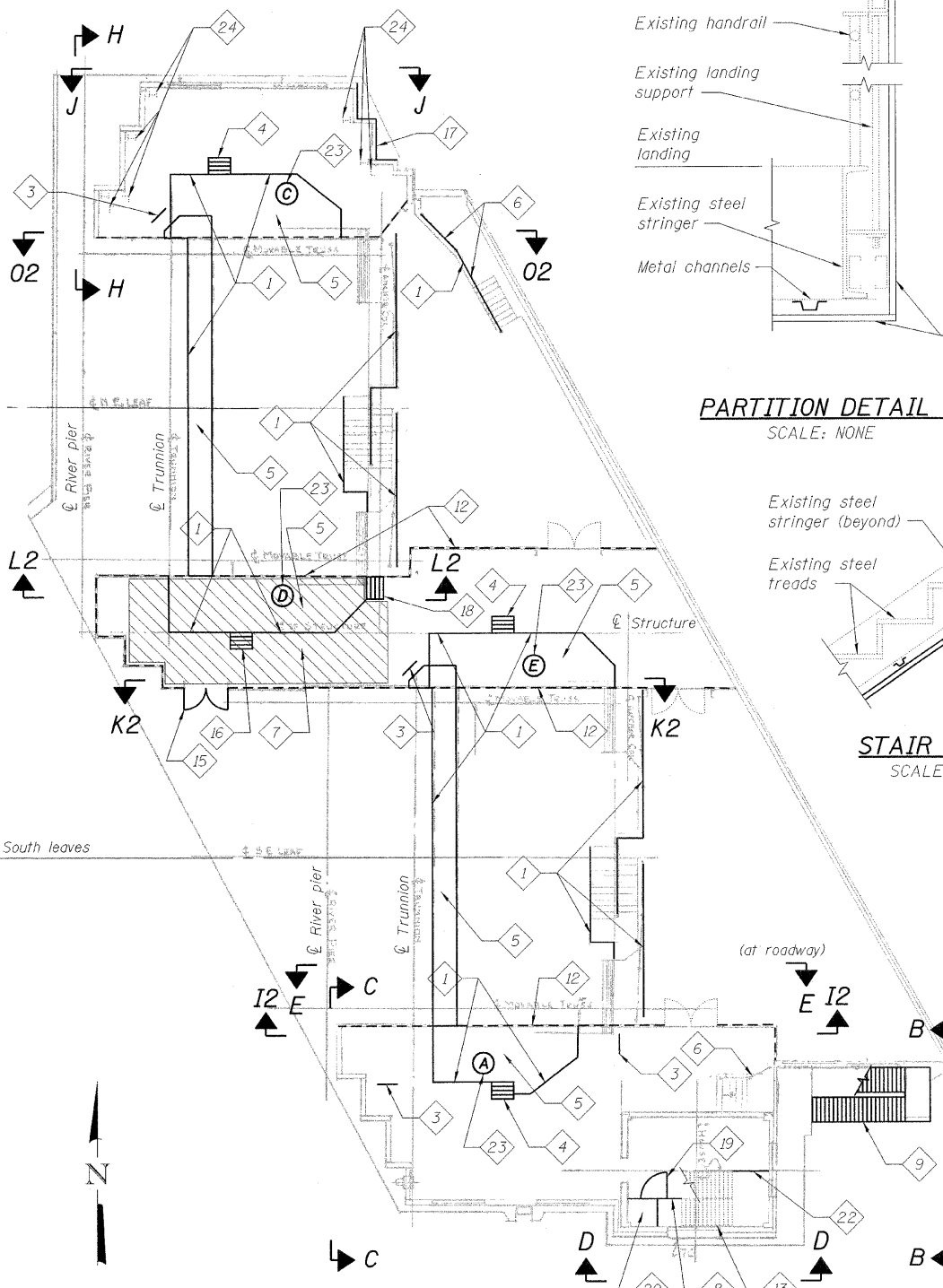
- 1 Remove and replace metal guardrail.
- 2 Remove and replace wall mounted metal handrail.
- 3 Remove ladder and replace with new metal ladder.
- 4 Remove and replace metal ships ladder.
- 5 Remove and replace metal grating (includes mezzanine above).
- 6 Concrete stairs repair.
- 7 Remove and replace roof above hatched area. See details on sheet 142 of 163.
- 8 New one hour partition. See Partition Detail A this sheet.
- 9 Remove and replace existing metal stair.
- 10 Clean and seal top limestone panel. Remove and replace lowest limestone panel.
- 11 New guardrail.
- 12 Dashed line indicates new 1/2" thick (20 gauge) metal wall panels on existing steel framing.
- 13 Existing stair and rail to remain.
- 14 Remove and replace metal tread plates.
- 15 Remove and replace existing doors with 3'-0" x 6'-8" hollow metal door (pair).
- 16 New ships ladder.
- 17 Remove and replace lower limestone panels.
- 18 Remove existing ships ladder.
- 19 New hollow metal door and frame (3'-0" x 6'-8").
- 20 New 3'-7"x4'-0"x4" thick concrete pad.
- 21 Remove all existing plywood wall panels. Cost included with Metal Panels.
- 22 New one hour partition. See partition detail B this sheet.
- 23 See sheet 145 of 163 for platform plan.
- 24 Remove and replace connection angles at the base and repair anchor bolt. See Detail A on sheet 144 of 163.

Notes:  
Portions of these drawings are extracted from original drawings for this bridge. Details are provided to illustrate the work to be performed.  
For Elevations B-B, C-C, D-D, E-E, F-F, G-G, H-H, and J-J, see sheet 139 of 163.  
For Elevations A2, C2, G2, I2, L2 and O2, see sheet 143 of 163.  
For Elevations F2, K2, M2, and N2, see sheet 144 of 163.

**FLOOR PLANS AND DETAILS  
STRUCTURE NO. 016-2445**

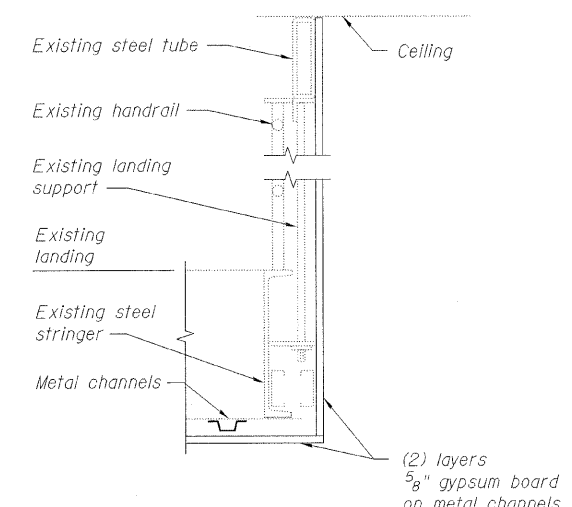


**ENLARGED PLAN**  
(East plan similar - Opposite hand)

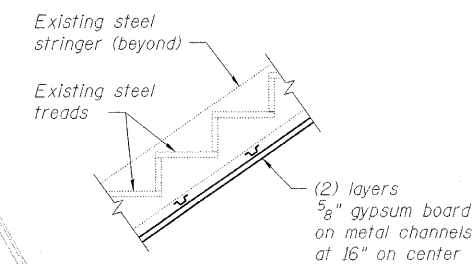


**WEST PLAN**  
(DOCK LEVEL)

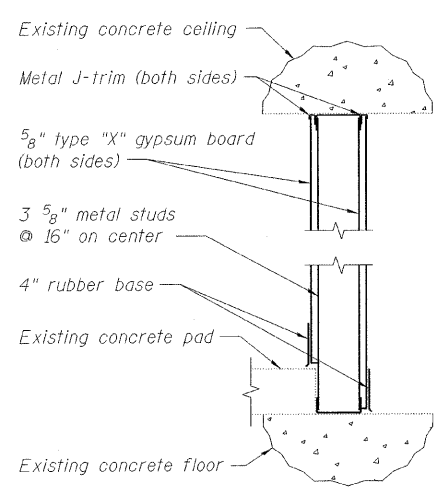
**EAST PLAN**  
(DOCK LEVEL)



**PARTITION DETAIL B**  
SCALE: NONE



**STAIR SECTION**  
SCALE: NONE



**PARTITION DETAIL A**  
SCALE: NONE

**LEGEND:**

- Existing member to remain
- New member

DESIGNED	K. STOCKIE
CHECKED	J. SHURMAN
DRAWN	E. KIENSTRA
CHECKED	A. HAMMAD

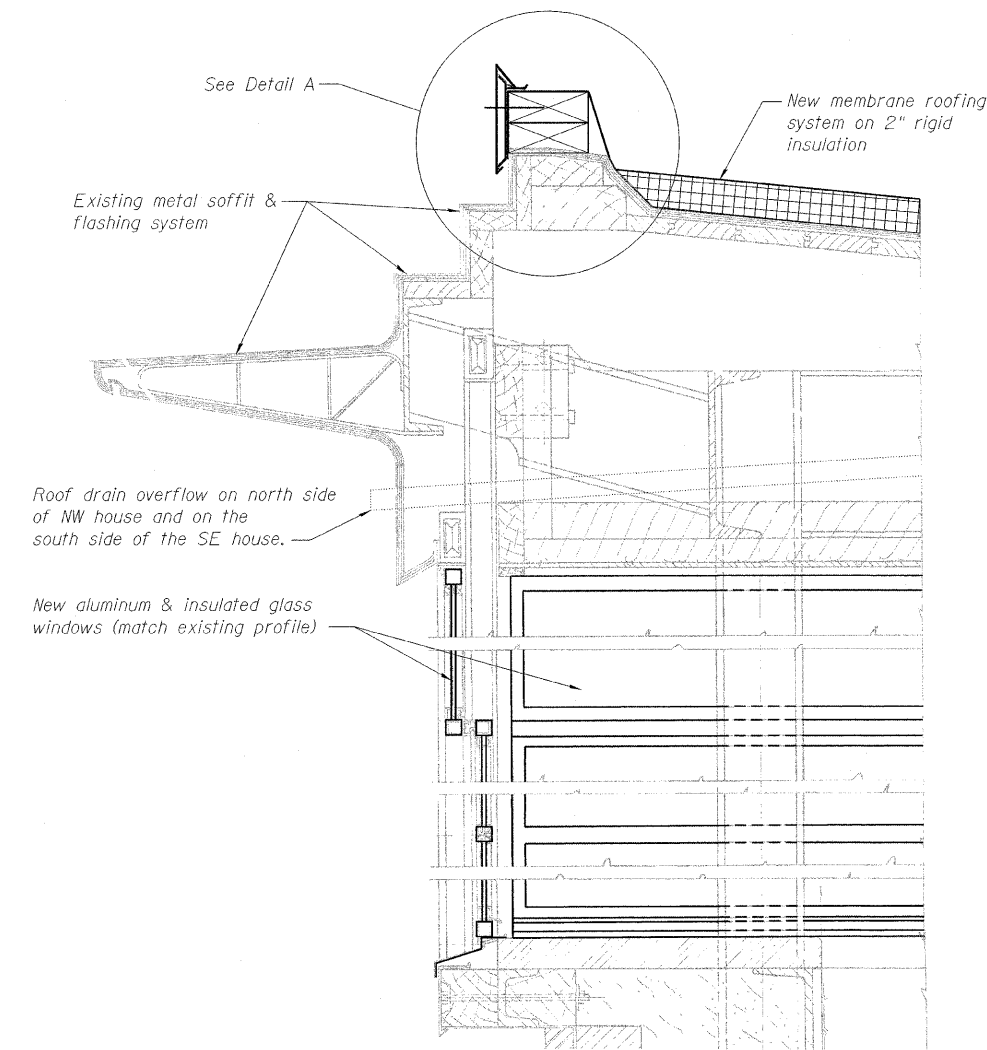
**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 137
163 SHEETS

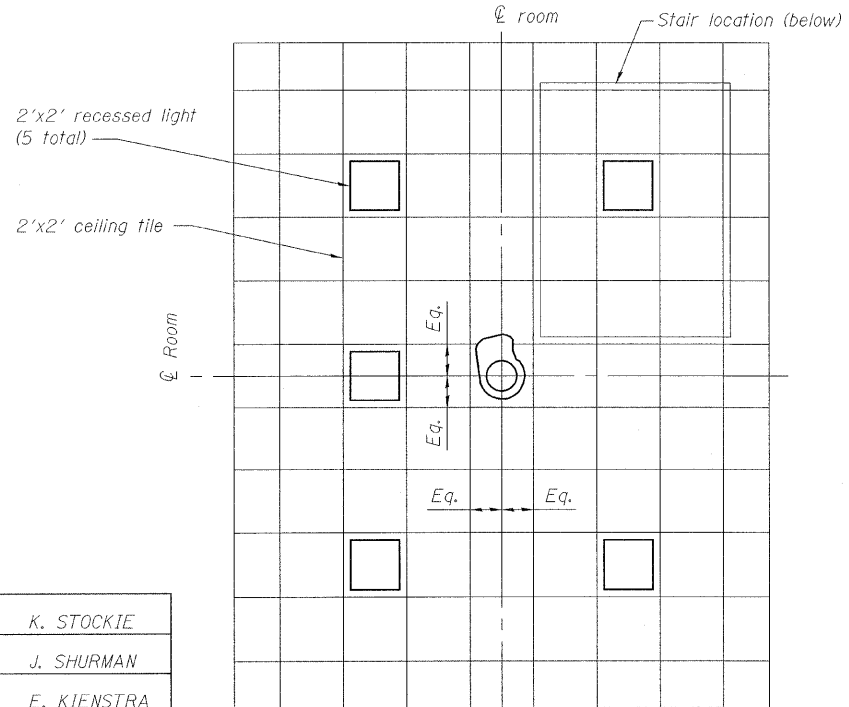
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424.2B-R	COOK	398	218
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				

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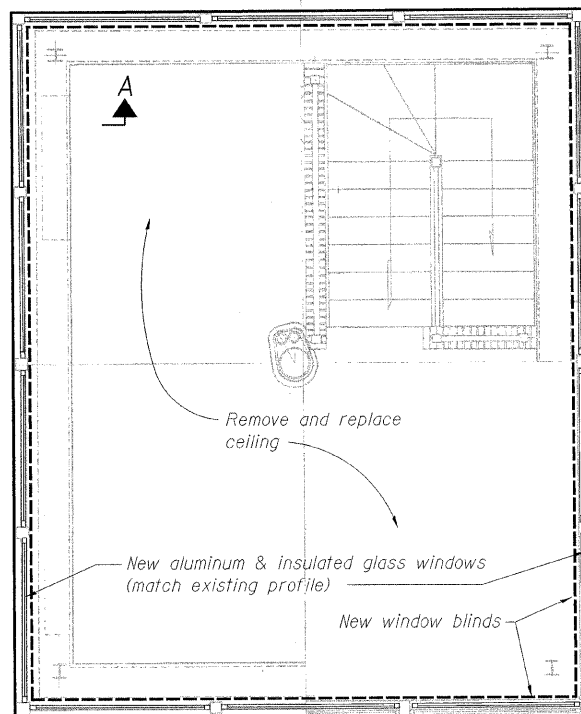
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**SECTION A**  
SCALE: 3" = 1'-0"  
@ room

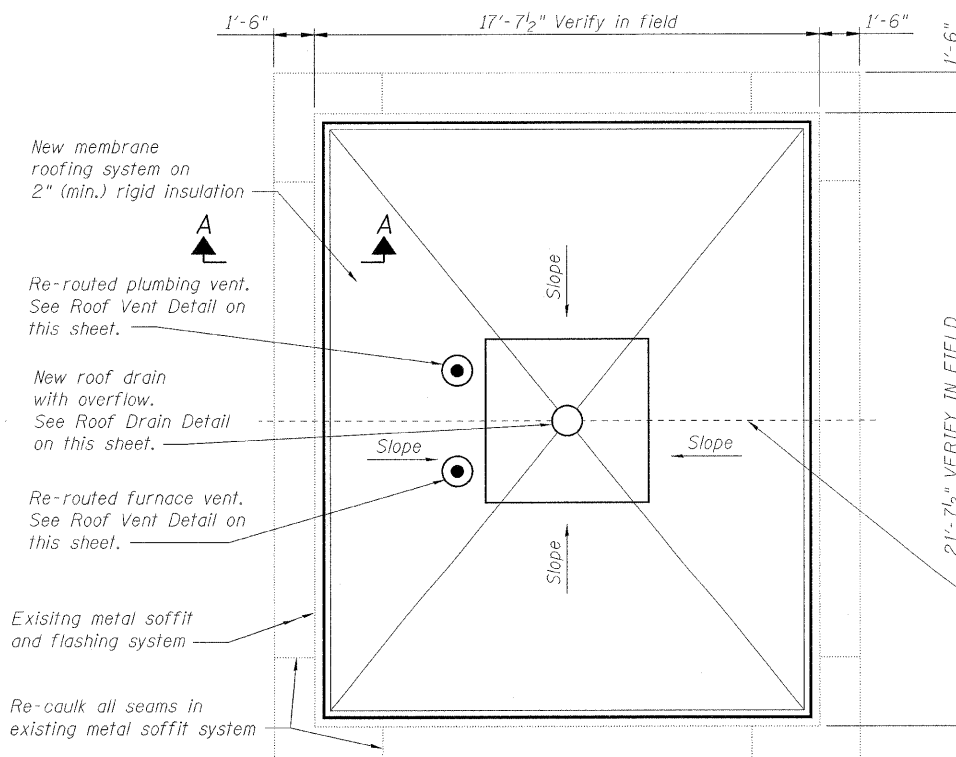


**OPERATOR'S ROOM CEILING PLAN**  
SCALE: 1/2" = 1'-0"

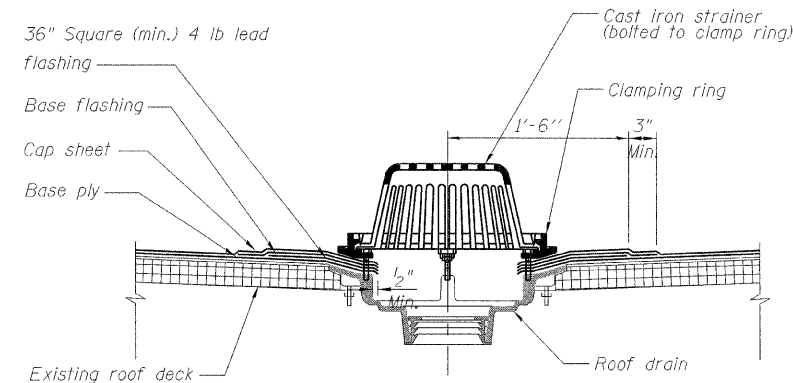


**OPERATOR'S ROOM FLOOR PLAN**  
SCALE: 1/2" = 1'-0"

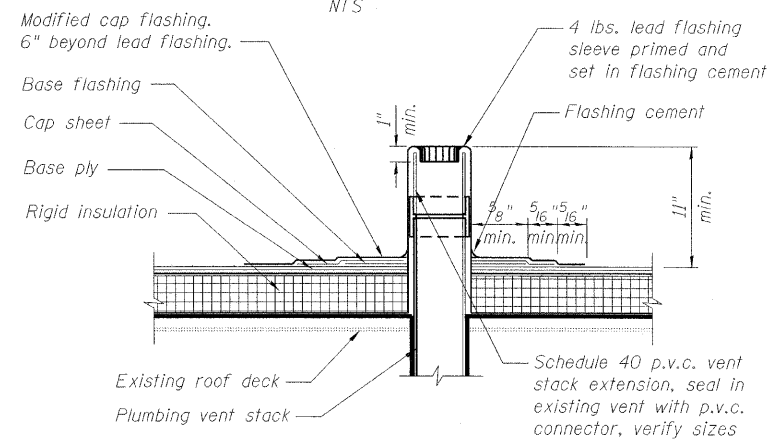
(NW bridgehouse shown - SE bridgehouse similar)



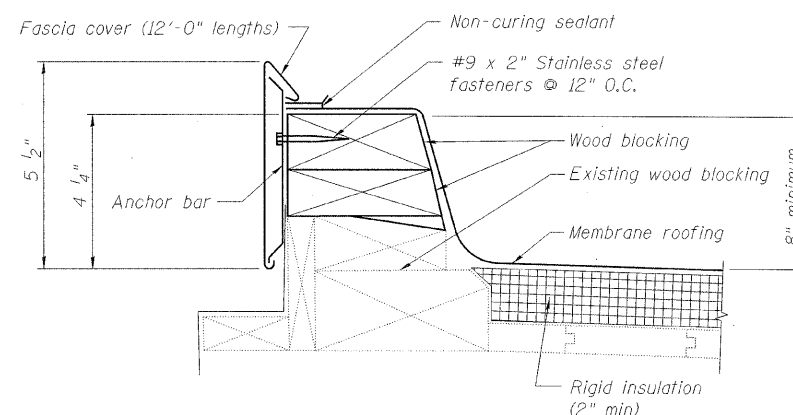
**OPERATOR'S ROOM ROOF PLAN**  
SCALE: 1/2" = 1'-0"  
(NW bridgehouse shown - SE bridgehouse similar)



**ROOF DRAIN DETAIL**



**ROOF VENT DETAIL**



**DETAIL A**  
(Fascia Cover & Roof Detail)

Roof rain overflow on north side of NW house

**LEGEND:**

- Existing member to remain
- New member

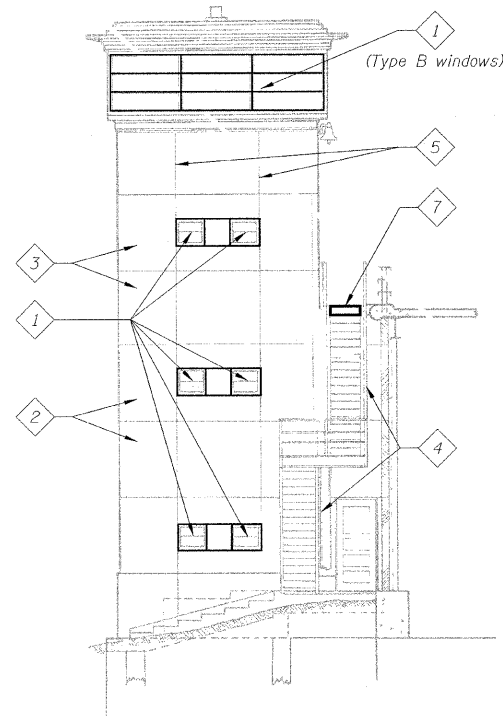
Note:  
Portions of this drawing are extracted from original drawings for this bridge. Details shown are provided to illustrate the work to be performed.

**ROOF AND WINDOW REPAIR DETAILS**  
**STRUCTURE NO. 016-2445**

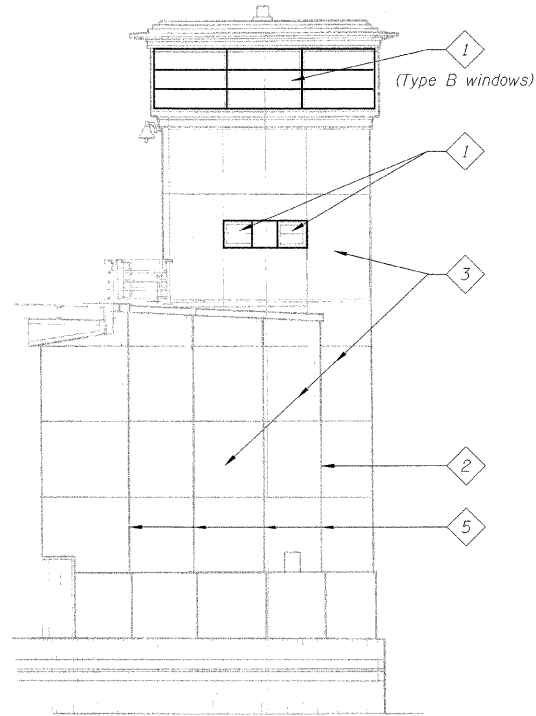
SHEET NO. 138	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	219
163 SHEETS	CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

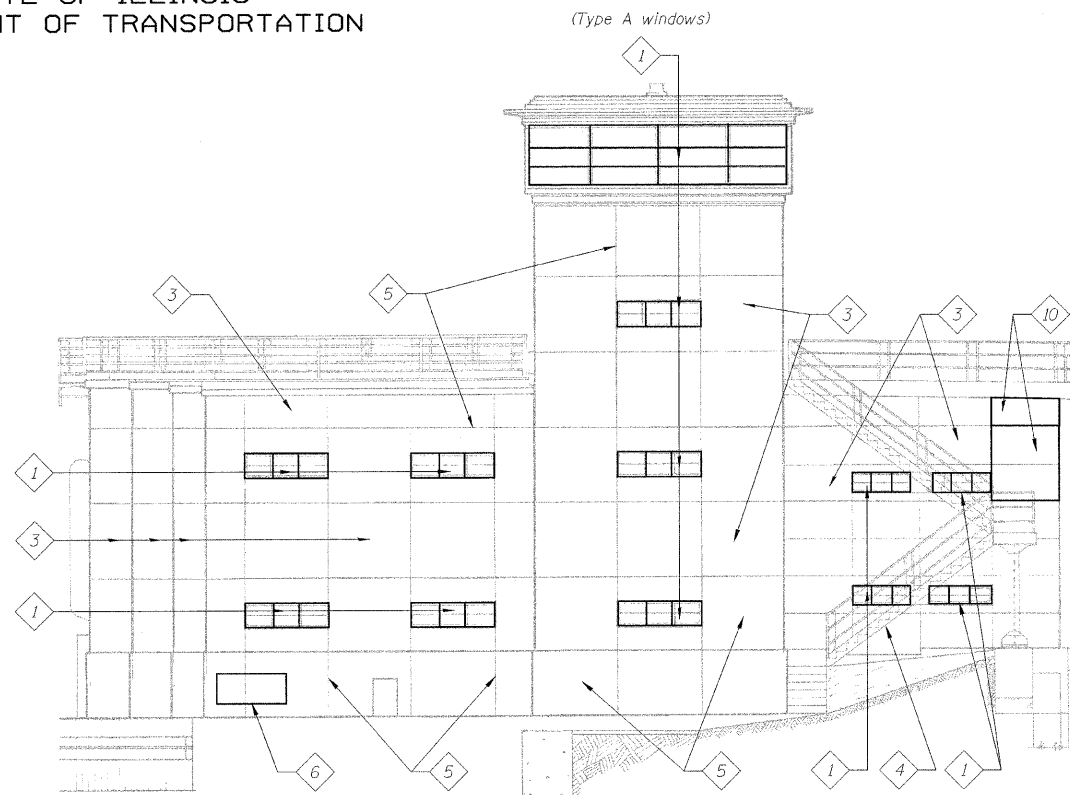
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



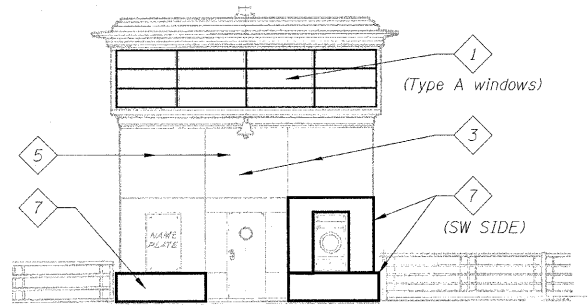
**ELEVATION B-B**  
(East elevation, Southeast house)



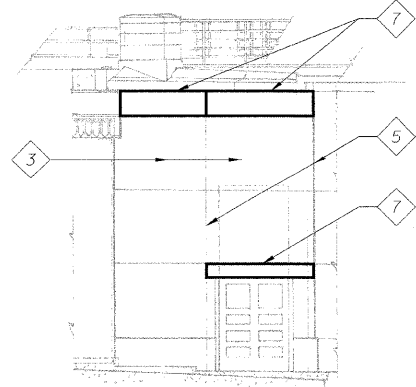
**ELEVATION C-C**  
(West elevation, Southeast house)



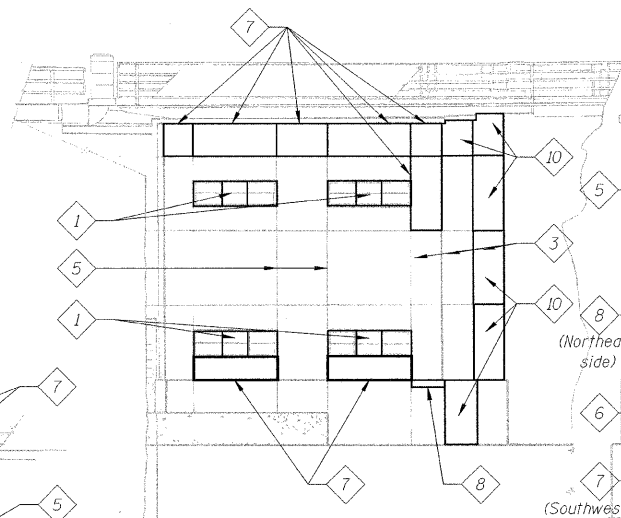
**ELEVATION D-D**  
(South elevation, Southeast house)



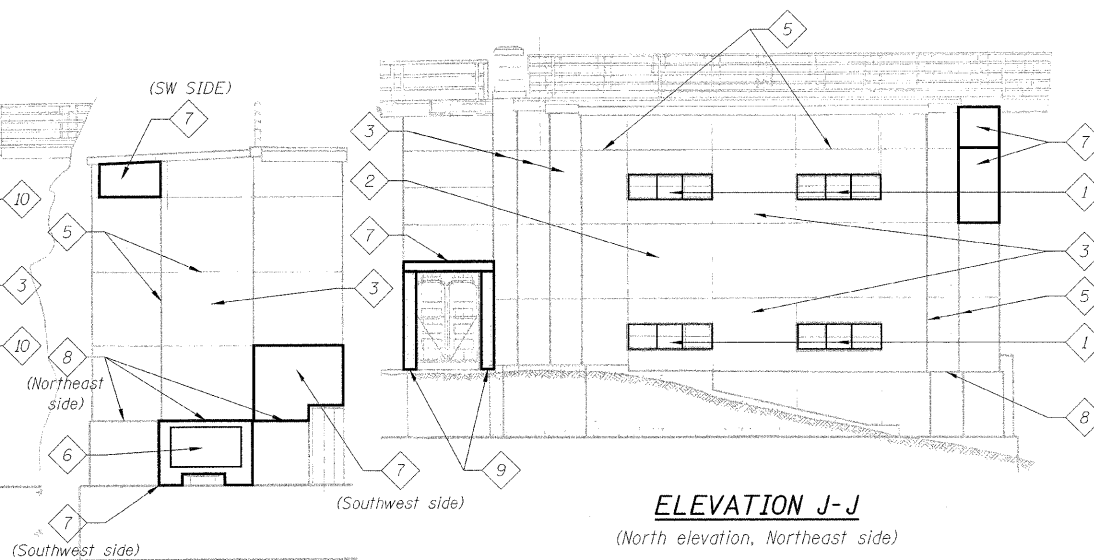
**ELEVATION E-E**  
(Roadway Elevation,  
Northeast side and Southwest side)



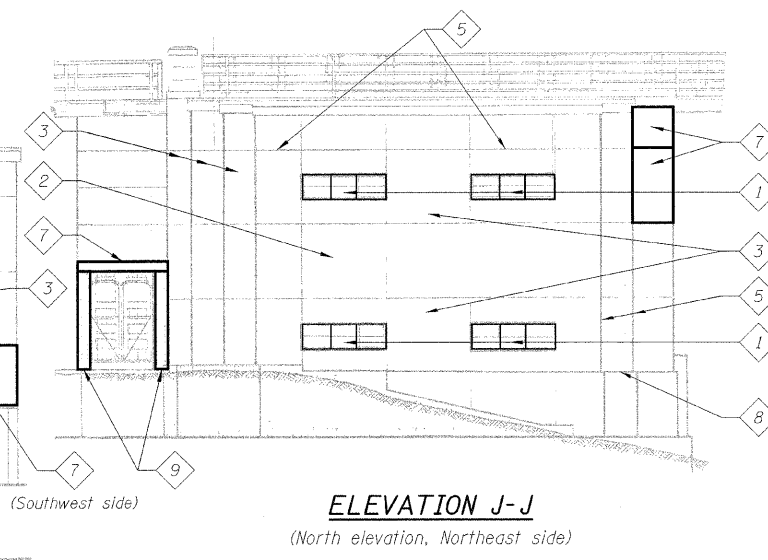
**ELEVATION F-F**  
(Southwest elevation, Southwest side)



**ELEVATION G-G**  
(South elevation, Southwest side)



**ELEVATION H-H**  
(West elevation, Northwest side,  
East elevation, Southwest side)



**ELEVATION J-J**  
(North elevation, Northeast side)

**KEYED NOTES:**

- 1 Remove and replace all existing windows
- 2 Remove all vegetation from limestone - entire face of facade
- 3 Clean all limestone panels - entire face of facade
- 4 Remove and replace existing stair
- 5 Remove material from all mortar joints - entire face of facade
- 6 Remove signage and re-install
- 7 Remove and replace limestone panel
- 8 Repair existing limestone panel
- 9 Remove and replace steel panel
- 10 Reset limestone panel

**LEGEND:**

- Existing member to remain
- New member

Note:  
Portions of this drawing are extracted from original drawings for this bridge. Details shown are provided to illustrate the work to be performed.

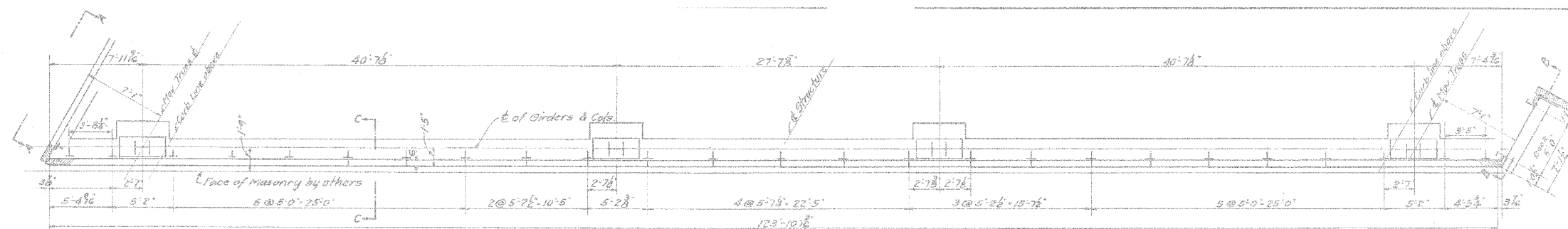
**ELEVATIONS**  
**STRUCTURE NO. 016-2445**

DESIGNED	K. STOCKIE
CHECKED	J. SHURMAN
DRAWN	E. KIENSTRA
CHECKED	A. HAMMAD

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

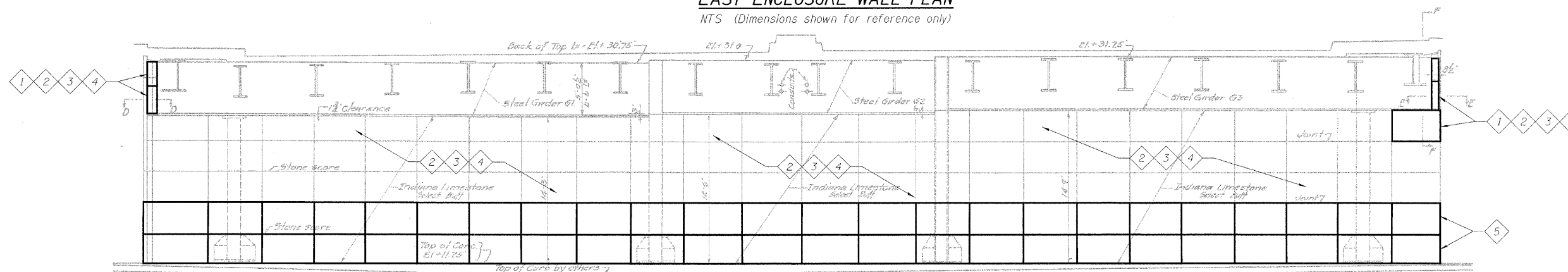
SHEET NO. 139	F.A.P. RTE. 389	SECTION 2424.2B-R	COUNTY COOK	TOTAL SHEETS 398	SHEET NO. 220
163 SHEETS		CONTRACT NO. 60661		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**EAST ENCLOSURE WALL PLAN**

NTS (Dimensions shown for reference only)



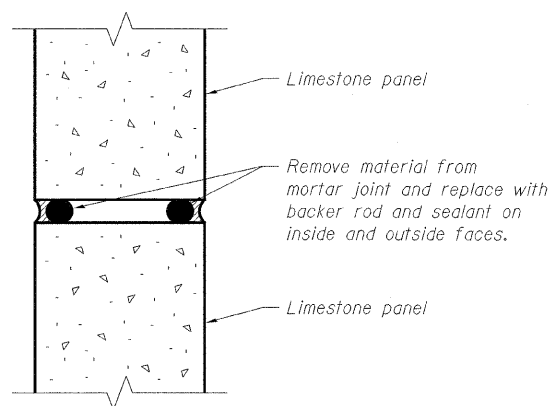
**EAST ENCLOSURE WALL ELEVATION**

NTS (Dimensions shown for reference only)

**KEYED NOTES:**

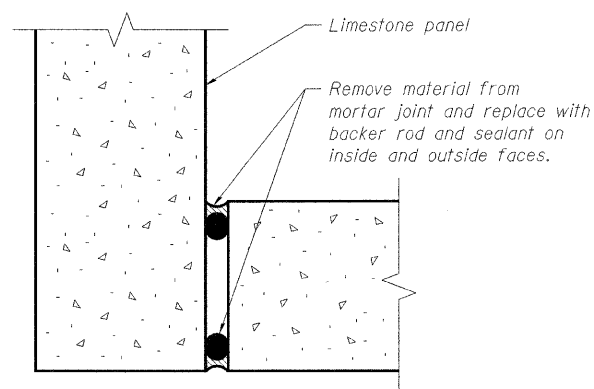
- 1 Reset limestone panel
- 2 Clean all limestone panels - entire facade
- 3 Seal all limestone panels - entire facade
- 4 Remove material from mortar joints - entire facade  
Replace material with backer rod and sealant per typical details on this sheet.
- 5 Remove and replace limestone panel full length.

Note:  
Portions of this drawing are extracted from original drawings for this bridge. Details shown are provided to illustrate the work to be performed.



**TYPICAL HORIZONTAL AND VERTICAL  
PANEL JOINT DETAIL**

NTS



**TYPICAL CORNER PANEL JOINT DETAIL**

NTS

**LEGEND:**

- Existing member to remain
- New member

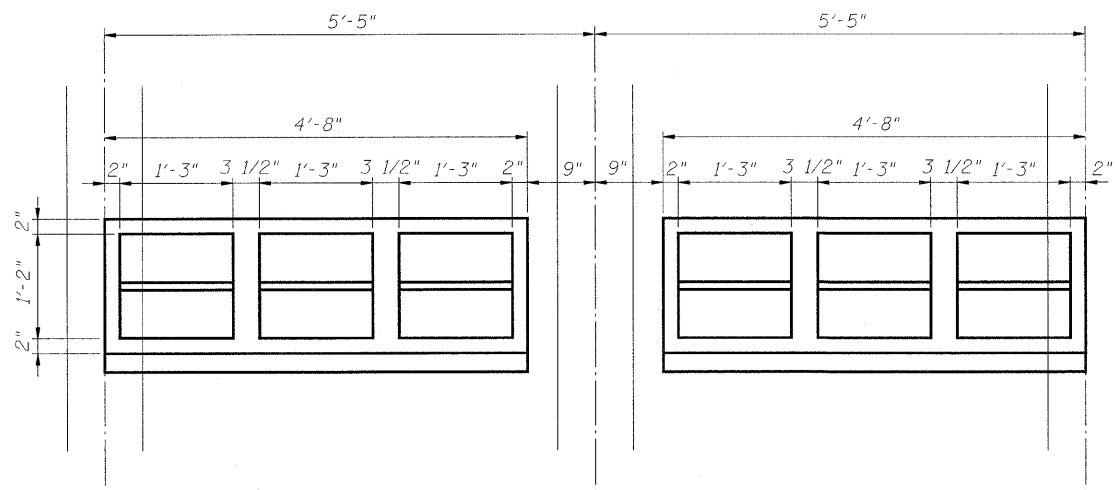
DESIGNED	K. STOCKIE
CHECKED	J. SHURMAN
DRAWN	E. KIENSTRA
CHECKED	A. HAMMAD

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

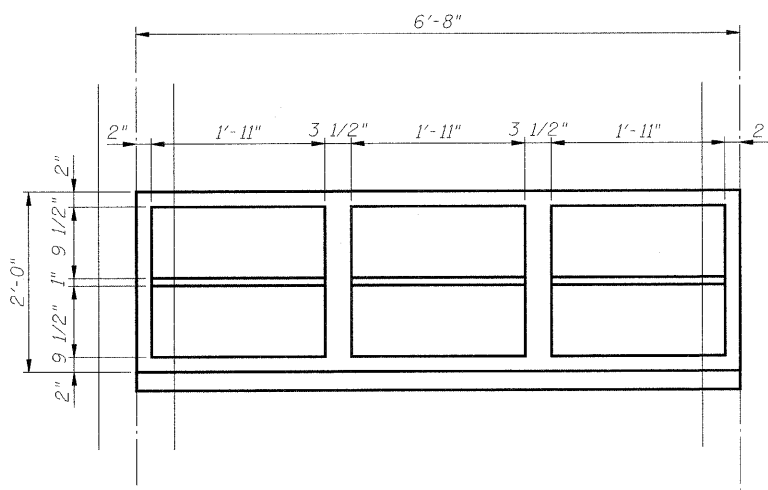
SHEET NO. 140 163 SHEETS	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	221
			CONTRACT NO. 60D61		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

**EAST ENCLOSURE WALL PLAN  
ELEVATION AND JOINT DETAILS  
STRUCTURE NO. 016-2445**

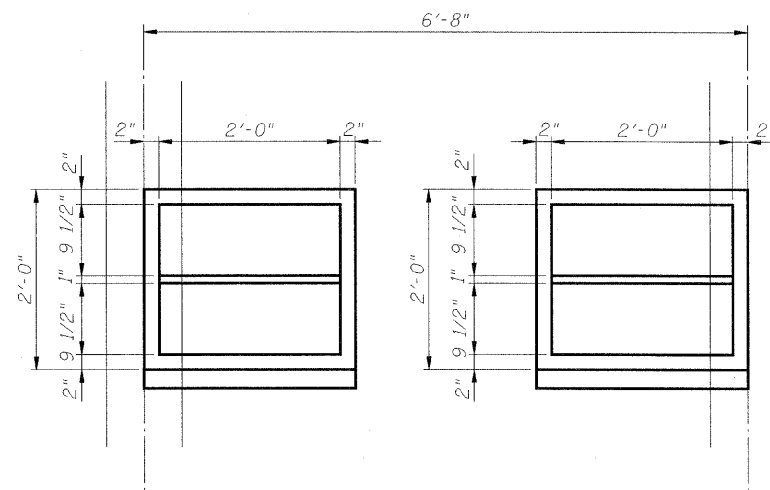
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



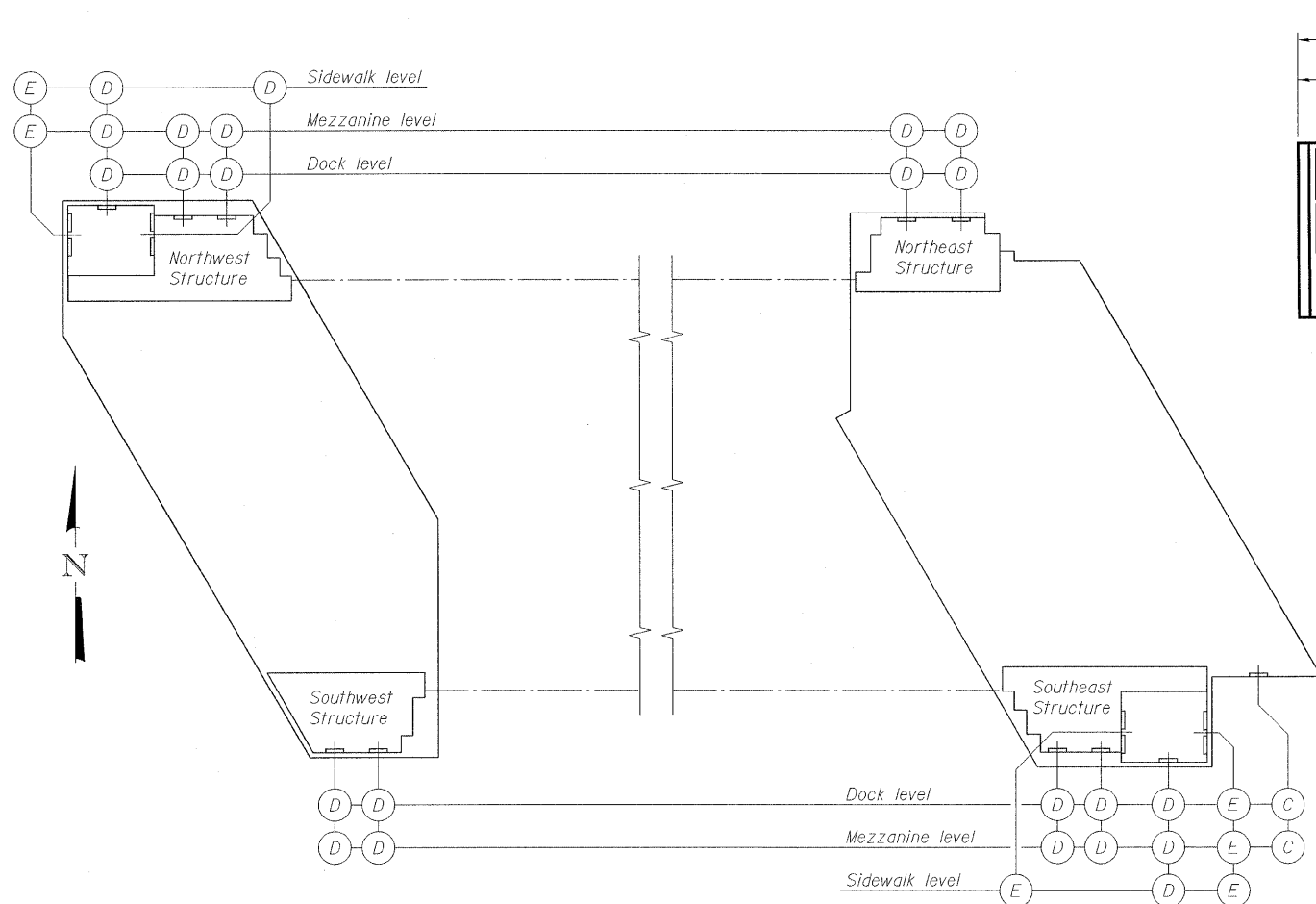
WINDOWS TYPE C



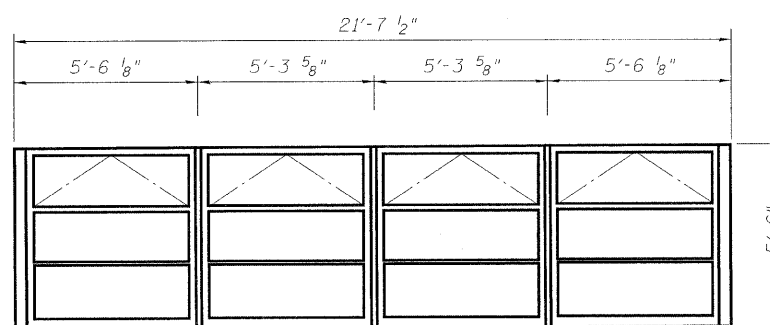
WINDOWS TYPE D



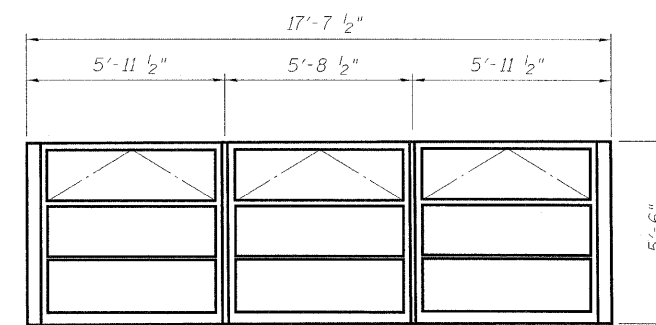
WINDOWS TYPE E



KEY PLAN



NORTH & SOUTH ELEVATIONS  
WINDOWS TYPE-A



EAST & WEST ELEVATIONS  
WINDOWS TYPE-B

**NOTES:**

- Window dimensions are shown for reference only. Verify all dimensions in field.

**LEGEND:**

- Existing member to remain
- New member

DESIGNED	K. STOCKIE
CHECKED	J. SHURMAN
DRAWN	E. KIENSTRA
CHECKED	A. HAMMAD

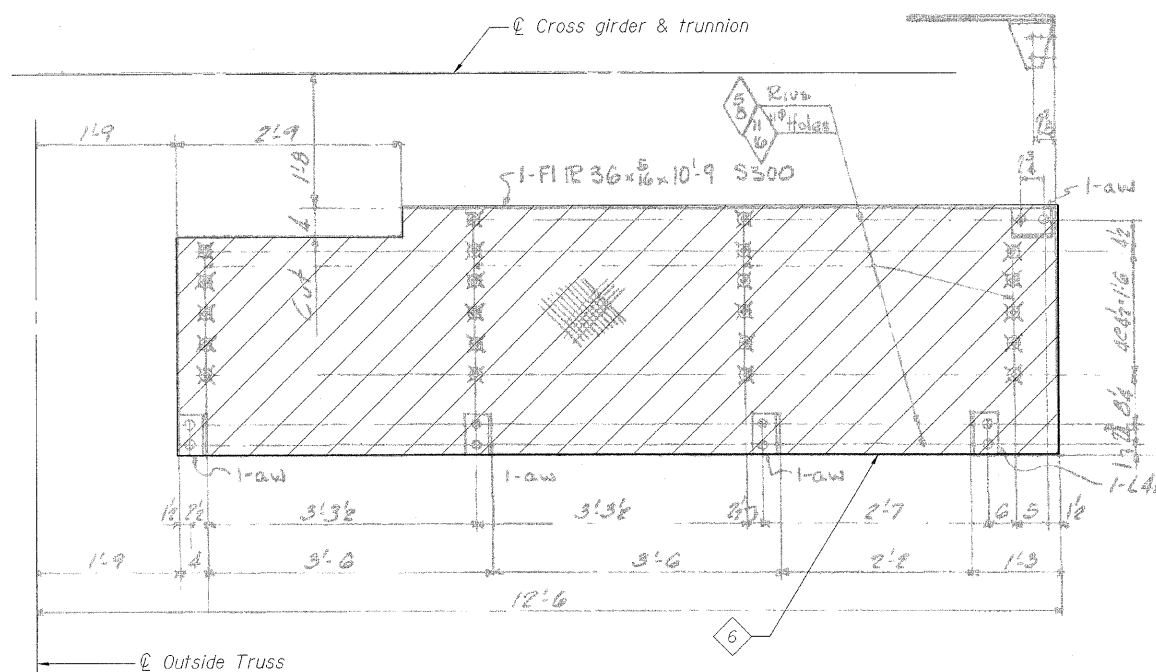
WINDOW TYPES AND LOCATIONS  
STRUCTURE NO. 016-2445

SHEET NO. 141 163 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	222
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT		
CONTRACT NO.				60D61	

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230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

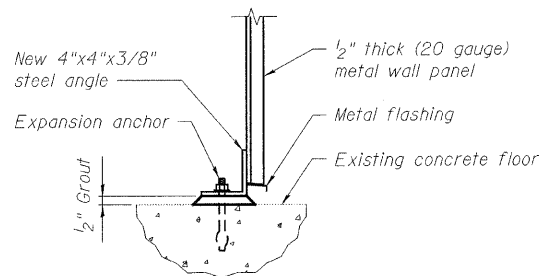
T:\16843A\Structural\Cadd\Pre-final\EB\_Plans\0162445-60D61-FSR-142.dgn  
07-MAY-2009

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

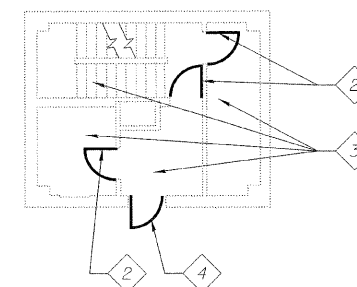


**TRUNNION PLATFORM  
NEAR LATTICE TRUSS**

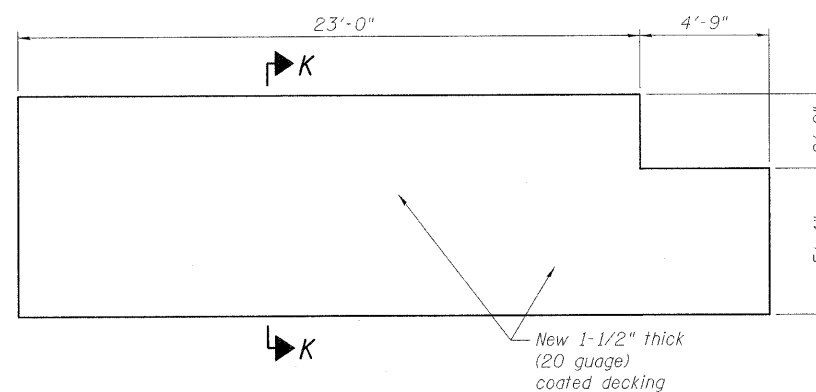
SW LEAF - NE SIMILAR (SE AND NW OPPOSITE HAND)  
INSIDE TRUSS SIMILAR - OPPOSITE HAND



**STEEL ANGLE DETAIL**

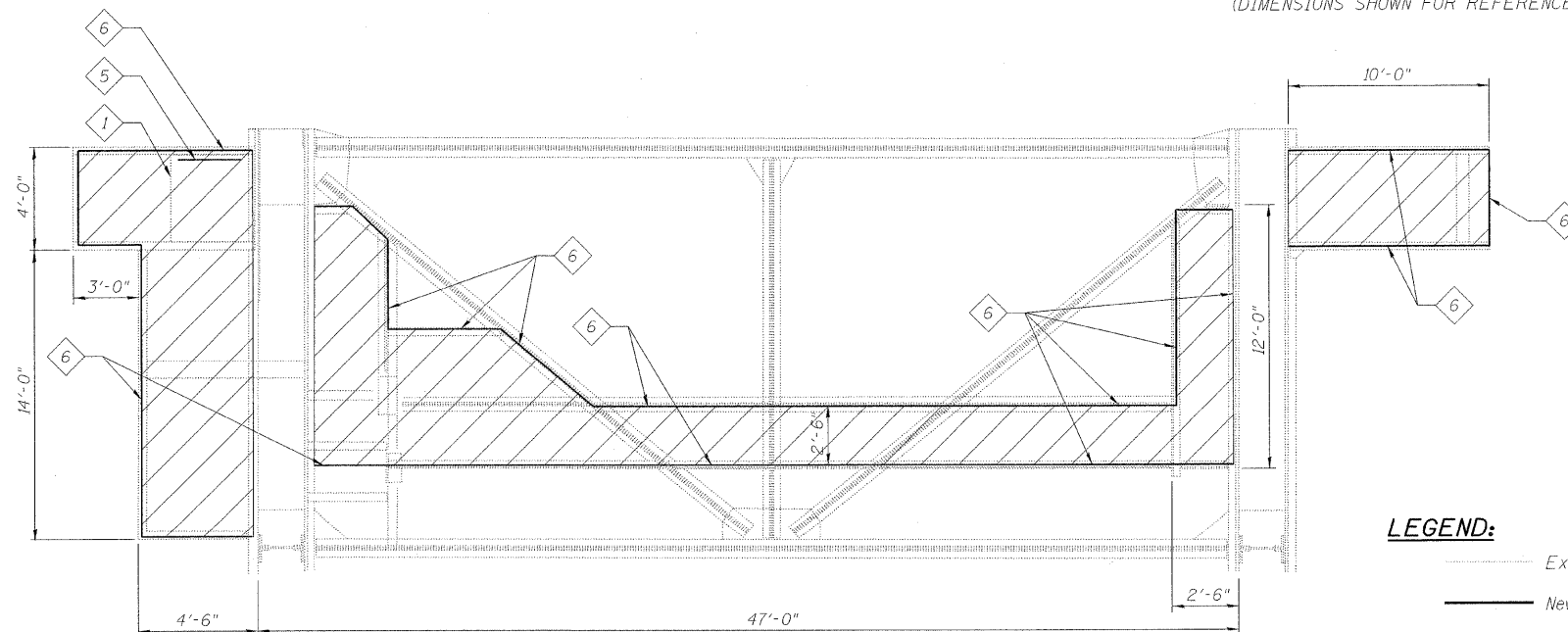


**SIDEWALK LEVEL PLAN NORTHWEST SIDE**  
SOUTHEAST SIDE SIMILAR - OPPOSITE HAND

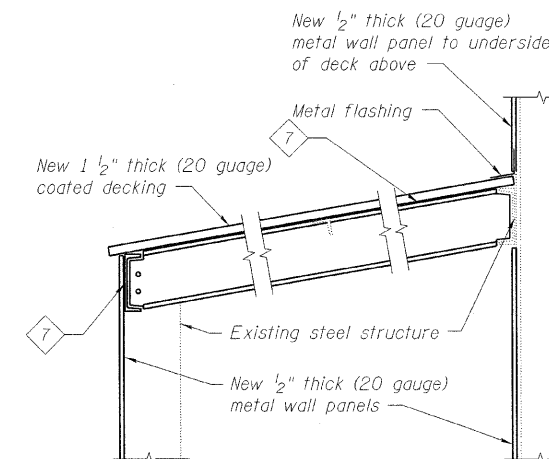


**WEST INTERMEDIATE ROOF PLAN**

EAST INTERMEDIATE ROOF PLAN SIMILAR - OPPOSITE HAND  
(DIMENSIONS SHOWN FOR REFERENCE ONLY)



**NW CENTER SPAN WALKWAY PLAN  
SE OPPOSITE AND SIMILAR**  
(DIMENSIONS SHOWN FOR REFERENCE ONLY)



**SECTION K-K**

**KEYED NOTES:**

- 1 Metal sidewalk door above.
- 2 Remove and replace existing door with hollow metal (1 hour rated) door and frame (2'-6"x7'-0" door).
- 3 Fill all penetrations, cracks, and distressed mortar joints with fire caulk - all levels.
- 4 Remove and replace hollow metal (1 hour rated) door and frame (3'-0"x6'-8").
- 5 Remove ladder and replace with new metal ladder.
- 6 Remove and replace metal guardrail. For guardrail details, see sheet 146 of 163.
- 7 Remove and replace existing channels. Cost included in the cost of Metal Panels.

**NOTES:**

1. Walkways are shown for reference only. Verify all dimensions in field.

**LEGEND:**

- Existing member to remain
- New member
- ▨ Remove and replace metal grating

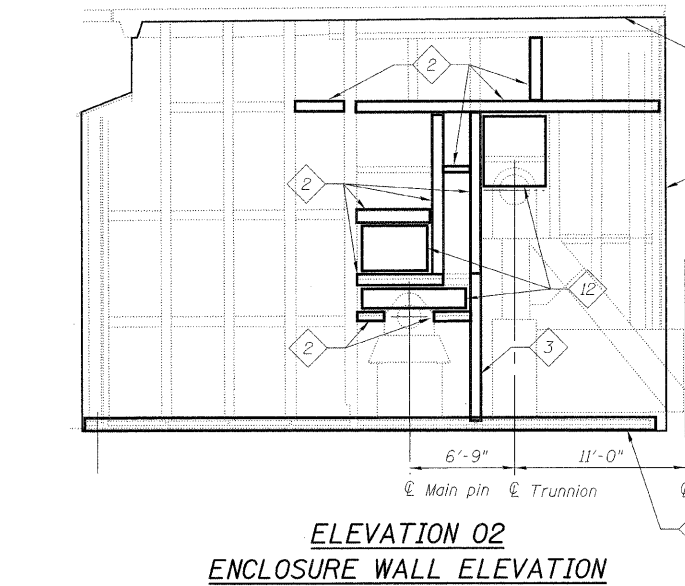
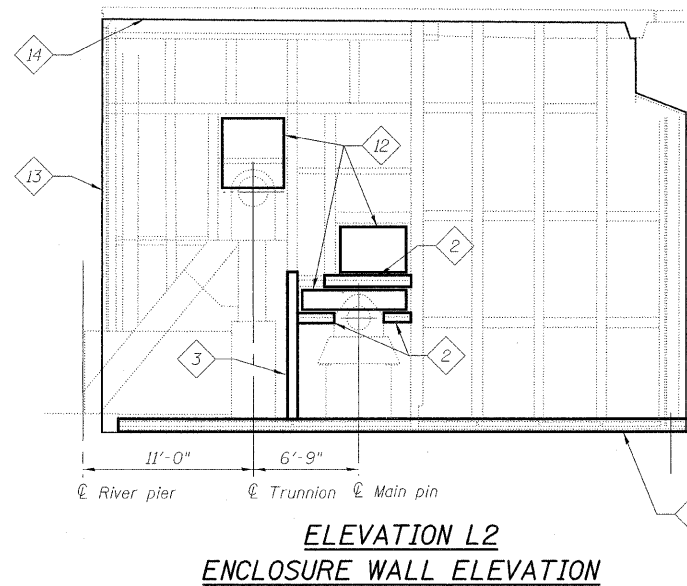
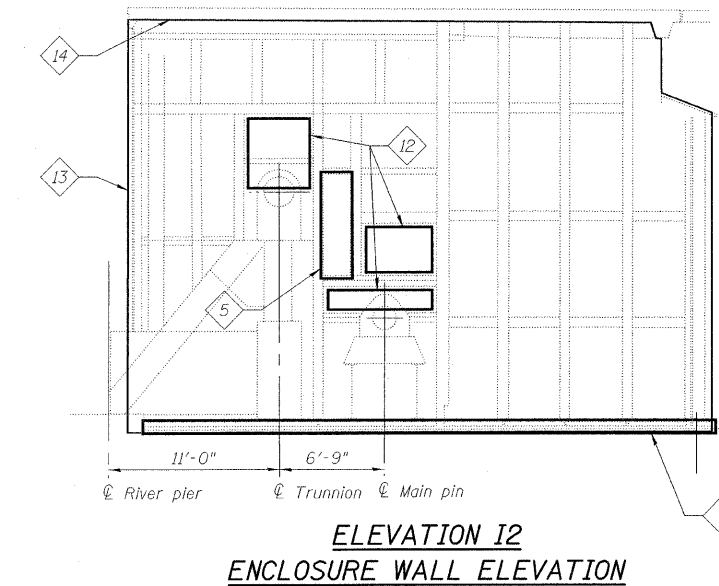
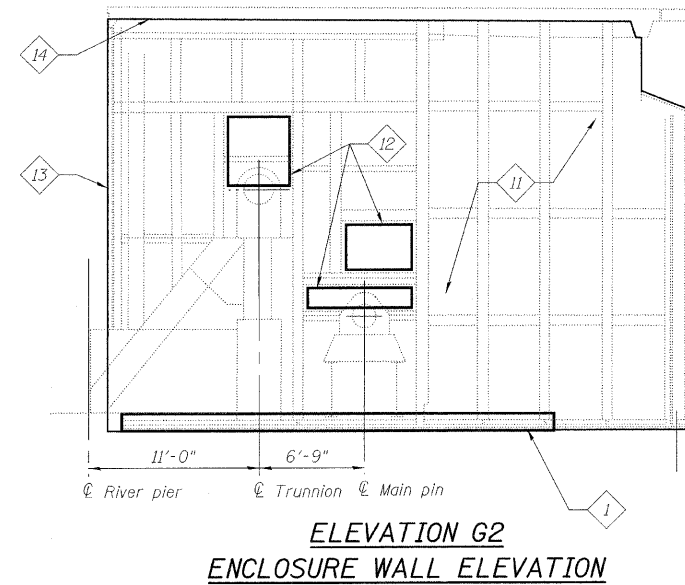
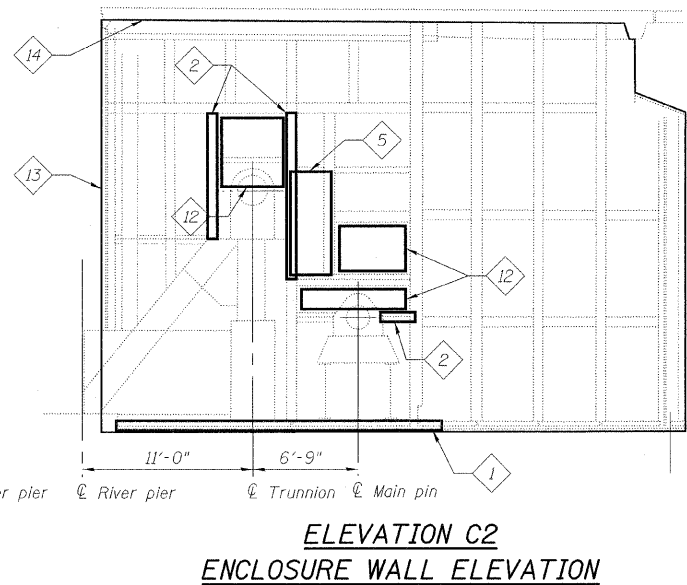
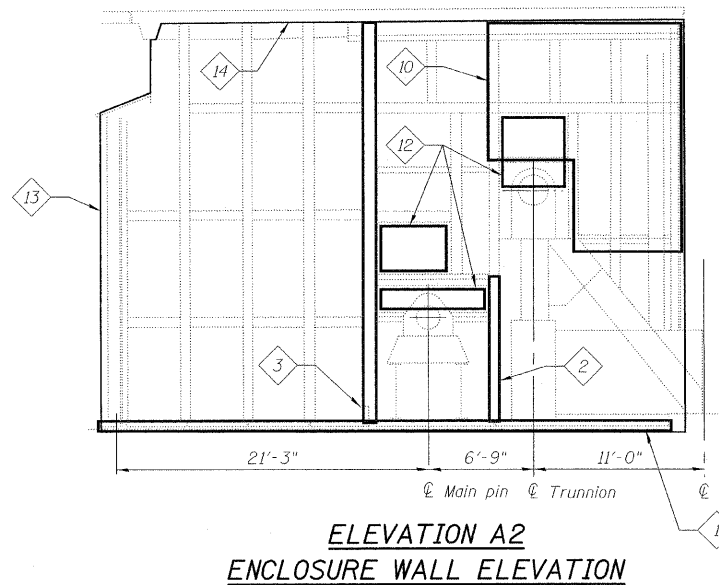
**ROOF PLAN, WALKWAY PLAN,  
FLOOR PLAN AND DETAILS  
STRUCTURE NO. 016-2445**

DESIGNED	K. STOCKIE
CHECKED	J. SHURMAN
DRAWN	E. KIENSTRA
CHECKED	A. HAMMAD

SHEET NO. 142 163 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	223
			CONTRACT NO. 60D61		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

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230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**KEYED NOTES:**

- 1 Remove and replace 4"x4"x3/8" angle and 18"x3/8" plate along the bottom of all enclosure walls.
- 2 Remove and replace WT5x24.5.
- 3 Repair base of WT5x24.5.
- 4 NOT USED
- 5 Remove and replace doors and frames.
- 6 NOT USED
- 7 NOT USED
- 8 NOT USED
- 9 NOT USED
- 10 Remove and replace missing section of wall.
- 11 Remove and replace wall paneling on both enclosure walls.
- 12 Replace with removable panel. For panel detail, see sheet 144 of 163.
- 13 Limits of new 1/2" thick (20 gauge) fixed metal wall panels on steel framing (unless noted otherwise).
- 14 Underside of structure above.

Note:  
The removal of existing plywood wall paneling at some wall section is included in the cost Metal Panels.

**LEGEND:**

- Existing member to remain
- New member

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SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 143 163 SHEETS	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	224
CONTRACT NO. 60D61					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

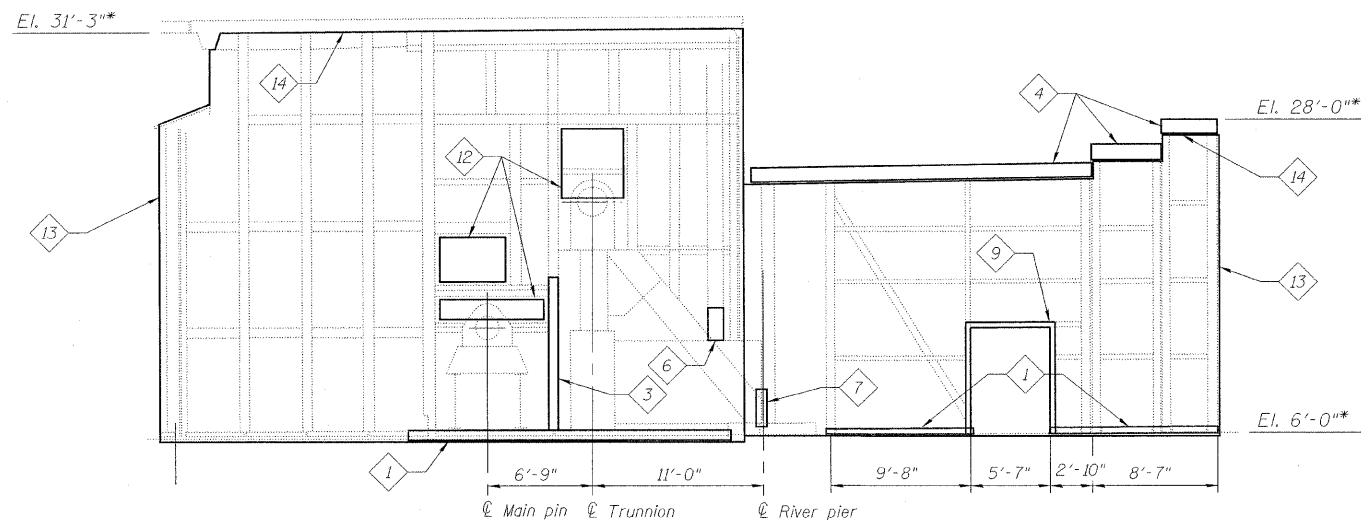
**ENCLOSURE WALL ELEVATIONS**  
**STRUCTURE NO. 016-2445**

DESIGNED	K. STOCKIE
CHECKED	J. SHURMAN
DRAWN	E. KIENSTRA
CHECKED	A. HAMMAD

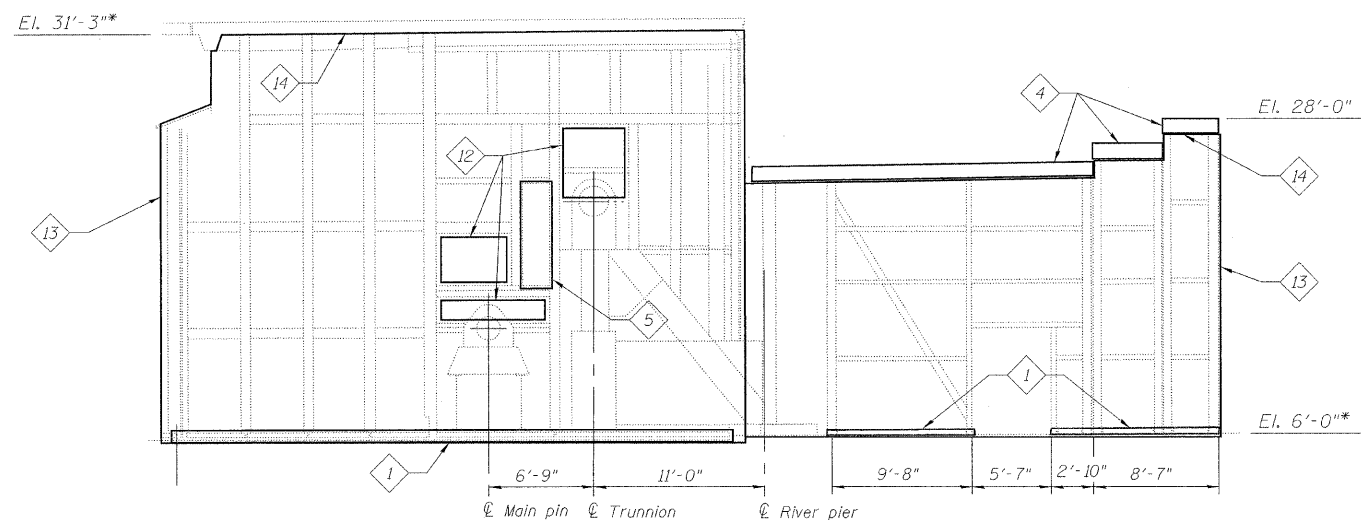
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07-MAY-2009



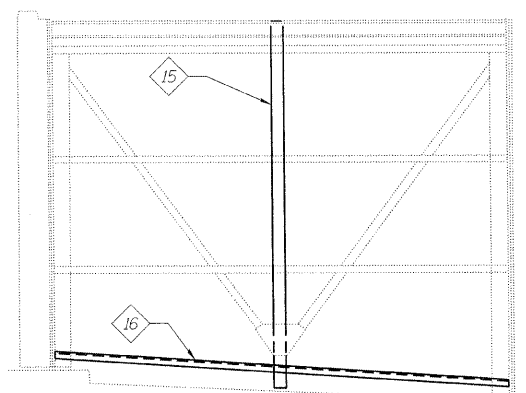
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



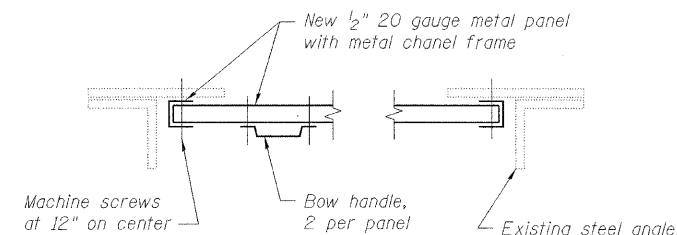
**ELEVATION F2**  
**ENCLOSURE WALL ELEVATION**



**ELEVATION K2**  
**ENCLOSURE WALL ELEVATION**



**ELEVATION M2**  
**ENCLOSURE WALL ELEVATION**



**TYPICAL PLAN SECTION - REMOVABLE PANEL**  
SCALE: NONE

**KEYED NOTES:**

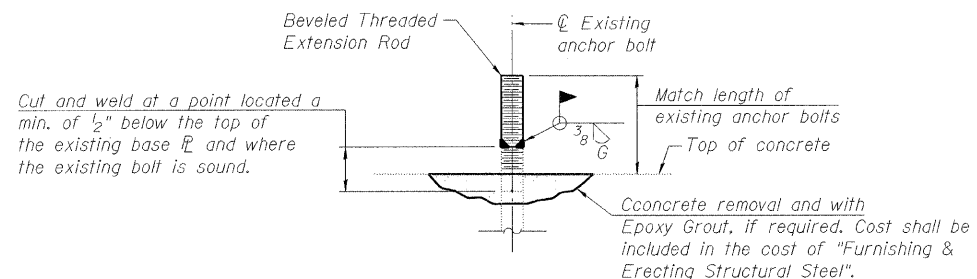
- 1 Remove and replace 4"x4"x<sup>3</sup>/<sub>8</sub>" angle and 18"x<sup>3</sup>/<sub>8</sub>" plate along the bottom of all enclosure walls.
- 2 NOT USED
- 3 Repair base of WT5x24.5.
- 4 Remove and replace C10x20.
- 5 Remove and replace doors and frames.
- 6 Repair connection at base of W12x58 and 7"x4"x<sup>5</sup>/<sub>8</sub>" angles.
- 7 Repair 1" bent plate and holes in base of builtup section at the southeast support of the machinery.
- 8 NOT USED
- 9 Remove and replace double door frame.
- 10 NOT USED
- 11 NOT USED
- 12 Replace removable panel. See Panel Detail this sheet.
- 13 Limits of new 1/2" thick (20 gauge) fixed metal wall panels on steel framing (unless noted otherwise).
- 14 Underside of structure above.
- 15 Repair W6x25 column, see Detail B.
- 16 Remove and replace C6x13.
- 17 Remove and replace <sup>3</sup>/<sub>8</sub>" PL.
- 18 Remove and replace L4x4x<sup>1</sup>/<sub>2</sub>".

Note:  
The removal of existing plywood wall paneling at some wall section is included in the cost Metal Panels.

**LEGEND:**

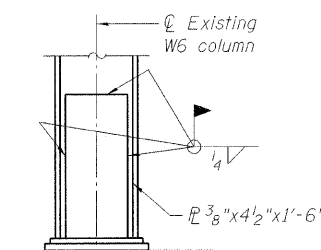
- Existing member to remain
- New member

\* Based on existing drawings.



**ANCHOR BOLT EXTENSION DETAIL**

The furnishing and installation of required Anchor Bolt Extensions shall be included in the cost of "Furnishing & Erecting Structural Steel".



**DETAIL B**

DESIGNED	K. STOCKIE
CHECKED	J. SHURMAN
DRAWN	E. KIENSTRA
CHECKED	A. HAMMAD

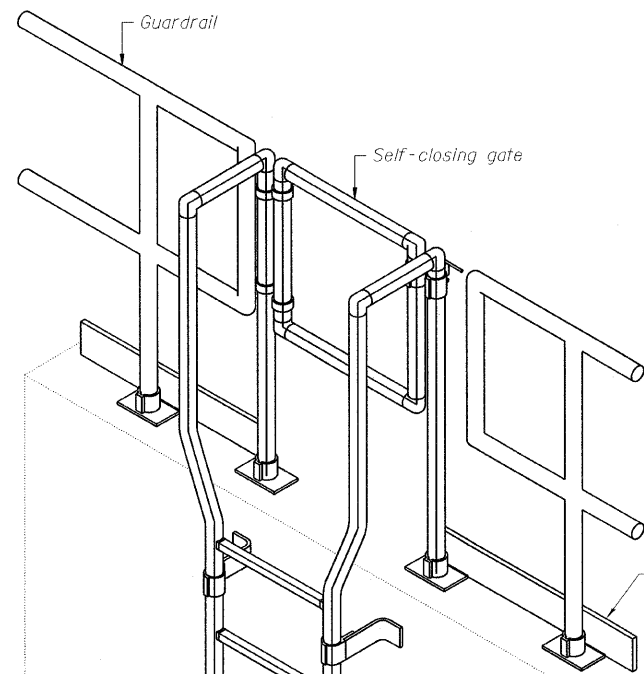
T:\16849A\Structural\Cadd\Pre-final\EB\_Plans\0162445-60D61-FSP-144a.dgn 07-MAY-2009

**ENCLOSURE WALL ELEVATIONS**  
**STRUCTURE NO. 016-2445**

SHEET NO. 144	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	225
163 SHEETS			CONTRACT NO. 60D61		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

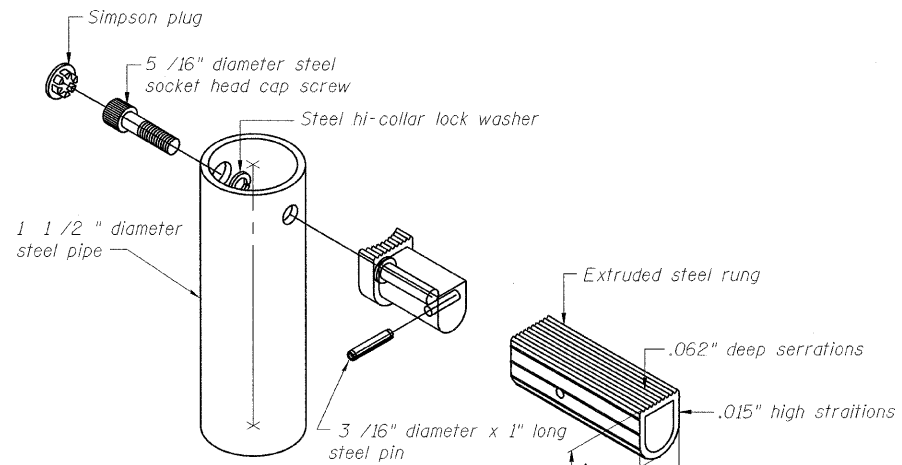
**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

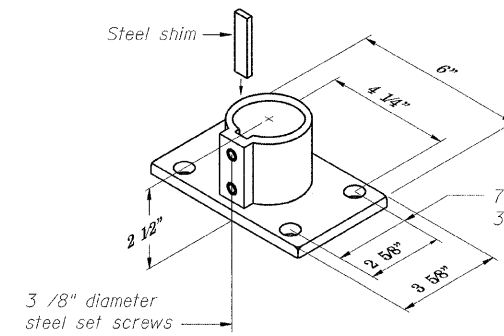


**TYPICAL LADDER ELEVATION**  
TYPE A

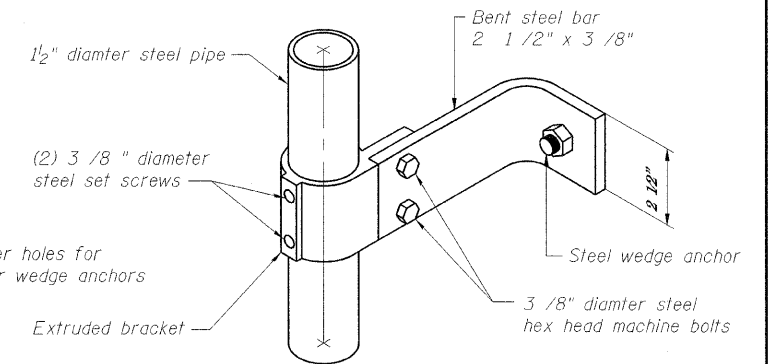
DESIGNED	K. STOCKIE
CHECKED	J. SHURMAN
DRAWN	E. KIENSTRA
CHECKED	A. HAMMAD



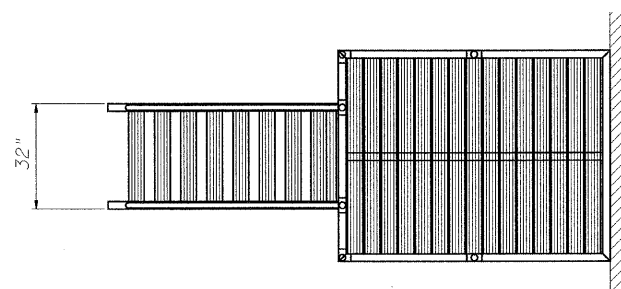
**DETAIL OF LADDER RUNG**



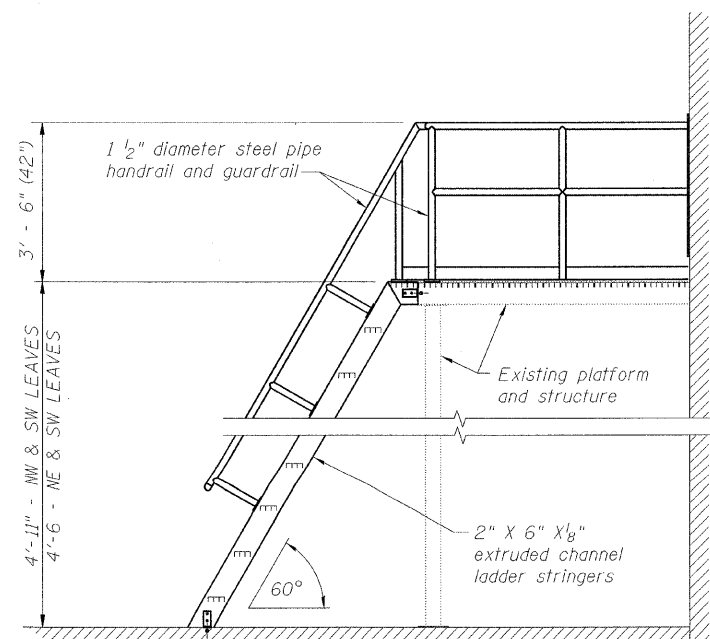
**DETAIL OF BASE FLANGE**



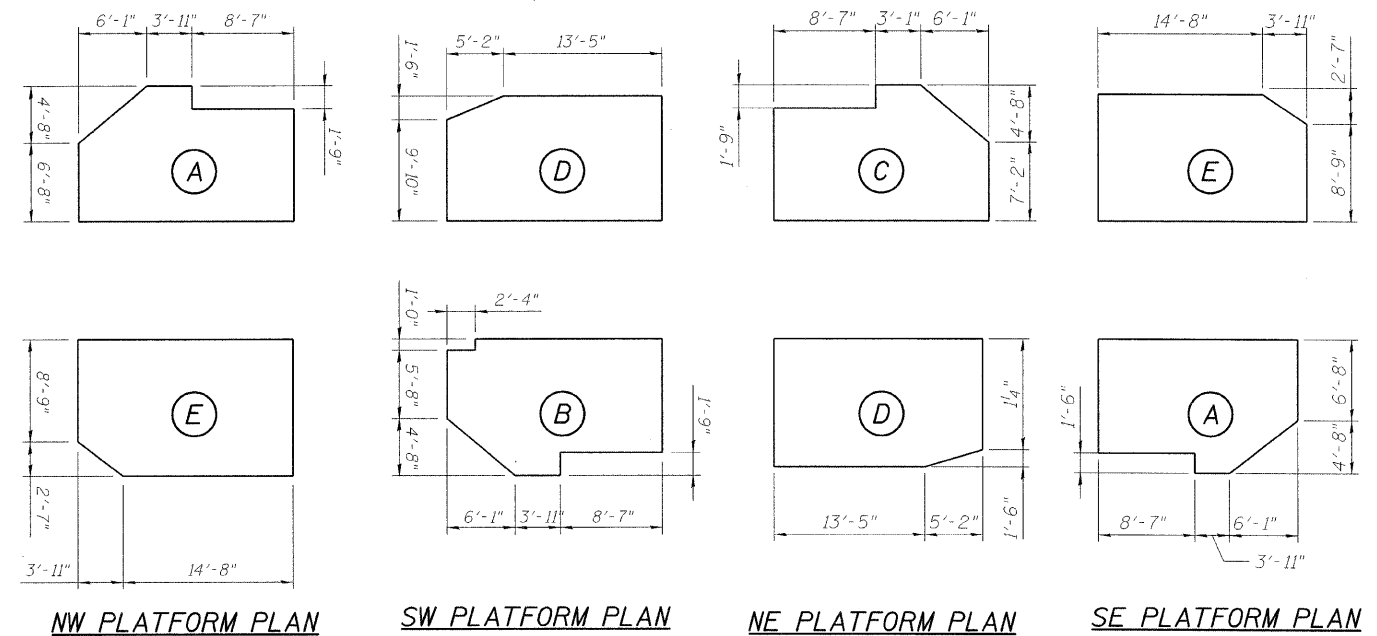
**DETAIL OF LADDER BRACKET**



**SHIPS LADDER PLAN VIEW**



**SHIPS LADDER SIDE ELEVATION**



**NW PLATFORM PLAN**

**SW PLATFORM PLAN**

**NE PLATFORM PLAN**

**SE PLATFORM PLAN**

**LEGEND**

- Existing member to remain
- New member

Notes:  
All shown platform dimensions are to existing platform sizes.  
For location of platform see sheet 137 of 163.  
All platform grating shall be removed and replaced. See Special Provision.

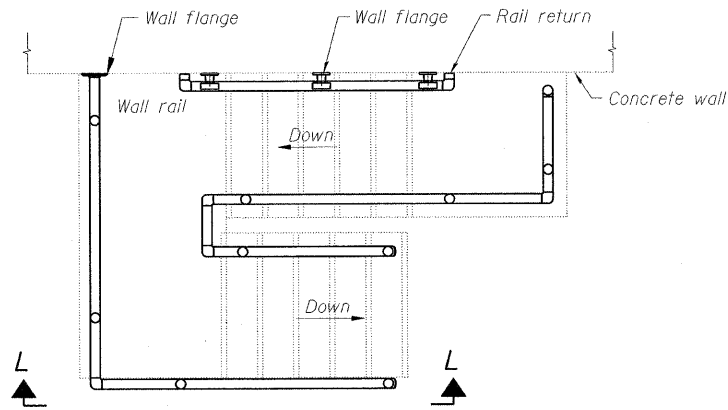
**LADDER DETAILS AND PLATFORM PLANS**  
STRUCTURE NO. 016-2445

T:\16843A\Structural\Cadd\Pre-final\EB\_Plans\0162445-60D61-FSR-145.dgn 07-MAY-2009

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

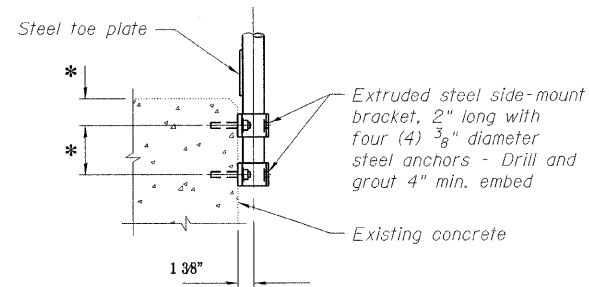
SHEET NO. 145 163 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	226
			CONTRACT NO. 60D61		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



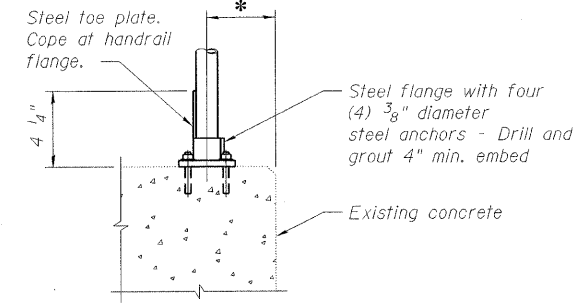
**TYPICAL GUARDRAIL AND HANDRAIL AT STAIRWAYS**

Guardrails shall be top-mounted or side-mounted, as shown on plans  
(Typical dimensions)



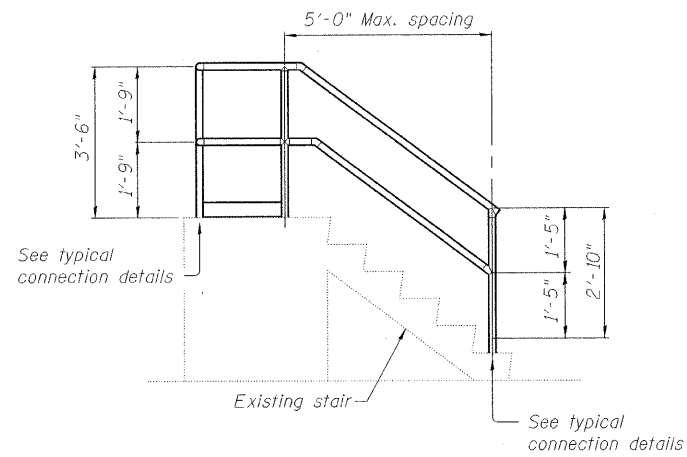
**TYPICAL SIDE MOUNT CONNECTION AT CONCRETE**

\* Manufacturer's recommended dimensions

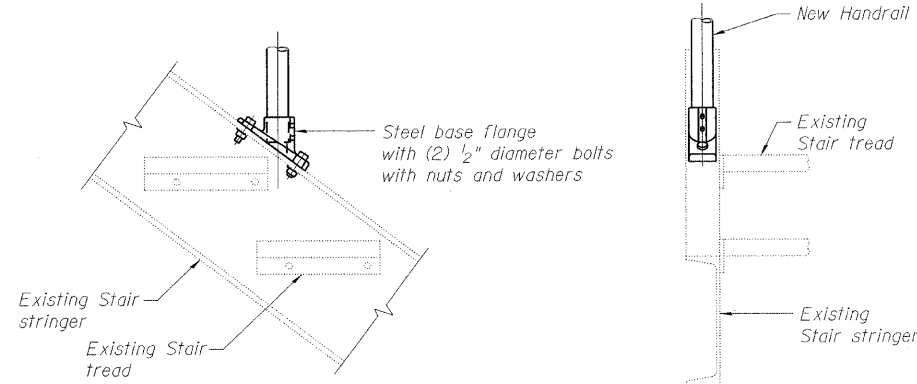


**TYPICAL TOP MOUNT CONNECTION AT CONCRETE**

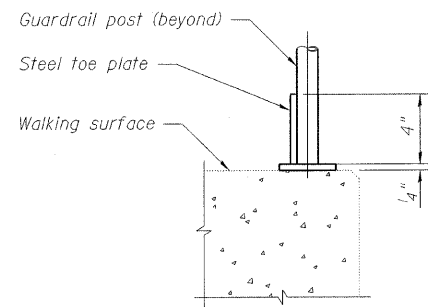
\* Manufacturer's recommended dimensions



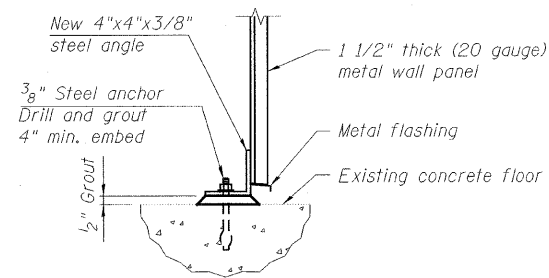
**SECTION L-L**  
(Typical dimensions)



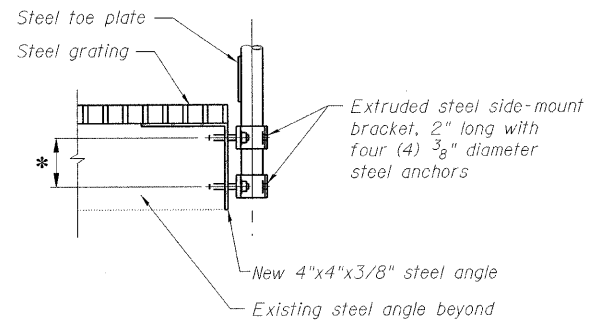
**TYPICAL TOP MOUNT CONNECTION TO STRINGER**



**TYPICAL TOE PLATE DETAIL**

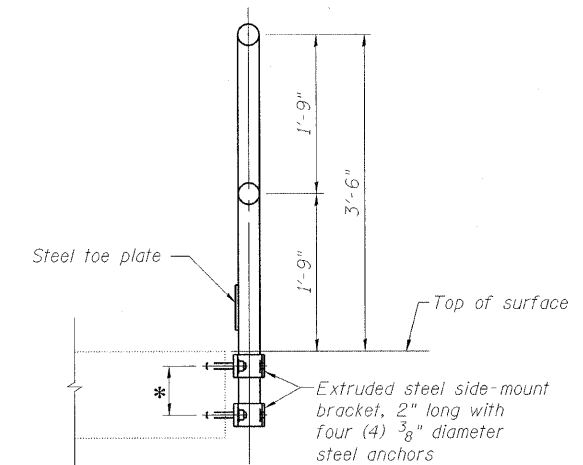


**STEEL ANGLE DETAIL**



**TYPICAL SIDE MOUNT CONNECTION AT PLATFORM**

\* Manufacturer's recommended dimensions



**TYPICAL GUARDRAIL SECTION**

\* Manufacturer's recommended dimensions

**LEGEND:**

- Existing member to remain
- New member

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 146 163 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	227
FED. ROAD DIST. NO. 7			ILLINOIS	FED. AID PROJECT	CONTRACT NO. 60D61

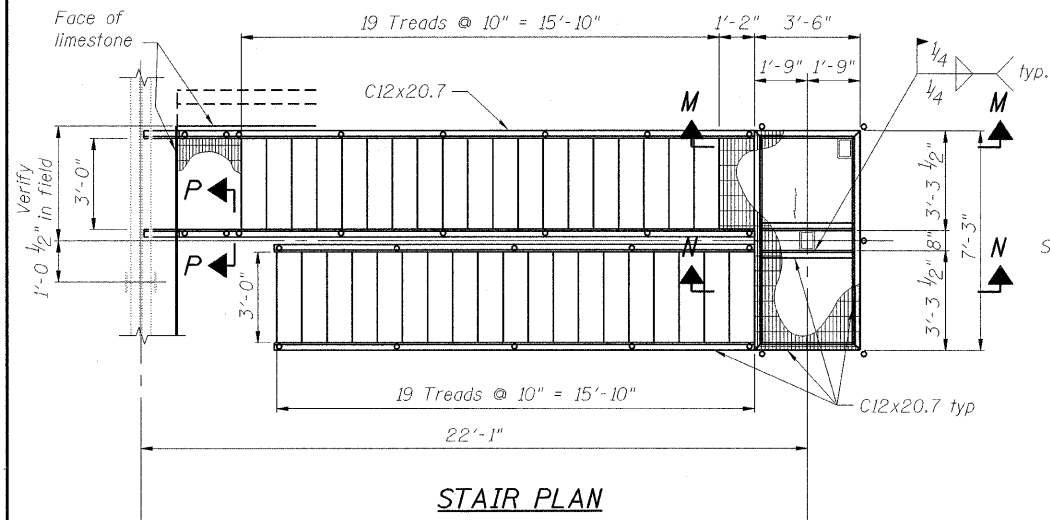
**STAIR RAILING DETAILS**  
**STRUCTURE NO. 016-2445**

DESIGNED	K. STOCKIE
CHECKED	J. SHURMAN
DRAWN	E. KIENSTRA
CHECKED	A. HAMMAD

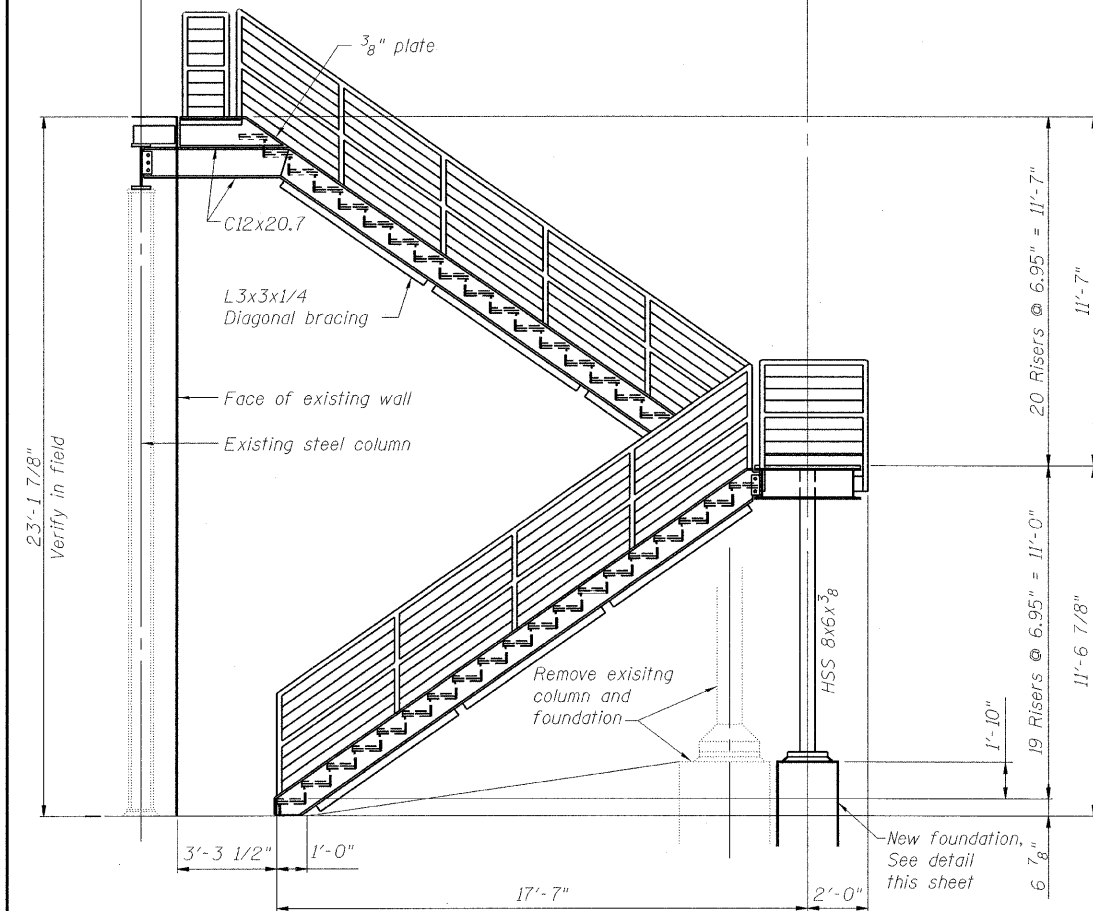
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIAL

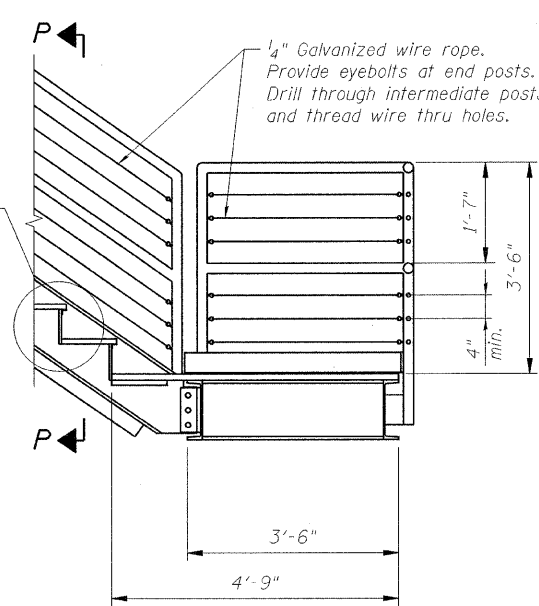
Bar	No.	Size	Length	Shape
n <sub>50</sub> (E)	8	#8	5'-8"	—
s <sub>50</sub> (E)	4	#4	7'-9"	□
t <sub>50</sub> (E)	5	#5	4'-8"	—
w <sub>50</sub> (E)	5	#5	4'-8"	—
Reinforcement Bars, Epoxy Coated		Pound	190	
Porous Granular Embankment		Cu. Yd.	4	
Structure Excavation		Cu. Yd.	5.4	
Concrete Structures		Cu. Yd.	1.7	



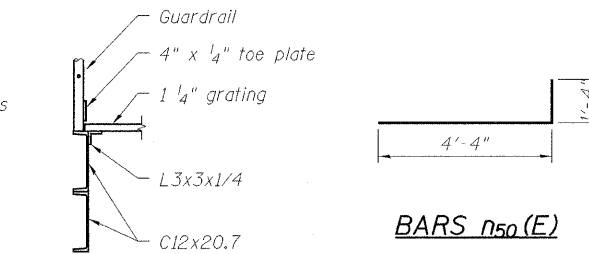
STAIR PLAN



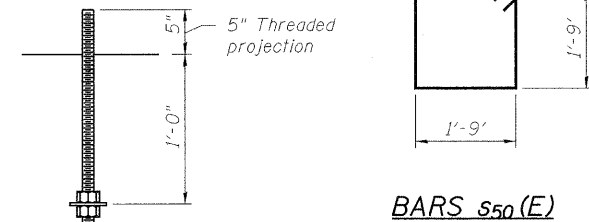
STAIR ELEVATION



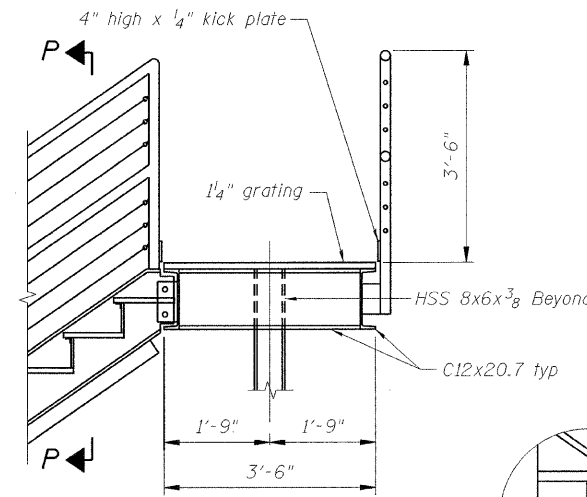
SECTION M-M



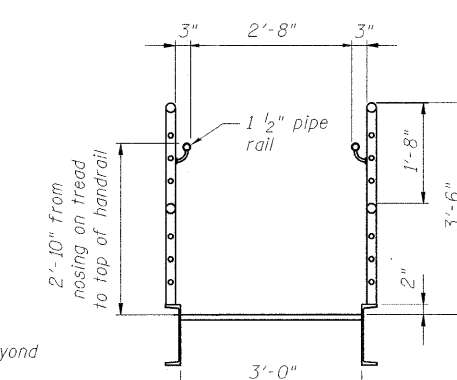
SECTION R-R



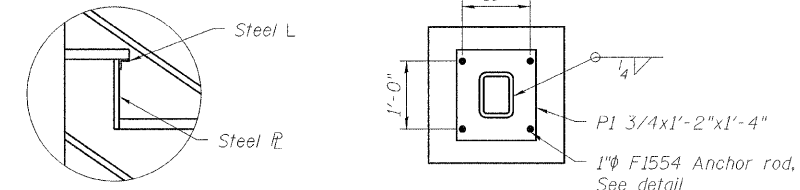
ANCHOR ROD DETAIL



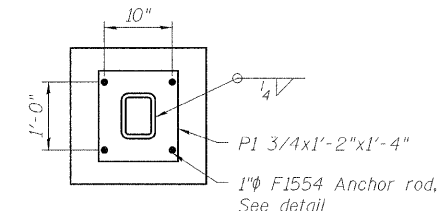
SECTION N-N



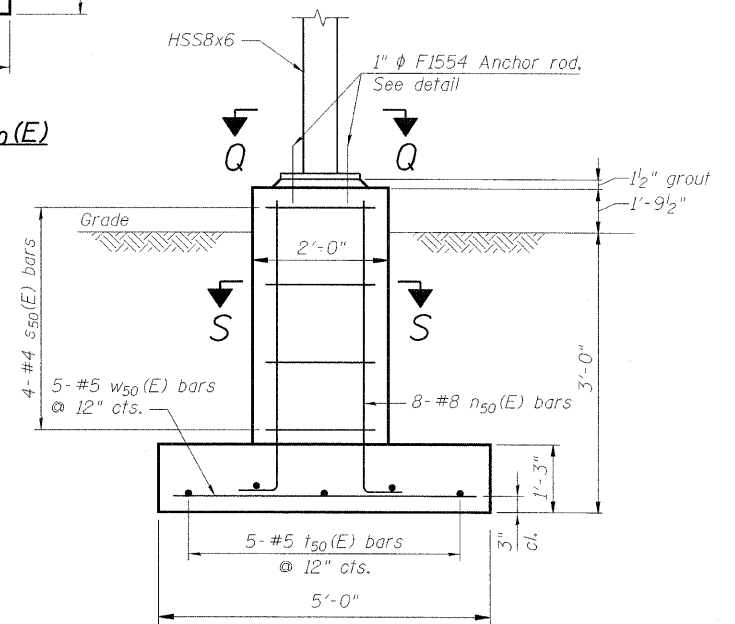
SECTION P-P



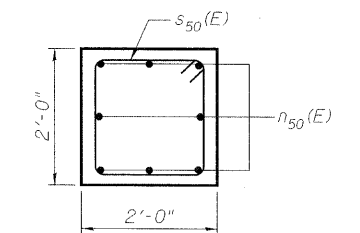
DETAIL A



SECTION Q-Q



STAIR FOUNDATION ELEVATION



SECTION S-S

Notes:

- Steel shapes and plates shall be ASTM A36.
- Guardrails shall be constructed of ASTM A53 pipe with Schedule 80 verticals and Schedule 40 horizontals.
- Steel Tubing shall be ASTM A500 gr. B.

- Bar Grating shall be galvanized with 1-1/4"x3/16" bearing bars. Serrated bar grating shall be used throughout.
- Bolted connections shall be ASTM A325N.
- Welding indicated shall be in accordance with AWS standards.

LEGEND

- Existing member to remain
- New member

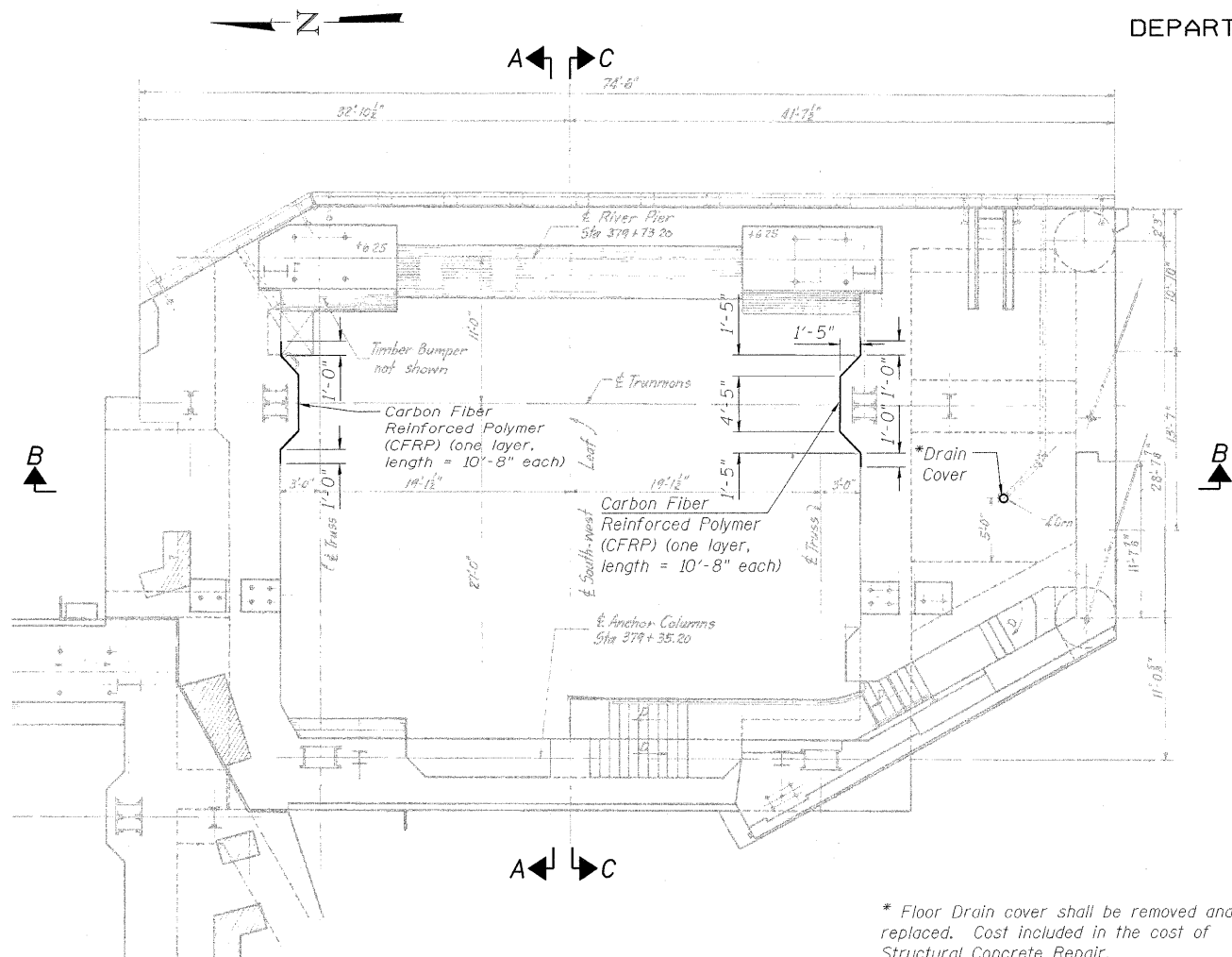
DESIGNED	K. STOCKIE
CHECKED	J. SHERMAN
DRAWN	E. KIENSTRA
CHECKED	A. HAMMAD

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 147	F.A.P RTE. 389	SECTION 2424.2B-R	COUNTY COOK	TOTAL SHEETS 398	SHEET NO. 228
CONTRACT NO. 60D61			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT		

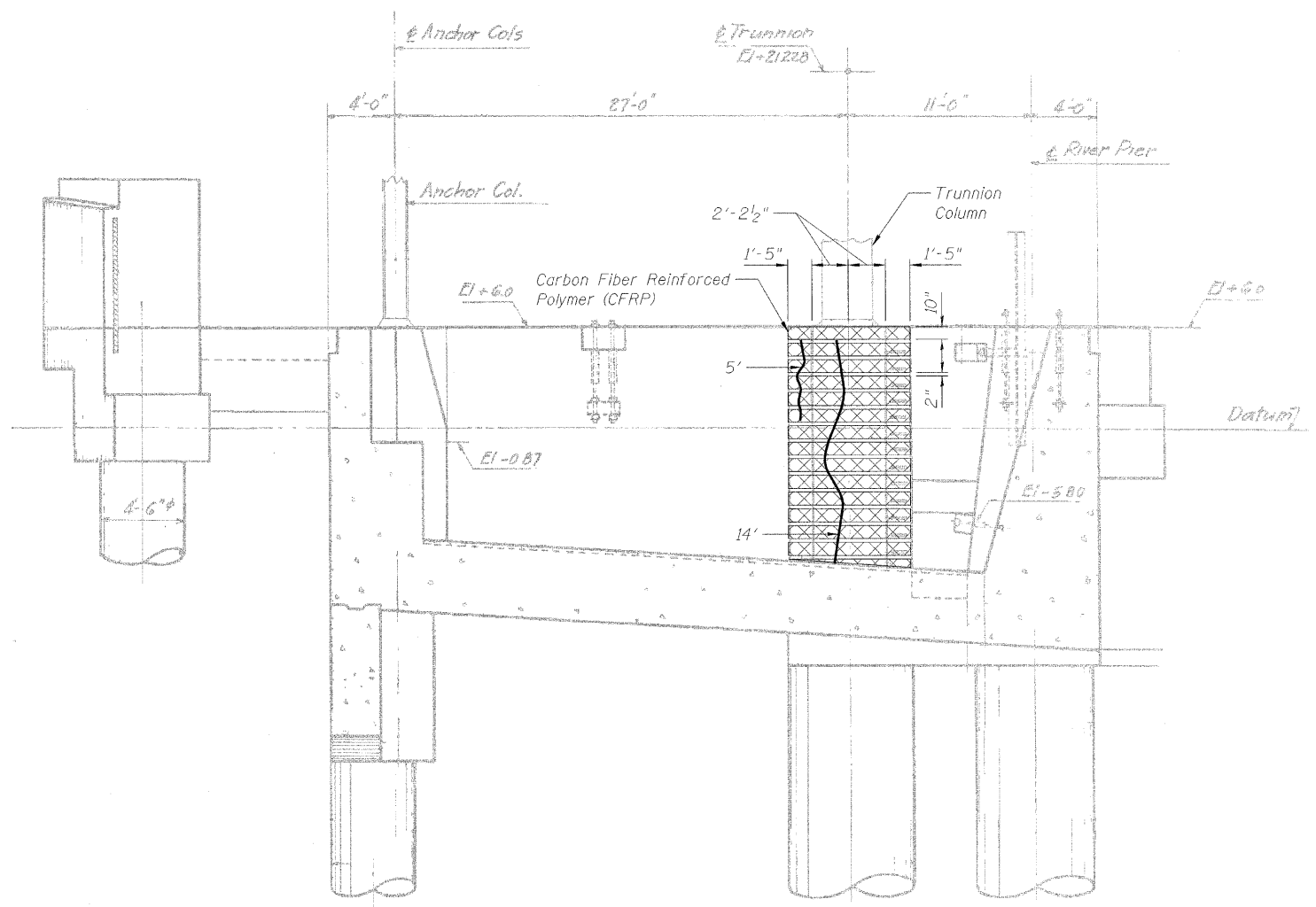
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07-MAY-2009

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**SOUTHWEST COUNTERWEIGHT PIT PLAN**

\* Floor Drain cover shall be removed and replaced. Cost included in the cost of Structural Concrete Repair.



**SECTION A-A**

Notes:  
Portions of this drawing are extracted from original drawings for this bridge. Details shown are provided to illustrate the work to be performed.  
Elevations are based on existing drawings. Contractor shall verify existing elevations and dimensions prior to ordering any material.  
See sheet 149 of 163 for Section B-B and Section C-C.

- LEGEND**
- 6' → Epoxy Crack Injection
  - Carbon Fiber Reinforced Polymer (CFRP)

DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

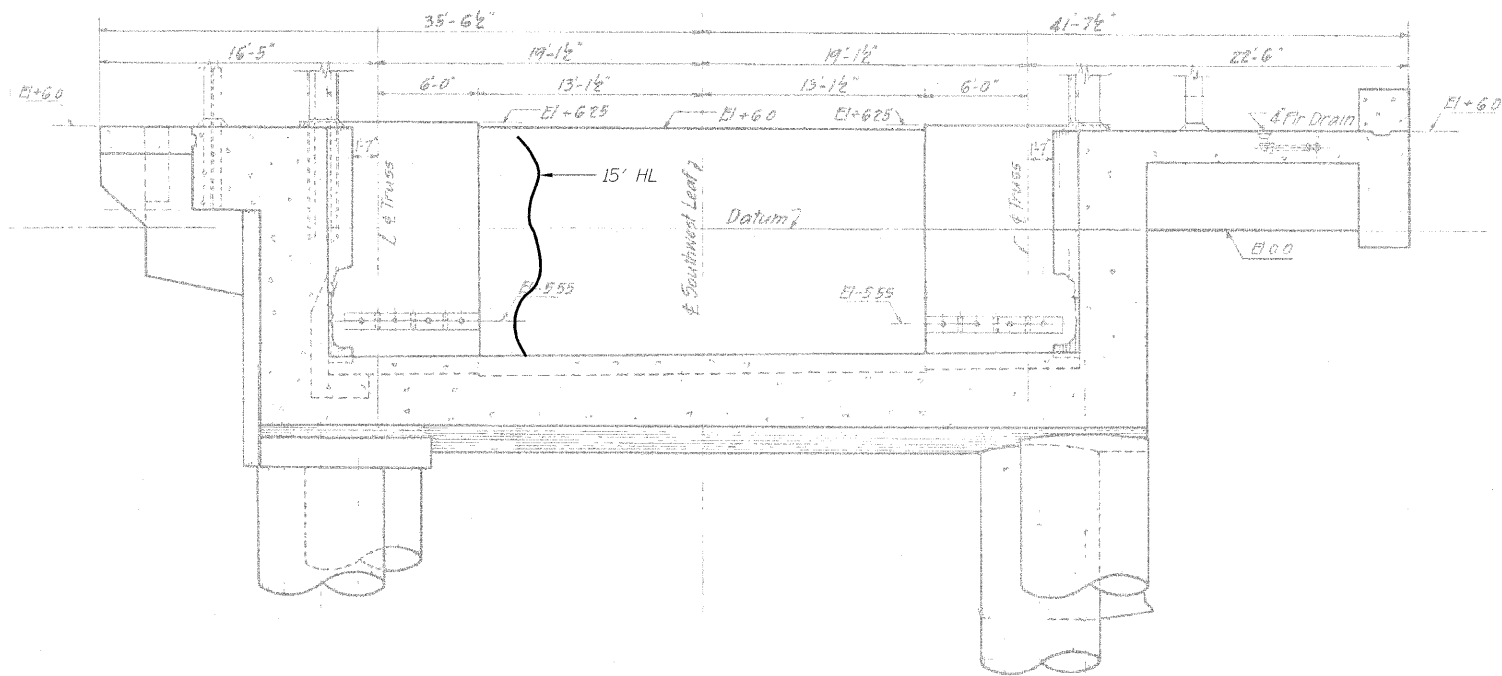
**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 148  163 SHEETS	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	229
			CONTRACT NO. 60D61		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

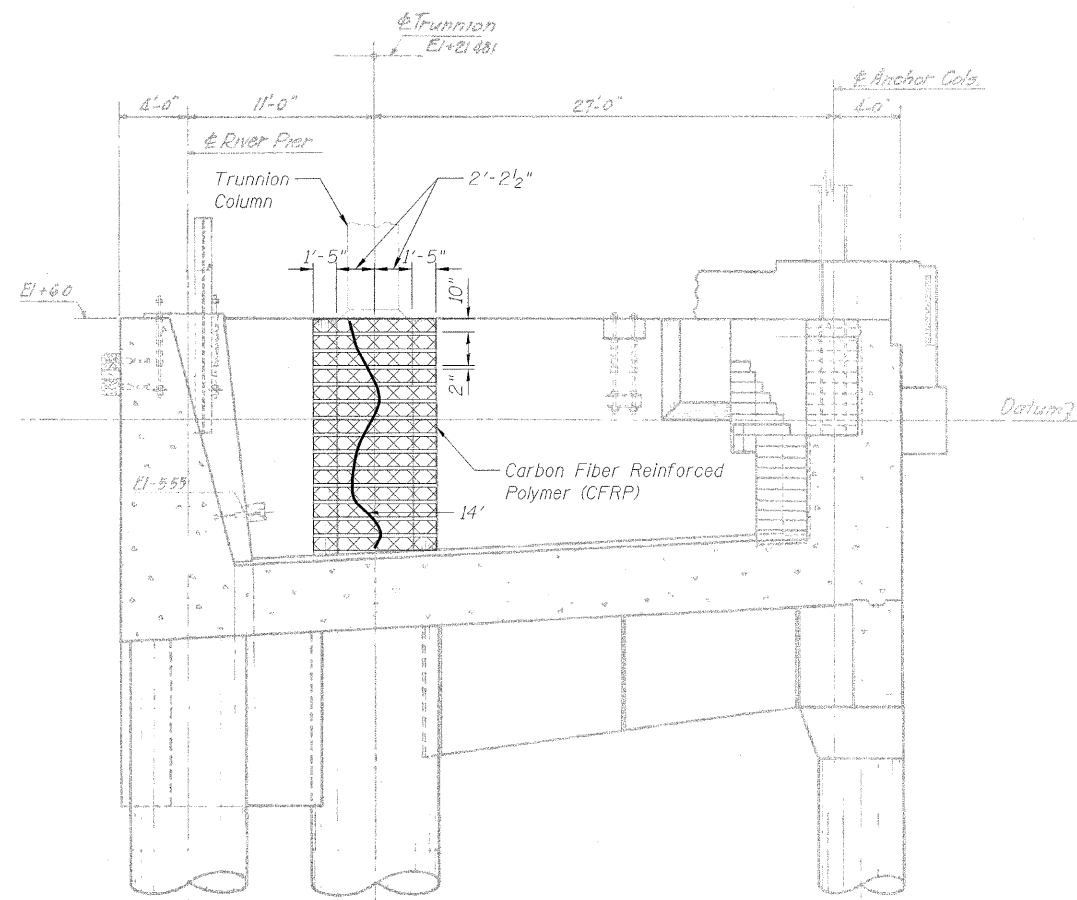
**WEST COUNTERWEIGHT  
PIT REPAIR (SOUTHWEST)  
STRUCTURE NO. 016-2445**

T:\18843\Structural\Cadd\Pre-final\EB\_Plans\0162445-60D61-CPR-148.dgn 07-MAY-2009

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



SECTION B-B



SECTION C-C

BILL OF MATERIAL

Item	Unit	Quantity
Epoxy Crack Injection	Foot	33
Carbon Fiber Reinforced Polymer (CFRP)	Sq. Ft.	249
Counterweight Pit Cleaning	Each	1

Notes:  
Portions of this drawing are extracted from original drawings for this bridge. Details shown are provided to illustrate the work to be performed.  
Elevations are based on existing drawings. Contractor shall verify existing elevations and dimensions prior to ordering any material.

LEGEND

- 6' — } Epoxy crack injection
- HL — } Hairline Crack - not to be sealed
- Carbon Fiber Reinforced Polymer (CFRP)

DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

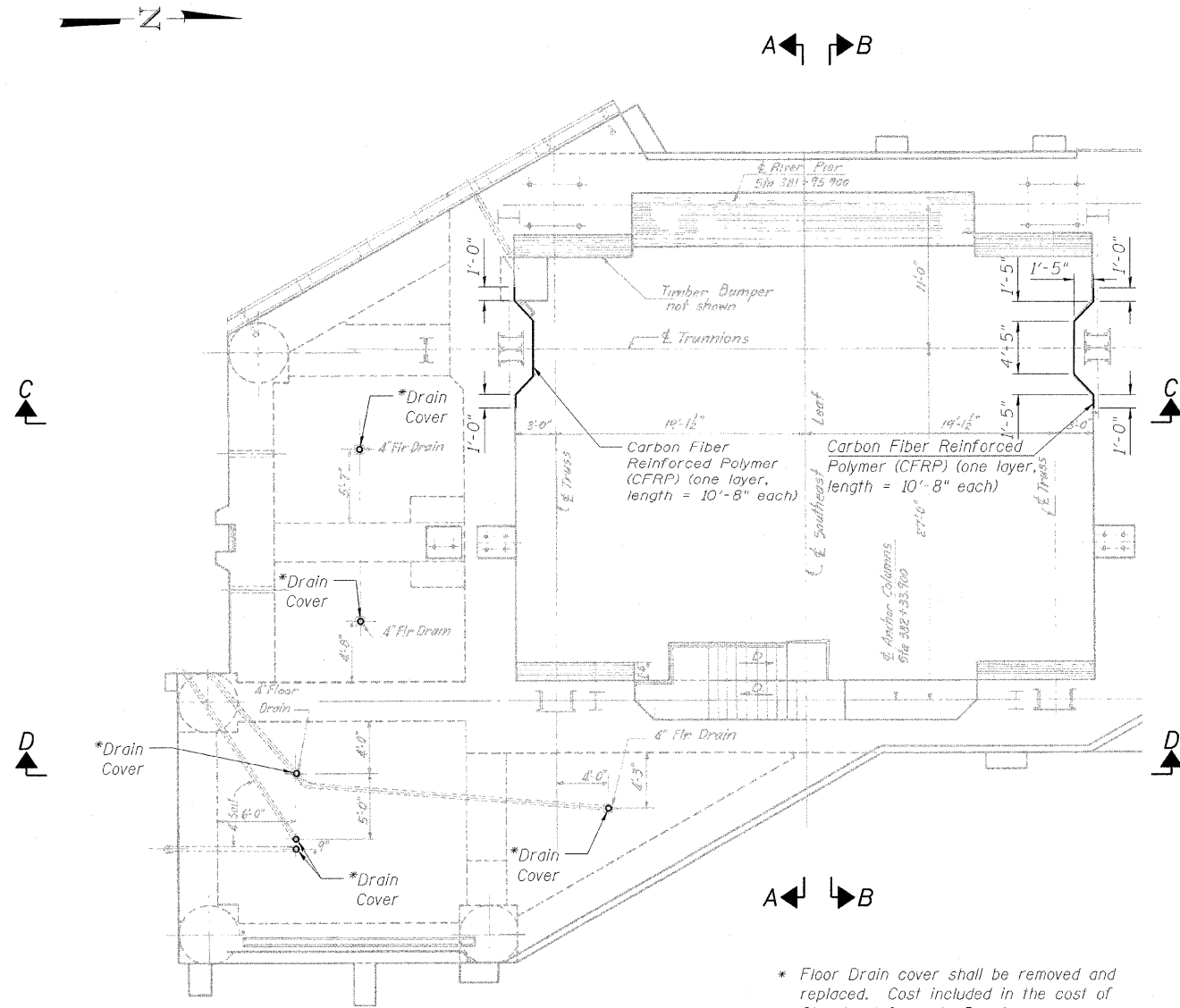
**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 149	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	230
163 SHEETS			CONTRACT NO. 60D61		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

WEST COUNTERWEIGHT  
PIT REPAIR (SOUTHWEST)  
STRUCTURE NO. 016-2445

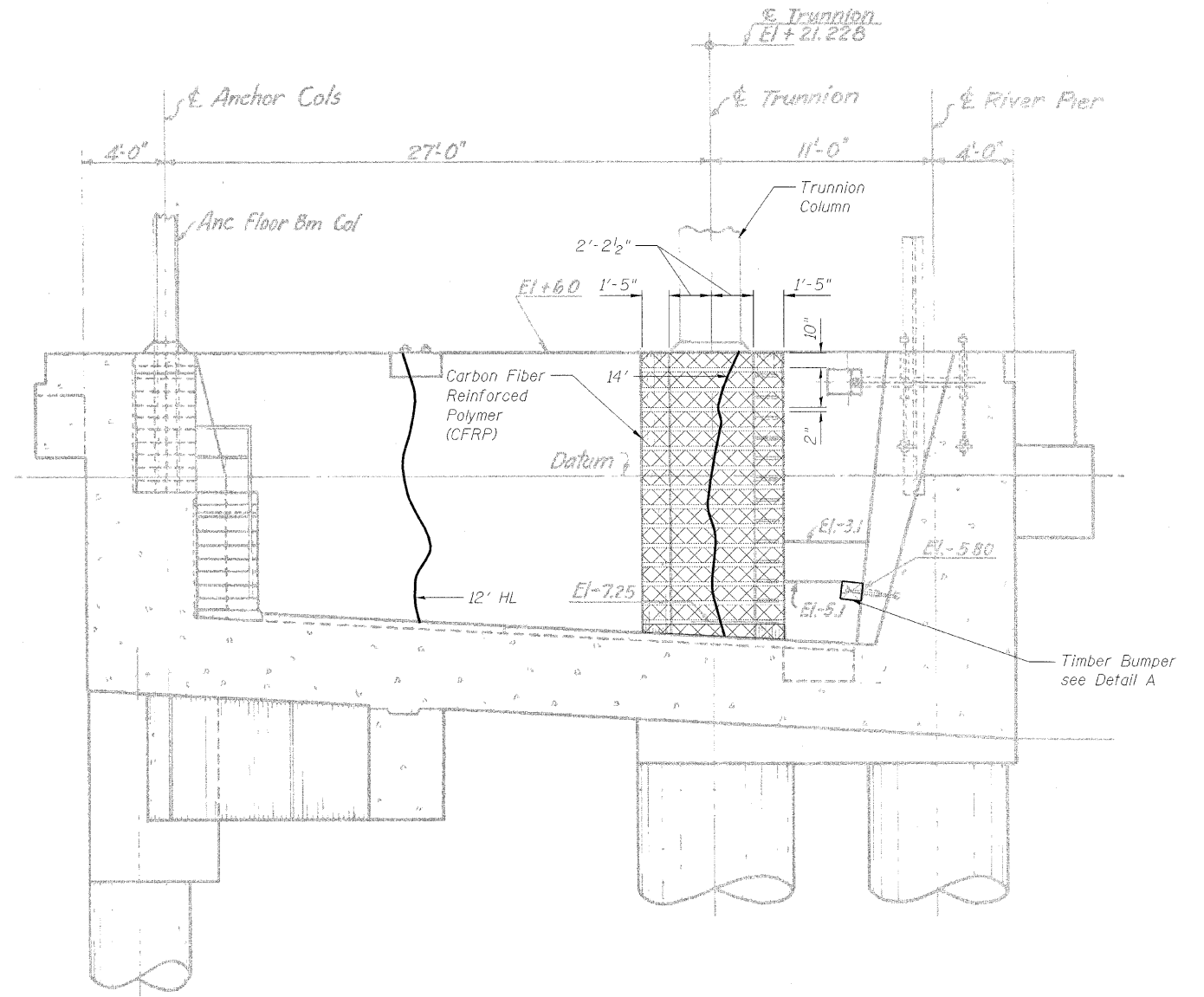
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



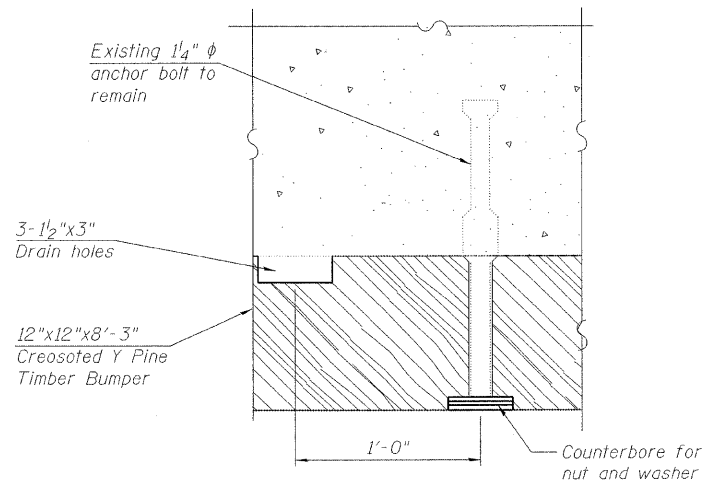
**SOUTHEAST COUNTERWEIGHT PIT PLAN**

\* Floor Drain cover shall be removed and replaced. Cost included in the cost of Structural Concrete Repair.



**SECTION A-A**

Notes:  
 Portions of this drawing are extracted from original drawings for this bridge. Details shown are provided to illustrate the work to be performed.  
 Elevations are based on existing drawings. Contractor shall verify existing elevations and dimensions prior to ordering any material.  
 See sheet 151 of 163 for section B-B through Section D-D.



**DETAIL A**

**LEGEND**

- 6' → Epoxy Crack Injection
- HL → Hairline Crack - not to be sealed
- [Cross-hatched box] Carbon Fiber Reinforced Polymer (CFRP)

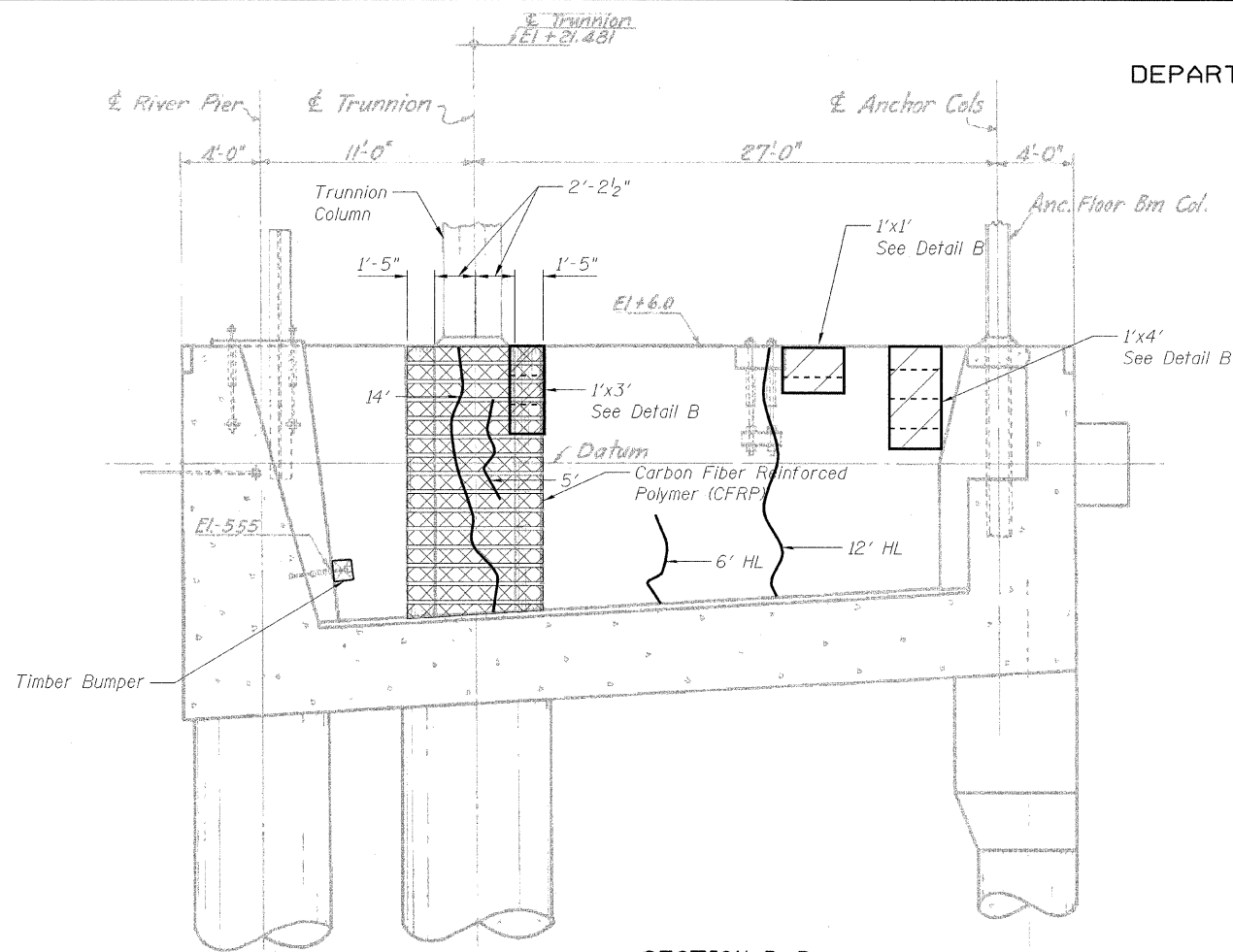
DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

**PB Americas, Inc.**  
 230 WEST MONROE STREET,  
 SUITE 900  
 CHICAGO, IL. 60606

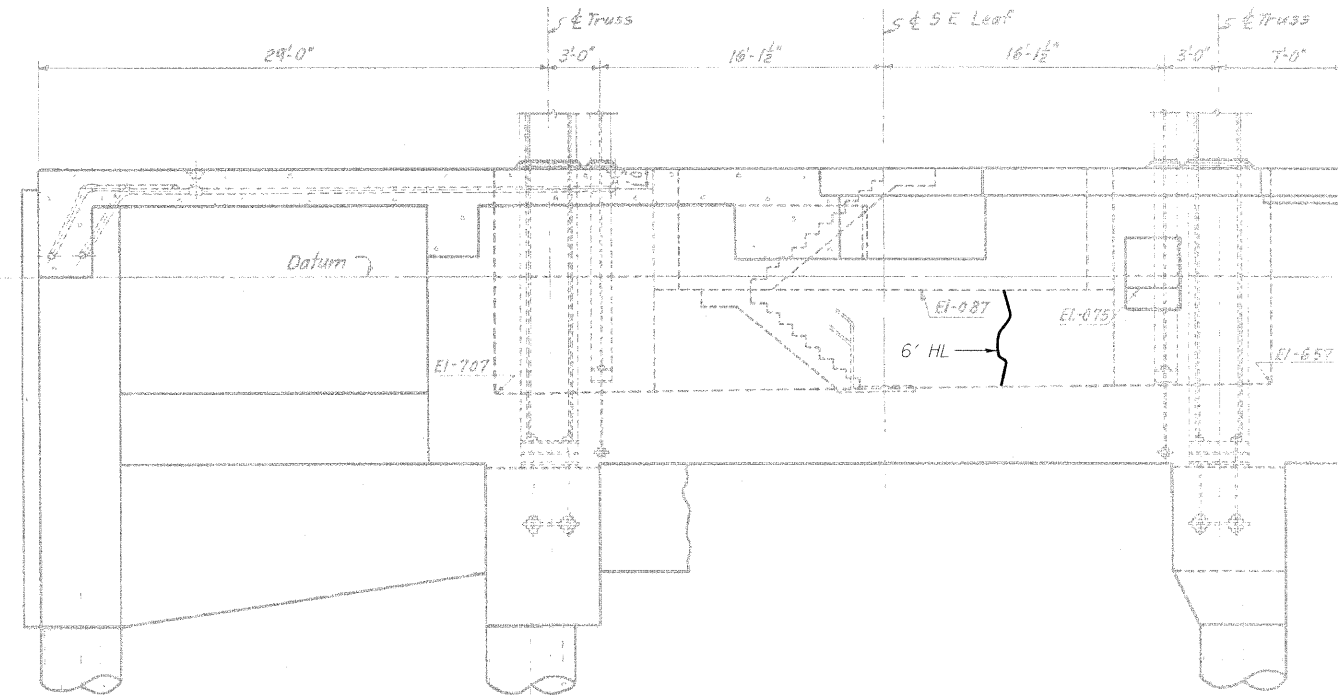
SHEET NO. 150	F.A.P RTE. 389	SECTION 2424.2B-R	COUNTY COOK	TOTAL SHEETS 398	SHEET NO. 231
163 SHEETS	CONTRACT NO. 60D61		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT		

**EAST COUNTERWEIGHT  
PIT REPAIR (SOUTHEAST)  
STRUCTURE NO. 016-2445**

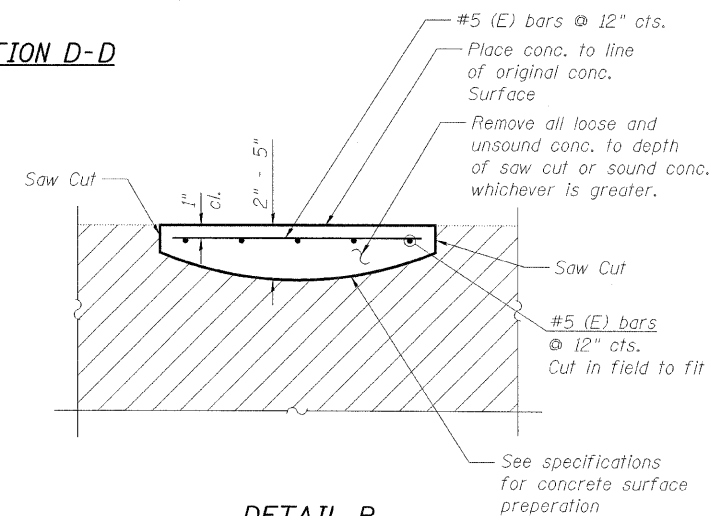
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



SECTION B-B



SECTION D-D



DETAIL B  
STRUCTURAL REPAIR OF CONCRETE  
DEPTH EQUAL TO OR LESS THAN 5"

Notes:  
Portions of this drawing are extracted from original drawings for this bridge. Details shown are provided to illustrate the work to be performed.  
Elevations are based on existing drawings. Contractor shall verify existing elevations and dimensions prior to ordering any material.  
See sheet 150 of 163 for Detail A.

EAST COUNTERWEIGHT  
PIT REPAIR (SOUTHEAST)  
STRUCTURE NO. 016-2445



SECTION C-C

LEGEND

- Spalled Concrete (16 S.F.)
- Spalled Concrete with exposed rebar (24 S.F.)
- Epoxy crack injection
- Hairline Crack - not to be sealed
- Carbon Fiber Reinforced Polymer (CFRP)

BILL OF MATERIAL

Item	Unit	Quantity
Epoxy Crack Injection	Foot	33
Carbon Fiber Reinforced Polymer (CFRP)	Sq. Ft.	248.8
Timber Bumper	Foot	16
Structural Concrete Repair <=5"	Sq. Ft.	40
Counterweight Pit Cleaning	Each	1

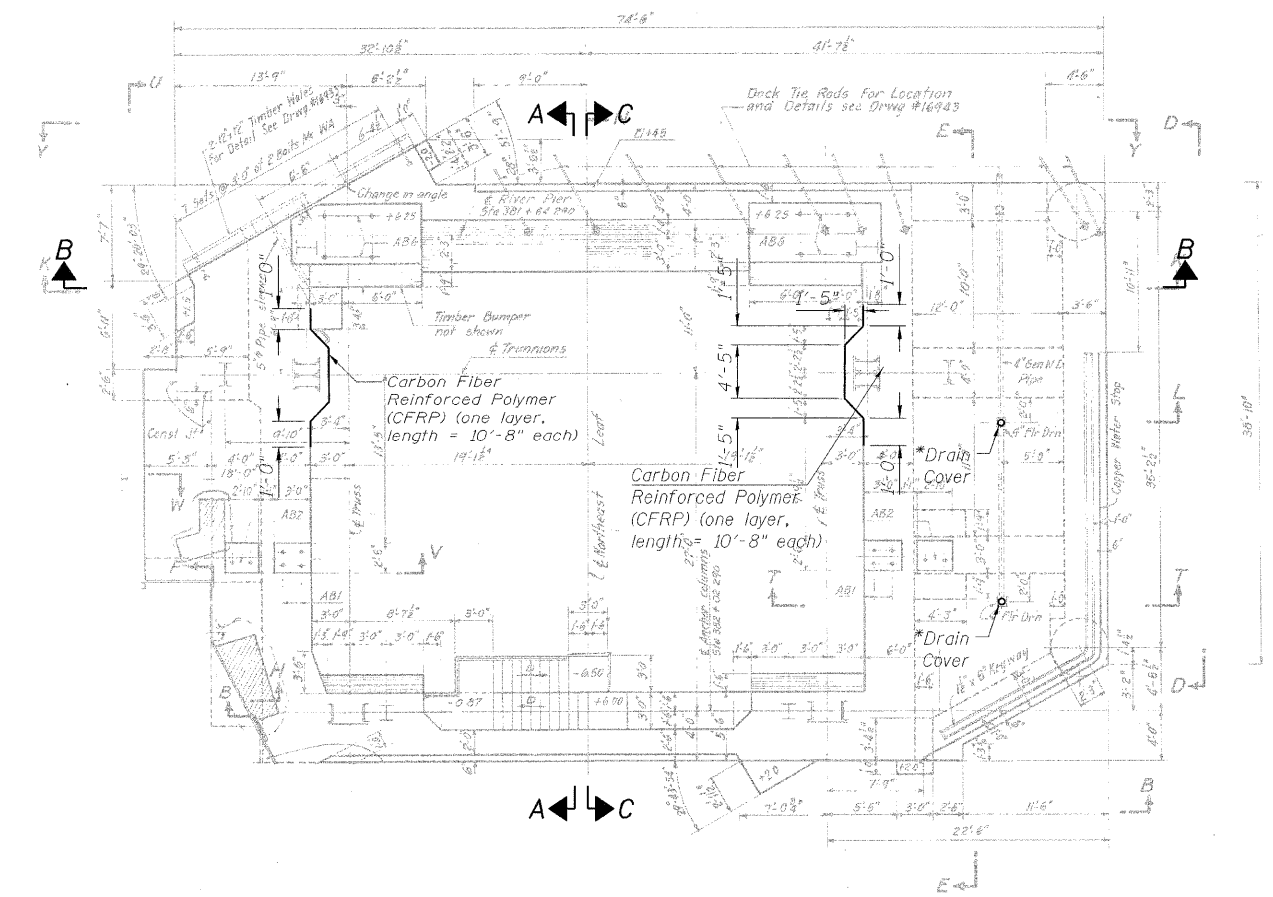
DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 151	F.A.P RTE. 389	SECTION 2424.2B-R	COUNTY COOK	TOTAL SHEETS 398	SHEET NO. 232
163 SHEETS		CONTRACT NO. 60D61			
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

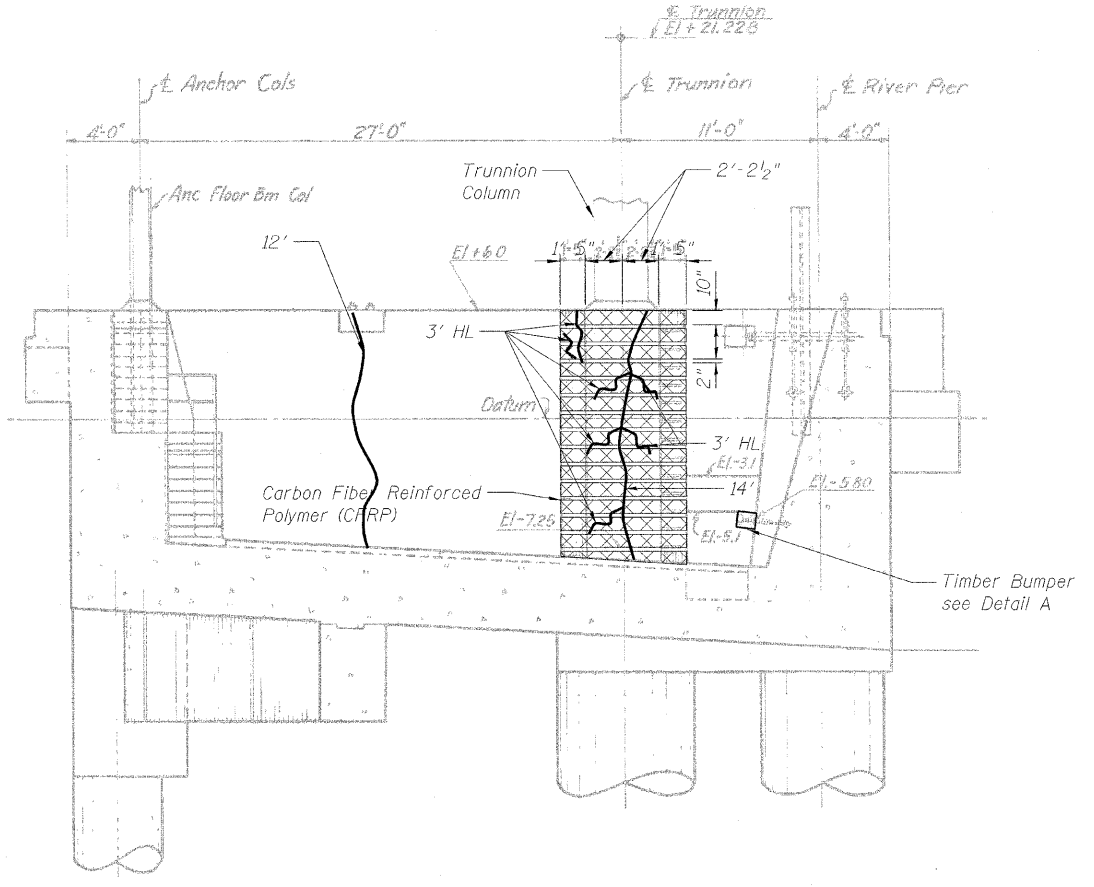


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**NORTHEAST COUNTERWEIGHT PIT PLAN**

\* Floor Drain cover shall be removed and replaced. Cost included in the cost of Structural Concrete Repair.



**SECTION A-A**

Notes:  
Portions of this drawing are extracted from original drawings for this bridge. Details shown are provided to illustrate the work to be performed.  
Elevations are based on existing drawings. Contractor shall verify existing elevations and dimensions prior to ordering any material.  
See sheet 153 of 163 for Section B-B and Section C-C.

**LEGEND**

- 6' → Epoxy Crack Injection
- HL → Hairline Crack - not to be sealed
- Carbon Fiber Reinforced Polymer (CFRP)

DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

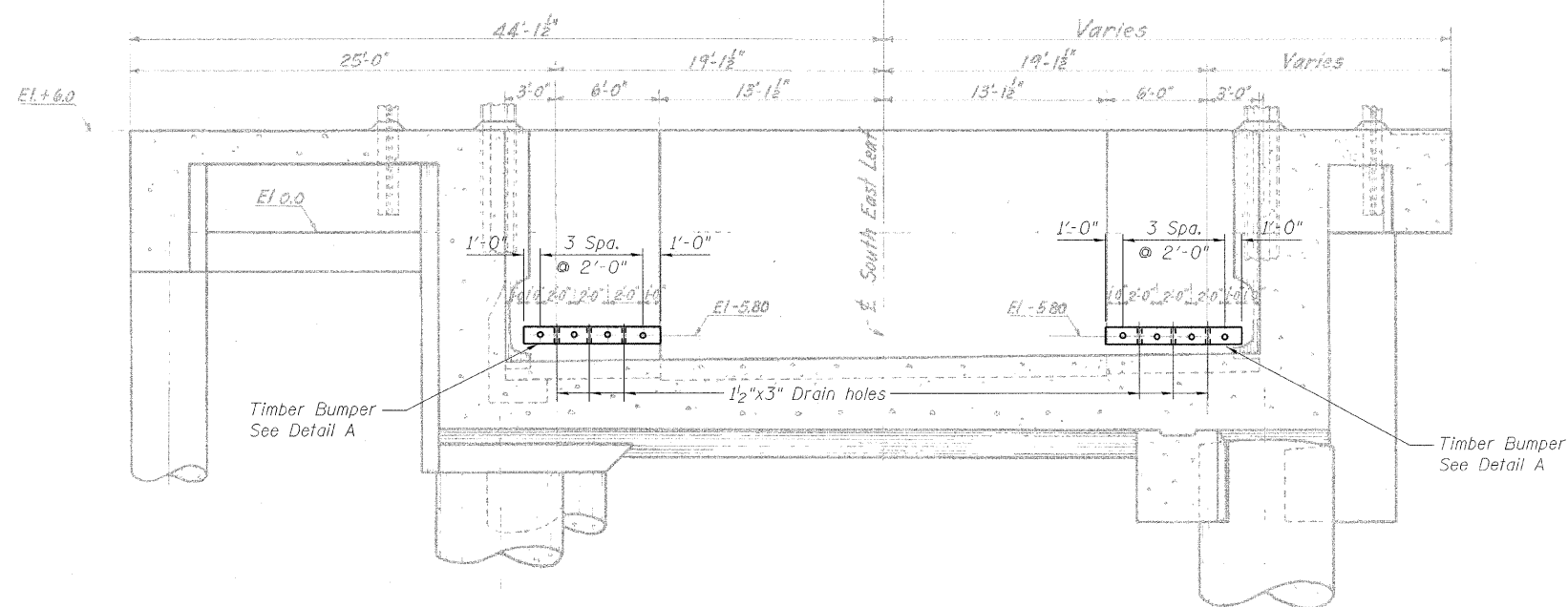
**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 152 163 SHEETS	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	233
FED. ROAD DIST. NO. 7 ILLINOIS			CONTRACT NO. 60D61		
FED. AID PROJECT					

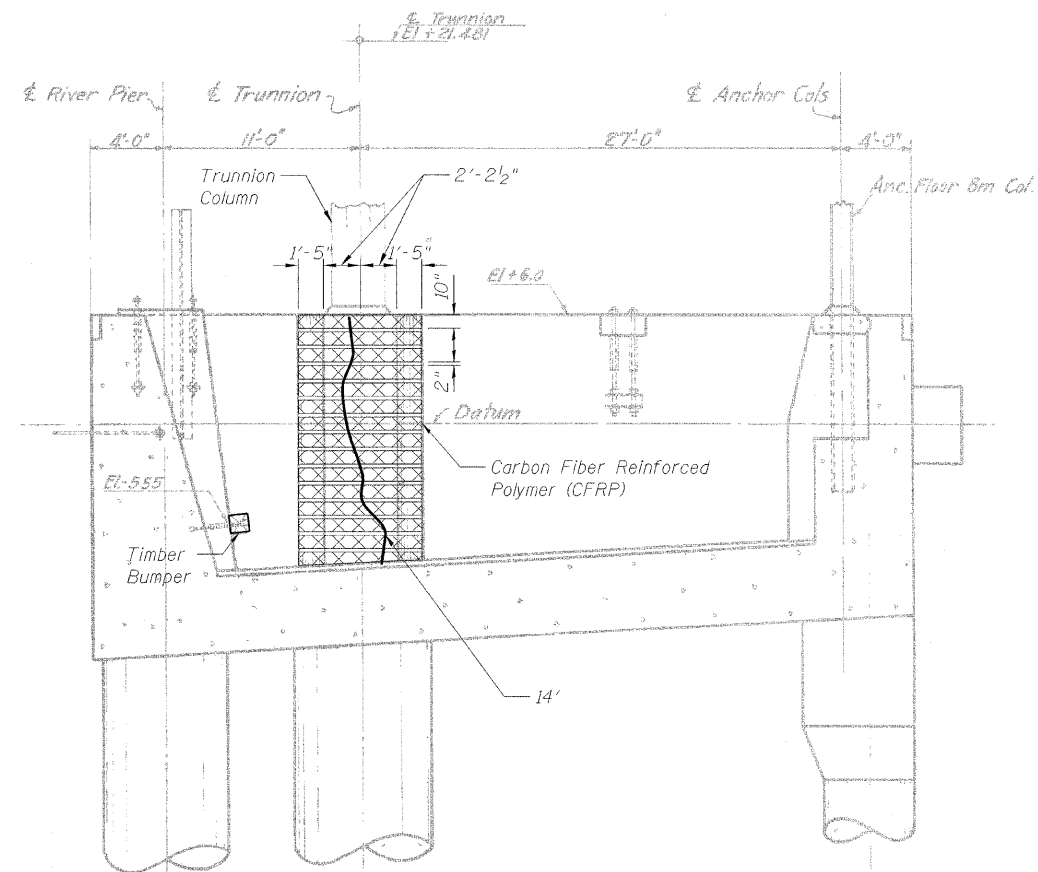
**EAST COUNTERWEIGHT  
PIT REPAIR (NORTHEAST)  
STRUCTURE NO. 016-2445**

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07-MAY-2009

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



SECTION B-B



SECTION C-C

DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

LEGEND

- 6' — } Epoxy crack injection
- HL — } Hairline Crack - not to be sealed
- Carbon Fiber Reinforced Polymer (CFRP)

BILL OF MATERIAL

Item	Unit	Quantity
Epoxy Crack Injection	Foot	40
Carbon Fiber Reinforced Polymer Repair	Sq. Ft.	248.8
Timber Bumper	Foot	16
Counterweight Pit Cleaning	Each	1

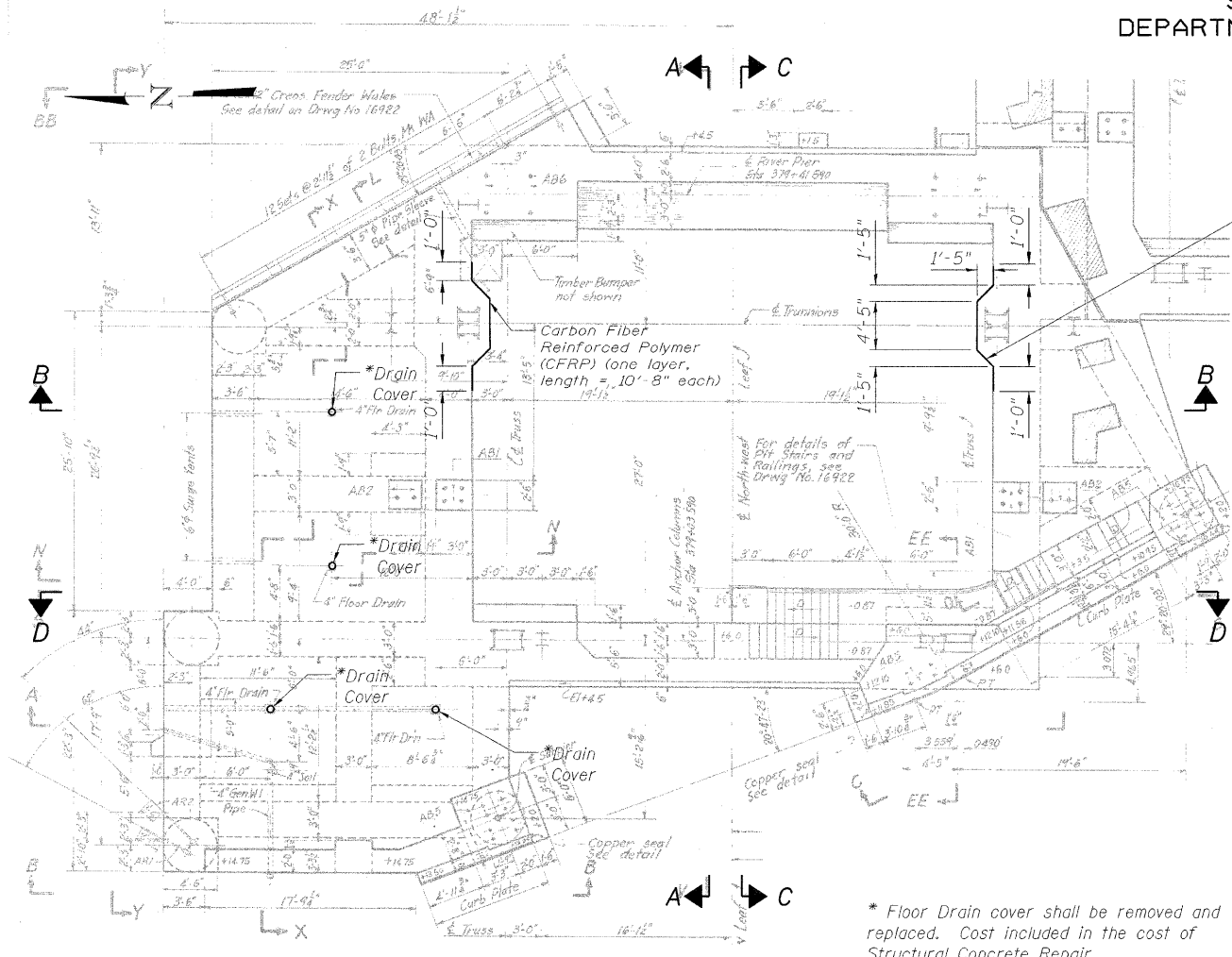
Notes:  
Portions of this drawing are extracted from original drawings for this bridge. Details shown are provided to illustrate the work to be performed.  
Elevations are based on existing drawings. Contractor shall verify existing elevations and dimensions prior to ordering any material.  
See sheet 150 of 163 for Detail A.

EAST COUNTERWEIGHT  
PIT REPAIR (NORTHEAST)  
STRUCTURE NO. 016-2445

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

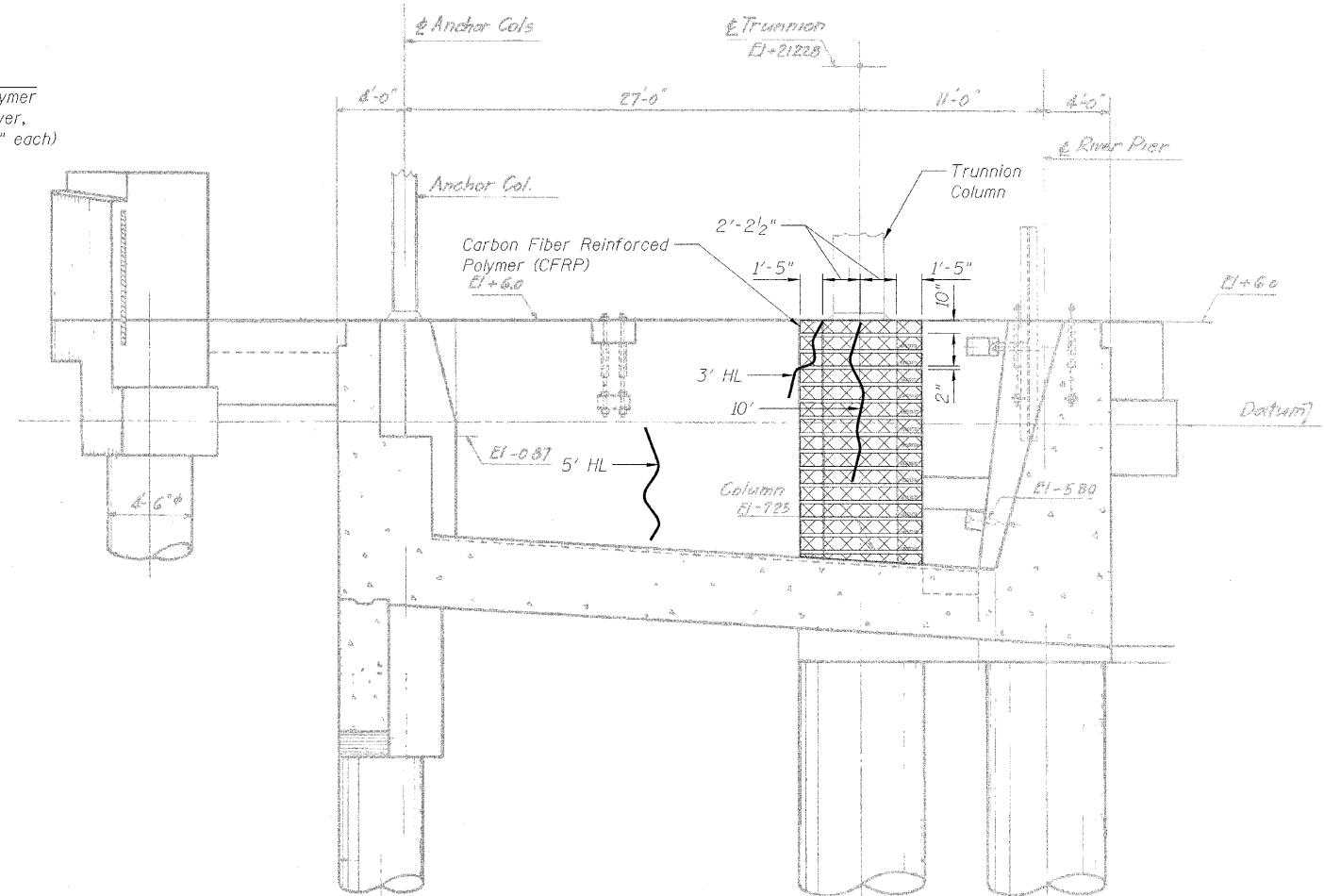
SHEET NO. 153 163 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	234
CONTRACT NO. 60D61					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**NORTHWEST COUNTERWEIGHT PIT PLAN**

Carbon Fiber Reinforced Polymer (CFRP) (one layer, length = 10'-8" each)



**SECTION A-A**

Notes:  
Portions of this drawing are extracted from original drawings for this bridge. Details shown are provided to illustrate the work to be performed.  
Elevations are based on existing drawings. Contractor shall verify existing elevations and dimensions prior to ordering any material.  
See sheet 155 of 163 for Section B-B through Section D-D.

**LEGEND**

- 6' — } Epoxy crack injection
- HL — } Hairline Crack - not to be sealed
- Carbon Fiber Reinforced Polymer (CFRP)

DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

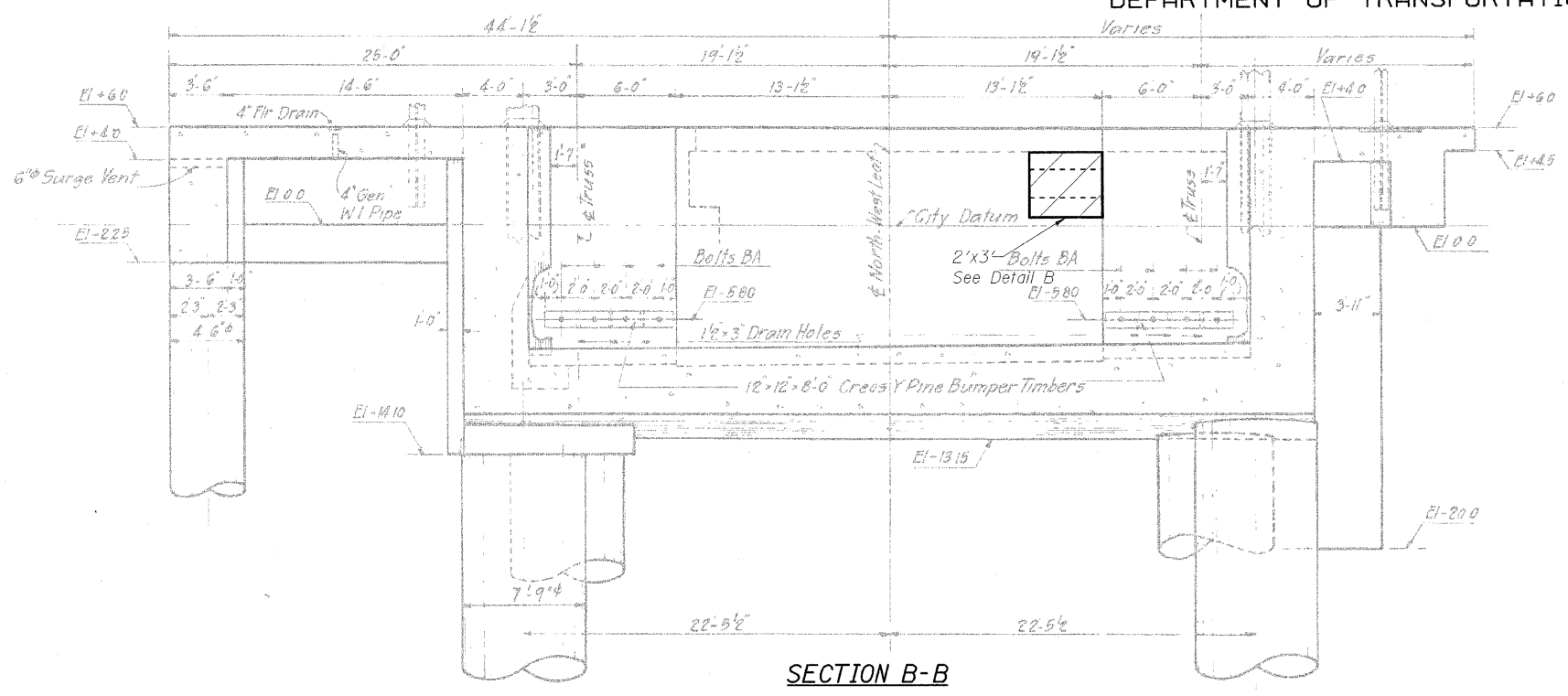
**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 154 163 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	235
CONTRACT NO. 60D61					
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

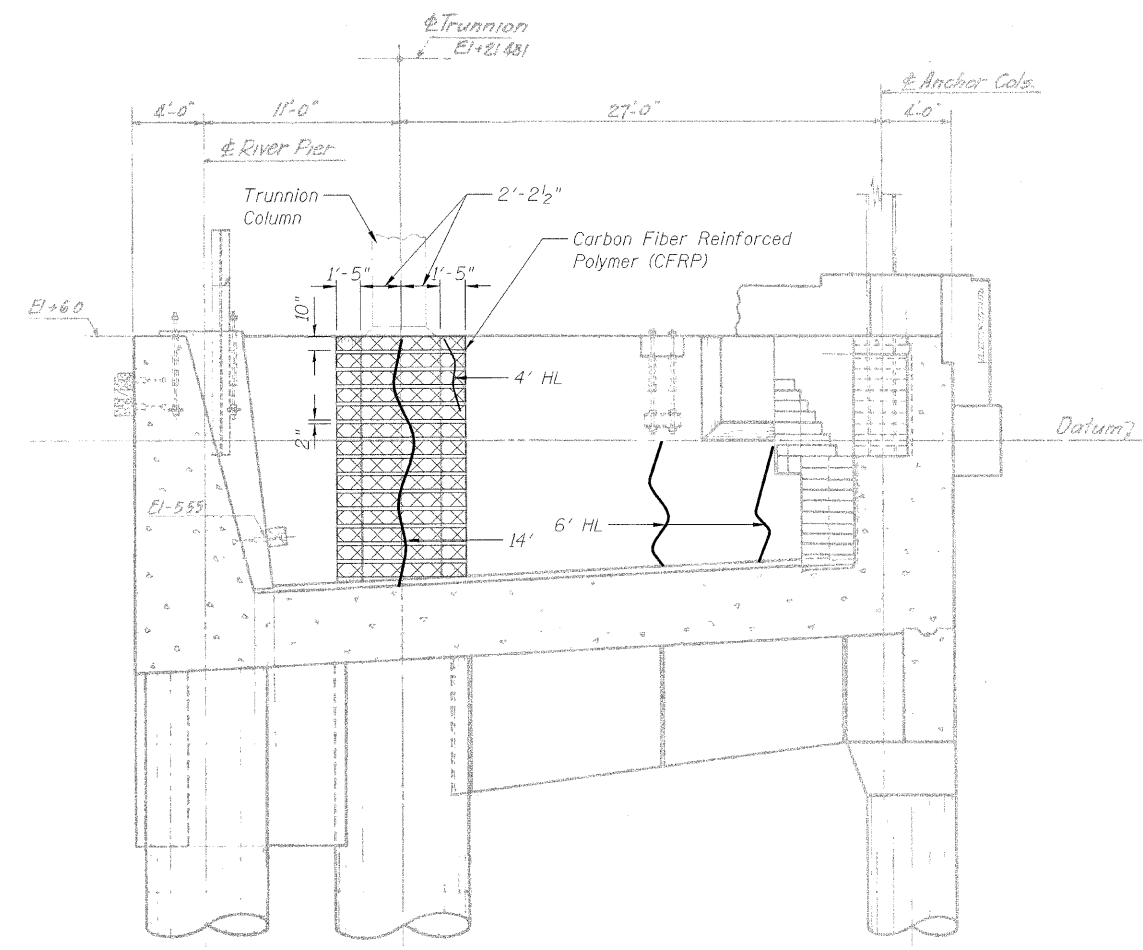
**WEST COUNTERWEIGHT  
PIT REPAIR (NORTHWEST)  
STRUCTURE NO. 016-2445**

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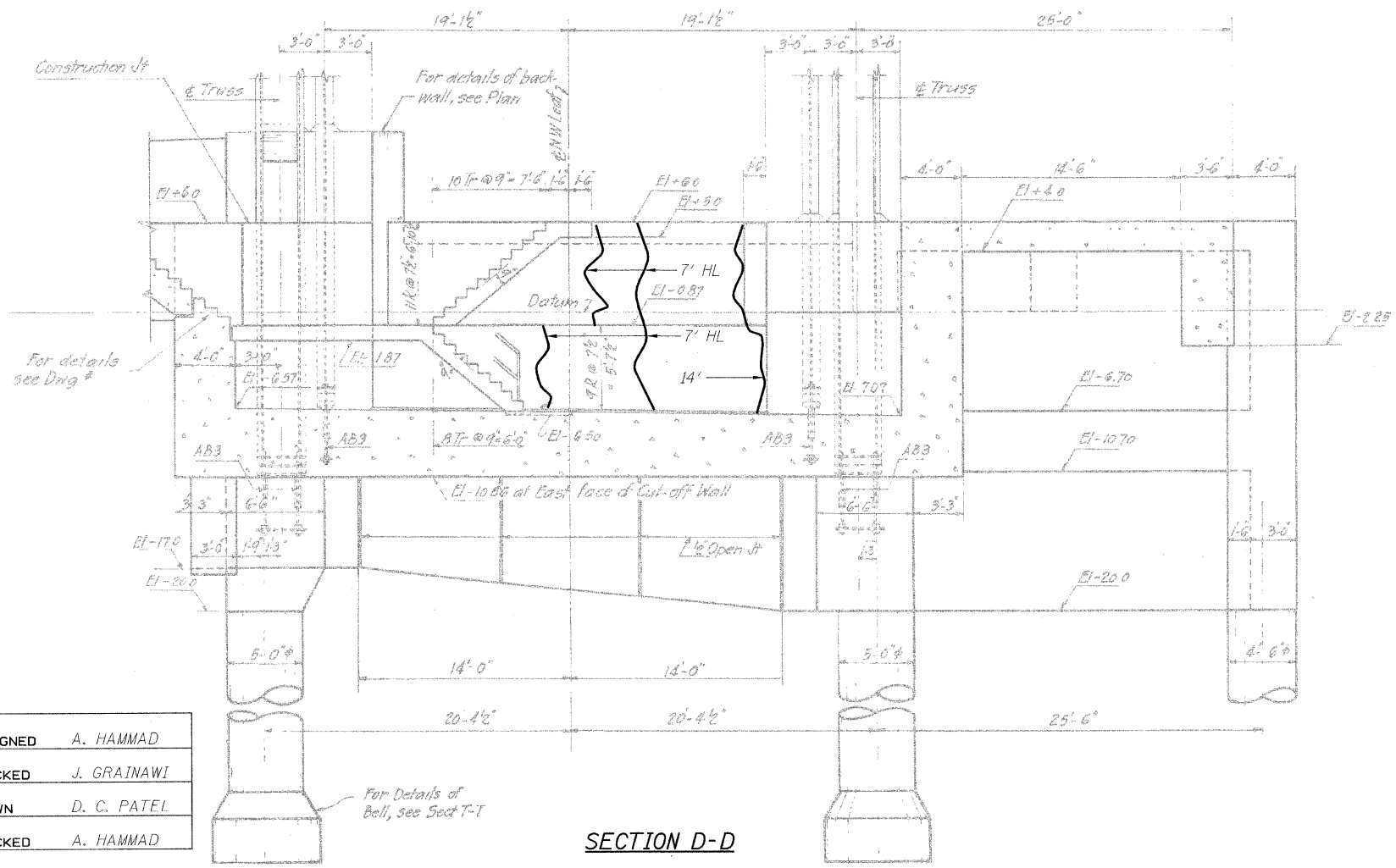
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



SECTION B-B







SECTION C-C



SECTION D-D

LEGEND

-  Spalled Concrete with exposed rebar
-  Epoxy crack injection
-  Hairline Crack - not to be sealed
-  Carbon Fiber Reinforced Polymer (CFRP)

BILL OF MATERIAL

Item	Unit	Quantity
Epoxy Crack Injection	Foot	38
Carbon Fiber Reinforced Polymer (CFRP)	Sq. Ft.	248.8
Structural Concrete Repair <=5"	Sq. Ft.	6
Counterweight Pit Cleaning	Each	1

Notes:  
Portions of this drawing are extracted from original drawings for this bridge. Details shown are provided to illustrate the work to be performed.  
Elevations are based on existing drawings. Contractor shall verify existing elevations and dimensions prior to ordering any material. See sheet 150 of 163 for Detail A. See sheet 151 of 163 for Detail B.

WEST COUNTERWEIGHT  
PIT REPAIR (NORTHWEST)  
STRUCTURE NO. 016-2445

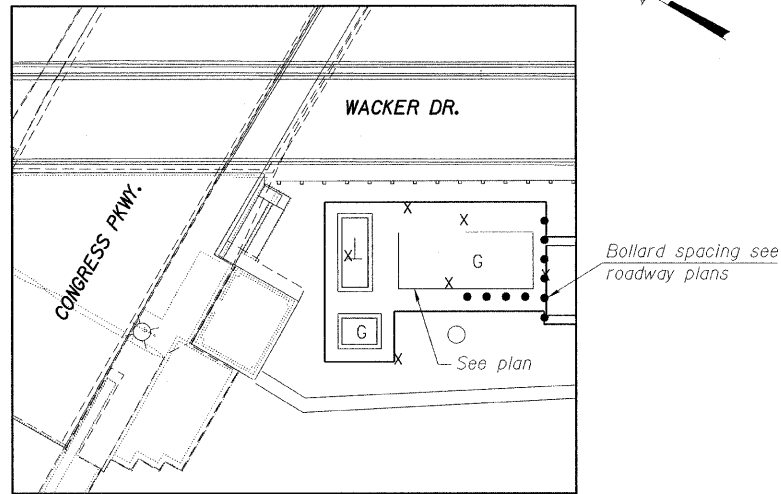
DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL 60606

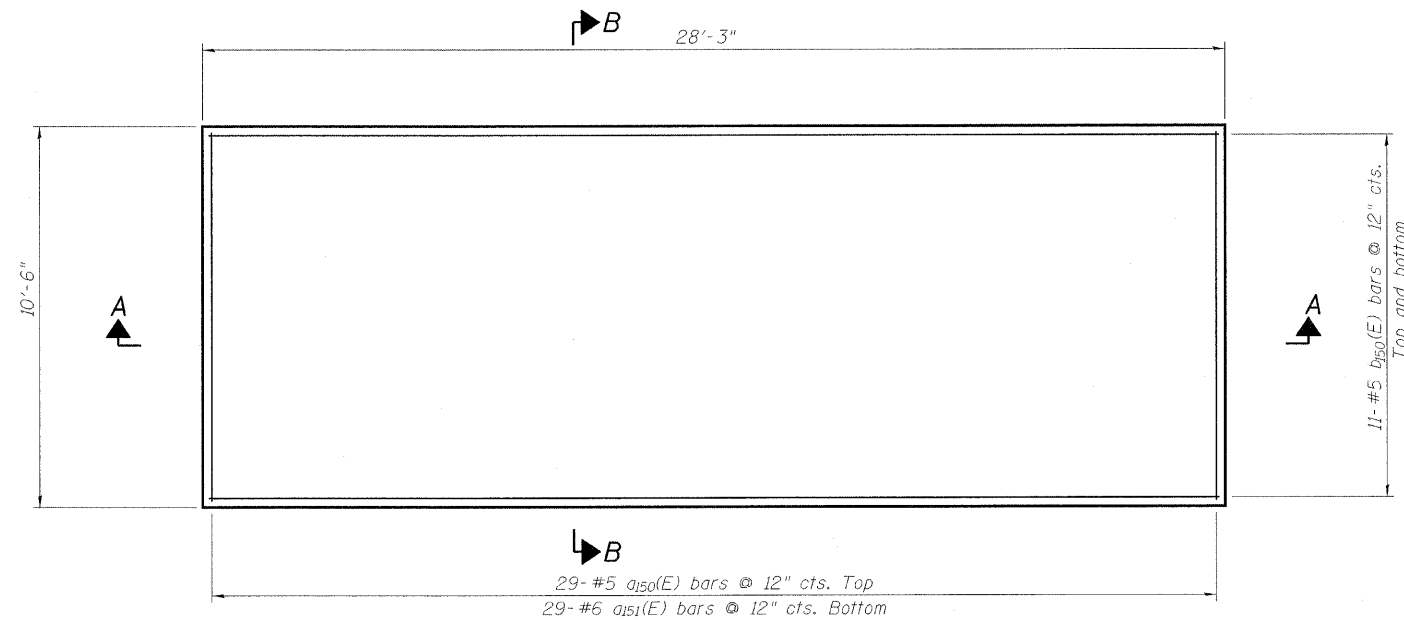
SHEET NO. 155	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	236
163 SHEETS			CONTRACT NO. 60D61		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

T:\16863\Structural\Cadd\Pre-final\EB\_Plans\0162445-60D61-CPR-155.dgn  
07-MAY-2009

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



KEY PLAN

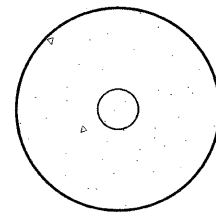


PLAN

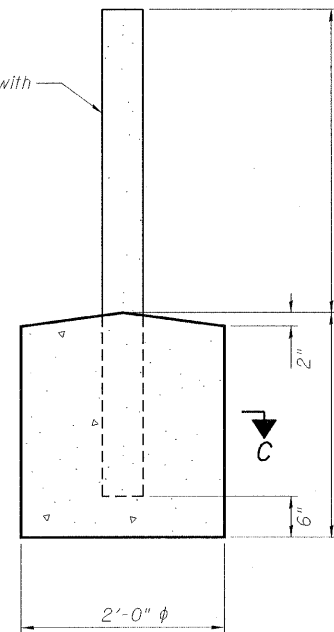
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a150(E)	29	#5	10'-2"	—
a151(E)	29	#6	10'-2"	—
b150(E)	22	#5	27'-11"	—
Reinforcement Bars, Epoxy Coated		Pound	1400	
Concrete Structures		Cu. Yds.	13.8	
Bollard		Each	10	

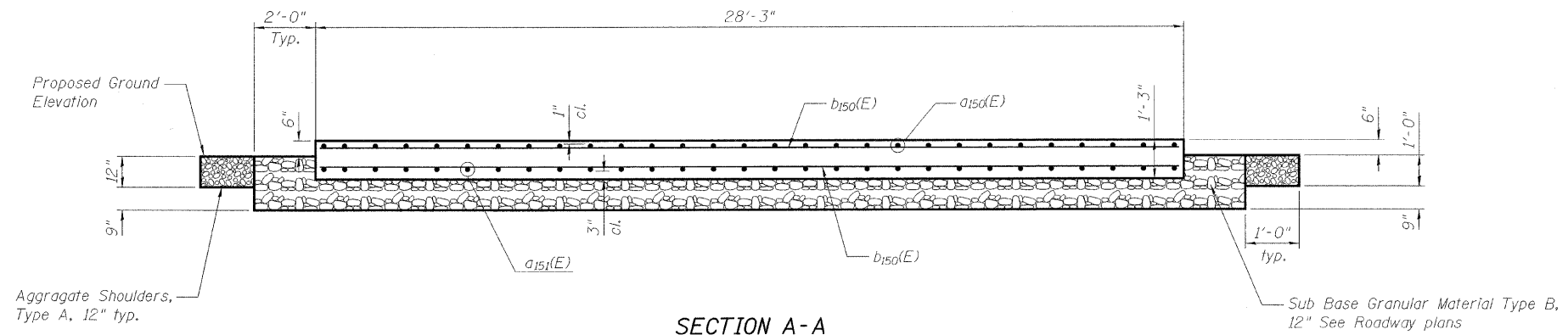
Note:  
Quantities shown are for information only, see roadway plans.



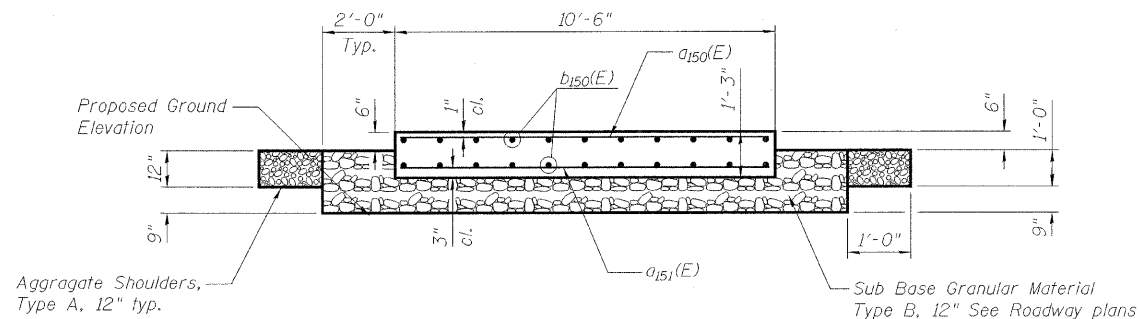
SECTION C-C



BOLLARD DETAIL



SECTION A-A



SECTION B-B

Notes:  
Contractor shall coordinate all work with ComEd and emergency generator manufacturer and as required by the Engineer.  
The cost of additional thickness of sub-base granular material shall be included in the contract unit price for sub-base granular material type B, 12"

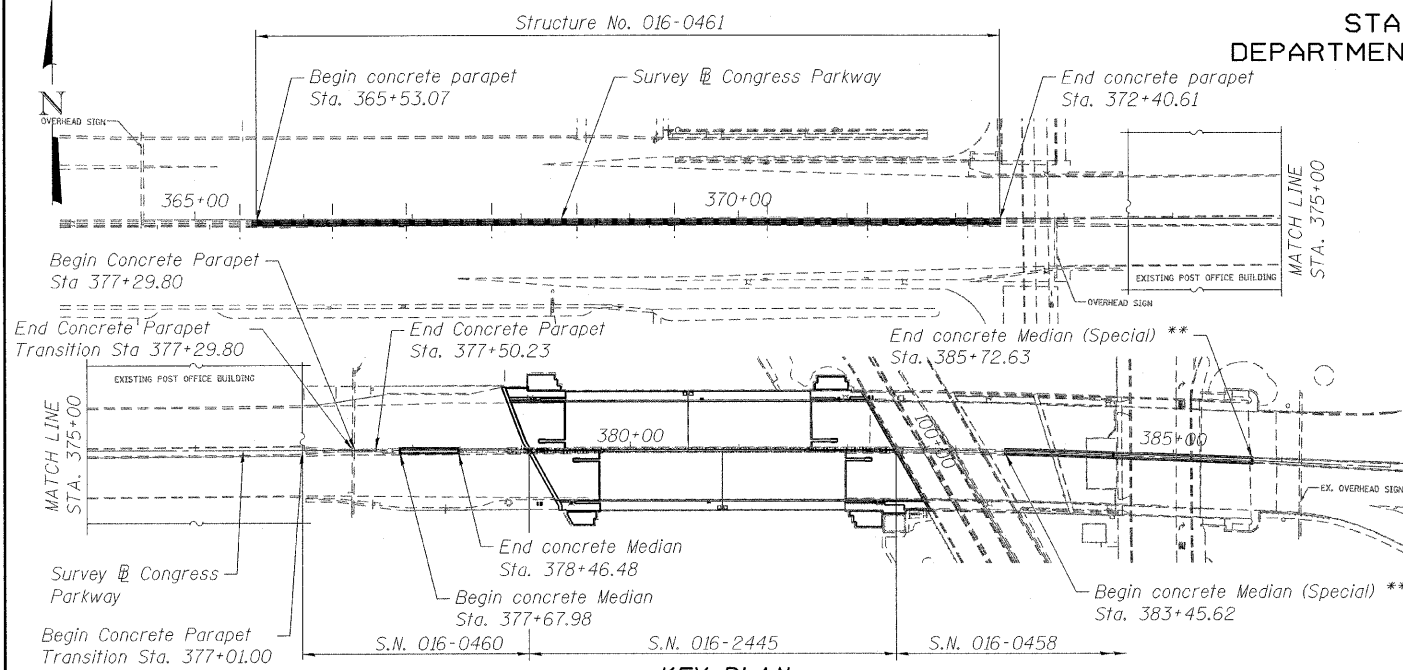
CONCRETE SLAB FOR  
EMERGENCY GENERATOR  
STRUCTURE NO. 016-2445

DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

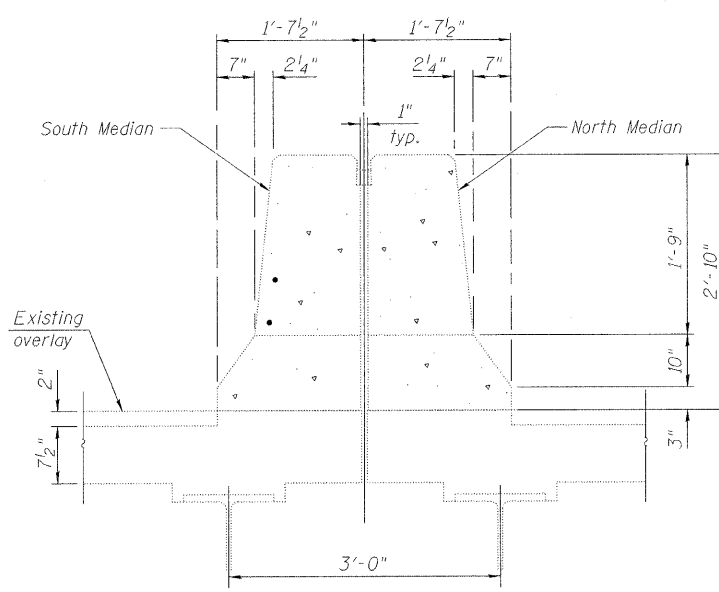
**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 156	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
163 SHEETS	389	2424.2B-R	COOK	398	237
			CONTRACT NO. 60D61		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

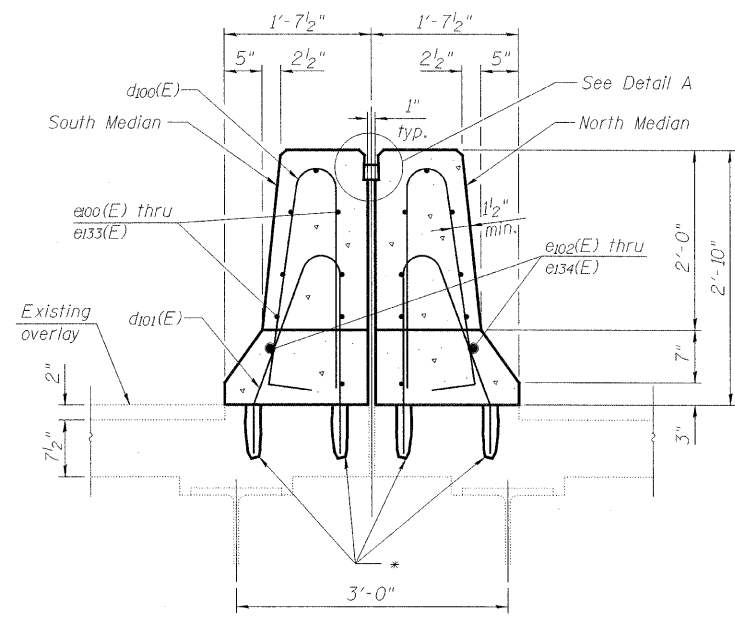
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



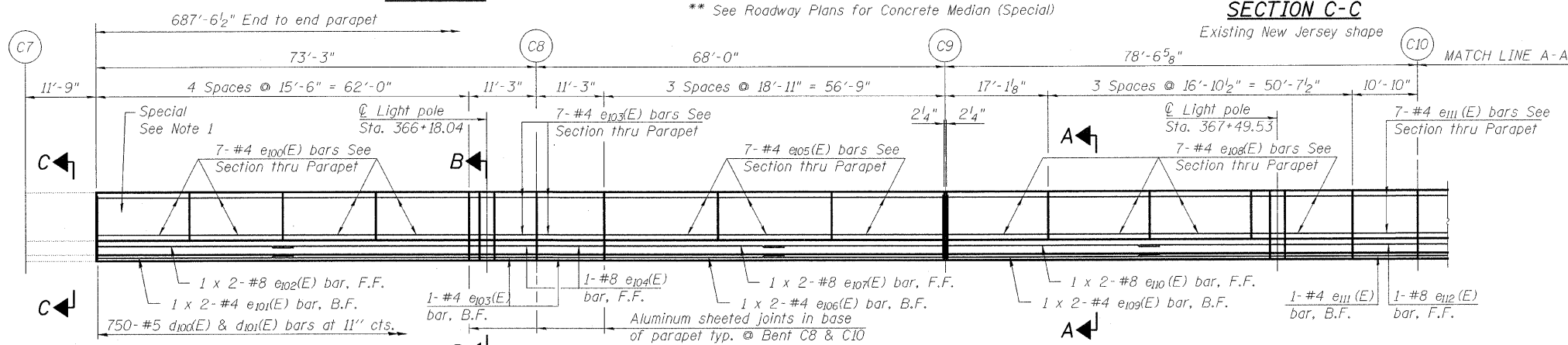
KEY PLAN



SECTION C-C

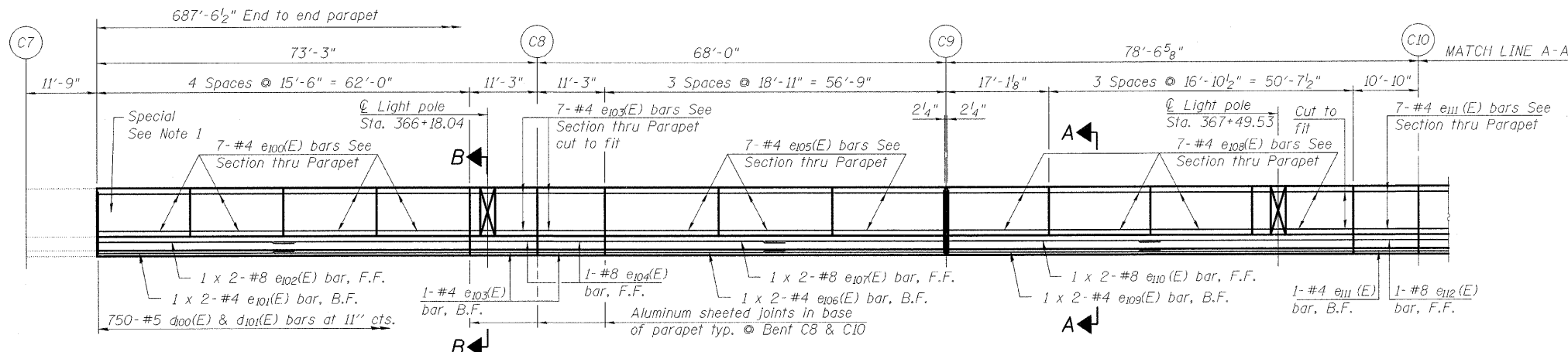


SECTION A-A



ELEVATION MEDIAN NORTH SIDE

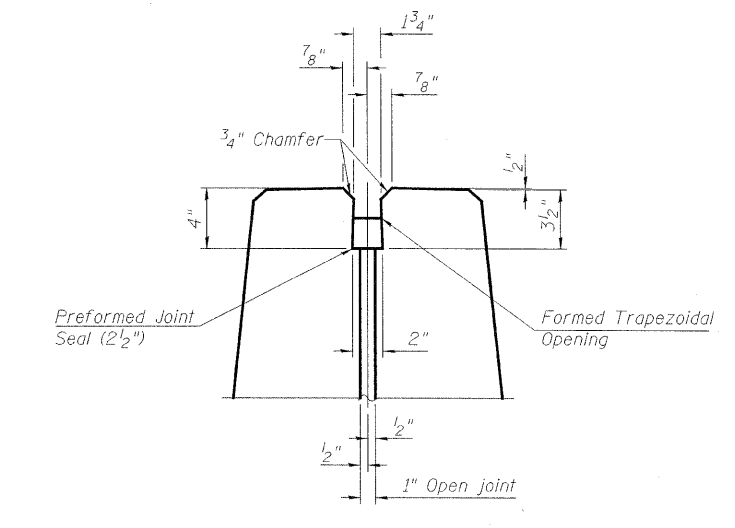
(Showing outside face on existing deck)



ELEVATION MEDIAN SOUTH SIDE

(Showing inside face on existing deck)

\* Core and set #5 d101(E) bar according to Article 509.06 of the Standard Specifications. Cored hole shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 7 1/2".



DETAIL A

SUPERSTRUCTURE DETAILS  
STRUCTURE NO. 016-0461

DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

Note:  
1. At the median cross-over the first panel and the last panel of the bridge concrete parapets shall transition from the existing concrete barrier (new jersey shape) into the proposed bridge parapet constructed at STA. 365+53.07 and STA. 372+23.61. This work shall be paid for at the contract unit price for Concrete Superstructure.

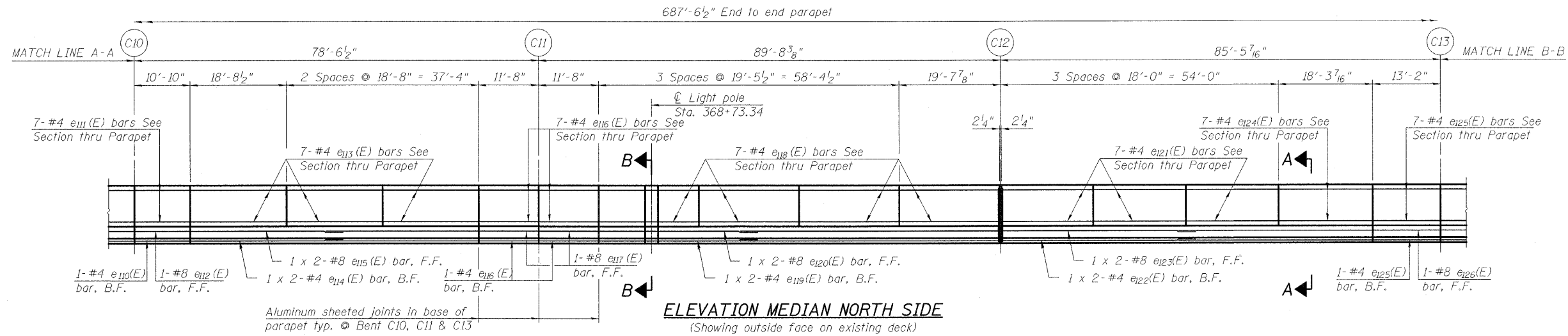
Notes:  
See sheet 158 of 163 for Matchline A-A.  
See sheet 159 of 163 for bill of material.  
See roadway plans for parapet removal.

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

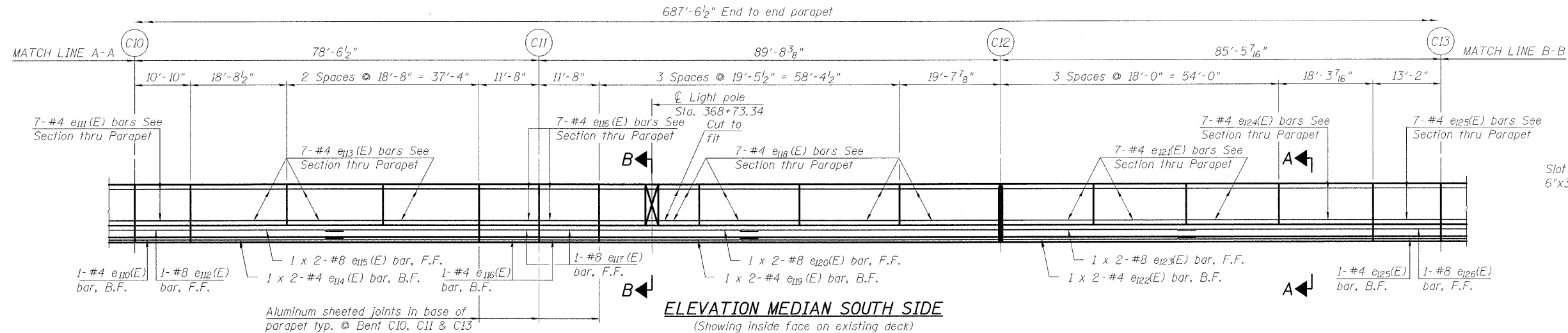
SHEET NO. 157	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	238
163 SHEETS			CONTRACT NO. 60D61		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

T:\16843A\Structural\Cadd\Pre-final\EB\_Plans\0162445-60D61-MBR-201.dgn  
07-MAY-2009

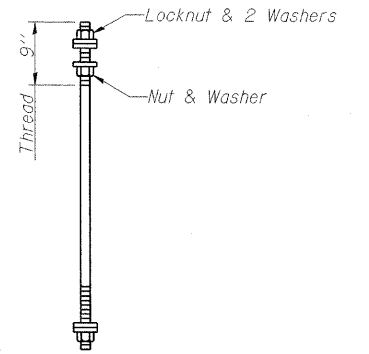
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



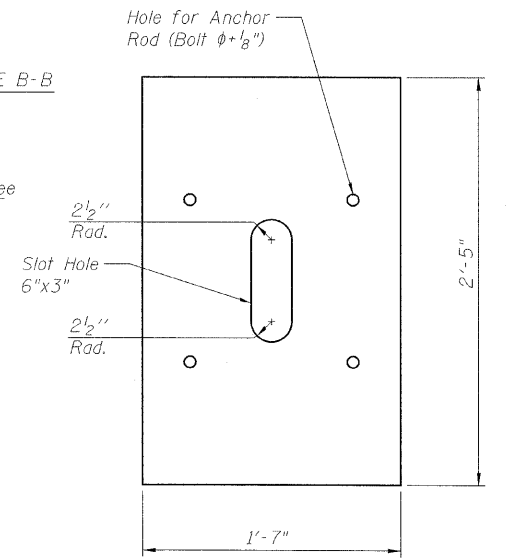
**ELEVATION MEDIAN NORTH SIDE**  
(Showing outside face on existing deck)



**ELEVATION MEDIAN SOUTH SIDE**  
(Showing inside face on existing deck)



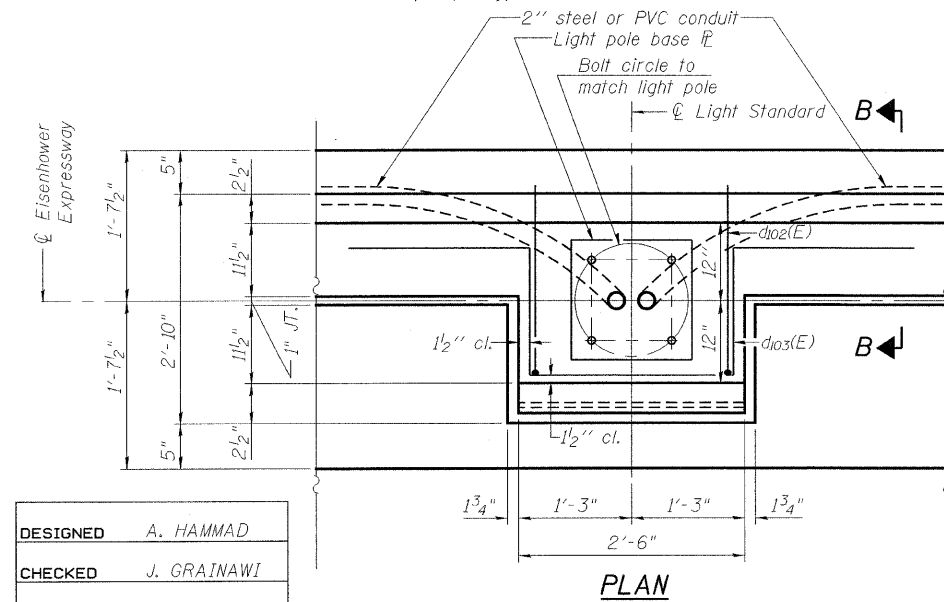
**MODIFIED ANCHOR ROD**  
Diameter as specified for light poles.  
(ASTM F 1554 Grade 105)



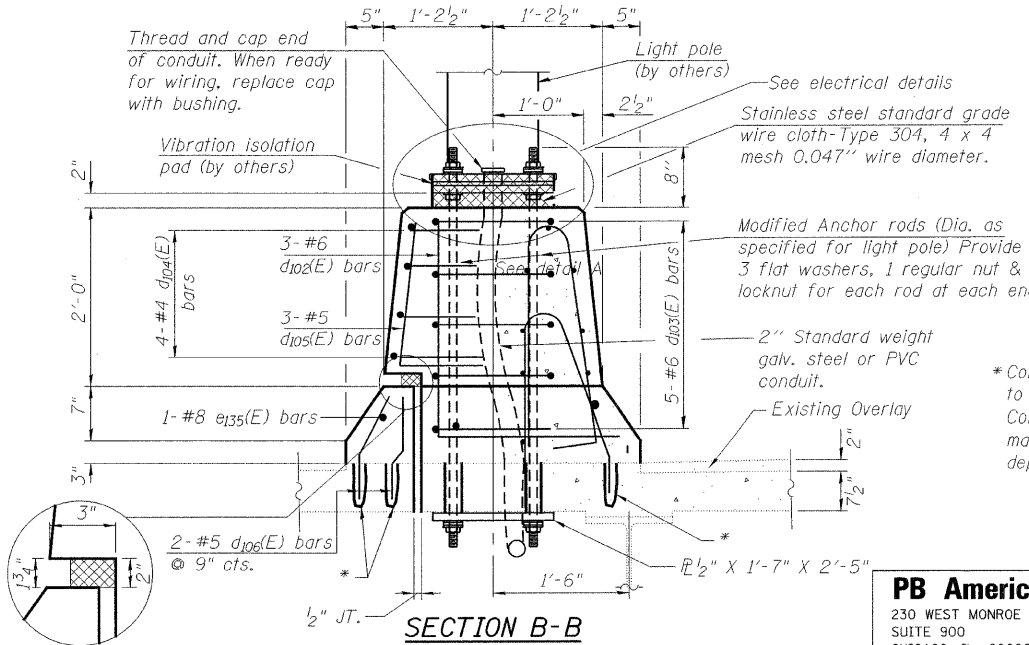
**1/2" X 1'-7" X 2'-5"**  
(3 Required)

Note:  
See sheet 157 of 163 for Matchline A-A.  
See sheet 159 of 163 for Matchline B-B  
and bill of material.

**SUPERSTRUCTURE DETAILS**  
**STRUCTURE NO. 016-0461**



**PLAN**



**SECTION B-B**

\*Core and set #5  $d_{101}(E)$  and  $d_{106}(E)$  bars according to Article 509.06 of the Standard Specifications. Cored hole shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 7/2\"/>

DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

Note:  
Cost of anchor rods and conduit is included with Concrete Superstructure.

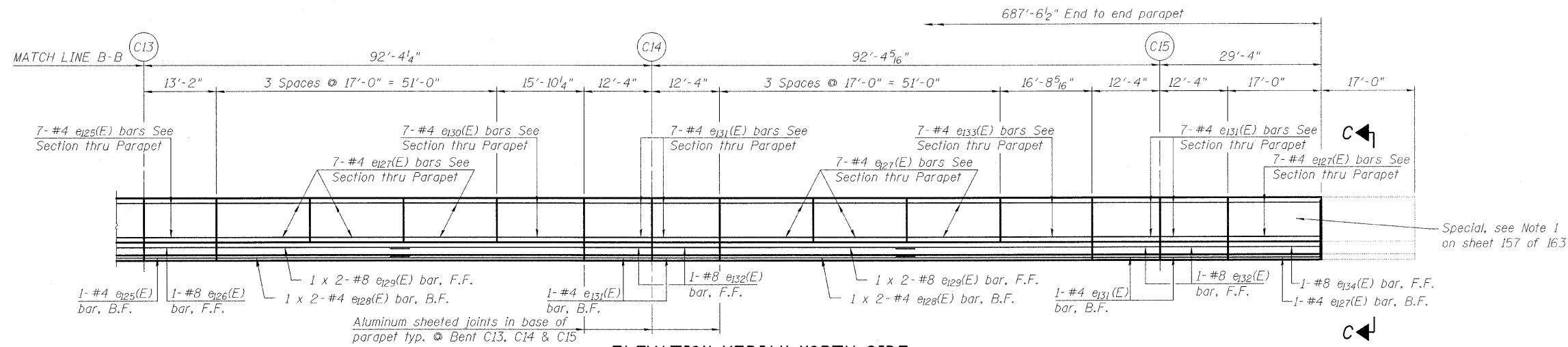
SHEET NO. 158	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	239
163 SHEETS			CONTRACT NO. 60D61		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

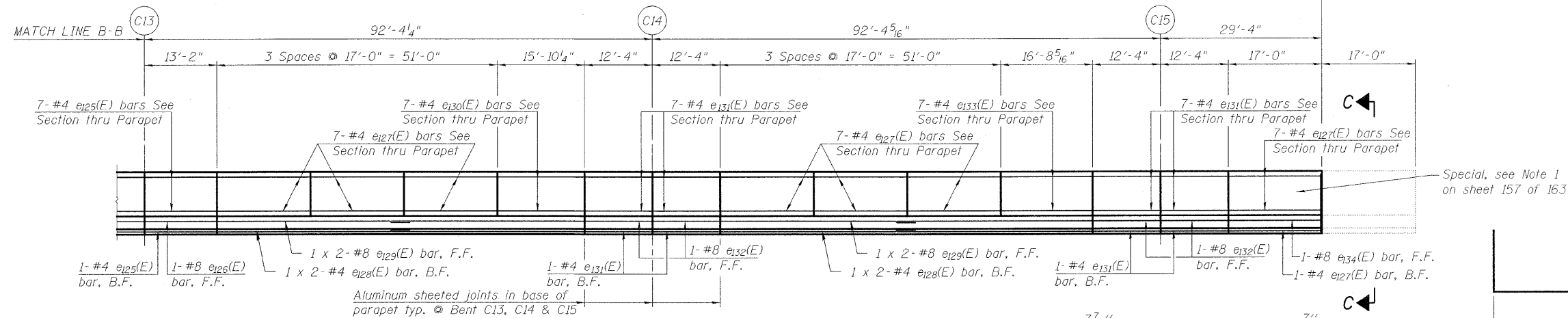
T:\16643A\Structural\Cadd\Pre-Final\EB\_Plans\0162445-60D61-MBR-202.dgn  
07-MAY-2009

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE  
BILL OF MATERIAL



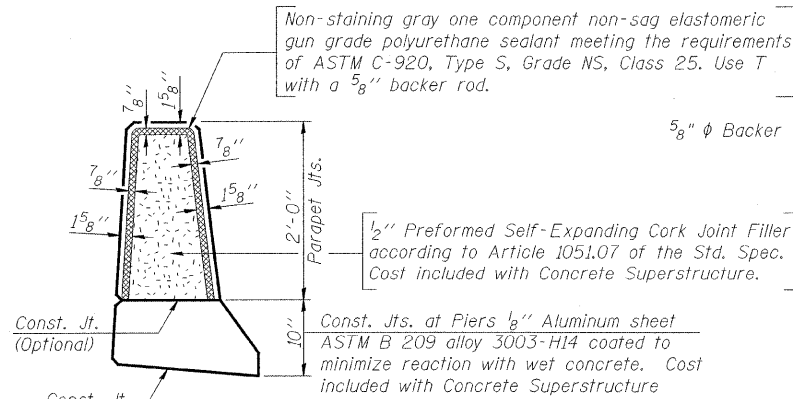
ELEVATION MEDIAN NORTH SIDE  
(Showing outside face on existing deck)



ELEVATION MEDIAN SOUTH SIDE  
(Showing inside face on existing deck)

Bar	No.	Size	Length	Shape
d100(E)	750	#5	5'-7"	┆
d101(E)	750	#5	4'-8"	┆
d102(E)	9	#6	4'-5"	┆
d103(E)	15	#6	8'-11"	┆
d104(E)	12	#4	4'-11"	┆
d105(E)	9	#5	2'-9"	┆
d106(E)	24	#5	1'-3"	┆
e100(E)	28	#4	15'-3"	┆
e101(E)	2	#4	31'-7"	┆
e102(E)	2	#8	32'-7"	┆
e103(E)	16	#4	11'-0"	┆
e104(E)	2	#8	11'-0"	┆
e105(E)	21	#4	18'-7"	┆
e106(E)	2	#4	28'-11"	┆
e107(E)	2	#8	29'-11"	┆
e108(E)	28	#4	16'-7"	┆
e109(E)	2	#4	34'-4"	┆
e110(E)	2	#8	35'-5"	┆
e111(E)	16	#4	10'-7"	┆
e112(E)	2	#8	10'-7"	┆
e113(E)	21	#4	18'-5"	┆
e114(E)	2	#4	28'-7"	┆
e115(E)	2	#8	29'-7"	┆
e116(E)	16	#4	11'-5"	┆
e117(E)	2	#8	11'-5"	┆
e118(E)	28	#4	19'-2"	┆
e119(E)	2	#4	39'-7"	┆
e120(E)	2	#8	40'-7"	┆
e121(E)	21	#4	17'-8"	┆
e122(E)	2	#4	36'-7"	┆
e123(E)	2	#8	37'-8"	┆
e124(E)	7	#4	18'-0"	┆
e125(E)	16	#4	12'-11"	┆
e126(E)	2	#8	12'-11"	┆
e127(E)	49	#4	16'-9"	┆
e128(E)	4	#4	34'-0"	┆
e129(E)	4	#8	35'-0"	┆
e130(E)	7	#4	15'-7"	┆
e131(E)	32	#4	12'-1"	┆
e132(E)	4	#8	12'-1"	┆
e133(E)	7	#4	16'-5"	┆
e134(E)	1	#8	16'-9"	┆
e135(E)	3	#8	2'-3"	┆
Reinforcement Bars, Epoxy Coated		Pound	13900	
Concrete Superstructure		Cu. Yds.	145	

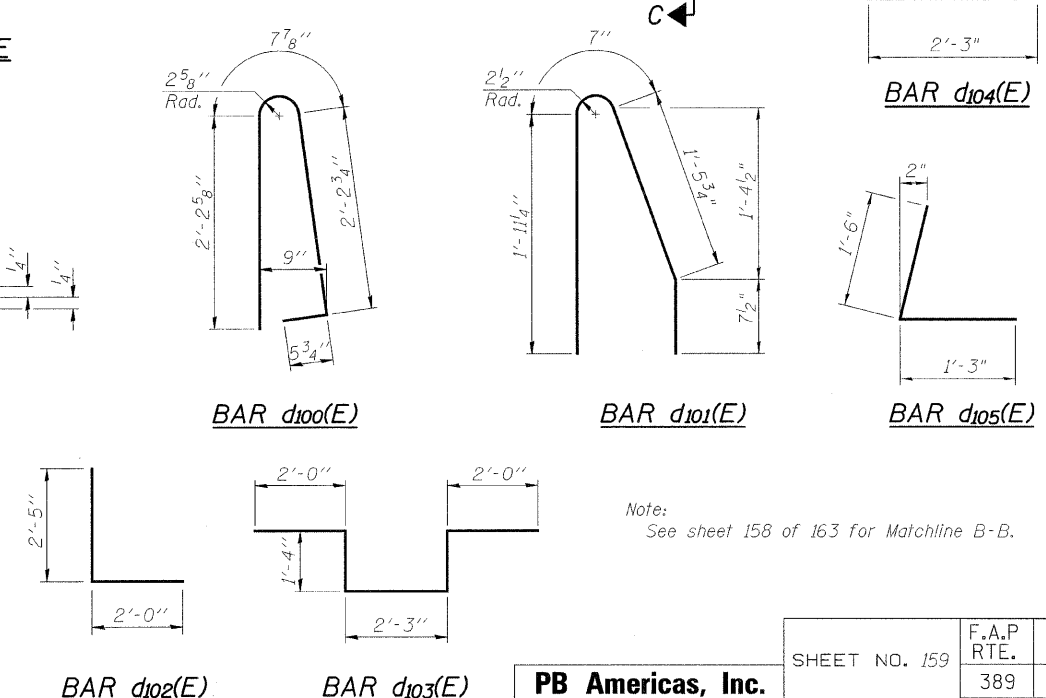
Bars indicated thus 1 x 2 - #8 etc. indicates 1 line of bars with 2 lengths per line.



PARAPET JOINT DETAILS

Notes:  
Drains shall be located clear of all diaphragms.  
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SPI prior to painting.  
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD



Note:  
See sheet 158 of 163 for Matchline B-B.

SUPERSTRUCTURE DETAILS  
STRUCTURE NO. 016-0461

SHEET NO. 159	F.A.P R.T.E. 389	SECTION 2424.2B-R	COUNTY COOK	TOTAL SHEETS 398	SHEET NO. 240
163 SHEETS	CONTRACT NO. 60D61		FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT		

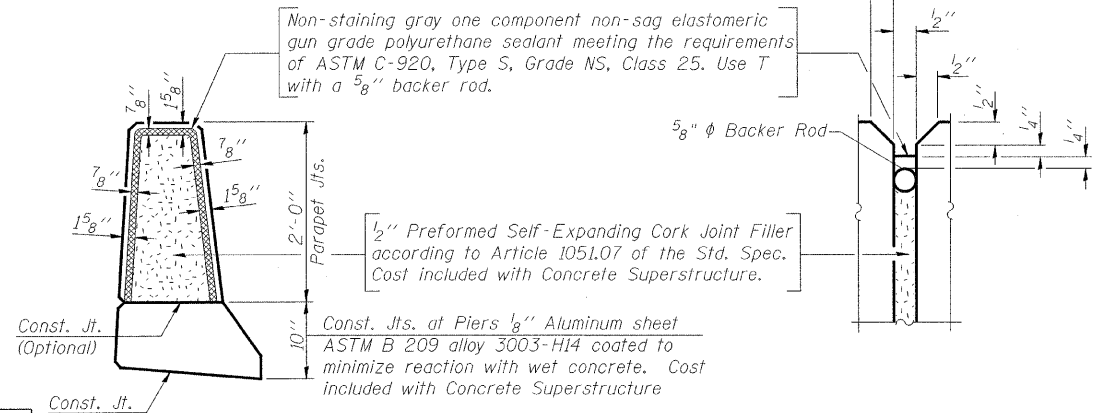
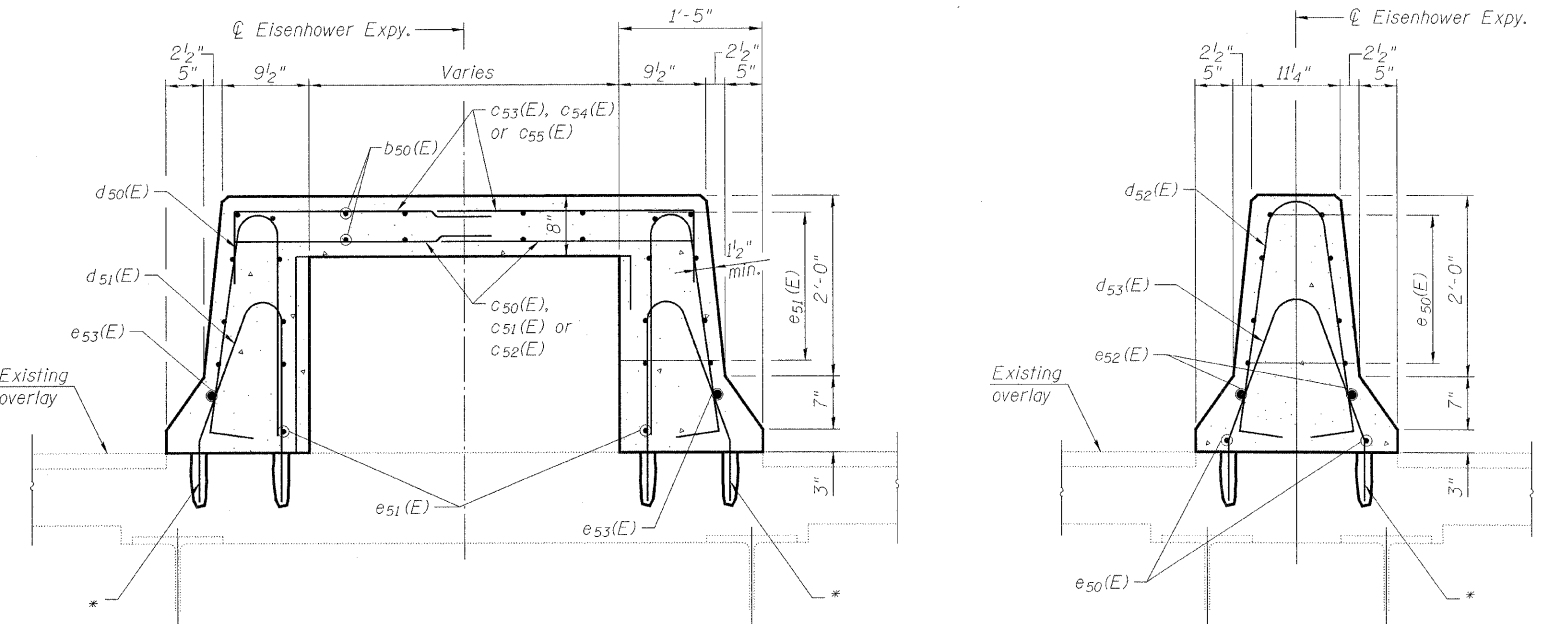
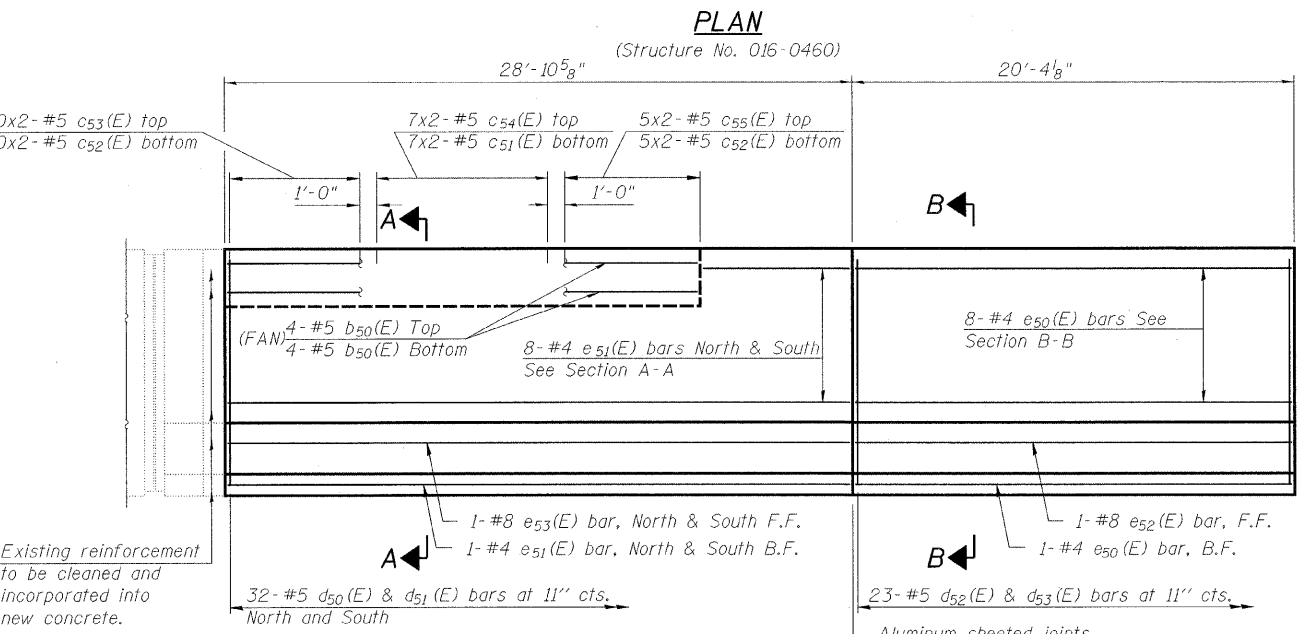
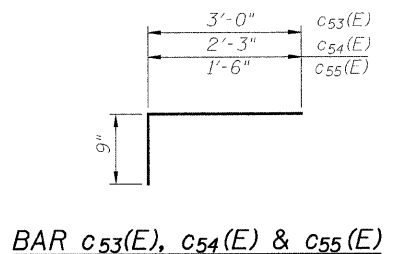
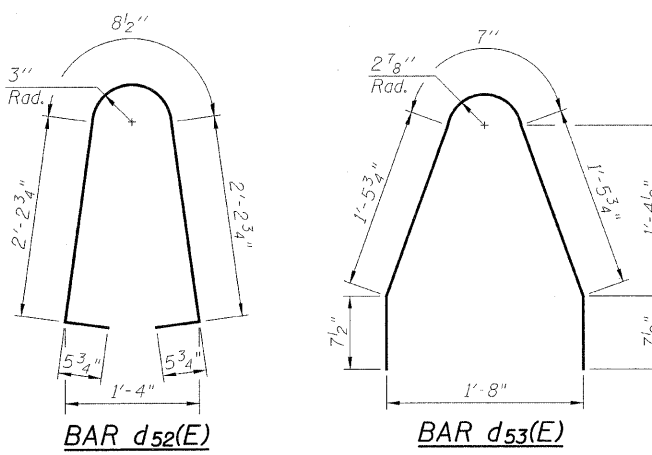
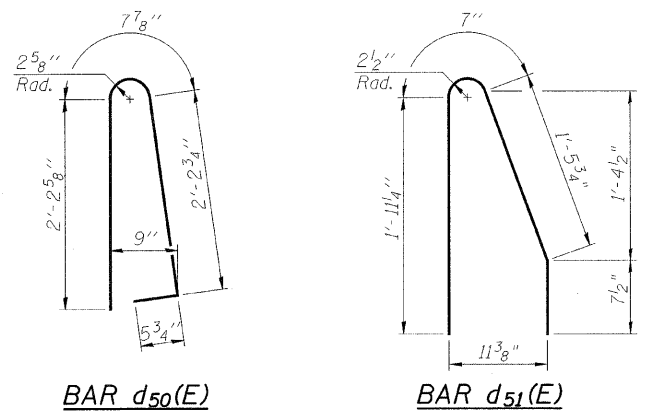
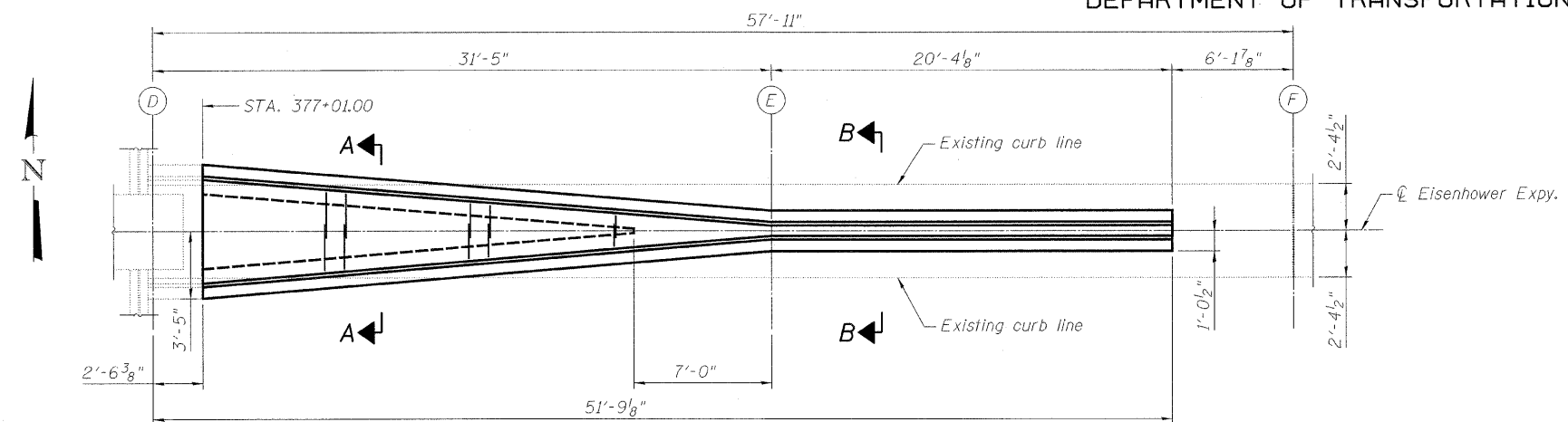
**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**SUPERSTRUCTURE  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
b <sub>50</sub> (E)	8	#5	21'-6"	—
c <sub>50</sub> (E)	20	#5	3'-0"	—
c <sub>51</sub> (E)	14	#5	2'-3"	—
c <sub>52</sub> (E)	10	#5	1'-6"	—
c <sub>53</sub> (E)	20	#5	3'-9"	—
c <sub>54</sub> (E)	14	#5	3'-0"	—
c <sub>55</sub> (E)	10	#5	2'-3"	—
d <sub>50</sub> (E)	64	#5	5'-7"	—
d <sub>51</sub> (E)	64	#5	4'-8"	—
d <sub>52</sub> (E)	23	#5	6'-2"	—
d <sub>53</sub> (E)	23	#5	4'-10"	—
e <sub>50</sub> (E)	10	#4	20'-1"	—
e <sub>51</sub> (E)	18	#4	28'-8"	—
e <sub>52</sub> (E)	2	#8	20'-1"	—
e <sub>53</sub> (E)	2	#8	28'-8"	—
Reinforcement Bars, Epoxy Coated		Pound	1950	
Concrete Superstructure		Cu. Yds.	11	



DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

**Notes:**  
Drains shall be located clear of all diaphragms.  
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SP1 prior to painting.  
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

**Note:**  
See roadway plans for existing parapet removal.

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

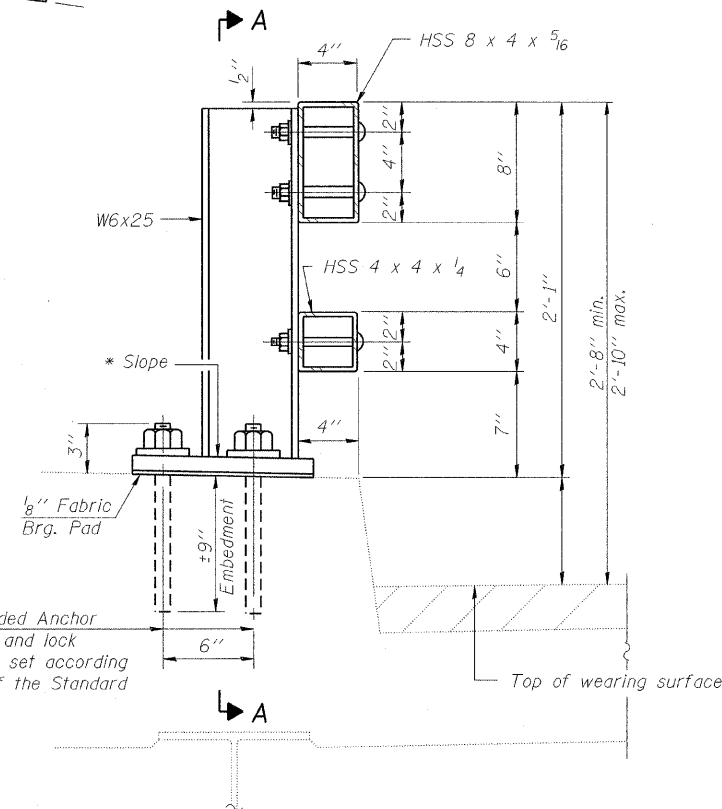
SHEET NO. 160	F.A.P RTE. 389	SECTION 2424.2B-R	COUNTY COOK	TOTAL SHEETS 398	SHEET NO. 241
163 SHEETS			CONTRACT NO. 60D61		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

**SUPERSTRUCTURE DETAILS  
STRUCTURE NO. 016-0460**

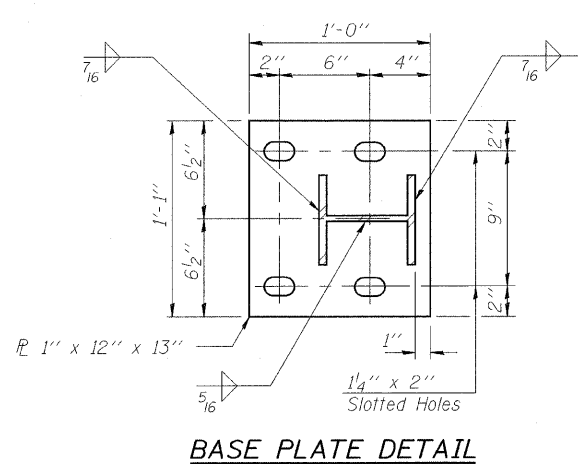
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07-MAY-2009

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

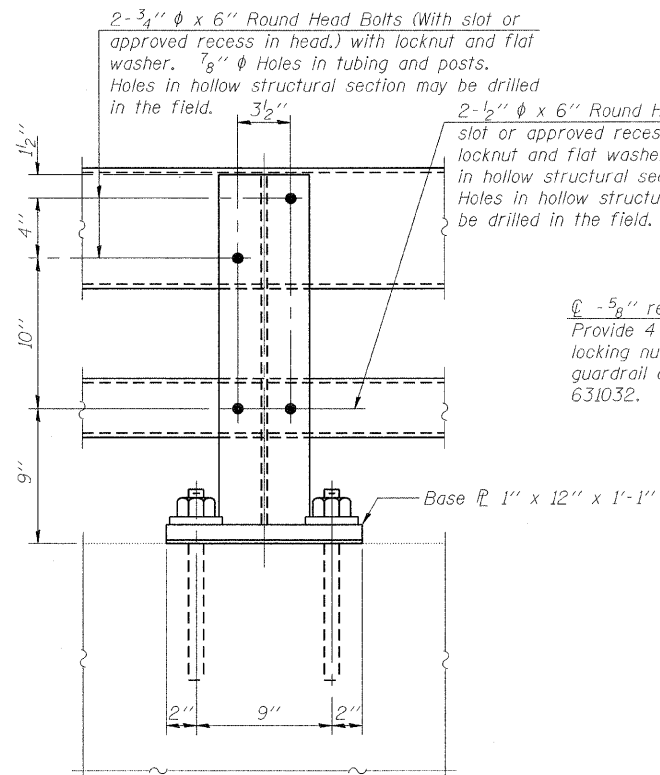
\* Cut bottom end of post to curb slope.



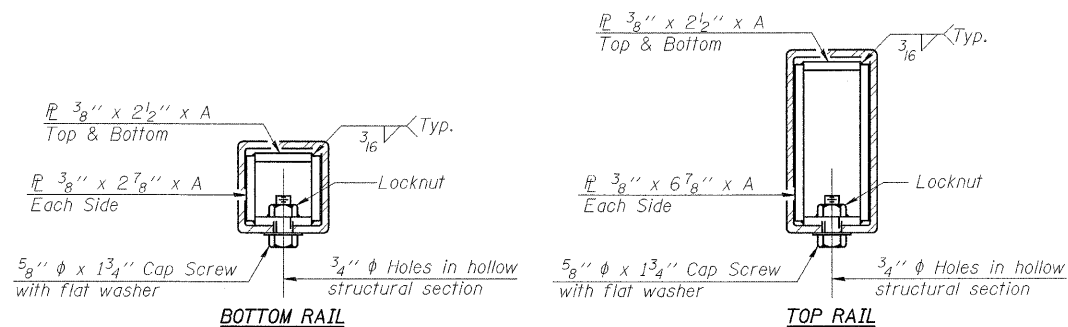
SECTION AT RAIL POST



BASE PLATE DETAIL

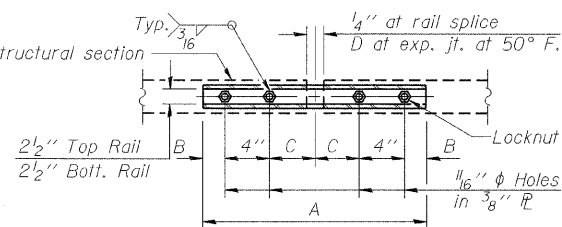


SECTION A-A

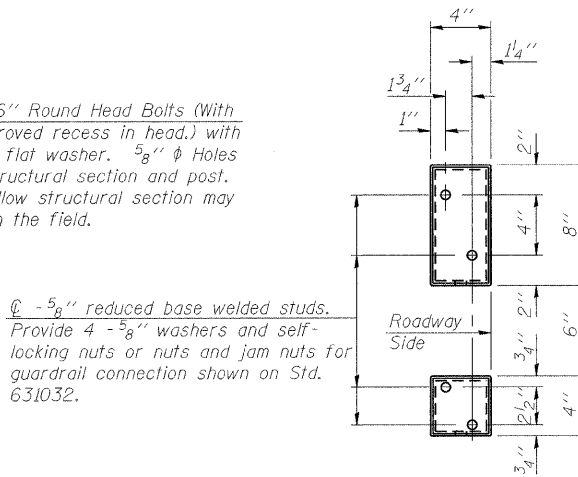


SECTIONS AT RAIL SPLICE

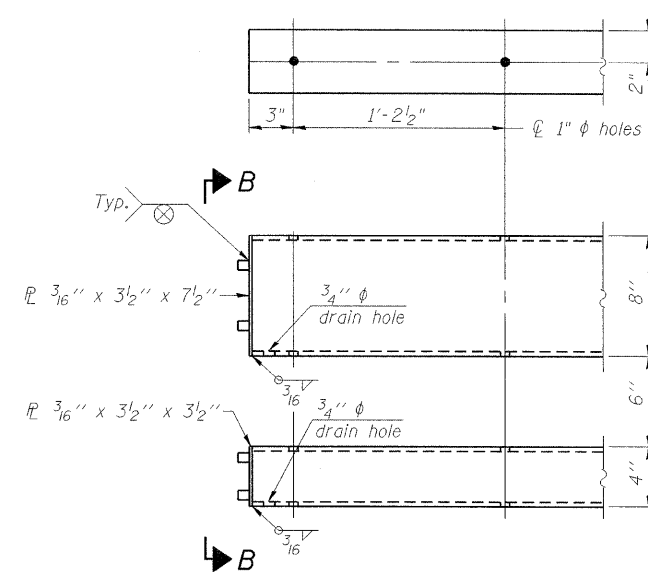
(6'-3" Maximum Post Spacing)



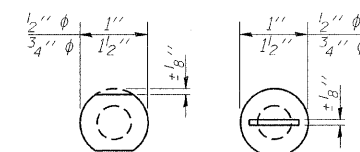
PLAN-BOTT. SPLICE TYPICAL



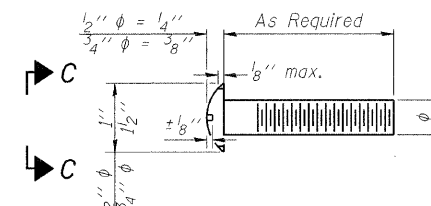
VIEW B-B



END OF RAIL DETAILS



VIEW C-C



DETAIL OF 1/2"  $\phi$  & 3/4"  $\phi$  ROUND HEAD BOLTS

Notes:

- All field drilled holes shall be coated with an approved zinc rich paint before erection.
- Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
- Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.
- Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
- All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

SPLICE DIMENSIONS

T	D	A	B	C	E
$\leq 4"$	2 1/2"	1'-8"	2"	4"	2 1/2"
$> 4" \leq 6 1/2"$	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
$> 6 1/2" \leq 9"$	5"	2'-4"	3 1/2"	6 1/2"	9"
$> 9" \leq 13"$	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	161

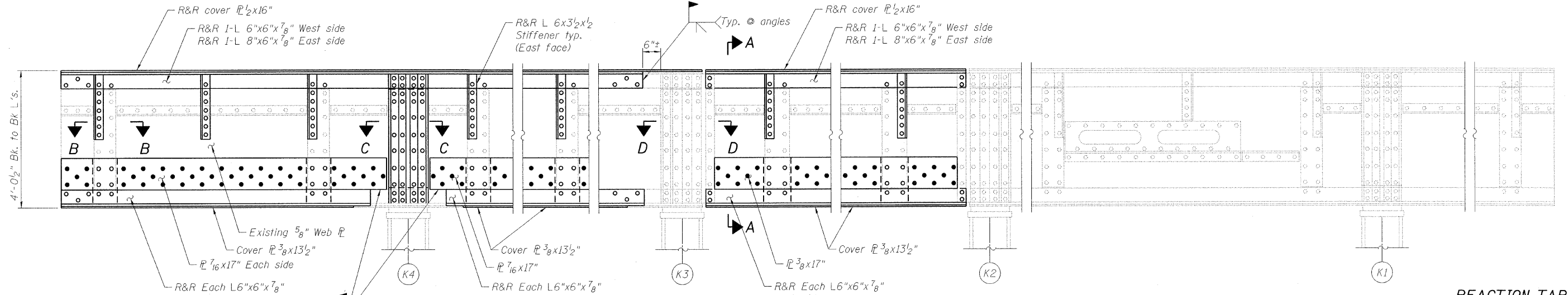
STEEL RAILING, TYPE 2399  
SOUTHWEST FIXED SPANS  
STRUCTURE NO. 016-0460

SHEET NO.	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
161	389	2424.2B-R	COOK	398	242
				CONTRACT NO. 60D61	
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 161  
163 SHEETS

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

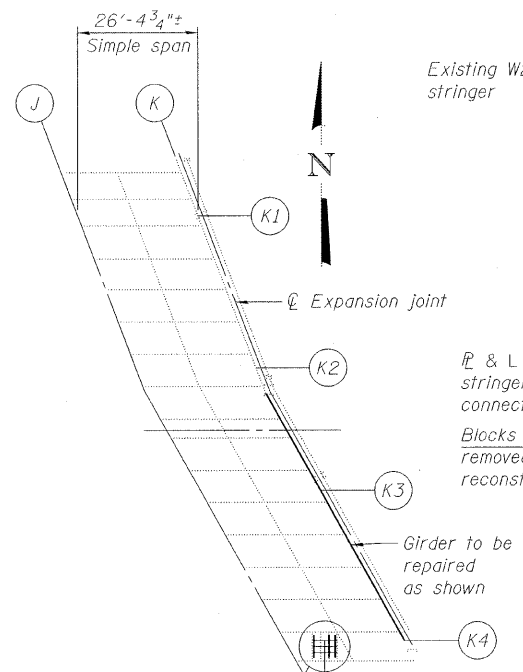


**ELEVATION GIRDER K**

(Looking West)  
(4 1/4" Maximum alternate bolt spacing in flange angles, cover PL's and web PL's)

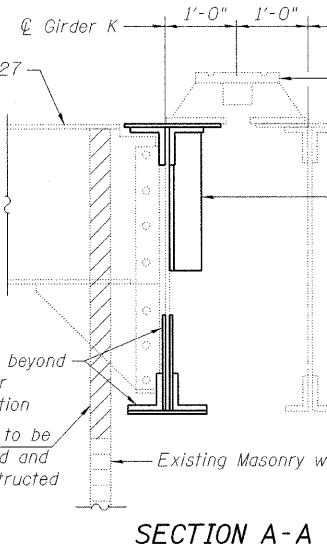
**REACTION TABLE**

Stringer	R
Typical	18 k

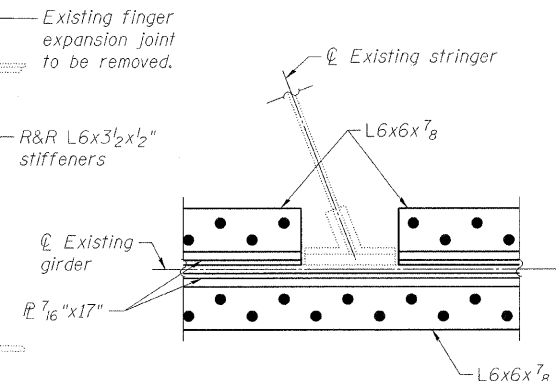


**PARTIAL PLAN**

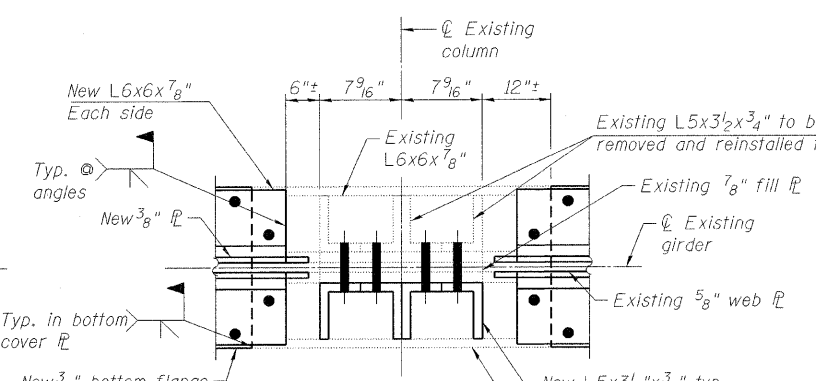
Remove existing diaphragm supporting the traffic barrier and replace with new diaphragm see details on sheet 163 of 163



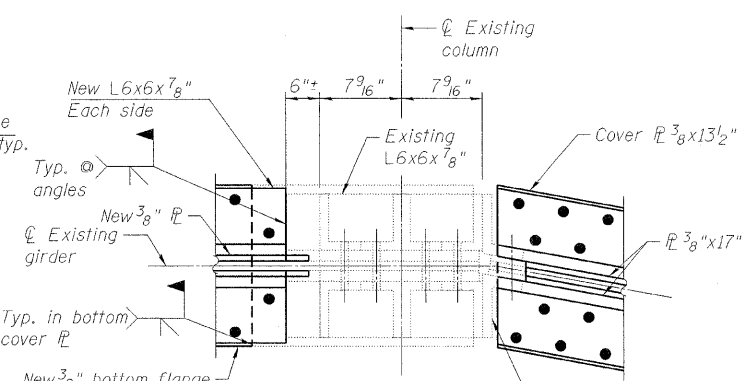
**SECTION A-A**



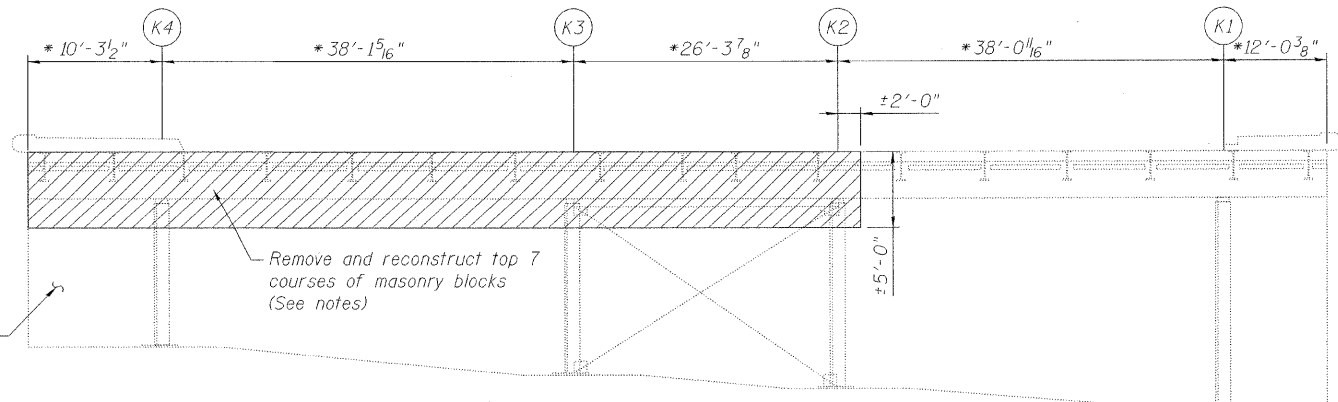
**SECTION B-B**



**SECTION C-C**



**SECTION D-D**



**ELEVATION BENT K**  
(Looking West)

\* Based on existing drawing. Contractor shall field verify prior to fabrication and ordering of material.

**BILL OF MATERIAL**

Item	Unit	Quantity
Structural Steel Repair	Pound	17450
Masonry Wall Construction	Sq. Ft.	385

**LEGEND**

- Existing fastener to remain
- Hole to match existing location
- New hole
- Existing member to remain
- New member

Notes:  
Girder/stringer ends shall be temporarily supported during repairs. Cost is included in the cost of Structural Steel Repair.  
Masonry blocks that are damaged during the removal shall be replaced in-kind at Contractor's expense.

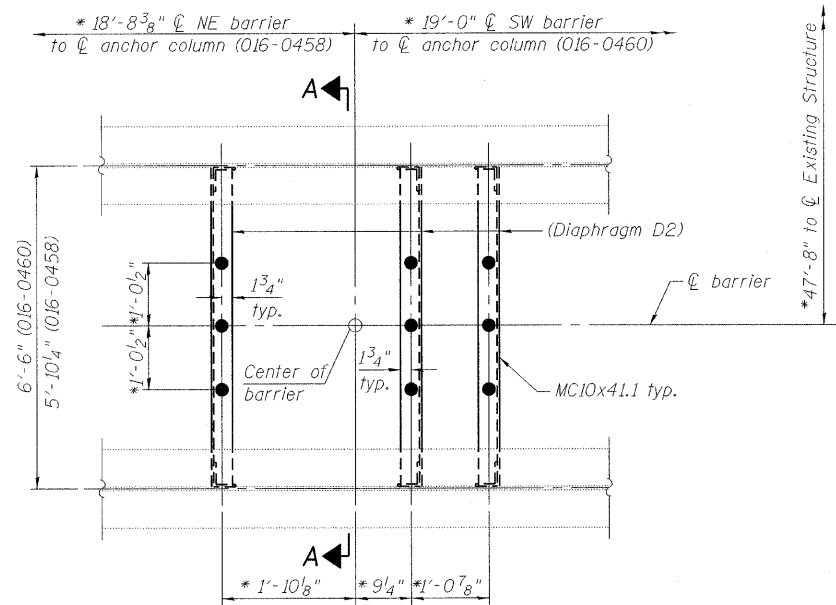
**FRAMING DETAILS (GIRDER K)  
FIXED SPANS  
STRUCTURE NO. 016-0460**

DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

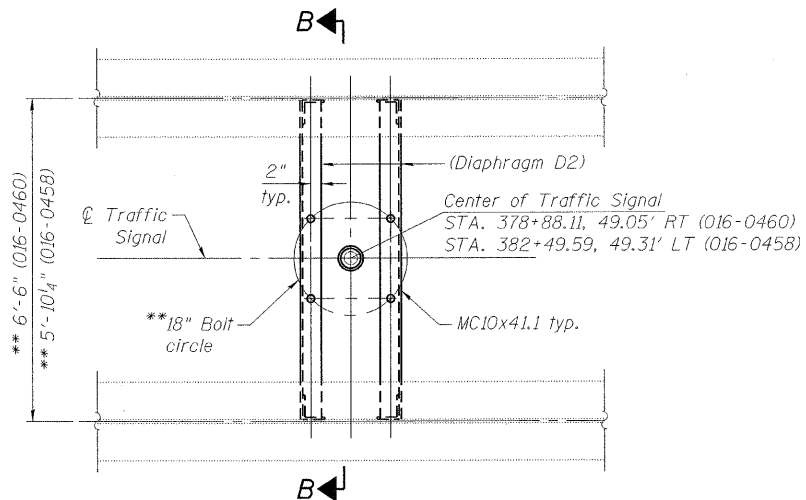
**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

SHEET NO. 162	F.A.P RTE. 389	SECTION 2424.2B-R	COUNTY COOK	TOTAL SHEETS 398	SHEET NO. 243
163 SHEETS			CONTRACT NO. 60D61		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

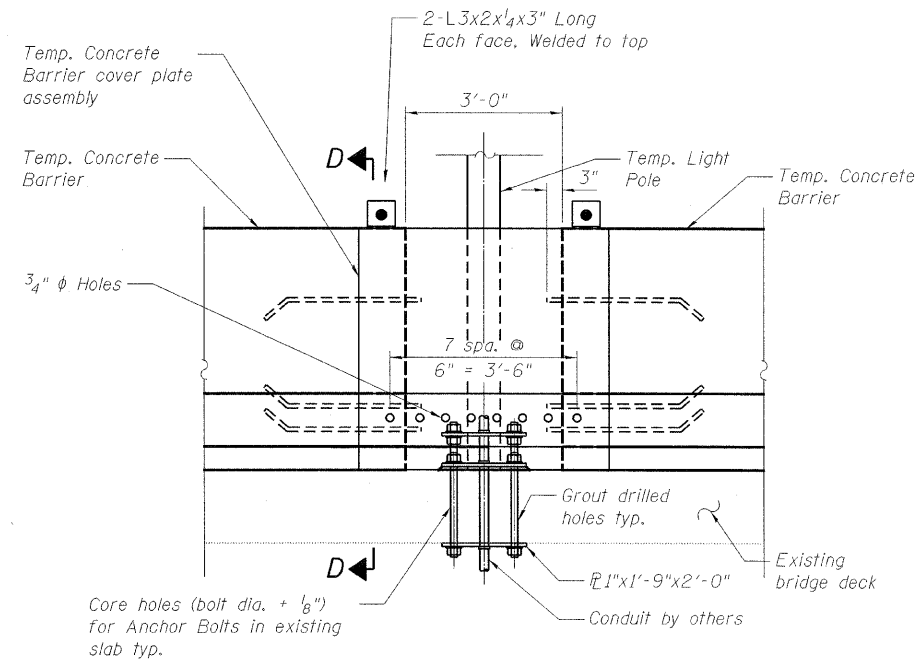
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



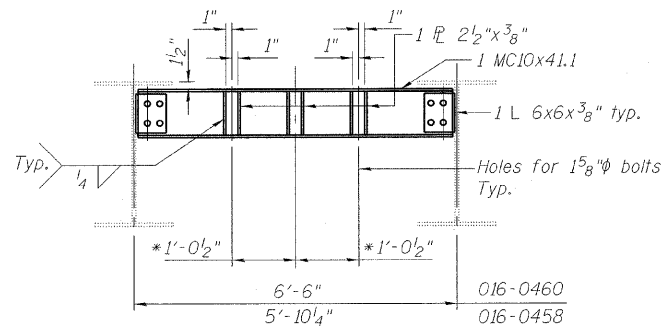
**TRAFFIC BARRIER ANCHORAGE PLAN**  
(Structure Nos. 016-0458 & 016-0460)



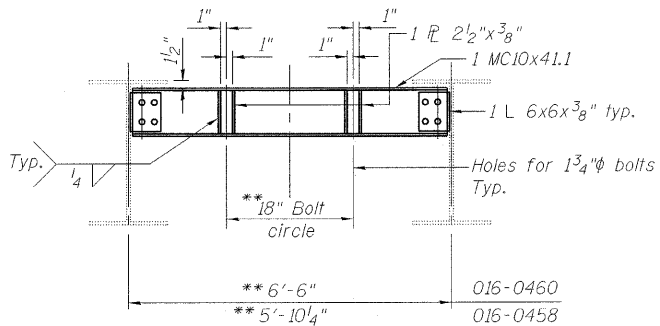
**TRAFFIC SIGNAL ANCHORAGE PLAN**  
(Structure Nos. 016-0458 & 016-0460)



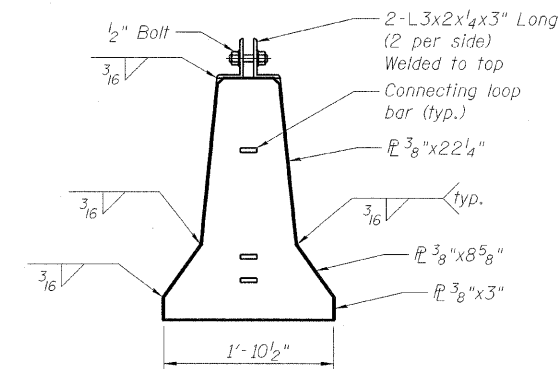
**TEMP. CONC. BARRIER COVER PLATE AT TEMP LIGHT POLE**  
(3 Locations, each stage)



**SECTION A-A**



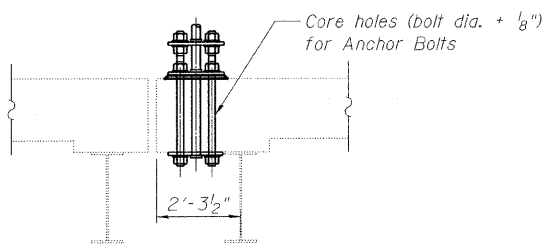
**SECTION B-B**



**SECTION D-D**

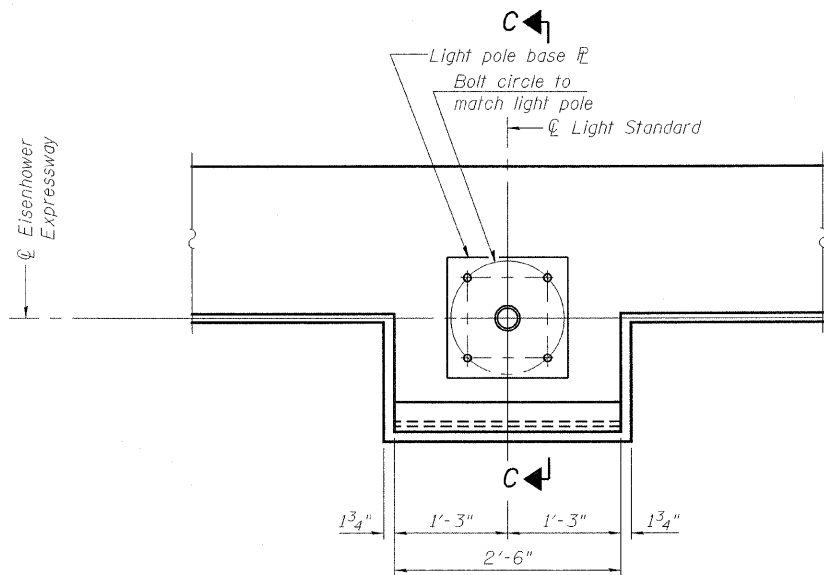
\* Coordinate location of anchor bolts with traffic barrier on mechanical drawings.

\*\* Dimensions to be verified in field. Coordinate location of anchor bolts with traffic signal manufacturer drawings.



**SECTION C-C**

(Temp. Light Standard Hold down detail during Shutdown Stage)



**PLAN**

(3 Nos., for location see sheets 157 and 158 of 163)

**LEGEND**

- Existing fastener to remain
- Hole to match existing location
- New hole
- Existing member to remain
- New member

**Notes:**

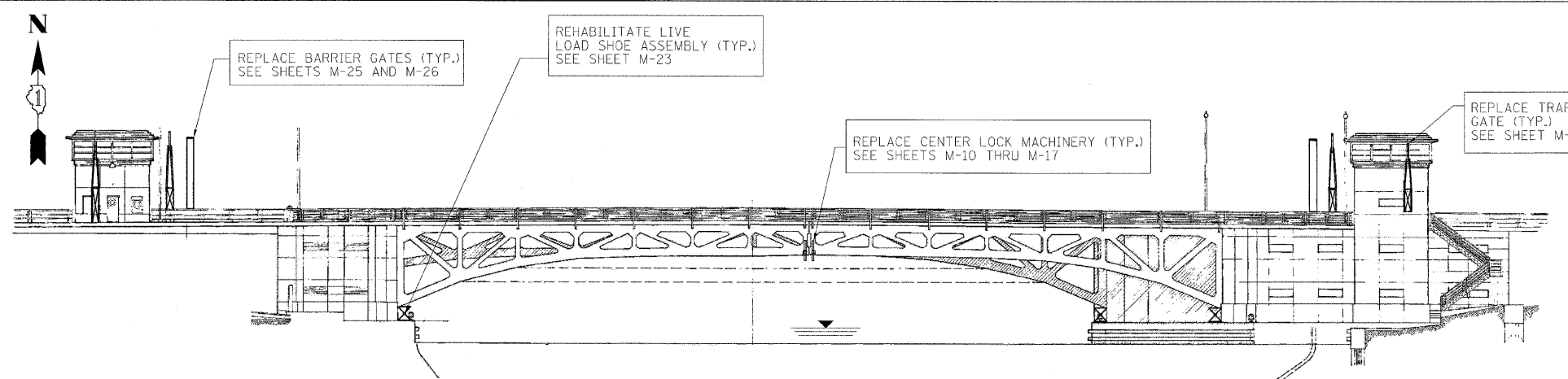
Thickness of existing reinforced concrete slab shall be verified in the field by the Contractor.  
Contractor to locate centerline of light pole to miss existing beam below and various conduit runs.  
The cost for mounting bracket assembly to existing structure for traffic signal temporary and permanent lighting poles will be included in the cost of "Mounting Bracket - Traffic Signal Pole to Existing Structure", "Mounting Bracket - Temporary Lighting Pole to Existing Structure" and "Mounting Bracket - Permanent Lighting Pole to Existing Structure".

**MISCELLANEOUS DETAILS  
FIXED SPANS  
STRUCTURE NO. 016-0458,  
STRUCTURE NO. 016-0460 &  
STRUCTURE NO. 016-0461**

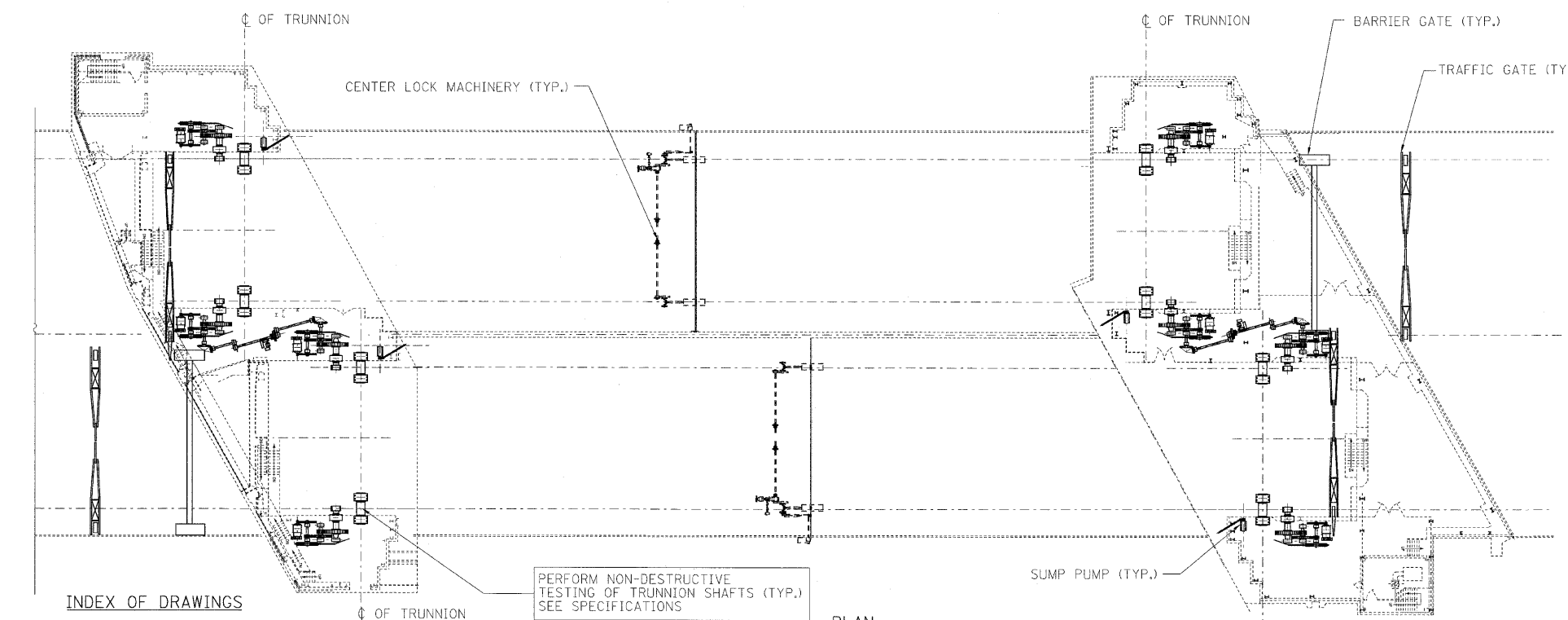
DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

SHEET NO. 163	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	244
163 SHEETS			CONTRACT NO. 60D61		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

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230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606



ELEVATION



GENERAL NOTES:

- ALL EXISTING DIMENSIONS ARE TAKEN FROM THE EXISTING BRIDGE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING DIMENSIONS AND SHALL NOTIFY THE ENGINEER OF ALL DEVIATIONS, IF ANY, BEFORE WORK BEGINS.
- DETAILS OF MACHINERY SHALL CONFORM TO THE 1988 STANDARD SPECIFICATIONS FOR MOVABLE HIGHWAY BRIDGES PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1992 AND 1993 REVISION, AND IDOT DESIGN MANUAL FOR BRIDGES AND STRUCTURES (2008 REVISED EDITION), UNLESS OTHERWISE SHOWN ON PLANS, OR PROVIDED FOR IN SPECIFICATIONS. WELDING SHALL BE IN ACCORDANCE WITH AWS BRIDGE WELDING CODE AASHTO/AWS-D1.5M/D1.5: 2008.
- ALL DIMENSIONS FOR MACHINE FINISHED SURFACES SHALL BE HELD TO 0.10 INCH EXCEPT AS OTHERWISE REQUIRED, SHOWN ON THE PLANS, BY SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.
- MATERIALS: THE FOLLOWING ITEMS SHALL BE OF THE MATERIAL SPECIFIED AND CONFORM TO THE FOLLOWING ASTM CODE PROVISIONS UNLESS OTHERWISE NOTED: WELDMENT AND PLATES: ASTM A709 GRADE 50 STRUCTURAL STEEL SUPPORTS FOR MECHANICAL COMPONENTS: ASTM A709 GRADE 50.
- ALL MACHINERY SUPPORTS SHALL BE FLAT, LEVEL AND PARALLEL TO EACH OTHER AND THE MOUNTING BASE PLATE. THICKNESS OF MOUNTING PLATES GIVEN ARE FOR AFTER FINISHING.
- PROVIDE ASTM A490 FINISHED BODY H.S. (HIGH STRENGTH) BOLTS AS REQUIRED TO CONNECT MACHINERY TO STRUCTURAL STEEL. ALL ASTM A490 H.S. BOLTS FOR STRUCTURAL STEEL CONNECTIONS SHALL BE REAMED TO PROVIDE A CLEARANCE OF NOT MORE THAN 1/16 INCH BETWEEN THE BODY OF THE BOLT AND THE HOLE. CONNECTION BETWEEN STRUCTURAL STEEL AND MACHINERY SHALL BE TURNED BOLTS HAVING A CLASS LC6 FIT BETWEEN THE BODY OF THE BOLT AND THE HOLE.
- ALL H.S. FASTENERS SHALL HAVE NUTS CONFORMING TO ASTM A563. ALL NUTS SHALL BE SECURED BY EFFECTIVE LOCKS. IF DOUBLE NUTS ARE USED, BOTH NUTS SHALL BE OF STANDARD THICKNESS. ALL HIGH STRENGTH FASTENERS SHALL HAVE A HARDENED PLAIN WASHER UNDER THE HEAD AND THE NUT. ALL HARDENED STEEL PLAIN WASHERS SHALL CONFORM TO ASTM F436. NEW ASTM A490 BOLTS SHALL NOT BE TORQUED MORE THAN ONCE.
- PROVIDE STAINLESS STEEL SHIMS TYPE 304/316 FOR LEVELLING AND ALIGNING ALL MACHINERY COMPONENTS.
- ALL BOLT HOLES IN CASTINGS SHALL BE SPOT-FACED.
- MACHINERY DIMENSIONS SHOWN ON DRAWINGS ARE DIMENSIONS AFTER MACHINING.
- FITS AND FINISHES FOR MACHINERY SHALL BE AS FOLLOWS:

SURFACE	FIT	FINISH (MICROINCHES)
MACHINERY BASE ON STEEL	-	250
MACHINERY BASE ON MASONRY	-	500
SHAFT JOURNALS	RC6	8
JOURNAL BUSHING	RC6	16
SPLIT BUSHING IN BASE	LC1	125
SOLID BUSHING IN BASE (TO 1/4 IN. WALL)	FN1	63
SOLID BUSHING IN BASE (OVER 1/4 IN. WALL)	FN2	63
HUBS ON SHAFT (TO 2 IN. BORE)	FN2	32
HUBS ON SHAFT (OVER 2 IN. BORE)	FN2	63
HUBS ON MAIN TRUNNION	FN3	63
TURNED BOLTS IN FINISHED HOLES	LC6	63
SLIDING BEARINGS	RC6	32
CENTER DISC	-	32
KEYS AND KEYWAYS (TOP AND BOTTOM)	LC4	63
KEYS AND KEYWAYS (SIDES)	FN2	63
KEYS AND KEYWAYS (MACHINERY PARTS IN FIXED CONTACT)	-	125
TEETH OF OPEN SPUR GEARS (OVER 3 DIAMETRAL PITCH)	-	32
TEETH OF OPEN SPUR GEARS (3 TO 1.75 DIAMETRAL PITCH)	-	63
TEETH OF OPEN SPUR GEARS (UNDER 1.75 DIAMETRAL PITCH)	-	125
- THE ABOVE FITS FOR CYLINDRICAL PARTS SHALL ALSO APPLY TO THE DIMENSIONS OF NON CYLINDRICAL PARTS.
- REPLACEMENT OF TURNED BOLTS SHALL BE OF THE SAME NOMINAL SIZE AS EXISTING, EXCEPT AS SHOWN. BOLT AREA AND BOLT HOLES SHALL BE CLEANED BY A WIRE BRUSH BEFORE NEW BOLT INSTALLATION.
- ANY REFERENCE TO THE "SPECIFICATIONS" INCLUDES REFERENCE TO ALL SUPPLEMENTAL SPECIFICATIONS, SPECIAL PROVISIONS AND SPECIFICATIONS REFERENCED HEREIN.
- THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SUCH THAT ANY MATERIALS THAT ARE TO REMAIN IN PLACE, THAT ARE TO BE RE-USED, OR THAT ARE TO REMAIN THE PROPERTY OF THE STATE OF ILLINOIS WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY SUCH MATERIALS, THE MATERIALS SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER, AT NO ADDITIONAL COST TO THE STATE OF ILLINOIS.
- ALL MAIN LOAD BEARING STRUCTURAL OR MACHINERY ELEMENTS, SUCH AS CASTING, BEARINGS ETC. SHALL HAVE A MINIMUM AVERAGE CVN IMPACT TOUGHNESS (AS DEFINED BY ASTM A370, SECTIONS 19-28) OF 25 FT-LBS AT 40 DEG. F, BASED ON A 0.394 INCH X 0.394 INCH BAR WITH A 0.079 INCH NOTCH. REQUIRED TOUGHNESS OF ALL SUB-SIZE ELEMENTS SHALL BE SCALED DOWN IN PROPORTION TO THE STANDARD BAR PER ASTM E23.
- MACHINERY SHALL BE ERECTED BY MILLWRIGHTS WITH DEMONSTRATED COMPETENCE IN MACHINERY ERECTION WORK.
- ALL SHOP DRAWINGS SHALL BE SUBMITTED WITH FIELD MEASUREMENTS.



DAVID O. NYARKO, P.E.  
LICENSE NO. 062-061532  
EXPIRES: November 30, 2009  
DATE: 5/8/09

FOR ADDITIONAL OPERATING MACHINERY WORK (TYP.)  
SEE SHEET M-02

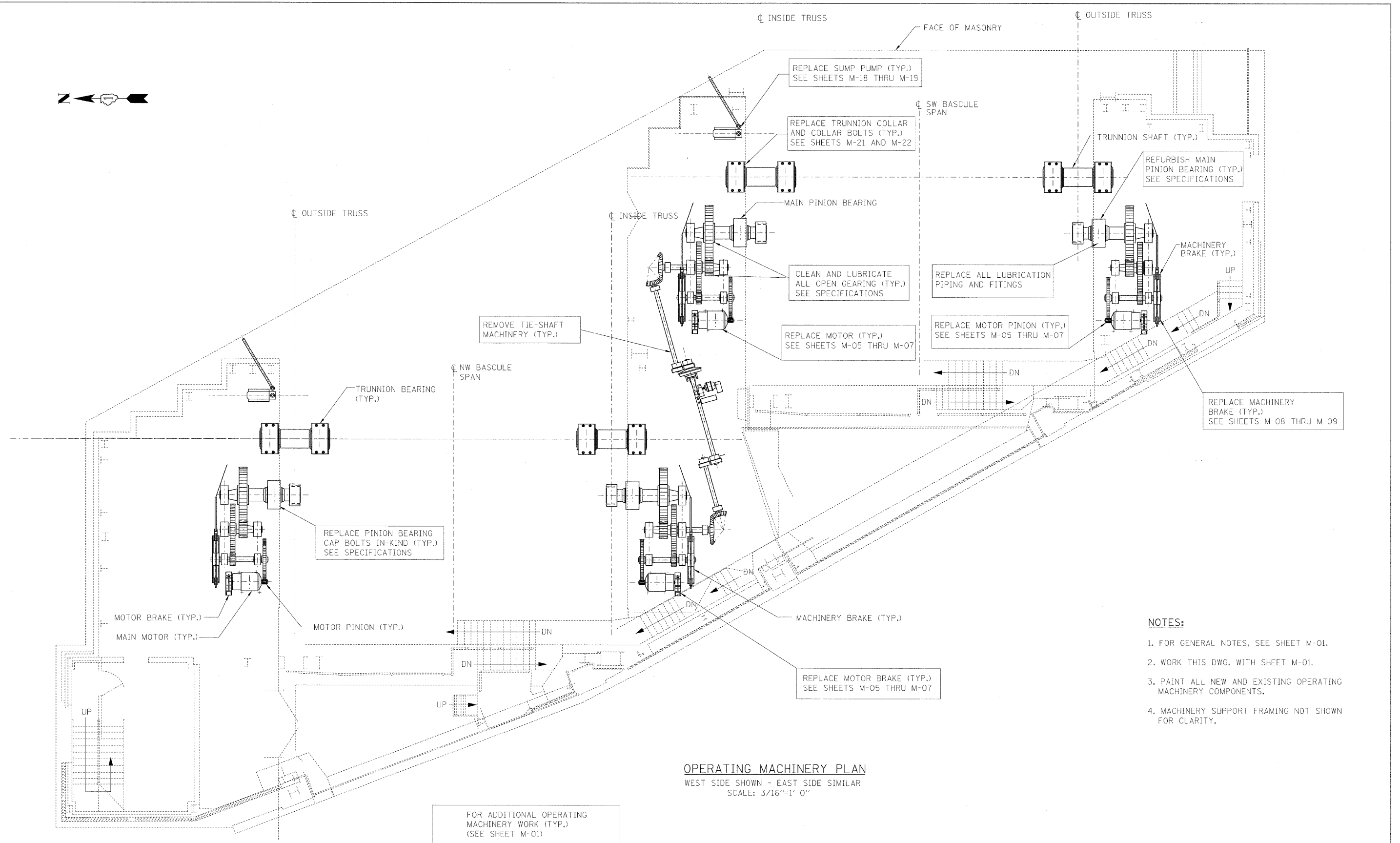
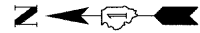
**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = sherna	DESIGNED - J. BONSU	REVISED -
FILE NAME = D160d61-sht-mec-01.dgn	DRAWN - V. LEVIT	REVISED -
PLOT SCALE = NONE	CHECKED - D. NYARKO	REVISED -
PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN, ELEVATION AND NOTES  
SCALE: AS SHOWN SHEET NO. M-01 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE. 389	SECTION 2424-2B-R	COUNTY COOK	TOTAL SHEETS 398	SHEET NO. 245
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



- NOTES:**
1. FOR GENERAL NOTES, SEE SHEET M-01.
  2. WORK THIS DWG. WITH SHEET M-01.
  3. PAINT ALL NEW AND EXISTING OPERATING MACHINERY COMPONENTS.
  4. MACHINERY SUPPORT FRAMING NOT SHOWN FOR CLARITY.

**OPERATING MACHINERY PLAN**  
 WEST SIDE SHOWN - EAST SIDE SIMILAR  
 SCALE: 3/16"=1'-0"

FOR ADDITIONAL OPERATING MACHINERY WORK (TYP.) (SEE SHEET M-01)

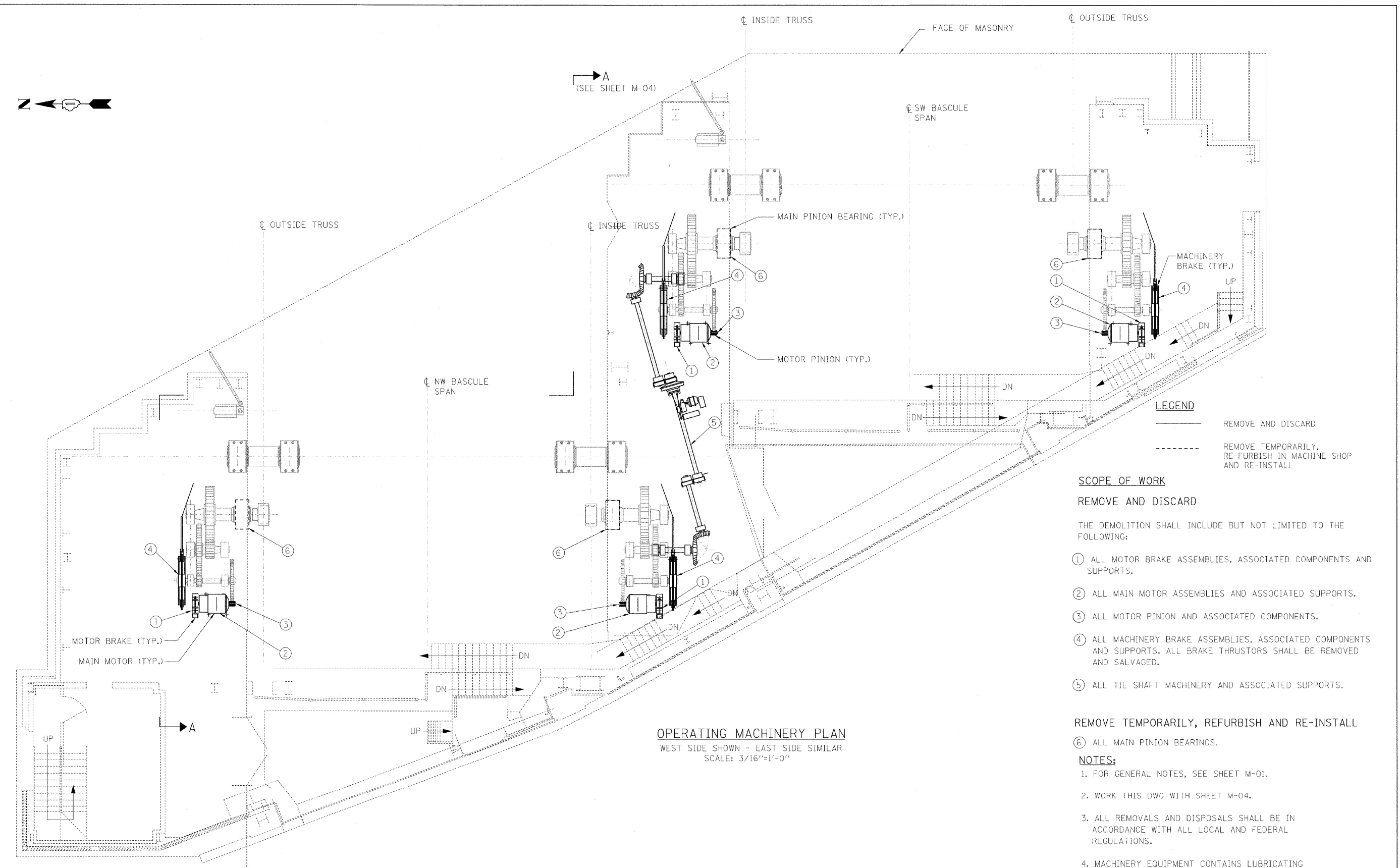
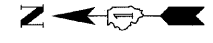
**PB Americas, Inc.**  
 230 WEST MONROE STREET,  
 SUITE 900  
 CHICAGO, IL. 60606

USER NAME = sharma	DESIGNED - J. BONSU	REVISED -
FILE NAME = D168d61-sht-mec-02.dgn	DRAWN - V. LEVIT	REVISED -
PLOT SCALE = NONE	CHECKED - D. NYARKO	REVISED -
PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

<b>OPERATING MACHINERY PLAN</b>	
SCALE: AS SHOWN	SHEET NO. M-02 OF M-21 SHEETS
STA. 379+06.09 TO STA. 382+45.28	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	246
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



**LEGEND**

— REMOVE AND DISCARD

- - - REMOVE TEMPORARILY, RE-FURBISH IN MACHINE SHOP AND RE-INSTALL

- SCOPE OF WORK**
- REMOVE AND DISCARD**
- THE DEMOLITION SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING:
- ① ALL MOTOR BRAKE ASSEMBLIES, ASSOCIATED COMPONENTS AND SUPPORTS.
  - ② ALL MAIN MOTOR ASSEMBLIES AND ASSOCIATED SUPPORTS.
  - ③ ALL MOTOR PINION AND ASSOCIATED COMPONENTS.
  - ④ ALL MACHINERY BRAKE ASSEMBLIES, ASSOCIATED COMPONENTS AND SUPPORTS. ALL BRAKE THRUSTORS SHALL BE REMOVED AND SALVAGED.
  - ⑤ ALL TIE SHAFT MACHINERY AND ASSOCIATED SUPPORTS.

- REMOVE TEMPORARILY, REFURBISH AND RE-INSTALL**
- ⑥ ALL MAIN PINION BEARINGS.

- NOTES:**
- 1. FOR GENERAL NOTES, SEE SHEET M-01.
  - 2. WORK THIS DWG WITH SHEET M-04.
  - 3. ALL REMOVALS AND DISPOSALS SHALL BE IN ACCORDANCE WITH ALL LOCAL AND FEDERAL REGULATIONS.
  - 4. MACHINERY EQUIPMENT CONTAINS LUBRICATING OIL OR GREASE. REMOVALS AND DISPOSALS SHALL BE IN ACCORDANCE WITH ALL LOCAL AND FEDERAL REGULATIONS.

**OPERATING MACHINERY PLAN**  
 WEST SIDE SHOWN - EAST SIDE SIMILAR  
 SCALE: 3/16"=1'-0"

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 230 WEST MONROE STREET,  
 SUITE 900  
 CHICAGO, IL. 60606

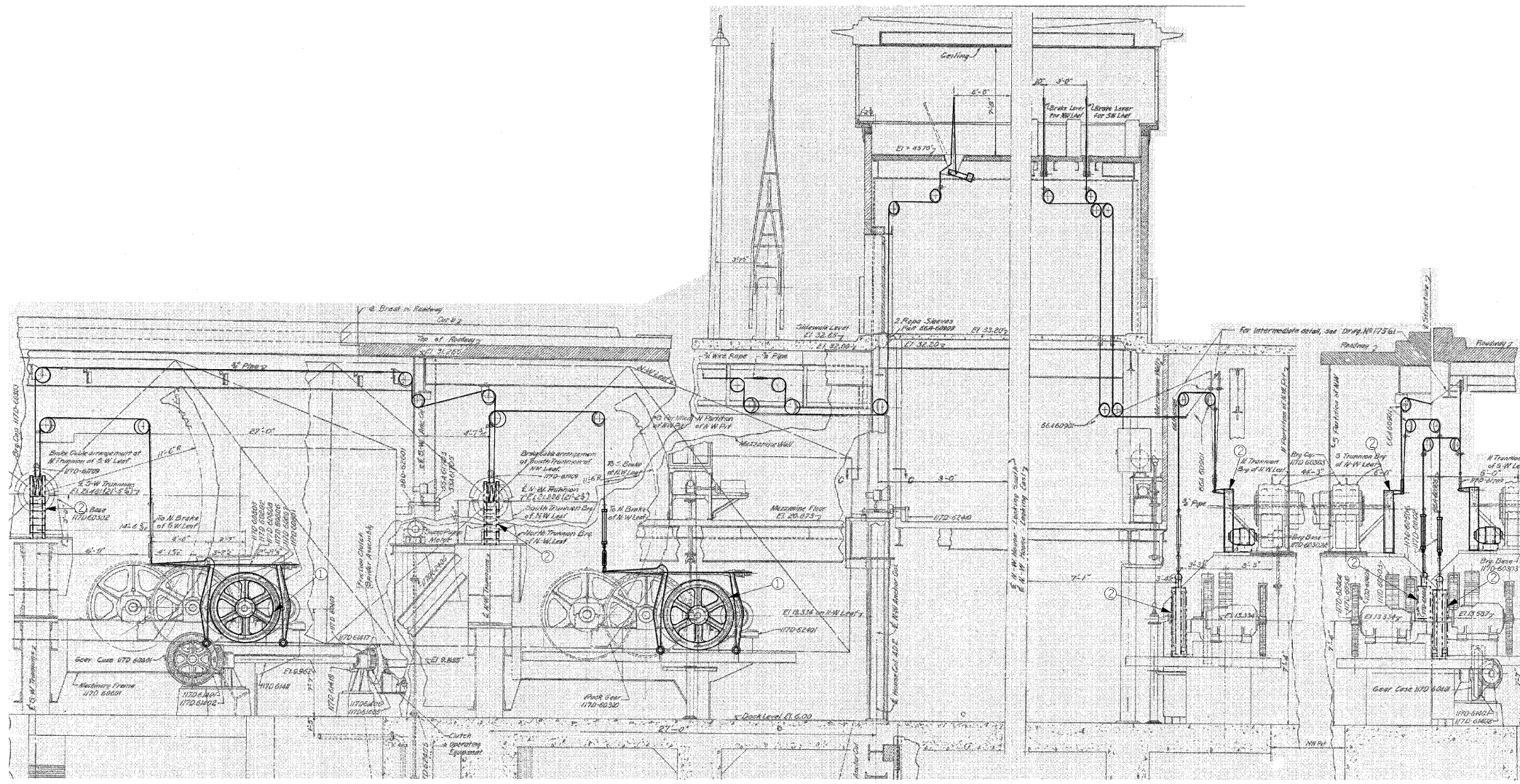
USER NAME = sherna	DESIGNED - J. BONSU	REVISED -
FILE NAME = 016061-sht-meo-03.dgn	DRAWN - V. LEVIT	REVISED -
PLOT SCALE = NONE	CHECKED - D. NYARKO	REVISED -
PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**OPERATING MACHINERY DEMOLITION PLAN**

SCALE: AS SHOWN    SHEET NO. M-03 OF M-27 SHEETS    STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	247
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



SECTION A-A (SEE SHEET M-03)  
 N. BRAKE OF S.W. LEAF AND N. BRAKE OF  
 N.W. LEAF SHOWN - 8 LOCATIONS REQUIRED  
 N.T.S.

**SCOPE OF WORK**

**REMOVE AND DISCARD**

THE DEMOLITION SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

- ① ALL MACHINERY BRAKE ASSEMBLIES, BRAKE WHEELS, BRAKE OPERATING CABLES, SHEAVES, EQUALIZERS, PIPES, SUPPORTS AND ALL ASSOCIATED ELECTRICAL COMPONENTS.

**REMOVE AND SALVAGE**

THE ITEMS TO BE SALVAGED, SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

- ② ALL MACHINERY BRAKE THRUSTORS.

**LEGEND**

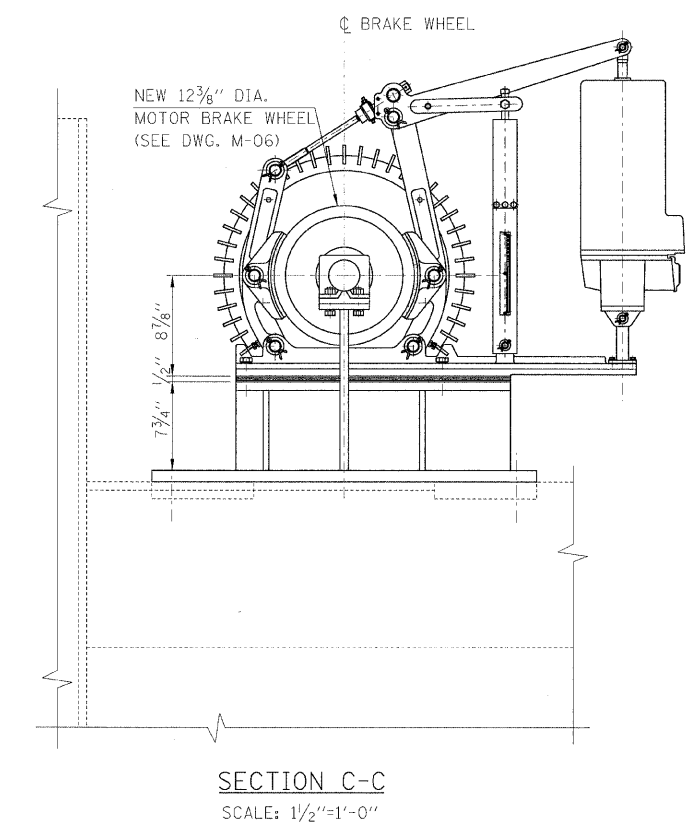
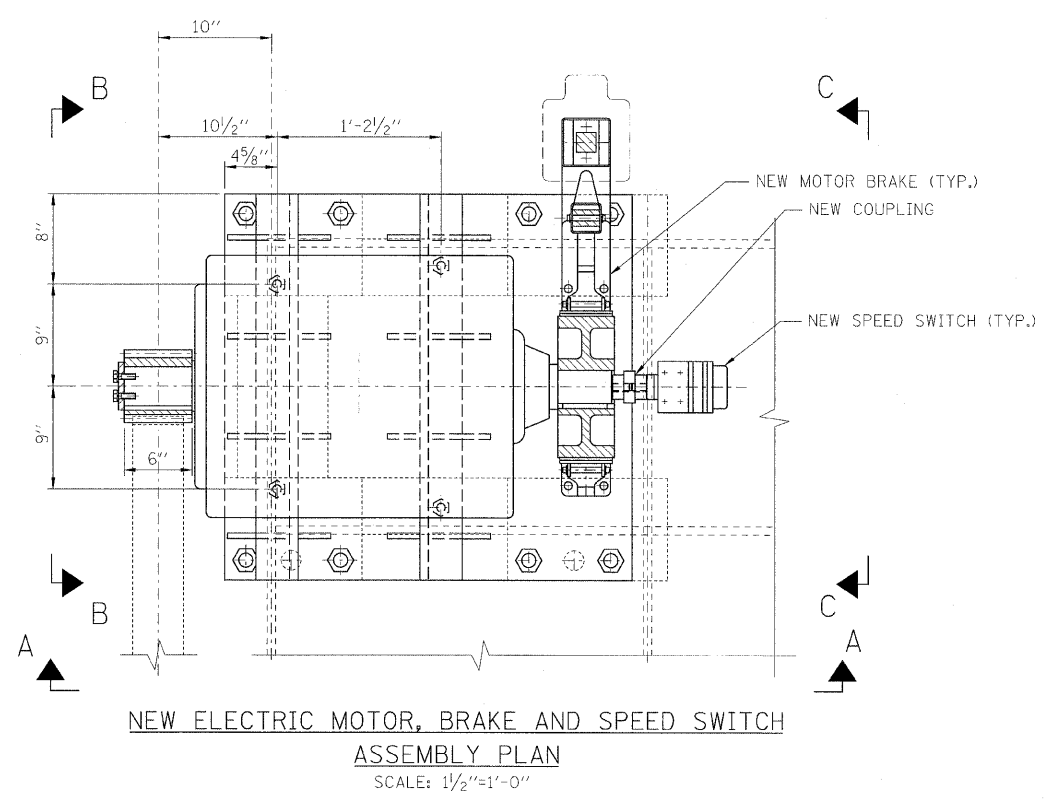
- REMOVE AND DISCARD
- REMOVE AND SALVAGE

**NOTES:**

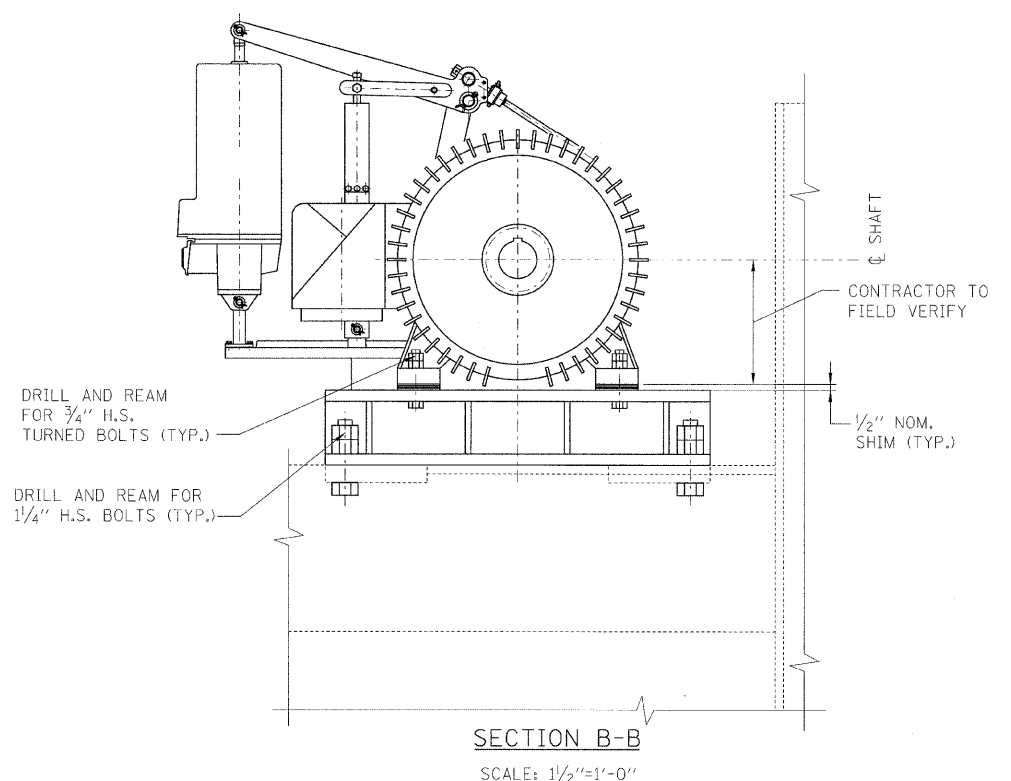
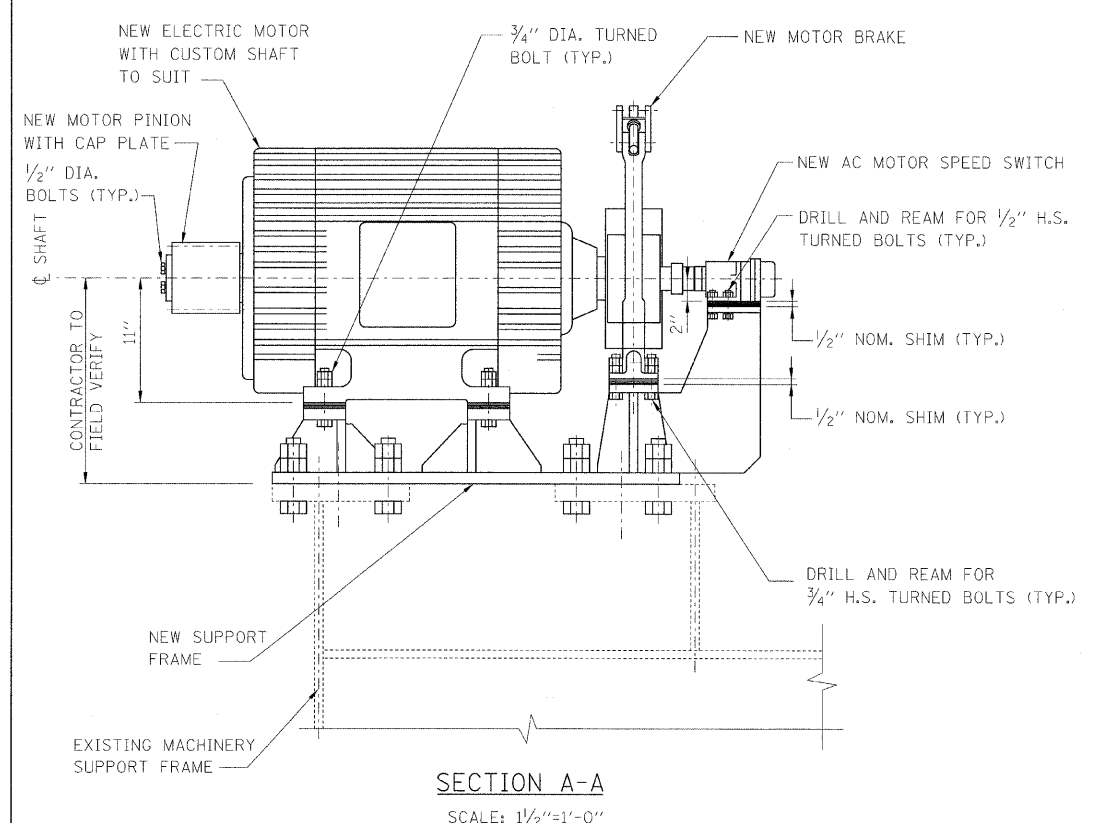
- 1. FOR GENERAL NOTES, SEE SHEET M-01.
- 2. WORK THIS DWG. WITH SHEET M-03.
- 3. ALL REMOVALS AND DISPOSALS SHALL BE IN ACCORDANCE WITH ALL LOCAL AND FEDERAL REGULATIONS.
- 4. UNLESS THERE IS SEVERE INTERFERENCE WITH NEW MACHINERY, EXISTING BRAKE SUPPORT HOLES IN MACHINERY SHALL BE FILLED BY ROUND HEADED BLIND RIVETS OF FLAT HEADED SELF TAPPING SCREWS SET INTO COUNTERSUNK HOLES. PLUG WELDS SHALL ONLY BE PERMITTED UPON WRITTEN APPROVAL OF THE ENGINEER.

<b>PB Americas, Inc.</b> 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL. 60606	USER NAME = shorns FILE NAME = D168d61-shr-mec-04.dgn PLOT SCALE = NONE PLOT DATE = 5/7/2004	DESIGNED - J. BONSU DRAWN - J. FERRERI CHECKED - D. NYARKO DATE - MAY 8, 2009	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS          DEPARTMENT OF TRANSPORTATION</b>	<b>MACHINERY BRAKES DEMOLITION DETAILS</b>	F.A.P. RTE. 389 SECTION 2424-2B-R COUNTY COOK TOTAL SHEETS 398 SHEET NO. 248	CONTRACT NO. 60D61 FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT
	SCALE: AS SHOWN SHEET NO. M-04 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28						



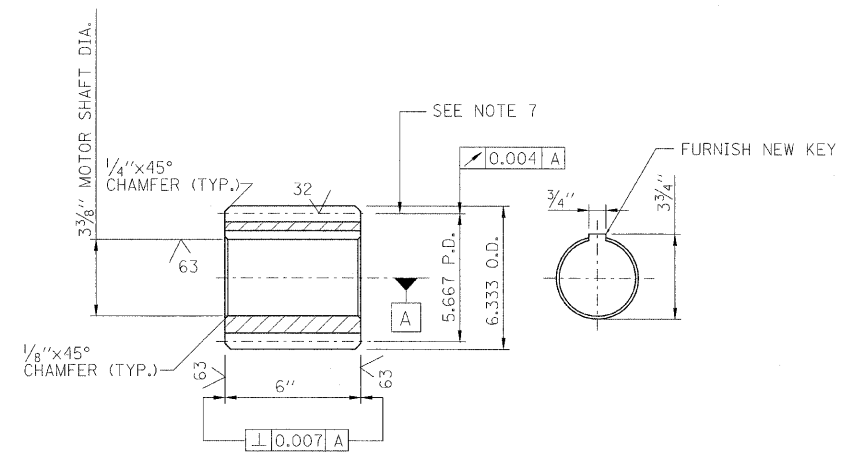


QTY.	ITEM	DESCRIPTION
8	MAIN MOTOR	75 HP ELECTRIC AC MOTOR, 530 RPM, FRAME 444T BY MAGNETEK OR APPROVED EQUAL
8	THRUSTOR BRAKE	BUBENZER 13" DIA., TYPE 315-121/6 WITH MANUAL RELEASE HANDLE AND LIMIT SWITCHES OR APPROVED EQUAL
8	AC MOTOR SPEED SWITCH	
AS REQUIRED	SHIMS	STAINLESS STEEL, ASTM A240 TYPE 316/304
64	1/4" DIA. H.S. BOLT	HEAVY HEX BOLTS, ASTM A325
128	1/4" DIA. NUT	HEAVY HEX NUTS, ASTM A563
64	3/4" DIA. TURNED BOLT	HIGH STRENGTH TURNED BOLTS, ASTM A490
128	3/4" DIA. NUT	HEAVY HEX NUTS, ASTM A563
32	1/2" DIA. TURNED BOLT	HIGH STRENGTH TURNED BOLTS, ASTM A490
32	1/2" DIA. NUT	HEAVY HEX NUTS, ASTM A563
48	1/2" DIA. WASHER	HARDENED STEEL WASHERS, ASTM F436
16	1/2" DIA. CAP BOLT	HIGH STRENGTH TURNED BOLTS, ASTM A490
8	COUPLING	LOVEJOY JAW IN-SHEAR TYPE, SIZE LS095 STYLE 1, WITH 3/4" BORE OR APPROVED EQUAL



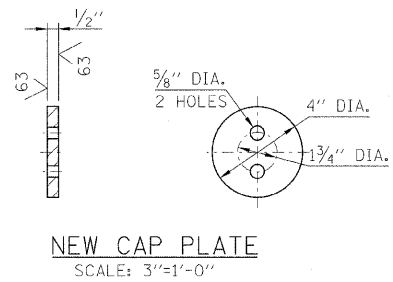
**LEGEND:**  
 - - - - - EXISTING MEMBER TO REMAIN  
 ——— NEW MEMBER

- NOTES:**
- FOR GENERAL NOTES, SEE SHEET M-01.
  - CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
  - WORK THIS DWG WITH SHEETS M-06 AND M-07.
  - UNLESS THERE IS SEVERE INTERFERENCE WITH NEW MACHINERY, EXISTING BOLT HOLES SHALL BE FILLED BY ROUND-HEADED BLIND RIVETS OR FLAT HEADED SELF-TAPPING SCREWS SET INTO COUNTERSUNK HOLES. PLUG WELDS SHALL ONLY BE PERMITTED UPON WRITTEN APPROVAL OF THE ENGINEER.
  - DRILLING AND REAMING SHALL OCCUR AFTER FINAL ALIGNMENT.



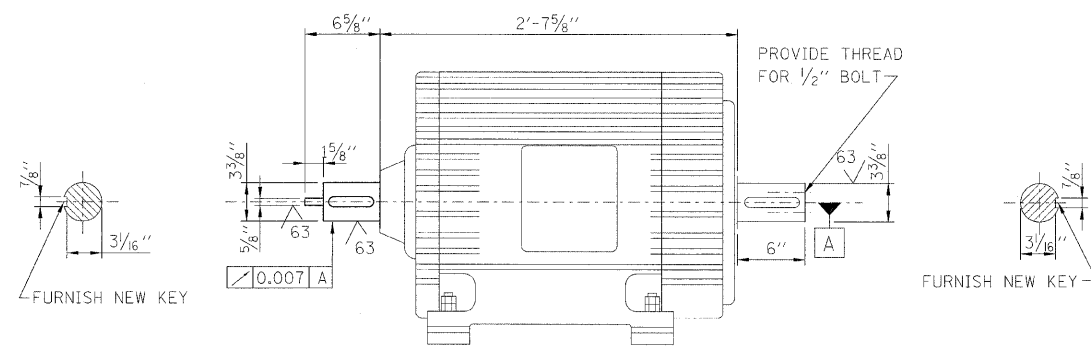
FULL DEPTH, SPUR GEAR - 5.667 P.D., 3 D.P., 17 TEETH - 14 1/2° INVOLUTE

**NEW MOTOR PINION**  
SCALE: 3"=1'-0"

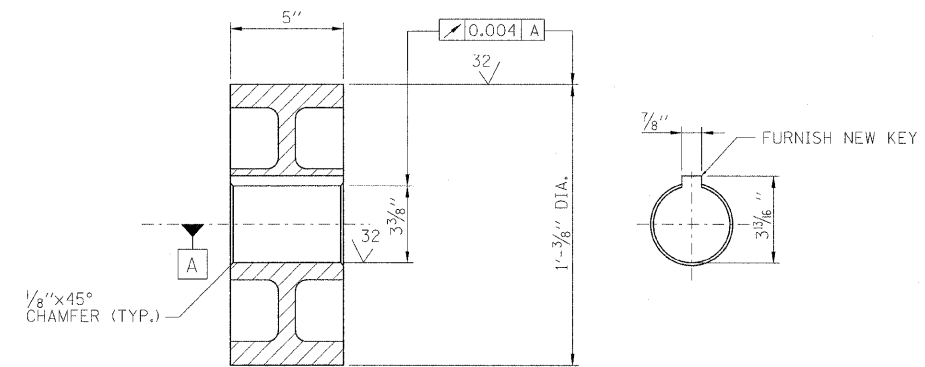


**NEW CAP PLATE**  
SCALE: 3"=1'-0"

QTY.	ITEM	DESCRIPTION
8	NEW MOTOR PINION	ASTM A668 CLASS J FORGING, SAE 41L40 HEAT TREATED (QUENCHED, TEMPERED AND STRESS-RELIEVED)
8	NEW MOTOR BRAKE WHEEL	ASTM A732 GRADE 5N CAST STEEL WITH A CVN IMPACT TOUGHNESS OF 25 FT-LBS AT 40°F
8	NEW ELECTRIC MOTOR	CAST ALUMINUM
8	NEW CAP PLATE	ASTM A668, CLASS D



**NEW ELECTRIC MOTOR WITH EXTENDED SHAFT**  
SCALE: 1/2"=1'-0"



**NEW MOTOR BRAKE WHEEL**  
SCALE: 3"=1'-0"

**NOTES:**

- FOR GENERAL NOTES, SEE SHEET, M-01
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
- WORK THIS DWG, WITH SHEET M-05.
- FOR ADDITIONAL NOTES ON BRAKE REPLACEMENT, SEE SHEET M-05.
- NEW BRAKE WHEELS SHALL BE PROVIDED WITH NEW KEYS.
- MACHINERY SUPPORTS ARE DETAILED FOR THE COMPONENTS SPECIFIED WITH 1/2" NOMINAL SHIMS PROVIDED BETWEEN MACHINERY AND SUPPORTS.
- THE PITCH LINE MUST BE SCRIBED ON BOTH ENDS OF ALL MOTOR PINION TEETH. SCRIBED LINE TO BE V-GROOVE, MINIMUM OF 0.02" DEEP.

**PB Americas, Inc.**  
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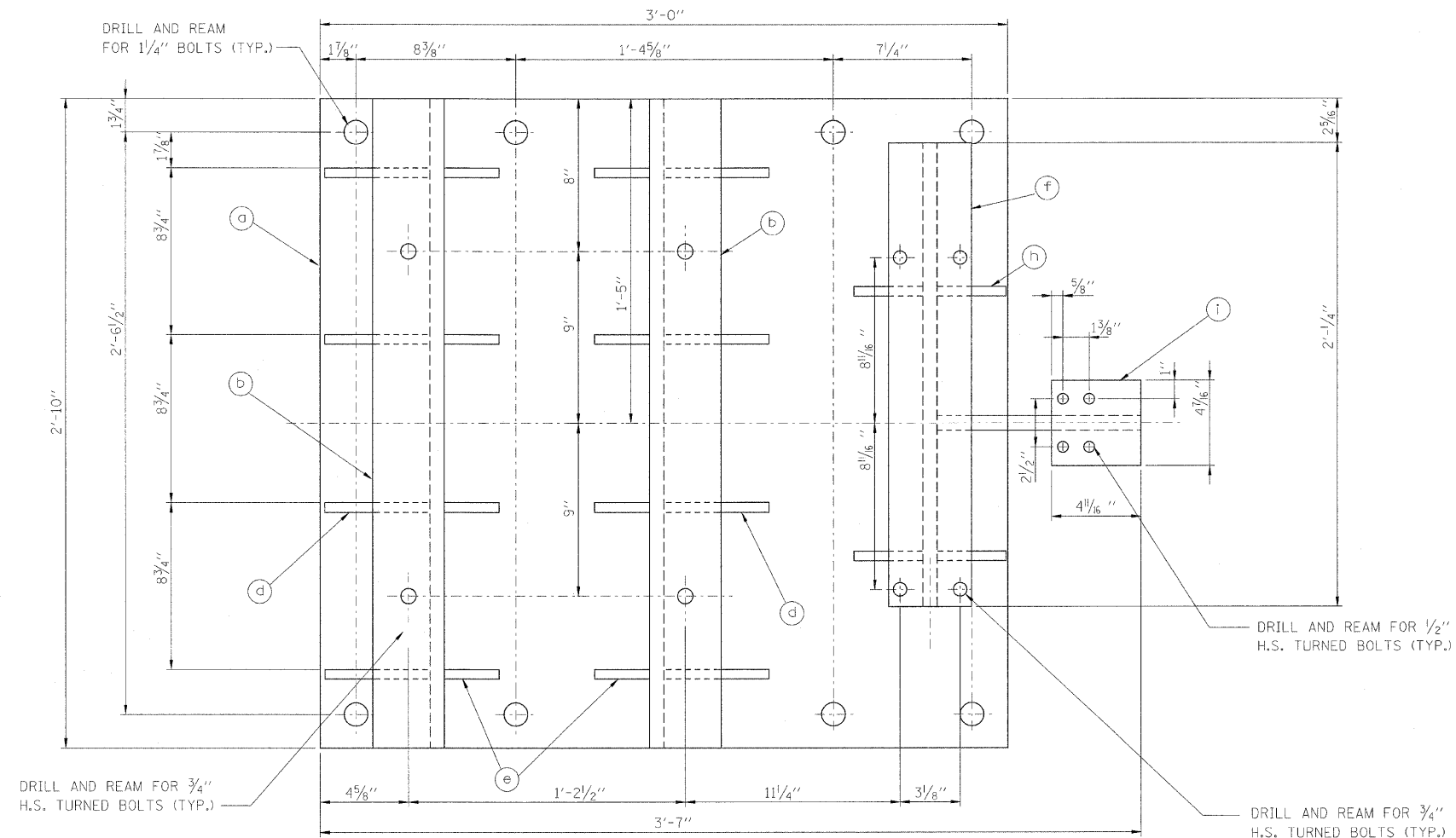
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PLOT SCALE = NONE	CHECKED - D. NYARKO	REVISED -
PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**OPERATING MACHINERY DETAILS - II**

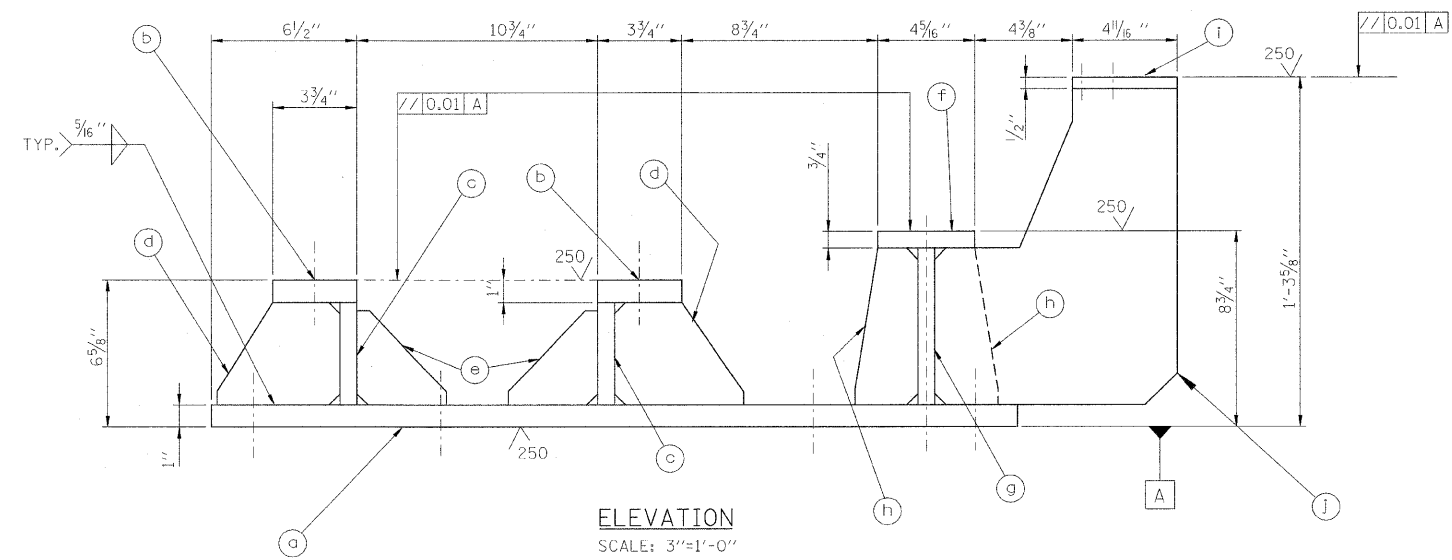
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	250
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



PLAN

SCALE: 3"=1'-0"  
 MATERIAL: ASTM A709, GRADE 50  
 (NORTHWEST SUPPORT SHOWN)



ELEVATION  
 SCALE: 3"=1'-0"

MARK NO.	QTY.	DESCRIPTION
a	8	1/4" x 2'-10" x 3'-0" PL
b	16	1/4" x 3 3/4" x 2'-10" PL
c	16	3/4" x 4 5/8" x 2'-10" PL
d	64	1/2" x 4 5/8" x 5 1/2" PL
e	64	1/2" x 3 3/4" x 4 1/4" PL
f	8	1" x 4 5/8" x 2 1/4" PL
g	8	3/4" x 7" x 2 1/4" PL
h	32	1/2" x 3" x 7" PL
i	8	3/4" x 4 1/6" x 4 1/6" PL
j	8	3/4" x 10 5/8" x 1'-3 5/8" PL

NOTES:

- FOR GENERAL NOTES, SEE SHEET M-01.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
- ALL STEEL SHALL CONFORM TO THE ASTM A709, GRADE 50.
- FOR ADDITIONAL NOTES ON BRAKE REPLACEMENT, SEE SHEET M-05.
- MACHINERY SHALL BE BOLTED TO SUPPORTS USING ASTM A490 HIGH STRENGTH TURNED BOLTS. NEW SUPPORTS SHALL BE CONNECTED TO EXISTING MACHINERY SUPPORTS USING ASTM A325, HEAVY HEX BOLTS.
- WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE AWS-D-1.5D/1.5; 2008. PERMISSIBLE ELECTRODES ARE: AWS E70S-6 WITH CO<sub>2</sub> OR 75% ARGON-25% CO COVER GAS; OR AWS E7018; OR AWS E71T-1 WITH 75% ARGON-25% CO COVER GAS.
- UNLESS THERE IS A SEVERE INTERFERENCE WITH THE NEW MACHINERY, EXISTING BOLT HOLES SHALL BE FILLED BY ROUND-HEADED BLIND RIVETS OR FLAT HEADED SELF-TAPPING SCREWS SET INTO COUNTERSUNK HOLES. PLUG WELDS SHALL ONLY BE PERMITTED UPON WRITTEN APPROVAL OF THE ENGINEER.
- ORIENTATION OF SUPPORT FOR EACH MACHINERY IS DIFFERENT. CONTRACTOR TO VERIFY ORIENTATION OF SUPPORTS PRIOR TO FABRICATION.

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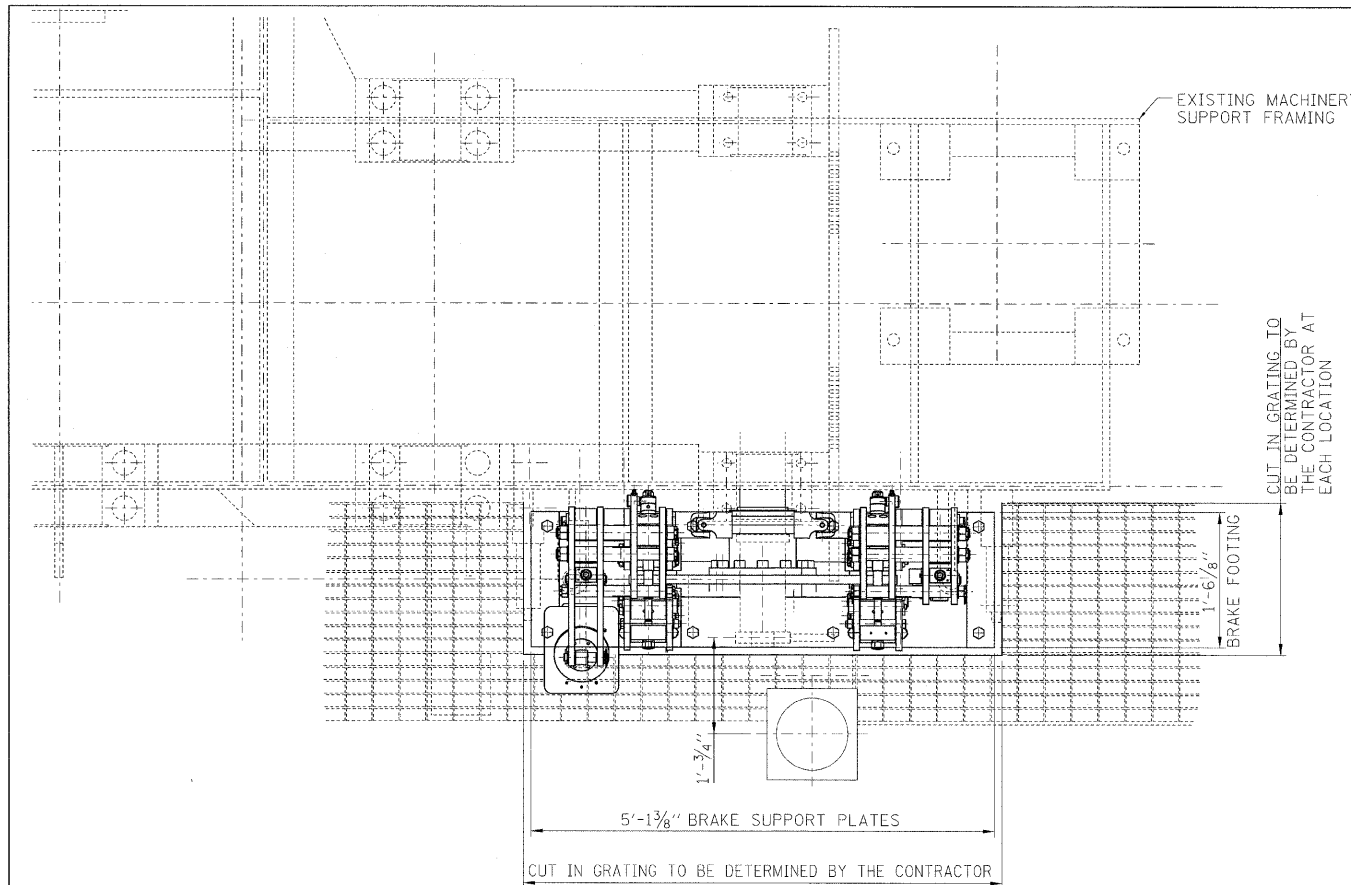
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PLOT SCALE = NONE	CHECKED - D. NYARKO	REVISED -
PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**OPERATING MACHINERY SUPPORT DETAILS**

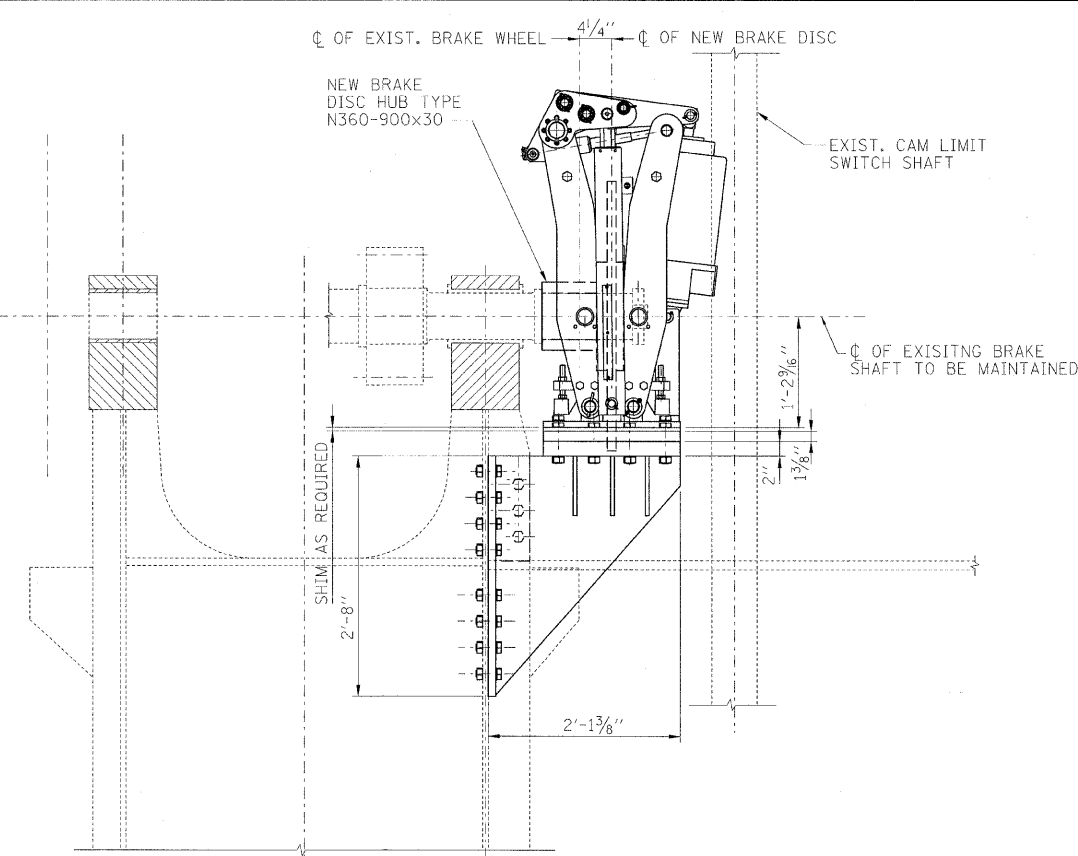
SCALE: AS SHOWN SHEET NO. M-07 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	251
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



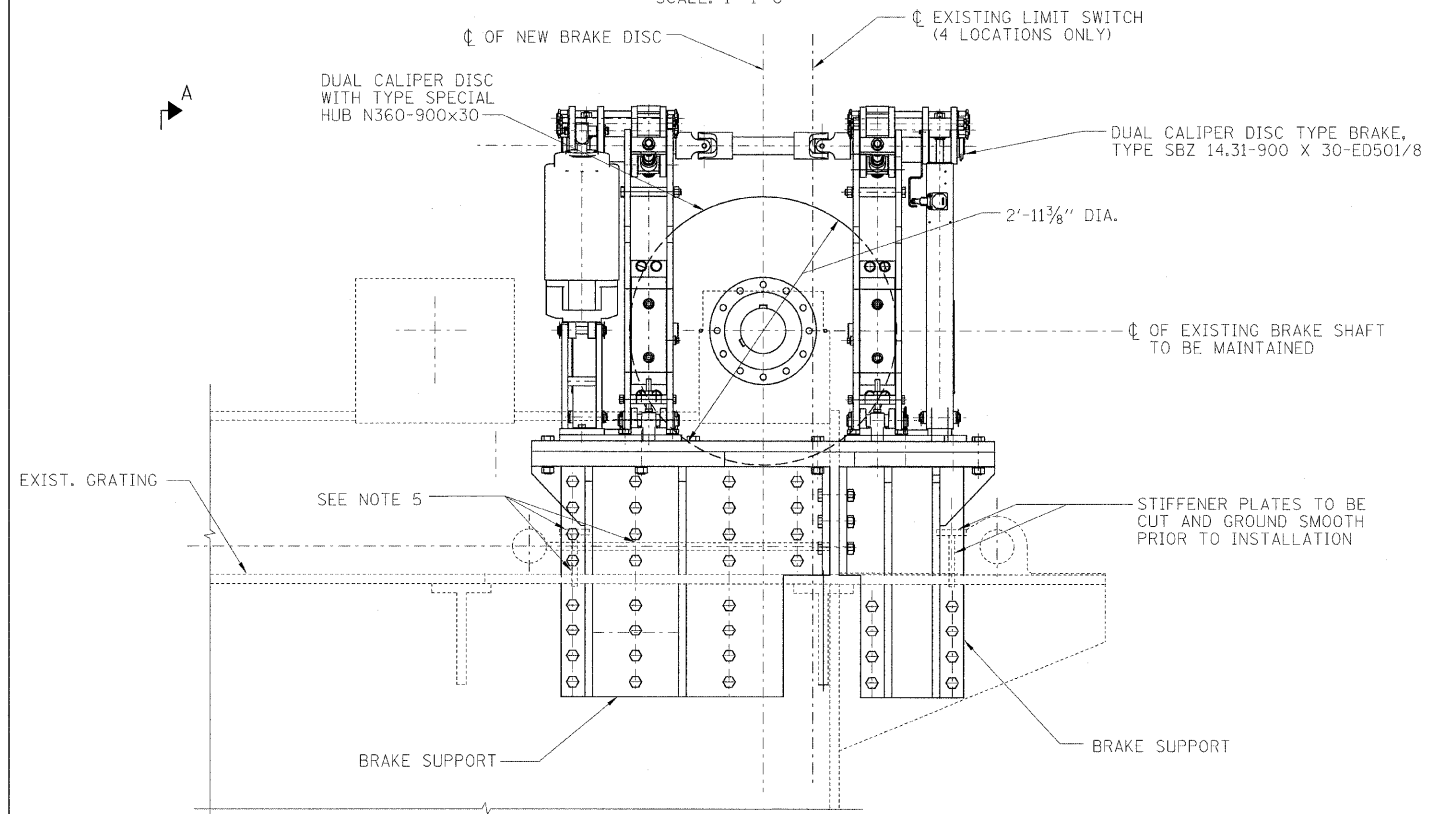
PLAN

SCALE: 1"=1'-0"



SECTION A-A

SCALE: 1"=1'-0"



ELEVATION

SCALE: 1"=1'-0"

LEGEND:

- NEW MEMBER
- - - - - EXISTING MEMBER TO REMAIN

NOTES:

1. FOR GENERAL NOTES, SEE SHEET M-01.
2. WORK THIS DWG WITH SHEET M-09.
3. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS BEFORE BEGINNING FABRICATION AND INSTALLATION.
4. NEW MACHINERY BRAKES SHALL BE BUBENZER'S DUAL CALIPER DISC TYPE BRAKE, TYPE SBZ 14.31-900 X 30-ED 501/8 OR APPROVED EQUAL.
5. THE MACHINERY SUPPORT STIFFENER PLATES THAT INTERFERE WITH THE BRAKE SUPPORTS SHALL BE CUT. THE AREA SHALL BE GROUND SMOOTH, PRIMED AND PAINTED PRIOR TO INSTALLATION OF NEW MACHINERY BRAKE SUPPORT.
6. NEW KEYS SHALL BE PROVIDED WITH BRAKE DISC TO MATCH EXISTING KEY WAYS.
7. CONTRACTOR TO CUT HOLES IN BRAKE SUPPORT TO ACCOMMODATE CALIPER DISC.

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230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = sha-ma  
FILE NAME = D168d61-sht-mco-08.dgn  
PLOT SCALE = NONE  
PLOT DATE = 5/7/2009

DESIGNED - V. LEVIT  
DRAWN - V. LEVIT  
CHECKED - D. NYARKO  
DATE - MAY 8, 2009

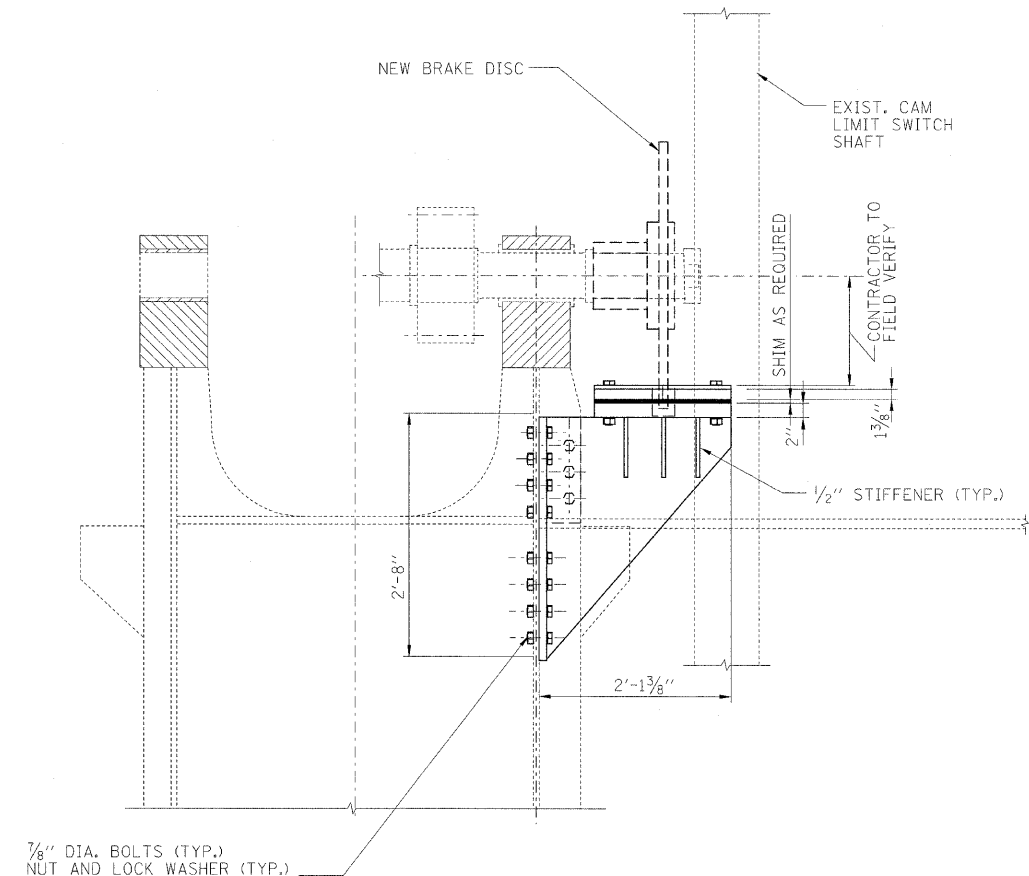
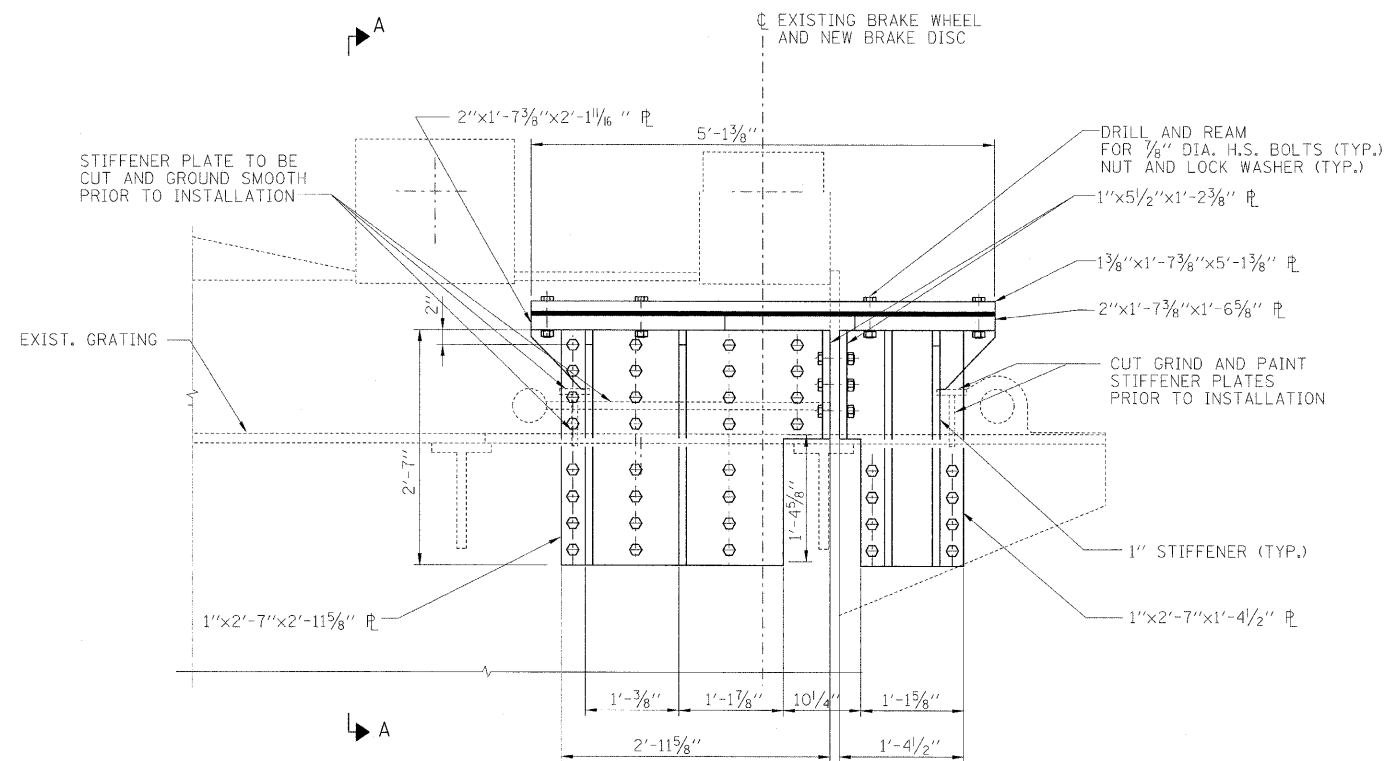
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REVISED -  
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

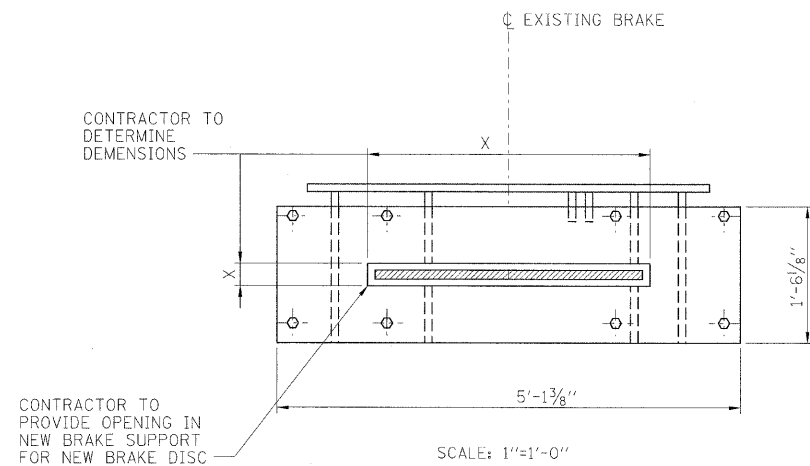
**MACHINERY BRAKES**

SCALE: AS SHOWN SHEET NO. M-08 OF N-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	252
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



SECTION A-A  
SCALE: 1"=1'-0"



MACHINERY BRAKE SUPPORT ASSEMBLY  
8 ASSEMBLIES REQUIRED

**LEGEND:**

- NEW MEMBER
- ..... EXISTING MEMBER TO REMAIN

**NOTES:**

1. FOR GENERAL NOTES, SEE SHEET M-01.
2. WORK THIS DWG WITH SHEET M-08.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
4. CONTRACTOR TO REMOVE EXISTING CAM LIMIT SWITCH GEARS ON THE EXISTING BRAKE SHAFT, BEFORE BRAKE INSTALLATION. EXISTING GEARS AND NEW KEYS SHALL BE INSTALLED AFTER BRAKE INSTALLATION.
5. C/C BOLTS SHALL BE 3/2" O/C TO EDGE DISTANCES SHALL BE PER AASHTO STANDARD SPECIFICATIONS.
6. NEW BRAKE DISC MATERIAL SHALL BE ASTM A874 LOW TEMPERATURE DUCTILE IRON AT 25 FT.LBS AT 40°F.
7. ALL STEEL FOR MACHINERY SUPPORT SHALL CONFORM TO ASTM A709, GRADE 50.
8. NEW BRAKE DISC SHALL BE BORE FINISHED. THE BORE DIAMETER SHALL BE DETERMINED BY CONTRACTOR.

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SUITE 900  
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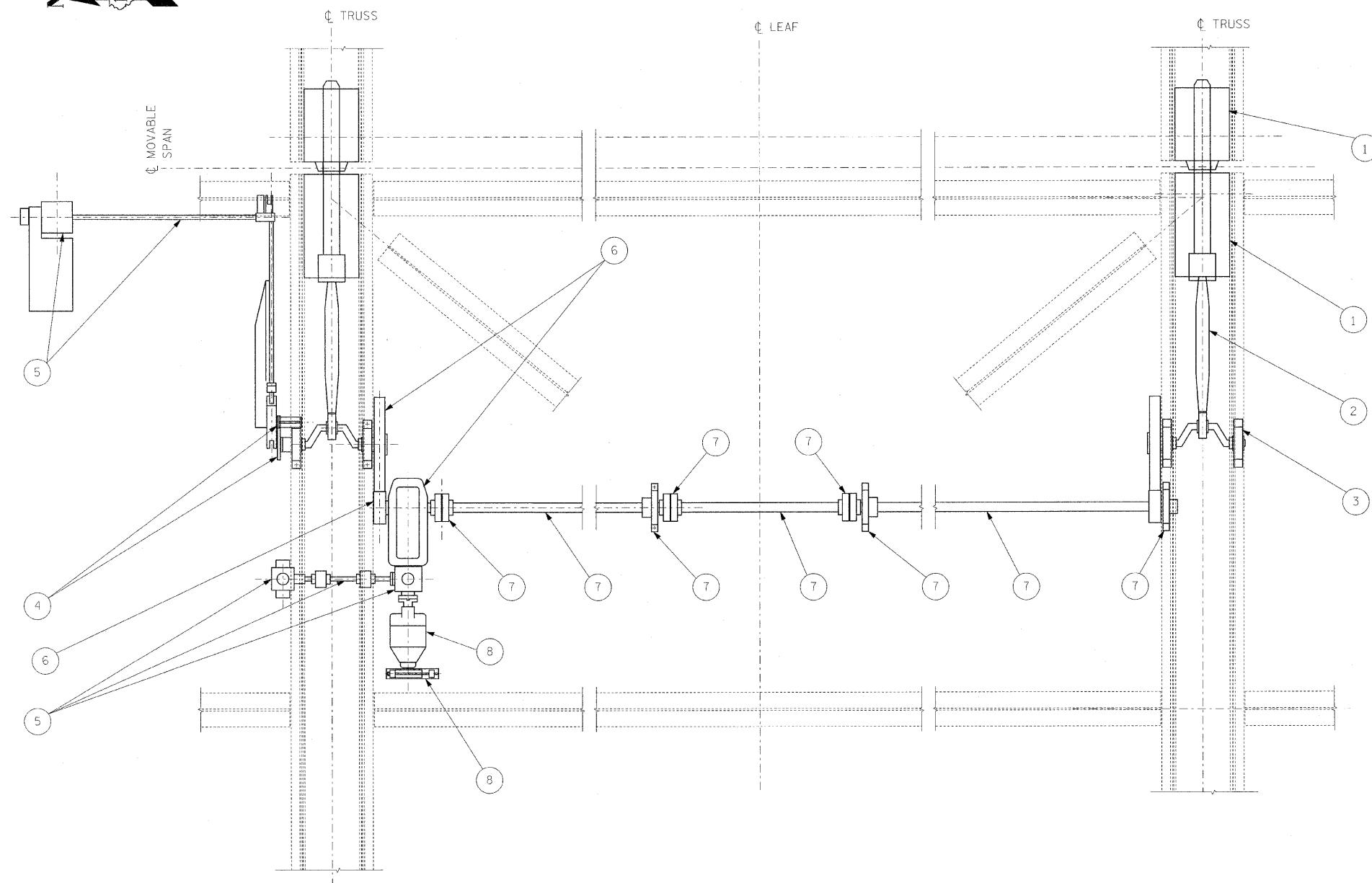
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PLOT SCALE = NONE	CHECKED - D. NYARKO	REVISED -
PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MACHINERY BRAKE SUPPORT DETAILS**

SCALE: AS SHOWN SHEET NO. M-09 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	253
CONTRACT NO. 60D61			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	



**DEMOLITION PLAN**  
 NORTH LEAF SHOWN, SOUTH LEAF SIMILAR  
 SCALE: 1/2" = 1'-0"

**SCOPE OF WORK FOR CENTER LOCK DEMOLITION**

REMOVE AND DISPOSE OF ALL EXISTING CENTER LOCK EQUIPMENT AND ASSOCIATED SUPPORTS. THE DEMOLITION SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

- ① ALL LOCKBARS, GUIDES, SOCKET ASSEMBLIES, AND ALL ASSOCIATED COMPONENTS.
- ② ALL LOCKBAR CRANKS, ACTUATING LINKAGES ASSEMBLIES AND ASSOCIATED COMPONENTS
- ③ ALL LOCK MACHINERY SUPPORTS.
- ④ ALL LIMIT SWITCH ASSEMBLIES.
- ⑤ ALL MANUAL DRIVE MECHANISMS, ASSOCIATED COMPONENTS AND ASSOCIATED SUPPORTS.
- ⑥ ALL SPUR GEARS, REDUCER, SHAFTS AND KEYS.
- ⑦ ALL TRANSVERSE LINE SHAFTS, ASSOCIATED BEARINGS AND COUPLINGS.
- ⑧ ELECTRIC MOTOR, BRAKES, AND ALL ASSOCIATED ELECTRICAL COMPONENTS.
- ⑨ ALL LUBRICATION LINES AND ASSOCIATED COMPONENTS.

**LEGEND:**

— REMOVE AND DISCARD.

**NOTES:**

1. FOR GENERAL NOTES, SEE SHEET M-01.
2. WORK THIS DWG WITH SHEETS M-11 THRU M-17.
3. ALL REMOVALS AND DISPOSALS SHALL BE IN ACCORDANCE WITH ALL LOCAL AND FEDERAL REGULATIONS.
4. MACHINERY EQUIPMENT CONTAINS LUBRICATING OIL OR GREASE. REMOVALS AND DISPOSALS SHALL BE IN ACCORDANCE WITH ALL LOCAL AND FEDERAL REGULATIONS.
5. THE EXISTING LOCKBAR SOCKETS ARE BOLTED AND TACK WELDED TO THE FLOORBEAM. SOCKET REMOVAL WILL REQUIRE BREAKING WELDS AND UNBOLTING THE CASTING. ALL TACK WELDS SHALL BE GROUND SMOOTH AND FLUSH WITH THE SURFACE OF THE FLOOR BEAM WEB.
6. FOR ADDITIONAL WORK, SEE SPECIAL PROVISIONS.

**PB Americas, Inc.**  
 230 WEST MONROE STREET,  
 SUITE 900  
 CHICAGO, IL. 60606

USER NAME = sharaa  
 FILE NAME = 0160661-sht-nec-10.dgn  
 PLOT SCALE = NONE  
 PLOT DATE = 5/7/2009

DESIGNED - V. LEVIT  
 DRAWN - V. LEVIT  
 CHECKED - D. NYARKO  
 DATE - MAY 8, 2009

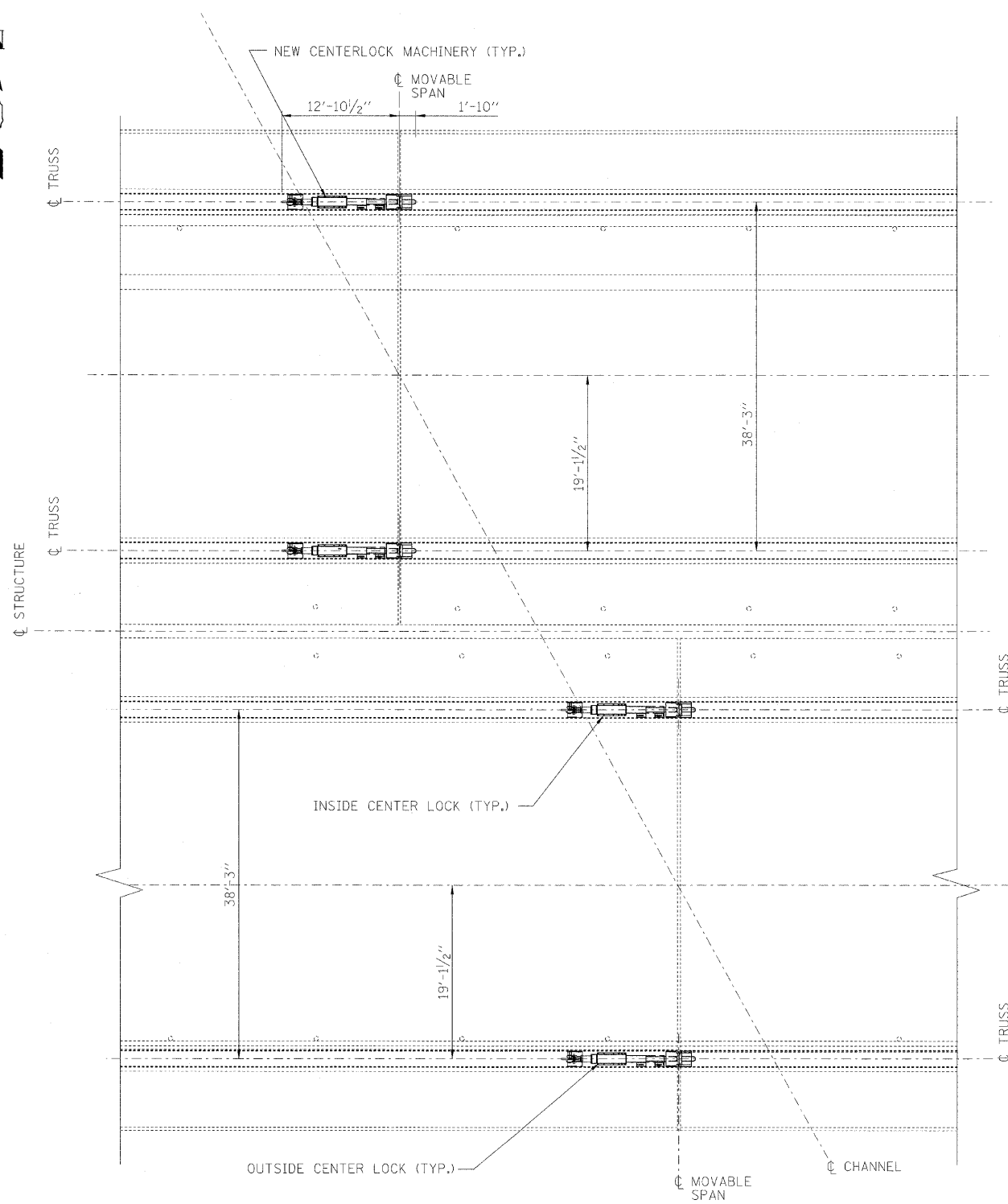
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CENTER LOCKS MACHINERY DEMOLITION PLAN**

SCALE: AS SHOWN SHEET NO. M-10 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-28-R	COOK	398	254
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				



CENTER LOCK LOCATION PLAN

SCALE: 1/8" = 1'-0"

**NOTES:**

1. FOR GENERAL NOTES, SEE SHEET M-01.
2. WORK THIS DRAWING WITH SHEETS M-12 THRU M-17.
3. FOR CENTER LOCK DEMOLITION, SEE SHEET M-10.
4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS.

**PB Americas, Inc.**  
 230 WEST MONROE STREET,  
 SUITE 900  
 CHICAGO, IL. 60606

USER NAME = sherma  
 FILE NAME = D160261-sht-mec-11.dgn  
 PLOT SCALE = NONE  
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DESIGNED - V. LEVIT  
 DRAWN - V. LEVIT  
 CHECKED - D. NYARKO  
 DATE - MAY 8, 2009

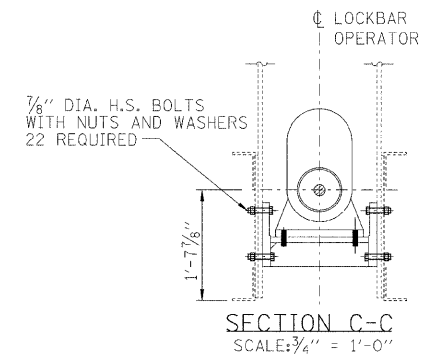
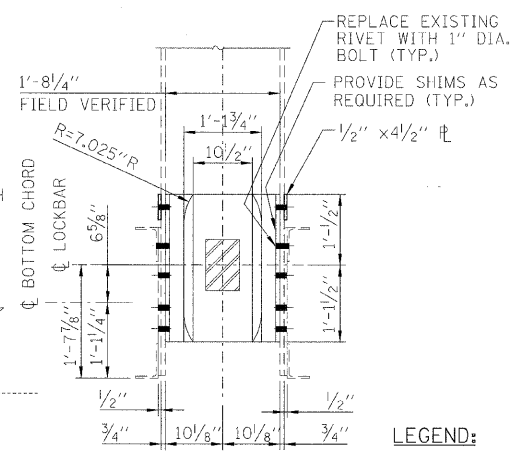
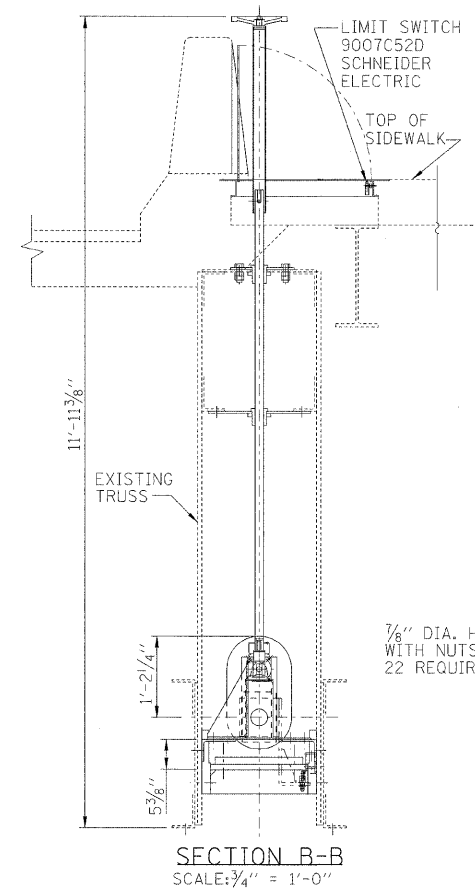
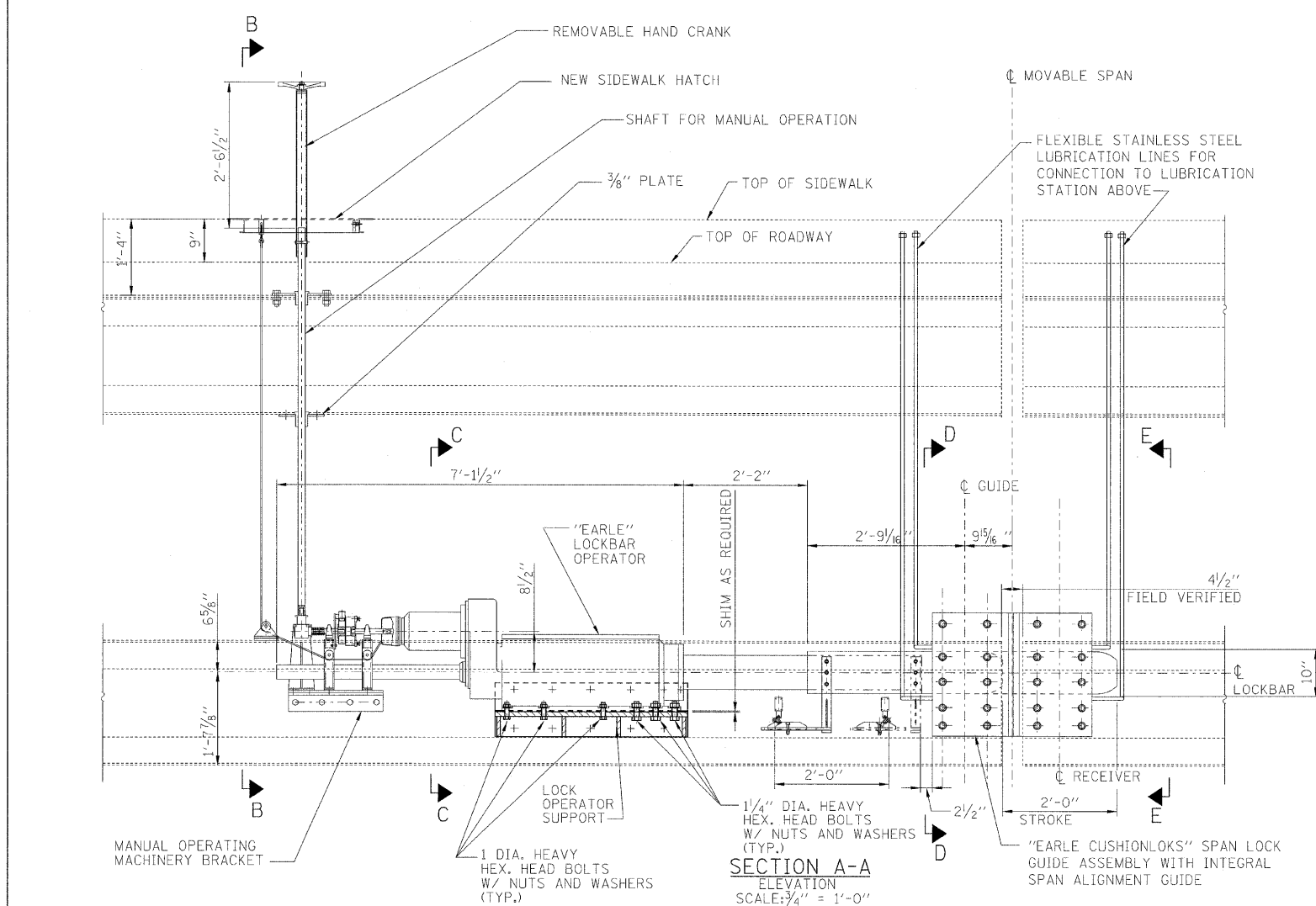
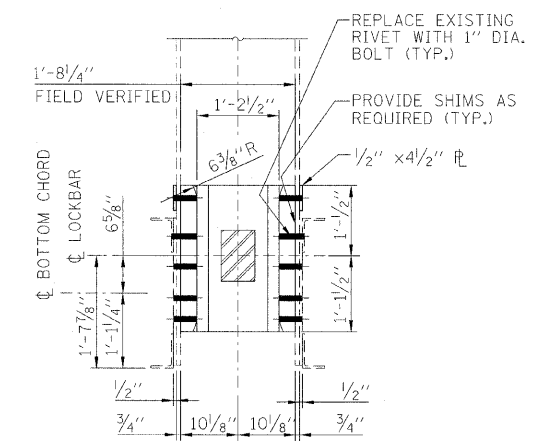
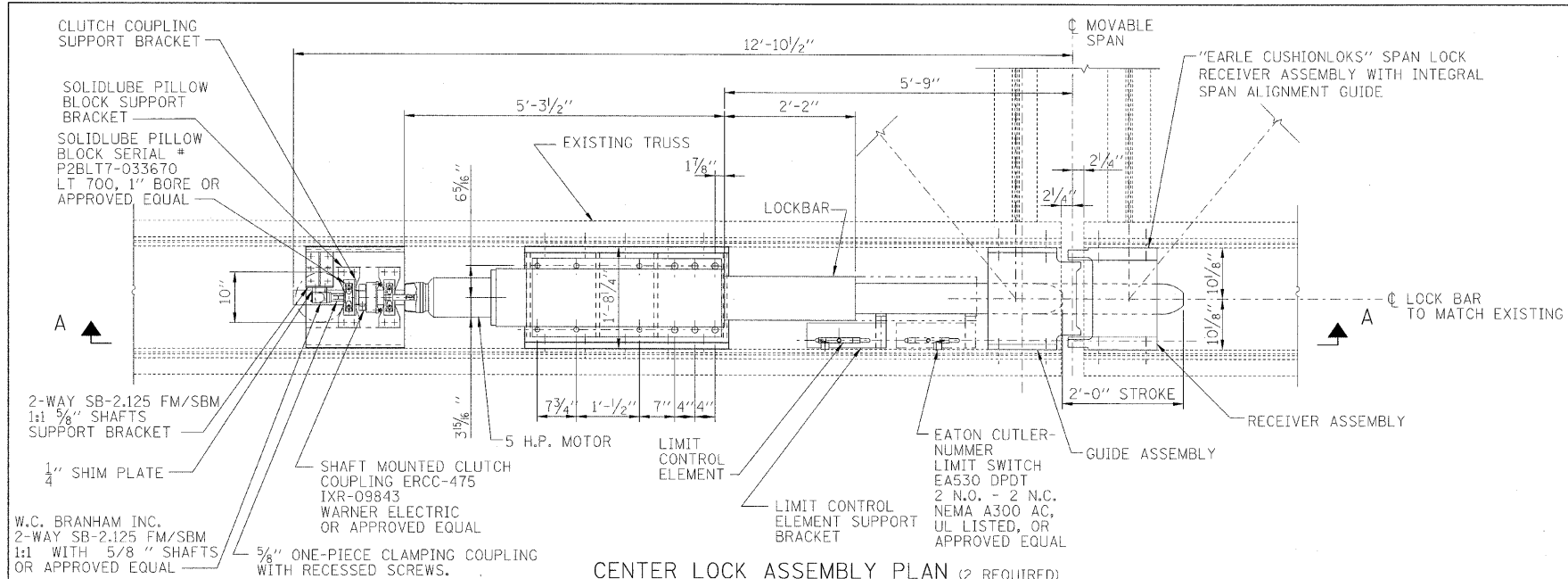
REVISED -  
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CENTER LOCKS LOCATION PLAN**

SCALE: AS SHOWN | SHEET NO. M-11 OF M-27 SHEETS | STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	255
CONTRACT NO. 60D61			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	



- LEGEND:**
- ..... EXISTING MEMBER TO REMAIN
  - NEW MEMBER
- NOTES:**
- FOR GENERAL NOTES, SEE SHEET M-01.
  - WORK THIS DRAWING WITH SHEETS M-11 THRU M-17.
  - CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
  - DETAILS OF LOCKBAR RECEIVER AND LOCKBAR GUIDES NOT SHOWN FOR CLARITY.
  - NEW "EARLE" LOCKBAR BAR OPERATOR AND "EARLE CUSHIONLOKS" WITH SPAN GUIDE INTEGRAL SHALL BE MANUFACTURED BY STEWARD MACHINE COMPANY OR APPROVED EQUAL.

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = anariba	DESIGNED - V. LEVIT	REVISED -
FILE NAME = D160d61-sh1-mec-12.dgn	DRAWN - V. LEVIT	REVISED -
PLOT SCALE = NONE	CHECKED - D. NYARKO	REVISED -
PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -

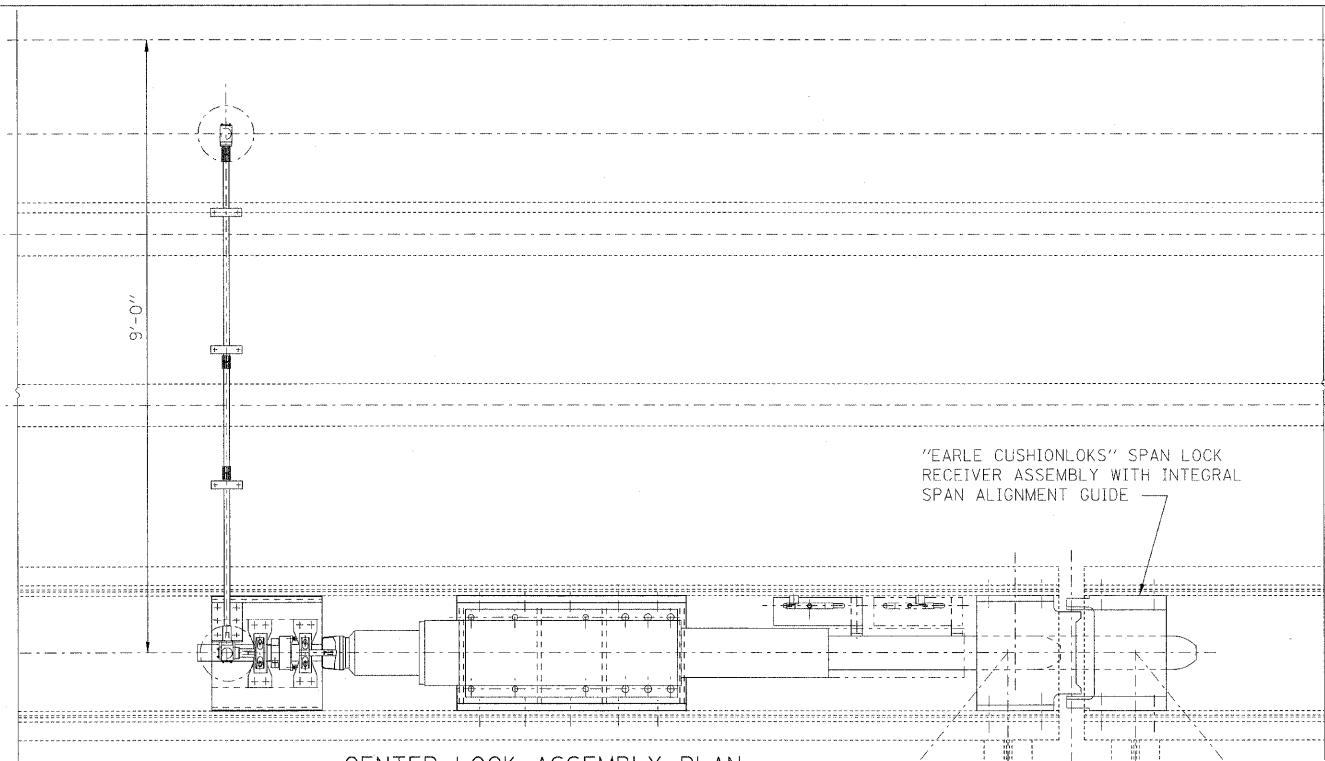
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**OUTSIDE CENTER LOCKS MACHINERY PLAN**

SCALE: AS SHOWN SHEET NO. M-12 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

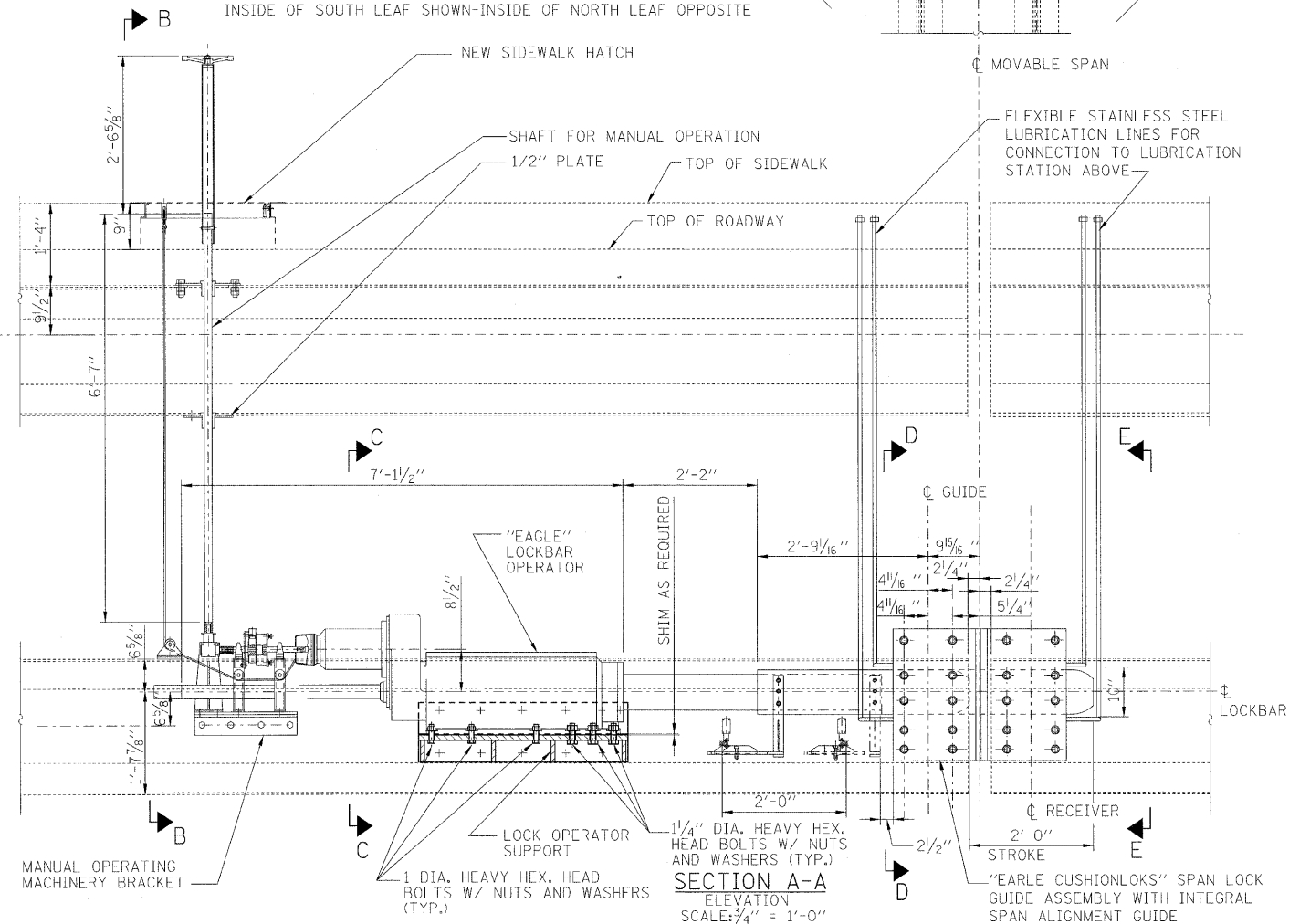




CENTER LOCK ASSEMBLY PLAN

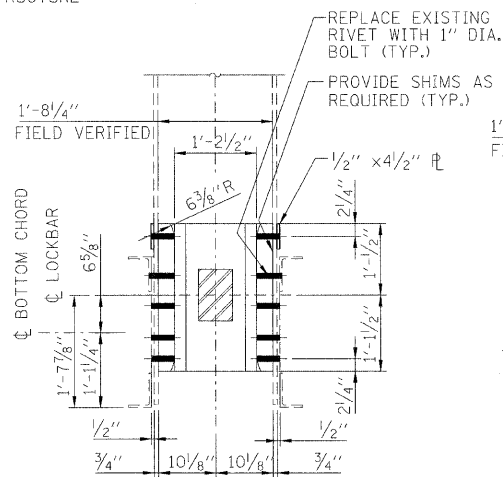
SCALE: 3/4" = 1'-0"

INSIDE OF SOUTH LEAF SHOWN-INSIDE OF NORTH LEAF OPPOSITE



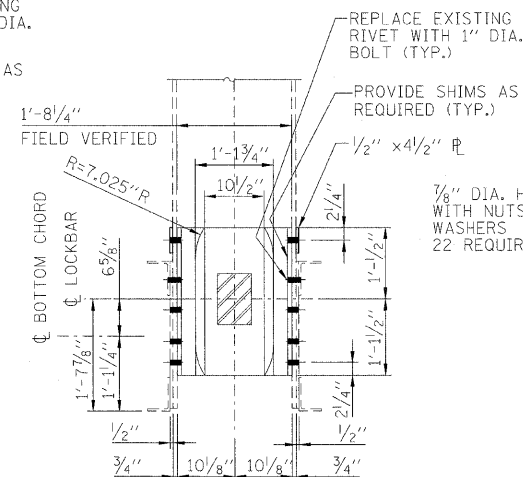
SECTION A-A ELEVATION

SCALE: 3/4" = 1'-0"



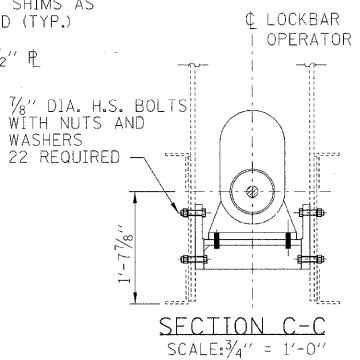
SECTION E-E LOCKBAR RECEIVER

SCALE: 3/4" = 1'-0"



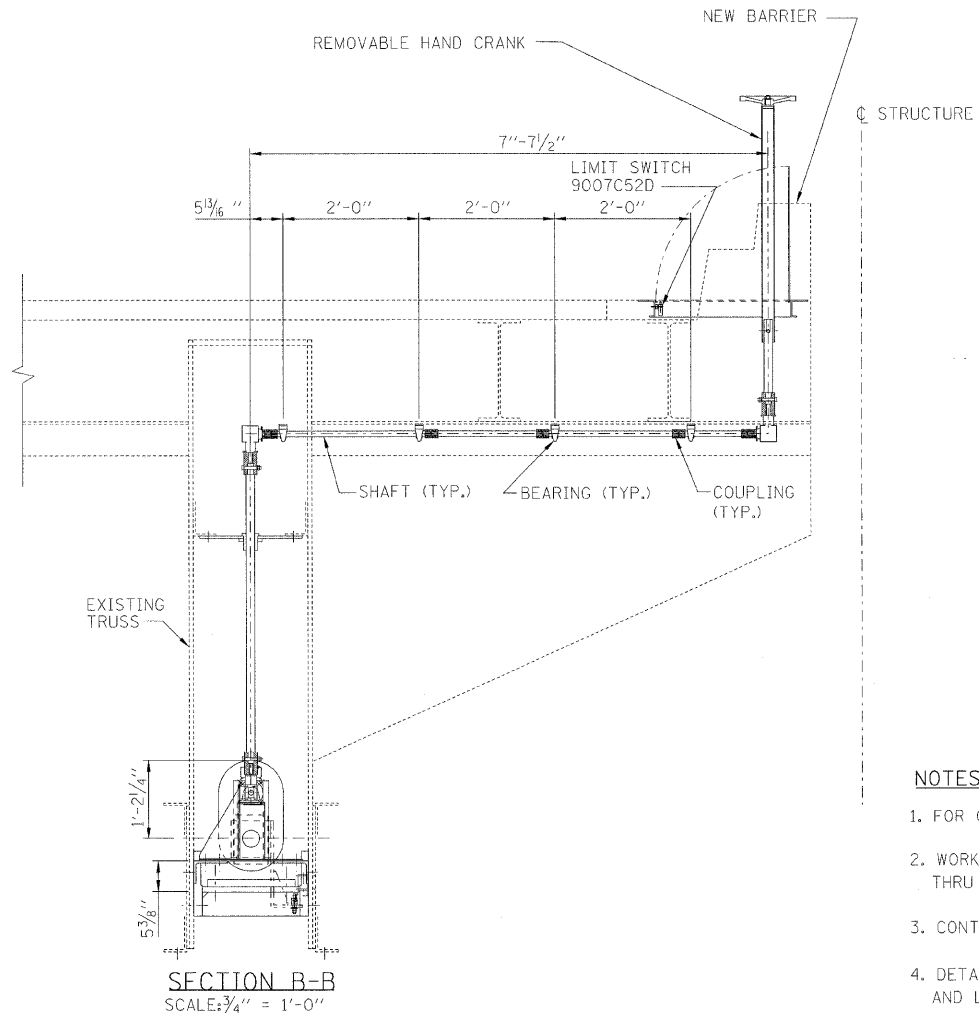
SECTION D-D LOCKBAR GUIDE

SCALE: 3/4" = 1'-0"



SECTION C-C LOCKBAR OPERATOR

SCALE: 3/4" = 1'-0"



SECTION B-B

SCALE: 3/4" = 1'-0"

- NOTES:
1. FOR GENERAL NOTES, SEE SHEET M-01.
  2. WORK THIS DRAWING WITH SHEETS M-11 THRU M-17.
  3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
  4. DETAILS OF LOCKBAR RECEIVER AND LOCKBAR GUIDES NOT SHOWN FOR CLARITY.

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = sharma  
FILE NAME = D160661-shs-meo-13.dgn  
PLOT SCALE = NONE  
PLOT DATE = 5/7/2009

DESIGNED - V. LEVIT  
DRAWN - V. LEVIT  
CHECKED - D. NYARKO  
DATE - MAY 8, 2009

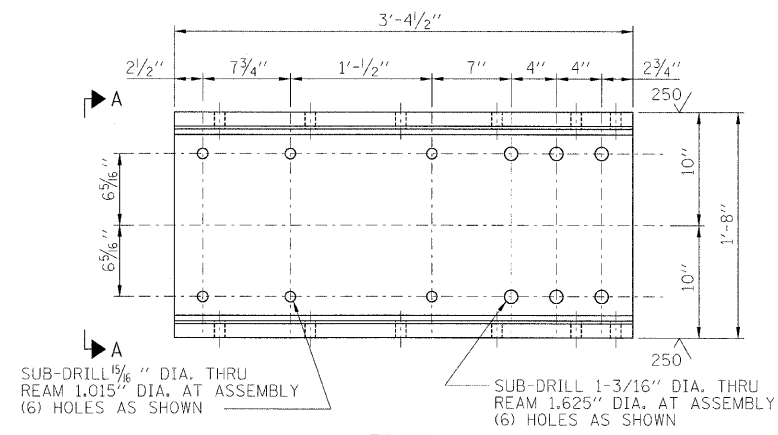
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**DEPARTMENT OF TRANSPORTATION**

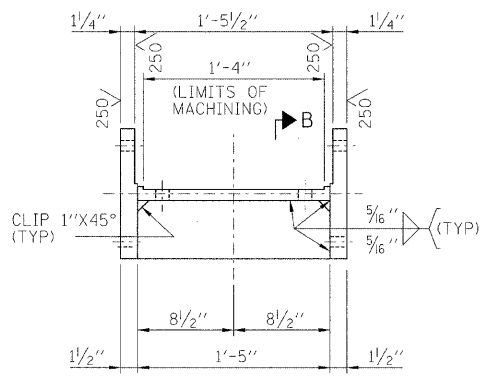
**INSIDE CENTER LOCKS MACHINERY PLAN**

SCALE: AS SHOWN SHEET NO. W-13 OF W-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

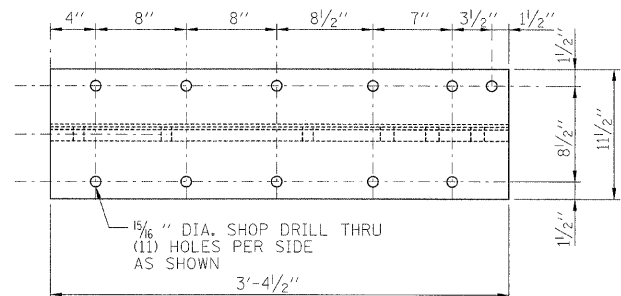
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CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



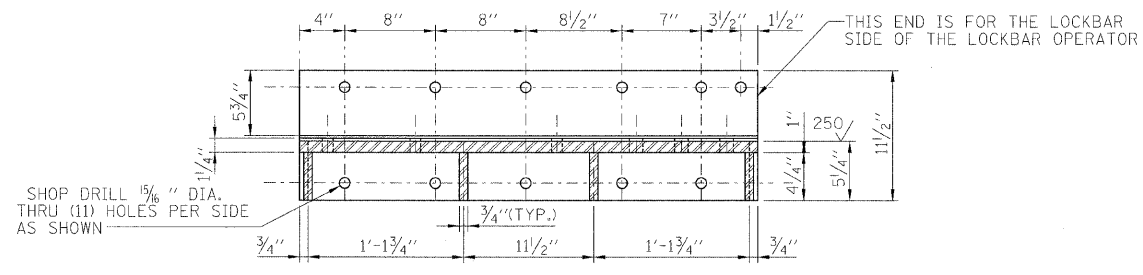
PLAN



SECTION A-A



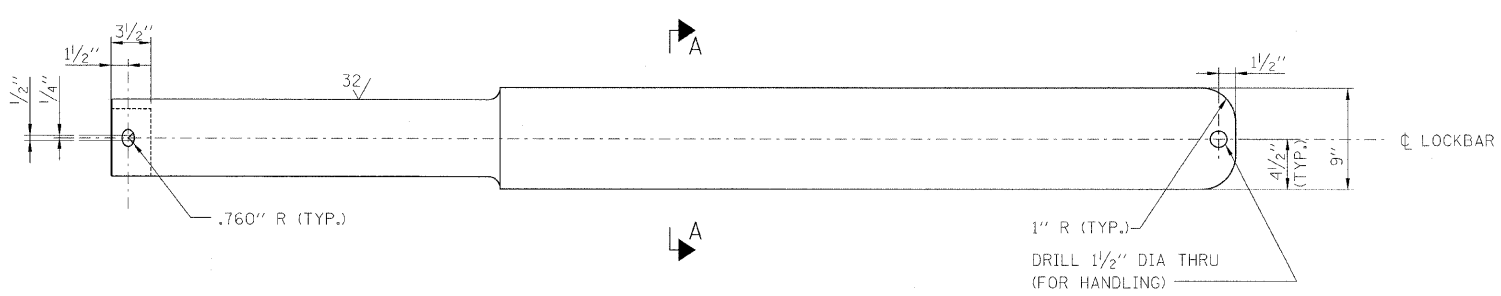
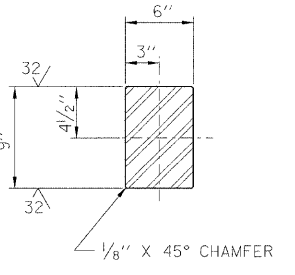
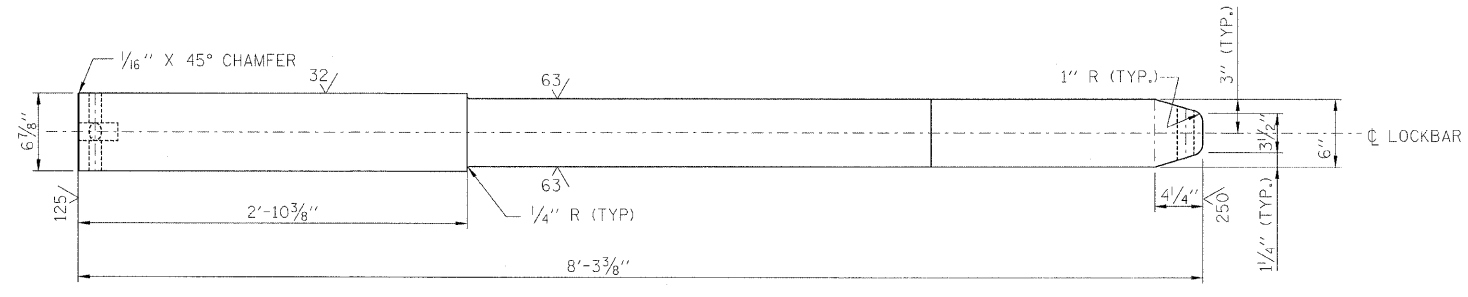
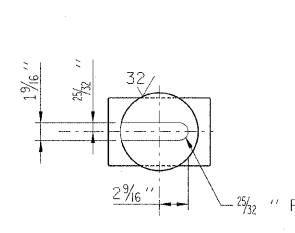
ELEVATION



SECTION B-B

NEW LOCKBAR OPERATOR MACHINERY SUPPORTS

MATERIAL: ASTM A709, GRADE 50  
SCALE: 1/2"=1'-0"



NEW LOCKBAR

MATERIAL: ASTM A668, CLASS L FORGING  
QUENCHED AND TEMPERED TO 260-290 BHN.  
SCALE: 1/2"=1'-0"

NOTES:

- FOR GENERAL NOTES, SEE SHEET M-01.
- WORK THIS DRAWING WITH SHEETS M-11 THRU M-17.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
- WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE AWS-D1.5M/D1.5: 2008. PERMISSIBLE ELECTRODES ARE: AWS ER705-6 WITH CO<sub>2</sub> OR 75% ARGON - 25% CO<sub>2</sub> COVER GAS; OR AWS E7018; OR AWS E71T-1 WITH 75% ARGON - 25% CO<sub>2</sub> COVER GAS.

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = sharma  
FILE NAME = 0160361-shi-mec-14.dgn  
PLOT SCALE = NONE  
PLOT DATE = 5/7/2009

DESIGNED - V. LEVIT  
DRAWN - V. LEVIT  
CHECKED - D. NYARKO  
DATE - MAY 8, 2009

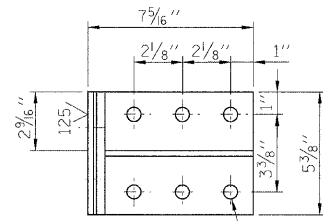
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REVISED -  
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REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

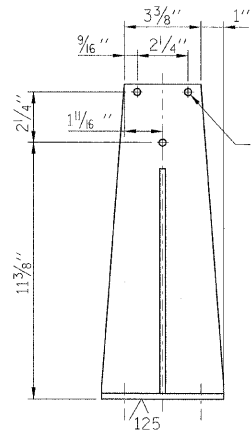
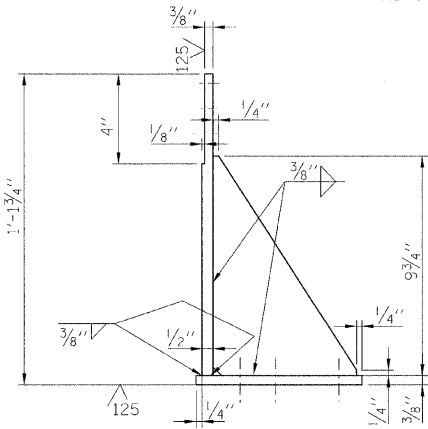
**CENTER LOCK MACHINERY SUPPORTS AND LOCKBAR DETAILS**

SCALE: AS SHOWN SHEET NO. M-14 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	258
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

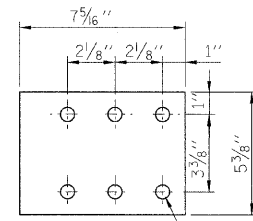


DRILL AND REAM FOR 5/8" DIA. H.S. TURNED BOLTS - FOR 6 HOLES AS SHOWN.



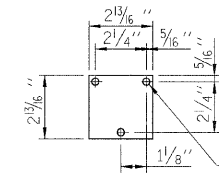
DRILL AND REAM FOR 5/8" DIA. H.S. TURNED BOLTS - FOR 3 HOLES AS SHOWN.

**GEARBOX SUPPORT BRACKET (4 REQUIRED)**  
SCALE: 3"=1'-0"



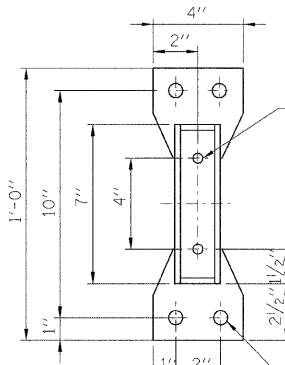
DRILL AND REAM FOR 5/8" DIA. H.S. TURNED BOLTS - FOR 6 HOLES AS SHOWN.

**SHIM PLATE (FOR SUPPORT BRACKET)**  
SCALE: 3"=1'-0"



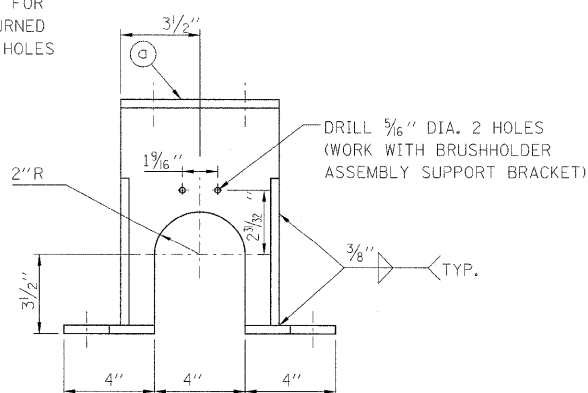
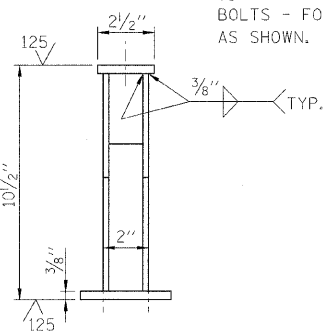
DRILL AND REAM FOR 5/8" DIA. H.S. TURNED BOLTS - FOR 3 HOLES AS SHOWN.

**SHIM PLATE (FOR GEARBOX)**  
SCALE: 3"=1'-0"



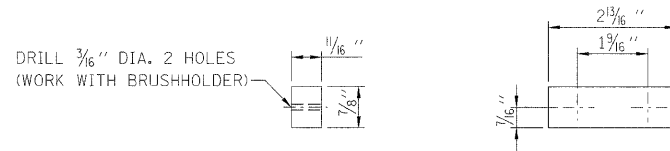
DRILL AND REAM FOR 7/16" DIA. H.S. TURNED BOLTS - FOR 2 HOLES AS SHOWN.

DRILL AND REAM FOR 5/8" DIA. H.S. TURNED BOLTS - FOR 4 HOLES AS SHOWN.



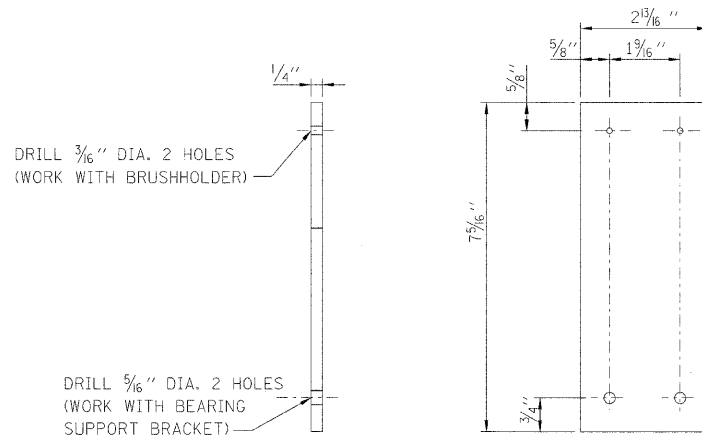
DRILL 3/16" DIA. 2 HOLES (WORK WITH BRUSHHOLDER ASSEMBLY SUPPORT BRACKET)

**BEARING SUPPORT BRACKET (4 REQUIRED)**  
SCALE: 3"=1'-0"



DRILL 3/16" DIA. 2 HOLES (WORK WITH BRUSHHOLDER)

**BRUSHHOLDER ASSEMBLY SHIM PLATE (4 REQUIRED)**  
SCALE: 6"=1'-0"



DRILL 3/16" DIA. 2 HOLES (WORK WITH BRUSHHOLDER)

DRILL 5/8" DIA. 2 HOLES (WORK WITH BEARING SUPPORT BRACKET)

**BRUSHHOLDER ASSEMBLY SUPPORT BRACKET (4 REQUIRED)**  
SCALE: 6"=1'-0"

**NOTES:**

- FOR GENERAL NOTES, SEE SHEET. M-01.
- MATERIAL FOR ALL SUPPORT DETAILS SHALL BE ASTM A709, GRADE 50.
- WORK THIS DWG. WITH SHEETS M-11 THRU M-17.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
- WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE AWS-D1.5M/D1.5: 2008. PERMISSIBLE ELECTRODES ARE: AWS ER70S-6 WITH CO<sub>2</sub> OR 75% ARGON-25% CO<sub>2</sub> COVER GAS; OR AWS E7018; OR AWS E71T-1 WITH 75% ARGON-25% CO<sub>2</sub> COVER GAS.

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = dharma  
FILE NAME = D160d61-shr-mec-15.dgn  
PLOT SCALE = NONE  
PLOT DATE = 5/7/2009

DESIGNED - V. LEVIT  
DRAWN - V. LEVIT  
CHECKED - D. NYARKO  
DATE - MAY 8, 2009

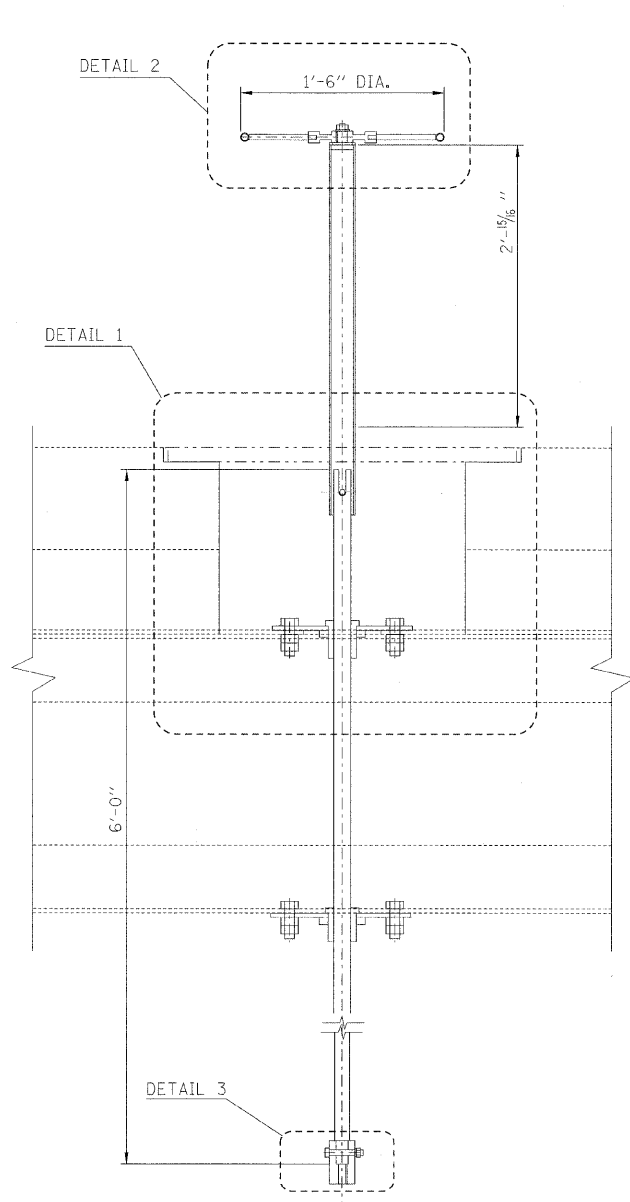
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REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

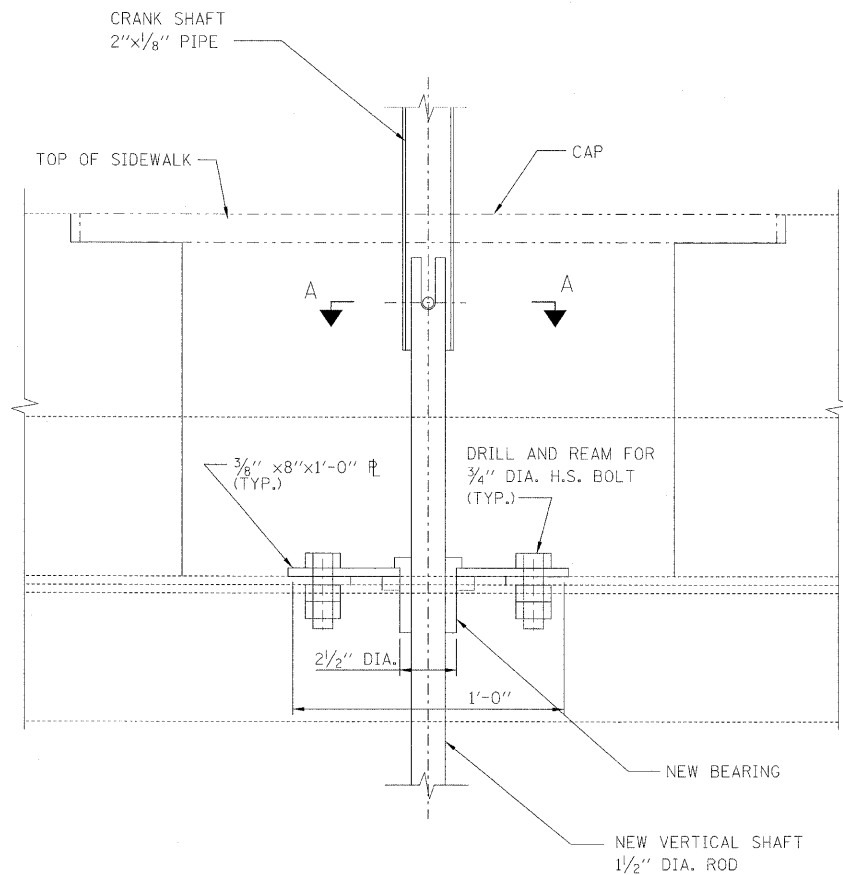
**CENTER LOCK MACHINERY MISCELLANEOUS SUPPORT DETAILS**

SCALE: AS SHOWN SHEET NO. M-15 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

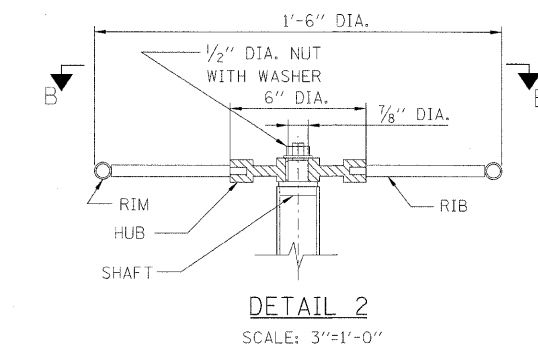
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	259
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



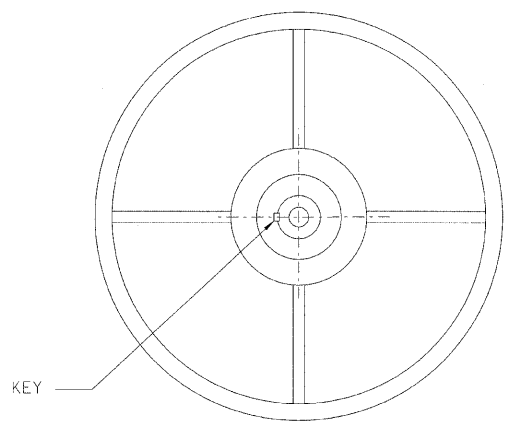
**MANUAL HAND CRANK  
SHAFT ASSEMBLY (4 REQUIRED)**  
SCALE: 1/2"=1'-0"



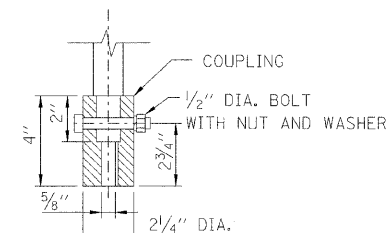
**DETAIL 1**  
SCALE: 3"=1'-0"



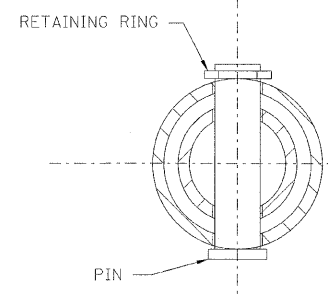
**DETAIL 2**  
SCALE: 3"=1'-0"



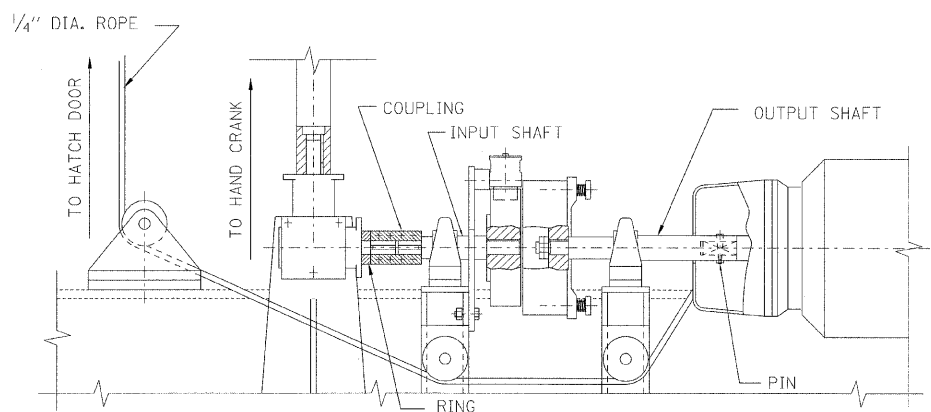
**SECTION B-B**  
SCALE: 3"=1'-0"



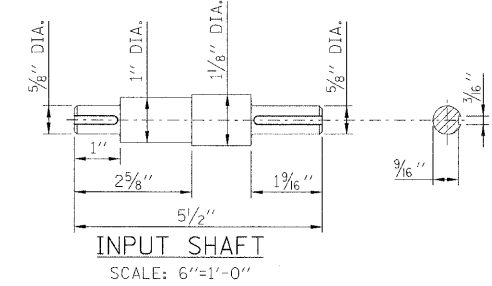
**DETAIL 3**  
SCALE: 3"=1'-0"



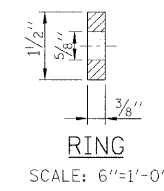
**SECTION A-A**  
SCALE: 6"=1'-0"



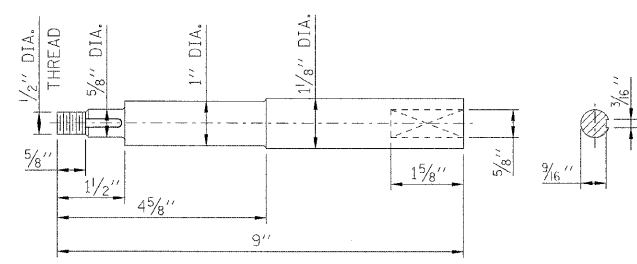
**MANUAL OPERATION MECHANISM ASSEMBLY (4 REQUIRED)**  
SCALE: 3"=1'-0"



**INPUT SHAFT**  
SCALE: 6"=1'-0"



**RING**  
SCALE: 6"=1'-0"



**OUTPUT SHAFT**  
SCALE: 6"=1'-0"

QTY.	ITEM	DESCRIPTION
MANUAL CRANK SHAFT ASSEMBLY		
4	CRANK SHAFT, 2" x 1/8" PIPE	ASTM A668
4	VERTICAL SHAFT, 1/2" DIA. ROD	FORGED STEEL
4	CAP, 1" x 2 1/2" x 2 1/2" PL	ASTM A668
16	3/4" H.S. BOLT	ASTM A325
4	3/8" x 8" x 1'-0" STEEL PLATE	ASTM A709, GRADE 50
4	BEARING, 3" x 2 1/2" DIA.	FORGED STEEL
4	HUB, 1" x 6" DIA.	ASTM A668
16	RIB, 6" x 1/2" DIA.	ASTM A668
4	RIM, 3/4" x 1/8" x 4'-6" PIPE	ASTM A668
4	SHAFT, 2 3/8" x 1/2" DIA.	FORGED STEEL
4	1/2" DIA. NUT AND WASHER	NUT - ASTM A563 WASHER - ASTM F463
4	COUPLING-4" x 5/8" DIA.	FORGED STEEL
MANUAL OPERATION ASSEMBLY		
4	INPUT SHAFT-4 3/16" x 1/8" DIA.	FORGED STEEL
4	OUTPUT SHAFT-5 5/16" x 1/8" DIA.	FORGED STEEL
4	RING-3/8" x 1 1/2" DIA.	FORGED STEEL

- NOTES:**
- FOR GENERAL NOTES, SEE SHEET M-01.
  - WORK THIS DRAWING WITH SHEETS M-11 THRU M-17.
  - CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
  - KEY FOR INPUT AND OUTPUT SHAFTS ARE NOT SHOWN. CONTRACTOR TO PROVIDE KEYS AND KEYWAYS PER ANSI STANDARD.

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = shernie  
FILE NAME = D162d61-shr-meo-16.dgn  
PLOT SCALE = NONE  
PLOT DATE = 5/7/2009

DESIGNED - V. LEVIT  
DRAWN - V. LEVIT  
CHECKED - D. NYARKO  
DATE - MAY 8, 2009

REVISED -  
REVISED -  
REVISED -  
REVISED -

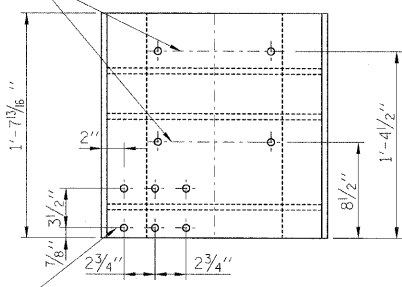
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CENTER LOCK MACHINERY MANUAL OPERATION ASSEMBLY**

SCALE: AS SHOWN SHEET NO. M-16 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	260
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

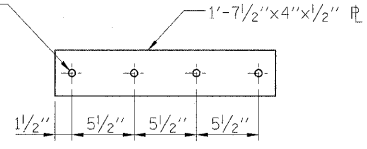
DRILL  $\frac{5}{8}$ " DIA. THRU AT ASSEMBLY 2 HOLES AS SHOWN



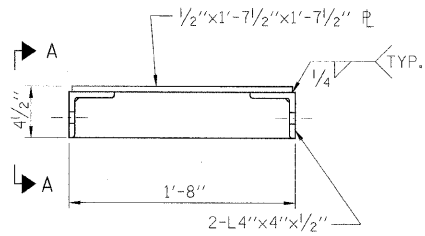
DRILL  $\frac{5}{8}$ " DIA. THRU AT ASSEMBLY 6 HOLES AS SHOWN

PLAN

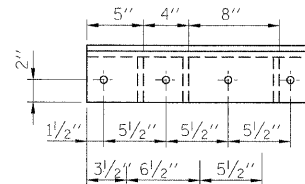
DRILL  $\frac{1}{8}$ " DIA. THRU AT ASSEMBLY 4 HOLES AS SHOWN



SHIM PLATE



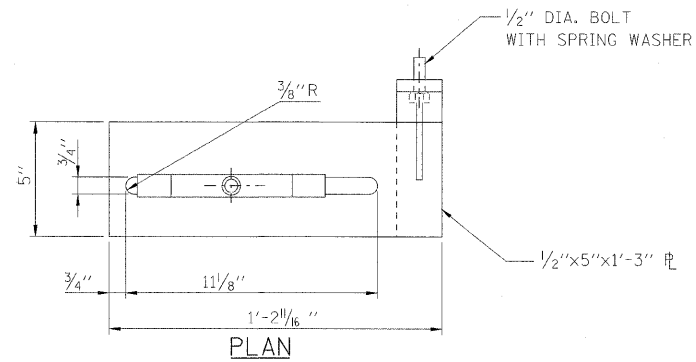
ELEVATION



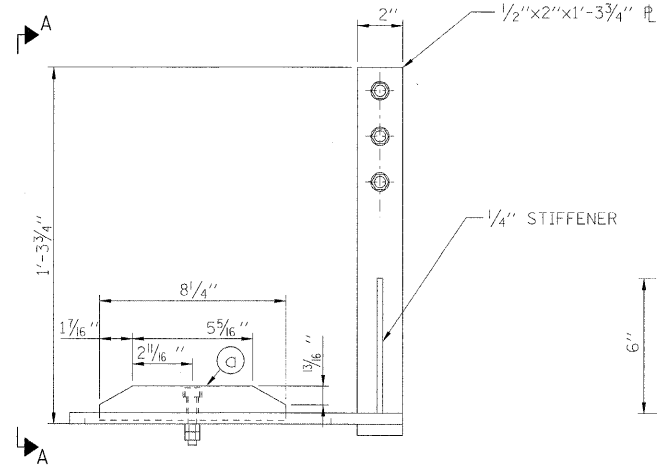
SECTION A-A

MANUAL OPERATION MACHINERY SUPPORT

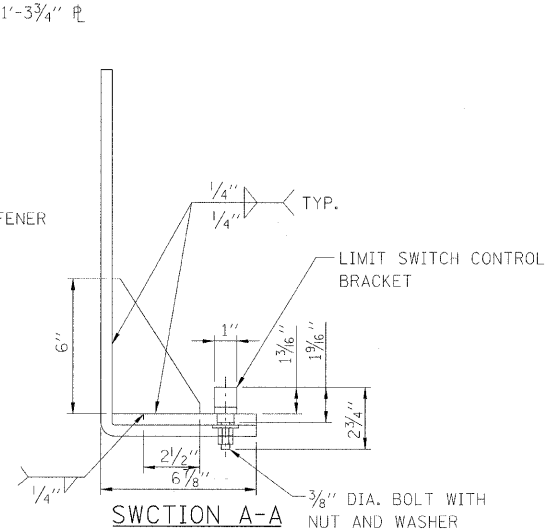
SCALE: 3"=1'-0"  
MATERIAL: ASTM A709, GRADE 50



PLAN



ELEVATION



SECTION A-A

LIMIT SWITCH SUPPORT BRACKET ASSEMBLY

MATERIAL: ASTM A709, GRADE 50  
SCALE: 3"=1'-0"

NOTES:

- FOR GENERAL NOTES, SEE SHEET M-01.
- WORK THIS DRAWING WITH SHEETS M-11 THRU M-17.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
- WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE AWS-D1.5M/D1.5; 2008. PERMISSIBLE ELECTRODES ARE: AWS ER705-6 WITH CO<sub>2</sub> OR 75% ARGON - 25% CO<sub>2</sub> COVER GAS; OR AWS E7018; OR AWS E71T-1 WITH 75% ARGON - 25% CO<sub>2</sub> COVER GAS.

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230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

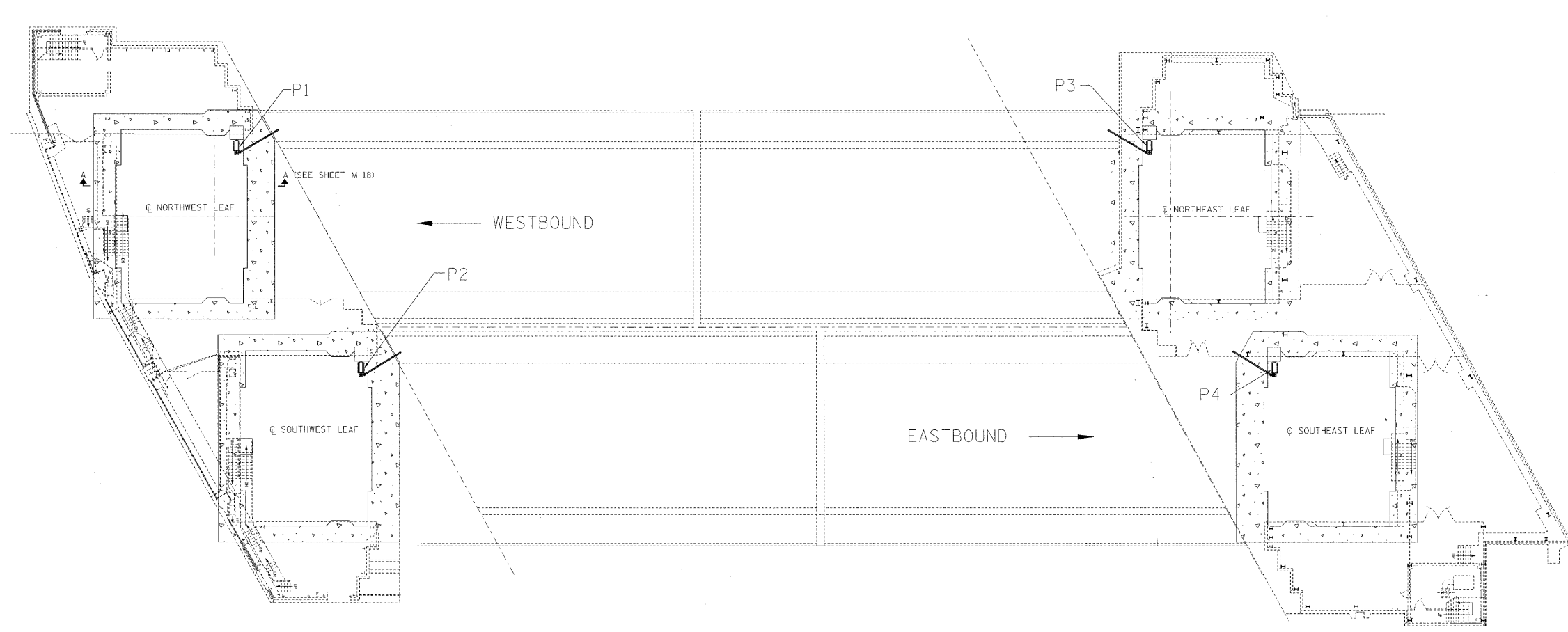
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FILE NAME = D160d61-shr-mec-17.dgn	DRAWN - V. LEVIT	REVISED -
PLOT SCALE = NONE	CHECKED - D. NYARKO	REVISED -
PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CENTER LOCK MANUAL OPERATION MACHINERY SUPPORTS

SCALE: AS SHOWN SHEET NO. M-17 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RITE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	261
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



SUMP PUMP LOCATION PLAN  
SCALE: 1/32" = 1'-0"

PUMP SCHEDULE

ITEM	FLOW (GPM)	VOLTS	PH.	HP	RPM	TYPE	MFG., MODEL*
P1	125	460	3	1.5	1750	SUBMERSIBLE, NON CLOG	HYDROMATIC, SB3SD150M4-4
P2	125	460	3	1.5	1750	SUBMERSIBLE, NON CLOG	HYDROMATIC, SB3SD150M4-4
P3	125	460	3	1.5	1750	SUBMERSIBLE, NON CLOG	HYDROMATIC, SB3SD150M4-4
P4	125	460	3	1.5	1750	SUBMERSIBLE, NON CLOG	HYDROMATIC, SB3SD150M4-4

\* OR APPROVED EQUAL

NOTES:

1. FOR GENERAL NOTES, SEE SHEET M-01.
2. WORK THIS DWG WITH SHEET M-19.
3. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS BEFORE BEGINNING FABRICATION AND INSTALLATION. ALL FIELD MEASUREMENTS SHALL BE INDICATED ON SHOP DRAWINGS.
4. SEE SPECIAL PROVISIONS FOR ADDITIONAL SUMP PUMP REPLACEMENT WORK ITEMS.

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SUITE 900  
CHICAGO, IL. 60606

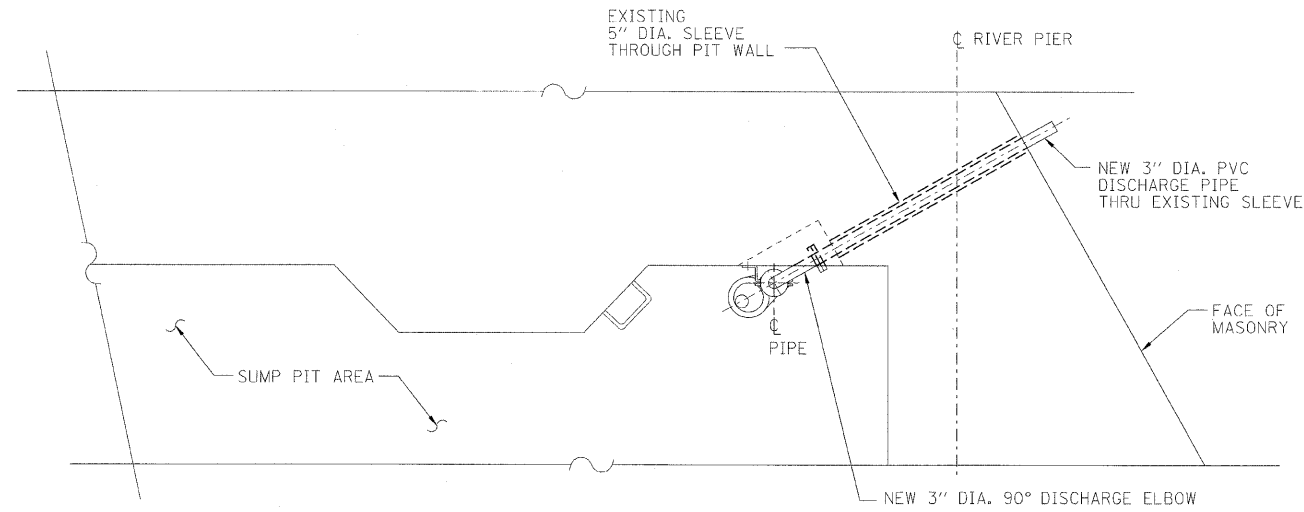
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FILE NAME = D160d61-sht-meo-18.dgn	DRAWN - V. LEVIT	REVISED -
PLOT SCALE = NONE	CHECKED - J. GUINAN	REVISED -
PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

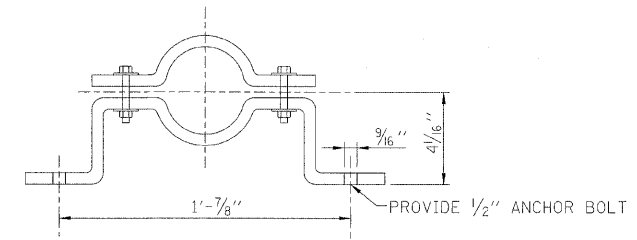
**SUMP PUMP LOCATION PLAN**

SCALE: AS SHOWN SHEET NO. M-18 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

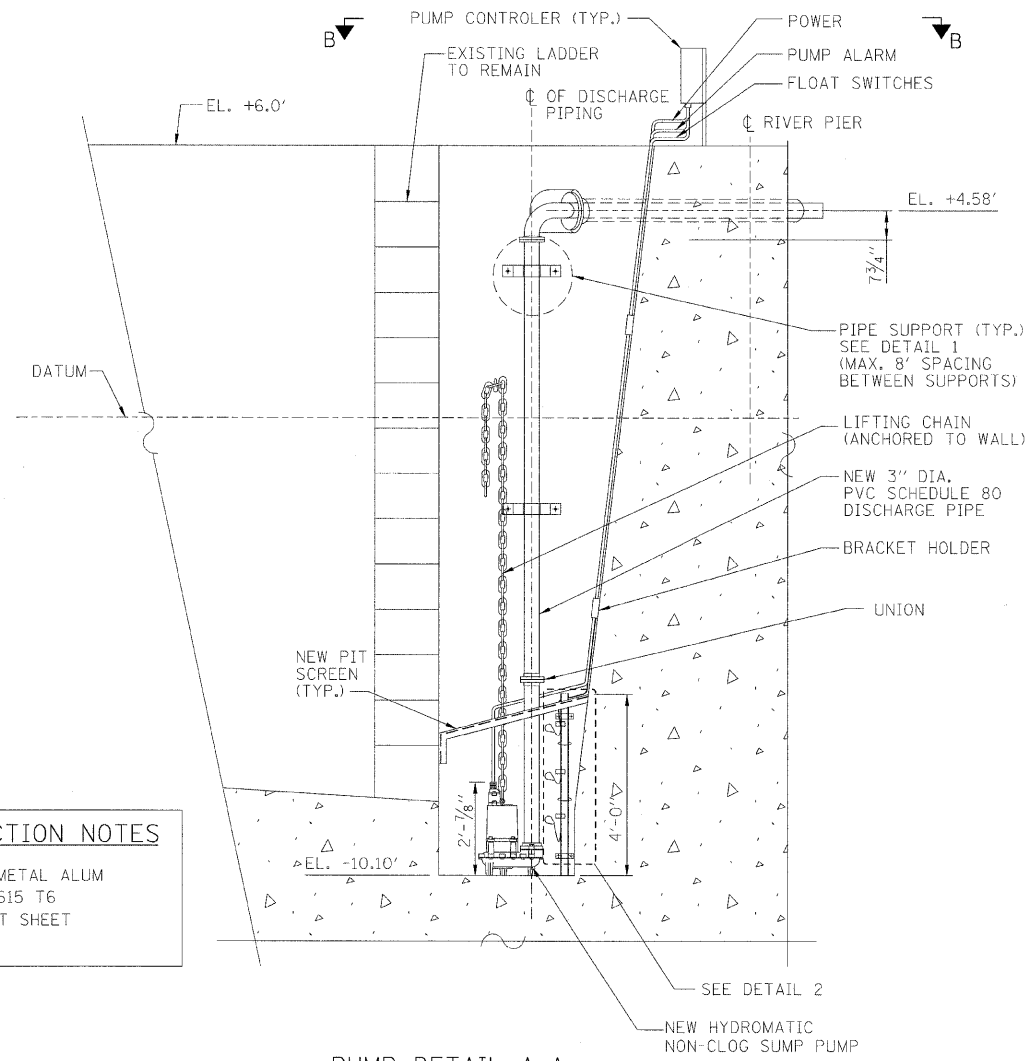
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	262
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILL. INDIAN FED. AID PROJECT				



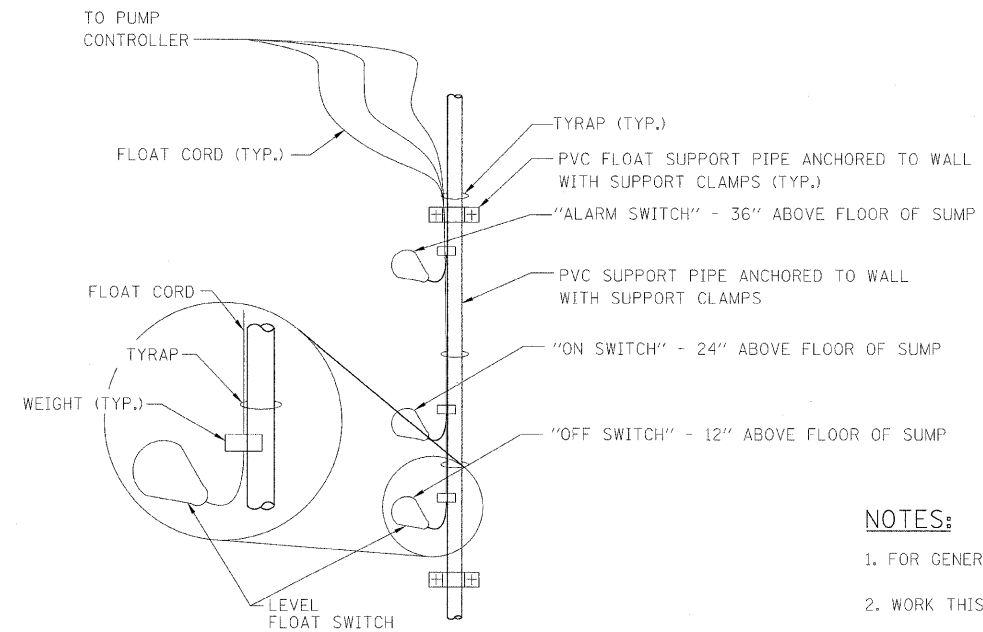
**SECTION B-B**  
SCALE: 1/2"=1'-0"



**PIPE SUPPORT-DETAIL 1**  
N.T.S.



**PUMP DETAIL A-A** (SEE DWG. M-18)  
TYPICAL OF FOUR  
SCALE: 1/2"=1'-0"



**FLOAT MOUNTING SYSTEM-DETAIL 2**  
NOT TO SCALE

**PIT SCREEN CONSTRUCTION NOTES**

GRILLE - 3/4"x0.125 FLATTENED METAL ALUM  
ANGLES - 1 1/2"x1 1/2"x1/4" ALUM 615 T6  
PLATES - .125" ALUM 3SH14 FLAT SHEET  
WELDING - HELIARC PROCESS

**NOTES:**

- FOR GENERAL NOTES, SEE SHEET M-01.
- WORK THIS DWG WITH SHEET M-18.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
- THE MATERIALS FOR ALL ANCHOR BOLTS, NUTS, WASHERS AND LIFTING CHAIN SHALL BE 316 STAINLESS STEEL.
- ALL FLOAT SWITCHES SHALL BE TIED SEPARATELY TO SUPPORT PIPE.
- ALL SUPPORT CLAMPS FOR ALL DISCHARGE AND FLOAT MOUNTING PIPES CLAMPS, BRACKET HOLDERS SHALL BE 316 STAINLESS STEEL.
- PROVIDE ALL SUPPORT CLAMPS, BRACKET HOLDERS AS NECESSARY.
- PROVIDE OPENINGS IN PIT SCREEN FOR ALL FLOAT POWER AND FLOAT CORDS, DISCHARGE PIPES, FLOAT SUPPORT PIPES AND LIFTING CHAIN.

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CHICAGO, IL. 60606

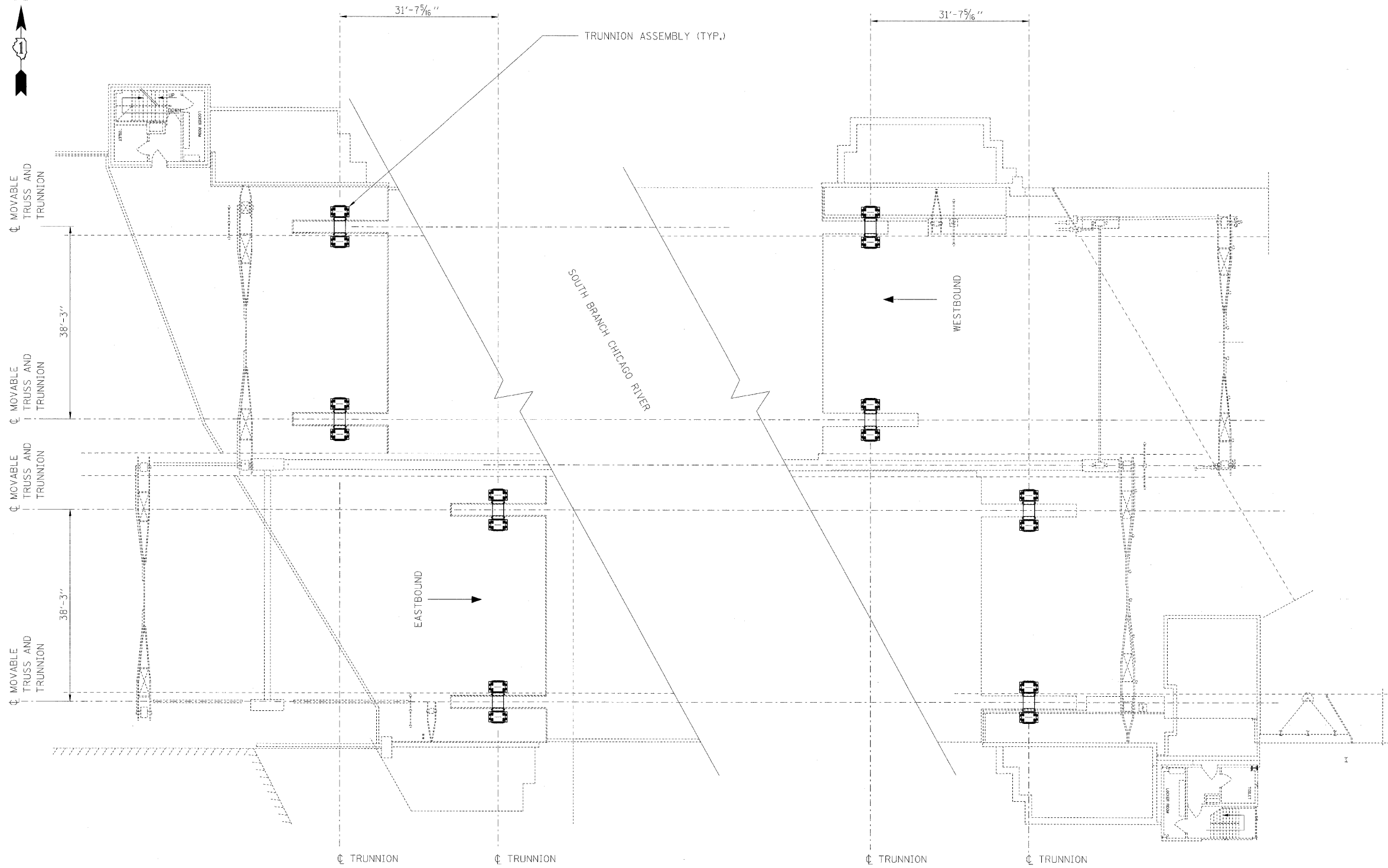
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FILE NAME = D160d61-shs-mec-19.dgn	DRAWN - V. LEVIT	REVISED -
PLOT SCALE = NONE	CHECKED - J. GUINAN	REVISED -
PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SUMP PUMP DETAILS**

SCALE: AS SHOWN SHEET NO. M-19 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	263
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



LOCATION PLAN  
SCALE: 3/32" = 1'-0"

- NOTES:
1. FOR GENERAL NOTES, SEE SHEET M-01.
  2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS.

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = shanna	DESIGNED - V. LEVIT	REVISED -
FILE NAME = D:\60d61-sh-t-mec-20.dgn	DRAWN - V. LEVIT	REVISED -
PLOT SCALE = NONE	CHECKED - D. NYARKO	REVISED -
PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -

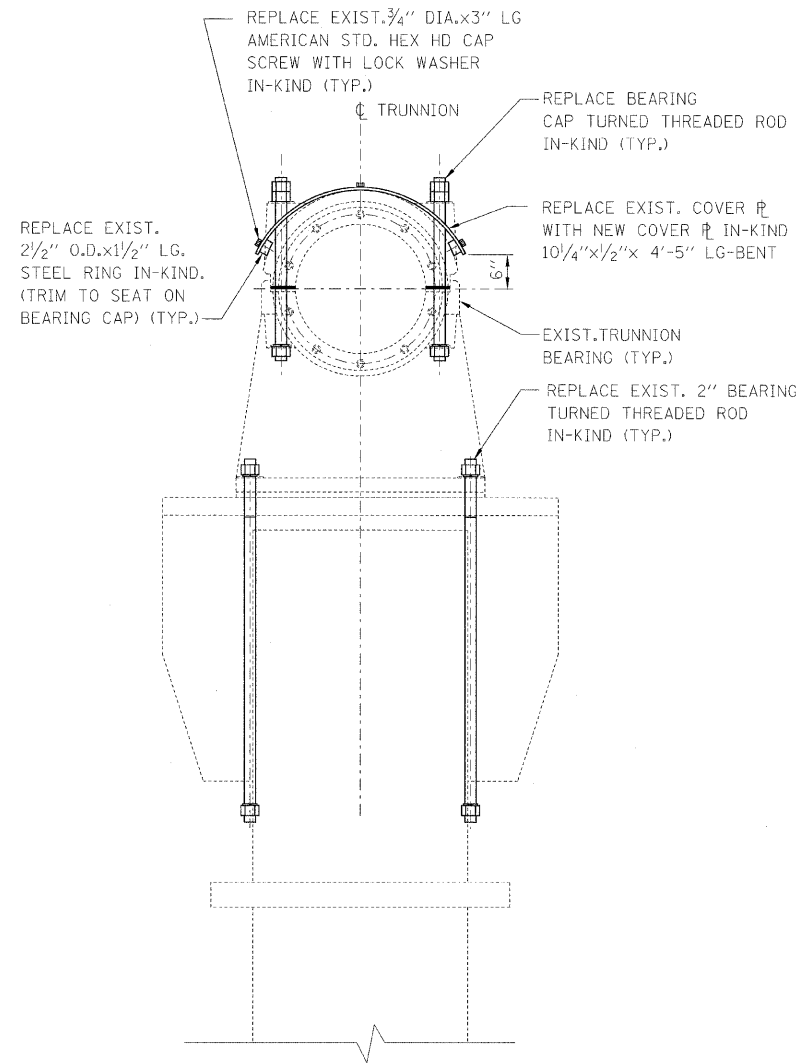
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**TRUNNION BEARINGS LOCATION PLAN**

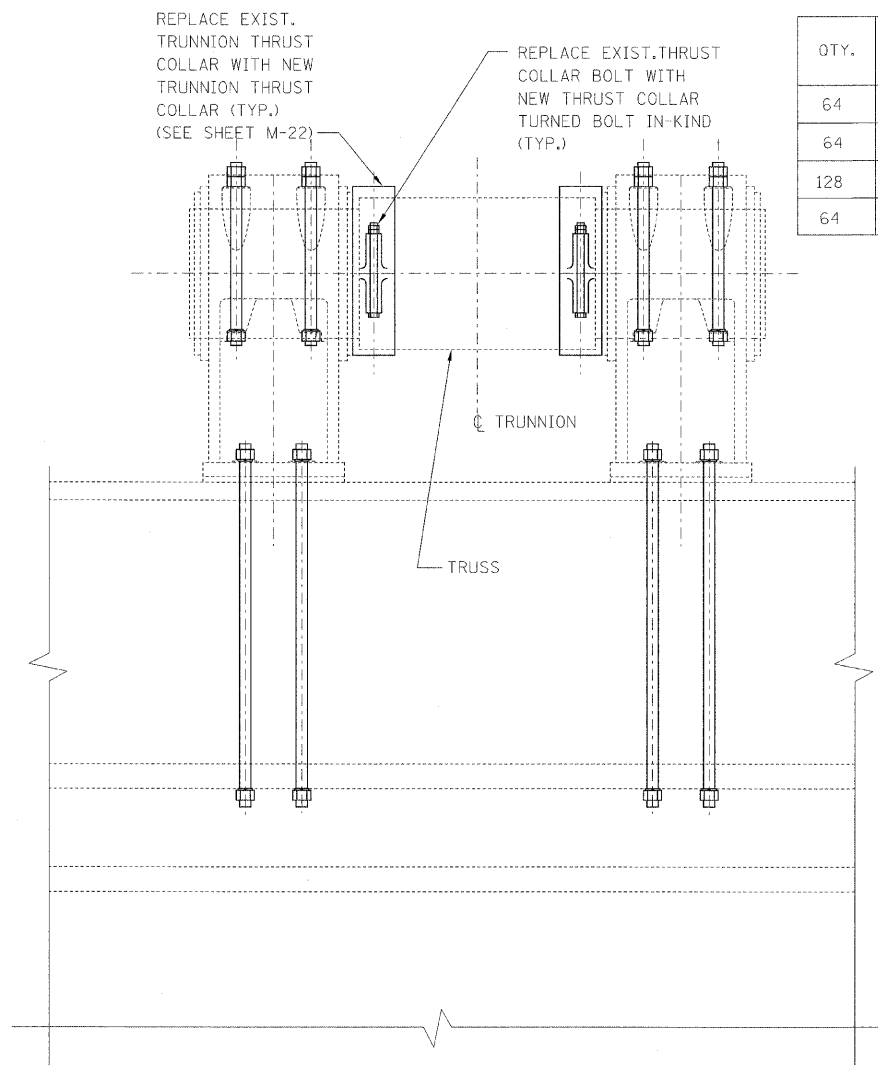
SCALE: AS SHOWN SHEET NO. M-20 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
389	2424-2B-R	COOK	398 / 264
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 60D61

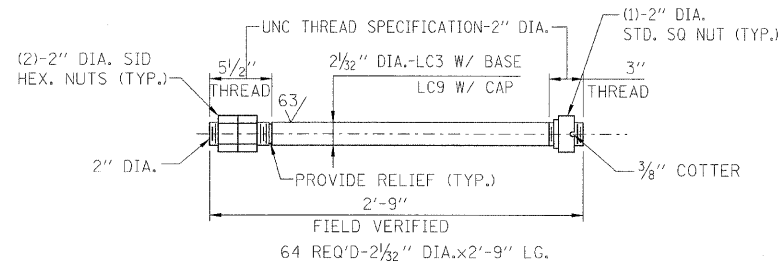




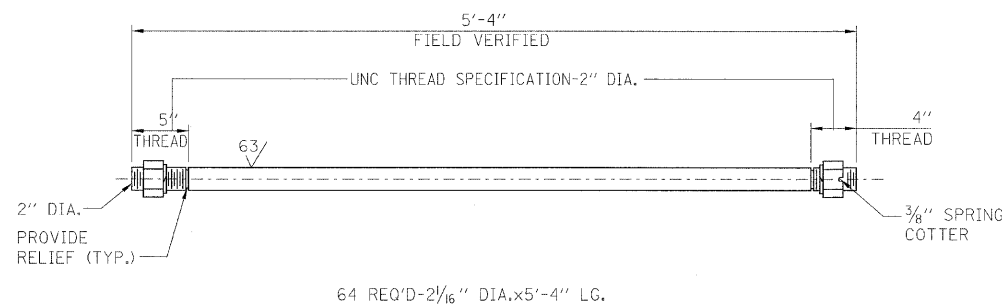
**TRUNNION ASSEMBLY**  
SCALE: 3/4"=1'-0"  
EIGHT LOCATIONS REQUIRED



QTY.	ITEM	DESCRIPTION
64	BEARING CAP TURNED THREADED ROD, 2 1/2" DIA. x 2'-9" LG	HIGH STRENGTH TURNED THREADED ROD, ASTM A490
64	BEARING TURNED THREADED ROD, 2 1/6" DIA. x 5'-4" LG.	HIGH STRENGTH TURNED THREADED ROD, ASTM A490
128	2" DIA. STD. HEAVY HEX. NUT FOR BEARING CAP BOLT	ASTM A563
64	2" DIA. STD. SQ. NUT FOR BEARING CAP BOLT	ASTM A563



**BEARING CAP TURNED THREADED ROD DETAIL**  
SCALE: 1 1/2"=1'-0"



**BEARING TURNED THREADED ROD**  
SCALE: 1 1/2"=1'-0"

**NOTES:**

- FOR GENERAL NOTES, SEE SHEET M-01.
- DIMENSIONS AND TOLERANCES ARE FROM AS-BUILT DRAWINGS. CONTRACTOR SHALL VERIFY DIMENSIONS AND TOLERANCES AT EACH LOCATION.

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

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FILE NAME = D160d61-ahs-mec-21.dgn  
PLOT SCALE = NONE  
PLOT DATE = 5/7/2009

DESIGNED - V. LEVIT  
DRAWN - V. LEVIT  
CHECKED - D. NYARKO  
DATE - MAY 8, 2009

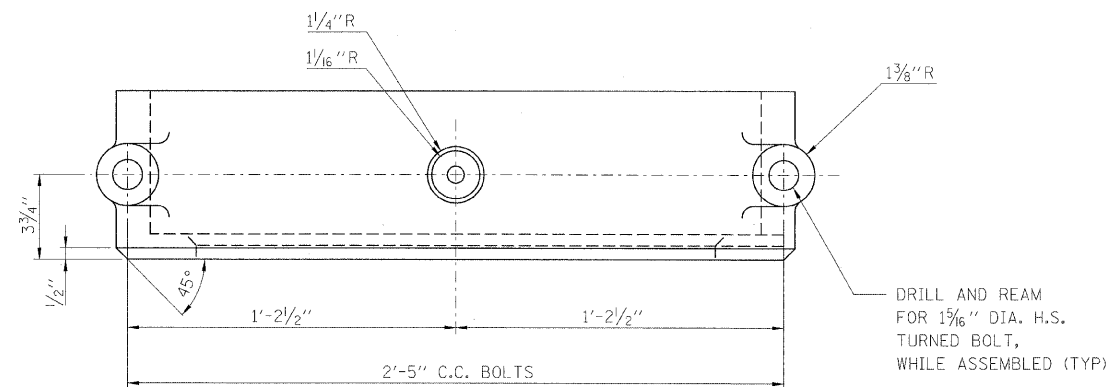
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REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TRUNNION BEARING BOLTS AND THRUST COLLARS**

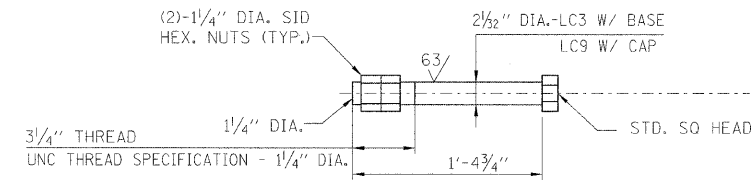
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				

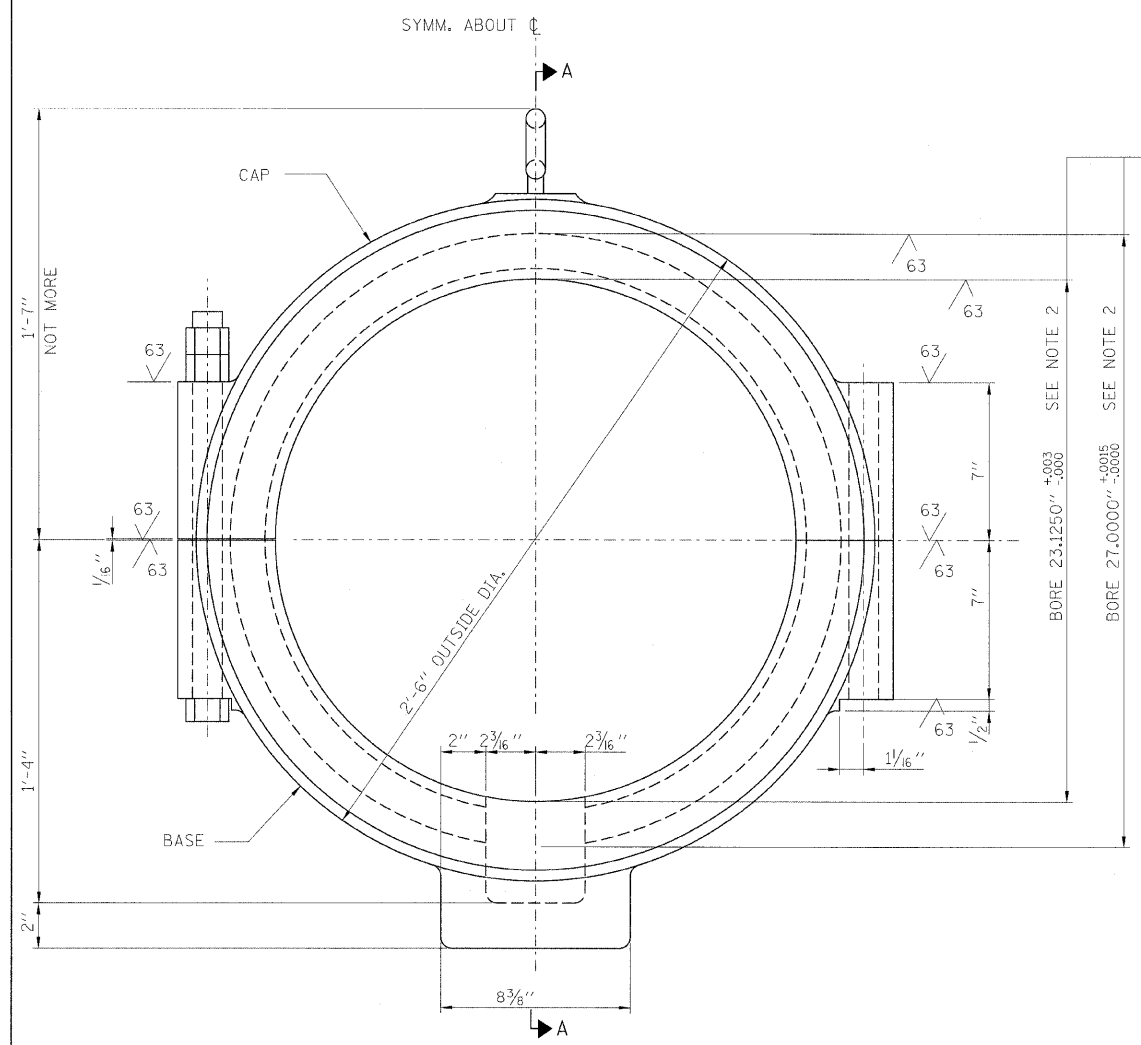


PLAN

SCALE: 3"=1'-0"  
MATERIAL: ASTM A732 GRADE 5N OR 130



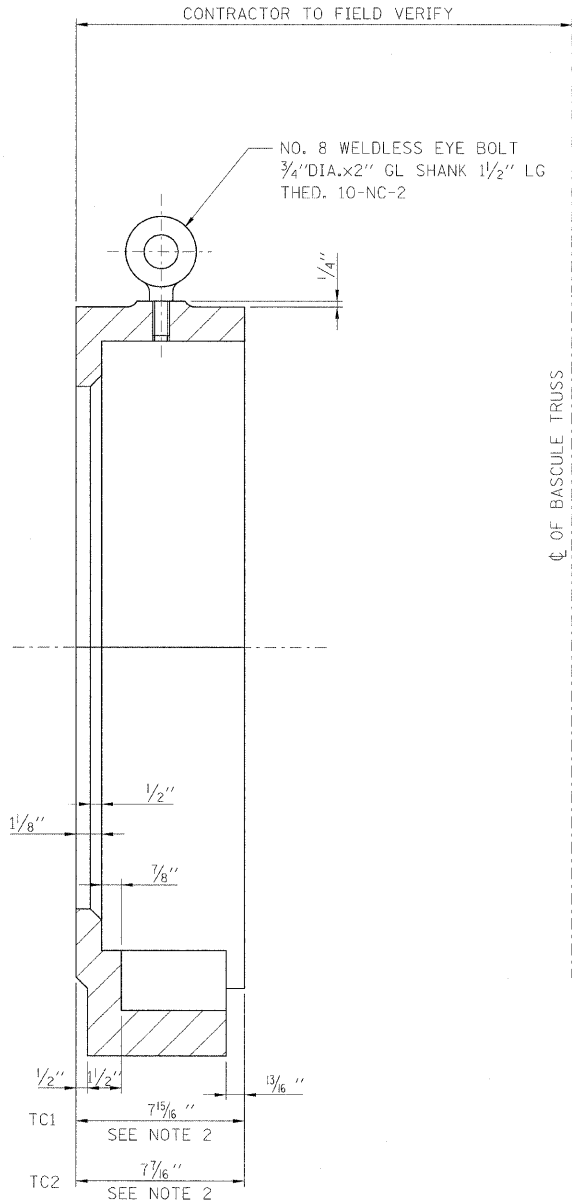
THRUST COLLAR BOLT  
32 REQ'D-1 3/8" DIA. x 1'-4" LG.  
SCALE: 1 1/2"=1'-0"



ELEVATION

SCALE: 3"=1'-0"

EACH SHAFT LOCATION SHALL BE MEASURED PRIOR TO FINAL MACHINING FOR LC6 FIT



SECTION A-A

SCALE: 3"=1'-0"

- NOTES:
- FOR GENERAL NOTES, SEE SHEET M-01.
  - DIMENSIONS AND TOLERANCES SHOWN ARE FROM AS-BUILT DRAWINGS. CONTRACTOR SHALL VERIFY DIMENSIONS AND TOLERANCES AT EACH LOCATION PRIOR TO FINAL MACHINING.

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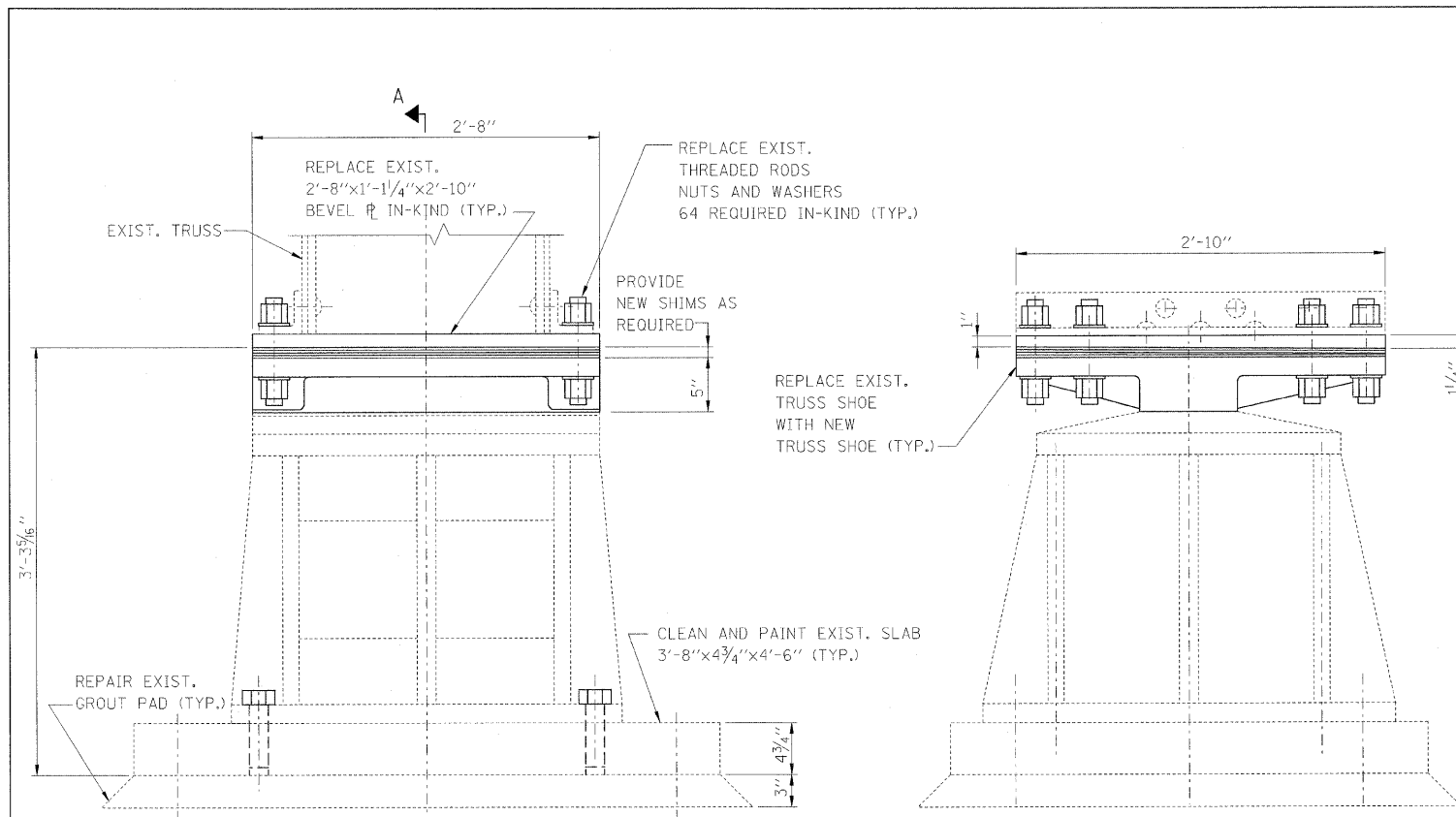
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PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -

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DEPARTMENT OF TRANSPORTATION

NEW TRUNNION THRUST COLLAR DETAILS

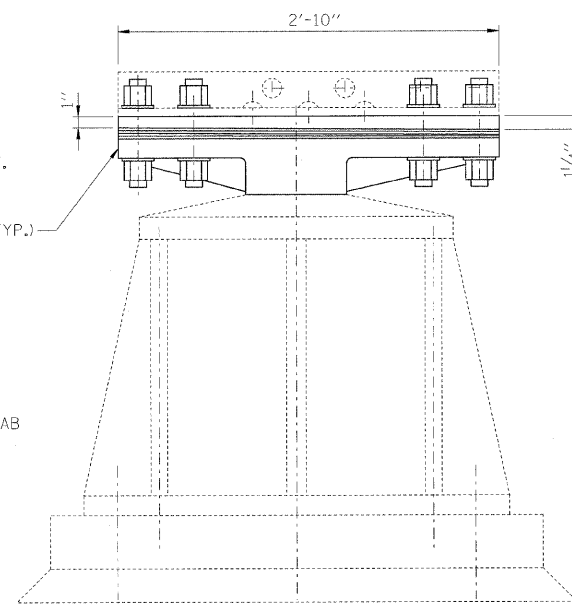
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F.A.P. RITE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				

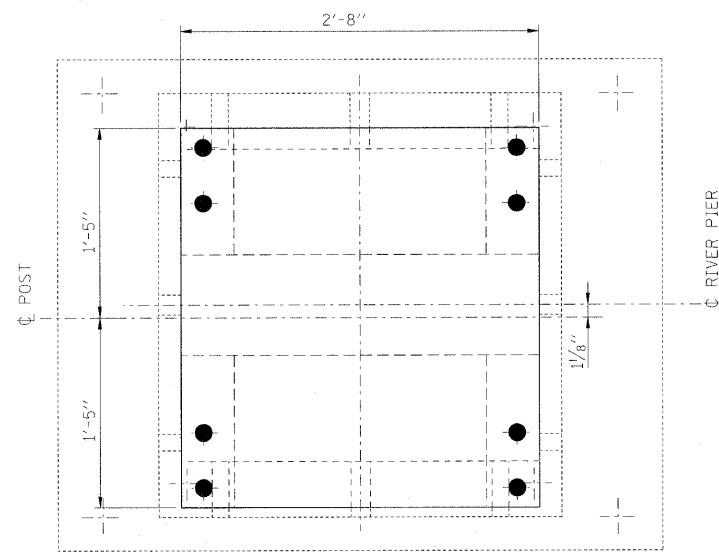


**LIVE LOAD BEARING ASSEMBLY ELEVATION**

SCALE: 1/2"=1'-0"  
 MATERIAL: ASTM A27 GRADE 70-40 CAST STEEL  
 STRESS RELIEVED AT 1050°F FOR 1HR PER EACH INCH OF SECTION.

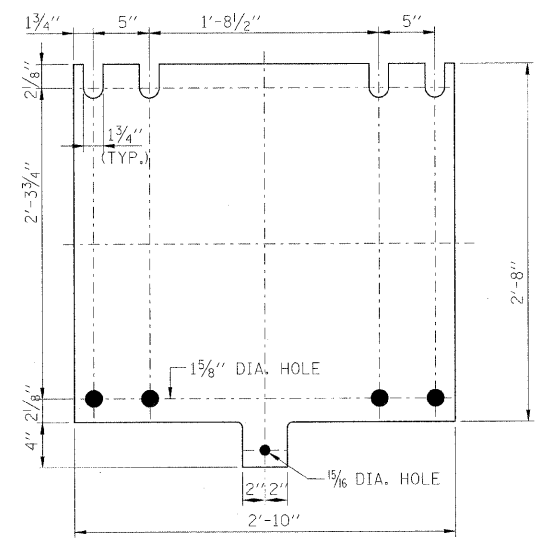


**SECTION A-A**  
 SCALE: 1/2"=1'-0"



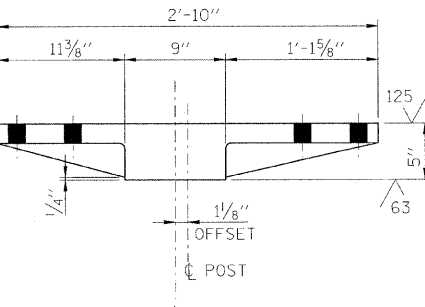
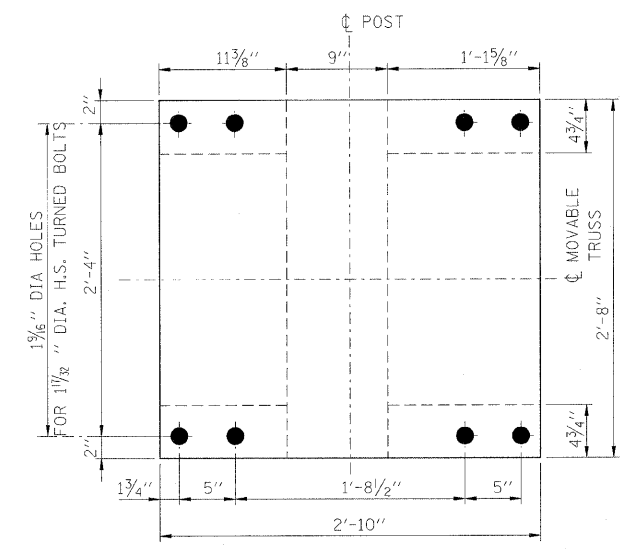
**LIVE LOAD BEARING ASSEMBLY PLAN**

SCALE: 1/2"=1'-0"



SHIM PACK:  
 2P - 34" x 1/2" x 3'-0"  
 1P - 34" x 1/4" x 3'-0"  
 1P - 34" x 3/16" x 3'-0" (CARBON STEEL)  
 2P - 34" x 1/8" x 3'-0"

**NEW SHIM PLATES**  
 PROVIDE QUANTITY AS REQUIRED



**NEW TRUSS SHOE CASTING**  
 CAST STEEL ASTM A27  
 SCALE: 1/2"=1'-0"

**SCOPE OF WORK:**

1. REMOVE EXISTING LIVE LOAD CASTING AND ALL ASSOCIATED SHIMS AND FASTENERS.
2. FURNISH AND INSTALL NEW SHOE CASTING WITH ASSOCIATED SHIMS.
3. REPAIR DAMAGED GROUT PADS.
4. CLEAN AND PAINT ALL PEDESTALS AND PEDESTAL SLABS.

**NOTES:**

1. FOR GENERAL NOTES, SEE SHEET M-01.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
3. CONTRACTOR SHALL PROVIDE NEW SHIM PLATE TO BE MOUNTED BETWEEN NEW TRUSS SHOE CASTING AND NEW BEVEL PLATE.
4. CONTRACTOR TO DETERMINE SHIM QUANTITY REQUIRED IN ORDER TO REMOVE ALL PLAY IN THE LIVE LOAD BEARING WHEN THE SPAN IS IN THE FULLY CLOSED POSITION.
5. PAINTING ON EXISTING COMPONENTS MAY BE LEAD BASED CONTRACTOR SHALL REMOVE EXISTING LEAD PAINT PER LOCAL AND FEDERAL REGULATIONS.

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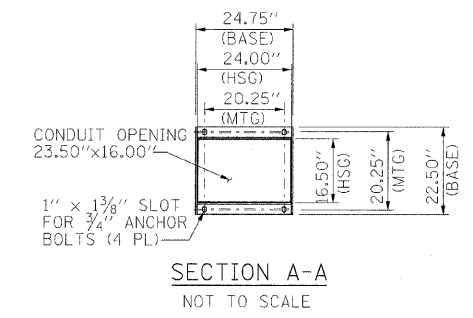
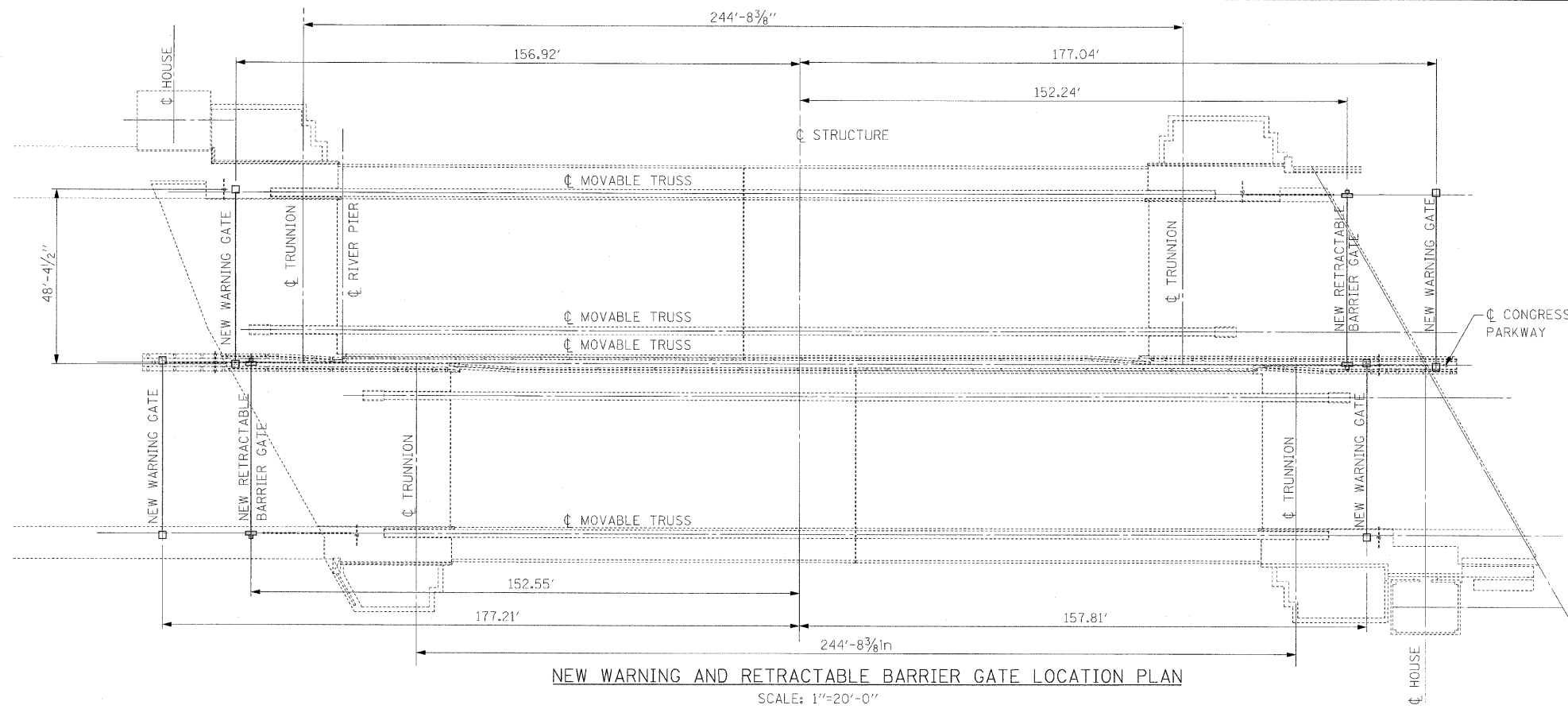
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PLOT SCALE = NONE	CHECKED - D. NYARKO	REVISED -
PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

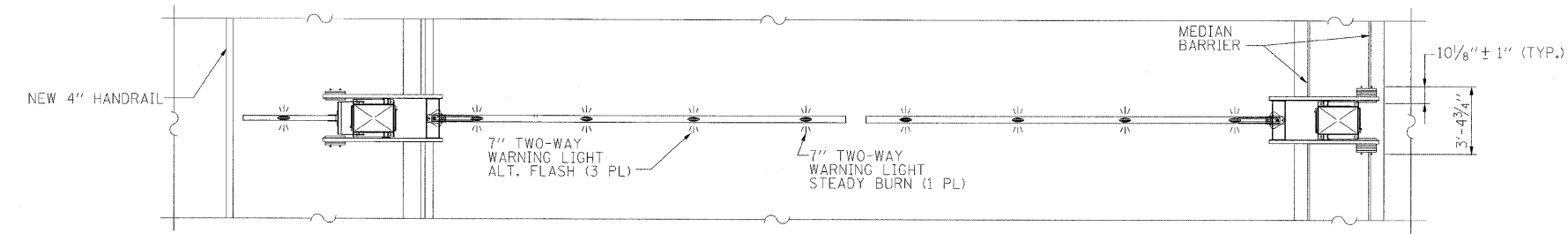
**LIVE LOAD BEARING**

SCALE: AS SHOWN SHEET NO. M-23 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

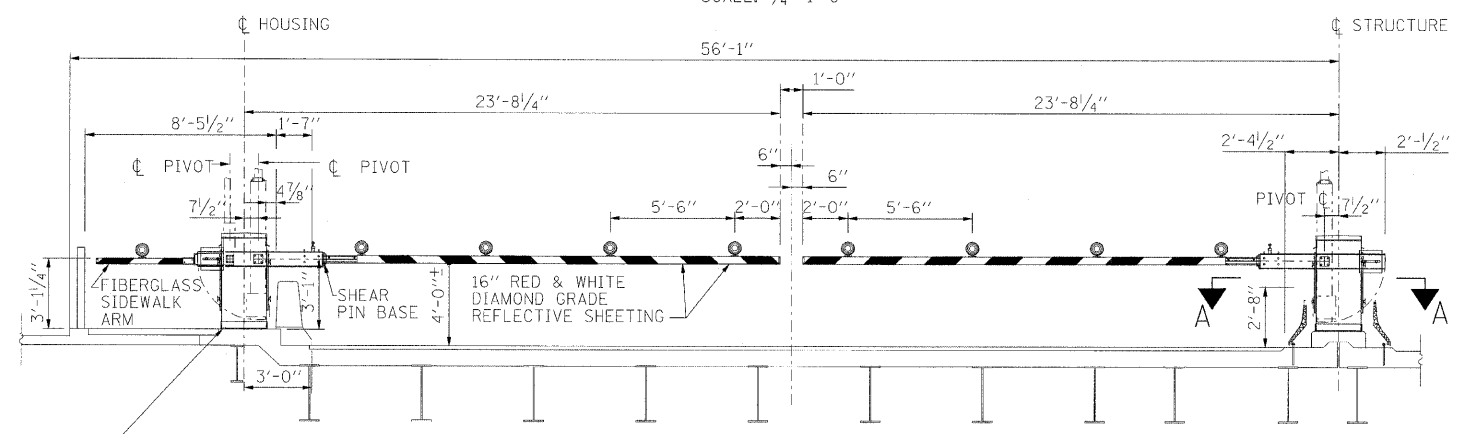
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-28-R	COOK	398	267
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



NEW WARNING AND RETRACTABLE BARRIER GATE LOCATION PLAN  
SCALE: 1"=20'-0"



NEW WARNING GATE PLAN  
SCALE: 1/4"=1'-0"



NEW WARNING GATE ELEVATION  
(LOOKING EAST)  
(NORTHWEST FIXED SPAN SHOWN - ALL OTHERS SIMILAR)  
SCALE: 1/4"=1'-0"

**NOTES:**

1. FOR GENERAL MECHANICAL NOTES, SEE SHEET M-01
2. REMOVE EXISTING WARNING GATE ASSEMBLIES AND DISPOSE OFF SITE. REMOVAL SHALL INCLUDE ALL ASSOCIATED ELECTRICAL COMPONENTS AND WIRING.
3. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS BEFORE BEGINNING FABRICATION/CONSTRUCTION. ALL FIELD MEASUREMENTS SHALL BE INDICATED ON SHOP DRAWINGS.
4. FOR MOUNTING DETAILS SEE STRUCTURAL DRAWINGS.
5. THE COUNTERWEIGHT OFFSET SHALL BE DETERMINED BY THE MANUFACTURER.
6. WARNING LIGHTS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ILLINOIS STATE MANUAL OF TRAFFIC CONTROL DEVICES (MUTCD).
7. EACH WARNING LIGHT SHALL BE A RED LIGHT AND VISIBLE FROM BOTH DIRECTIONS ALONG THE SIDEWALK. ADJACENT LIGHTS SHALL FLASH ALTERNATELY.
8. FOR DESTINATION AND ROUTING OF FLASHING LIGHTS SEE SYSTEM CIRCUIT DIAGRAM ELECTRICAL DRAWINGS.
9. GATE ARM CONDUCTORS SHALL BE INSTALLED IN HOT DIPPED GALVANIZED RIGID STEEL CONDUIT SUPPORTED ON GATE ARMS WITH 2-HOLE PIPE CLAMS SPACED A MAXIMUM OF 5 FEET APART.
10. GATE ARM CONDUCTORS MATERIALS FOR THE WARNING LIGHT CIRCUIT SHALL BE INSULATED STRANDED COPPER.
11. CONNECTION FROM CONDUCTORS ON MOVABLE ARMS TO GATE HOUSING SHALL BE BY MEANS OF HEAVY DUTY EXTRA FLEXIBLE NON-METALLIC MULTI-CONDUCTOR CABLE, TYPE SO OR APPROVED EQUAL, WITH SLACK PROVIDED FOR EXTREME END OF TRAVEL POSITION OF ARM. THE MULTI-CONDUCTOR CABLE SHALL INCLUDE A GROUNDING CONDUCTOR.
12. GATE ARM CONDUCTORS SHALL TERMINATE INSIDE THE GATE HOUSING ON A TERMINAL BLOCK.
13. NON CURRENT-CARRYING METALLIC PART ON SIDEWALK WARNING GATE SHALL BE BONDED TOGETHER AND CONNECTED BY MEANS OF A GROUNDING CONDUCTOR TO THE EQUIPMENT GROUNDING SYSTEM.
14. NEW WARNING GATE SHALL BE ROADWAY MANUFACTURING TYPE VW-4 OR APPROVED EQUAL.

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230 WEST MONROE STREET,  
SUITE 900  
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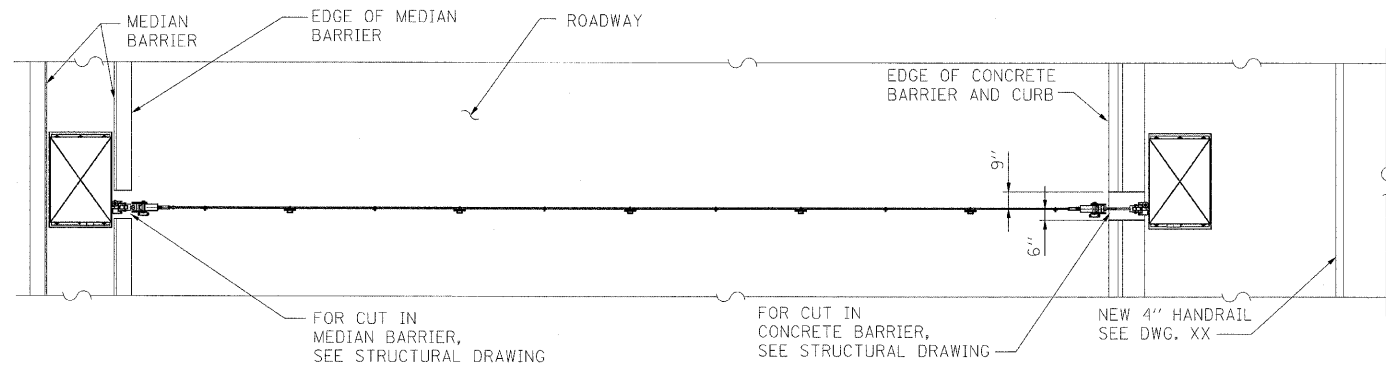
DESIGNED - E. BASU  
DRAWN - V. LEVIT  
CHECKED - D. NYARKO  
DATE - MAY 8, 2009

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REVISED -  
REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

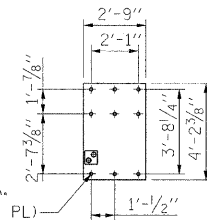
**TRAFFIC GATE REPLACEMENT**  
SCALE: AS SHOWN SHEET NO. M-24 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	268
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



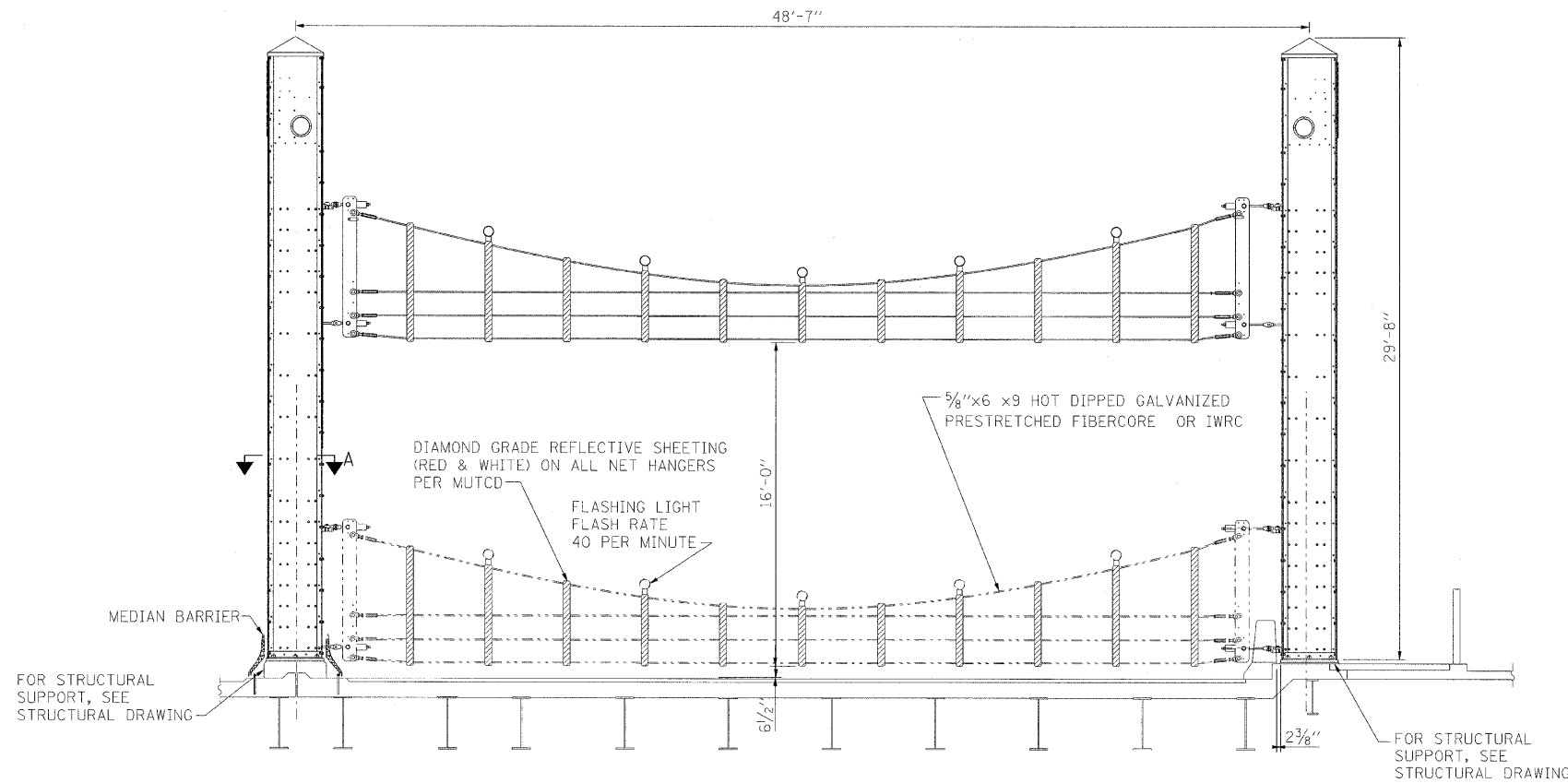
**NEW RETRACTABLE BARRIER GATE PLAN**

SCALE: 1/4"=1'-0"



PROVIDE 1 5/8" DIA. ANCHOR BOLTS (9 PL)

**SECTION A-A**  
NOT TO SCALE



**NEW RETRACTABLE BARRIER GATE ELEVATION (PROPRIETARY COMPONENT)**

(LOOKING EAST)  
(SOUTHWEST FIXED SPAN SHOWN, - NORTHEAST FIXED SPAN SIMILAR)  
SCALE: 1/4"=1'-0"

**DESIGN PERFORMANCE LEVELS:**

ENERGY DISSIPATION-231,000 FOOT-POUNDS  
DECELERATION OF 1800 POUND VEHICLE @62 MPH-9.5 G'S  
RESULTING OCCUPANT IMPACT VELOCITY FOR 1800 POUND VEHICLE @62 MPH-25 FEET/SEC  
RESULTING STOPPING DISTANCE FOR 1800 POUND VEHICLE @62 MPH-MAXIMUM 32 FEET  
SAFETY NET VERTICAL TRAVEL SPEED- 1 FT PER SECOND

**DESIGNED CLEARANCE:**

HORIZONTAL ROADWAY CLEARANCE ( CURB TO MEDIAN BARRIER) 44'-4 3/8"  
VERTICAL ROADWAY CLEARANCE- 16 FT

**NOTES:**

1. FOR GENERAL MECHANICAL NOTES, SEE SHEET M-01.
2. REMOVE ALL EXISTING BARRIER GATE AND ALL ASSOCIATED ASSEMBLIES AND DISPOSE OF OFFSITE.
3. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS BEFORE BEGINNING FABRICATION/CONSTRUCTION. ALL FIELD MEASUREMENTS SHALL BE INDICATED ON SHOP DRAWINGS.
4. FOR MOUNTING DETAIL, SEE STRUCTURAL DRAWINGS.
5. BARRIER GATE SHALL BE LOKRAN RETRACTABLE BARRIER GATE TYPE OR APPROVED EQUAL.
6. WORK THIS DRAWING, WITH SHEET M-28.
7. CONTRACTOR TO FIT NEW GATES, BY REMOVING EXISTING BARRIER POST AND TOP CAP AT GATE LOCATIONS.

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SUITE 900  
CHICAGO, IL. 60606

USER NAME = shanna  
FILE NAME = D160d61-shr-mec-25.dgn  
PLOT SCALE = NONE  
PLOT DATE = 5/7/2009

DESIGNED - E. BASU  
DRAWN - V. LEVIT  
CHECKED - D. NYARKO  
DATE - MAY 8, 2009

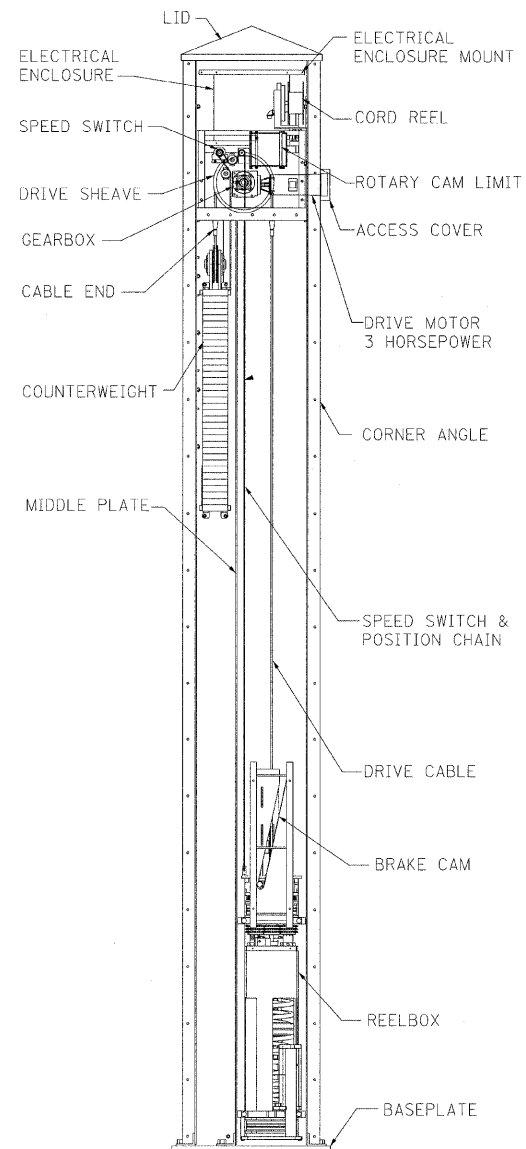
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BARRIER GATE REPLACEMENT**

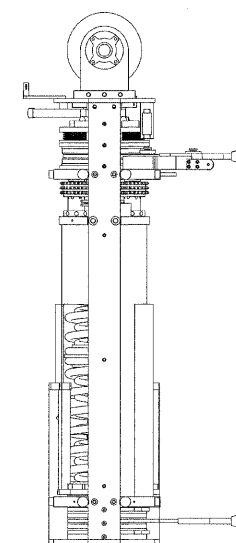
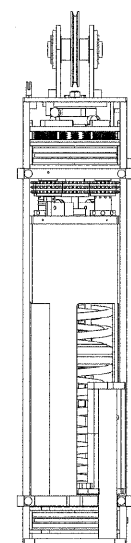
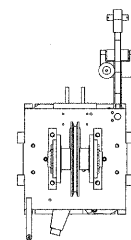
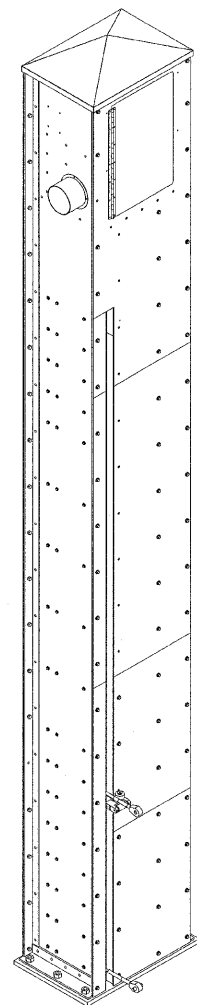
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	269
CONTRACT NO. 60D61			ILLINOIS FED. AID PROJECT	

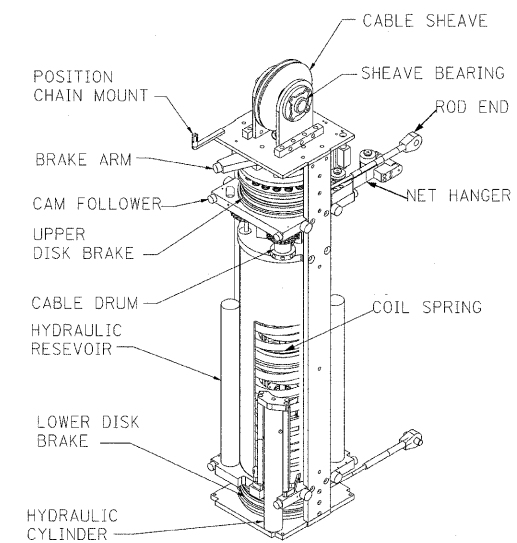


LOOKING FROM REAR OF COLUMN

**COLUMN ASSEMBLY**  
MISSING DETAILS FOR CLARITY  
NOT TO SCALE



**REELBOX ASSEMBLY**  
NOT TO SCALE



**PROPRIETARY REELBOX**

HYDRAULIC DAMPERS TO CONTROL SPEED OF CABLE RETRACTION DURING RESET  
MINIMUM SAFETY FACTOR OF 2 THROUGHOUT DESIGN  
CORROSION RESISTANT COATINGS AND MATERIALS  
PERMANENTLY LUBRICATED CAMFOLLOWERS  
PRELOADED HELICAL COIL NET TENSIONING SPRINGS  
NON ASBESTOS BONDED DISK BRAKES

**NOTES:**

1. FOR GENERAL NOTES, SEE SHEET M-01.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
3. WORK THIS DRAWING WITH SHEET M-27.

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = sharma  
FILE NAME = D162d61-shl-mec-26.dgn  
PLOT SCALE = NONE  
PLOT DATE = 5/7/2009

DESIGNED - E. BASU  
DRAWN - V. LEVIT  
CHECKED - D. NYARKO  
DATE - MAY 8, 2009

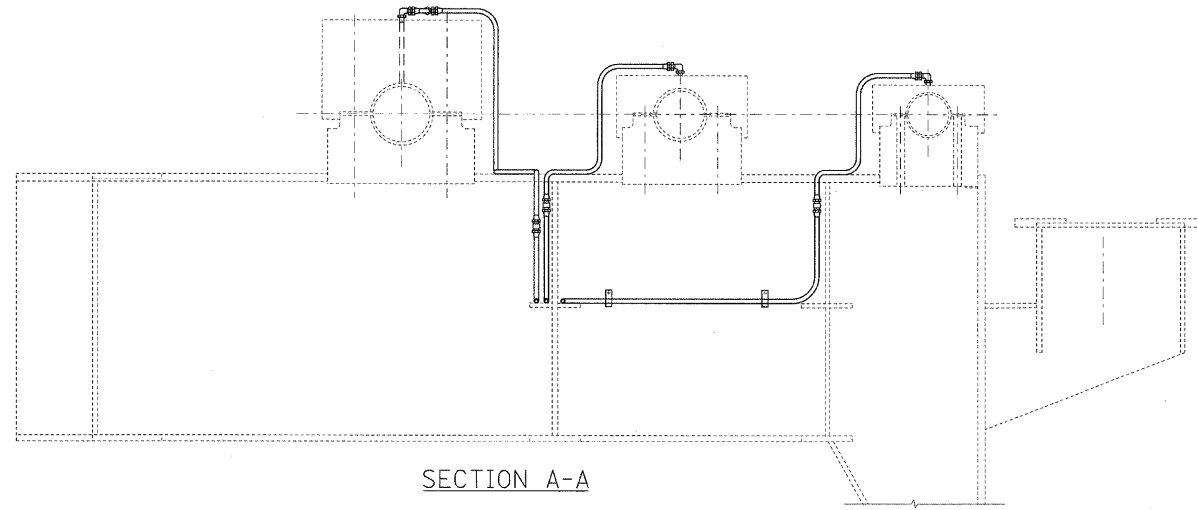
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

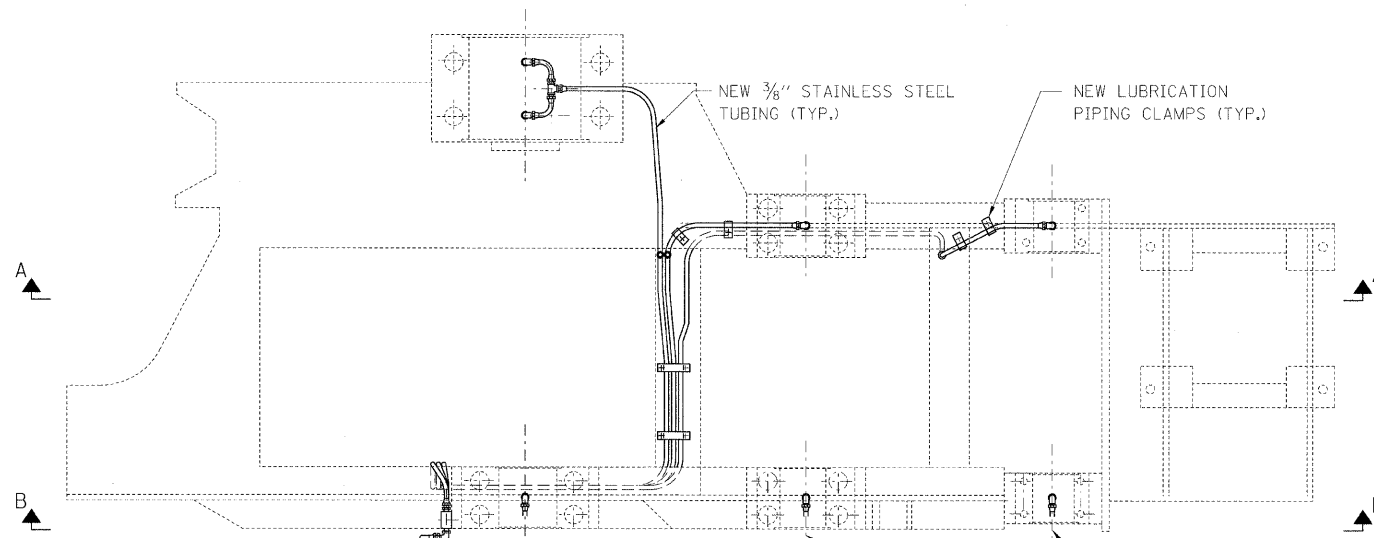
**BARRIER GATE REPLACEMENT DETAILS**

SCALE: AS SHOWN SHEET NO. M-26 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

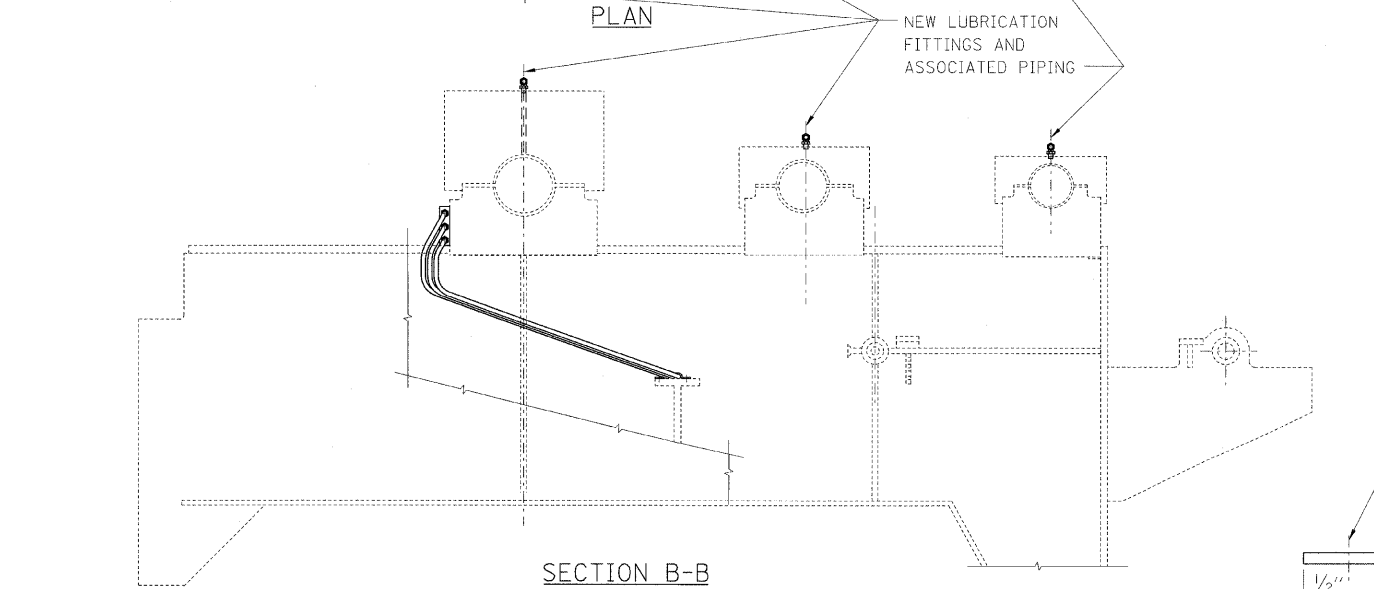
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	270
CONTRACT NO. 60D61			ILLINOIS FED. AID PROJECT	



SECTION A-A

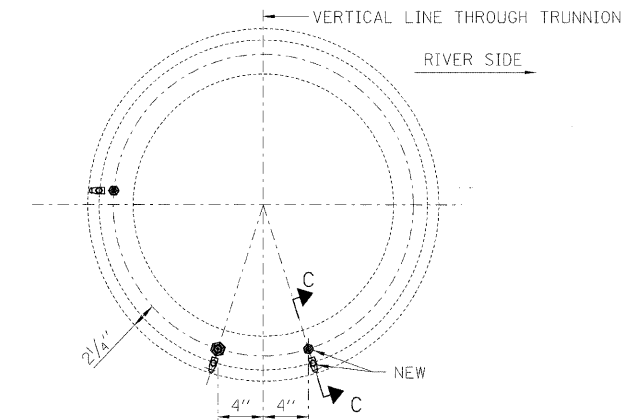


PLAN



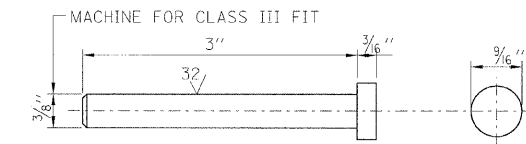
SECTION B-B

LAYOUT OF GEAR TRAIN LUBRICATION SYSTEM  
SCALE: 3/4"=1'-0"



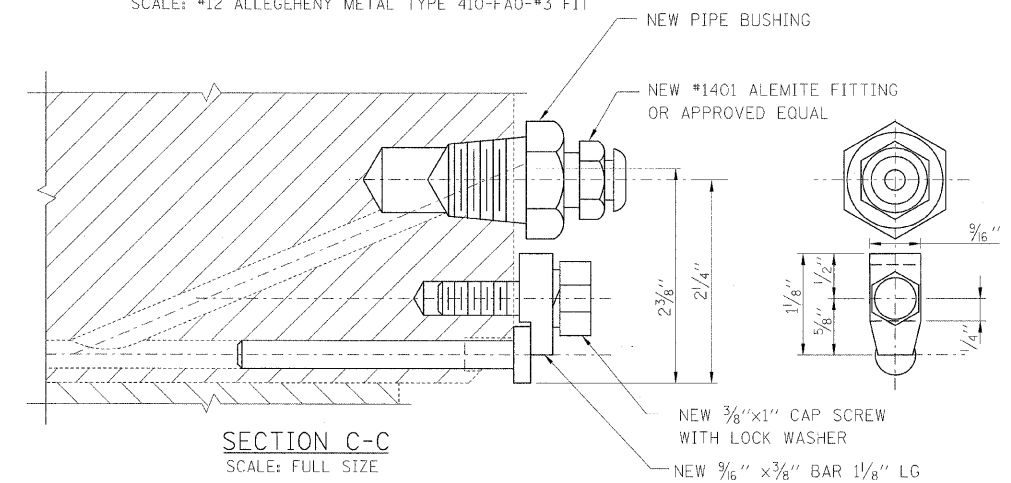
LOCATION OF LUBRICATION DUCTS AT EACH TRUNNION END

SCALE: 1/2"=1'-0"



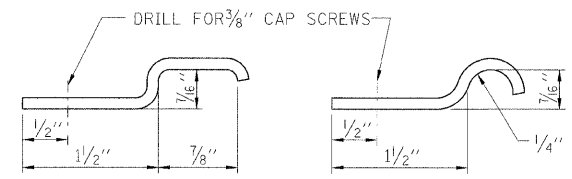
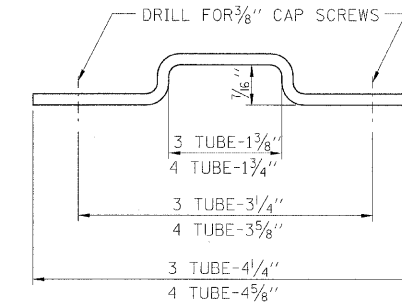
NEW LUBRICATION GROOVE END PLUG

SCALE: #12 ALLEGEHENY METAL TYPE 410-FA0-#3 FIT



SECTION C-C

SCALE: FULL SIZE



TYPICAL TUBING CLAMPS

SCALE: FULL SIZE

**SCOPE OF WORK**

1. REMOVE ALL EXISTING LUBRICATION PIPING AND ASSOCIATED COMPONENTS.
2. FURNISH AND INSTALL NEW PIPING AND LUBRICATION PIPING COMPONENTS IN-KIND.
3. ALL PIPING MATERIAL AND LUBRICATION COMPONENTS SHALL BE 304 OR 304L OR 316 STAINLESS STEEL IN THE COLD FINISHED, ANNEALED AND PICKLED CONDITION STAINLESS STEEL.

**NOTES:**

1. FOR GENERAL NOTES, SEE SHEET M-01.
2. ALL DETAILS OF THE OPERATING MACHINERY LUBRICATION SYSTEM HAVE NOT BEEN SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL OBTAIN THE DETAILS OF THE LUBRICATION FITTING, TUBING AND ROUTING FROM EXISTING AS-BUILT DRAWINGS.
3. THE MATERIAL FOR ALL LUBRICATION TUBING MATERIAL, ASSOCIATED CLAMPS AND FITTINGS SHALL BE STAINLESS STEEL TYPE 304 OR TYPE 316.

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = sherma  
FILE NAME = D160d61-sh-t-mec-27.dgn  
PLOT SCALE = NONE  
PLOT DATE = 5/7/2009

DESIGNED V. LEVIT  
DRAWN V. LEVIT  
CHECKED D. NYARKO  
DATE - MAY 8, 2009

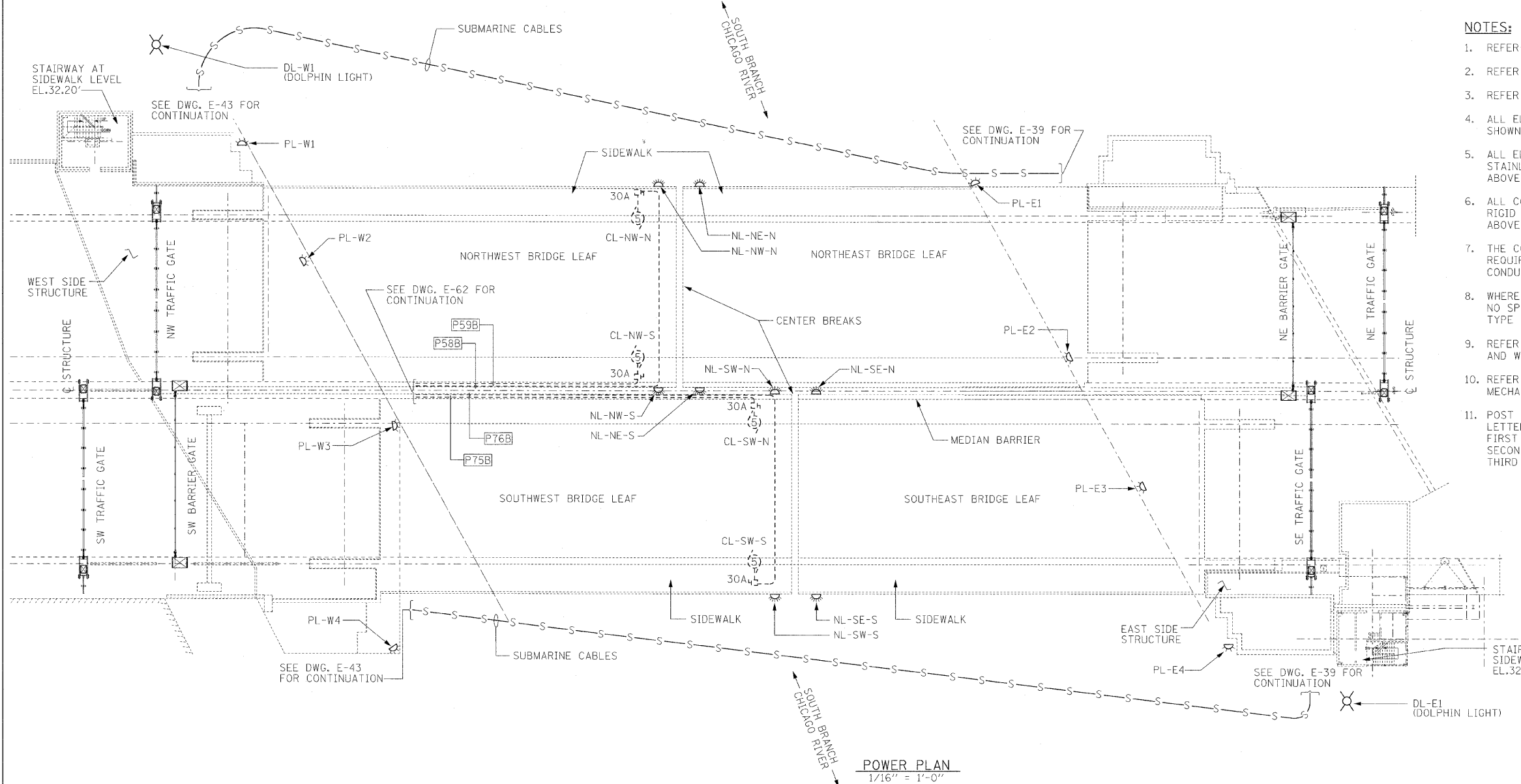
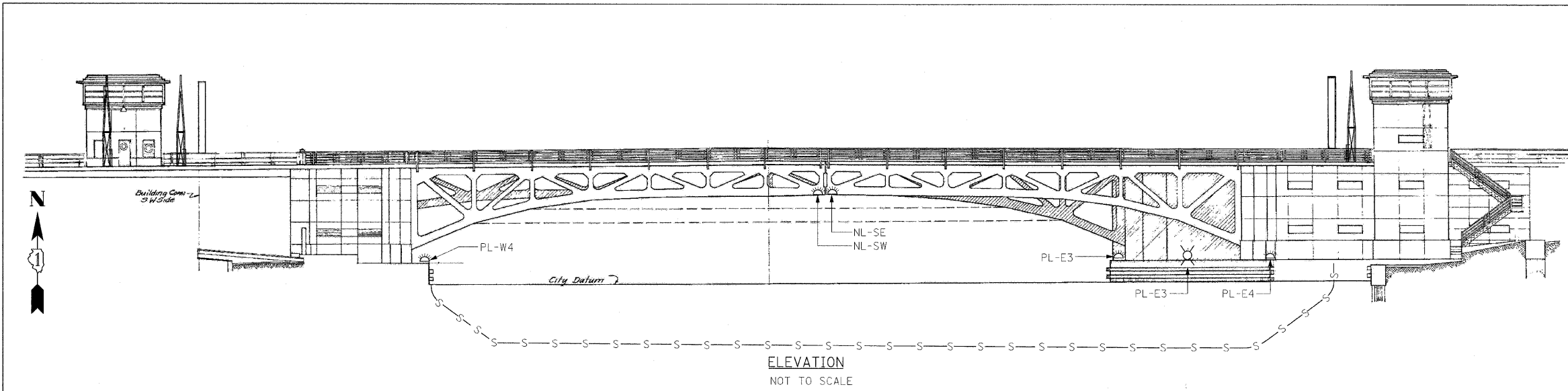
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**OPERATING MACHINERY LUBRICATION SYSTEM**

SCALE: AS SHOWN SHEET NO. M-27 OF M-27 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	271
CONTRACT NO. 60D61			FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT	



- NOTES:**
1. REFER TO DRAWINGS E-04 AND E-05 FOR ELECTRICAL SYMBOLS.
  2. REFER TO DRAWING E-06 FOR ELECTRICAL ABBREVIATIONS.
  3. REFER TO DWGS. E-2 AND E-3 FOR GENERAL ELECTRICAL NOTES.
  4. ALL ELECTRICAL MOTORS, DISCONNECT SWITCHES AND CONDUITS SHOWN DASHED ARE UNDER THE BRIDGE DECK.
  5. ALL ELECTRICAL PULL BOXES AND JUNCTION BOXES SHALL BE STAINLESS STEEL, TYPE 316 AND SHALL BE RATED NEMA 4X ABOVE OR UNDER THE BRIDGE DECK.
  6. ALL CONDUIT AND FITTINGS SHALL BE HOT-DIP GALVANIZED RIGID STEEL AND PVC COATED, AND POLYURETHANE COATED, ABOVE OR UNDER THE BRIDGE DECK, UON.
  7. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL PULL BOXES REQUIRED TO FACILITATE THE ROUTING AND PULLING OF CONDUITS AND WIRES.
  8. WHEREVER THE NUMBER OF CONDUIT BENDS EXCEED 180° AND NO SPLICE IS INVOLVED, CONTRACTOR SHALL USE MOGUL TYPE FITTINGS.
  9. REFER TO DRAWINGS E-68 THROUGH E-73 AND E-125 FOR CONDUIT AND WIRE SCHEDULES.
  10. REFER TO MECHANICAL DRAWINGS FOR LOCATION OF MECHANICAL / ELECTRICAL DEVICES.
  11. POST WARNING SIGNS AT FOUR LOCATIONS, SIZE 4' x 3' BLACK LETTERS ON WHITE BACKGROUND, GALVANIZED STEEL.  
 FIRST LINE: CABLE CROSSING (SMALL FONT)  
 SECOND LINE: CITY OF CHICAGO (SMALL FONT)  
 THIRD LINE: DO NOT ANCHOR



*James William Guinan*  
**JAMES WILLIAM GUINAN, P.E.**  
 LICENSE NO. 062-053407  
 EXPIRES: November 30, 2009  
 DATE: 5-8-09

<b>PB Americas, Inc.</b> 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL. 60606	USER NAME = sharma	DESIGNED - A. CENTENO	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>ELECTRICAL GENERAL PLAN AND ELEVATION</b>	F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	FILE NAME = D:\06061-sht-ele-01.dgn	DRAWN - S. SHARMA	REVISED -			389	2424-26-R	COOK	398	272	
	PLOT SCALE = NONE	CHECKED - M. INTATANO	REVISED -			CONTRACT NO. 60D61					
	PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -			FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT					
SCALE: AS SHOWN    SHEET NO. E-01 OF E-125 SHEETS    STA. 379+06.09 TO STA. 382+45.28											



**GENERAL NOTES:**

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF N.E.C., AASHTO, U.S. COAST GUARD, AND LOCAL ORDINANCE AND REGULATIONS. COORDINATE ALL ELECTRICAL WORK WITH IDOT AND ALL OTHER CONTRACTORS ON THE SITE.
- INDOOR ELECTRICAL CONTROL CABINETS SHALL HAVE A MINIMUM NEMA-12 RATING OR AS INDICATED. ALL OUTDOOR CABINETS SHALL BE STAINLESS STEEL, TYPE 316 AND SHALL BE NEMA 4X RATED, UNLESS OTHERWISE NOTED.
- LOCATIONS AND DIMENSIONS OF ELECTRICAL EQUIPMENT AND ASSOCIATED DEVICES ARE APPROXIMATE BASED ON EXISTING CONDITIONS AND BEST AVAILABLE PERTINENT INFORMATION AND PLANS. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXACT LOCATIONS AND PROPOSED EQUIPMENT DIMENSIONS AS PART OF THE CONSTRUCTION AND SHOP DRAWING SUBMITTAL PROCESS. AS-BUILT-DRAWINGS SHALL BE BASED UPON APPROVED SHOP DRAWINGS, AND BASED ON ACTUAL FIELD SURVEYS, MEASUREMENTS, AND APPROVED INSTALLED EQUIPMENT ONLY.
- ALL CONDUIT AND FITTINGS SHALL BE HOT- DIP GALVANIZED RIGID STEEL OR PVC COATED AS REQUIRED. MOUNT ALL CONDUIT ON PVC COATED GALVANIZED STEEL UNISTRUT (KINDORF) CHANNELS OR APPROVED EQUAL. MOUNTING HARDWARE SHALL BE STAINLESS STEEL, TYPE 316. MINIMUM SIZE OF CONDUIT SHALL BE 3/4" DIAMETER AND CONTAIN MINIMUM 2 #12 AND 1#12 GROUND WIRE, UNON.
- EXACT CONDUITS, JUNCTION AND PULL BOX LOCATIONS, MOUNTING HARDWARE AND SUPPORTS, AND STUB-UP LOCATIONS ARE TO BE DETERMINED BASED ON FIELD CONDITIONS AND BRIDGE ELECTRICAL REQUIREMENTS AS SPECIFIED AND SHOWN ON THE PLANS.
- FLEXIBLE, LIQUIDTITE METAL CONDUIT SHALL BE USED FOR FINAL MOTOR, LIMIT SWITCH AND OTHER INSTRUMENTATION.
- PROVIDE EXPANSION AND DEFLECTION CONDUIT FITTINGS OF THE APPROVED TYPE AT THE LOCATIONS WHERE CONDUIT PASSES THROUGH STRUCTURAL EXPANSION JOINTS OTHER CRITICAL LOCATIONS, OR MINIMUM EVERY 200 FEET ON STRAIGHT RUNS.
- PITCH CONDUIT RUNS TOWARD PULL BOXES TO PREVENT MOISTURE ACCUMULATION. ON LOWEST POINT OF ALL BOXES AND OTHER ELECTRICAL EQUIPMENT SUBJECT TO WATER ACCUMULATION, PROVIDE NECESSARY DRAIN OPENINGS ,FITTINGS, CONDUITS, ETC.
- PERFORM ALL CUTTING, DRILLING AND CORE DRILLING AS NECESSARY TO PROVIDE PENETRATIONS THROUGH WALLS AND FLOORS FOR ELECTRICAL INSTALLATION WORK. CORE DRILL DIAMETER SHALL NOT BE MORE THAN 25 PERCENT LARGER THAN THE CONDUIT OUTSIDE DIAMETER. ALL CONDUITS PENETRATING WALLS AND FLOORS SHALL BE INSTALLED IN A GALVANIZED STEEL SLEEVE WITH FLOOR SUPPORTS . PATCH AND RESTORE SURROUNDING AREA OF PENETRATIONS TO ITS ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER. OPENINGS THROUGH SLAB AND WALL FOR CONDUITS SHALL BE FIRE STOPPED IN AN APPROVED MANNER UTILIZING "3M" COMPANY SEALING SYSTEM #7904 SERIES OR APPROVED EQUAL.
- ALL ELECTRICAL MOTORS SHALL BE PROVIDED WITH DISCONNECT SWITCHES AS PER NEC REQUIREMENTS.
- THE CONTROL RELAYS AND CONTACTORS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED SURGE SUPPRESSORS.
- ALL CONTROL CABINETS SHALL BE FURNISHED WITH ONE THERMOSTATICALLY-CONTROLLED STRIP HEATER, 125V, 20A RATED DUPLEX RECEPTACLE, AND ONE FLUORESCENT LIGHT FIXTURE WITH SWITCH.
- CONTRACTOR SHALL NOTIFY IDOT FOR EXISTENCE OF ASBESTOS AFFECTED BY THE INSTALLATION OF ELECTRICAL AND CONTROL SYSTEMS.
- FURNISH AND INSTALL TAGS FOR CONDUITS AND CABLES TO BE INSTALLED UNDER THIS CONTRACT. TAG IDENTIFICATIONS SHALL BE IN ACCORDANCE WITH THE CONTRACT DRAWINGS OR AS DIRECTED BY THE ENGINEER.
- PRIOR TO COMMENCEMENT OF WORK, SUBMIT DETAILED STAGING PLAN TO THE ENGINEER FOR APPROVAL. COORDINATE WITH THE ENGINEER ALL CONSTRUCTION ACTIVITIES THAT MAY AFFECT OPERATIONS.

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**DWG No. DESCRIPTION**

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<b>PB Americas, Inc.</b> 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL. 60606	USER NAME = sharma	DESIGNED - A. CENTENO	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL ELECTRICAL NOTES</b> <b>SHEET 1</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FILE NAME = D168d61-sh1-elc-02.dgn	DRAWN - S. SHARMA	REVISED -		389	2424-2B-R	COOK	398	273			
	PLOT SCALE = NONE	CHECKED - M. INTATANO	REVISED -		CONTRACT NO. 60D61							
	PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -		SCALE: AS SHOWN   SHEET NO. E-02 OF E-125 SHEETS   STA. 379+06.09 TO STA. 382+45.28   FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT							

**GENERAL NOTES (CONTINUED FROM DWG E-02)**

16. COMPLETE ELECTRICAL INSTALLATION SHALL BE PERMANENTLY AND EFFECTIVELY GROUNDED TO GROUND RODS AND STRUCTURAL STEEL IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE AND AASHTO CODE REQUIREMENTS. WHETHER OR NOT SUCH CONNECTIONS ARE SPECIFICALLY IDENTIFIED, MEASURED RESISTANCE TO GROUND TO BE 5 OHMS MAXIMUM.
17. ALL 600V POWER AND CONTROL CABLE SHALL BE TYPES RHH, RHW, XHHW-2 OR USE. THE CABLE SHALL RATED AT A MINIMUM OF 90°C DRY AND 75°C WET AND SHALL BE SUITABLE FOR INSTALLATION IN WET AND DRY LOCATIONS, AND SHALL BE RESISTANT TO OILS AND CHEMICALS, SHALL CONSIST OF STRANDED COPPER CONDUCTORS INSULATED WITH CHEMICALLY CROSS-LINKED POLYETHYLENE, XLPE.
18. THE POWER AND CONTROL SUBMARINE CABLE INSULATION SHALL BE 600V RATED, SHALL CONSIST OF STRANDED COPPER CONDUCTORS INSULATED WITH CROSS-LINKED POLYETHYLENE, XLPE (90°C), CABLED WITH FILLERS AS NECESSARY, BINDER TAPE, POLYETHYLENE INNER JACKET, POLYETHYLENE COATED SPIRAL-WOUND GALVANIZED STEEL ARMOR WIRES, SEPARATOR TAPE, AND A POLYETHYLENE OUTER JACKET, AND SHALL BE RATED FOR LONG-TERM UNDERWATER INSTALLATIONS AND SUITABLE FOR USE IN WET OR DRY LOCATIONS WHICH MAY BE EXPOSED TO DIRECT SUNLIGHT. SUBMARINE CABLES SHALL BE MANUFACTURED BY DRAKA CABLETEQ, USA OR APPROVED EQUAL.
19. THE CONTRACTOR SHALL PERFORM FULL CONTINUITY, INSULATION AND GROUNDING INTEGRITY TESTS UPON COMPLETION OF THE ELECTRICAL INSTALLATIONS. THE CONTRACTOR SHALL PERFORM FULL ACCEPTANCE TESTS OF ALL BRIDGE ELECTRICAL SYSTEMS INCLUDING LIFT SPAN DRIVES AND MOTORS, TRAFFIC DEVICES AND AUXILIARY EQUIPMENT, AS DESCRIBED UNDER SPECIAL PROVISIONS.
20. BACKGROUNDS FOR BRIDGE'S ROADWAY AND VARIOUS ROOMS ARE BASED ON CONTRACT - WEST CONGRESS STREET BRIDGE OVER SOUTH BRANCH - CHICAGO RIVER. THE CONTRACTOR SHALL FIELD VERIFY THE ACTUAL INSTALLATION.

<b>PB Americas, Inc.</b> 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL. 60606	USER NAME = sharma	DESIGNED - A. CENTENO	REVISED -	<b>STATE OF ILLINOIS                  DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL ELECTRICAL NOTES                  SHEET 2</b>		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FILE NAME = 0160d61-shr-elc-03.dgn	DRAWN - S. SHARMA	REVISED -		389	2424-2B-R	COOK	398	274		
	PLOT SCALE = NONE	CHECKED - M. INTATANO	REVISED -		<b>CONTRACT NO. 60D61</b>						
	PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -		SCALE: AS SHOWN   SHEET NO. E-03 OF E-125 SHEETS   STA. 379+06.09 TO STA. 382+45.28   FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT						

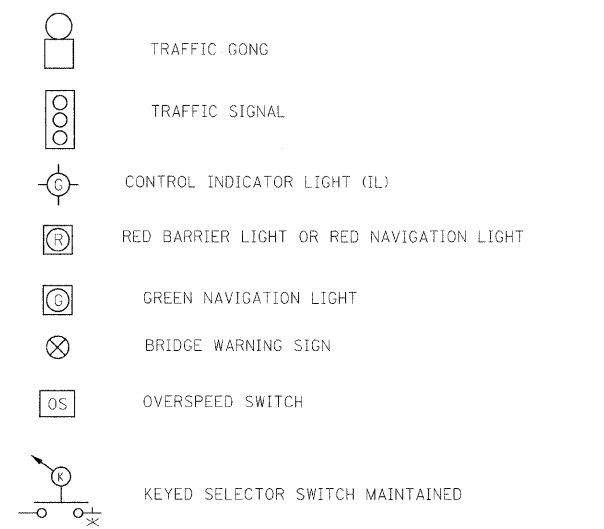
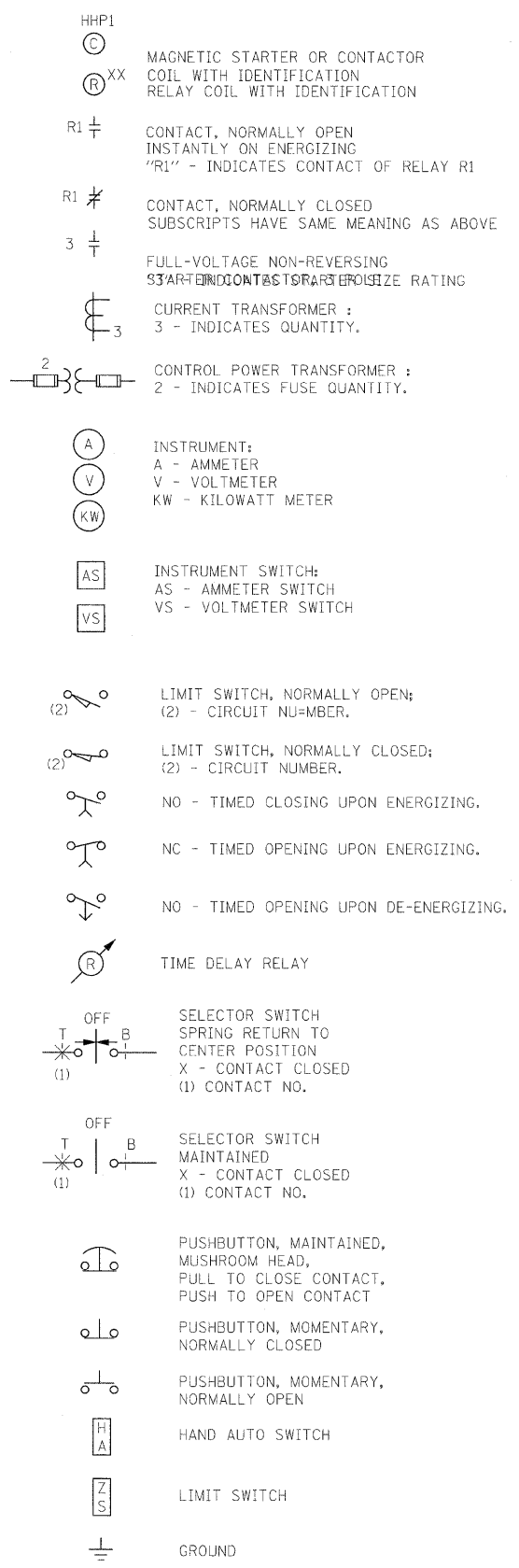
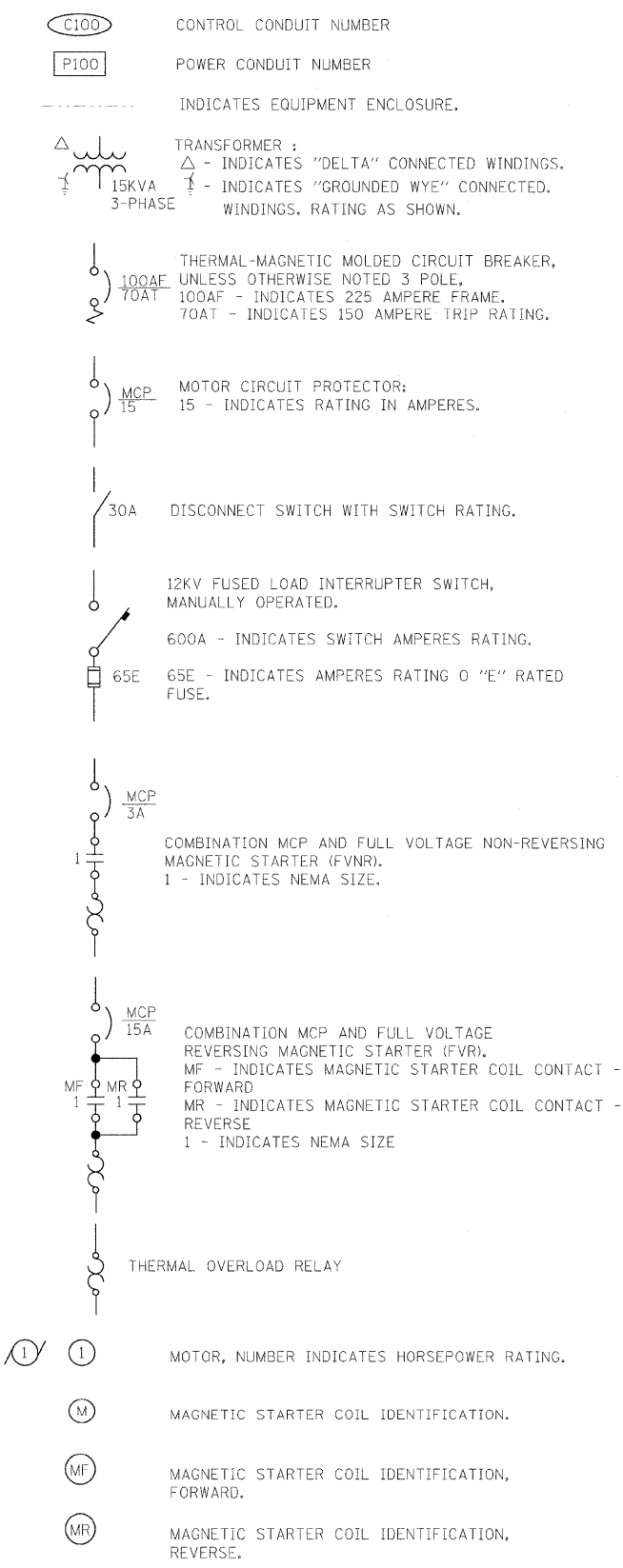
**ELECTRICAL SYMBOLS**  
(LIGHT LINE INDICATES EXISTING CONDUIT, CABLE AND EQUIPMENT).

	EXISTING DROP CORD.		EXISTING LIGHT POLE
	EXISTING JUNCTION BOX.		EXISTING CHANNEL LIGHT
	EXISTING CEILING FIXTURE, INCANDESCENT.		EXISTING PIER LAMP
	EXISTING BRACKET FIXTURE, INCANDESCENT.		EXISTING TARGET LIGHT
	EXISTING FLUORESCENT FIXTURE, 2T-40W.		EXISTING STOP SIGN SWITCH
	EXISTING 1 POLE SWITCH.		EXISTING STOP SIGN AND BELL
	EXISTING 3-1 POLE SWITCHES GANGED.		EXISTING MOTOR STARTER AND CONTROLS ENCLOSURE
	EXISTING 3 WAY SWITCH.		EXISTING CONDUIT HANGER
	EXISTING 4 WAY SWITCH.		EXISTING JUNCTION BOX
	EXISTING PLUG RECEPTACLE.		
	EXISTING BUZZER.		
	EXISTING INTERCOM-TELEPHONE.		
A, B, ETC.	EXISTING SWITCH CONTROL.		
1, 2, ETC.	EXISTING CIRCUIT NUMBER.		
	EXISTING LIGHTING CONDUIT EXPOSED.		
	EXISTING LIGHTING CONDUIT CONCEALED.		
	EXISTING INTERCOM TEL CONDUIT EXPOSED.		
	EXISTING INTERCOM TEL CONDUIT CONCEALED.		
	EXISTING BUZZER CONDUIT EXPOSED.		
	EXISTING BUZZER CONDUIT CONCEALED.		
	EXISTING SPEAKER CONDUIT EXPOSED.		
	EXISTING SPEAKER CONDUIT CONCEALED.		
	EXISTING STREET LIGHTING CONDUIT EXPOSED.		
	EXISTING HOME RUN : C13 - INDICATES CONDUIT NUMBER WITH WIRES.		
	EXISTING CONDUIT TURNING UP OR TOWARD OBSERVER.		
	EXISTING CONDUIT TURNING DOWN OR AWAY FROM OBSERVER.		
	EXISTING ELECTRICAL EQUIPMENT.		

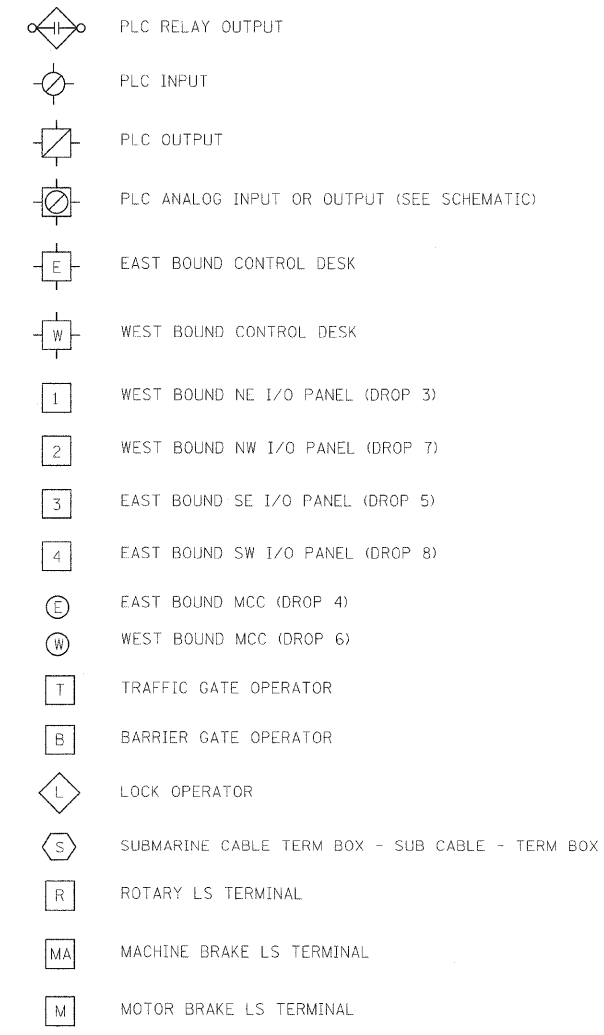
**ELECTRICAL SYMBOLS**  
(ELECTRICAL PLANS, GENERAL)

	LIGHT POLE		MOTOR, NUMBER INDICATES HORSEPOWER RATING.
	CONDUIT RUN EXPOSED.		MOTORIZED DAMPER.
	CONDUIT RUN UNDER VIADUCT		TERMINAL, PULL OR SPLICE BOX AS SHOWN.
	CONDUIT RUN CONCEALED IN HUNG CEILING OR WALL.		CONTROL PANEL
	CONDUIT TURNING UP OR TOWARD OBSERVER.		JUNCTION BOX.
	CONDUIT TURNING DOWN OR AWAY FROM OBSERVER.		MAIN GROUND GRID
	UNDERGROUND POWER (ABOVE 600V), CONCRETE ENCASED CONDUIT OR DUCTBANK.		COPPERWELD GROUND ROD, 3/4" DIA. X 1-0' LONG
	UNDERGROUND POWER (600V AND BELOW), CONCRETE ENCASED CONDUIT OR DUCTBANK.		GROUND ROD TEST WELL
	FLEXIBLE LOOP CABLE		FLUSH MOUNTED DUPLEX CONVENIENCE RECEPTACLE, 20A, 125V, 3W GROUNDING TYPE WITH GROUND FAULT CIRCUIT INTERRUPTER.
	SUBMARINE CABLE.		WALL MOUNTED DUPLEX CONVENIENCE RECEPTACLE, 20A, 125V, 3W GROUNDING TYPE WITH GROUND FAULT CIRCUIT INTERRUPTER IN WEATHERPROOF ENCLOSURE
	STAGE 1 - EXISTING EQUIPMENT, CONDUIT, OR CABLE TO BE REMOVED.		FLUORESCENT LUMINAIRE TYPE "B" CONTROLLED BY SWITCH "a"
	STAGE 2 - EXISTING EQUIPMENT, CONDUIT, OR CABLE TO BE REMOVED.		FLUORESCENT LUMINAIRE TYPE "C" CONTROLLED BY SWITCH "a"
	HOME RUN, DESIGNATION INDICATES PANEL AND CIRCUIT NUMBERS HATCHMARK INDICATES NUMBER OF #12 PHASE WIRE, UON. HATCHMARK WITH STRIKE INDICATES #12 NEUTRAL WIRE, UON. HATCHMARK WITH TAIL INDICATES #12 GROUND WIRE, UON.		CEILING/PENDANT MOUNTED LUMINAIRE TYPE "A" CONTROLLED BY SWITCH "a" METAL HALIDE LAMP.
	208/120V, 3P, 4W LIGHTING PANELBOARD.		WALL MOUNTED EXIT LIGHT
	208/120V, 3P, 4W DISTRIBUTION PANELBOARD.		CEILING/PENDANT MOUNTED EXIT LIGHT
	480V, 3P, 3W MOTOR CONTROL CENTER.		TOGGLE-SWITCH - "3" INDICATES 3WAY - "a" INDICATES SWITCH CONTROL.
	480V, 3P, 3W SWITCHBOARD, ONE SECTION.		DIMME 750W SLIDE TYPE
	12KV - 480V, 3P, TRANSFORMER.		NAVIGATION LIGHT FIXTURE LETTER DENOTES TYPE: TYPE A: FENDER POST MOUNTED TYPE B: SPAN MOUNTED FIXTURE WITH UPPER PART 180° GREEN LENS AND BOTTOM PART 180° RED LENS
	480V - 208/120V, 3P, TRANSFORMER 15KVA INDICATES DEVICE KVA RATING.		CHANNEL LIGHT
	1200A, 480V, 3P, 3W, OPEN TRANSITION AUTOMATIC TRANSFER SWITCH.		PIER LAMP
	600A, 12KV, 3W, FUSED LOAD INTERRUPTER SWITCH MANUALLY OPERATED.		EMERGENCY BATTERY UNIT
	VARIABLE FREQUENCY DRIVE.		
	FUSED DISCONNECT SWITCH : 100AS - INDICATES SWITCH AMPERE RATING. 100AF - INDICATES FUSE AMPERE RATING.		
	UNFUSED DISCONNECT SWITCH : 100A - INDICATES SWITCH AMPERE RATING.		
	EMERGENCY GENERATOR.		

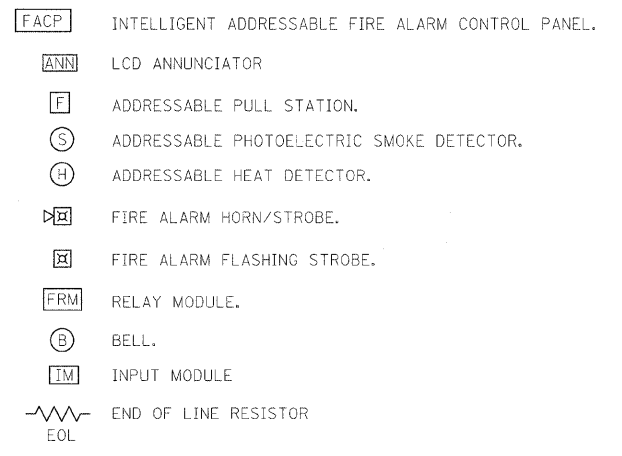
FOR SINGLE LINE AND CONTROL WIRING DIAGRAMS



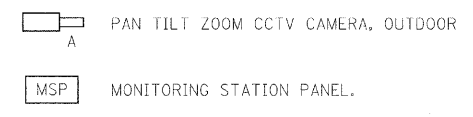
TERMINALS



FIRE ALARM  
 (PLAN AND RISER DIAGRAM)



CCTV  
 (PLAN AND RISER DIAGRAM)



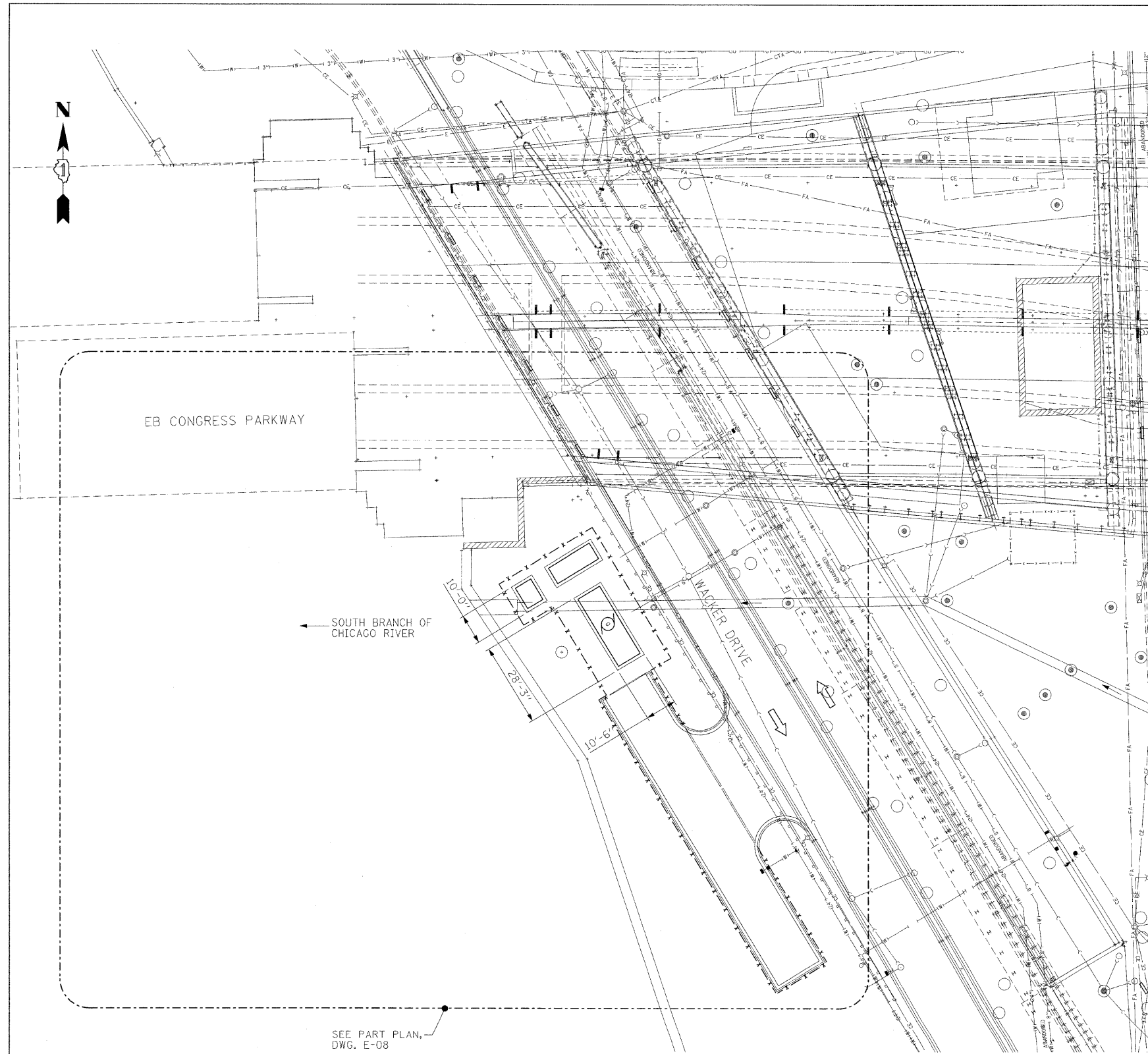
**ABBREVIATIONS**

A AMMETER  
 A AMPERE  
 AASHTO AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS  
 AC ALTERNATING CURRENT  
 AF AMPERE FRAME  
 AIC AMPERE INTERRUPTING CAPACITY  
 AMPL. AMPLIFIER  
 AI ANALOG INPUT  
 AO ANALOG OUTPUT  
 AS AMMETER SWITCH  
 AT AMPERE TRIP  
 ATS AUTOMATIC TRANSFER SWITCH  
 AWG AMERICAN WIRE GAUGE  
 AUX. AUXILIARY  
  
 BALL. BALLAST  
 BAR. BARRIER  
 BC BRIDGE CONTROL  
 BC-CAB BRIDGE CONTROL CABINET  
 BCR BRIDGE CONTROL RELAY  
 BGL BARRIER GATES LOWER (GROUP)  
 BG-NE-N BARRIER GATE NORTHEAST ON-COMING- NORTH  
 BG-NE-S BARRIER GATE NORTHEAST ON-COMING- SOUTH  
 BGPL BARRIER GATE PERMISSION LOWER  
 BGPR BARRIER GATE PERMISSION RAISE  
 BGR BARRIER GATES RAISE (GROUP)  
 BG-SW-N BARRIER GATE SOUTHWEST ON-COMING- NORTH  
 BG-SW-S BARRIER GATE SOUTHWEST ON-COMING- SOUTH  
 BP BYPASS  
 BRK. BRAKE  
 BR. BRIDGE  
 BRD. BOARD  
 BUZZ. BUZZER  
  
 C CONDUIT (HOT DIPPED RIGID GALVANIZED STEEL)  
 CAB. CABINET  
 CABLE  
 CB CIRCUIT BREAKER  
 CCR CAMERA CONTROL RECEIVER  
 CCTV CLOSED CIRCUIT TELEVISION CAMERA  
 CHNL. CHANNEL  
 CKT, CCTS CIRCUIT/S  
 CL, CTLK CENTER LOCK  
 CL-NW-N CENTER LOCK NORTHEAST NORTH  
 CL-NW-S CENTER LOCK NORTHEAST SOUTH  
 CL-SW-N CENTER LOCK SOUTHWEST NORTH  
 CL-SW-S CENTER LOCK SOUTHWEST SOUTH  
 CL CENTERLINE  
 CL. CLUTCH  
 COAX COAXIAL CABLE  
 CONN CONNECTION  
 CONT CONTINUATION, CONTACT  
 C., CONT. CONTROL PANEL CONTROLLER  
 CS CONTROL SWITCH  
 C.O., CHOVER CHANGEOVER  
 CT CURRENT TRANSFORMER  
 CTR CENTER  
  
 D DRIVE  
 DC DIRECT CURRENT  
 DI DISCRETE INPUT  
 DISC DISCONNECT  
 DN DOWN  
 DO DISCRETE OUTPUT  
 DSS DOOR SAFETY SWITCH  
 DWG DRAWING  
  
 E EXTEND  
 E-CC-1 EASTBOUND CONTROL CONSOLE 1  
 E-CP-2 EASTBOUND CONTROL PANEL 2  
 EC EXISTING CONDUIT  
 EDM EAST DRIVE MOTOR  
 ENCL ENCLOSURE  
 EPB EMERGENCY STOP PUSHBUTTON  
 ERR ERROR  
 ES EMERGENCY STOP

FL FLASHER  
 F FUSE  
 FDR FEEDER  
 FIXT FIXTURE  
 FL. FULL CLOSED  
 FULLY LOWERED  
 FLEX FLEXIBLE  
 FO FULLY OPEN  
 FT. FOOT  
 FTTG. FITTING  
 G GREEN  
 GGR GATES GROUP RAISE  
 GL GATE LIGHT  
 GND GROUND  
 GOV. GOVERNOR  
  
 HC HAND CRANK  
 HENS. HENSCHL  
 HLS HANDCRANK LIMIT SWITCH  
 HOS HIGH OVERSPEED  
 HP HORSEPOWER  
 HSE. HOUSE  
 HZ HERTZ  
  
 IBTC ILLINOIS BELL TELEPHONE COMPANY  
 IND INDICATOR  
 INST. INSTRUMENT  
 INT. INTERCOM  
  
 JBOX JUNCTION BOX  
 J-BOX BOX "J"  
  
 KCMIL THOUSAND CIRCULAR MIL  
 KV KILOVOLT  
 KVA KILOVOLT-AMPERE  
 KW KILOWATT  
 KILOWATT METER  
  
 LC LOGIC CONTROL  
 LIM. LIMIT  
 LK. LOCK  
 L LOWER  
 LOS LOW OVERSPEED  
 LP LIGHTING PANELBOARD  
 LS LIMIT SWITCH  
 LTG LIGHTING  
 LTN LIGHTNING  
 LTS LIGHTS  
  
 M MAIN  
 MB-NE-N MACHINERY BRAKE NORTHEAST NORTH  
 MB-NE-S MACHINERY BRAKE NORTHEAST SOUTH  
 MB-NW-N MACHINERY BRAKE NORTHWEST NORTH  
 MB-NW-S MACHINERY BRAKE NORTHWEST SOUTH  
 MB-SE-N MACHINERY BRAKE SOUTHEAST NORTH  
 MB-SE-S MACHINERY BRAKE SOUTHEAST SOUTH  
 MB-SW-N MACHINERY BRAKE SOUTHWEST NORTH  
 MB-SW-S MACHINERY BRAKE SOUTHWEST SOUTH  
 M-NE-N MAIN MOTOR NORTHEAST NORTH  
 M-NE-S MAIN MOTOR NORTHEAST SOUTH  
 M-NW-N MAIN MOTOR NORTHWEST NORTH  
 M-NW-S MAIN MOTOR NORTHWEST SOUTH  
 M-SE-N MAIN MOTOR SOUTHEAST NORTH  
 M-SE-S MAIN MOTOR SOUTHEAST SOUTH  
 M-SW-N MAIN MOTOR SOUTHWEST NORTH  
 M-SW-S MAIN MOTOR SOUTHWEST SOUTH  
 MACH. MACHINE  
 MCC MOTOR CONTROL CENTER  
 MD. MIDDLE  
 MECH MECHANICAL  
 MIN MINIMUM  
 MFR MANUFACTURER  
 MOB-NE-N MOTOR BRAKE NORTHEAST NORTH  
 MOB-NE-S MOTOR BRAKE NORTHEAST SOUTH  
 MOB-NW-N MOTOR BRAKE NORTHWEST NORTH  
 MOB-NW-S MOTOR BRAKE NORTHWEST SOUTH  
 MOB-SE-N MOTOR BRAKE SOUTHEAST NORTH  
 MOB-SE-S MOTOR BRAKE SOUTHEAST SOUTH  
 MOB-SW-N MOTOR BRAKE SOUTHWEST NORTH  
 MOB-SW-S MOTOR BRAKE SOUTHWEST SOUTH  
 MOT. MOTOR  
 MR MANUAL RELEASE

N NEUTRAL  
 N/A NOT APPLICABLE  
 NC NORMALLY CLOSED  
 NBS NAVIGATION LIGHTS BYPASS SWITCH  
 NDL NORMAL (MAIN) DRIVE LOWER  
 NDP NORMAL (MAIN) DRIVE PERMISSION  
 NDR NORMAL (MAIN) DRIVE RAISE  
 NE NORTHEAST  
 NEC NATIONAL ELECTRICAL CODE  
 NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION  
 NETA NATIONAL ELECTRICAL TESTING ASSOCIATION  
 NFPA NATIONAL FIRE PROTECTION ASSOCIATION  
 NNL NORTH NAVIGATION LIGHT  
 NO NORMALLY OPEN  
 NO. NUMBER  
 NORTH  
 NTS NOT TO SCALE  
 NWLCL NORTHWEST LEAF CENTER LOCK  
 NW NORTHWEST  
 Ø PHASE  
 O OPEN  
 OL OVERLOAD  
 OPER. OPERATOR  
 OS OVERSPEED SWITCH  
 OT OVERTRAVEL  
  
 P POLE  
 PIER  
 PIT  
 PB PUSH BUTTON  
 PBOX PULL BOX  
 PC PHOTOCELL  
 PFR PHASE FAILURE RELAY  
 PH PHASE  
 PLC PROGRAMMABLE LOGIC CONTROLLER  
 PNL. / PAN. PANEL  
 PT POSITION TRANSMITTER  
 PR POSITION RECEIVER  
 PVC POLYVINYL CHLORIDE COATED CONDUIT  
 PWR. / POW. POWER  
  
 RDWAY. ROADWAY  
 RES. RESISTOR  
 R RED OR RAISE OR RETRACT  
 REF REFERENCE  
 REM REMOTE  
 RMS ROOT MEAN SQUARE  
 RM. ROOM  
 RGS RIGID GALVANIZED STEEL CONDUIT/FITTING  
  
 S. SVC. SERVICE  
 SO. SOUTH  
 SCC SUBMARINE CABLE CONTROL  
 SCP SUBMARINE CABLE POWER  
 SE SOUTHEAST  
 SK SKEW  
 SKERR SKREW ERROR DETECTOR  
 SNL SOUTH NAVIGATION LIGHT  
 SPKR. SPEAKER  
 SS SELECTOR SWITCH OR SURGE SUPPRESSOR  
 STA. STATION  
 SUB. SUBMARINE  
 SWLCL SOUTHWEST LEAF CENTER LOCK  
 SW. SWITCH  
 SW SOUTHWEST  
  
 TRANSM. TRANSMITTER  
 TB TERMINAL BOX  
 TEL. TELEPHONE  
 TG TACH GENERATOR  
 TGNENOC TRAFFIC GATE NORTHEAST NORTH ON-COMING  
 TGNESOC TRAFFIC GATE NORTHEAST SOUTH ON-COMING  
 TGSWNOG TRAFFIC GATE SOUTHWEST NORTH ON-COMING  
 TGSWSOC TRAFFIC GATE SOUTHWEST SOUTH ON-COMING  
 TGNWNOG TRAFFIC GATE NORTHWEST NORTH OFF-GOING  
 TGNWSOG TRAFFIC GATE NORTHWEST SOUTH OFF-GOING  
 TGSENOG TRAFFIC GATE SOUTHEAST NORTH OFF-GOING  
 TGSESOG TRAFFIC GATE SOUTHEAST SOUTH OFF-GOING  
 TGBS TRAFFIC GATES BYPASS SWITCH  
 TGPL TRAFFIC GATES PERMISSION LOWER  
 TGPR TRAFFIC GATES PERMISSION RAISE  
 TGR TRAFFIC GATES RAISE (GROUP)  
 TL TRAFFIC LIGHT  
 TLC TRAFFIC LIGHTS CONTROLLER  
 TSP TWISTED SHIELDED PAIR  
 TYP TYPICAL

UG. UNDERGROUND  
 UL UNDERWRITERS LABORATORIES, INC.  
 UON UNLESS OTHERWISE NOTED  
 UVR UNDERVOLTAGE RELAY  
  
 V VOLT  
 VFD VARIABLE FREQUENCY DRIVE  
 VA VOLT-AMPERE  
 VDC VOLT DIRECT CURRENT  
  
 W WATT, WIRE  
 W/ WITH  
 W/O WITHOUT  
 WFL WEST FENDER NAVIGATION LIGHT  
  
 WDM WEST DRIVE MOTOR  
 WP WEATHERPROOF  
 W-CC-1 WESTBOUND CONTROL CONSOLE 1  
 W-CP-2 WESTBOUND CONTROL PANEL 2  
  
 XFR TRANSFORMER



**NOTES:**  
 1. REFER TO DRAWINGS E-04 AND E-05 FOR ELECTRICAL SYMBOLS.  
 2. REFER TO DRAWING E-06 FOR ELECTRICAL ABBREVIATIONS.

**SITE LAYOUT PLAN**  
 1"=20'-0"

**PB Americas, Inc.**  
 230 WEST MONROE STREET,  
 SUITE 900  
 CHICAGO, IL. 60606

USER NAME = sharma  
 FILE NAME = D168a61-shr-elc-07.dgn  
 PLOT SCALE = NONE  
 PLOT DATE = 5/7/2009

DESIGNED - A. CENTENO  
 DRAWN - S. SHARMA  
 CHECKED - M. INTATANO  
 DATE - MAY 8, 2009

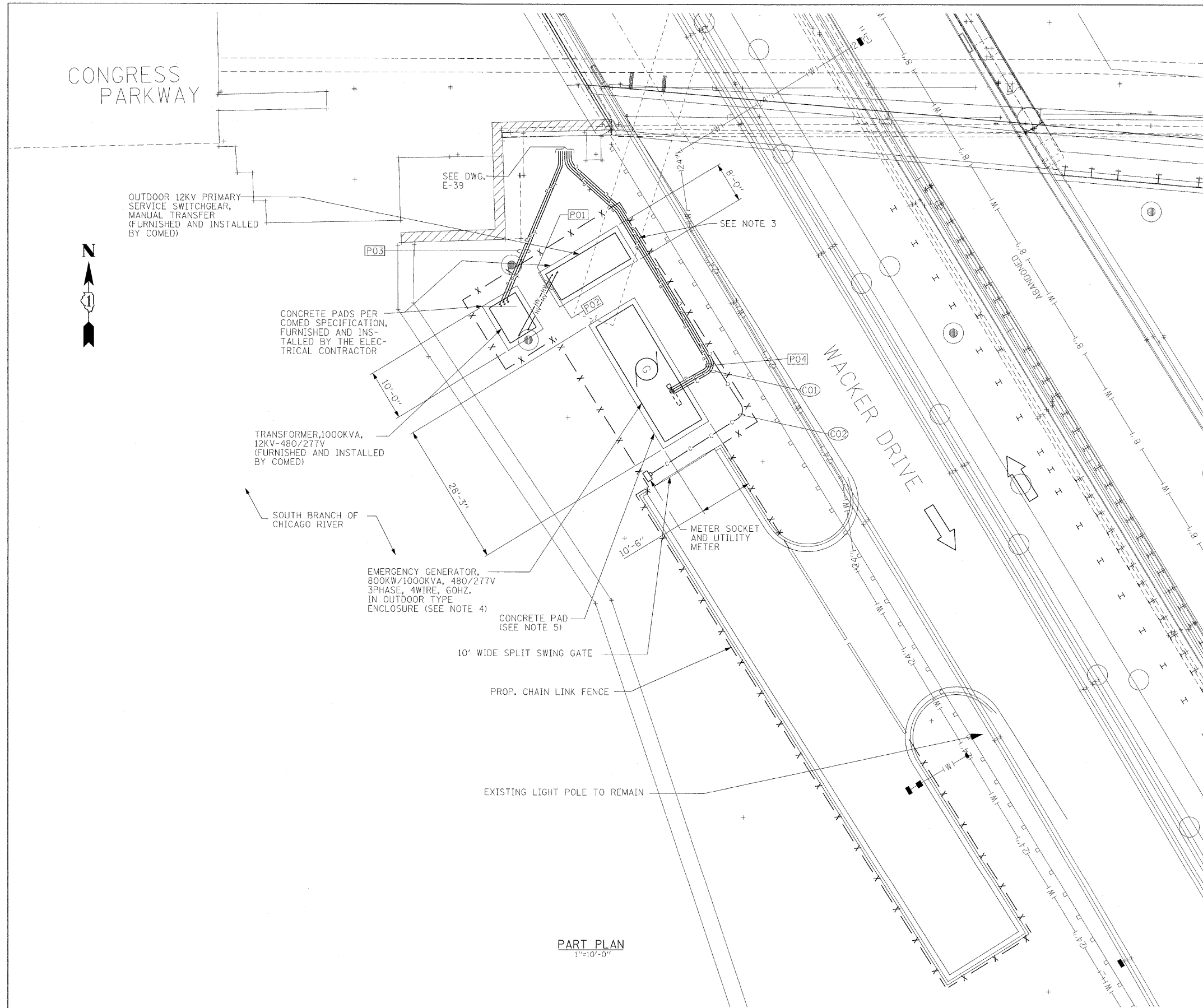
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 REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PRIMARY ELECTRICAL SERVICE PLAN**

SCALE: AS SHOWN SHEET NO. E-07 OF E-125 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-28-R	COOK	398	278
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				CONTRACT NO. 60D61



- NOTES:**
1. REFER TO DRAWINGS E-04 AND E-05 FOR ELECTRICAL SYMBOLS.
  2. REFER TO DRAWING E-06 FOR ELECTRICAL ABBREVIATIONS.
  3. CONTRACTOR TO COORDINATE THE INSTALLATION OF 480V UNDERGROUND DUCTBANK WITH COMED.
  4. REFER TO DWG. E-19 FOR EMERGENCY GENERATOR PLANS AND SECTIONS.
  5. REFER TO STRUCTURAL DRAWING FOR CONCRETE PADS.
  6. REFER TO DRAWING E-68 THROUGH E-73 AND E-125 FOR CONDUIT AND WIRE SCHEDULES.

**PART PLAN**  
1"=10'-0"

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = sharma  
FILE NAME = D:\6061-sht-ejc-06.dgn  
PLOT SCALE = NONE  
PLOT DATE = 5/7/2009

DESIGNED - A. CENTENO  
DRAWN - S. SHARMA  
CHECKED - M. INTATANO  
DATE - MAY 8, 2009

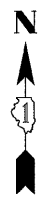
REVISED -  
REVISED -  
REVISED -  
REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**ELECTRICAL DISTRIBUTION SERVICE EQUIPMENT LAYOUT**

SCALE: AS SHOWN | SHEET NO. E-08 OF E-125 SHEETS | STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-28-R	COOK	398	279
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT				



CONGRESS PARKWAY

TO SERVICE ENTRANCE DISCONNECT AND UTILITY PT/CT CABINETS, SEE DWG. E-38

OUTDOOR 12KV PRIMARY SERVICE SWITCHGEAR, MANUAL TRANSFER (FURNISHED AND INSTALLED BY COMED)

OUTDOOR EMERGENCY GENERATOR, 800KW/1000KVA, 0.80 PF, 480V, 3 PHASE, 4 WIRE, 60HZ.

OUTDOOR TRANSFORMER, 1000KVA, 12KV-480/277V, 3 PHASE, FURNISHED BY COMED

BRANCH OFF #4/0 BARE COPPER CABLE (TYPICAL FOR 12KV SWITCHGEAR, XFMR AND GENERATOR)

WACKER DRIVE

ENTRY GATES

MAIN GROUND GRID #4 BARE COPPER CABLE (TYP)

CHAIN LINK FENCE

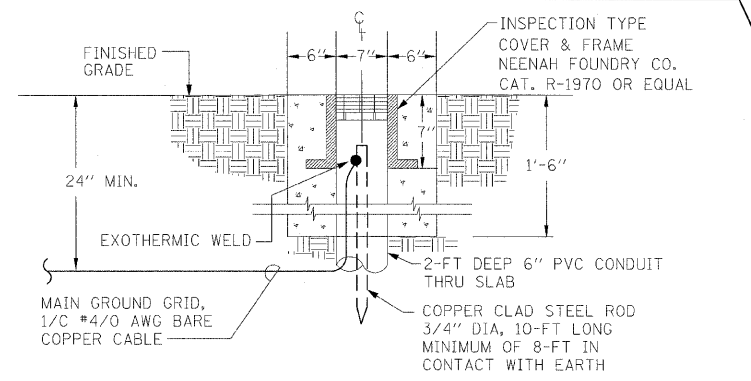
GROUND ROD TEST WELL (TYP FOR 4)

BRANCH OFF #1/0 BARE COPPER CABLE (TYPICAL FOR FENCE AND GATE POSTS)

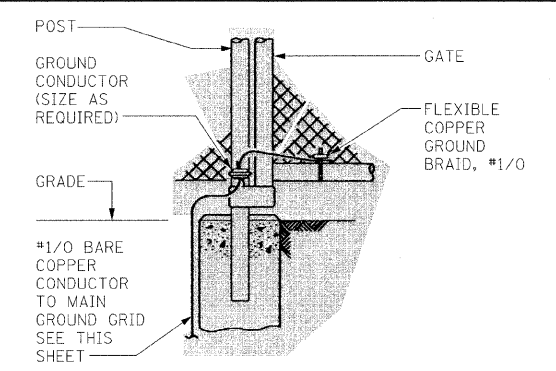
PART PLAN  
1"=10'-0"

**NOTES:**

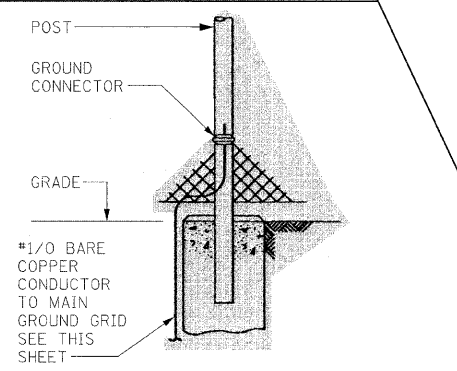
1. MAIN GROUND GRID SHALL BE 1/C #4/0 BARE COPPER CABLE AND TO BE RUN A MINIMUM OF 24" BELOW GRADE.
2. WHERE EXPOSED TO MECHANICAL INJURY, THE GROUNDING CONDUCTOR SHALL BE SUITABLY PROTECTED BY RIGID GALVANIZED STEEL SLEEVES WITH GROUNDING BUSHINGS. EACH END OF PROTECTING CONDUIT SHALL BE BONDED TO THE BARE CABLE.
3. ALL BURIED GROUNDING CABLE CONNECTIONS SHALL BE CADWELD OR THERMOWELD. THE WELDED CONNECTIONS SHALL BE LEFT EXPOSED FOR INSPECTION BY THE ENGINEER PRIOR TO BACKFILLING.
4. ABOVE GROUND, CONNECTIONS TO BE COMPRESSION TYPE, UNLESS OTHERWISE NOTED.
5. IF GROUND RESISTANCE OF 5 OHMS IS NOT MET, PROVIDE ADDITIONAL GROUND RODS IN TANDEM UNTIL IT IS MET.
6. ALL TRENCHES FOR GROUND WIRES AND LOCATIONS OF GROUND RODS, SOIL TO BE TREATED WITH BENTONITE (ELECTRO-FILL) TO IMPROVE RESISTANCE.
7. CONTRACTOR TO MARK OUT ALL EXISTING UTILITIES PRIOR TO ANY EXCAVATIONS OR DRIVING GROUND RODS TO ENSURE THE WORK WILL NOT AFFECT ANY EXISTING UTILITIES. CONTRACTOR TO EXERCISE EXTREME CARE WHEN EXCAVATING. ALL EXCAVATION ADJACENT TO EXISTING UTILITIES SHALL BE DONE BY HAND.
8. COORDINATE THIS DRAWING WITH DRAWING E-08.



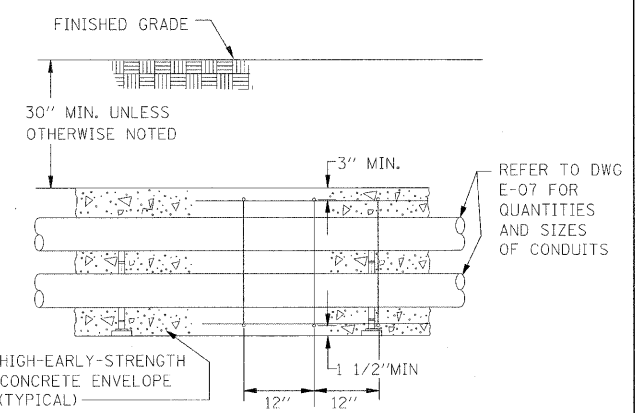
GROUND ROD TEST WELL DETAIL  
NTS



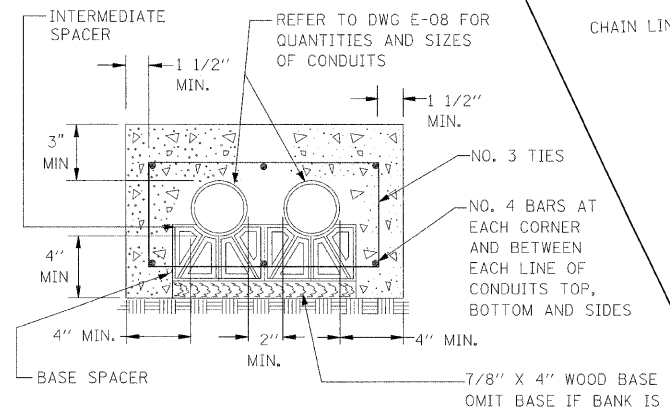
FENCE GATE GROUNDING  
(TYPICAL FOR EACH SIDE OF GATE)  
NTS



FENCE POST GROUNDING  
(GROUND EVERY THIRD FENCE POST)  
NTS



ELECTRICAL DUCT BANK ELEVATION  
NTS



ELECTRICAL DUCT BANK SECTION  
NTS

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = sharma  
FILE NAME = D:\60d61-ohtr-e1c-09.dgn  
PLOT SCALE = NONE  
PLOT DATE = 5/7/2009

DESIGNED - A. CENTENO  
DRAWN - S. SHARMA  
CHECKED - M. INTATANO  
DATE - MAY 8, 2009

REVISED -  
REVISED -  
REVISED -  
REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ELECTRICAL DISTRIBUTION SERVICE EQUIPMENT GROUNDING LAYOUT**

SCALE: AS SHOWN SHEET NO. E-09 OF E-125 SHEETS STA. 379+06.09 TO STA. 382+45.28

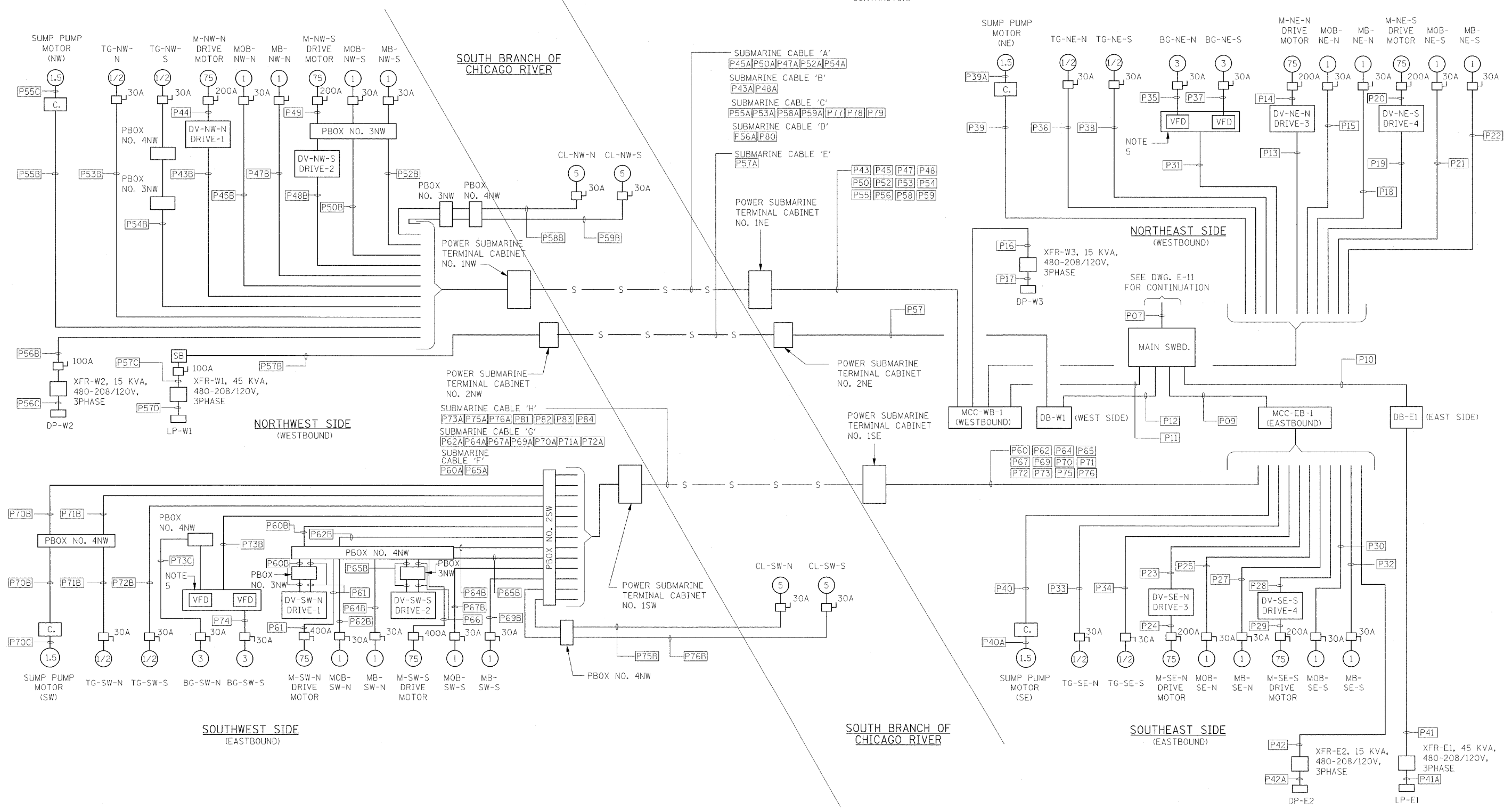
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	280
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				





**NOTES**

1. REFER TO DRAWINGS E-04 AND E-05 FOR ELECTRICAL SYMBOLS.
2. REFER TO DRAWING E-06 FOR ELECTRICAL ABBREVIATIONS.
3. REFER TO DRAWINGS E-12 AND E-14 FOR MCC ONE LINE DIAGRAMS.
4. REFER TO DRAWINGS E-58, E-59, E-62 AND E-63 FOR ELECTRICAL EQUIPMENT LOCATIONS.
5. THE VFDS AND THE EQUIPMENT ENCLOSURE IS STAINLESS STEEL, TYPE 316 AND RATED NEMA 4X, TO BE SUPPLIED BY THE LOKRAN INDUSTRIES, INC. AND TO BE INSTALLED BY THE ELECTRICAL CONTRACTOR.
6. FOR CONTROL SUBMARINE CABLES SEE DWGS E-119 AND E-120.
7. FOR FIBER OPTIC SUBMARINE CABLE SEE DWG E-17.
8. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF SUBMARINE CABLE TERMINAL BOX DETAILS, FOR REVIEW AND APPROVAL.



**PB Americas, Inc.**  
 230 WEST MONROE STREET,  
 SUITE 900  
 CHICAGO, IL. 60606

USER NAME = sharma  
 FILE NAME = D160d61-shr-elo-10.dgn  
 PLOT SCALE = NONE  
 PLOT DATE = 5/7/2009

DESIGNED - A. CENTENO  
 DRAWN - S. SHARMA  
 CHECKED - M. INTATANO  
 DATE - MAY 8, 2009

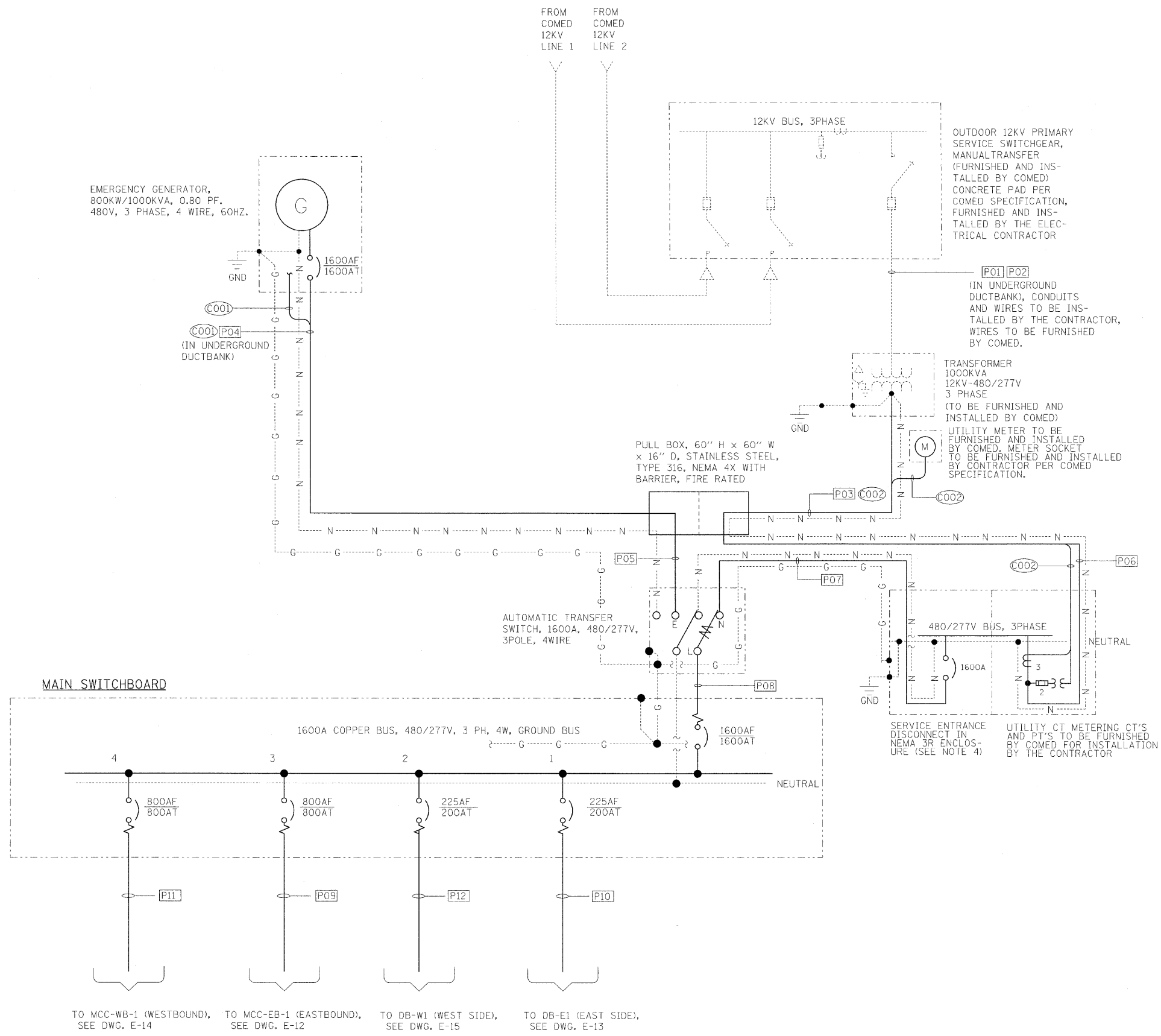
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 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**ELECTRICAL BLOCK DIAGRAM**

SCALE: AS SHOWN SHEET NO. E-10 OF E-125 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	281
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



- NOTES:**
- REFER TO DRAWINGS E-04 AND E-05 FOR ELECTRICAL SYMBOLS.
  - REFER TO DRAWING E-06 FOR ELECTRICAL ABBREVIATIONS.
  - REFER TO DRAWING E-59 THROUGH E-61 FOR ELECTRICAL EQUIPMENT FRONT ELEVATIONS.
  - THE SERVICE ENTRANCE DISCONNECT SHALL BE A CIRCUIT BREAKER 1600A SENSOR RATING, 3 POLE, 600V WITH MICROLOGIC LSIG TRIP FUNCTION, SHALL BE MANUFACTURED BY SQUARE D, CAT. NO. RJF36160U44A OR APPROVED EQUAL.

**PB Americas, Inc.**  
 230 WEST MONROE STREET,  
 SUITE 900  
 CHICAGO, IL. 60606

USER NAME = sharma	DESIGNED - A. CENTENO	REVISED -
FILE NAME = D:\6061-shr-elo-11.dgn	DRAWN - S. SHARMA	REVISED -
PLOT SCALE = NONE	CHECKED - M. INTATANO	REVISED -
PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

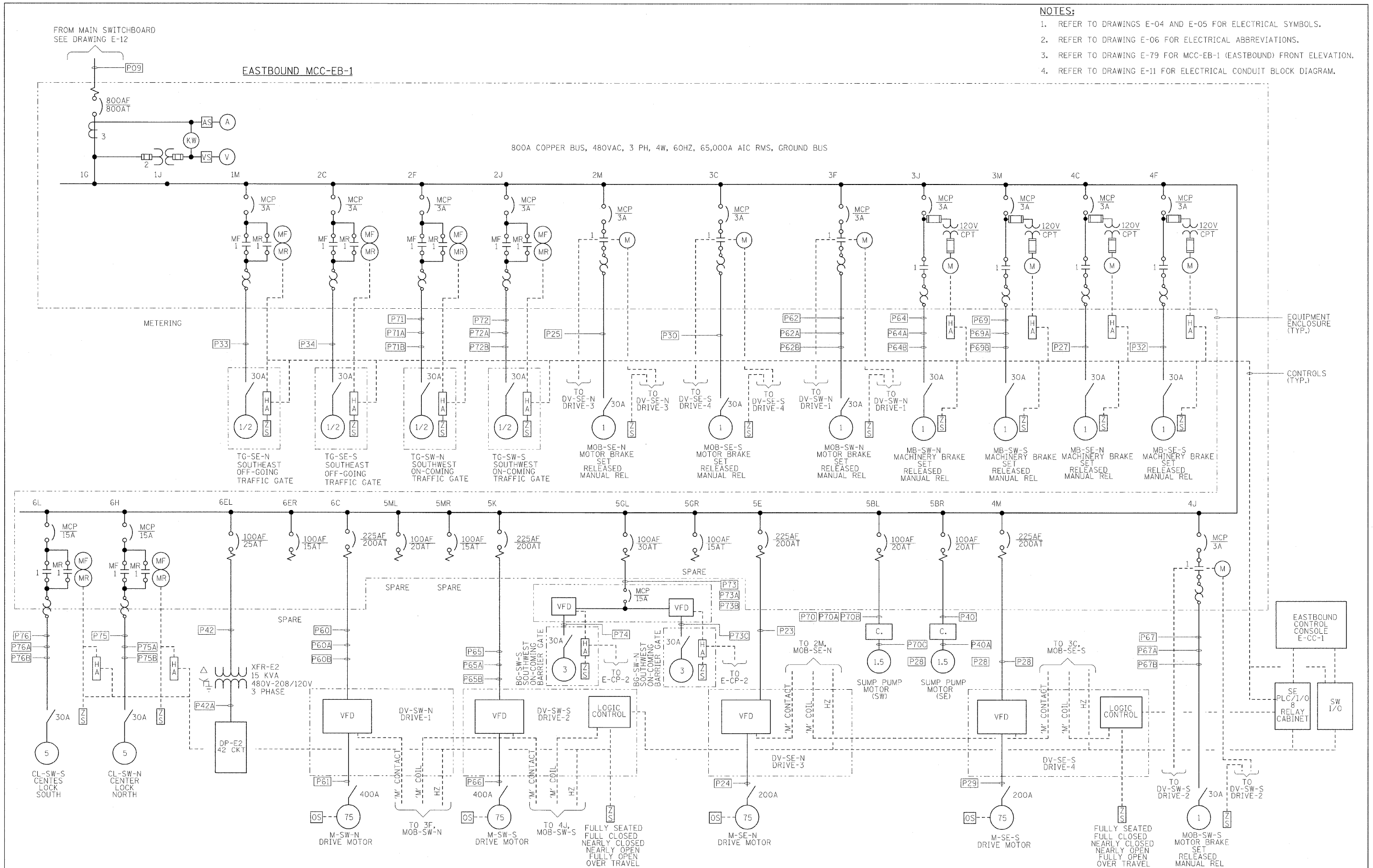
**ELECTRICAL ONE LINE DIAGRAM  
 EAST SIDE, SHEET 1**

SCALE: AS SHOWN SHEET NO. E-11 OF E-125 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	282
FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT			CONTRACT NO. 60D61	

**NOTES:**

1. REFER TO DRAWINGS E-04 AND E-05 FOR ELECTRICAL SYMBOLS.
2. REFER TO DRAWING E-06 FOR ELECTRICAL ABBREVIATIONS.
3. REFER TO DRAWING E-79 FOR MCC-EB-1 (EASTBOUND) FRONT ELEVATION.
4. REFER TO DRAWING E-11 FOR ELECTRICAL CONDUIT BLOCK DIAGRAM.



**PB Americas, Inc.**  
 230 WEST MONROE STREET,  
 SUITE 900  
 CHICAGO, IL. 60606

USER NAME = sharma  
 FILE NAME = D:\6061-shr-elo-12.dgn  
 PLOT SCALE = NONE  
 PLOT DATE = 5/7/2009

DESIGNED - A. CENTENO  
 DRAWN - S. SHARMA  
 CHECKED - M. INTATANO  
 DATE - MAY 8, 2009

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

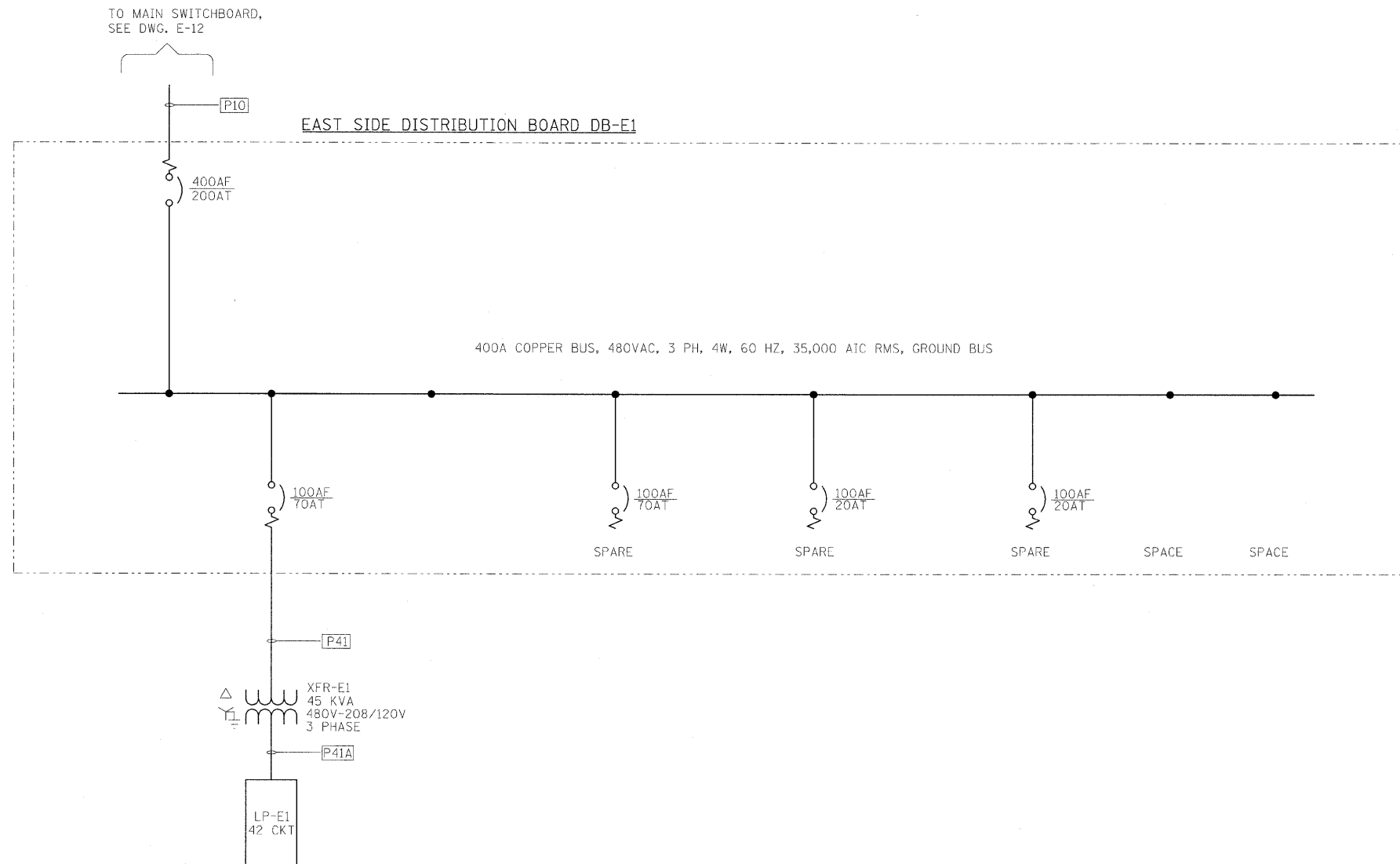
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**ELECTRICAL ONE LINE DIAGRAM**  
**EASTBOUND MCC-EB-1**  
 SCALE: AS SHOWN SHEET NO. E-12 OF E-125 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	283
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT				

**NOTES:**

1. REFER TO DRAWINGS E-04 AND E-05 FOR ELECTRICAL SYMBOLS.
2. REFER TO DRAWING E-06 FOR ELECTRICAL ABBREVIATIONS.
3. REFER TO DRAWING E-10 FOR ELECTRICAL CONDUIT BLOCK DIAGRAM.



**PB Americas, Inc.**  
 230 WEST MONROE STREET,  
 SUITE 900  
 CHICAGO, IL. 60606

USER NAME = sharma  
 FILE NAME = D:\60d61-shr-e1o-13.dgn  
 PLOT SCALE = NONE  
 PLOT DATE = 5/7/2009

DESIGNED - A. CENTENO  
 DRAWN - S. SHARMA  
 CHECKED - M. INTATANO  
 DATE - MAY 8, 2009

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

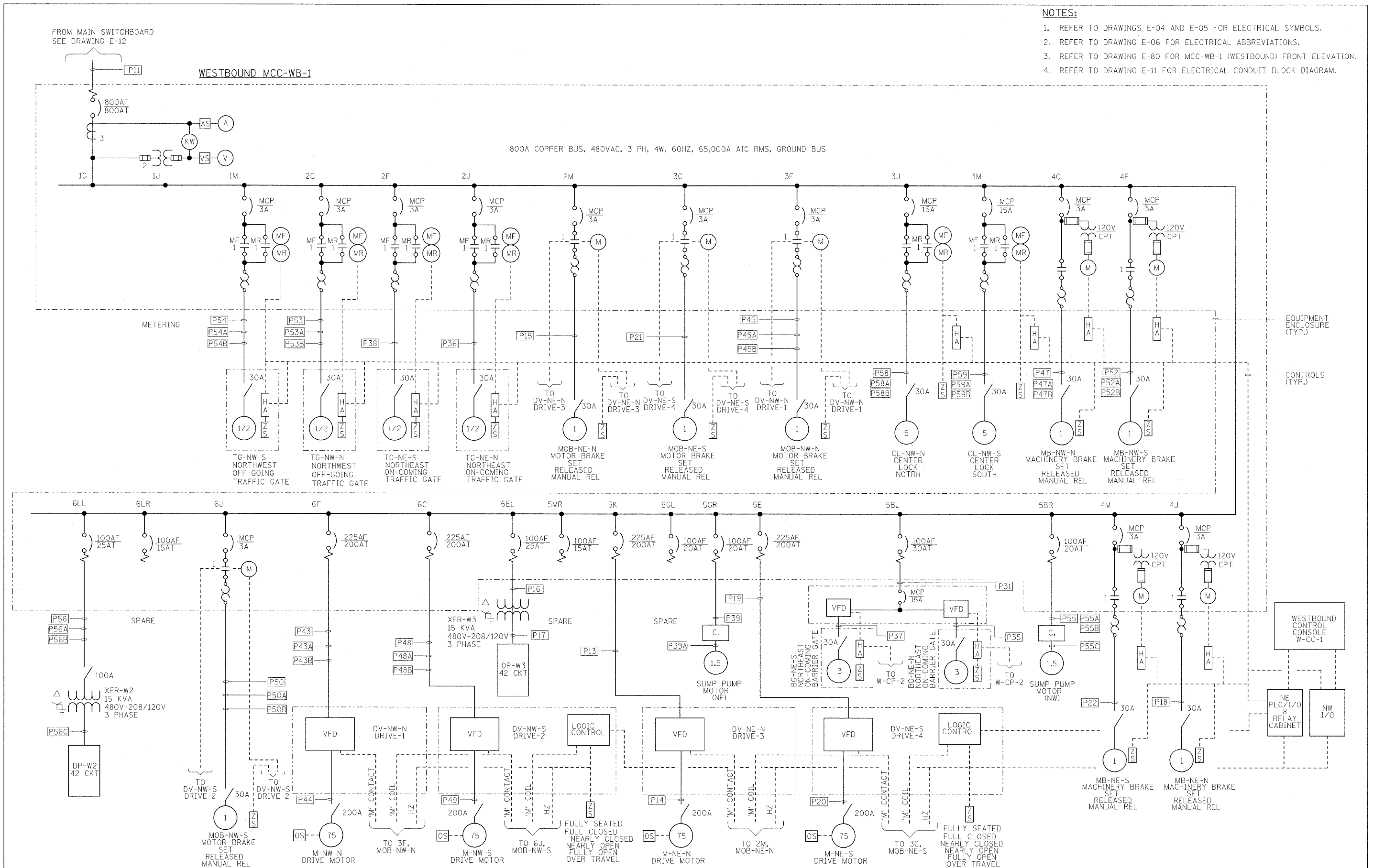
**ELECTRICAL ONE LINE DIAGRAM  
 EAST SIDE MCC-E1**

SCALE: AS SHOWN | SHEET NO. E-13 OF E-125 SHEETS | STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	284
FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT			CONTRACT NO. 60D61	

**NOTES:**

1. REFER TO DRAWINGS E-04 AND E-05 FOR ELECTRICAL SYMBOLS.
2. REFER TO DRAWING E-06 FOR ELECTRICAL ABBREVIATIONS.
3. REFER TO DRAWING E-80 FOR MCC-WB-1 (WESTBOUND) FRONT ELEVATION.
4. REFER TO DRAWING E-11 FOR ELECTRICAL CONDUIT BLOCK DIAGRAM.



**PB Americas, Inc.**  
 230 WEST MONROE STREET,  
 SUITE 900  
 CHICAGO, IL. 60606

USER NAME = sharma	DESIGNED - A. CENTENO	REVISED -
FILE NAME = D:\60d61-shr-elc-14.dgn	DRAWN - S. SHARMA	REVISED -
PLOT SCALE = NONE	CHECKED - M. INTATANO	REVISED -
PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

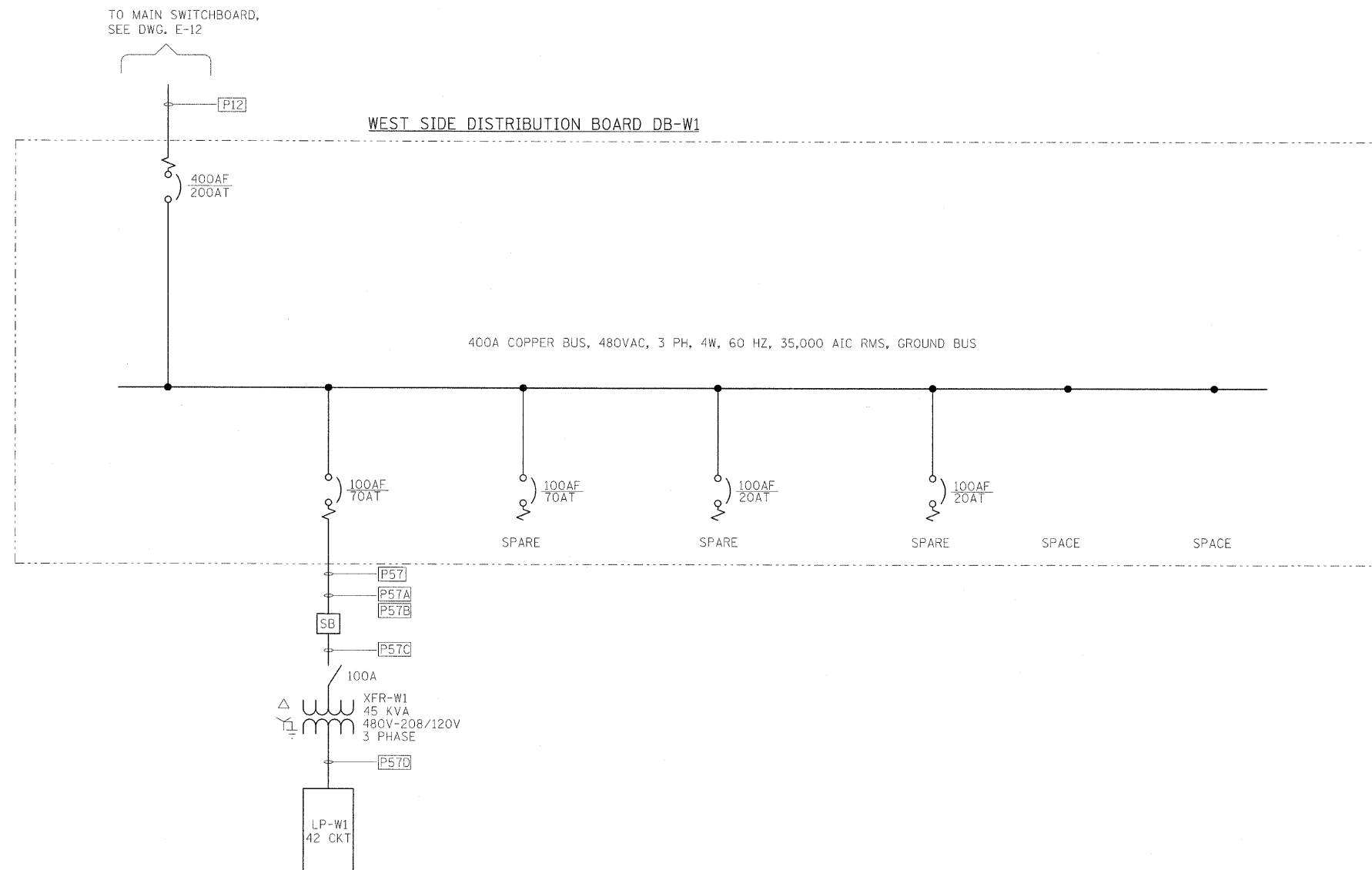
**ELECTRICAL ONE LINE DIAGRAM  
 WESTBOUND MCC-WB-1**

SCALE: AS SHOWN    SHEET NO. E-14 OF E-125 SHEETS    STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	285
CONTRACT NO. 60D61			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	

**NOTES:**

1. REFER TO DRAWINGS E-04 AND E-05 FOR ELECTRICAL SYMBOLS.
2. REFER TO DRAWING E-06 FOR ELECTRICAL ABBREVIATIONS.
3. REFER TO DRAWING E-10 FOR ELECTRICAL CONDUIT BLOCK DIAGRAM.



**PB Americas, Inc.**  
 230 WEST MONROE STREET,  
 SUITE 900  
 CHICAGO, IL. 60606

USER NAME = sharma  
 FILE NAME = 0160d61-shr-elo-15.dgn  
 PLOT SCALE = NONE  
 PLOT DATE = 5/7/2009

DESIGNED - A. CENTENO  
 DRAWN - S. SHARMA  
 CHECKED - M. INTATANO  
 DATE - MAY 8, 2009

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

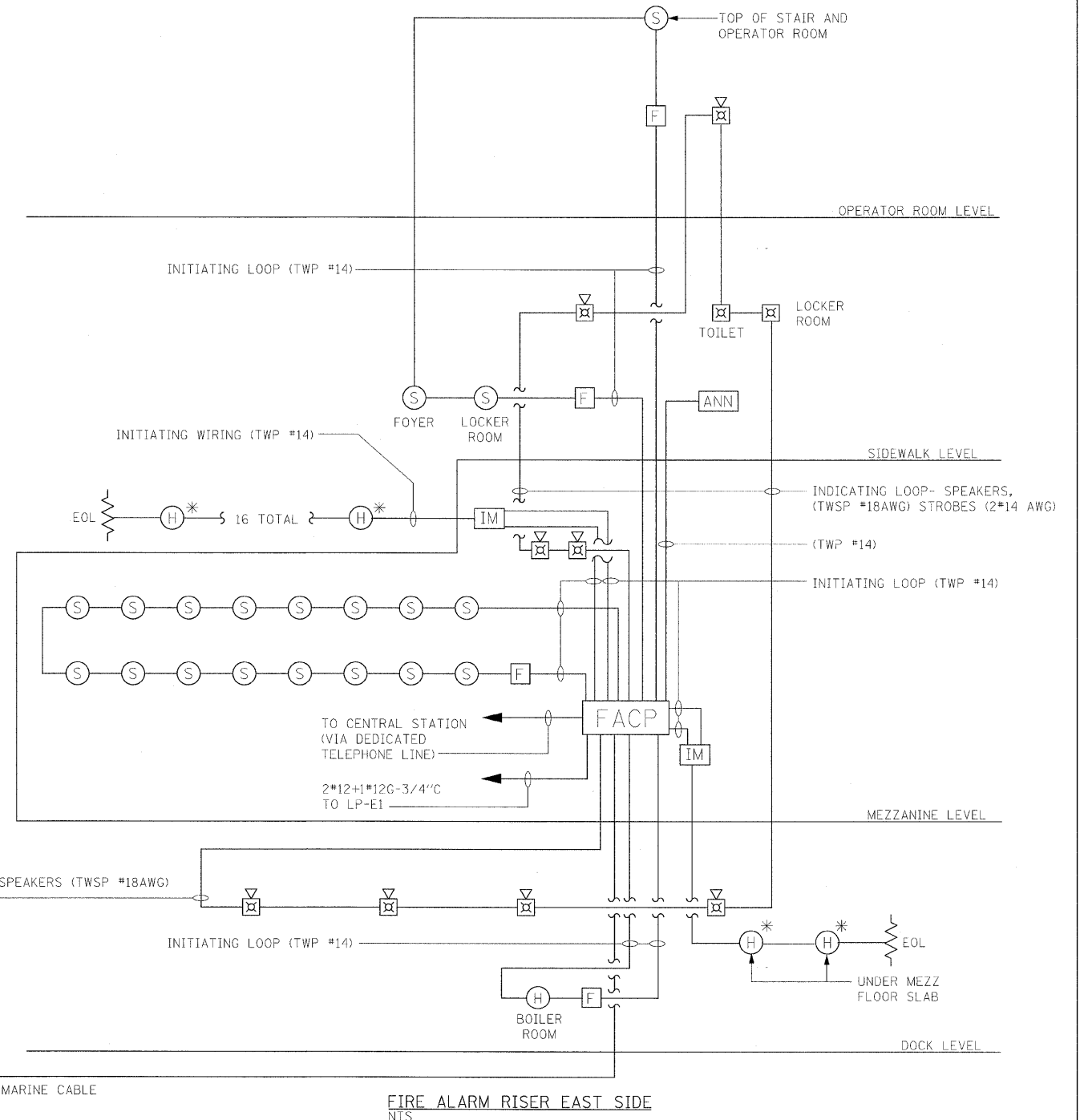
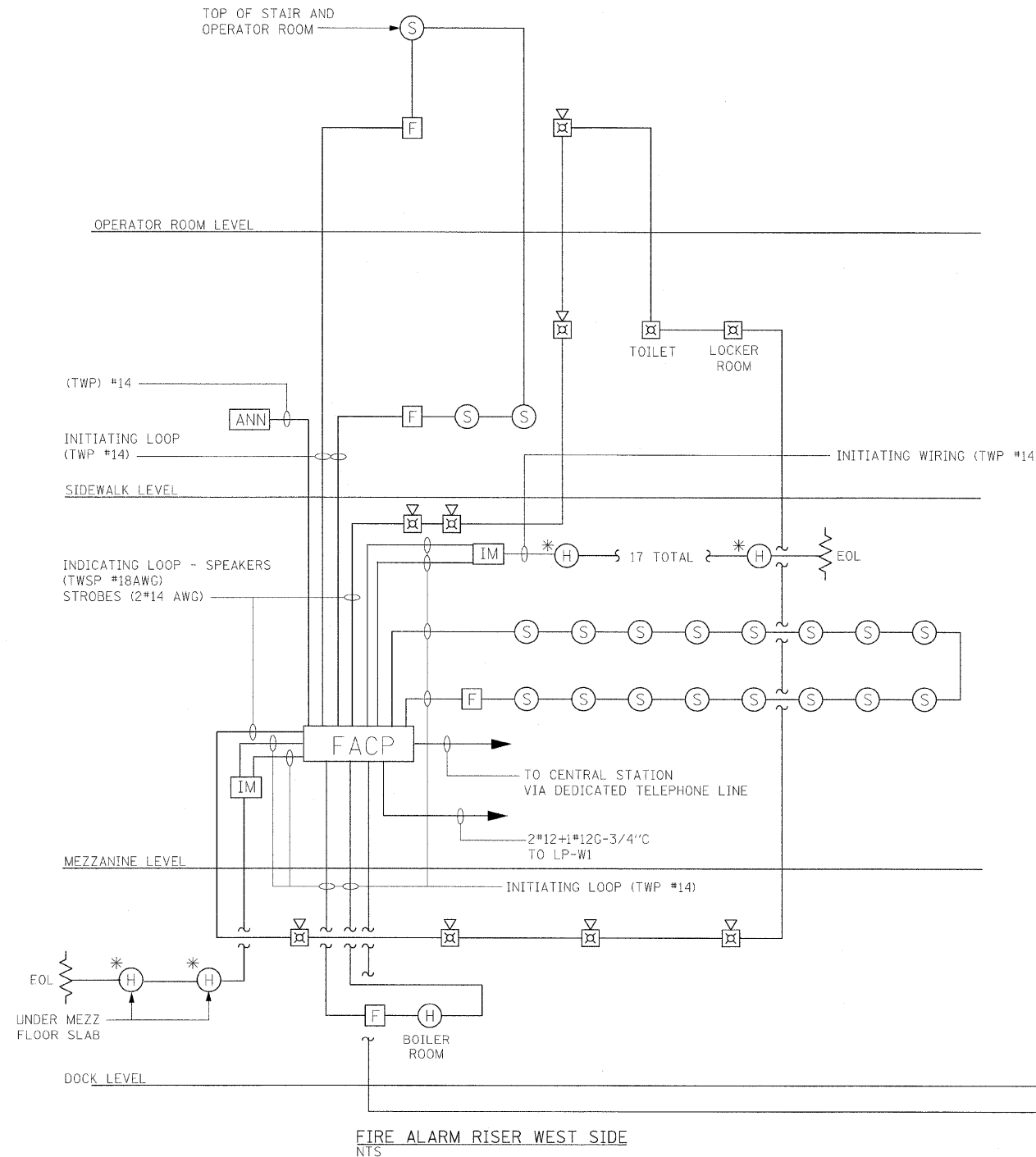
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**ELECTRICAL ONE LINE DIAGRAM  
 WEST SIDE MCC-W1**

SCALE: AS SHOWN SHEET NO. E-15 OF E-125 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	266
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

- NOTES:**
- FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS SEE DWG E-04, E-05 AND E-06.
  - FOR GENERAL NOTES SEE DWGS E-02 AND E-03.



**H\*** NON-ADDRESSABLE HEAT DETECTOR

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = sharma  
FILE NAME = D16@d61-shr-elc-16.dgn  
PLOT SCALE = NONE  
PLOT DATE = 5/7/2009

DESIGNED - R. GODULIAS  
DRAWN - S. SHARMA  
CHECKED - M. INTATANO  
DATE - MAY 8, 2009

REVISED -  
REVISED -  
REVISED -  
REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

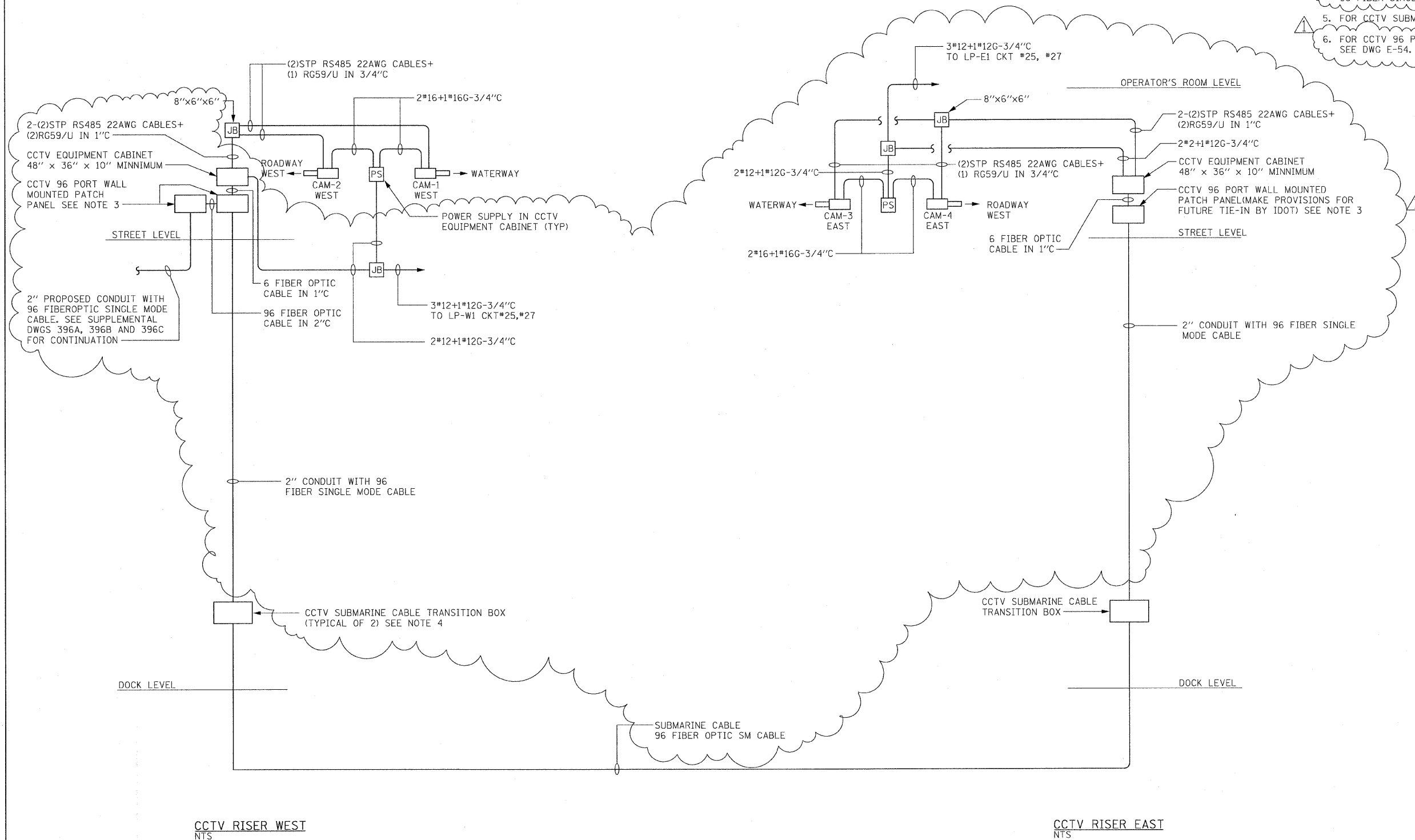
**EAST AND WEST FIRE ALARM RISER DIAGRAM**

SCALE: AS SHOWN | SHEET NO. E-16 OF E-125 SHEETS | STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	287
FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT			CONTRACT NO. 60D61	

**NOTES:**

1. FOR ELECTRICAL SYMBOLS SEE DWGS E-04 AND E-05, AND FOR ABBREVIATIONS SEE DWG E-06.
2. FOR GENERAL NOTES SEE DWGS E-02 AND E-03.
3. NEMA4X STAINLESS STEEL LOCKABLE 96 PORT PATCH PANEL 48" x 36" x 10" MIN.
4. SUBMARINE CABLE TRANSITION BOX SEE SPECIFICATIONS. SPLICE 96 FIBER SINGLE MODE CABLE TO SUBMARINE 96 FIBER SINGLE MODE CABLE.
5. FOR CCTV SUBMARINE CABINET ELEVATION SEE DWG E-50.
6. FOR CCTV 96 PORT WALL MOUNTED CABINET ELEVATIONS SEE DWG E-54.

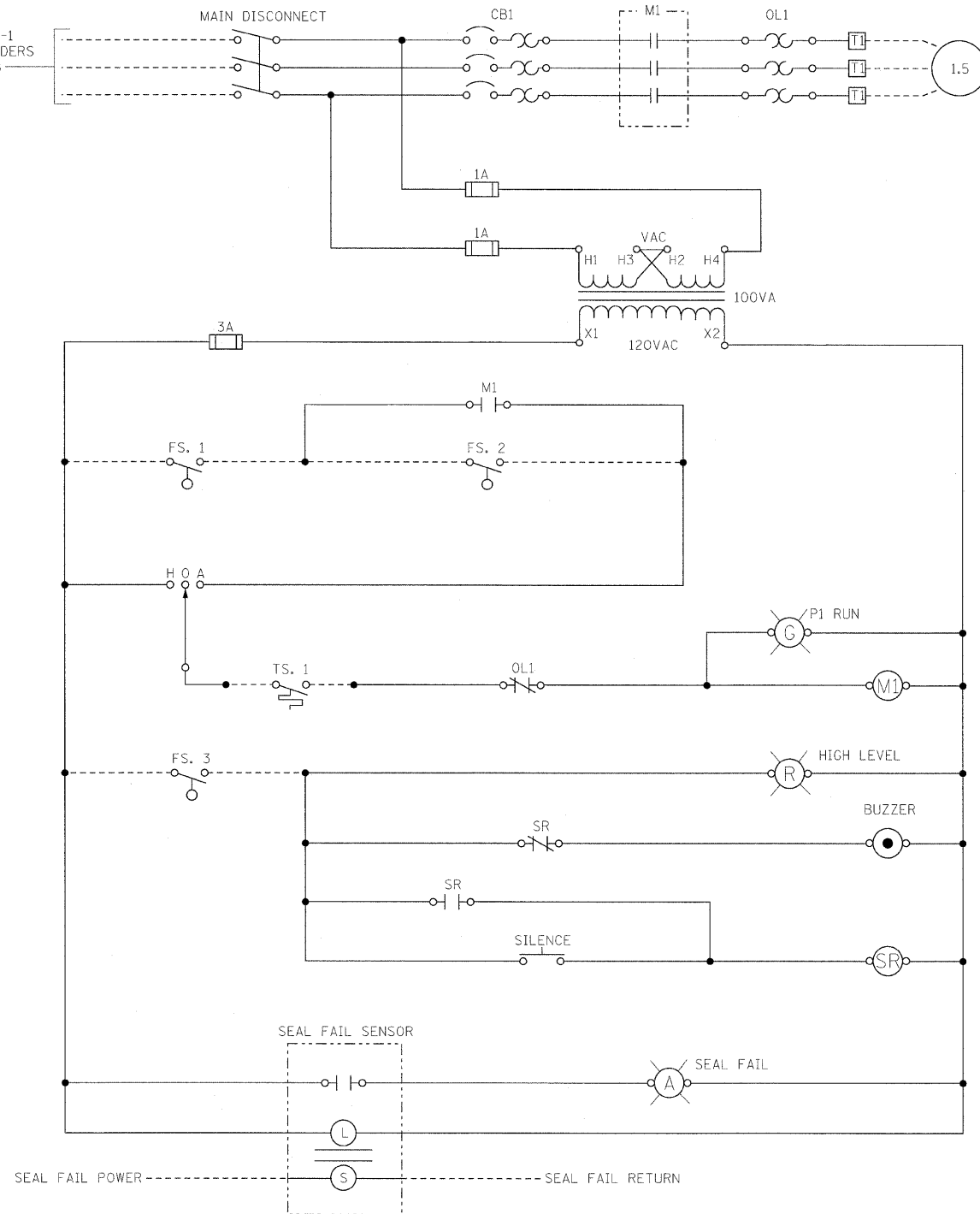


ADDENDUM - JULY 14, 2009

<b>PB Americas, Inc.</b> 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL. 60606	USER NAME = sharma	DESIGNED - R. GODULIAS	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CCTV SYSTEM RISER DIAGRAM</b>		F.A.P. RTE. = 389	SECTION = 2424-2B-R	COUNTY = COOK	TOTAL SHEETS = 398	SHEET NO. = 288		
	FILE NAME = D:\60961-sht-elc-17.dgn	DRAWN - S. SHARMA	REVISED -		SCALE: AS SHOWN		SHEET NO. E-17 OF E-125 SHEETS	STA. 379+06.09 TO STA. 382+45.28		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			
	PLOT SCALE = NONE	CHECKED - M. INTATANO	REVISED -						CONTRACT NO. 60D61				
	PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -										



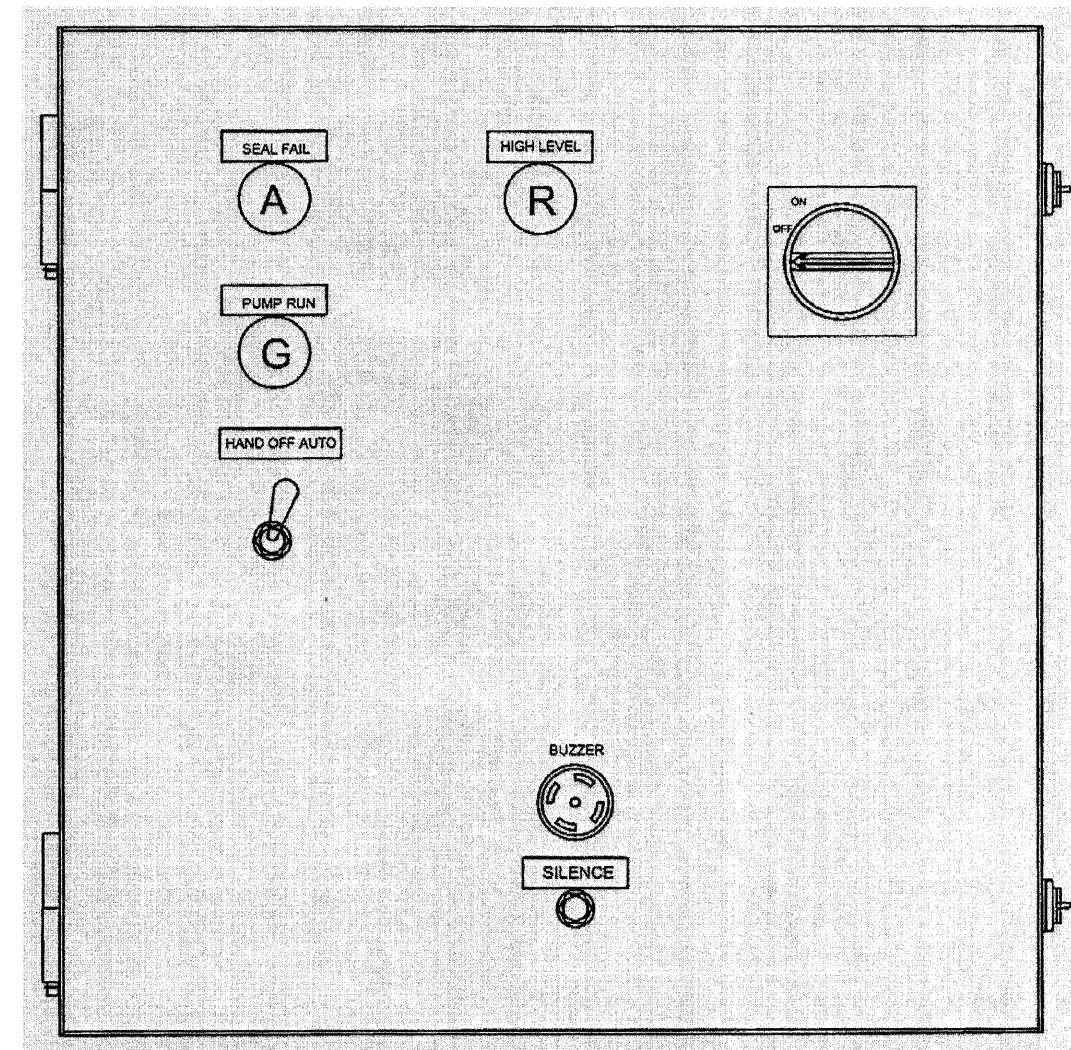
TWO FEEDERS FROM MCC-EB-1 AND TWO FEEDERS FROM MCC-WB



SUMP PUMP MOTOR CONTROL SCHEMATIC DIAGRAM  
(TYPICAL FOR 4)  
NTS

**NOTE:**

1. THE CONTROL PANEL SHALL BE 16" H x 16" W x 6"D STAINLESS STEEL, TYPE 316 AND RATED NEMA 4X AND SHALL BE MANUFACTURED BY METROPOLITAN INDUSTRIES, INC. ROMEOVILLE, ILLINOIS 60446 OR APPROVED EQUAL.



FRONT VIEW  
SUMP PUMP MOTOR CONTROL PANEL  
NTS

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = sharma	DESIGNED - A. CENTENO	REVISED -
FILE NAME = D160d61-sh-t-elo-18.dgn	DRAWN - S. SHARMA	REVISED -
PLOT SCALE = NONE	CHECKED - M. INTATANO	REVISED -
PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

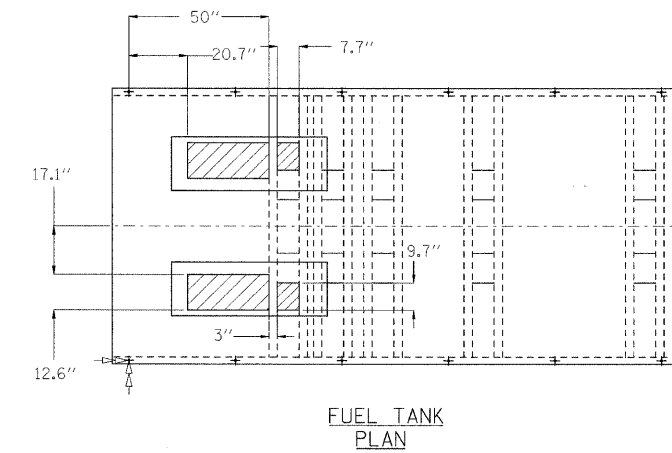
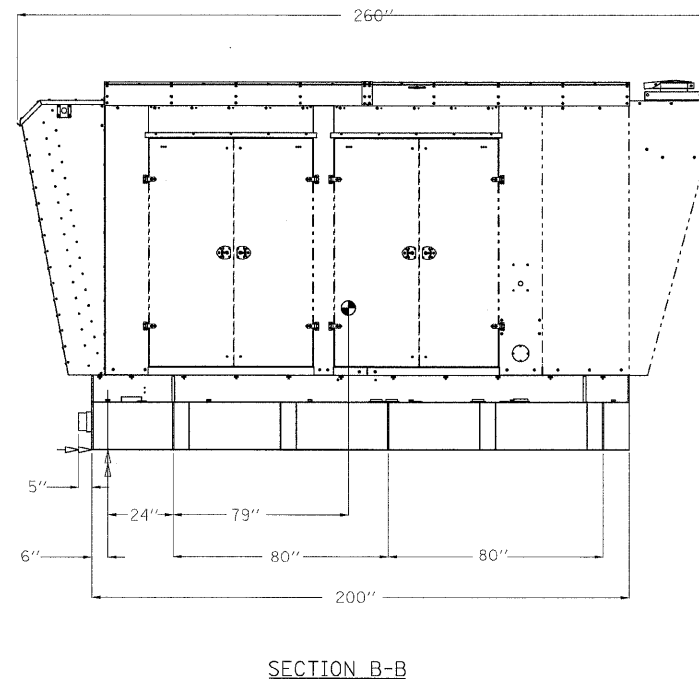
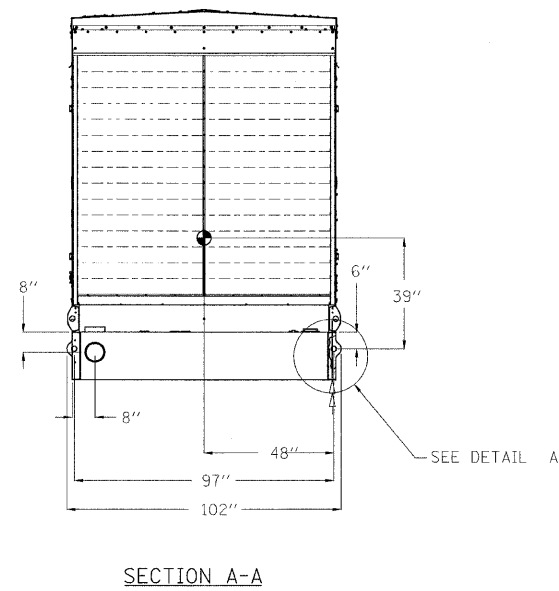
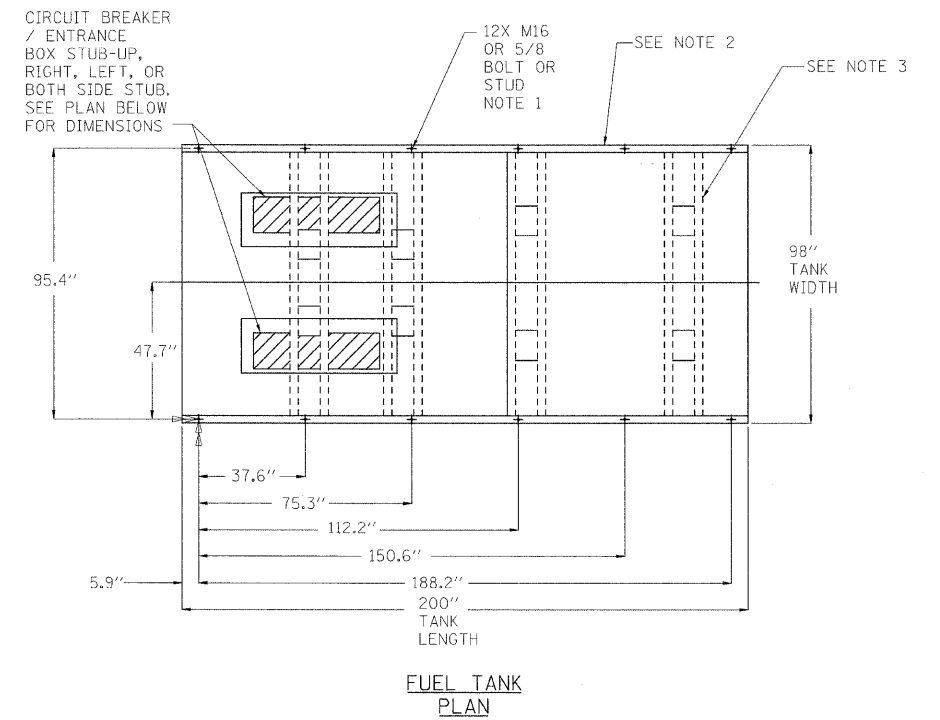
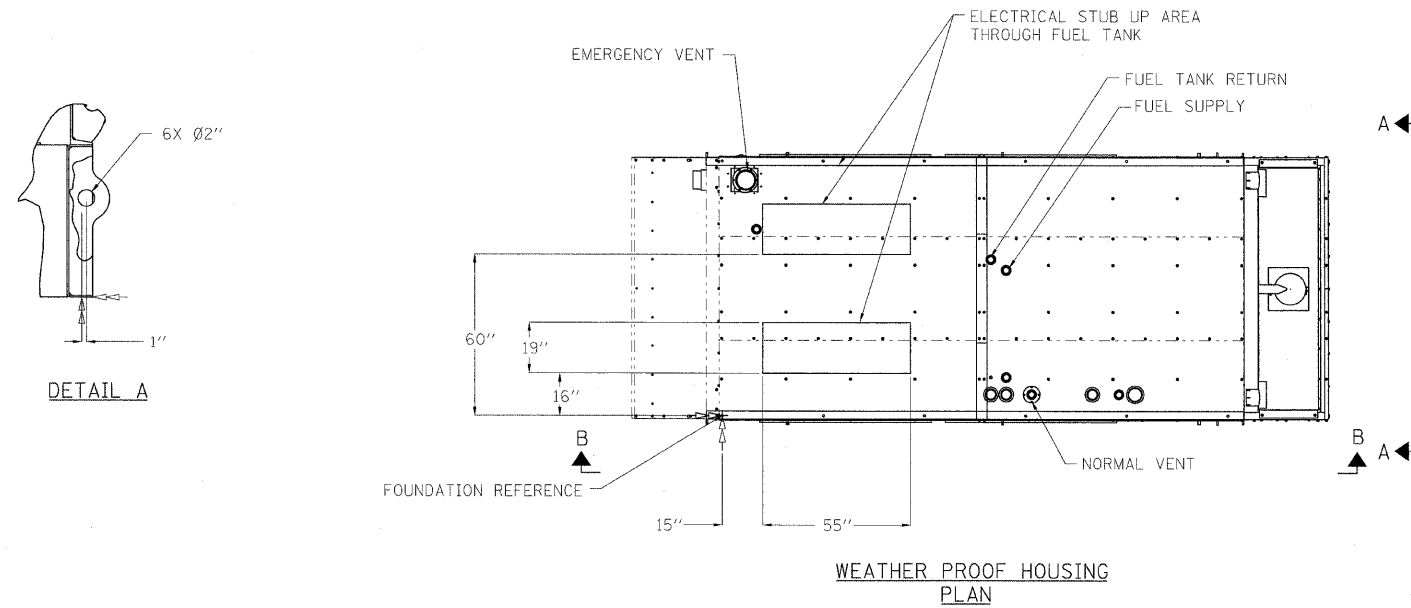
**SUMP PUMP MOTOR CONTROL PANEL AND SCHEMATIC DIAGRAM**

SCALE: AS SHOWN SHEET NO. E-18 OF E-125 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	289
				CONTRACT NO. 60D61
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

**NOTES:**

1. FUEL TANK HAS FLANGE THICKNESS OF 0.25", ALLOW EXTRA LENGTH ON HARDWARE FOR UNEVENNESS OF MOUNTING SURFACE.
2. LIFTING BASE OR FUEL TANK PERIMETER IS SHOWN. FOUNDATION SHOULD BE EXTENDED BEYOND THIS PERIMETER.
3. HIDDEN LINES REPRESENT LIFT BASE CROSS-MEMBER.



TYPICAL DIMENSIONS 800 KW GENERATOR

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = s Sharma  
FILE NAME = D16@d61-ahf-elo-19.dgn  
PLOT SCALE = NONE  
PLOT DATE = 5/7/2009

DESIGNED - A. CENTENO  
DRAWN - S. SHARMA  
CHECKED - M. INTATANO  
DATE - MAY 8, 2009

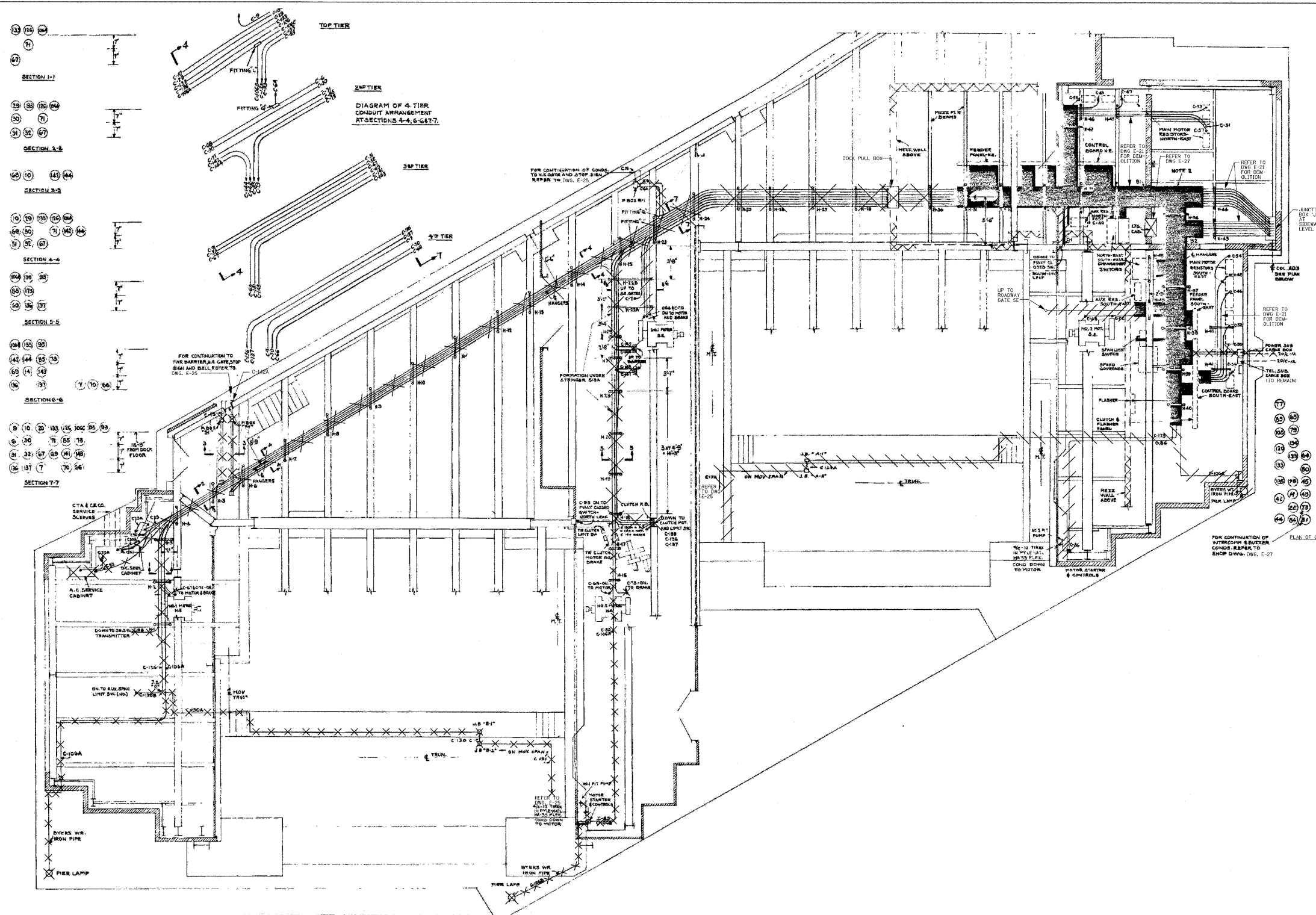
REVISED -  
REVISED -  
REVISED -  
REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EMERGENCY GENERATOR  
PLANS AND SECTIONS**

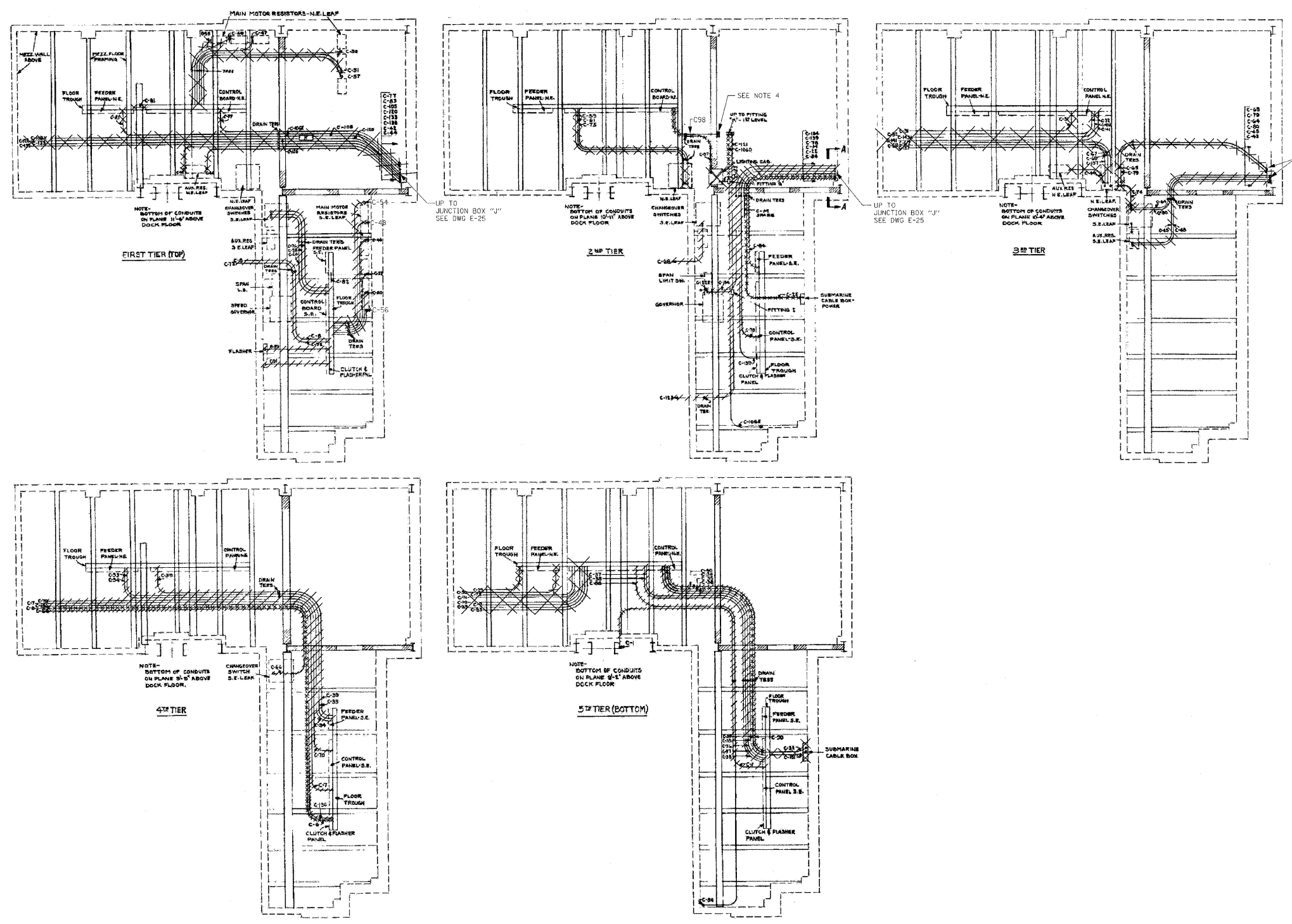
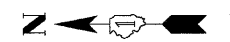
SCALE: AS SHOWN SHEET NO. E-19 OF E-125 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	290
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



- NOTES:**
- EQUIPMENT SHOWN SOLID IS PLATFORM MOUNTED AT ELEV. +6.0', EQUIPMENT DOTTED AT MEZZANINE ELEV +22.073'. REFER TO DWG E-24 FOR DEMOLITION OF EQUIPMENT AT MEZZ LEVEL.
  - SHADED ZONE IS AREA TAKEN BY 5 CONDUIT TIERS UNDER MEZZ FLOOR. REFER TO DWG E-21.
  - REFER TO DWG E-04 AND E-05 FOR ELECTRICAL SYMBOLS.
  - REFER TO DWG E-65 FOR EXISTING CONDUIT AND WIRE SCHEDULE.
  - ALL ITEMS CROSSED BY HATCH LINES SHALL BE DEMOLISHED DURING STAGE 1 - ELECTRICAL DEMOLITION ON THE EASTBOUND SIDE OF THE BRIDGE. ALL ITEMS CROSSED BY CROSSHATCH LINES SHALL BE DEMOLISHED DURING STAGE 2 - ELECTRICAL DEMOLITION ON THE WESTBOUND SIDE OF THE BRIDGE.
  - PRIOR TO DEMOLITION (STAGE 1) THE SOUTHWEST AND THE SOUTHEAST BRIDGE LEAVES WILL BE LOCKED IN THE OPEN POSITION. PROVIDE TEMPORARY LIGHT AND POWER 24 HOURS PER DAY, 7 DAYS PER WEEK.
  - ALL ELECTRICAL EQUIPMENT WHICH ARE NO LONGER REQUIRED TO FUNCTION SHALL BE DE-ENERGIZED AND DISCONNECTED AT THE SOURCE OF THE POWER SUPPLY AND SHALL BE REMOVED AND COORDINATED WITH THE AUTHORITY.
  - ALL ELECTRICAL WORK IN ADJOINING AREAS WHICH ARE REQUIRED TO FUNCTION BUT ARE AFFECTED BY DEMOLITION WORK SHALL BE RECONNECTED AND RESTORED TO THEIR PRESENT FUNCTIONS AS PART OF THE ELECTRICAL SYSTEMS.
  - AT ANY TIME THE CONTRACTOR SHALL NOT PERFORM ANY DEMOLITION WORK, RELOCATION, REPAIR OR REROUTING OF EXISTING CABLES, CONDUITS, JUNCTION BOXES OR ANY EQUIPMENT WITHOUT OBTAINING FULL CLEARANCE OF ANY ASBESTOS, AND/OR LEAD CONTAINING MATERIALS. CONTRACTOR SHALL NOTIFY IDOT FOR EXISTENCE OF ASBESTOS AFFECTED BY THE DEMOLITION WORK.
  - ALL ELECTRICAL EQUIPMENT BEING REMOVED SHALL BE DISPOSED OF AT NO ADDITIONAL COST TO THE AUTHORITY. ANY EQUIPMENT REQUIRED TO BE TURNED OVER TO THE AUTHORITY SHALL BE DELIVERED, THE EXACT LOCATION AND TIME OF DELIVERY WILL BE DETERMINED BY THE ENGINEER TWO WEEKS PRIOR TO THE EQUIPMENT BEING REMOVED.
  - FOLLOW THE SAME STEPS FOR STAGE 2 DEMOLITION.
  - REFER TO DWGS E-39 THROUGH E-45 FOR NEW POWER LAYOUTS.

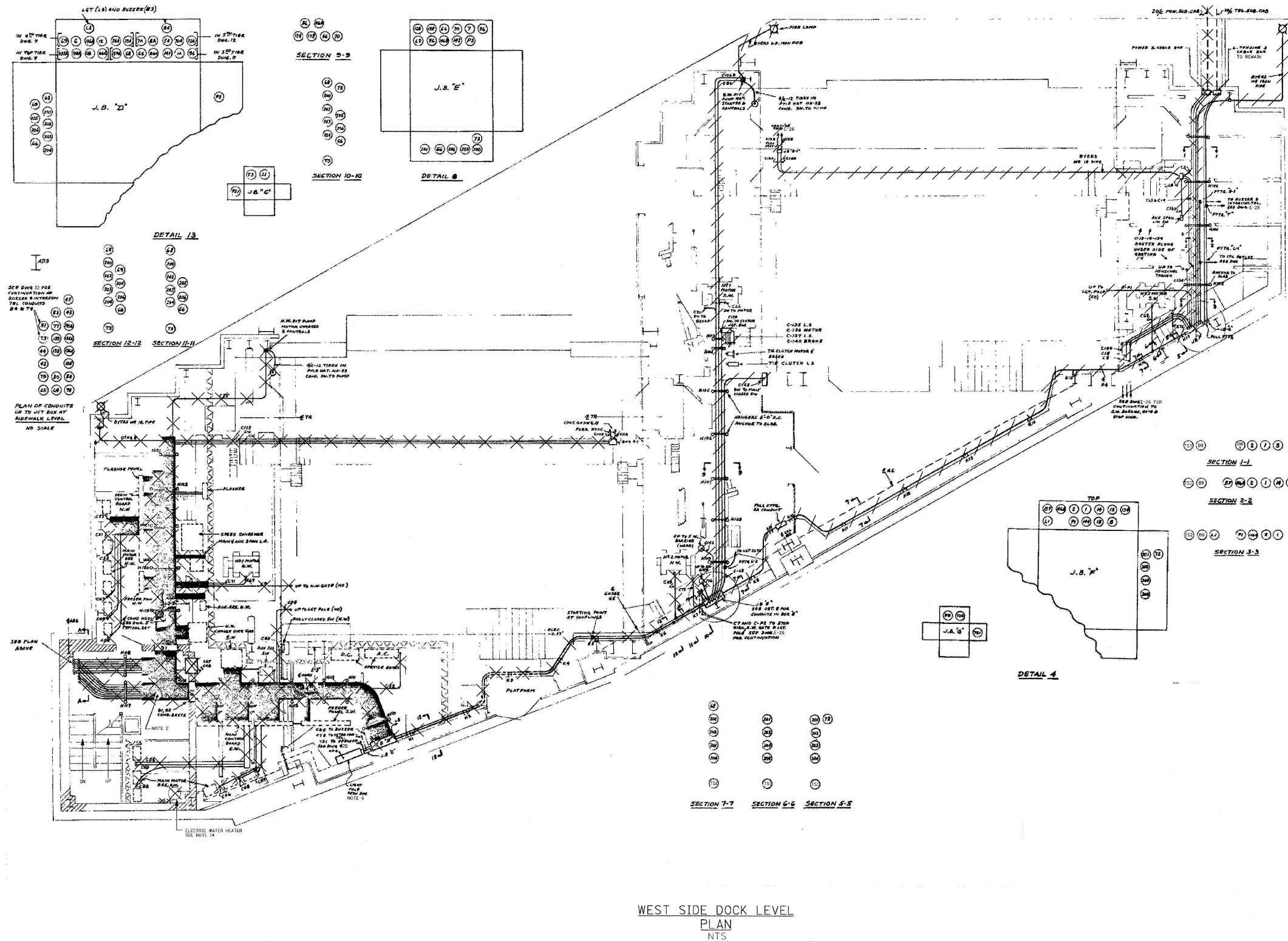
EAST SIDE DOCK LEVEL  
PLAN  
NTS



- NOTES:**
- CONDUIT TIERS ARE SUSPENDED ABOVE DOCK ELEV +6.0' AND BELOW MEZZ ELEV +20.073'.
  - REFER TO DWG E-20 FOR NOTES.
  - REFER TO DWG E-24 FOR DEMOLITION OF EQUIPMENT AND FLOOR TROUGH AT MEZZANINE LEVEL.
  - DE-ENERGIZE AND DISCONNECT CONDUIT C98 AT CONTROL BOARD NE. PARTIALLY CUT C98 AT CONVENIENT LOCATION AND EXTEND NEW CIRCUIT AS SHOWN ON DWG E-39.

EAST SIDE DOCK LEVEL  
PLAN  
NTS

<b>PB Americas, Inc.</b> 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL. 60606	USER NAME = sharma FILE NAME = D:\60d61-sht-e10-21.dgn PLOT SCALE = NONE PLOT DATE = 5/7/2009	DESIGNED - A. CENTENO DRAWN - S. SHARMA CHECKED - M. INTATANO DATE - MAY 8, 2009	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>ELECTRICAL DEMOLITION</b> <b>POWER AND CONTROL CONDUITS - EAST SIDE DOCK LEVEL, SHEET 2</b>	F.A.P. RTE. = 389 SECTION = 2424-2B-R COUNTY = COOK TOTAL SHEETS = 398 SHEET NO. = 292	CONTRACT NO. 60D61
	SCALE: AS SHOWN   SHEET NO. E-21 OF E-125 SHEETS   STA. 379+06.09 TO STA. 382+45.28		FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT				



**NOTES:**

- EQUIPMENT SHOWN SOLID IS PLATFORM MOUNTED AT ELEV. +6.0. EQUIPMENT DOTTED AT MEZZ. ELEV. +20.073. REFER TO DWG E-23 FOR DEMOLITION OF EQUIPMENT.
- SHADED ZONE IS AREA TAKEN BY 5 CONDUIT TIERS UNDER MEZZ. FLOOR. REFER TO DWG E-23.
- REFER TO DWG. E-04 AND E-05 FOR ELECTRICAL SYMBOLS.
- REFER TO DWGS. E-66 AND E-67 FOR EXISTING CONDUIT AND WIRE SCHEDULES.
- ALL ITEMS CROSSED BY HATCH LINES SHALL BE DEMOLISHED DURING STAGE 1 - ELECTRICAL DEMOLITION ON THE EASTBOUND SIDE OF THE BRIDGE. ALL ITEMS CROSSED BY CROSSHATCH LINES SHALL BE DEMOLISHED DURING STAGE 2 - ELECTRICAL DEMOLITION ON THE WESTBOUND SIDE OF THE BRIDGE.
- DE-ENERGIZE, DISCONNECT AND REMOVE ALL STREET LIGHT POLE FEEDERS FROM THE STREET LIGHT ENCLOSURE. THE STREET LIGHT FEEDER AND ENCLOSURE TO REMAIN. REFER TO DWGS E26, E-35 AND E-56.
- PRIOR TO DEMOLITION (STAGE 1), THE SOUTHWEST AND THE SOUTHEAST BRIDGE LEAVES WILL BE LOCKED IN THE OPEN POSITION PROVIDE TEMPORARY LIGHT AND POWER 24 HOURS PER DAY, 7 DAYS PER WEEK.
- ALL ELECTRICAL EQUIPMENT WHICH ARE NO LONGER REQUIRED TO FUNCTION SHALL BE DE-ENERGIZED AND DISCONNECTED AT THE SOURCE OF THE POWER SUPPLY AND SHALL BE REMOVED AND COORDINATED WITH THE AUTHORITY.
- AT ANY TIME THE CONTRACTOR SHALL NOT PERFORM ANY DEMOLITION WORK, RELOCATION, REPAIR OR REROUTING OF EXISTING CABLES, CONDUITS, JUNCTION BOXES OR ANY EQUIPMENT WITHOUT OBTAINING FULL CLEARANCE OF ANY ASBESTOS, AND/OR LEAD CONTAINING MATERIALS.
- ALL ELECTRICAL EQUIPMENT BEING REMOVED SHALL BE DISPOSED OF AT NO ADDITIONAL COST TO THE AUTHORITY. ANY EQUIPMENT REQUIRED TO BE TURNED OVER TO THE AUTHORITY SHALL BE DELIVERED, THE EXACT LOCATION AND TIME OF DELIVERY WILL BE DETERMINED BY THE ENGINEER TWO WEEKS PRIOR TO THE EQUIPMENT BEING REMOVED.
- FOLLOW THE SAME STEPS FOR STAGE 2 - DEMOLITION.
- REFER TO DWGS. E-43 THRU E-46 FOR NEW POWER LAYOUTS.
- CONDUITS C1, C2, C201, C203 AND C204 WILL BE DEMOLISHED DURING STAGE 2.
- DE-ENERGIZE AND DISCONNECT THE ELECTRIC WATER HEATER AT THE SOURCE OF THE POWER SUPPLY. REMOVE AND REPLACE WITH THE NEW WATER HEATER, SHALL MATCH EXISTING ONE. CAP. 40 GAL AND SHALL BE 208V, 1 PHASE, 60HZ AND WITH NEW FEEDER AND DISCONNECT SWITCH AS SHOWN ON DWG. E-43.

**PB Americas, Inc.**  
 230 WEST MONROE STREET,  
 SUITE 900  
 CHICAGO, IL. 60606

USER NAME = sharma  
 FILE NAME = D:\6061-shr-elo-22.dgn  
 PLOT SCALE = NONE  
 PLOT DATE = 5/7/2009

DESIGNED - A. CENTENO  
 DRAWN - S. SHARMA  
 CHECKED - M. INTATANO  
 DATE - MAY 8, 2009

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

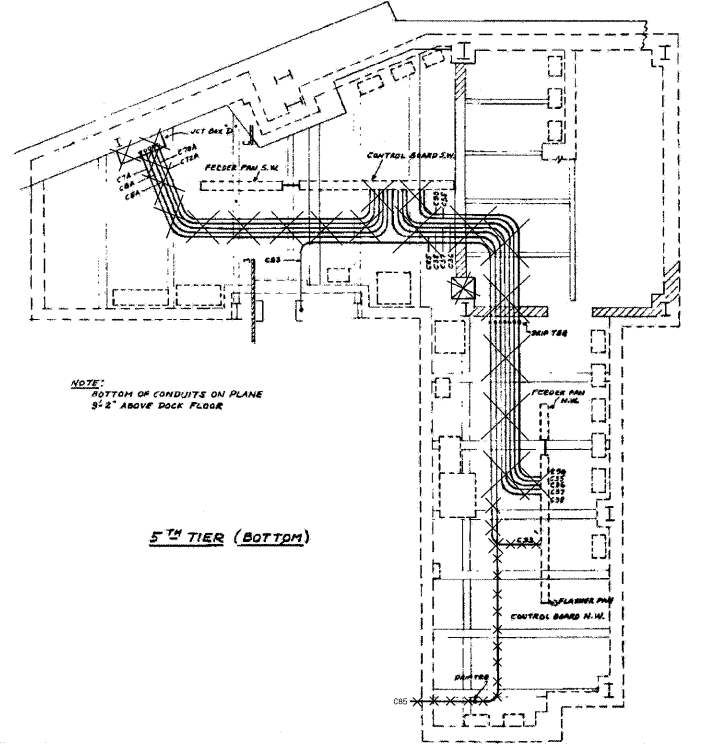
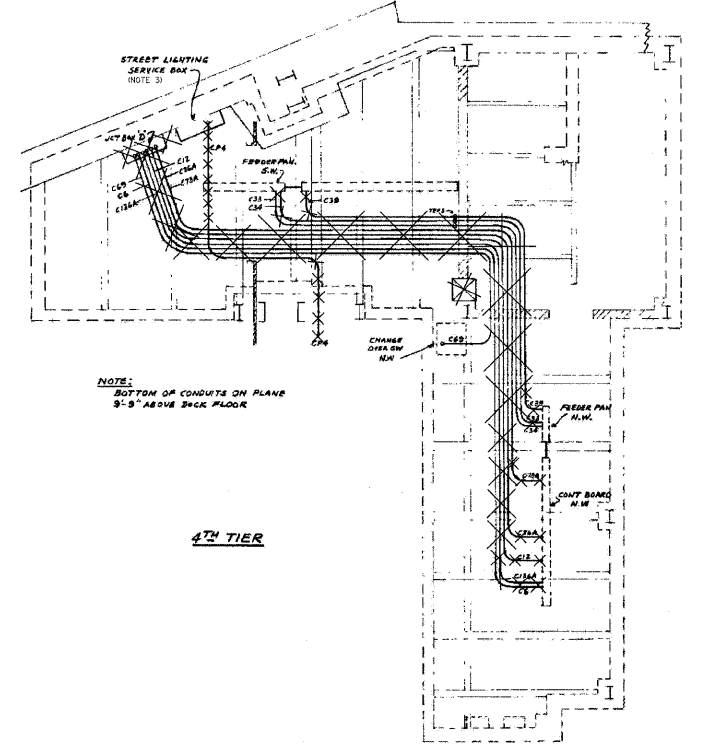
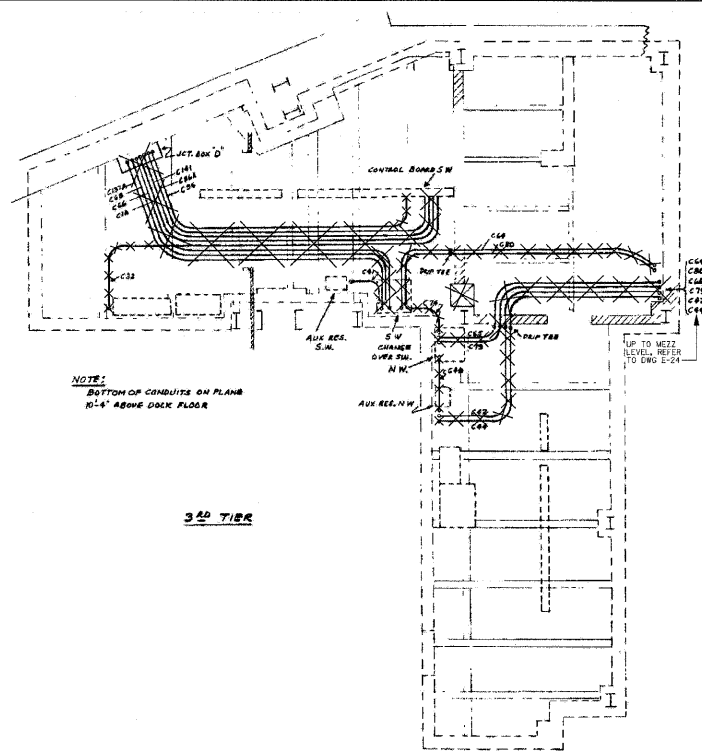
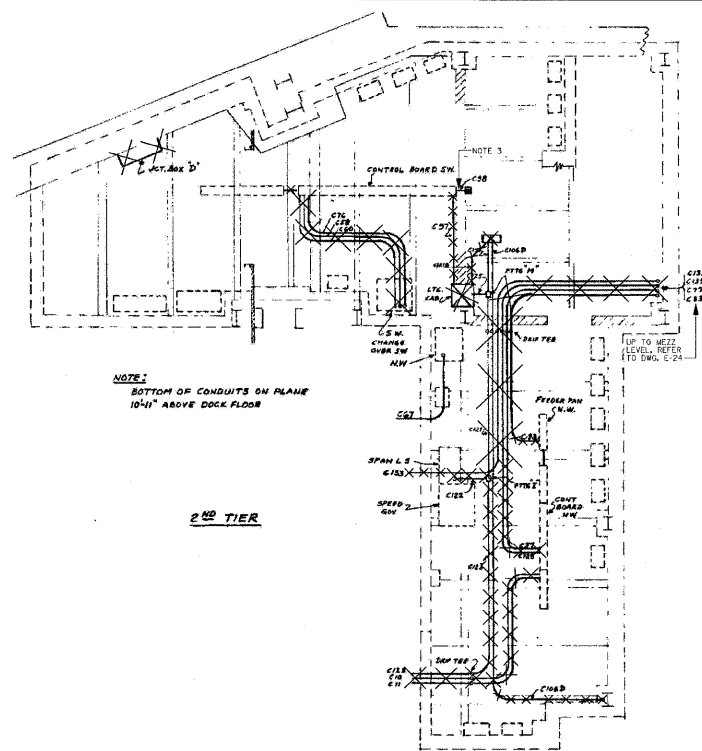
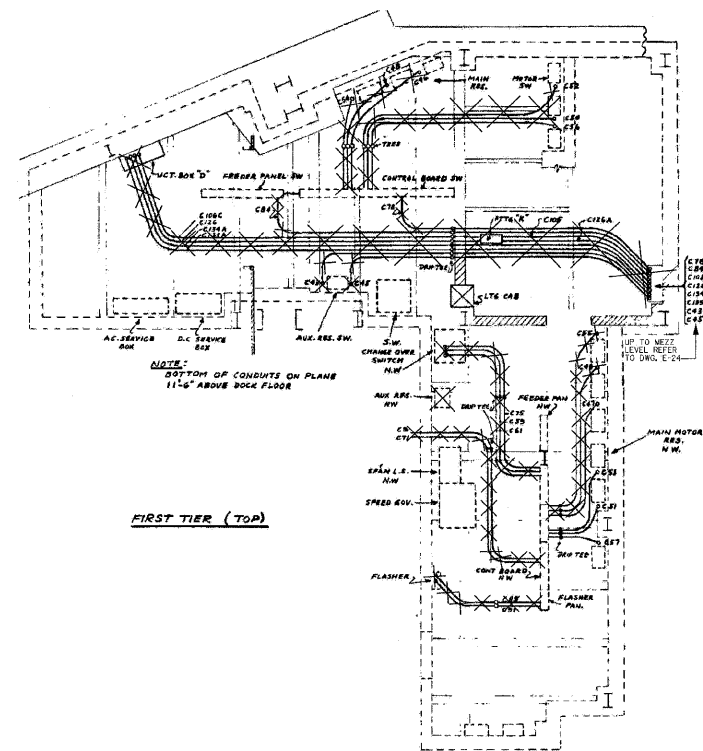
**ELECTRICAL DEMOLITION  
 POWER AND CONTROL CONDUITS - WEST SIDE DOCK LEVEL - SHEET 1**

SCALE: AS SHOWN SHEET NO. E-22 OF E-125 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-28-R	COOK	398	293
				CONTRACT NO. 60D61
FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT				

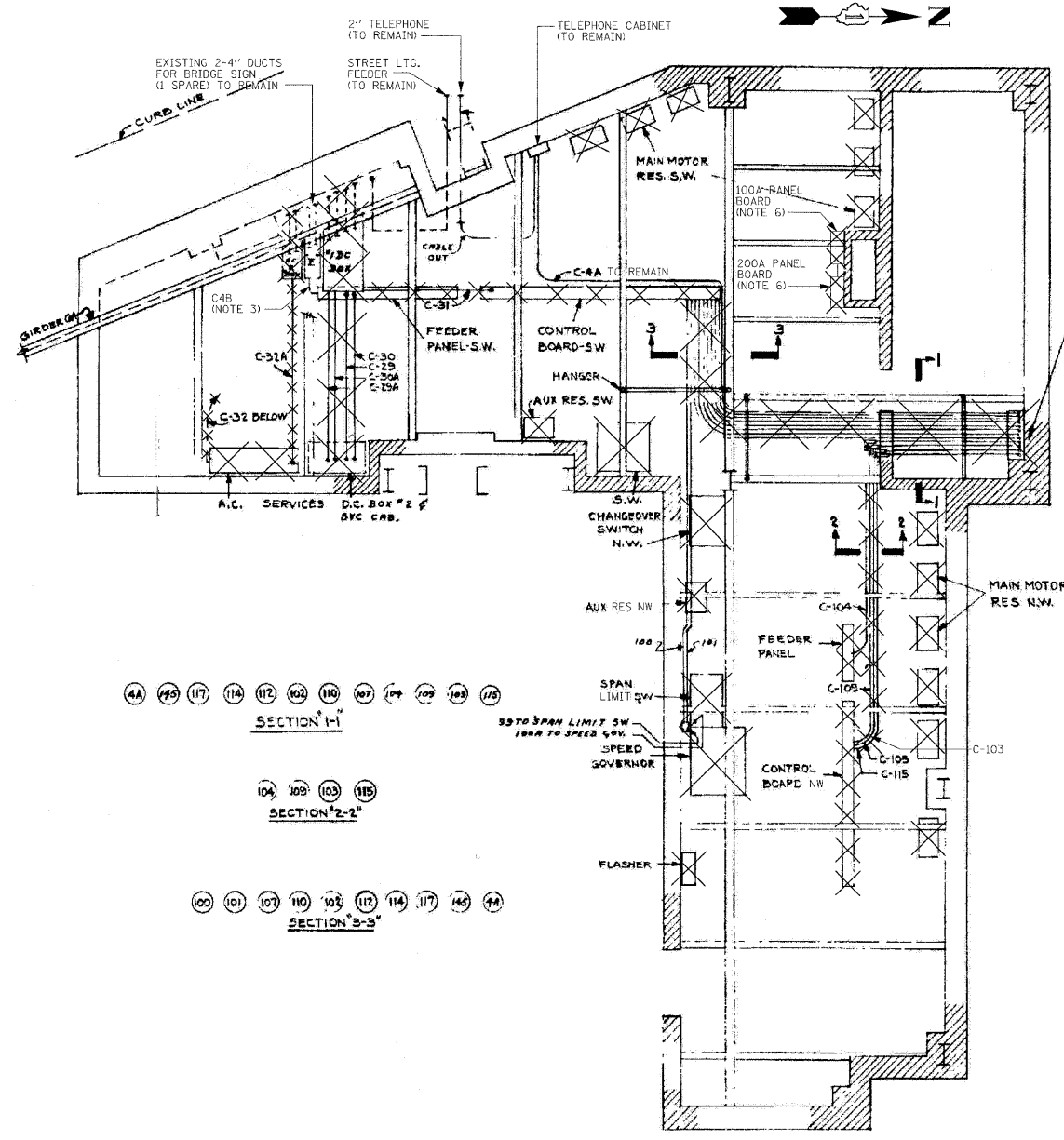


- NOTES:**
1. CONDUIT TIERS ARE SUSPENDED ABOVE DOCK ELEV +6.0' AND BELOW MEZZ. ELEV +20.073'.
  2. COORDINATE THIS DEMOLITION DRAWING WITH DWGS. E-22 AND E-24.
  3. DE-ENERGIZE, DISCONNECT AND REMOVE ALL STREET LIGHT POLE FEEDERS FROM THE STREET LTG. ENCLOSURE. THE STREET LTG. FEEDER AND ENCLOSURE TO REMAIN. REFER TO DWGS. E-26, E-35 AND E-56.



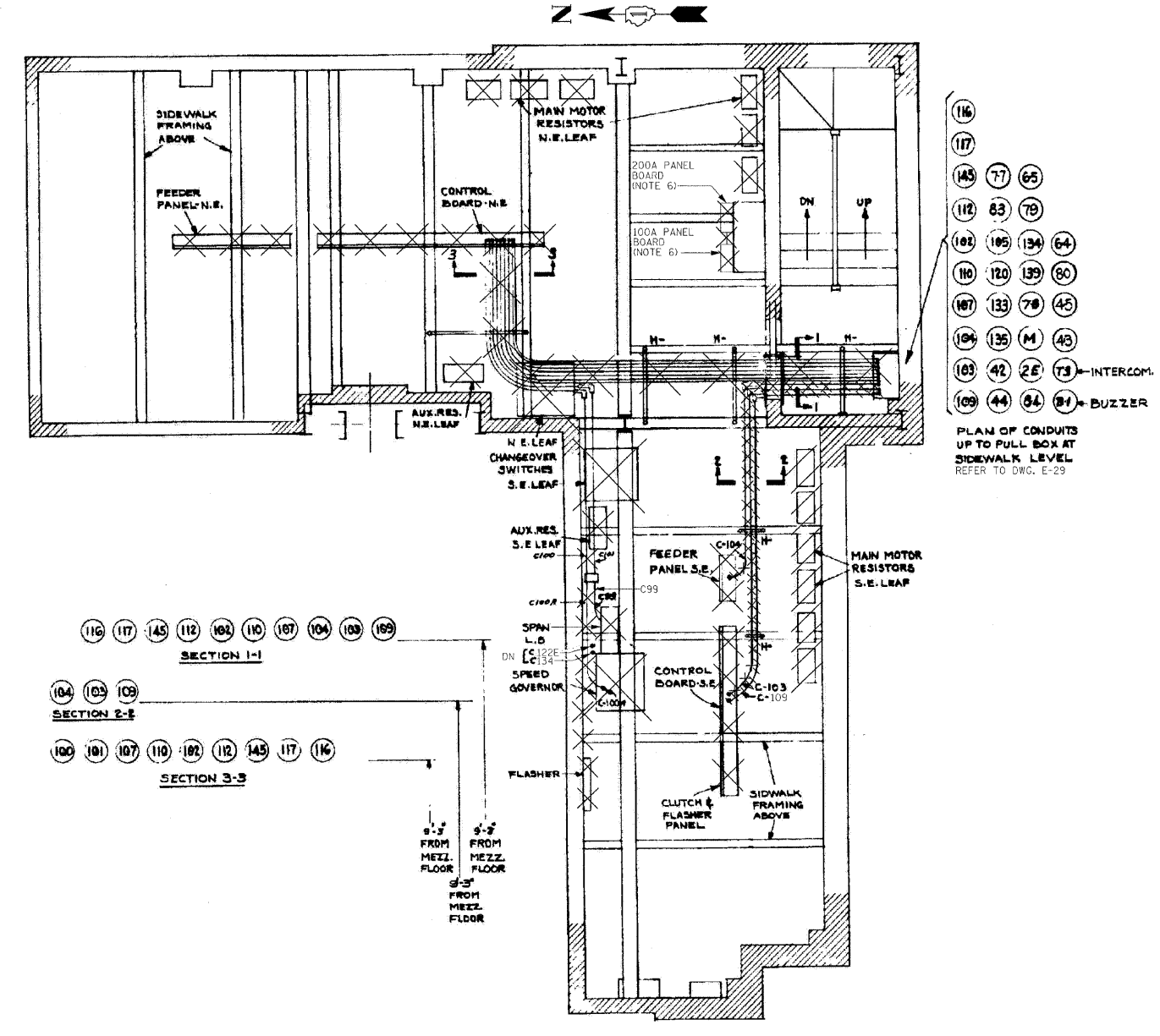
WEST SIDE DOCK LEVEL  
PLAN  
NTS

<b>PB Americas, Inc.</b> 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL. 60606	USER NAME = sharma	DESIGNED - A. CENTENO	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>ELECTRICAL DEMOLITION</b> <b>POWER AND CONTROL CONDUIT - WEST SIDE DOCK LEVEL, SHEET 2</b>		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	FILE NAME = D16@a61-shr-elo-23.dgn	DRAWN - S. SHARMA	REVISED -		389	2424-2B-R	COOK	398	294	CONTRACT NO. 60D61		
	PLOT SCALE = NONE	CHECKED - M. INTATANO	REVISED -									
	PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -		SCALE: AS SHOWN   SHEET NO. E-23 OF E-125 SHEETS   STA. 379+06.09 TO STA. 382+45.28   FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT							



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PLAN OF CONDUITS UP TO 3\"/>



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PLAN OF CONDUITS UP TO PULL BOX AT SIDEWALK LEVEL REFER TO DWG. E-29

WEST SIDE MEZZANINE LEVEL  
 PLAN  
 NTS

NOTES: (WEST SIDE)

- CONDUITS ARE EXPOSED AND SUSPENDED ABOVE THE MEZZ. ELEV +20.073'. EQUIPMENT IS MOUNTED AT THIS LEVEL.
- COORDINATE THE DEMOLITION WORK WITH DRAWINGS E-22 AN DE-23.
- DE-ENERGIZE AND DISCONNECT THE CIRCUIT AT THE LIGHTING CABINET, REMOVE CONDUIT C4B, REPLACE WITH NEW CIRCUIT AND RECONNECT AS SHOWN ON DWG E-44.
- REFER TO DWGS E-66 AND E-67 FOR EXISTING CONDUIT AND WIRE SCHEDULES.
- REFER TO DWG E-44 FOR NEW POWER LAYOUT.
- THE POWER FEEDER TO THE 200A PANELBOARD, 100A PANEL BOARD WILL BE DE-ENERGIZED, DISCONNECTED AND REMOVED DURING STAGE 2. BRANCH FEEDERS THAT ARE CONNECTED TO THESE PANELBOARDS WHICH ARE NO LONGER REQUIRED TO FUNCTION EITHER DURING STAGE 1 OR STAGE 2 WILL BE DE-ENERGIZED, DISCONNECTED AND REMOVED. BRANCH FEEDERS WHICH ARE REQUIRED TO CONTINUE TO FUNCTION WILL BE CUT AT CONVENIENT LOCATIONS, REROUTED AND RECONNECTED TO THE NEW PANELBOARD AS SHOWN ON DWG E-44. NEW FEEDER EXTENSIONS SHALL MATCH EXISTING ONES IN ALL ASPECTS, CONDUCTOR AMPACITY, CONDUIT SIZES ETC. COORDINATE THE BRANCH FEEDERS THAT NEED TO BE MAINTAINED WITH THE ENGINEER.

EAST SIDE MEZZANINE LEVEL  
 PLAN  
 NTS

NOTES: (EAST SIDE)

- CONDUITS ARE EXPOSED AND SUSPENDED ABOVE THE MEZZ. ELEV +20.073'. EQUIPMENT IS MOUNTED AT THIS LEVEL.
- COORDINATE THE DEMOLITION WORK WITH DRAWINGS E-20 AND E-21.
- REFER TO DWGS E-65 THRU E-67 FOR EXISTING CONDUIT AND WIRE SCHEDULES.
- CONDUITS T3 AND B-1 TO REMAIN.
- REFER TO DWG E-40 FOR NEW POWER LAYOUT.
- THE POWER FEEDER TO THE 200A PANELBOARD, 100A PANEL BOARD WILL BE DE-ENERGIZED, DISCONNECTED AND REMOVED DURING STAGE 2. BRANCH FEEDERS THAT ARE CONNECTED TO THESE PANELBOARDS WHICH ARE NO LONGER REQUIRED TO FUNCTION EITHER DURING STAGE 1 OR STAGE 2 WILL BE DE-ENERGIZED, DISCONNECTED AND REMOVED. BRANCH FEEDERS WHICH ARE REQUIRED TO CONTINUE TO FUNCTION WILL BE CUT AT CONVENIENT LOCATIONS, REROUTED AND RECONNECTED TO THE NEW PANELBOARD AS SHOWN ON DWG E-40. NEW FEEDER EXTENSIONS SHALL MATCH EXISTING ONES IN ALL ASPECTS, CONDUCTOR AMPACITY, CONDUIT SIZES ETC. COORDINATE THE BRANCH FEEDERS THAT NEED TO BE MAINTAINED WITH THE ENGINEER.

**PB Americas, Inc.**  
 230 WEST MONROE STREET,  
 SUITE 900  
 CHICAGO, IL. 60606

USER NAME = sharma  
 FILE NAME = D:\6061-sh1-elc-24.dgn  
 PLOT SCALE = NONE  
 PLOT DATE = 5/7/2009

DESIGNED - A. CENTENO  
 DRAWN - S. SHARMA  
 CHECKED - M. INTATANO  
 DATE - MAY 8, 2009

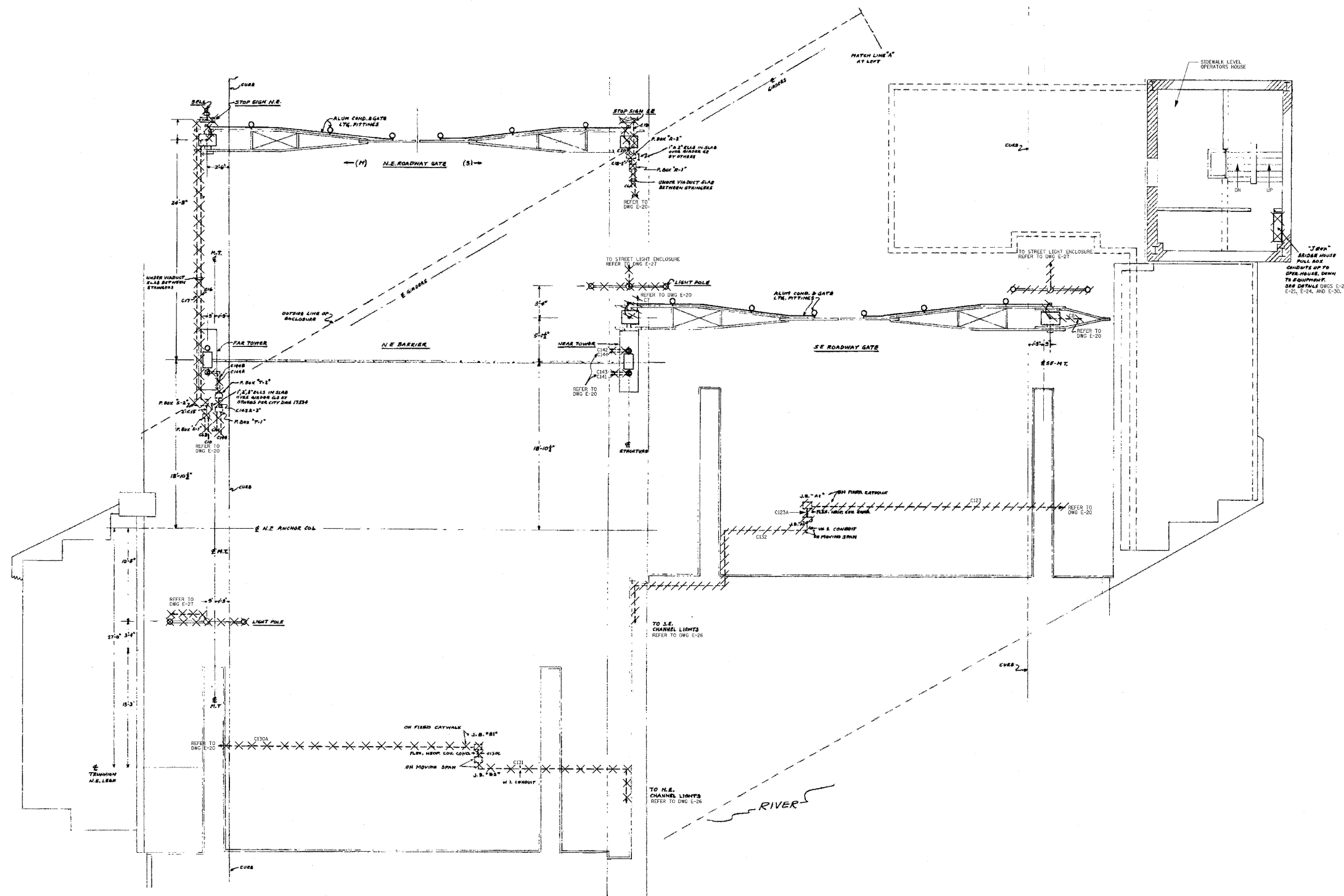
REVISED -  
 REVISED -  
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 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL DEMOLITION  
 POWER AND CONTROL CONDUITS - EAST /WEST SIDE MEZZANINE LEVEL

SCALE: AS SHOWN SHEET NO. E-24 OF E-125 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	295
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60D61	



- NOTES:**
1. SIDEWALK ELEV +33.20' CONDUITS SHOWN TURN UP FROM BELOW TO EQUIPMENT AT THIS LEVEL.
  2. REFER TO DRAWINGS NOTES ON DWG E-20.
  3. REFER TO DRAWINGS E-01, E-39, E-41, E-57 FOR NEW ELECTRICAL LAYOUTS.

EAST SIDE SIDEWALK LEVEL  
PLAN  
NTS

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = sharma  
FILE NAME = D:\6061\shht-elo-25.dgn  
PLOT SCALE = NONE  
PLOT DATE = 5/7/2009

DESIGNED - A. CENTENO  
DRAWN - S. SHARMA  
CHECKED - M. INTATANO  
DATE - MAY 8, 2009

REVISED -  
REVISED -  
REVISED -  
REVISED -

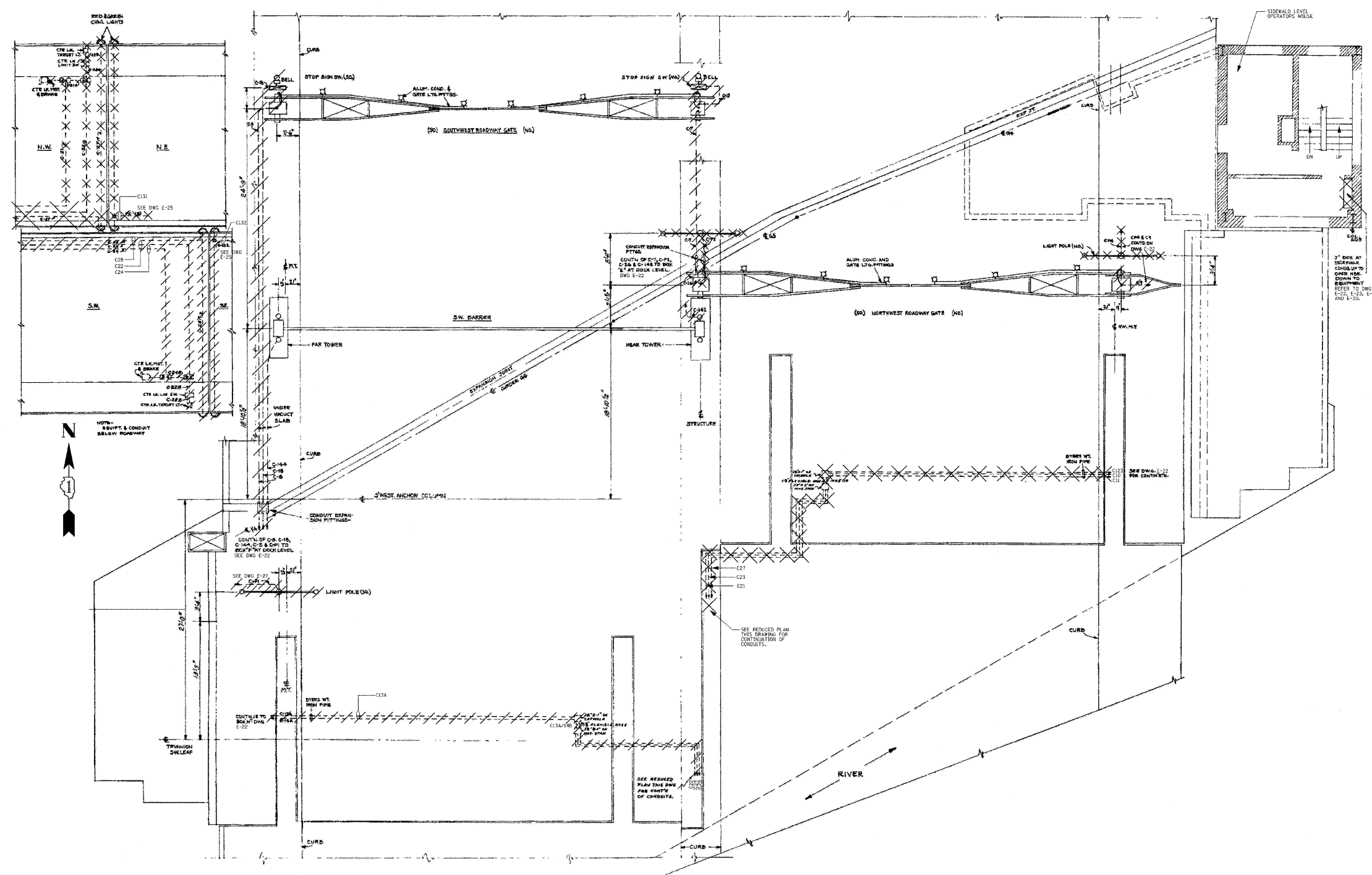
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ELECTRICAL DEMOLITION  
POWER AND CONTROL CONDUITS - EAST SIDE SIDEWALK LEVEL

SCALE: AS SHOWN SHEET NO. E-25 OF E-125 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	296
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60D61	

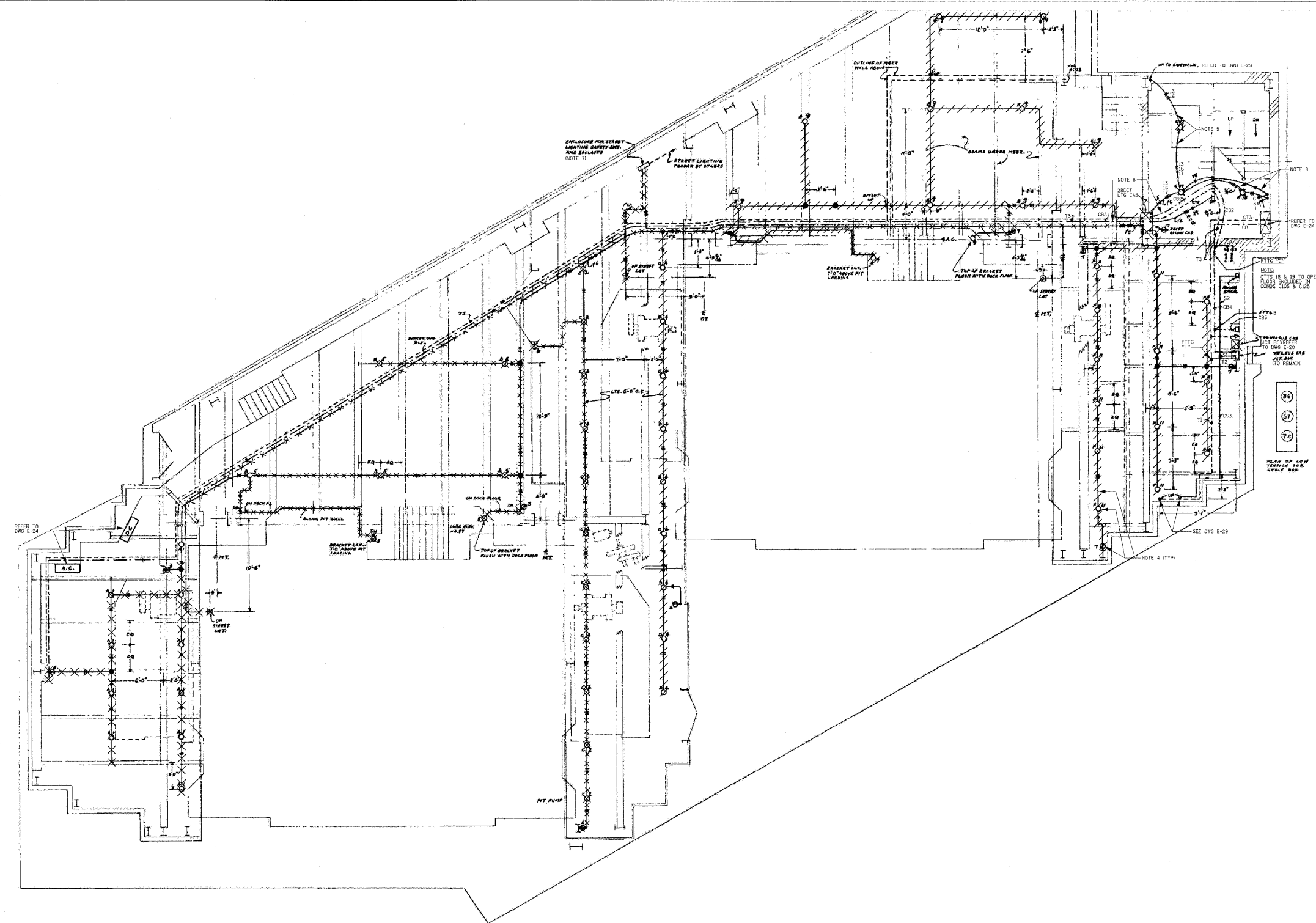




- NOTES:**
1. SIDEWALK ELEV +33.20' CONDUITS SHOWN TURN UP FROM BELOW TO EQUIPMENT AT THIS LEVEL.
  2. REFER TO DRAWINGS NOTES ON DWG E-22.
  3. REFER TO DRAWINGS E-01, E-43, E-45, E-56 FOR NEW ELECTRICAL LAYOUTS.

WEST SIDE SIDEWALK LEVEL  
PLAN  
NTS

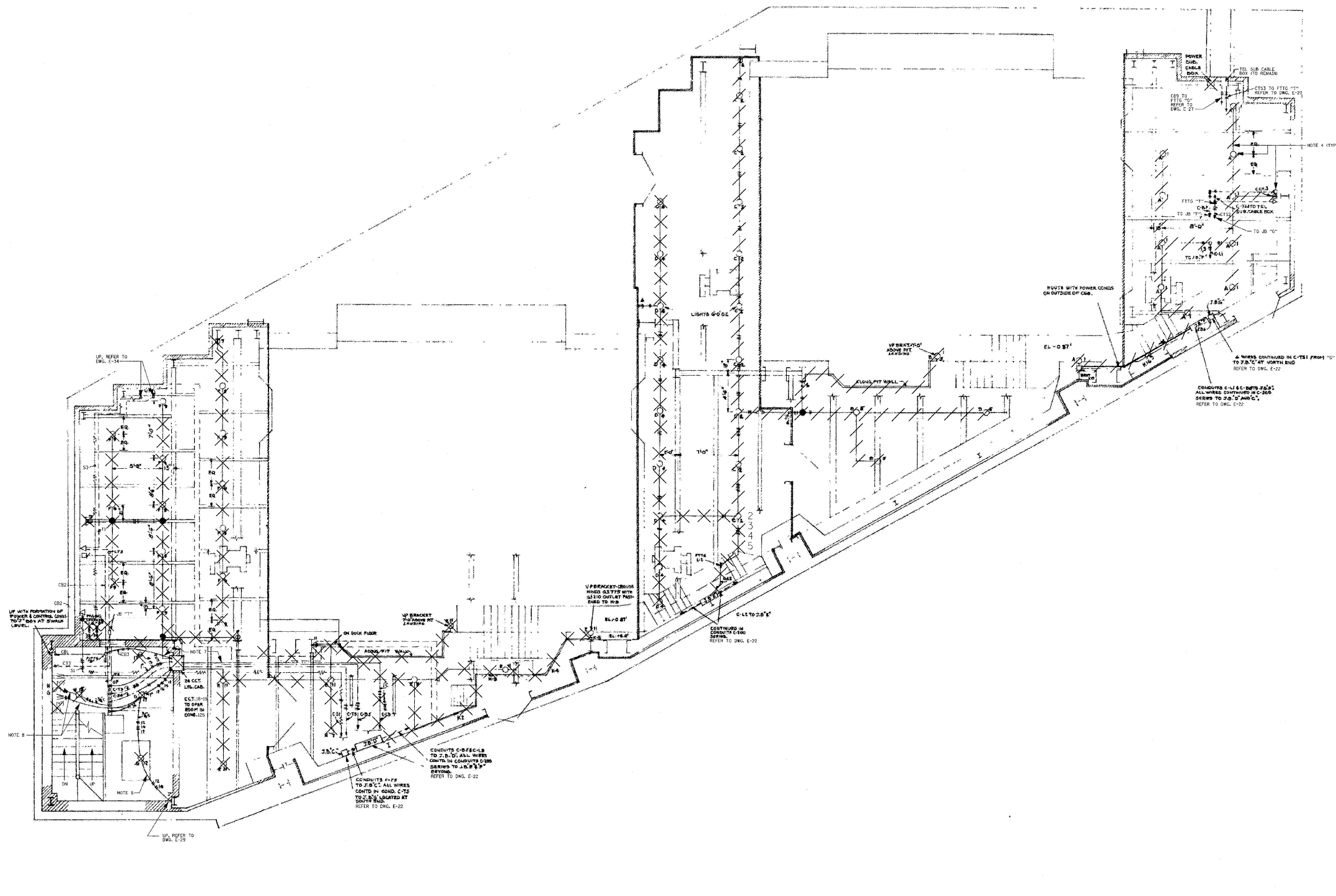
<b>PB Americas, Inc.</b> 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL. 60606	USER NAME = s Sharma FILE NAME = D:\60\d61-shr-elo-26.dgn PLOT SCALE = NONE PLOT DATE = 5/7/2009	DESIGNED - A. CENTENO DRAWN - S. SHARMA CHECKED - M. INTATANO DATE - MAY 8, 2009	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>ELECTRICAL DEMOLITION</b> <b>POWER AND CONTROL CONDUITS - WEST SIDE SIDEWALK LEVEL</b>	F.A.P. RTE. = 389 SECTION = 2424-2B-R COUNTY = COOK TOTAL SHEETS = 398 SHEET NO. = 297	CONTRACT NO. 60D61
	SCALE: AS SHOWN   SHEET NO. E-26 OF E-125 SHEETS   STA. 379+06.09 TO STA. 382+45.28		FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT				



- NOTES:**
- REFER TO DWG E-04 AND E-05 FOR ELECTRICAL SYMBOLS.
  - REFER TO DWG E-65 FOR EXISTING CONDUIT AND WIRE SCHEDULES.
  - COORDINATE THIS DEMOLITION DRAWING WITH DWG E-20.
  - DE-ENERGIZE AND DISCONNECT THE CIRCUITS AT THE LIGHTING CABINET FOR THE REMOVAL OF LIGHT FIXTURES, RECEPTACLES AND CONDUITS WITH WIRES.
  - ALL ITEMS CROSSED BY HATCH LINES SHALL BE DEMOLISHED UNDER STAGE 1 DEMOLITION ON THE EASTBOUND SIDE OF THE BRIDGE. ALL ITEMS CROSSED BY CROSSHATCHED LINES SHALL BE DEMOLISHED UNDER STAGE 2 DEMOLITION ON THE WESTBOUND SIDE OF THE BRIDGE.
  - REFER TO DWGS E-31 AND E-47 FOR NEW LIGHTING AND RECEPTACLES AND AUXILIARY SYSTEMS.
  - DE-ENERGIZE, DISCONNECT AND REMOVE ALL THE STREET LIGHT POLES FROM THE STREET LIGHT ENCLOSURE. THE STREET LIGHT FEEDER AND ENCLOSURE TO REMAIN. REFER TO DWGS E-25, E-30 AND E-57.
  - DE-ENERGIZE AND DISCONNECT CONDUITS CB2 AND CB3 AT THE LIGHTING CABINET. PARTIALLY CUT CB2 AND CB3 AT CONVENIENT LOCATIONS AND EXTEND NEW CIRCUITS AS SHOWN ON DWG E-31.
  - DE-ENERGIZE AND DISCONNECT LIGHTING CIRCUITS 10, 11, 12, 13, 14, 15, 16 AND 17 AT THE LIGHTING CABINET. ALL LIGHTING CONDUIT RUNS CONCEALED IN FLOOR SLABS AND WALLS SHALL BE ABANDONED. WIRING SHALL BE REMOVED. ALL OPENINGS AS A RESULT OF DEMOLITION WORK SHALL BE CLOSED IN A MANNER APPROVED BY THE ENGINEER.

EAST SIDE DOCK LEVEL  
PLAN  
NTS

<b>PB Americas, Inc.</b> 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL. 60606	USER NAME = sharma	DESIGNED - A. CENTENO	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>ELECTRICAL DEMOLITION</b> <b>LIGHTING AND LOW TENSION SYSTEMS - EAST SIDE DOCK LEVEL</b>		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FILE NAME = U160061-shr-el0-27.dgn	DRAWN - S. SHARMA	REVISED -		389	2424-2B-R	COOK	398	298		
	PLOT SCALE = NONE	CHECKED - M. INTATANO	REVISED -		CONTRACT NO. 60D61						
	PLOT DATE = 5/7/2009	DATE - MAY 8, 2009	REVISED -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT						
SCALE: AS SHOWN   SHEET NO. E-27 OF E-125 SHEETS   STA. 379+06.09 TO STA. 382+45.28											



WEST SIDE DOCK LEVEL  
PLAN  
NTS

**NOTES:**

1. REFER TO DWG. E-04 AND E-05 FOR ELECTRICAL SYMBOLS.
2. REFER TO DWGS. E-66 AND E-67 FOR EXISTING CONDUIT AND WIRE SCHEDULES.
3. COORDINATE THIS DEMOLITION DRAWING WITH DWG. E-22.
4. DE-ENERGIZE AND DISCONNECT THE CIRCUITS AT THE LIGHTING CABINET FOR THE REMOVAL OF LIGHT FIXTURES, RECEPTACLES AND CONDUIT WITH WIRES.
5. ALL ITEMS CROSSED BY HATCH LINES SHALL BE DEMOLISHED DURING STAGE 1 - ELECTRICAL DEMOLITION ON THE EASTBOUND SIDE OF THE BRIDGE. ALL ITEMS CROSSED BY CROSSHATCH LINES SHALL BE DEMOLISHED DURING STAGE ELECTRICAL DEMOLITION ON THE WESTBOUND SIDE OF THE BRIDGE.
6. REFER TO DWGS. E-35 AND E-51 FOR NEW LIGHTING, RECEPTACLES AND AUXILIARY SYSTEMS.
7. DE-ENERGIZE AND DISCONNECT CONDUITS CB3 AND CB5 AT THE LIGHTING CABINET. PARTIALLY CUT CB3 AND CB5 AT CONVENIENT LOCATIONS AND EXTEND NEW CIRCUITS AS SHOWN ON DWG E-35.
8. DE-ENERGIZE AND DISCONNECT LIGHTING CIRCUITS 12, 14, 16, AND 17 AT THE LIGHTING CABINET. ALL LIGHTING CONDUIT RUNS CONCEALED IN FLOOR SLABS AND WALLS SHALL BE ABANDONED, WIRING SHALL BE REMOVED. ALL OPENINGS AS A RESULT OF DEMOLITION WORK SHALL BE CLOSED IN A MANNER APPROVED BY THE ENGINEER.

**PB Americas, Inc.**  
230 WEST MONROE STREET,  
SUITE 900  
CHICAGO, IL. 60606

USER NAME = sharma  
FILE NAME = D162d61-shr-elo-28.dgn  
PLOT SCALE = NONE  
PLOT DATE = 5/7/2009

DESIGNED - A. CENTENO  
DRAWN - S. SHARMA  
CHECKED - M. INTATANO  
DATE - MAY 8, 2009

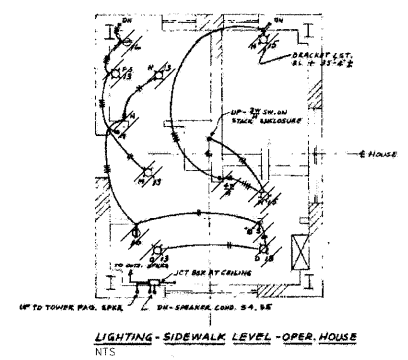
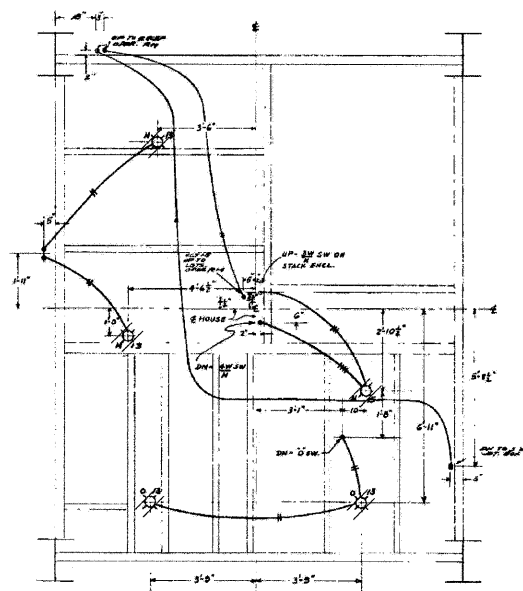
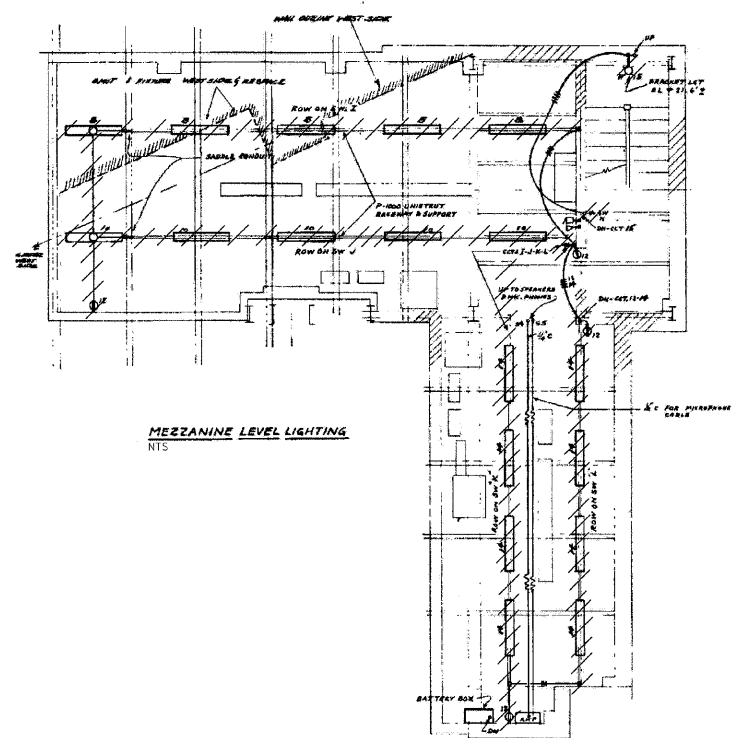
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

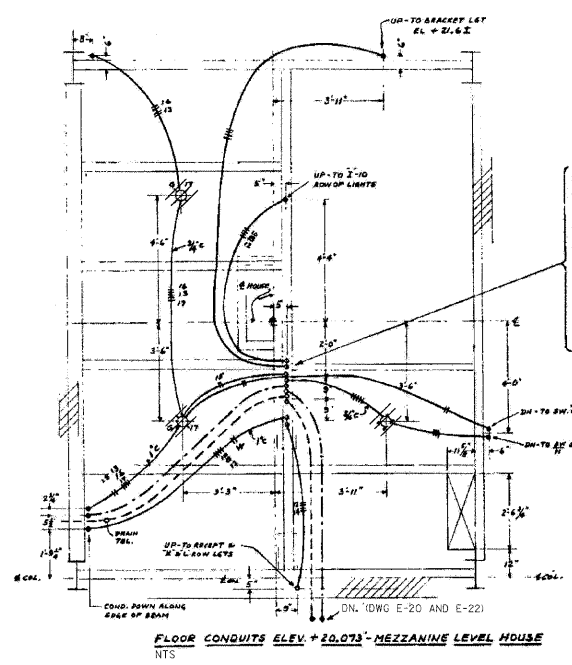
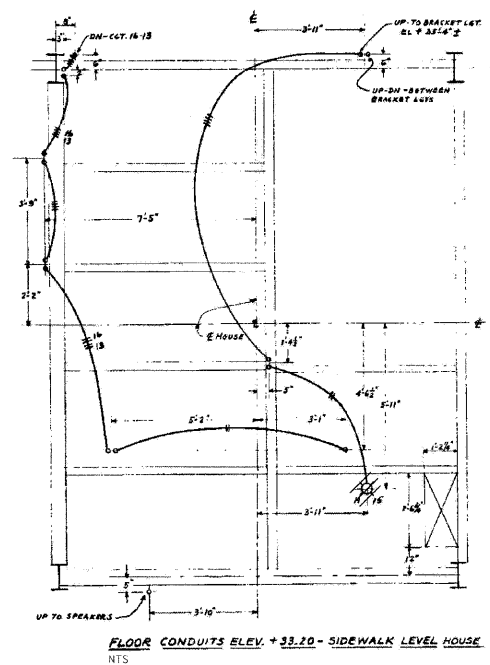
**ELECTRICAL DEMOLITION  
LIGHTING AND LOW TENSION SYSTEMS - WEST SIDE DOCK LEVEL**

SCALE: AS SHOWN SHEET NO. E-28 OF E-125 SHEETS STA. 379+06.09 TO STA. 382+45.28

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424-2B-R	COOK	398	299
CONTRACT NO. 60D61				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



- SYMBOLS**
- DROP CORD
  - JCT. BOX
  - ▭ CEILING FIXTURE INC
  - ▭ BRACKET FIXTURE INC
  - ▭ FLUORESCENT FIXTURE 27-60W
  - ⊥ 1 POLE SWITCH
  - ⊥ 3-POLE SWITCHES GANGED
  - ⊥ 3-WY SWITCH
  - ⊥ 4-WY SWITCH
  - ⊥ PLUS RECEPTACLE
  - ⊥ SILEX
  - ⊥ INTERCOM. TELEPHONE
  - A, B, ETC. SWITCH CONTROL
  - 1/2, ETC. CIRCUIT NUMBER
  - LIGHTING CONDUIT EXPOSED
  - LIGHTING CONDUIT CONCEALED
  - INTERCOM. TEL. CONDUIT EXPOSED
  - INTERCOM. TEL. CONDUIT CONCEALED
  - BUZZER CONDUIT EXPOSED
  - BUZZER CONDUIT CONCEALED
  - SPEAKER CONDUIT EXPOSED
  - SPEAKER CONDUIT CONCEALED
  - STREET LIGHTING CONDUIT EXPOSED



- 1/2" ○ UP TO SW. X
- 3/8" ○ UP TO SW. SW (EXT. WALL LTS)
- 1/4" ○ UP TO 4 IN. SW. REAR (CCT. 12)
- 3/8" ○ UP TO SW. SW.
- 1/2" ○ UP TO BUZZER (TO REMAIN)
- 3/8" ○ UP TO BUZZER (TO REMAIN)
- 1/2" ○ UP TO INTERCOM. TEL. (TO REMAIN)
- 3/8" ○ UP TO INTERCOM. TEL. (TO REMAIN)
- 1" ○ UP TO 9 GANG SW. (CCT. 10-12-13)
- 3/4" ○ UP TO ONE REL. (CCT. 12-13)

**MEZZANINE AND SIDEWALK LEVELS**  
**PLAN**  
NTS

- NOTES:**
- EAST SIDE SHOWN. WEST SIDE SAME WITH DIRECTION ARROW REVERSED AND AS NOTED.
  - PROVIDE TEMPORARY LIGHT AND POWER 24 HOURS PER DAY, 7 DAYS A WEEK.
  - DE-ENERGIZE AND DISCONNECT LIGHTING CIRCUITS 15, 18, 19 AND FOR BUZZER AT THE LIGHTING CABINET. REFER TO DWGS E-21 AND E-24. ALL LIGHTING CONDUIT RUNS CONCEALED IN FLOOR SLABS AND WALLS SHALL BE ABANDONED. WIRING SHALL BE REMOVED. ALL OPENINGS AS A RESULT OF DEMOLITION WORK SHALL BE CLOSED IN A MANNER APPROVED BY THE ENGINEER.
  - COORDINATE THIS DRAWING WITH DWG E-29.

<b>PB Americas, Inc.</b> 230 WEST MONROE STREET, SUITE 900 CHICAGO, IL. 60606	USER NAME = sharma FILE NAME = 0162d61-shr-elc-29.dgn PLOT SCALE = NONE PLOT DATE = 5/7/2009	DESIGNED - A. CENTENO DRAWN - S. SHARMA CHECKED - M. INTATANO DATE - MAY 8, 2009	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>ELECTRICAL DEMOLITION</b> <b>LIGHTING AND LOW TENSION SYSTEMS</b> <b>MEZZANINE AND SIDEWALK LEVELS</b>	F.A.P. RTE. 389 SECTION 2424-2B-R COUNTY COOK TOTAL SHEETS 398 SHEET NO. 300	CONTRACT NO. 60D61 FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT
	SCALE: AS SHOWN SHEET NO. E-29 OF E-125 SHEETS STA. 379+06.09 TO STA. 382+45.28						
	STA. 379+06.09 TO STA. 382+45.28						
	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT						