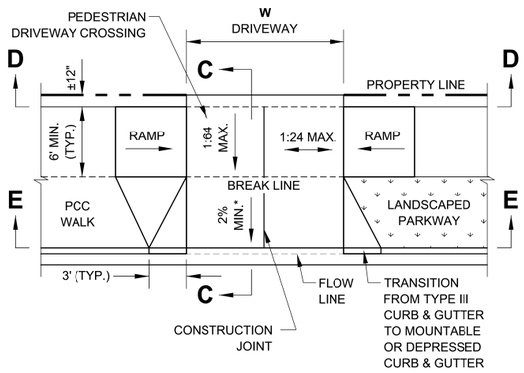


ALLEY NOTES:

A. DETECTABLE WARNING IS NOT REQUIRED AT NON-SIGNALIZED DRIVEWAYS.

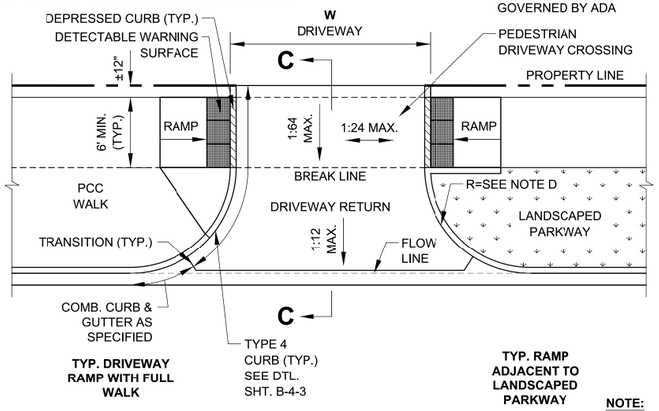
B. RAMP DETAILS ARE DEPENDENT UPON SITE SPECIFIC CONDITIONS (WHERE RAMPS ARE NECESSARY). SEE APPROPRIATE RAMP SHEET AS REQUIRED (TYP.).

C. SEE DETAIL B-2-5 FOR REDUCED WIDTH (4' MIN.) PEDESTRIAN ACCESSIBLE ROUTE ACROSS ALLEY / DRIVEWAY (TO ALLOW FOR ADDITIONAL SLOPE AT ALLEY / DRIVEWAY).

D. DEPENDENT UPON TYPE & VOLUME OF TRAFFIC.

* SLOPE VARIES AND IS NOT GOVERNED BY ADA

OPTION A - DRIVEWAY WITH FLARES



NOTE:
WORK THIS SHEET WITH SHEET B-2-4.

OPTION B - COMMERCIAL AND RESIDENTIAL DRIVEWAY WITH CURB
FOR USE WITH TRAFFIC SIGNALIZATION APPROVED BY CITY ORDINANCE

City of Chicago
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Department of Transportation
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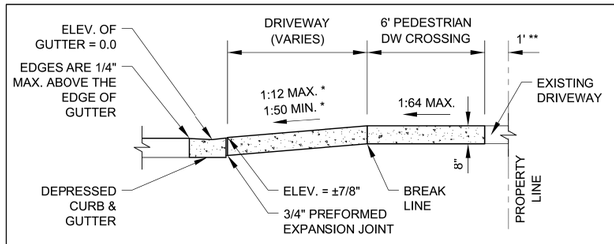
CDOT CHICAGO DEPARTMENT OF TRANSPORTATION

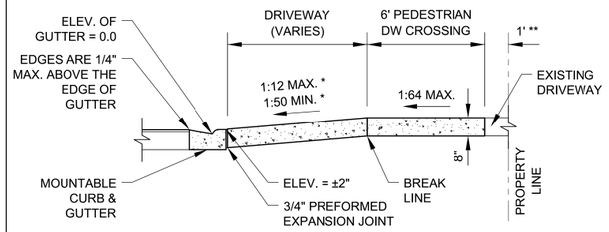
DATE	REVISION
02/20/07	REVISION 1
11/15/07	REVISION 2
11/14/08	REVISION 3
11/02/09	REVISION 4
08/10/12	REVISION 5

CITY OF CHICAGO
DRIVEWAY CONSTRUCTION PLAN VIEWS
SHEET B-2-3

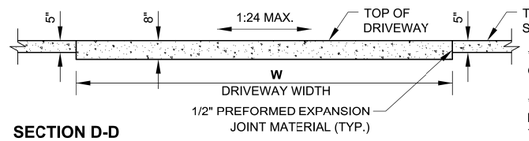
SCALE: NOT TO SCALE
DATE: 10/23/2006
DRAWN BY: CDOT
CHECKED BY: LCM



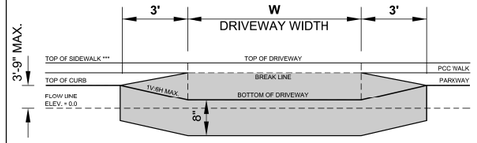
SECTION C-C: SECTION SHOWING DEPRESSED CURB & GUTTER



SECTION C-C: SECTION SHOWING MOUNTABLE CURB & GUTTER



SECTION D-D



SECTION E-E

* SLOPE VARIES AND IS NOT GOVERNED BY ADA

** THE SLOPE OF THE ALLEY IN THE 1' SPACE ADJACENT TO THE PROPERTY LINE MAY BE ALTERED UP TO 10% TO MEET EXISTING CONDITIONS

*** HEIGHT OF FLARE + WIDTH OF SIDEWALK x 1.56% + WIDTH OF PARKWAY x 1.56% TO 4%

NOTE:
WORK THIS SHEET WITH SHEET B-2-3.

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CDOT CHICAGO DEPARTMENT OF TRANSPORTATION

DATE	REVISION
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11/15/07	REVISION 2
11/14/08	REVISION 3
11/02/09	REVISION 4
08/10/12	REVISION 5

CITY OF CHICAGO
DRIVEWAY CONSTRUCTION SECTIONS
SHEET B-2-4

SCALE: NOT TO SCALE
DATE: 10/23/2006
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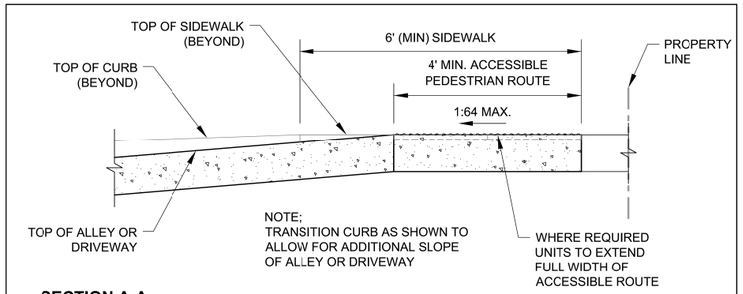
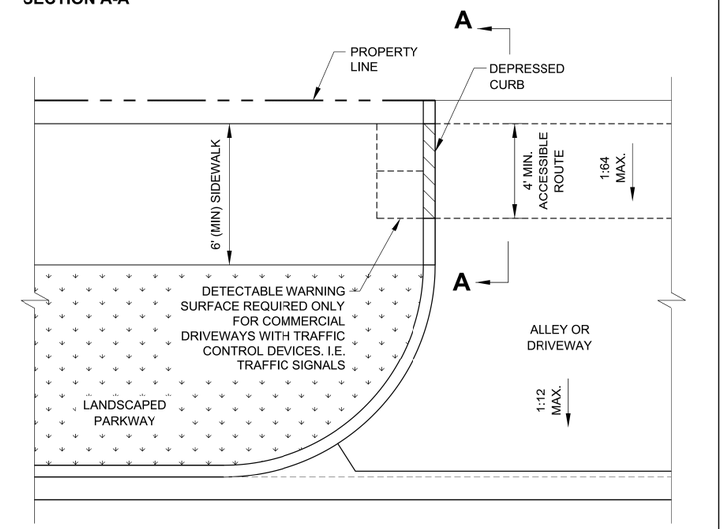


SECTION A-A



PLAN VIEW

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DATE	REVISION
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11/14/08	REVISION 3
11/02/09	REVISION 4
08/10/12	REVISION 5

CITY OF CHICAGO
ALLEY & DRIVEWAY DETAIL FOR REDUCED WIDTH PEDESTRIAN ACCESS ROUTE
SHEET B-2-5

SCALE: NOT TO SCALE
DATE: 10/23/2006
DRAWN BY: CDOT
CHECKED BY: LCM

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W25-sht-ADA-06	DESIGNED - BMC	REVISED -	
USER NAME = CzosnykaB	DRAWN - BMC	REVISED -	
PLOT SCALE = 1.0000 ' / in.	CHECKED - AFC	REVISED -	
PLOT DATE = 5/15/2013	DATE - 5/14/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO
ADA STANDARDS

SCALE: N.T.S. | SHEET 3 OF 5 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	101
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

FILE PATH = pw:\\380239-pwntl.aecomonline.local:PWAECOM00\Documents\01 Americas\Transportation\60269938 Circle\Phase II\000_CAD\006_Roadway\Sheets\60W25_Contract\D160W25-sht-ADA-06

GENERAL NOTES:

1. THE DETECTABLE WARNING USED SHALL BE CHOSEN FROM THE CHICAGO DEPARTMENT OF TRANSPORTATION LIST OF APPROVED DETECTABLE WARNING PRODUCTS (AVAILABLE ON THE CITY OF CHICAGO WEBSITE). IT IS NOT ACCEPTABLE TO INSTALL TWO DIFFERENT DETECTABLE WARNING PRODUCTS ADJACENT TO ONE ANOTHER AT ANY LOCATION. IN THE CENTRAL BUSINESS DISTRICT, GRANITE OR OTHER SPECIALTY PAVING MATERIALS MAY BE SUBMITTED TO THE COMMISSIONER FOR APPROVAL.

2. THE DETECTABLE WARNING MUST BE INSTALLED A MAXIMUM OF 8" OR LESS FROM FACE OF CURB (SEE DETAIL SHEET B-4-2).

3. THE DETECTABLE WARNING MUST COVER FULL WIDTH OF RAMP EXCLUDING SIDE FLARES FOR A MINIMUM UNOBSTRUCTED DEPTH OF 24". THE DETECTABLE WARNING LOCATED ON THE SURFACES OF RAMPS IS TYPICALLY ORIENTED PERPENDICULAR TO THE RUN OF THE RAMP UNLESS SPECIAL CIRCUMSTANCES OCCUR (SEE DETAIL SHEET B-1-5). THE DETECTABLE WARNING MUST BE PROVIDED FOR A MINIMUM DEPTH OF 24" FOR THE ENTIRE LENGTH OF THE SIDEWALK WHERE THE SIDEWALK IS FLUSH WITH THE STREET (DEPRESSED CURB OR FLUSH TRANSITION). IF IT IS NECESSARY TO CUT A UNIT(S) IN THE PROVISION OF A COMPLIANT RAMP OR SIDEWALK WITH 24" MINIMUM DEPTH OF DETECTABLE WARNING, THE UNITS SHALL BE CUT IN A NEAT AND WORKMAN LIKE MANNER PER MANUFACTURER'S REQUIREMENTS WITH A MINIMUM OF THREE PINS OR ANCHOR POINTS (WHERE APPLICABLE). THE UNITS SHALL BE ARRANGED SO THAT THE CUT UNITS ARE LARGE ENOUGH TO BE PROPERLY AND ADEQUATELY SECURED. CUT UNITS SHALL NOT BE USED UNLESS ALL OTHER DESIGN OPTIONS HAVE BEEN EXHAUSTED. THE USE OF SALVAGE PIECES FROM UNITS THAT ARE CUT WILL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE COMMISSIONER. CUT UNIT SALVAGE PIECES NOT APPROVED FOR USE MUST BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.

4. WHERE APPLICABLE, A COMBINATION OF STRAIGHT AND RADIAL DETECTABLE WARNING UNITS MAY BE USED ON COMPOUND AND LARGE RADII. CONTRACTOR MUST MAKE THIS DETERMINATION AND VERIFY IN FIELD.

5. THE DETECTABLE WARNING MUST CONTRAST WITH ADJACENT PAVEMENT. IF LIGHT COLORED PAVEMENT IS USED THE DETECTABLE WARNING COLOR SHALL BE RED. IF A DARK COLORED PAVEMENT IS USED THE DETECTABLE WARNING COLOR SHALL BE YELLOW. CONTRACTOR TO VERIFY THAT PROPER CONTRAST IS OBTAINED.

6. PRIOR TO PLACING CONCRETE FOR DEPRESSED CURBS, RAMPS, OR SIDEWALKS THE CONTRACTOR SHALL VERIFY THAT LAYOUT OR DESIGN COMPLIES WITH THE REQUIREMENTS OF THE CDOT ADA STANDARDS.

7. RAMP WIDTH MUST BE A MINIMUM OF 6'-0" AND IN INCREMENTS OF 1'-0", EXCEPT WHEN USING THE PERPENDICULAR RAMP AT CORNER (OR OTHER SPECIAL CDOT APPROVED CONDITIONS), WHICH HAS A MINIMUM WIDTH OF 4'-0".

8. THE MAXIMUM ALLOWABLE RAMP RUNNING SLOPE IS 1:14, MEASURED AT ANY PORTION OF THE RAMP. IF POSSIBLE, A MORE GRADUAL SLOPE SHALL BE USED. GRADE BREAKS AT THE TOP AND BOTTOM OF RAMPS SHALL BE PERPENDICULAR TO THE DIRECTION OF RAMP RUN.

9. THE MAXIMUM ALLOWABLE RAMP CROSS SLOPE IS 1:64, MEASURED AT ANY PORTION OF THE RAMP. IF POSSIBLE, A MORE GRADUAL SLOPE SHALL BE USED.

10. THE MAXIMUM ALLOWABLE RAMP LANDING SLOPE IS 1:64, MEASURED AT ANY LOCATION AND IN ANY DIRECTION ON THE LANDING. THE RAMP LANDING WIDTH SHALL MATCH THE FULL WIDTH OF THE RAMP FOR A MINIMUM UNOBSTRUCTED DEPTH OF 4'-0". RAMP LANDINGS SHALL BE PROVIDED AT THE TOP AND/OR BOTTOM OF RAMPS WHERE TURNING IS REQUIRED.

11. RAMP SIDE FLARES SHALL BE INSTALLED AT ANY LOCATION WHERE THE SURFACE ADJACENT TO THE RAMP SURFACE IS INTENDED FOR PEDESTRIAN USE. TRIPPING HAZARDS, INCLUDING STEPS, DROP-OFFS, OR CURBS SHALL NOT BE LOCATED WITHIN THE LIMITS OF THE SIDEWALK. RAMP SIDE FLARES ARE NOT REQUIRED WHERE THE SURFACE ADJACENT TO THE RAMP SURFACE IS LANDSCAPED OR IS OCCUPIED BY A BARRIER THAT BLOCKS PEDESTRIAN ACCESS. EXCEPTIONS TO THIS RULE MAY BE SUBMITTED TO THE COMMISSIONER FOR APPROVAL.

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CDOT
CHICAGO DEPARTMENT OF TRANSPORTATION

DATE	REVISION
02/20/07	REVISION 1
11/15/07	REVISION 2
11/14/08	REVISION 3
11/02/09	REVISION 4
08/10/12	REVISION 5

CITY OF CHICAGO
GENERAL NOTES
SHEET B-3-2

SCALE: NOT TO SCALE
DATE: 10/23/2006

DRAWN BY: CDOT
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GENERAL NOTES (CONTINUED):

12. UTILITIES, SUCH AS LIGHT POLES, TRAFFIC POLES AND HYDRANTS, MAY BE LOCATED IN THE FLARE OF THE RAMP BUT ARE NOT ALLOWED ON THE RAMP SURFACE OR LANDING AREAS. EXISTING UTILITY STRUCTURE LIDS MAY REMAIN WITHIN THE FLARE OR ON THE SURFACE OF THE RAMP IF THE REQUIREMENTS OF GENERAL NOTE #19 ARE MET.

13. ALL LOCATIONS WITH TYPE 4 OR TYPE B CURB (EXCEPT ALLEY APRONS) SHALL BE CONSTRUCTED AS CURB AND GUTTER TYPE BV.12 THROUGH THE LIMITS OF THE CORNER AND THE CURB RAMPS.

14. ALTERATIONS SHALL NOT DECREASE THE ACCESSIBILITY TO EXISTING FACILITIES, SIDEWALKS LEADING TO EXISTING FACILITIES, OR DOOR OR GATE ACCESS POINTS TO FACILITIES. THE ELEVATION AT THE EXISTING PROPERTY LINE OR FACILITY ACCESS POINT SHALL BE MAINTAINED AT A MINIMUM. ANY ALTERATIONS ADJACENT TO OR AFFECTING A FACILITY ACCESS POINT SHALL RESULT IN IMPROVED ACCESS OR AT A MINIMUM A REPLICATION OF EXISTING CONDITIONS, INCLUDING SIDEWALK SLOPES AND SURFACE CONDITIONS. FACILITIES INCLUDE, BUT ARE NOT LIMITED TO PRIVATE BUSINESSES, PUBLIC BUILDINGS, RESIDENCES, BUS STOPS, PUBLIC BENCHES, PAY PHONES, AND PARKING METERS.

15. THE MINIMUM CROSSWALK WIDTH IS 6'-0". CROSSWALKS SHALL BE LOCATED AS SHOWN IN THE PLAN SHEETS DEPENDING ON THE TYPE OF CURB RAMP USED. BEYOND THE CURB FACE AT THE BASE OF CURB RAMPS, A CLEAR SPACE OF 4'-0" BY 4'-0" MINIMUM SHALL BE PROVIDED WITHIN THE STRIPES OF THE CROSSWALK (WHERE PROVIDED).

16. IF SIDEWALK AND ALLEY ARE AT THE SAME GRADE, A RAMP IS NOT REQUIRED. IF SIDEWALK AND DRIVEWAY ARE AT THE SAME GRADE, A RAMP IS NOT REQUIRED BUT DETECTABLE WARNING UNITS ARE STILL REQUIRED IF THE DRIVEWAY HAS TRAFFIC CONTROL DEVICES (I.E. TRAFFIC SIGNALS).

17. MAIN LINE SIDEWALK SHALL HAVE A MAXIMUM CROSS SLOPE NOT TO EXCEED 1:64 FOR THE FULL WIDTH OF WALK UNLESS OTHERWISE APPROVED BY THE COMMISSIONER. WHERE TURNING IS REQUIRED AND WHERE SIDEWALKS INTERSECT, THE SLOPE OF THE SIDEWALK SHALL NOT EXCEED 1:64 IN ANY DIRECTION.

18. MAIN LINE SIDEWALK RUNNING SLOPES SHALL NOT EXCEED 1:24 OR THE GENERAL GRADE ESTABLISHED FOR THE ADJACENT STREET, WHICH EVER IS HIGHER.

19. THERE SHALL BE NO VERTICAL LEVEL DIFFERENCES BETWEEN SURFACES GREATER THAN 1/4" ON THE MAIN LINE SIDEWALK. THERE SHALL BE NO HORIZONTAL GAPS OR OPENINGS GREATER THAN 1/2" ON THE MAIN LINE SIDEWALK.

20. WHERE OBSTRUCTIONS EXIST ON THE MAINLINE SIDEWALK, THE CLEAR WIDTH OF USEABLE SIDEWALK SHALL NOT BE LESS THAN 4'-0". OBSTRUCTIONS INCLUDE, BUT ARE NOT LIMITED TO SIDEWALK BENCHES, FIRE HYDRANTS, SIGNAL OR LIGHT POLES, NEWSPAPER DISPENSERS, TRASH RECEPTACLES, AND UTILITY PEDESTALS.

21. CURB RAMPS AND LANDING (KEYSTONE) TO BE CONSTRUCTED WITH 8" THICK CONCRETE AT ALL TRAFFIC SIGNALIZED INTERSECTIONS AND INDUSTRIAL STREET INTERSECTIONS. AT ALL OTHER LOCATIONS, 5" THICK CONCRETE TO BE USED.

22. NO DEVIATIONS FROM THESE STANDARDS ARE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE COMMISSIONER.

23. DEPRESSED CURB, RAMP, OR SIDEWALK DESIGNS OR LAYOUTS SHALL MAINTAIN OR IMPROVE EXISTING DRAINAGE AND THE EXISTING INTERSECTION GEOMETRY SHALL NOT BE MODIFIED WITHOUT CDOT APPROVAL.

24. ALL CONSTRUCTION DOCUMENTS MUST BE STAMPED BY A LICENSED ARCHITECT/LANDSCAPE ARCHITECT/ENGINEER TO CERTIFY THAT THEY ARE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND ALL CODES AND BUILDING ORDINANCES OF THE CITY OF CHICAGO AND STATE OF ILLINOIS.

City of Chicago
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CDOT
CHICAGO DEPARTMENT OF TRANSPORTATION

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02/20/07	REVISION 1
11/15/07	REVISION 2
11/14/08	REVISION 3
11/02/09	REVISION 4
08/10/12	REVISION 5

CITY OF CHICAGO
GENERAL NOTES (CONTINUED)
SHEET B-3-3

SCALE: NOT TO SCALE
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ADA COMPLIANCE AND TRANSITION GUIDELINES

POLICY STATEMENT: ANY ALTERATION OF THE PUBLIC WAY MUST BE RESTORED IN AN ADA COMPLIANT MANNER

I. STREET RESURFACING / RECONSTRUCTION *

FOR ANY RESURFACING/RECONSTRUCTION PROJECT WHERE, WITHIN THE PROJECT LIMITS, A CROSSWALK IS ENCOUNTERED OR WHERE THE PROJECT LIMITS TERMINATE WITHIN 4' OR LESS OF A CROSSWALK, THOSE CROSSWALKS AND THE ASSOCIATED CURB RAMPS MUST BE IMPROVED TO CURRENT ADA STANDARDS. WHERE RESURFACING/RECONSTRUCTION ENCOUNTERS LESS THAN 1/4
POINT OF THE STREET SURFACE (LONGITUDINAL CUT), IT IS ACCEPTABLE PRACTICE TO EXCLUDE IMPROVEMENTS TO THE ASSOCIATED CROSSWALKS AND CURB RAMPS.

WHEN A PROJECT SCOPE OF WORK CALLS FOR ONLY AN INTERSECTION TO BE REPAVED, THE INTERSECTION LIMITS AS DEFINED BY THE AREA OUTLINED BY OUTERMOST CROSSWALK LINES AND ADJACENT CURB FACES AND ALL ADJOINING CROSSWALKS AND CURB RAMPS MUST BE IMPROVED TO CURRENT ADA STANDARDS.

WHEN A PROJECT SCOPE OF WORK IS LIMITED TO A SINGLE CORNER OF AN INTERSECTION, THE CURB RAMP MUST BE IMPROVED TO CURRENT ADA STANDARDS AND THE ADJACENT PAVEMENT MUST BE RESURFACED, AS NECESSARY TO PROVIDE FOR A FLUSH TRANSITION.

FOR ANY RESURFACING / RECONSTRUCTION PROJECT WHERE, WITHIN THE PROJECT LIMITS, AN ALLEY APRON IS ENCOUNTERED, THE ASSOCIATED CURB RAMPS, ALLEY APRON, AND SIDEWALKS MUST BE IMPROVED TO CURRENT ADA STANDARDS.

II. SIDEWALK INSTALLATION / REPAIRS / RECONSTRUCTION

THE LIMITS OF ANY MAINLINE SIDEWALK REPLACEMENT, GREATER THAN TEN FEET (10') IN LENGTH, THAT ABUT AN EXISTING RAMP LOCATION (INCLUDING THE FOUR FOOT (4') LANDING AREA AND/OR THE "KEYSTONE"), SHALL BE EXTENDED TO INCLUDE THE AFFECTED RAMPS AND THESE RAMPS SHALL BE RECONSTRUCTED TO CURRENT ADA STANDARDS. IN ADDITION, ALL NEWLY PLACED SIDEWALK TEN FEET (10') OR MORE IN LENGTH SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL CURRENT APPLICABLE STANDARDS WHICH INCLUDE PROVIDING A MINIMUM FOUR FEET (4') WIDTH ACCESSIBLE PATHWAY WITH A CROSS SLOPE NOT TO EXCEED 1:64.

III. GUIDELINES FOR TRANSITIONING TO EXISTING NON-COMPLIANT CONDITION

NEW SIDEWALK PLACEMENTS GREATER THAN TEN FEET IN CONTIGUOUS LENGTH:
THE LIMITS OF ANY MAINLINE SIDEWALK REPLACEMENT, GREATER THAN TEN FEET (10') IN LENGTH, MUST BE EXTENDED FOR A MINIMUM FIVE ADDITIONAL FEET (5') EITHER SIDE IN ORDER TO PROVIDE A REASONABLE TRANSITION TO MATCH THE EXISTING SIDEWALK. THE LENGTH OF TRANSITION SHALL BE LENGTHENED AS NECESSARY TO ENSURE THAT THE RUNNING SLOPE OF THE TRANSITION DOES NOT EXCEED A SLOPE OF 1:24 (PREFERRED) OR 1:14 (MAXIMUM) AT ANY POINT.

NEW SIDEWALK REPLACEMENTS TEN FEET OR LESS IN CONTIGUOUS LENGTH (REPAIRS):
IT IS ACCEPTABLE PRACTICE TO MATCH ADJACENT SIDEWALKS AT THE EXISTING SLOPE.

CURB RAMP REPLACEMENTS:
SIDEWALK REPLACEMENT BEYOND THE LIMITS OF THE LANDING AREA AND/OR THE "KEYSTONE" MUST BE EXTENDED A MINIMUM OF AN AN ADDITIONAL FIVE FEET (5') EITHER SIDE IN ORDER TO PROVIDE A REASONABLE TRANSITION TO MATCH THE EXISTING SIDEWALK. THE TRANSITION SHALL BE LENGTHENED AS NECESSARY TO ENSURE THAT THE RUNNING SLOPE OF THE TRANSITION DOES NOT EXCEED A SLOPE OF 1:24 (PREFERRED) OR 1:14 (MAXIMUM) AT ANY POINT.

NO EXCEPTIONS TO THE ABOVE WILL BE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE COMMISSIONER.

* THE REQUIREMENTS OF SECTION I. SHALL APPLY ONLY TO CITY AGENCIES

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Department of Transportation
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CDOT
CHICAGO DEPARTMENT OF TRANSPORTATION

DATE	REVISION
02/20/07	REVISION 1
11/15/07	REVISION 2
11/14/08	REVISION 3
11/02/09	REVISION 4
08/10/12	REVISION 5

CITY OF CHICAGO
ADA COMPLIANCE AND TRANSITION GUIDELINES
SHEET B-3-4

SCALE: NOT TO SCALE
DATE: 10/23/2006

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AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W25-sht-ADA-07	DESIGNED - BMC	REVISED -	
USER NAME = CzosnykaB	DRAWN - BMC	REVISED -	
PLOT SCALE = 1.0000 ' / in.	CHECKED - AFC	REVISED -	
PLOT DATE = 5/15/2013	DATE - 5/14/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

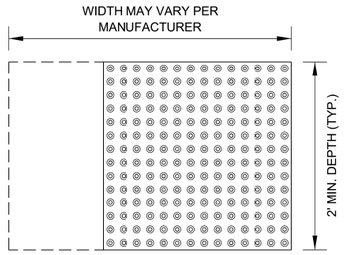
CITY OF CHICAGO
ADA STANDARDS

SCALE: N.T.S. | SHEET 4 OF 5 SHEETS | STA. | TO STA.

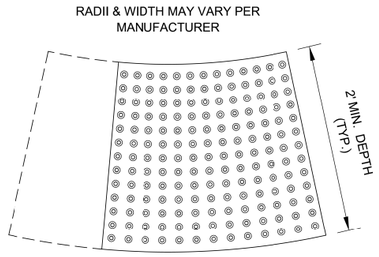
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	102
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		

FILE PATH = pw:\\3880039-pwint.aecomonline.local:PWAECOM00\Documents\01 Americas\Transportation\60269938 Circle\Phase II\000_CAD\006_Roadway\Sheets\60W25_Contract\D160W25-sht-ADA-07

STRAIGHT DETECTABLE WARNING UNITS



RADIAL DETECTABLE WARNING UNITS



DETECTABLE WARNING UNIT SIZES

- VERIFY ALL DIMENSIONS WITH THE PRODUCT MANUFACTURER.
- IF USING RADIAL UNITS, VERIFY THAT THE CURB RADIUS MATCHES AVAILABLE UNIT RADII WITH THE PRODUCT MANUFACTURER.
- APPROVED LIST OF DETECTABLE WARNING PRODUCTS CAN BE FOUND ON CDOT'S WEBSITE (www.cityofchicago.org).

City of Chicago
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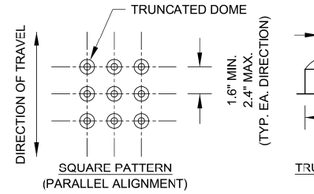
08/10/12	REVISION 5

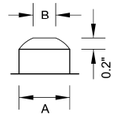
CITY OF CHICAGO
DETECTABLE WARNING UNIT SIZES
SHEET B-4-1

SCALE: NOT TO SCALE
DATE: 10/23/2006

DRAWN BY: CDOT
CHECKED BY: LCM

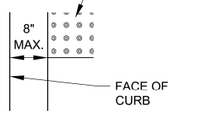
GENERAL NOTE:
THE ROWS OF DOMES IN THE DETECTABLE WARNING MATERIAL MUST BE ALIGNED WITH THE PATH OF WHEELCHAIR TRAVEL WHICH IS REQUIRED TO BE PERPENDICULAR TO THE GRADE BREAK AT THE BOTTOM OF THE RAMP TO PERMIT TRACKING BETWEEN DOME ROWS. ON BLENDED TRANSITIONS OR FLUSH TRANSITIONS, WHERE RADIAL UNITS ARE SITUATED ABOUT THE CURB RADIUS, DOME ORIENTATION IS NOT SIGNIFICANT.





A = 0.9" MIN. 1.4 MAX.
B = 50% OF (A) MIN. 65% OF (A) MAX.

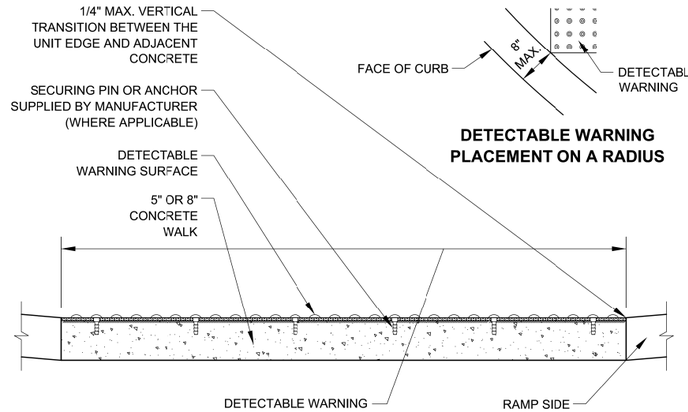
TRUNCATED DOME DETAIL



UNIT PATTERN & DOME DETAIL

TYPICAL DETECTABLE WARNING PLACEMENT

DETECTABLE WARNING PLACEMENT ON A RADIUS



DETECTABLE WARNING UNIT SECTION

City of Chicago
Rahm Emanuel, Mayor
Department of Transportation
Division of Engineering
www.cityofchicago.org

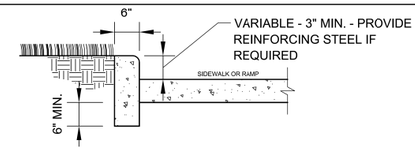
CDOT
CHICAGO DEPARTMENT OF TRANSPORTATION

DATE	REVISION
02/20/07	REVISION 1
11/15/07	REVISION 2
11/14/08	REVISION 3
11/02/09	REVISION 4
08/10/12	REVISION 5

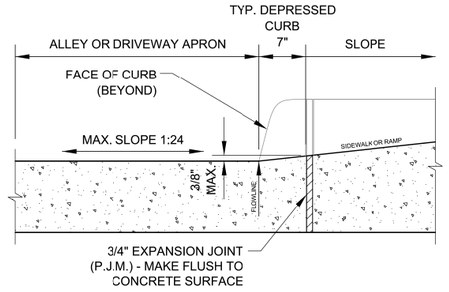
CITY OF CHICAGO
DETECTABLE WARNING UNIT DETAILS
SHEET B-4-2

SCALE: NOT TO SCALE
DATE: 10/23/2006

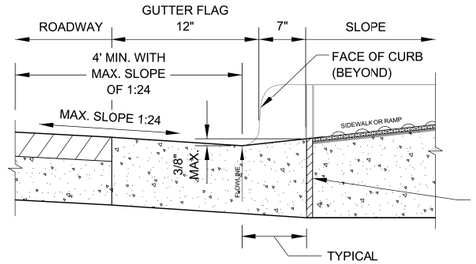
DRAWN BY: CDOT
CHECKED BY: LCM



SIDE CURB - SECTION



DEPRESSED CURB & GUTTER
AT ALLEY/DRIVEWAY APRON (TYPE 4 OR B CURB)



DEPRESSED CURB & GUTTER
AT BOTTOM OF TYPICAL CURB RAMP

NOTES FOR CURB & GUTTER DETAILS THIS SHEET:

A. CROSS SLOPE AT DEPRESSED CURB & GUTTER NOT TO EXCEED 1:64.

B. DETECTABLE WARNING SURFACE AT DRIVEWAYS REQUIRED ONLY FOR COMMERCIAL DRIVEWAYS WITH TRAFFIC CONTROL DEVICES, I.E. SIGNALS.

C. REFER TO *REGULATIONS FOR OPENINGS, CONSTRUCTION AND REPAIR IN THE PUBLIC WAY (CDOT)* FOR ADDITIONAL REQUIREMENTS FOR CURB AND GUTTER INSTALLATION.

D. RAMP SIDE FLARES SHALL BE INSTALLED AT ANY LOCATION WHERE THE SURFACE ADJACENT TO THE RAMP SURFACE IS INTENDED FOR PEDESTRIAN USE. TRIPPING HAZARDS, INCLUDING STEPS, DROP-OFFS, OR SIDE CURBS SHALL NOT BE LOCATED WITHIN THE LIMITS OF THE SIDEWALK.

E. 'P.J.M.' THIS SHEET REFERS TO PREFORMED JOINT MATERIAL.

City of Chicago
Rahm Emanuel, Mayor
Department of Transportation
Division of Engineering
www.cityofchicago.org

CDOT
CHICAGO DEPARTMENT OF TRANSPORTATION

DATE	REVISION
02/20/07	REVISION 1
11/15/07	REVISION 2
11/14/08	REVISION 3
11/02/09	REVISION 4
08/10/12	REVISION 5

CITY OF CHICAGO
CURB & GUTTER DETAILS
SHEET B-4-3

SCALE: NOT TO SCALE
DATE: 10/23/2006

DRAWN BY: CDOT
CHECKED BY: LCM

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W25-sht-ADA-08	DESIGNED - BMC	REVISED -
USER NAME = CzosnykaB	DRAWN - BMC	REVISED -
PLOT SCALE = 1.0000 ' / in.	CHECKED - AFC	REVISED -
PLOT DATE = 5/15/2013	DATE - 5/14/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO
ADA STANDARDS

SCALE: N.T.S. | SHEET 5 OF 5 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	103
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		

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PAVEMENT MARKING SCHEDULE

LOCATION	STATION	TO	STATION	TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS	TEMPORARY PAVEMENT MARKING - LINE 4"	TEMPORARY PAVEMENT MARKING - LINE 6"	TEMPORARY PAVEMENT MARKING - LINE 8"	TEMPORARY PAVEMENT MARKING - LINE 24"	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	EPOXY PAVEMENT MARKING - LINE 4"	EPOXY PAVEMENT MARKING - LINE 5"	EPOXY PAVEMENT MARKING - LINE 6"	EPOXY PAVEMENT MARKING - LINE 8"	EPOXY PAVEMENT MARKING - LINE 12"	POLYUREA PAVEMENT MARKING TYPE I - LETTERS AND SYMBOLS	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	POLYUREA PAVEMENT MARKING TYPE I - LINE 6"	POLYUREA PAVEMENT MARKING TYPE I - LINE 12"	POLYUREA PAVEMENT MARKING TYPE I - LINE 24"
				SQ FT	FOOT	FOOT	FOOT	FOOT	SQ FT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	SQ FT	FOOT	FOOT	FOOT	FOOT
LOCAL ROADS	3600+65	TO	3608+20	73	203	238	-	50	284	743	1469	29	328	-	-	-	-	-	78	936	1039	54	139
INTERSTATE AND RAMPS	323+00	TO	332+00	-	-	-	-	-	-	23	-	-	19	900	225		-	18	-	-	-	-	-
	332+00	TO	347+00	67	630	52	297	23	-	-	-	-	-	2851	1025	38	205	92	-	-	-	-	-
	347+00	TO	362+00	-	-	-	-	-	-	-	-	-	-	3053	587	-	189	-	-	-	-	-	-
	362+00	TO	365+00	-	-	-	-	-	-	-	-	-	-	300	75	-	-	-	-	-	-	-	-
			TOTALS	140	833	290	297	73	284	766	1469	29	347	7104	1912	38	394	110	78	936	1039	54	139

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AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W25-sht-Pmk-Sign-00	DESIGNED - BMC	REVISED -	
USER NAME = chiua	DRAWN - BMC	REVISED -	
PLOT SCALE = 50.0000 ' / in.	CHECKED - AFC	REVISED -	
PLOT DATE = 6/13/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING SCHEDULE

SCALE: | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	104
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

SIGNING SCHEDULE

LOCATION	SIGN NO.	LEGEND / DESCRIPTION	LOCATION (STA / OFF)		EXISTING PANEL DIMENSIONS		PROPOSED PANEL DIMENSIONS		REMOVE SIGN PANEL - TYPE 1	REMOVE SIGN PANEL - TYPE 2	REMOVE SIGN PANEL - TYPE 3	REMOVE SIGN PANEL ASSEMBLY - TYPE A	REMOVE SIGN PANEL ASSEMBLY - TYPE B	REMOVE AND REPLACE SIGN AND SUPPORTS	SIGN PANEL TYPE 1	SIGN PANEL TYPE 1 (SPECIAL)	SIGN PANEL TYPE 2	SIGN PANEL TYPE 3	METAL POST - TYPE A	TELESCOPING STEEL SIGN SUPPORT
			EXISTING	PROPOSED	WIDTH (FT)	HEIGHT (FT)	WIDTH (FT)	HEIGHT (FT)	(SQ FT)	(SQ FT)	(SQ FT)	(EACH)	(EACH)	(EACH)	(SQ FT)	(SQ FT)	(SQ FT)	(SQ FT)	(FOOT)	(FOOT)
MORGAN ST.	NB-01-LP	STREET NAME (GROUND) - MORGAN (D3-1)	3602+74.66, 25.87' RT	3602+73.00, 25.30' RT	3.00	0.56	3.50	0.67	1.68							2.34				
	NB-02-LP	STREET NAME (GROUND) - CONGRESS (D3-1)			3.00	0.56	4.50	0.67	1.68							3				
	NB-03-LP	NO PARKING (R7-201-4)	3603+48.97, 22.77' RT	3603+43.00, 21.00' RT	1.50	1.50	1.50	1.50	2.25							2.25				
	NB-04-SP	NO RIGHT TURN (R3-1)	3605+55.05, 22.71' RT	3605+57.00, 21.23' RT	2.00	2.00	2.00	2.00	4.00						4					
	NB-05-SP	NO LEFT TURN (R3-2)			2.00	2.00	2.00	2.00	4.00						4					
	NB-06-SA	NO RIGHT TURN (R3-1)	-	3606+13.93, 13.23'			2.00	2.00							4					
	NB-07-SP	NO PARKING (R7-201-4)	3606+08.83, 23.88' RT	3606+13.61, 24.98' RT	1.50	1.50	1.50	1.50	2.25							2.25				
	NB-08-SA	STREET NAME OVERHEAD - MORGAN (D3-2)	3606+24.83, 23.88' RT	3606+25.36, 25.30' RT	1.50	4.00	1.50	4.00	6.00							6				
	SB-01-SA	STREET NAME OVERHEAD - MORGAN (D3-2)	-	3606+44.40, 25.37 LT			1.50	4.00								6				
	SB-02-SA	NO LEFT TURN (R3-2)	-	3606+03.34, 12.67' LT	2.00	2.00	2.00	2.00	4.00						4					
	SB-03-SA	STREET NAME OVERHEAD - TILDEN (D3-2)	3606+03.24, 9.80' LT		1.50	4.00	1.50	4.00	6.00							6				
	SB-04-SA	STREET NAME OVERHEAD - MORGAN (D3-2)	3605+91.24, 25.80' LT	3605+88.91, 24.81' LT	1.50	4.00	1.50	4.00	6.00							6				
	SB-05-SP	NO PARKING (R7-201-4)	3606+03.24, 25.80' LT	3606+03.65, 24.41' LT	1.50	1.50	1.50	1.50	2.25							2.25				
	SB-06-SP	THE SHRINE OF OUR LADY OF POMPEII	3605+58.41, 23.69' LT	3605+57.00, 21.00' LT	2.00	2.00	2.00	2.00	4.00						4					
	SB-07-LP	STREET NAME (GROUND) - MORGAN (D3-1)	3603+52.64, 23.54' LT	3603+43.00, 21.00' LT	3.00	0.56	3.50	0.67	1.68							2.34				
	SB-08-LP	STREET NAME (GROUND) - CONGRESS (D3-1)			3.00	0.56	4.50	0.67	1.68							3				
	SB-09-LP	NO PARKING (R7-201-4)			1.50	1.50	1.50	1.50	2.25							2.25				
	SB-10-MP	ONE-WAY (R6-2L)	3603+29.72, 24.89' LT	3603+29.17, 24.87' LT	1.50	2.00	1.50	2.00				1			3				13	
	SB-11-MP	ONE-WAY (R6-2R)			1.50	2.00	1.50	2.00							3					
	SB-12-LP	ONE-WAY (R6-2L)	3602+74.19, 25.96' LT	3602+73.00, 26.58' LT	1.50	2.00	1.50	2.00	3.00						3					
	SB-13-LP	ONE-WAY (R6-2R)	-				1.50	2.00							3					
	SB-14-LP	NO PARKING (R7-201-4)	3602+74.19, 25.96' LT	3602+10.76, 26.58' LT	1.50	1.50	1.50	1.50	2.25							2.25				
CONGRESS PKWY.	CP-01-LP	NO PARKING (R7-201-4)	3305+92.55, 14.21' RT	3305+96.40, 14.58' RT	1.50	1.50	1.50	1.50	2.25							2.25				
	CP-02-MP	STOP (R1-1)	3306+44.65, 15.06' RT	3306+45.00, 14.75' RT	2.50	2.50	2.50	2.50				1			6.25				13	
	CP-03-MP	STOP (R1-1)	-	3306+45.00, 14.75' LT			2.50	2.50							6.25				13	
MORGAN ST. EXIT RAMP	MX-01-TS	RAMP 30 MPH (W13-3)	1002+07.42, 9.87' RT	1002+07.07, 15.96' RT	4.00	5.00	4.00	5.00					1				20			18
	MX-02-RR	EXIT 29B (E5-1a)	1002+88.11, 25.21' LT	1002+90.00, 25.05' LT	4.00	4.00								1						
	MX-03-MP	CHICAGO EXPY. KEEP THEM CLEAN	1003+95.14, 12.00' RT	-	1.50	2.00						1								
	MX-04-TS	WRONG WAY (R5-1a)	1004+84.53, 25.40' LT	1004+85.00, 14.77' RT	3.00	2.00	3.00	2.00							6					
	MX-05-TS	LT ONLY / DUAL TURN		-	2.50	2.50						1								13
	MX-06-TS	LT ONLY / RT ONLY (R3-8)	-	1004+85.00, 14.77' RT			2.50	2.50							6.25					
	MX-07-TS	WRONG WAY (R5-1a)	1004+84.34, 14.50' RT	-	3.00	2.00						1								
	MX-08-MP	NO DUMPING	1005+84.44, 27.24' LT	-	1.50	2.00						1								
	MX-09-SP	NO TURN ON RED (R10-11a)	1005+90.66, 8.00' RT	1005+90.40, 16.12' RT	1.50	2.00	2.00	2.50		12							12			
	MX-10-SP	DO NOT ENTER (R5-1)			2.50	2.50	2.50	2.50	6.25						6.25					
	MX-11-TS	ST. IGNATIUS HISTORIC LANDMARK	1005+94.19, 27.30' LT	1005+88.57, 13.87' LT	2.00	2.00	2.00	2.00							4					
	MX-12-TS	DO NOT ENTER (R5-1)			2.50	2.50	2.50	2.50				1			6.25					13
WB I-290	WB-01-BM	DAMEN AVE. - 1 MILE	339+67.24, 11.66' RT	-	15.50	8.50					131.75									
	WB-02-BM	ASHLAND AVE. / PAULINA ST. - 1/2 MILE	339+66.02, 6.06' LT	-	17.00	10.50					178.5									
	WB-03-BM	ASHLAND AVE. - 1/2 MILE	-	339+66.00, 18.00' LT			17.00	8.50										144.5		
	WB-04-BM	MORGAN ST. BRIDGE PLAQUE	339+64.95, 26.59' LT	339+64.50, 36.00' LT	6.00	2.50	6.00	2.50		15							15			
	WB-05-BM	DAMEN AVE. - 3/4 MILE	-	325+68.62, 8.12' LT			15.50	8.50										131.75		
	WB-06-BM	ASHLAND AVE. - 1/4 MILE	-	325+65.06, 20.30' LT			17.00	8.50										144.5		
EB I-290	EB-01-BM	MORGAN ST. BRIDGE PLAQUE	339+14.82, 49.82' RT	339+15.00, 50.00' RT	6.00	2.50	6.00	2.50		15							15			
				TOTALS					64	42	311	7	1	1	74	49	62	420.75	39	44

SIGN NUMBERING CODE EXAMPLE

NB-03-LP

DIRECTION OF TRAFFIC

NB - NORTHBOUND MORGAN ST.
SB - SOUTHBOUND MORGAN ST.
WB - WESTBOUND I-290
EB - EASTBOUND I-290
CP - CONGRESS PARKWAY
MX - MORGAN ST. EXIT RAMP

SIGN PANEL NUMBER

MOUNTING TYPE

MP - METAL POST
TS - TELESCOPING STEEL
RR - REMOVE AND REPLACE
LP - LIGHT POLE BANDING
SP - SIGNAL POLE BANDING
SA - SIGNAL POLE MAST ARM
BM - BRIDGE MOUNTED

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W25-sht-Pmk-Sign-00a	DESIGNED - BMC	REVISED -	
USER NAME = chiua	DRAWN - BMC	REVISED -	
PLOT SCALE = 50.0000 ' / in.	CHECKED - AFC	REVISED -	
PLOT DATE = 6/13/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING SCHEDULE

SCALE: | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	105
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		

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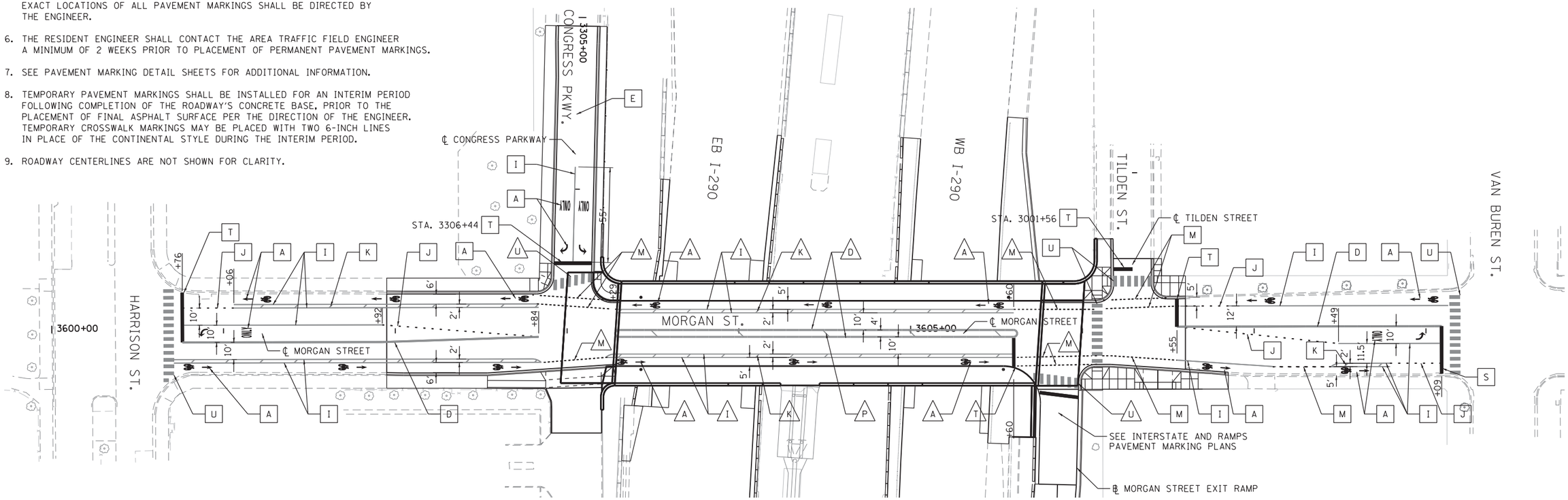
PAVEMENT MARKING NOTES

1. ALL FINAL PAVEMENT MARKING MATERIALS PLACED ON PCC PAVEMENT SHALL BE POLYUREA TYPE I EXCEPT WHERE NOTED IN THE PLANS.
2. ALL FINAL PAVEMENT MARKING MATERIALS PLACED ON BITUMINOUS PAVEMENT SHALL BE THERMOPLASTIC EXCEPT WHERE NOTED IN THE PLANS.
3. ALL FINAL PAVEMENT MARKING SYMBOLS SHALL BE OF SMALL SIZE.
4. ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE OF THE IMPROVEMENT LIMITS SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RECORD AND RETAIN ALL EXISTING PAVEMENT MARKINGS AND MARKERS FOR FUTURE REFERENCE. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE DIRECTED BY THE ENGINEER.
6. THE RESIDENT ENGINEER SHALL CONTACT THE AREA TRAFFIC FIELD ENGINEER A MINIMUM OF 2 WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
7. SEE PAVEMENT MARKING DETAIL SHEETS FOR ADDITIONAL INFORMATION.
8. TEMPORARY PAVEMENT MARKINGS SHALL BE INSTALLED FOR AN INTERIM PERIOD FOLLOWING COMPLETION OF THE ROADWAY'S CONCRETE BASE, PRIOR TO THE PLACEMENT OF FINAL ASPHALT SURFACE PER THE DIRECTION OF THE ENGINEER. TEMPORARY CROSSWALK MARKINGS MAY BE PLACED WITH TWO 6-INCH LINES IN PLACE OF THE CONTINENTAL STYLE DURING THE INTERIM PERIOD.
9. ROADWAY CENTERLINES ARE NOT SHOWN FOR CLARITY.



LEGEND

PAVEMENT MARKING MATERIAL

- ◯ EPOXY PAVEMENT MARKING
- ◇ TEMPORARY PAVEMENT MARKING
- □ THERMOPLASTIC PAVEMENT MARKING
- △ POLYUREA PAVEMENT MARKING TYPE I

PAVEMENT MARKING TYPE

- A - LETTERS AND SYMBOLS (WHITE)
- B - 4" WHITE EDGE LINE
- C - 4" YELLOW LINE
- D - 4" DOUBLE YELLOW CENTERLINE
- E - 4" WHITE (6' DASH, 18' SKIP)
- F - 4" YELLOW (6' DASH, 18' SKIP)
- G - 4" WHITE (2' DASH, 6' SKIP)
- H - 5" WHITE (10' DASH, 30' SKIP)
- I - 6" WHITE SOLID LINE
- J - 6" WHITE (2' DASH, 6' SKIP)
- K - 6" WHITE 45° DIAGONALS SPACED @ 20' CENTERS
- L - 8" WHITE EDGE LINE
- M - 12" WHITE (2' DASH, 2' SKIP)
- N - 12" WHITE 45° DIAGONALS SPACED @ 20' CENTERS
- O - 12" WHITE 45° DIAGONALS SPACED @ 30' CENTERS
- P - 12" WHITE 45° DIAGONALS SPACED @ 500' CENTERS
- Q - 12" YELLOW 45° DIAGONALS SPACED @ 50' CENTERS
- R - 12" YELLOW 45° DIAGONALS SPACED @ 500' CENTERS
- S - 12" WHITE CHEVRONS SPACED @ 30' CENTERS
- T - 24" WHITE STOP BAR
- U - 24" WHITE CROSSWALK, 6' WIDTH, SPACED @ 4' CENTERS
- Y - RAISED REFLECTIVE PAVEMENT MARKER (1-WAY YELLOW / OPAQUE)
- Z - RAISED REFLECTIVE PAVEMENT MARKER (1-WAY CRYSTAL / OPAQUE)

GRAPHIC SCALE
0 30 60 90 120
FEET

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W25-sht-Pmk-Sign-01	DESIGNED - BMC	REVISED -	
USER NAME = chiua	DRAWN - BMC	REVISED -	
PLOT SCALE = 30.0000 ' / in.	CHECKED - AFC	REVISED -	
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLANS
LOCAL ROADS

SCALE: 1" = 30' | SHEET 1 OF 5 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	106
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

FILE PATH = pw:\\388039-pwint.aecomonline.local:PWAECOM00\Documents\01 Americas\Transportation\60269938 Circle\Phase II\800.CAD\006.Roadway\Sheets\160W25_Contract\D160W25-sht-Pmk-Sign-01

PAVEMENT MARKING NOTES

1. ALL FINAL PAVEMENT MARKING MATERIALS PLACED ON PCC PAVEMENT SHALL BE POLYUREA TYPE I EXCEPT WHERE NOTED IN THE PLANS.
2. ALL FINAL PAVEMENT MARKING MATERIALS PLACED ON BITUMINOUS PAVEMENT SHALL BE THERMOPLASTIC EXCEPT WHERE NOTED IN THE PLANS.
3. ALL FINAL PAVEMENT MARKING SYMBOLS SHALL BE OF SMALL SIZE.
4. ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE OF THE IMPROVEMENT LIMITS SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RECORD AND RETAIN ALL EXISTING PAVEMENT MARKINGS AND MARKERS FOR FUTURE REFERENCE. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE DIRECTED BY THE ENGINEER.
6. THE RESIDENT ENGINEER SHALL CONTACT THE AREA TRAFFIC FIELD ENGINEER A MINIMUM OF 2 WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
7. MAINLINE AND RAMP LANE WIDTHS ARE 12' AND 11', RESPECTIVELY, UNLESS OTHERWISE NOTED.
8. SEE PAVEMENT MARKING DETAIL SHEETS FOR ADDITIONAL INFORMATION.
9.

LEGEND

PAVEMENT MARKING MATERIAL

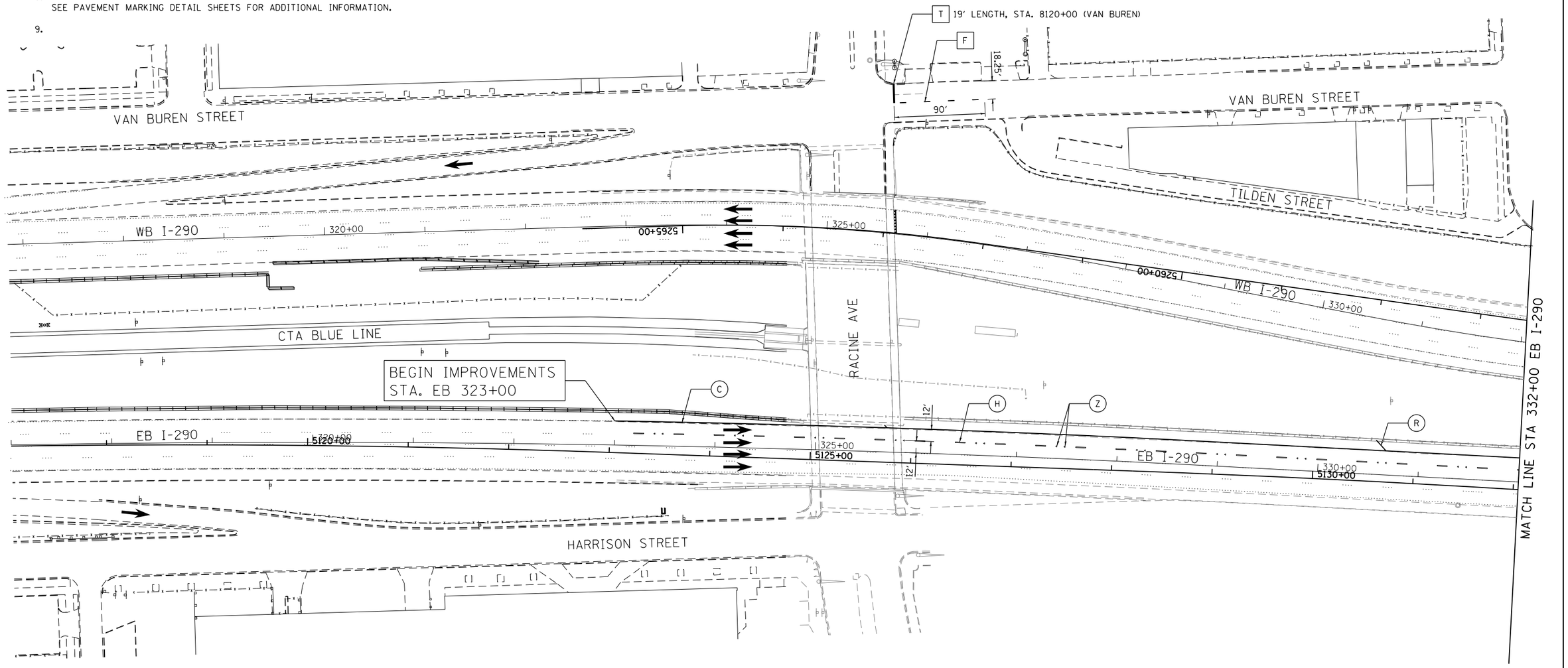
- ○ EPOXY PAVEMENT MARKING
- ◇ TEMPORARY PAVEMENT MARKING
- □ THERMOPLASTIC PAVEMENT MARKING
- △ POLYUREA PAVEMENT MARKING TYPE I

PAVEMENT MARKING TYPE

A - LETTERS AND SYMBOLS (WHITE)
B - 4" WHITE EDGE LINE
C - 4" YELLOW LINE
D - 4" DOUBLE YELLOW CENTERLINE
E - 4" WHITE (6' DASH, 18' SKIP)
F - 4" YELLOW (6' DASH, 18' SKIP)
G - 4" WHITE (2' DASH, 6' SKIP)
H - 5" WHITE (10' DASH, 30' SKIP)
I - 6" WHITE SOLID LINE
J - 6" WHITE (2' DASH, 6' SKIP)
K - 6" WHITE 45° DIAGONALS SPACED @ 20' CENTERS
L - 8" WHITE EDGE LINE
M - 12" WHITE (2' DASH, 2' SKIP)
N - 12" WHITE 45° DIAGONALS SPACED @ 20' CENTERS
O - 12" WHITE 45° DIAGONALS SPACED @ 30' CENTERS
P - 12" WHITE 45° DIAGONALS SPACED @ 500' CENTERS
Q - 12" YELLOW 45° DIAGONALS SPACED @ 50' CENTERS
R - 12" YELLOW 45° DIAGONALS SPACED @ 500' CENTERS
S - 12" WHITE CHEVRONS SPACED @ 30' CENTERS
T - 24" WHITE STOP BAR
U - 24" WHITE CROSSWALK, 6' WIDTH, SPACED @ 4' CENTERS
Y - RAISED REFLECTIVE PAVEMENT MARKER (1-WAY YELLOW / OPAQUE)
Z - RAISED REFLECTIVE PAVEMENT MARKER (1-WAY CRYSTAL / OPAQUE)

N

GRAPHIC SCALE
0 25 50 100
FEET



AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W25-sht-Pmk-Sign-02	DESIGNED - BMC	REVISED -
USER NAME = CzosnykaB	DRAWN - BMC	REVISED -
PLOT SCALE = 50.0000 ' / in.	CHECKED - AFC	REVISED -
PLOT DATE = 5/15/2013	DATE - 5/14/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLANS
INTERSTATE AND RAMPS

SCALE: 1" = 50' | SHEET 2 OF 5 SHEETS | STA. 323+00 TO STA. 332+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	107
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

FILE PATH = pw:\380039-pwint.aecomonline.local:PWAECOM00\Documents\01 Americas\Transportation\60269938 Circle\Phase II\002.CAD\006.Roadway\Sheets\60W25_Contract\D160W25-sht-Pmk-Sign-02

PAVEMENT MARKING NOTES

1. ALL FINAL PAVEMENT MARKING MATERIALS PLACED ON PCC PAVEMENT SHALL BE POLYUREA TYPE I EXCEPT WHERE NOTED IN THE PLANS.
2. ALL FINAL PAVEMENT MARKING MATERIALS PLACED ON BITUMINOUS PAVEMENT SHALL BE THERMOPLASTIC EXCEPT WHERE NOTED IN THE PLANS.
3. ALL FINAL PAVEMENT MARKING SYMBOLS SHALL BE OF SMALL SIZE.
4. ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE OF THE IMPROVEMENT LIMITS SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RECORD AND RETAIN ALL EXISTING PAVEMENT MARKINGS AND MARKERS FOR FUTURE REFERENCE. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE DIRECTED BY THE ENGINEER.
6. THE RESIDENT ENGINEER SHALL CONTACT THE AREA TRAFFIC FIELD ENGINEER A MINIMUM OF 2 WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
7. PARTIAL STATIONS PROVIDED REFER TO MAINLINE I-290 UNLESS OTHERWISE NOTED.
8. MAINLINE AND RAMP LANE WIDTHS ARE 12' AND 11', RESPECTIVELY, UNLESS OTHERWISE NOTED.
9. SEE PAVEMENT MARKING DETAIL SHEETS FOR ADDITIONAL INFORMATION.

LEGEND

PAVEMENT MARKING MATERIAL

- ○ EPOXY PAVEMENT MARKING
- ◇ TEMPORARY PAVEMENT MARKING
- □ THERMOPLASTIC PAVEMENT MARKING
- △ POLYUREA PAVEMENT MARKING TYPE I

PAVEMENT MARKING TYPE

A - LETTERS AND SYMBOLS (WHITE)
B - 4" WHITE EDGE LINE
C - 4" YELLOW LINE
D - 4" DOUBLE YELLOW CENTERLINE
E - 4" WHITE (6' DASH, 18' SKIP)
F - 4" YELLOW (6' DASH, 18' SKIP)
G - 4" WHITE (2' DASH, 6' SKIP)
H - 5" WHITE (10' DASH, 30' SKIP)
I - 6" WHITE SOLID LINE
J - 6" WHITE (2' DASH, 6' SKIP)
K - 6" WHITE 45° DIAGONALS SPACED @ 20' CENTERS
L - 8" WHITE EDGE LINE
M - 12" WHITE (2' DASH, 2' SKIP)
N - 12" WHITE 45° DIAGONALS SPACED @ 20' CENTERS
O - 12" WHITE 45° DIAGONALS SPACED @ 30' CENTERS
P - 12" WHITE 45° DIAGONALS SPACED @ 500' CENTERS
Q - 12" YELLOW 45° DIAGONALS SPACED @ 50' CENTERS
R - 12" YELLOW 45° DIAGONALS SPACED @ 500' CENTERS
S - 12" WHITE CHEVRONS SPACED @ 30' CENTERS
T - 24" WHITE STOP BAR
U - 24" WHITE CROSSWALK, 6' WIDTH, SPACED @ 4' CENTERS
Y - RAISED REFLECTIVE PAVEMENT MARKER (1-WAY YELLOW / OPAQUE)
Z - RAISED REFLECTIVE PAVEMENT MARKER (1-WAY CRYSTAL / OPAQUE)

N

GRAPHIC SCALE
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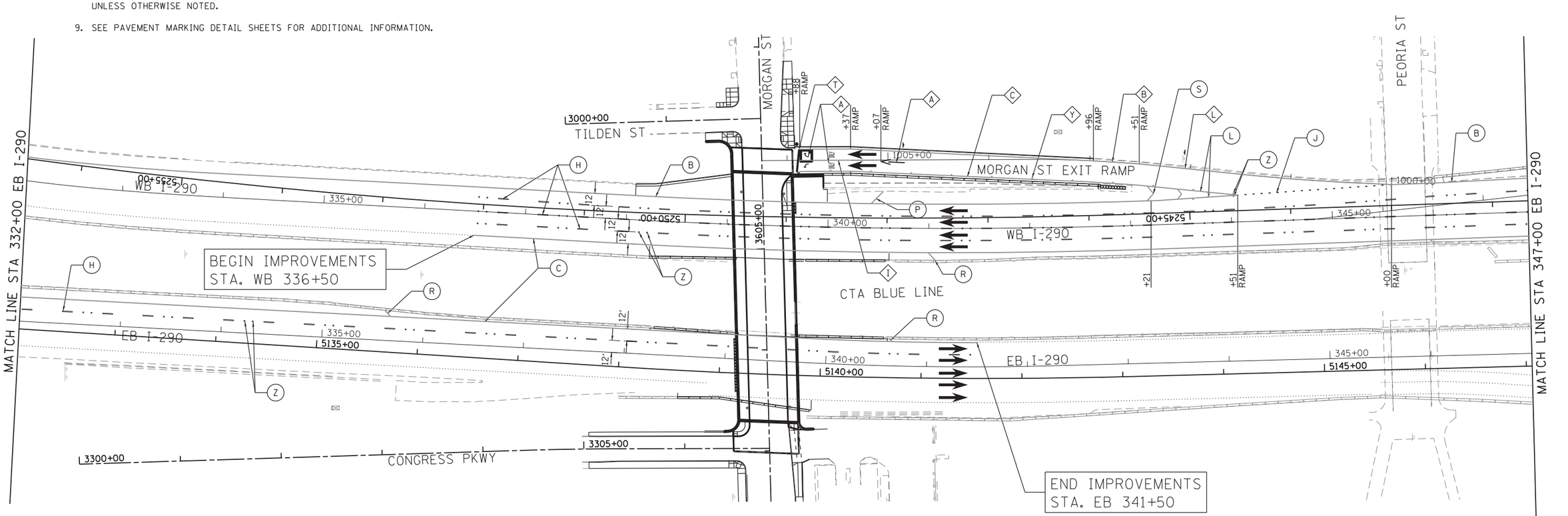
FEET



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AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

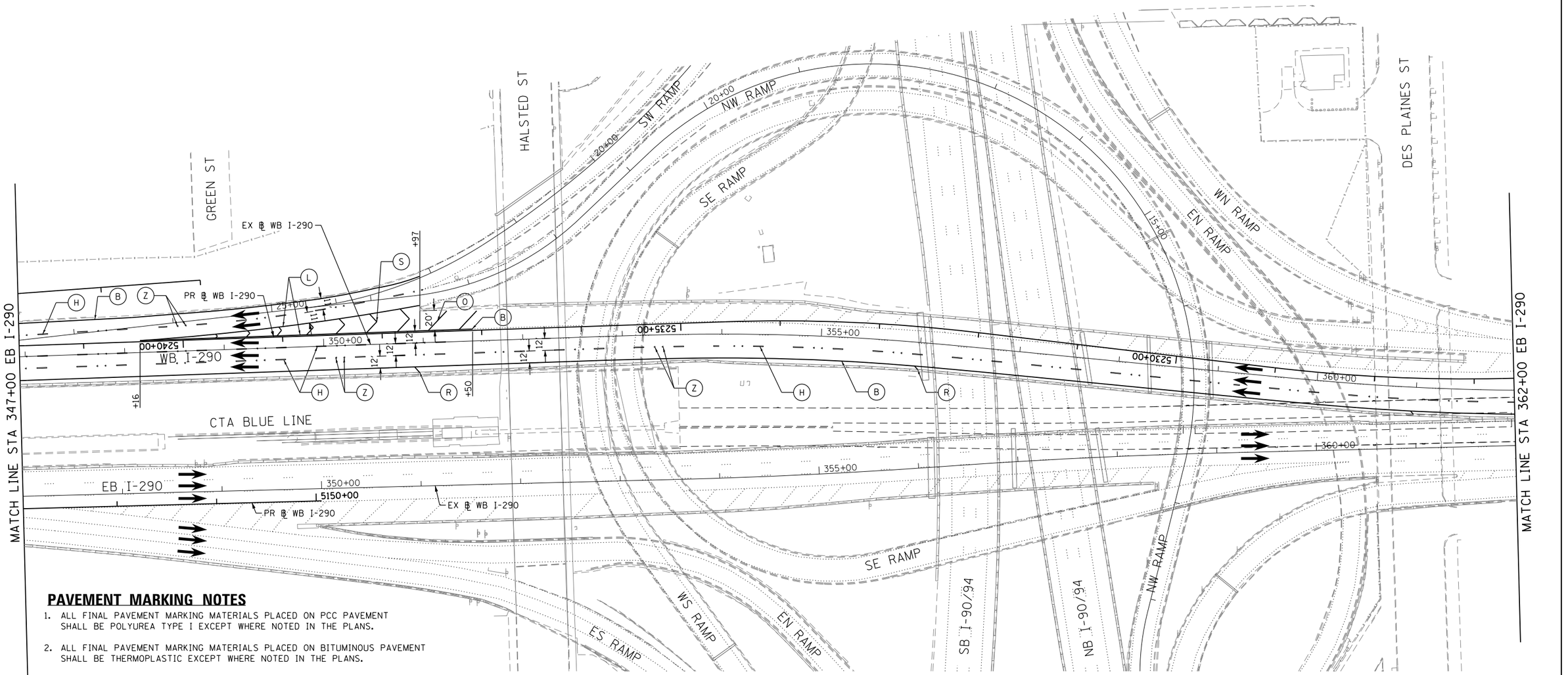
D160W25-sht-Pmk-Sign-03	DESIGNED - BMC	REVISED -	
USER NAME = chiua	DRAWN - BMC	REVISED -	
PLOT SCALE = 50.0000 ' / in.	CHECKED - AFC	REVISED -	
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLANS
INTERSTATE AND RAMPS

SCALE: 1" = 50' | SHEET 3 OF 5 SHEETS | STA. 332+00 | TO STA. 347+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	108
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



PAVEMENT MARKING NOTES

1. ALL FINAL PAVEMENT MARKING MATERIALS PLACED ON PCC PAVEMENT SHALL BE POLYUREA TYPE I EXCEPT WHERE NOTED IN THE PLANS.
2. ALL FINAL PAVEMENT MARKING MATERIALS PLACED ON BITUMINOUS PAVEMENT SHALL BE THERMOPLASTIC EXCEPT WHERE NOTED IN THE PLANS.
3. ALL FINAL PAVEMENT MARKING SYMBOLS SHALL BE OF SMALL SIZE.
4. ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE OF THE IMPROVEMENT LIMITS SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RECORD AND RETAIN ALL EXISTING PAVEMENT MARKINGS AND MARKERS FOR FUTURE REFERENCE. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE DIRECTED BY THE ENGINEER.
6. THE RESIDENT ENGINEER SHALL CONTACT THE AREA TRAFFIC FIELD ENGINEER A MINIMUM OF 2 WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
7. PARTIAL STATIONS PROVIDED REFER TO MAINLINE I-290 UNLESS OTHERWISE NOTED.
8. MAINLINE AND RAMP LANE WIDTHS ARE 12' AND 11', RESPECTIVELY, UNLESS OTHERWISE NOTED.
9. SEE PAVEMENT MARKING DETAIL SHEETS FOR ADDITIONAL INFORMATION.

LEGEND

PAVEMENT MARKING MATERIAL

- ○ EPOXY PAVEMENT MARKING
- ◇ TEMPORARY PAVEMENT MARKING
- □ THERMOPLASTIC PAVEMENT MARKING
- △ POLYUREA PAVEMENT MARKING TYPE I

PAVEMENT MARKING TYPE

A - LETTERS AND SYMBOLS (WHITE)

B - 4" WHITE EDGE LINE
C - 4" YELLOW LINE
D - 4" DOUBLE YELLOW CENTERLINE
E - 4" WHITE (6' DASH, 18' SKIP)
F - 4" YELLOW (6' DASH, 18' SKIP)
G - 4" WHITE (2' DASH, 6' SKIP)

H - 5" WHITE (10' DASH, 30' SKIP)

I - 6" WHITE SOLID LINE
J - 6" WHITE (2' DASH, 6' SKIP)
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L - 8" WHITE EDGE LINE

M - 12" WHITE (2' DASH, 2' SKIP)
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O - 12" WHITE 45° DIAGONALS SPACED @ 30' CENTERS
P - 12" WHITE 45° DIAGONALS SPACED @ 500' CENTERS
Q - 12" YELLOW 45° DIAGONALS SPACED @ 50' CENTERS
R - 12" YELLOW 45° DIAGONALS SPACED @ 500' CENTERS
S - 12" WHITE CHEVRONS SPACED @ 30' CENTERS

T - 24" WHITE STOP BAR
U - 24" WHITE CROSSWALK, 6' WIDTH, SPACED @ 4' CENTERS

Y - RAISED REFLECTIVE PAVEMENT MARKER (1-WAY YELLOW / OPAQUE)
Z - RAISED REFLECTIVE PAVEMENT MARKER (1-WAY CRYSTAL / OPAQUE)

N

GRAPHIC SCALE
0 25 50 100
FEET

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W25-sht-Pmk-Sign-03b	DESIGNED - BMC	REVISED -	
USER NAME = CzosnykaB	DRAWN - BMC	REVISED -	
PLOT SCALE = 50.0000 ' / in.	CHECKED - AFC	REVISED -	
PLOT DATE = 5/15/2013	DATE - 5/14/2013	REVISED -	

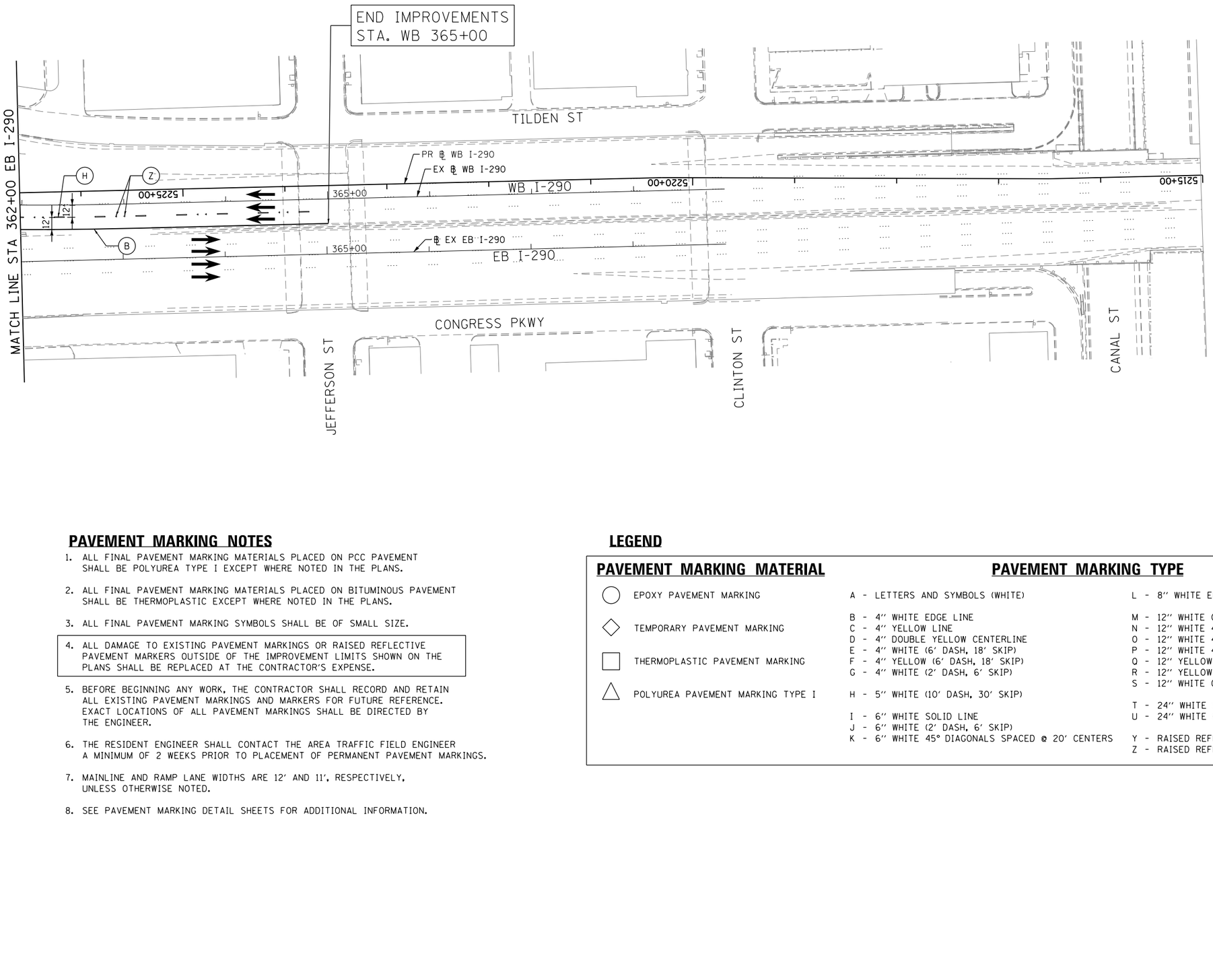
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

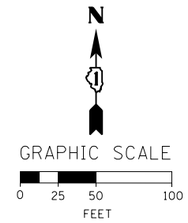
PAVEMENT MARKING PLANS
INTERSTATE AND RAMPS

SCALE: 1" = 50' | SHEET 4 OF 5 SHEETS | STA. 347+00 | TO STA. 362+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	109
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

FILE PATH = pw:\388039-pwnt1.aecomonline.local\PWDECOM00\Documents\01 Americas\Transportation\60269938 Circle\Phase II\000.CAD\006.Roadway\Sheets\60W25_Contract\D160W25-sht-Pmk-Sign-03b





PAVEMENT MARKING NOTES

1. ALL FINAL PAVEMENT MARKING MATERIALS PLACED ON PCC PAVEMENT SHALL BE POLYUREA TYPE I EXCEPT WHERE NOTED IN THE PLANS.
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6. THE RESIDENT ENGINEER SHALL CONTACT THE AREA TRAFFIC FIELD ENGINEER A MINIMUM OF 2 WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
7. MAINLINE AND RAMP LANE WIDTHS ARE 12' AND 11', RESPECTIVELY, UNLESS OTHERWISE NOTED.
8. SEE PAVEMENT MARKING DETAIL SHEETS FOR ADDITIONAL INFORMATION.

LEGEND

PAVEMENT MARKING MATERIAL

- ◯ EPOXY PAVEMENT MARKING
- ◇ TEMPORARY PAVEMENT MARKING
- □ THERMOPLASTIC PAVEMENT MARKING
- △ POLYUREA PAVEMENT MARKING TYPE I

PAVEMENT MARKING TYPE

A - LETTERS AND SYMBOLS (WHITE)

B - 4" WHITE EDGE LINE
C - 4" YELLOW LINE
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E - 4" WHITE (6' DASH, 18' SKIP)
F - 4" YELLOW (6' DASH, 18' SKIP)
G - 4" WHITE (2' DASH, 6' SKIP)

H - 5" WHITE (10' DASH, 30' SKIP)

I - 6" WHITE SOLID LINE
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K - 6" WHITE 45° DIAGONALS SPACED @ 20' CENTERS

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P - 12" WHITE 45° DIAGONALS SPACED @ 500' CENTERS
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R - 12" YELLOW 45° DIAGONALS SPACED @ 500' CENTERS
S - 12" WHITE CHEVRONS SPACED @ 30' CENTERS

T - 24" WHITE STOP BAR
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Y - RAISED REFLECTIVE PAVEMENT MARKER (1-WAY YELLOW / OPAQUE)
Z - RAISED REFLECTIVE PAVEMENT MARKER (1-WAY CRYSTAL / OPAQUE)

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W25-sht-Pmk-Sign-03c	DESIGNED - BMC	REVISED -
USER NAME = CzosnykaB	DRAWN - BMC	REVISED -
PLOT SCALE = 50.0000 ' / in.	CHECKED - AFC	REVISED -
PLOT DATE = 5/15/2013	DATE - 5/14/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLANS
INTERSTATE AND RAMPS

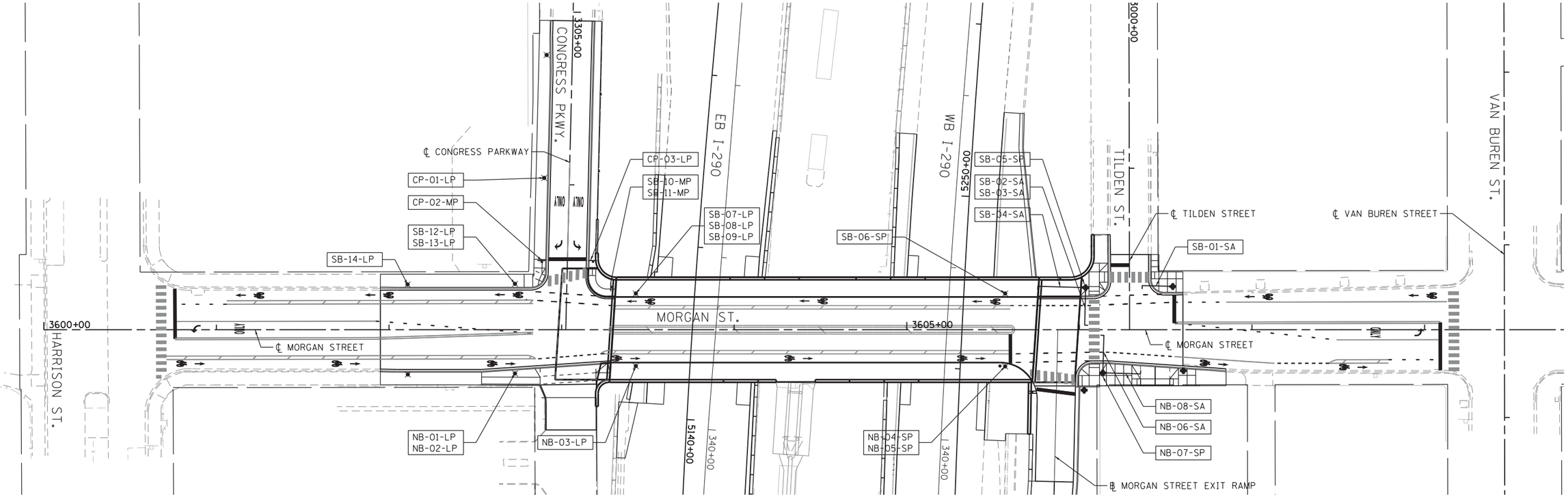
SCALE: 1" = 50' | SHEET 5 OF 5 SHEETS | STA. 362+00 TO STA. 365+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	110
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

FILE PATH = pw:\\388039-pwnt1.aecomonline.local:PWAECOM00\Documents\01 Americas\Transportation\60269938 Circle\Phase I\1000_CAD\006-Roadway\Sheets\60W25_Contract\D160W25-sht-Pmk-Sign-03c

SIGNING NOTES

1. SEE SIGN SCHEDULE FOR SIGN PANEL AND MOUNTING INFORMATION.
2. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RECORD AND RETAIN ALL EXISTING SIGN INFORMATION FOR FUTURE REFERENCE. EXACT LOCATIONS OF ALL SIGNS SHALL BE DIRECTED BY THE ENGINEER.



SIGN NUMBERING CODE EXAMPLE

NB-03-LP

DIRECTION OF TRAFFIC

NB - NORTHBOUND MORGAN ST.
SB - SOUTHBOUND MORGAN ST.
WB - WESTBOUND I-290
EB - EASTBOUND I-290
CP - CONGRESS PARKWAY
MX - MORGAN ST. EXIT RAMP

SIGN PANEL NUMBER

MOUNTING TYPE

MP - METAL POST
TS - TELESCOPING STEEL
RR - REMOVE AND REPLACE
LP - LIGHT POLE BANDING
SP - SIGNAL POLE BANDING
SA - SIGNAL POLE MAST ARM
BM - BRIDGE MOUNTED

GRAPHIC SCALE
0 30 60 90 120
FEET

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AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W25-sht-Pmk-Sign-01a	DESIGNED - BMC	REVISED -	
USER NAME = chiua	DRAWN - BMC	REVISED -	
PLOT SCALE = 30.0000 ' / in.	CHECKED - AFC	REVISED -	
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

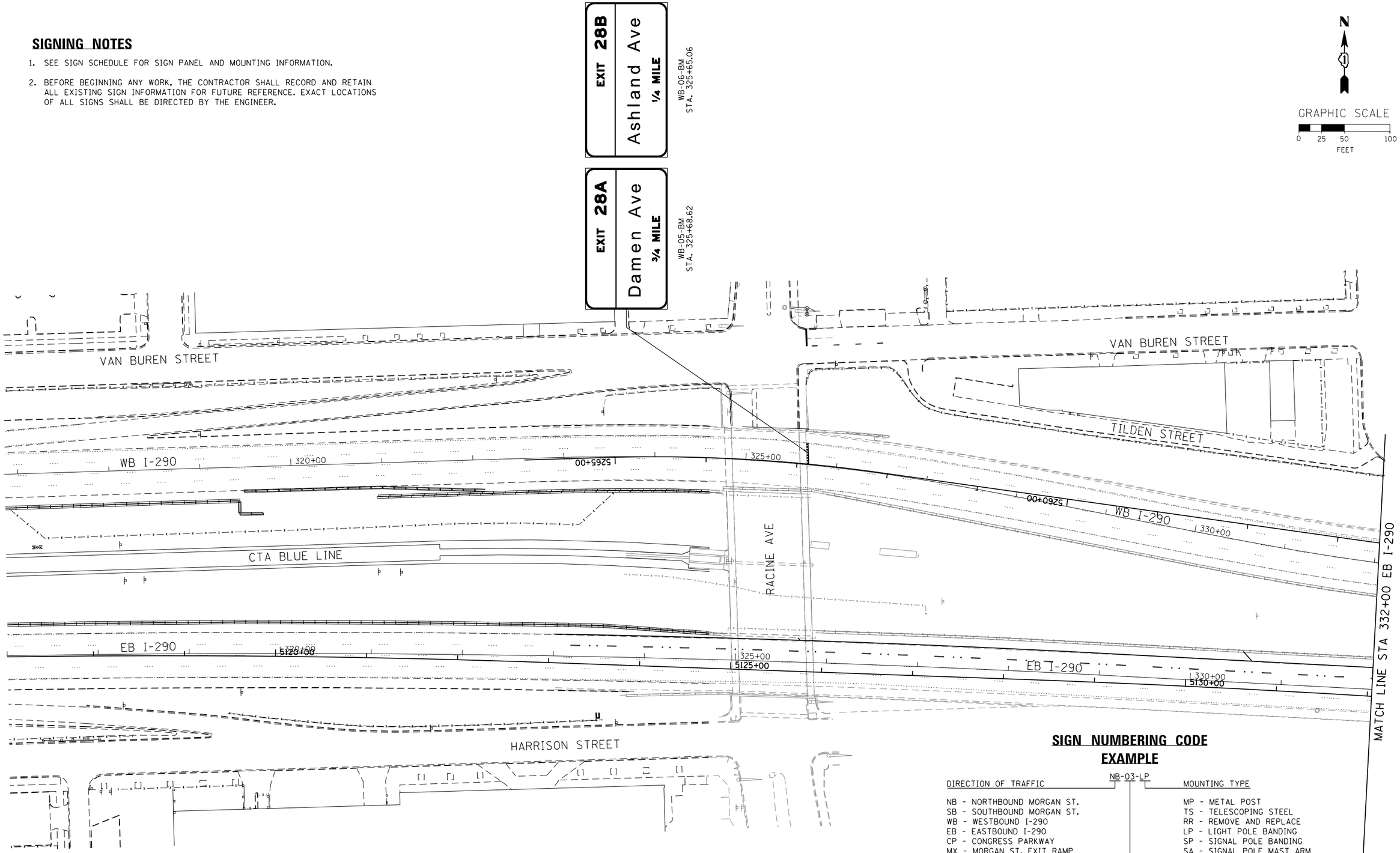
SIGNING PLANS
LOCAL ROADS

SCALE: 1" = 30' | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	111
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

SIGNING NOTES

1. SEE SIGN SCHEDULE FOR SIGN PANEL AND MOUNTING INFORMATION.
2. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RECORD AND RETAIN ALL EXISTING SIGN INFORMATION FOR FUTURE REFERENCE. EXACT LOCATIONS OF ALL SIGNS SHALL BE DIRECTED BY THE ENGINEER.



SIGN NUMBERING CODE EXAMPLE

NB-03-LP

- NB-03 — DIRECTION OF TRAFFIC
- LP — MOUNTING TYPE

DIRECTION OF TRAFFIC

- NB - NORTHBOUND MORGAN ST.
- SB - SOUTHBOUND MORGAN ST.
- WB - WESTBOUND I-290
- EB - EASTBOUND I-290
- CP - CONGRESS PARKWAY
- MX - MORGAN ST. EXIT RAMP

SIGN PANEL NUMBER

MOUNTING TYPE

- MP - METAL POST
- TS - TELESCOPING STEEL
- RR - REMOVE AND REPLACE
- LP - LIGHT POLE BANDING
- SP - SIGNAL POLE BANDING
- SA - SIGNAL POLE MAST ARM
- BM - BRIDGE MOUNTED

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W25-sht-Pmk-Sign-02a	DESIGNED - BMC	REVISED -	
USER NAME = CzosnykaB	DRAWN - BMC	REVISED -	
PLOT SCALE = 50.0000 ' / in.	CHECKED - AFC	REVISED -	
PLOT DATE = 5/15/2013	DATE - 5/14/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING PLANS
INTERSTATE AND RAMPS

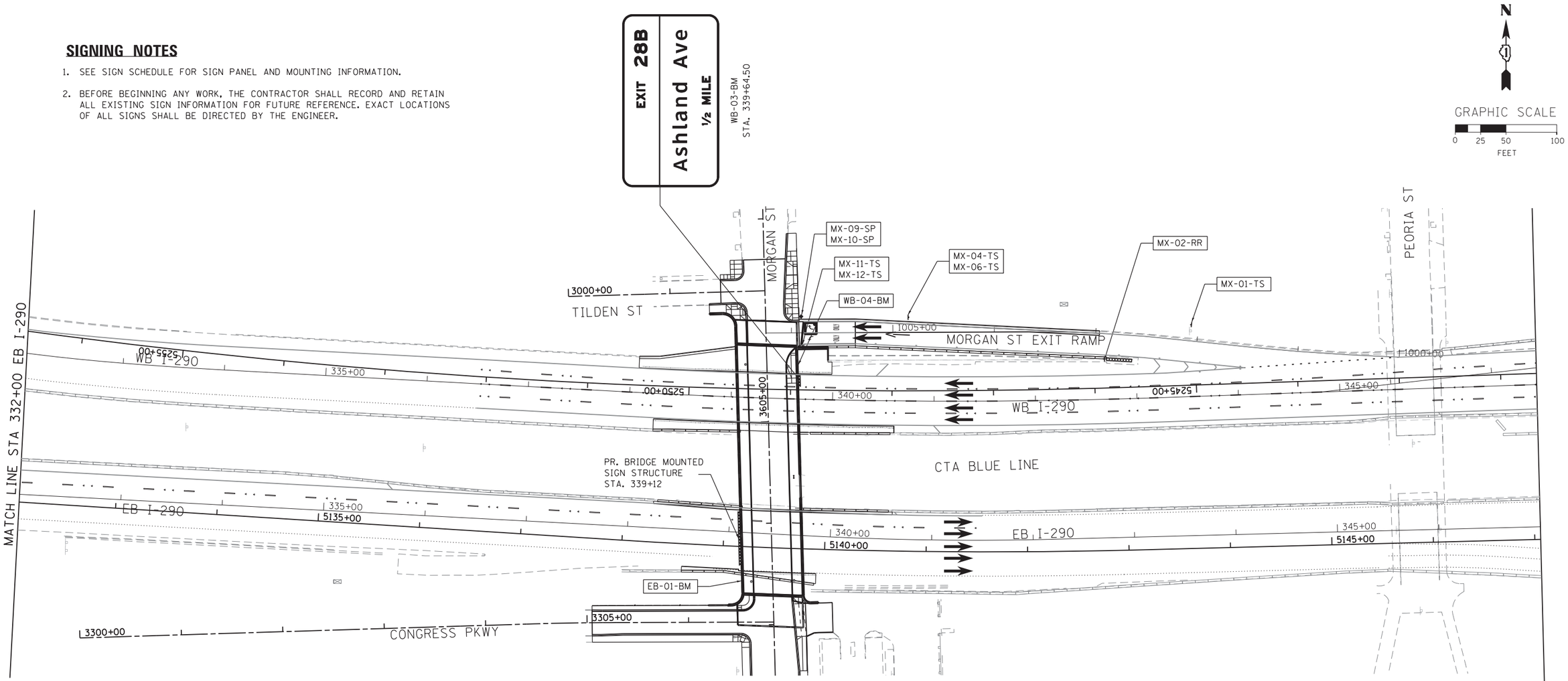
SCALE: 1" = 50' | SHEET 2 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	111A
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

FILE PATH = pw:\380039-pwint.aecomonline.local:PWAECOM00\Documents\01 Americas\Transportation\60269938 Circle\Phase II\002 CAD\006 Roadway\Sheets\60W25_Contract\D160W25-sht-Pmk-Sign-02a

SIGNING NOTES

1. SEE SIGN SCHEDULE FOR SIGN PANEL AND MOUNTING INFORMATION.
2. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RECORD AND RETAIN ALL EXISTING SIGN INFORMATION FOR FUTURE REFERENCE. EXACT LOCATIONS OF ALL SIGNS SHALL BE DIRECTED BY THE ENGINEER.



SIGN NUMBERING CODE EXAMPLE

NB-03-LP

DIRECTION OF TRAFFIC

NB - NORTHBOUND MORGAN ST.
SB - SOUTHBOUND MORGAN ST.
WB - WESTBOUND I-290
EB - EASTBOUND I-290
CP - CONGRESS PARKWAY
MX - MORGAN ST. EXIT RAMP

SIGN PANEL NUMBER

MOUNTING TYPE

MP - METAL POST
TS - TELESCOPING STEEL
RR - REMOVE AND REPLACE
LP - LIGHT POLE BANDING
SP - SIGNAL POLE BANDING
SA - SIGNAL POLE MAST ARM
BM - BRIDGE MOUNTED

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W25-sht-Pmk-Sign-03a	DESIGNED - BMC	REVISED -	
USER NAME = chiua	DRAWN - BMC	REVISED -	
PLOT SCALE = 50.0000 ' / in.	CHECKED - AFC	REVISED -	
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

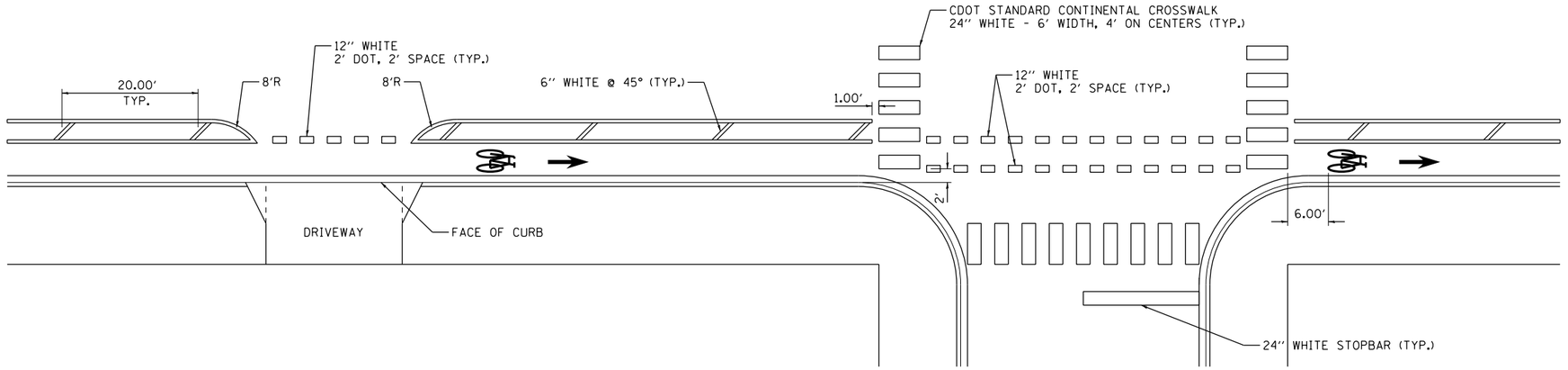
SIGNING PLANS
INTERSTATE AND RAMPS

SCALE: 1" = 50' | SHEET 3 OF 3 SHEETS | STA. | TO STA.

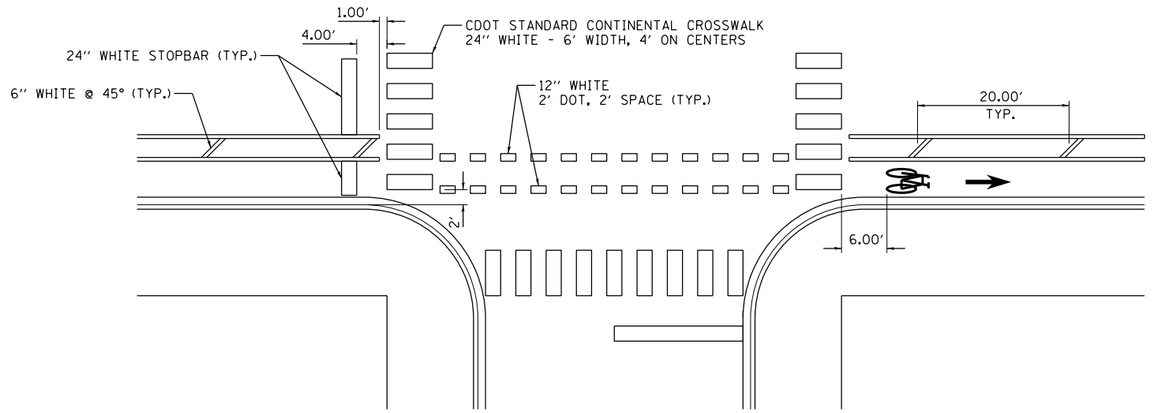
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	111B
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		

FILE PATH = pw:\388039-pwint1.aecomonline.local:PWAECOM00\Documents\01 Americas\Transportation\60269938 Circle\Phase II\000.CAD\006.Roadway\Sheets\60W25_Contract\D160W25-sht-Pmk-Sign-03a

DRIVEWAY AND UNSIGNALIZED INTERSECTION DETAIL



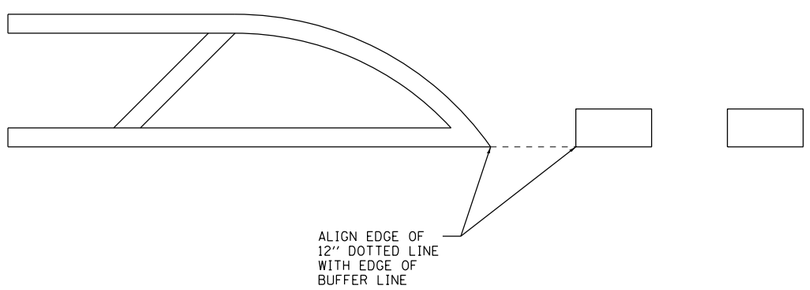
SIGNALIZED INTERSECTION DETAIL



NOTES:

1. ALL MARKINGS ARE 6" SOLID UNLESS OTHERWISE NOTED.
2. ALIGN LONGITUDINAL EDGE OF 12" DOTTED LINE WITH LONGITUDINAL EDGE OF 6" BUFFER LINE. SEE STRIPING ALIGNMENT DETAIL.
3. ALL PAVEMENT MARKING LINES TERMINATE 1' FROM CONTINENTAL CROSSWALKS.

STRIPING ALIGNMENT DETAIL



AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W25-sht-Pmk-Sign-04	DESIGNED - BMC	REVISED -	
USER NAME = CzosnykaB	DRAWN - BMC	REVISED -	
PLOT SCALE = 10.0000 ' / in.	CHECKED - AFC	REVISED -	
PLOT DATE = 5/15/2013	DATE - 5/14/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAILS

SCALE: N.T.S. | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	111C
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

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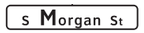
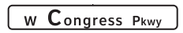


D3-1
DOUBLE SIDED
(42"x8")

NB-01-LP: STA 3602+73.00
SB-07-LP: STA 3603+43.00

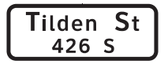


D3-1
DOUBLE SIDED
(54"x8")

NB-02-LP: STA 3602+73.00
SB-08-LP: STA 3603+43.00

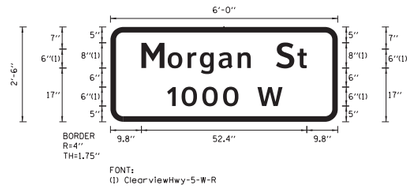
D3-2
DOUBLE-SIDED
(54"x18")

NB-08-SA: STA 3606+25.36
SB-01-SA: STA 3606+44.40
SB-04-SA: STA 3605+88.91



D3-2
DOUBLE SIDED
(48"x18")

SB-03-SA: STA 3606+03.34



CUSTOM
(72"x30")

WB-04-BM: STA 339+64.50
EB-01-BM: STA 339+15.00

R1-1
(30"x30")

CP-03-MP: STA 3306+45.00 (LT)
CP-02-MP: STA 3306+45.00 (RT)

R3-1
(24"x24")

NB-04-SP: STA 3605+57.00
NB-06-SA: STA 3606+13.93

R3-2
(24"x24")

NB-05-SP: STA 3605+57.00
SB-02-SA: STA 3606+03.34

R3-8
(30"x30")

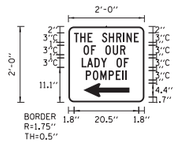
MX-06-TS: STA 1004+85.00

R5-1
(30"x30")

MX-12-TS: STA 1005+88.57
MX-10-SP: STA 1005+90.40

R5-1a
(36"x24")

MX-04-TS: STA 1004+85.00



CUSTOM
(24"x24")

SB-06-SP: STA 3605+57.00

R6-2L
(18"x24")

SB-12-MP: STA 3602+73.00
SB-10-MP: STA 3603+29.17

R6-2R
(18"x24")

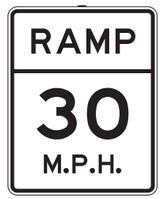
SB-13-LP: STA 3602+73.00
SB-11-LP: STA 3603+29.17

R7-201-4
DOUBLE SIDED
(18"x18")

SB-14-LP: STA 3602+10.76
SB-09-LP: STA 3603+43.00(LT)
NB-03-LP: STA 3603+43.00(RT)
NB-07-SP: STA 3606+13.61
SB-05-SP: STA 3606+03.65
CP-01-LP: STA 3305+96.40

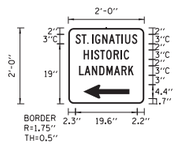
R10-11a
(24"x30")

MX-09-SP: STA 1005+90.40



W13-3
(48"x60")

MX-01-TS: STA 1002+07.07



SPECIAL
(24"x24")

MX-11-TS: STA 1005+88.57

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AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

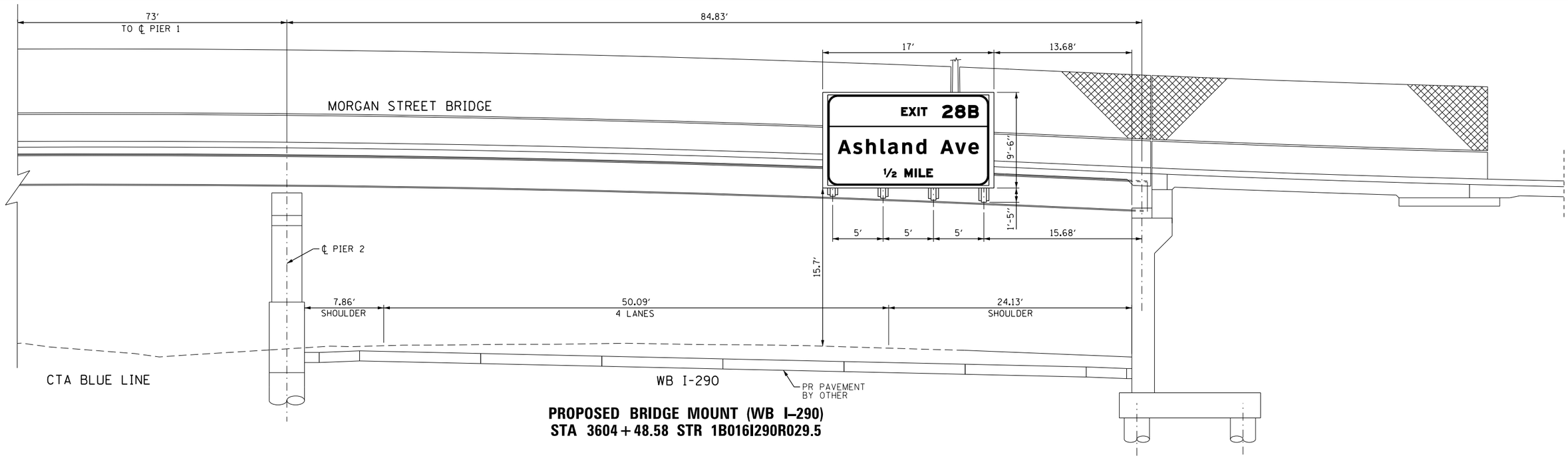
D160W25-sht-Pmk-Sign-05	DESIGNED - BMC	REVISED -	
USER NAME = chiua	DRAWN - BMC	REVISED -	
PLOT SCALE = 10.0000 ' / in.	CHECKED - AFC	REVISED -	
PLOT DATE = 6/13/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

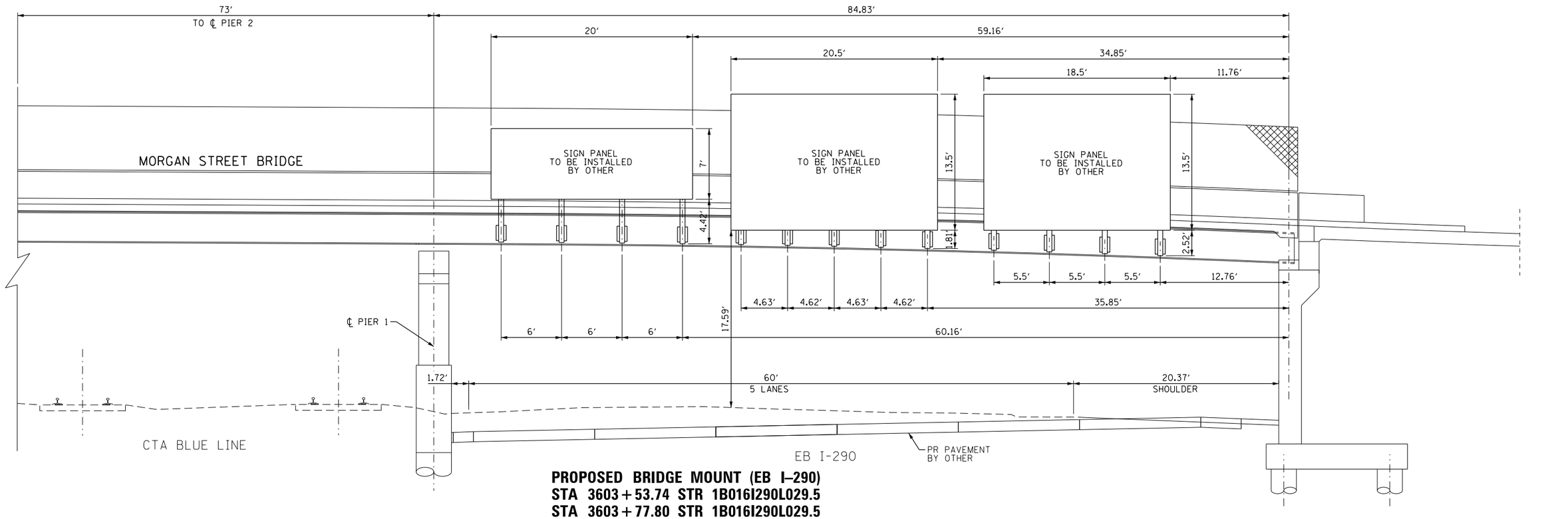
SIGNING DETAILS

SCALE: N.T.S. | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	111D
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



PROPOSED BRIDGE MOUNT (WB I–290)
STA 3604 + 48.58 STR 1B016I290R029.5



PROPOSED BRIDGE MOUNT (EB I–290)
STA 3603 + 53.74 STR 1B016I290L029.5
STA 3603 + 77.80 STR 1B016I290L029.5
STA 3604 + 01.86 STR 1B016I290L029.5

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AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W25-sht-Pmk-Sign-06	DESIGNED - BMC	REVISED -
USER NAME = moronik	DRAWN - BMC	REVISED -
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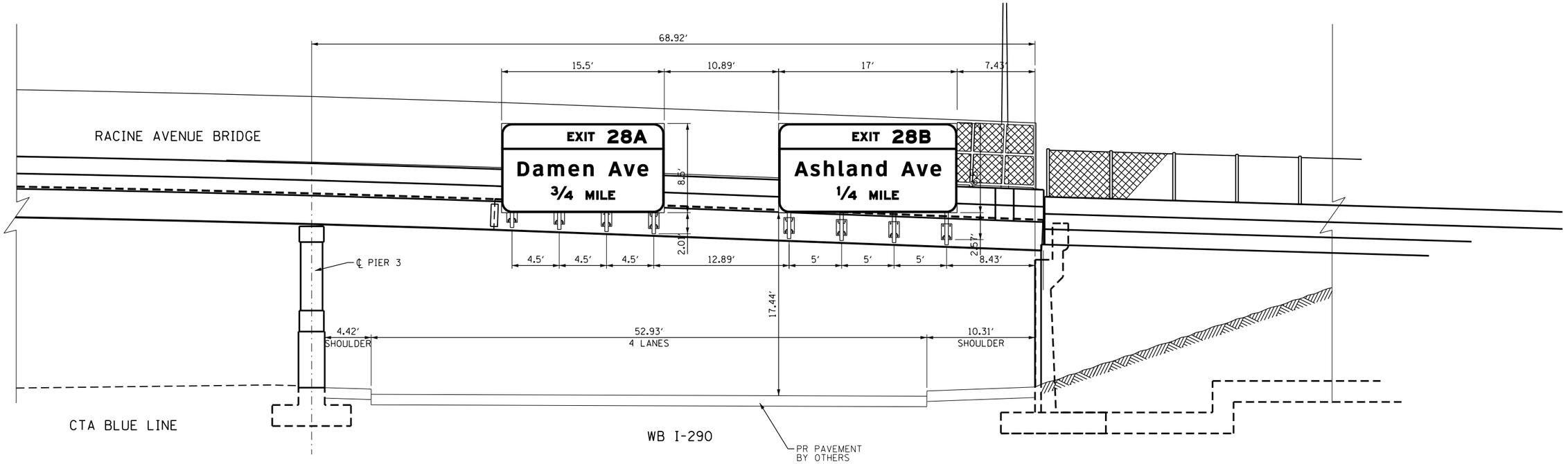
PLOT DATE = 5/15/2013	DATE - 5/14/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
SIGN PANEL PLACEMENT

SCALE: 1″ = 5′ | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	112
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		



PROPOSED BRIDGE MOUNT (WB I–290)
STA 5262 + 87.63 STR 1B16I290L029.3
STA 5262 + 91.17 STR 1B16I290L029.3

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AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W25-sht-Pmk-Sign-07.dgn	DESIGNED - BMC	REVISED -
USER NAME = moronik	DRAWN - BMC	REVISED -
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PLOT DATE = 5/15/2013	DATE - 5/14/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

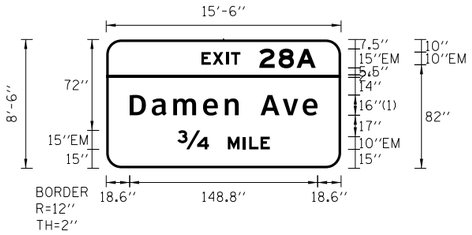
OVERHEAD SIGN STRUCTURES
SIGN PANEL PLACEMENT

SCALE: 1" = 5' | SHEET 2 OF 2 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	113
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		

SIGN DETAIL

1:75



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(1) ClearviewHwy-5-W

SIGN NUMBER	WB-05-BM
WIDTH x HGHT.	15'-6" x 8'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: ZZ Retro Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White /White

SYMBOL	ROT	X	Y	WID	HT

Panel Style: guide_exp_advance_a.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																					LENGTH	SERIES-SIZE
E	X	I	T	2	8	A																EM 2000
75.5	84.3	95.1	98.9	121.3	136.6	150.8															90.5	10,15
D	a	m	e	n		A	v	e														ClearviewHwy-5-W
18.6	36.1	53.1	76.7	93.9	105	122.3	139.9	155.6													148.8	1613
3/4	M	I	L	E																		EM 2000
56.4	96.4	108.5	113.3	122.3																	73.3	15,10

SIGN DETAIL

1:75

FONT:
(1) ClearviewHwy-5-W

SIGN NUMBER	WB-06-BM
WIDTH x HGHT.	17'-0" x 8'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: ZZ Retro Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

Panel Style: guide_exp_advance_a.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																											LENGTH	SERIES-SIZE
E	X	I	T	2	8	B																					EM 2000	
84.5	93.3	104.1	107.9	130.3	145.6	161.3																					89	10,15
A	s	h	l	a	n	d		A	v	e																		ClearviewHwy-5-W
18.4	36.6	52	69.2	78.1	95.1	111.6	123.3	140.5	158.1	173.9																	167.2	1613
1/4	M	I	L	E																								EM 2000
66.9	103.9	116	120.8	129.8																							70.3	15,10

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

D160W25-sht-Sign-Bridge-Detail-01	DESIGNED - AFC	REVISED -
USER NAME = moronik	DRAWN - AFC	REVISED -
PLOT SCALE = 5.0000 ' / in.	CHECKED - DBM	REVISED -
PLOT DATE = 5/15/2013	DATE - 5/14/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN PANEL DETAILS

SCALE: NTS | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	114
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		

SIGN DETAIL

1:75

FONT:
(1) ClearviewHwy-5-W

SIGN NUMBER	WB-03-BM
WIDTH x HGHT.	17'-0" x 8'-6"
BORDER WIDTH	2"
CORNER RADIUS	12"
MOUNTING	Overhead
BACKGROUND	TYPE: ZZ Retro Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT

Panel Style: guide_exp_advance_a.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																					LENGTH	SERIES-SIZE
E	X	I	T	2	8	B																EM 2000
84.5	93.3	104.1	107.9	130.3	145.6	161.4															89	10,15
A	s	h	l	a	n	d		A	v	e												ClearviewHwy-5-W
18.4	36.7	52	69.2	78.1	95.1	111.6	123.3	140.5	158.1	173.9											167.2	16/13
12	M	I	L	E																		EM 2000
66.9	103.9	116	120.8	129.8																	70.3	15,10

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

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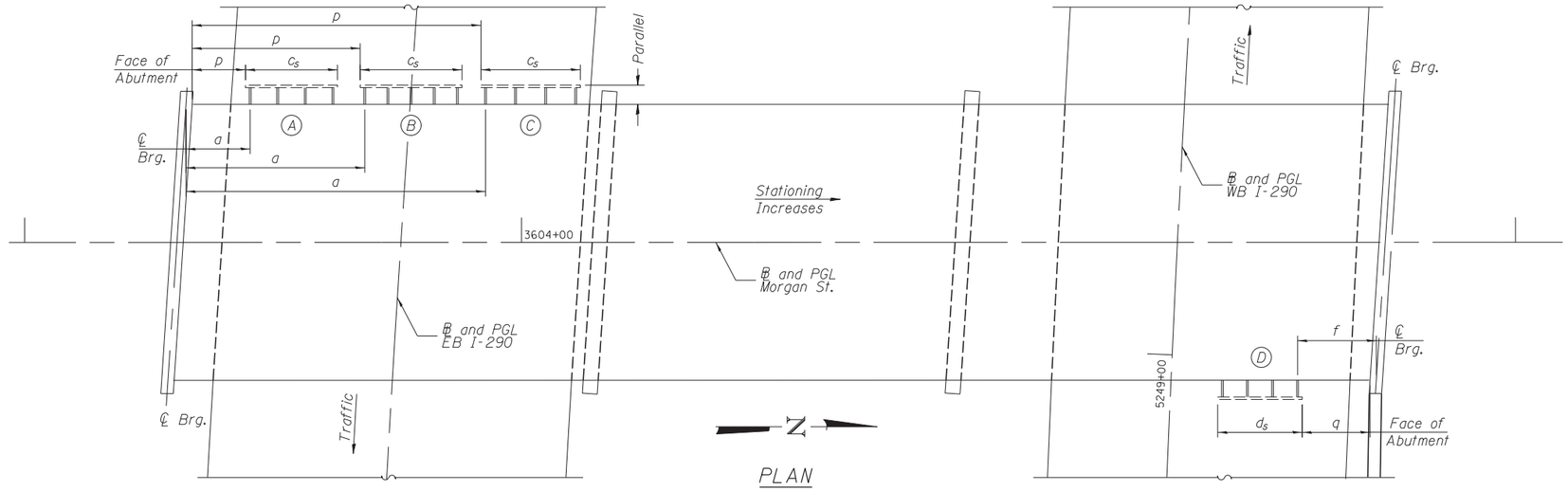
PLOT DATE = 5/15/2013	DATE - 5/14/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

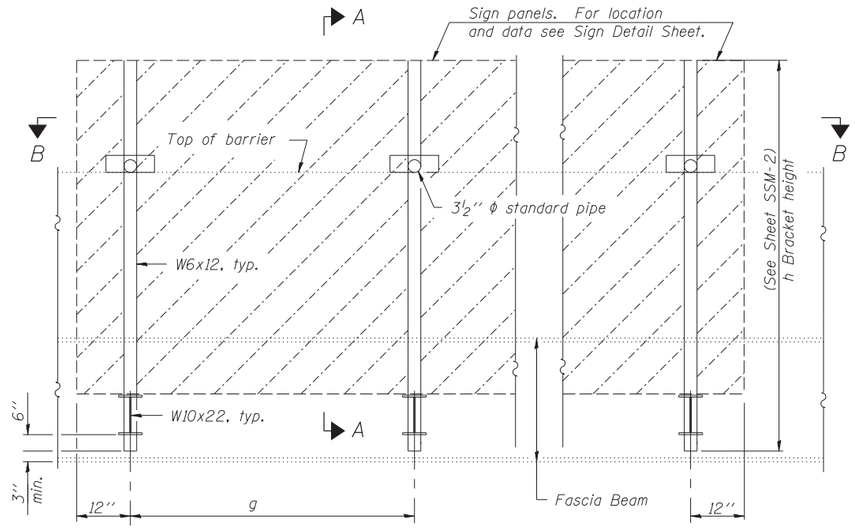
OVERHEAD SIGN PANEL DETAILS

SCALE: NTS | SHEET 2 OF 2 SHEETS | STA. | TO STA.

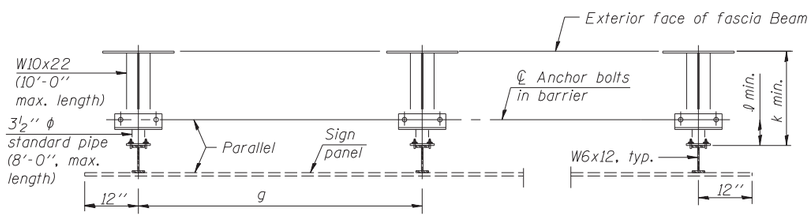
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	115
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		



PLAN



TYPICAL FRONT ELEVATION



SECTION B-B

NOTES:

1. "a" and "f" are measured from ℄ bearing along ℄ of fascia beam/girder to center of bracket.
2. "p" and "q" are measured from front face of abutment along ℄ of fascia beam/girder to edge of sign.
3. c_s & d_s = sign width
4. For Section A-A, see sheet SSM-2.
5. c_s and d_s are pay item limits for Overhead Sign Structures-Bridge Mounted.

GENERAL NOTES

SPECIFICATIONS:

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

MINIMUM CLEARANCE: 3" greater than bridge members at all locations. (All Obstructions)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 Structural Welding Code (Steel) and the Standard Specificiations.

MATERIALS: All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 (M183, M223 Gr. 50,).

HIGH STRENGTH BOLTS: All bolts, washers, nuts and locknuts shall satisfy the requirements of ASTM designation A307 unless noted as "H.S." which shall require AASHTO M164 (A325), ASTM A449, or approved alternate. All fasteners shall be hot dip galvanized per AASHTO M232 unless otherwise specified.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: All-threaded rod shall conform to ASTM F1554 Grade 105, $\frac{3}{4}$" ϕ x 12" long, each with one plate washer and locknut and be hot dip galvanized per AASHTO M232. They shall be either cast into the concrete or epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment in concrete shall be 9".

INDEX OF SHEETS

Structure Number	Bridge Station	Bridge Structure Number	Contract Route Designation	a	c_s	d_s	f	g	No. of Brackets (Total)	p	q
1B016I290L029.5A	3603+53.74	016-1709	EB I-290	12'-9½"	18'-6"	-	-	5'-6"	4	10'-9½"	-
1B016I290L029.5B	3603+77.80	016-1709	EB I-290	35'-10¼"	20'-6"	-	-	4'-7½"	5	33'-10¼"	-
1B016I290L029.5C	3604+01.86	016-1709	EB I-290	60'-1⅞"	20'-0"	-	-	6'-0"	4	58'-1⅞"	-
1B016I290R029.5D	3605+48.56	016-1709	WB I-290	-	-	17'-0"	15'-8⅛"	5'-0"	4	-	13'-8⅛"

Dimensions a, f & g may vary as approved by the Engineer, see Specifications.

TOTAL BILL OF MATERIAL

OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED	Foot	76

STATE OF ILLINOIS
MOUSSA A. ISSA
081-005738
CHICAGO, ILLINOIS
LICENSED STRUCTURAL ENGINEER

Signed Moussa A. Issa
Dr. Moussa A. Issa, S.E. Il. Lic. No. 081-005738
Expires 11-30-2014
Date 6/17/2013

HBM ENGINEERING GROUP, LLC.
CONSULTING & DESIGN
INSPECTION & RATING
RESEARCH & TESTING
4415 WEST HARRISON ST. SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900
FAX: (708) 236-0901

D160W25-Sht-SignStruct01-Morganl.dgn	DESIGNED - MI, MWM	REVISED -
USER NAME = will.mardauss	DRAWN - MWM	REVISED -
PLOT SCALE = 0i1.0000 ' / in.	CHECKED - MAI, MI	REVISED -
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE MOUNT SIGN STRUCTURES GENERAL PLAN AND ELEVATION
STRUCTURE NO. 016-1709

SCALE: | SHEET SSM-1 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	116
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

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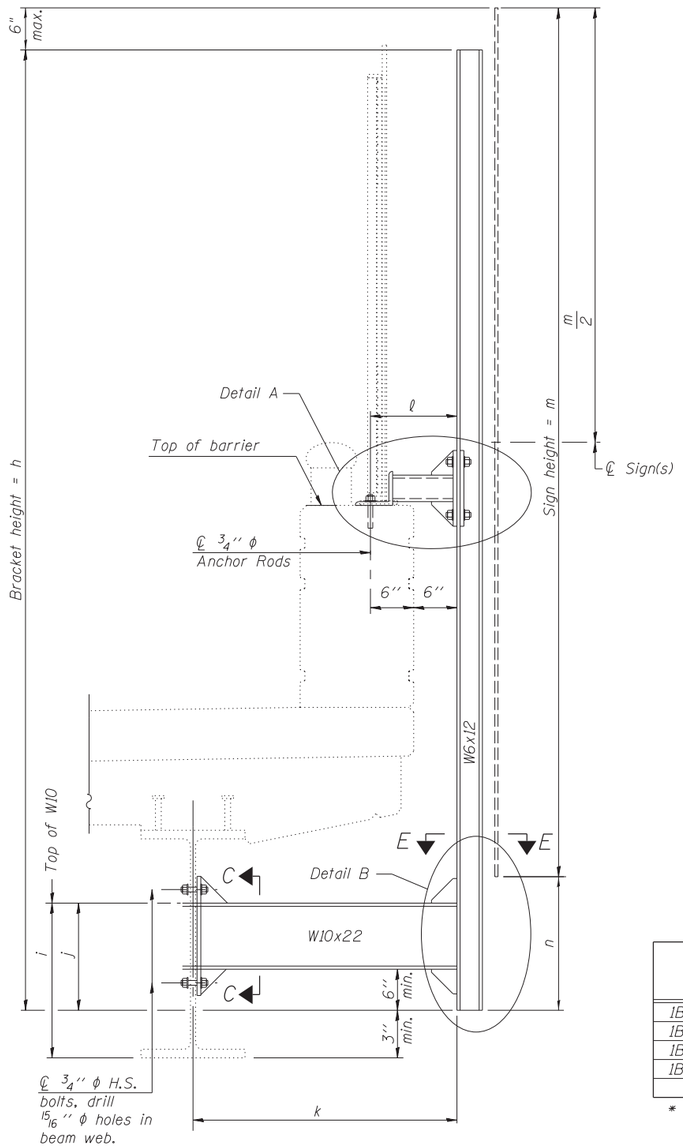
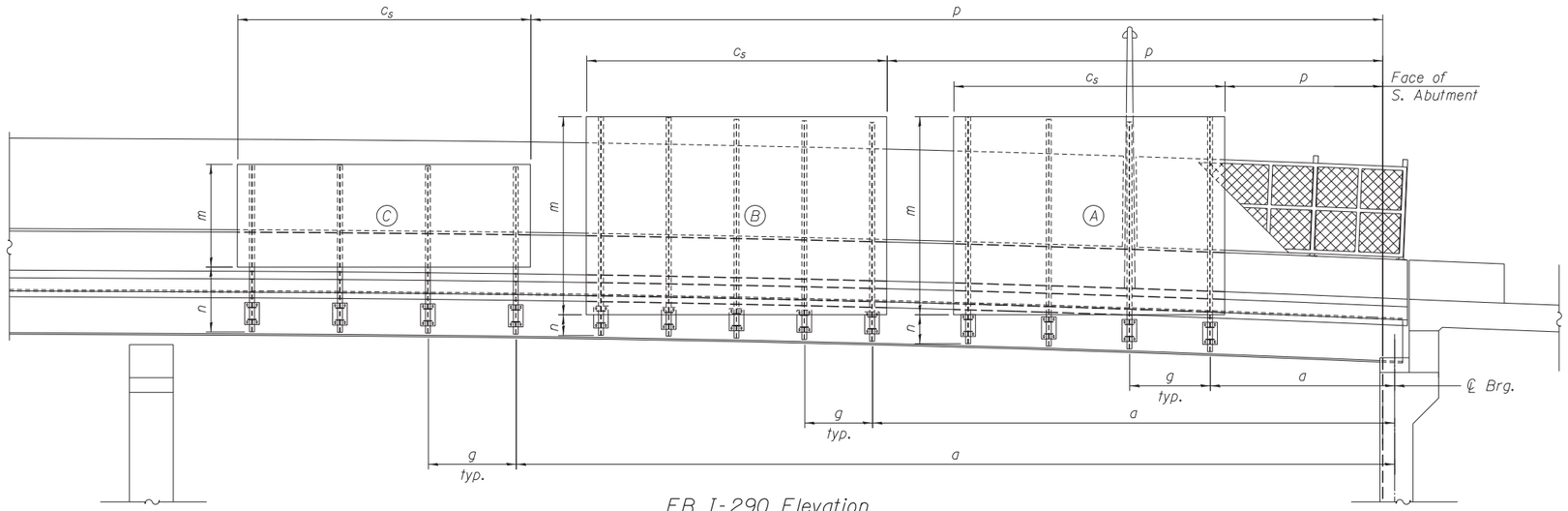
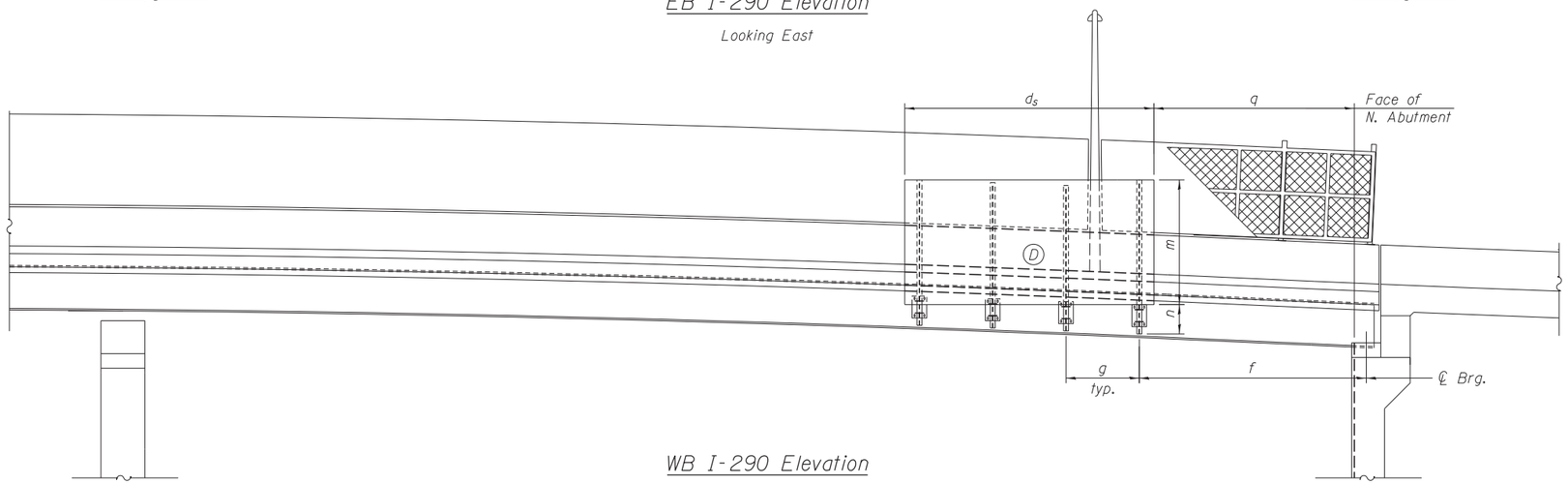


SECTION A-A



EB I-290 Elevation

Looking East



WB I-290 Elevation

Looking West

Structure Number	Bridge Station	h	i	j	k max. (10'-0" max.)	ℓ max. (8'-0" max.)	m (15'-0" max.)	n (1'-5" min.)
IB016I290L029.5A	3603+53.74	*	1'-11"	1'-4 1/4"	3'-5"	1'-0"	13'-6"	*
IB016I290L029.5B	3603+77.80	14'-11"	1'-11"	1'-4 1/4"	3'-5"	1'-0"	13'-6"	*
IB016I290L029.5C	3604+01.86	11'-5"	1'-11"	1'-4 1/4"	3'-5"	1'-0"	7'-0"	*
IB016I290R029.5D	3605+48.56	*	1'-11"	1'-4 1/4"	3'-5"	1'-0"	8'-6"	*

* varies, see table below

Structure Number	h_1	h_2	h_3	h_4	h_5	n_1	n_2	n_3	n_4	n_5
IB016I290L029.5A	16'-0 1/4"	15'-5 3/4"	15'-5 3/4"	15'-5 3/4"	-	2'-6 1/4"	2'-4"	2'-1 3/4"	1'-11 3/4"	-
IB016I290L029.5B	14'-11"	14'-11"	14'-11"	14'-11"	14'-11"	1'-9 3/4"	1'-8 1/4"	1'-7"	1'-5 1/2"	1'-5"
IB016I290L029.5C	11'-5"	11'-5"	11'-5"	11'-5"	-	4'-7"	4'-6"	4'-5 1/2"	4'-5"	-
IB016I290R029.5D	9'-11"	9'-11"	9'-11"	10'-6"	-	1'-5"	1'-7 1/4"	1'-9 1/2"	2'-0"	-

h_1/n_1 corresponds with the most southern bracket, then ascending to the most northern bracket h_4/n_4.

NOTES:

1. Installations not within dimensional limits shown require special analysis for all components and must be submitted to the Bureau of Bridges and Structures for approval.
2. Contractor shall field check all pertinent existing bridge dimensions shown on plans before submitting shop drawings.
3. All holes in bridge beams or girders should be located in the middle half of the member. There shall be no holes drilled in the lower quarter of the member's depth. Proposed exceptions must be approved by the Bureau of Bridges and Structures.
4. The Engineer may adjust dimension "i" to meet the above condition and to keep the sign level.
5. For Details A, & B, Sections C-C, and E-E, see Sheet SSM-3.

FILE PATH = C:\Users\will.mardauss\Desktop\Sign Structures\D160W25-Sht-SignStruct02-Morgan2.dgn

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE MOUNT SIGN STRUCTURES AND CONNECTION DETAILS
STRUCTURE NO. 016-1709

SCALE: | SHEET SSM-2 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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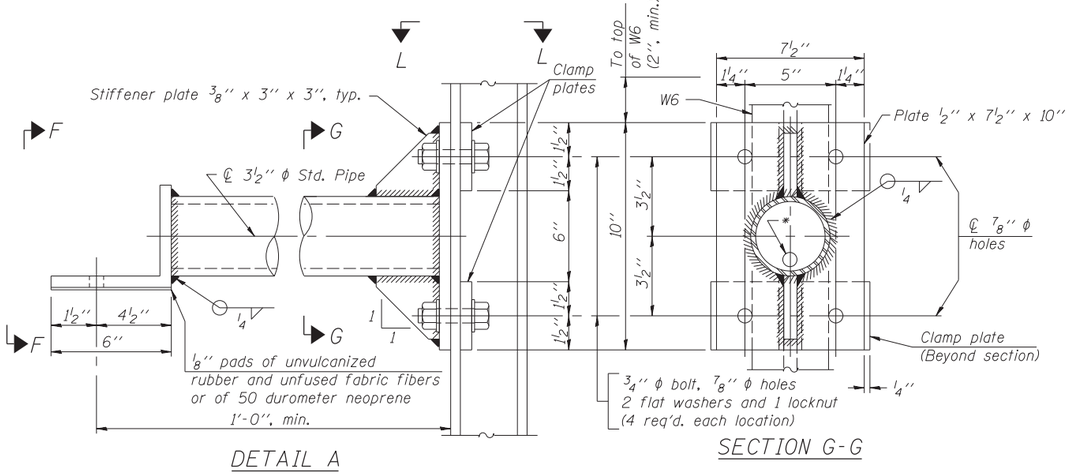
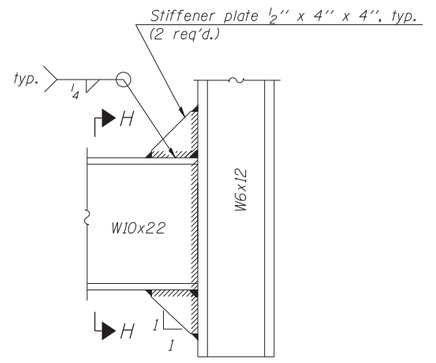
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

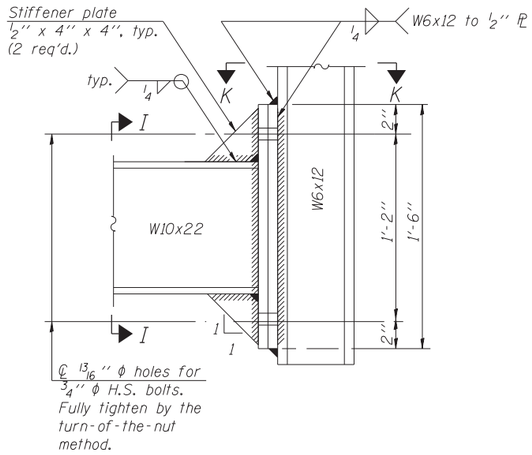


DETAIL A

SECTION G-G

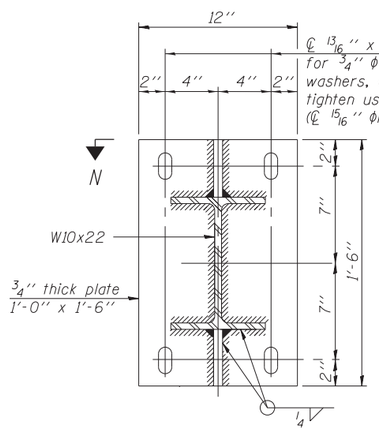


DETAIL B - WELDED W10x22 TO W6x12 CONNECTION



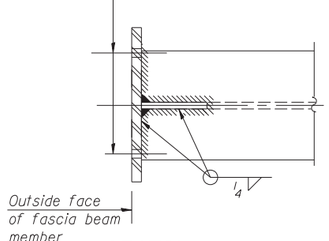
DETAIL B - ALTERNATE BOLTED W10x22 TO W6x12 CONNECTION

Alternate may be substituted by contractor to facilitate construction or galvanizing, especially on long struts for skewed bridges.



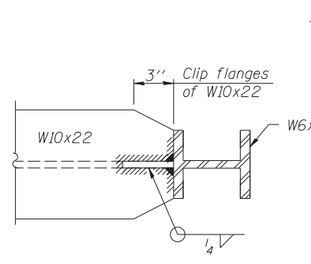
SECTION C-C

Steel beam connection plate details



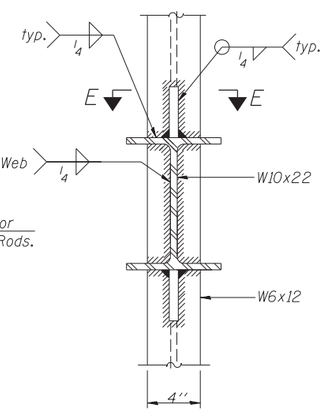
SECTION N-N

Connection detail for W10x22 to fascia beam.

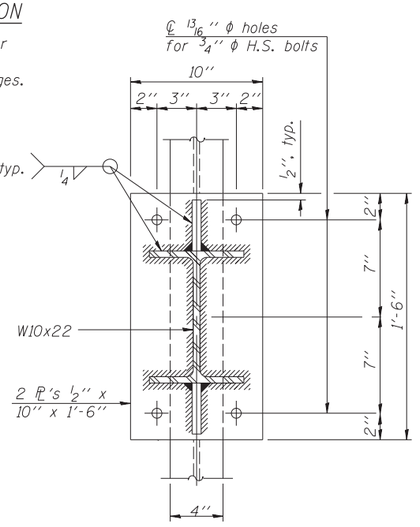


VIEW F-F

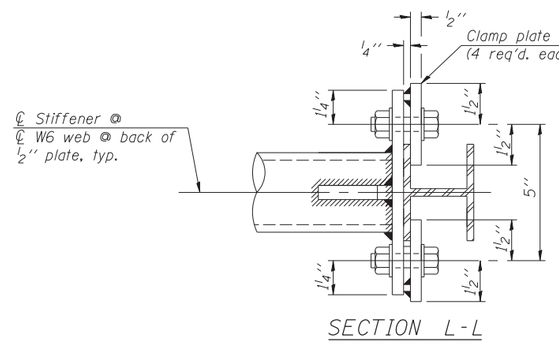
* 13/16" ϕ holes for galvanizing. After galvanizing, install 7/8" ϕ A307 hot-dip galvanized bolt to close hole in angle. (No bolt required in 1/2" plate.)



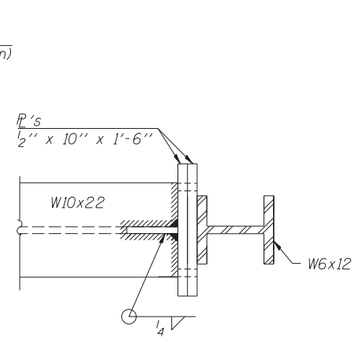
SECTION H-H



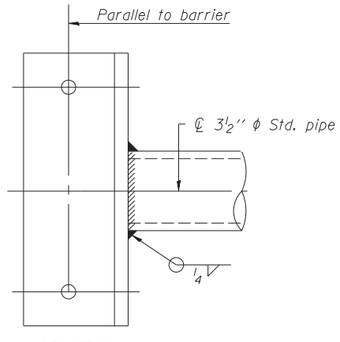
SECTION I-I



SECTION L-L

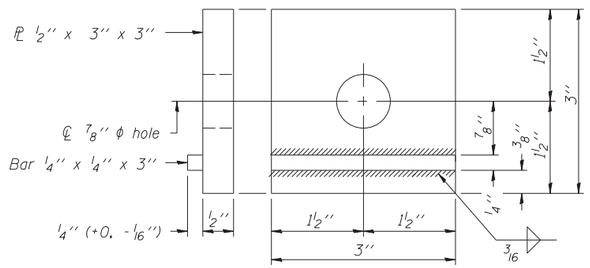


SECTION K-K



SECTION M-M

Connection detail for 3 1/2" ϕ pipe to barrier.



CLAMP PLATE DETAILS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE MOUNT SIGN STRUCTURES CONNECTION DETAILS
STRUCTURE NO. 016-1709

SCALE: | SHEET SSM-3 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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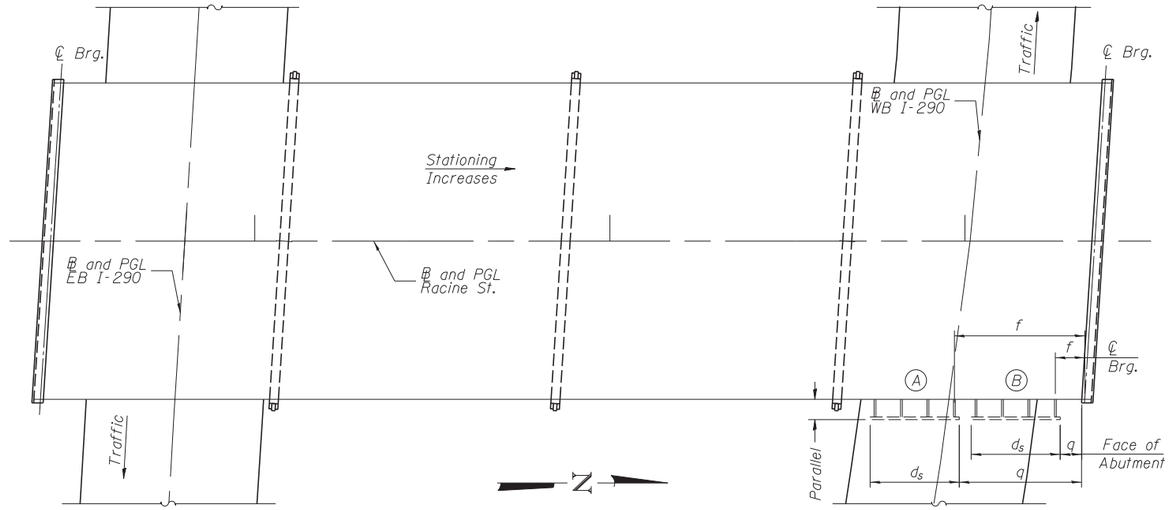
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



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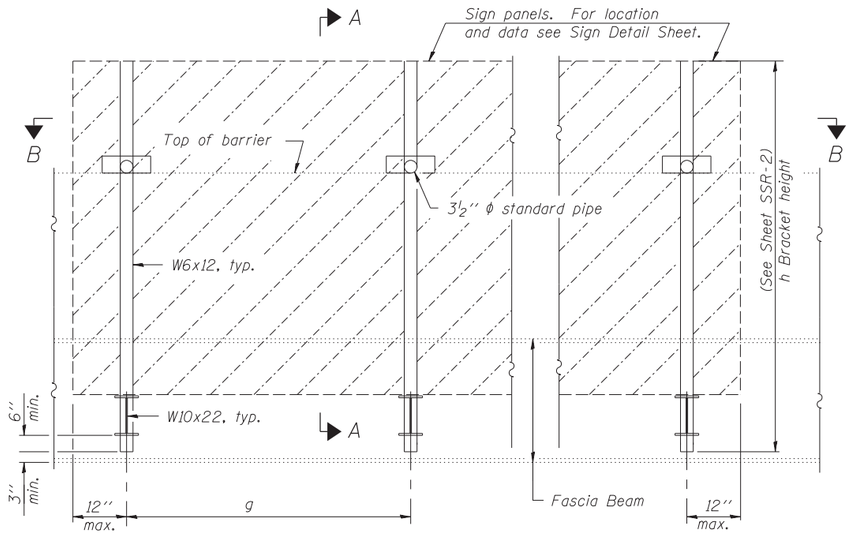
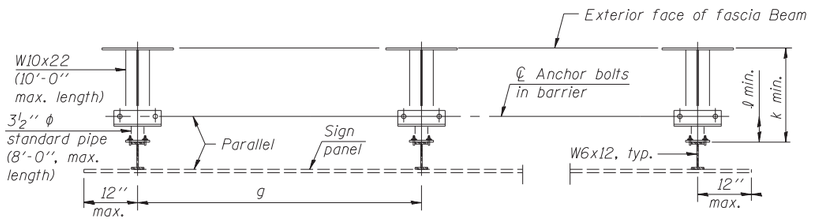


TYPICAL FRONT ELEVATION



SECTION B-B

GENERAL NOTES

SPECIFICATIONS:

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

MINIMUM CLEARANCE: 3'' greater than bridge members at all locations. (All Obstructions)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 Structural Welding Code (Steel) and the Standard Specificiations.

MATERIALS: All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 (M183, M223 Gr. 50.).

HIGH STRENGTH BOLTS: All bolts, washers, nuts and locknuts shall satisfy the requirements of ASTM designation A307 unless noted as "H.S." which shall require AASHTO M164 (A325), ASTM A449, or approved alternate. All fasteners shall be hot dip galvanized per AASHTO M232 unless otherwise specified.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: All-threaded rod shall conform to ASTM F1554 Grade 105, ¾'' ϕ x 12'' long, each with one plate washer and locknut and be hot dip galvanized per AASHTO M232. They shall be either cast into the concrete or epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment in concrete shall be 9''.

NOTES:

1. ''a'' and ''f'' are measured from ℄ bearing along ℄ of fascia beam/girder to center of bracket.
2. ''p'' and ''q'' are measured from front face of abutment along ℄ of fascia beam/girder to edge of sign.
3. c_s & d_s = sign width
4. For Section A-A, see sheet SSR-2.
5. c_s and d_s are pay item limits for Overhead Sign Structure-Bridge Mounted.

INDEX OF SHEETS

Structure Number	WB I-290 Station	WB I-290 Offest	Bridge Structure Number	Contract Route Designation	a	c_s	d_s	f	g	No. of Brackets (Total)	p	q
1B016I290L029.3A	5262+87.63	7.36LT	016-2115	WB I-290	-	-	15'-6"	37'-4¼"	4'-6"	4	-	35'-4¼"
1B016I290L029.3B	5262+91.17	19.55RT	016-2115	WB I-290	-	-	17'-0"	9'-5½"	5'-0"	4	-	7'-5½"

Dimensions f & g may vary as approved by the Engineer, see Specifications.

TOTAL BILL OF MATERIAL

OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED	Foot	33

STATE OF ILLINOIS
MOUSSA A. ISSA
081-005738
CHICAGO, ILLINOIS
LICENSED STRUCTURAL ENGINEER

Signed Moussa A. Issa
Dr. Moussa A. Issa, S.E. Il. Lic. No. 081-005738
Expires 11-30-2014
Date 6/17/2013

FILE PATH = C:\Users\will.mardauss\Desktop\Sign Structures\D160W25-Sht-SignStruct04-Racine1.dgn

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE MOUNT SIGN STRUCTURES GENERAL PLAN AND ELEVATION
EXISTING STRUCTURE NO. 016-2115

SCALE: | SHEET SSR-1 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	119
		CONTRACT NO. 60W25		
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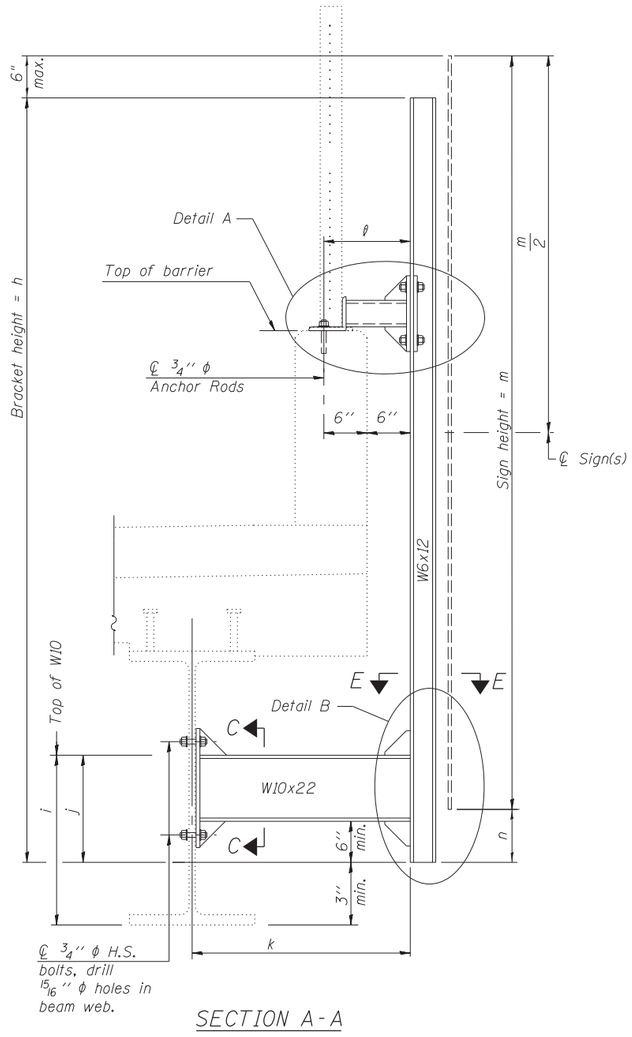
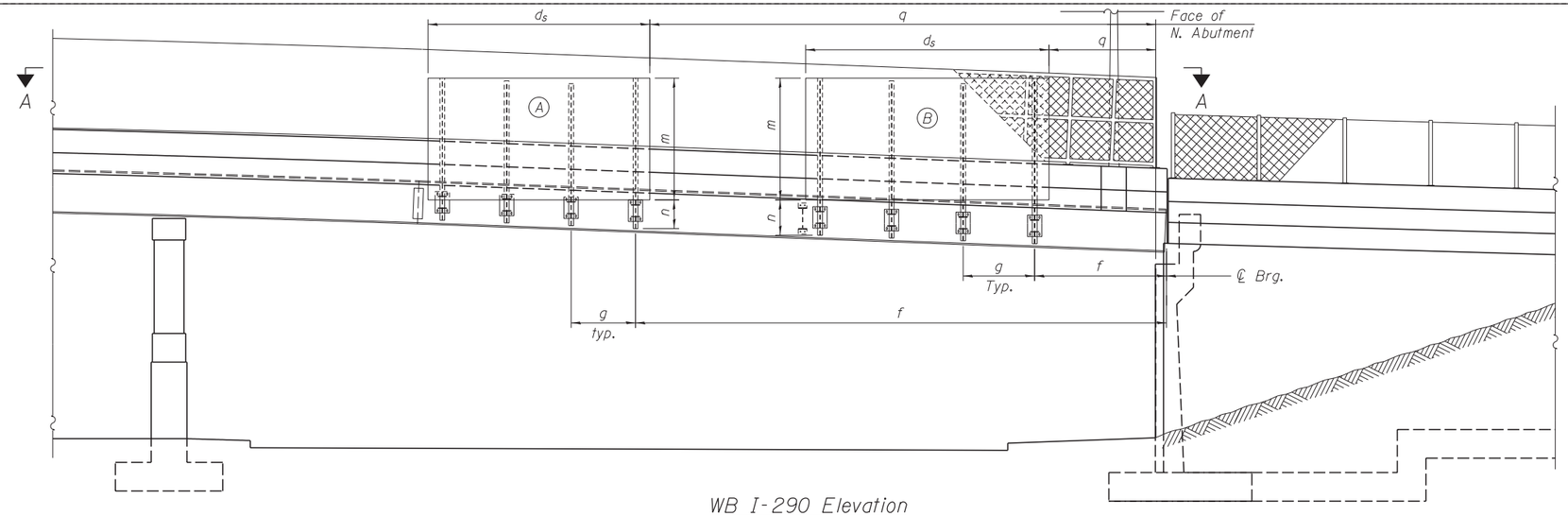
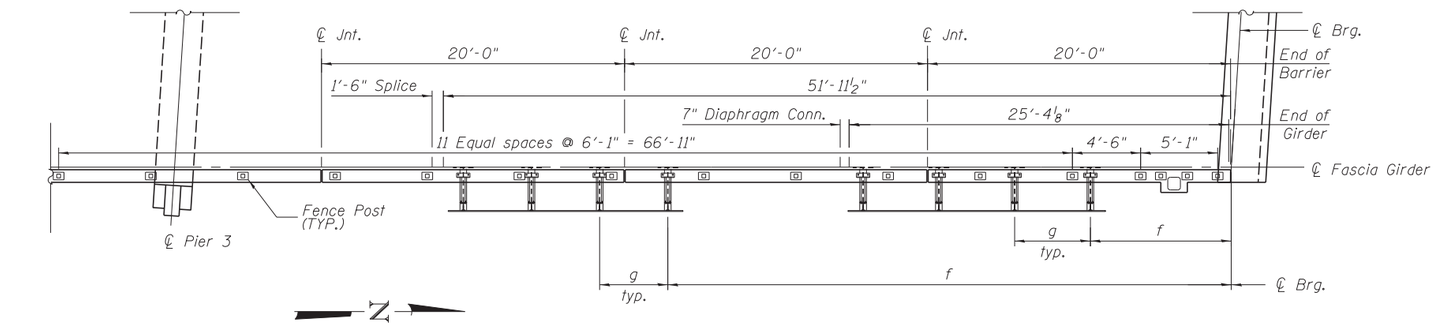


SECTION A-A



WB I-290 Elevation

Looking West



View A-A

Structure Number	WB I-290 Station	WB I-290 Offset	h	i	j	k max. (10'-0" max.)	ℓ max. (8'-0" max.)	m (15'-0" max.)	n (1'-5" min.)
1B016I290L029.3A	5262+87.63	7.36LT	*	1'-11"	1'-4 1/4"	1'-6"	1'-0"	8'-6"	*
1B016I290L029.3B	5262+91.17	19.55RT	*	1'-11"	1'-4 1/4"	1'-6"	1'-0"	8'-6"	*

* varies, see table below

Structure Number	h_1	h_2	h_3	h_4	n_1	n_2	n_3	n_4
1B016I290L029.3A	9'-11"	9'-11"	9'-11"	10'-6"	1'-5"	1'-7 1/4"	1'-9 1/2"	2'-1/8"
1B016I290L029.3B	10'-11 3/4"	10'-11 3/4"	10'-11 3/4"	11'-6 3/4"	2'-5 1/2"	2'-3"	2'-10 3/8"	2'-1/8"

h_1/n_1 corresponds with the most southern bracket, then ascending to the most northern bracket h_4/n_4.

NOTES:

1. Installations not within dimensional limits shown require special analysis for all components and must be submitted to the Bureau of Bridges and Structures for approval.
2. Contractor shall field check all pertinent existing bridge dimensions shown on plans before submitting shop drawings.
3. All holes in bridge beams or girders should be located in the middle half of the member. There shall be no holes drilled in the lower quarter of the member's depth. Proposed exceptions must be approved by the Bureau of Bridges and Structures.
4. The Engineer may adjust dimension "i" to meet the above condition and to keep the sign level.
5. For Details A. & B. Sections C-C. and E-E. see Sheet SSR-3.
6. Conctractor shall remove existing fence post connections if conflict with sign bracket connections occur. Costs for removal are included with sign installation.

FILE PATH = C:\Users\will.mardauss\Desktop\Sign Structures\D160W25-Sht-SignStruct05-Racine2.dgn

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE MOUNT SIGN STRUCTURES AND CONNECTION DETAILS
EXISTING STRUCTURE NO. 016-2115

SCALE: | SHEET SSR-2 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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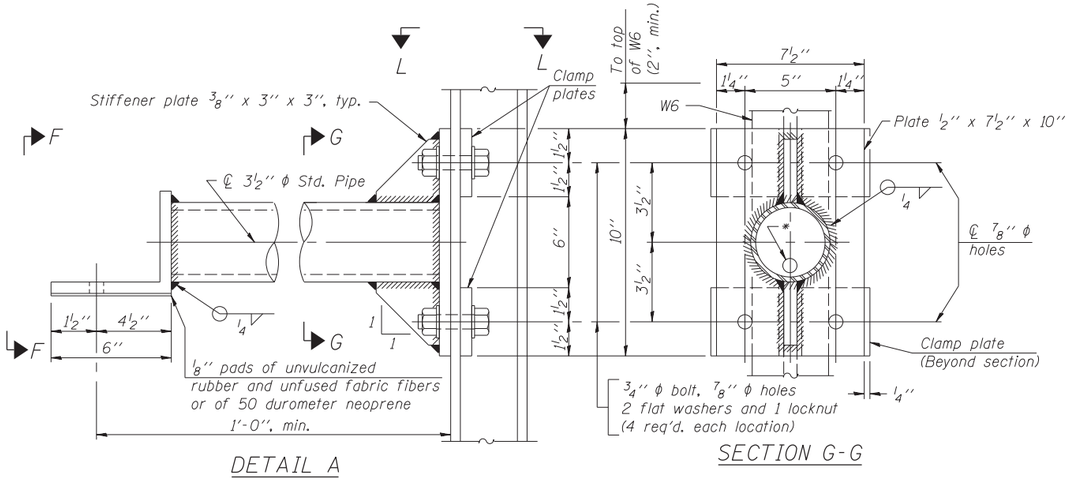
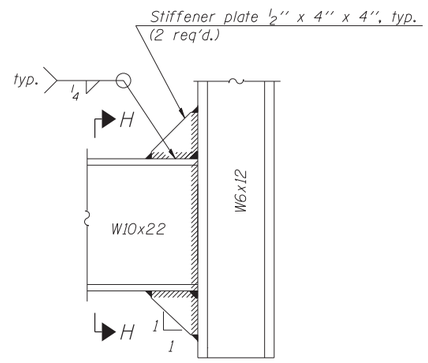
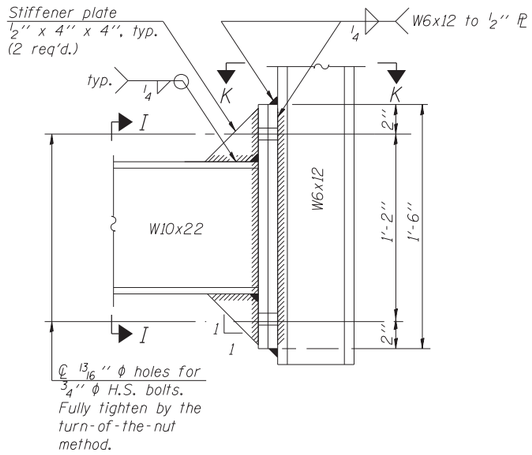


DETAIL A

SECTION G-G

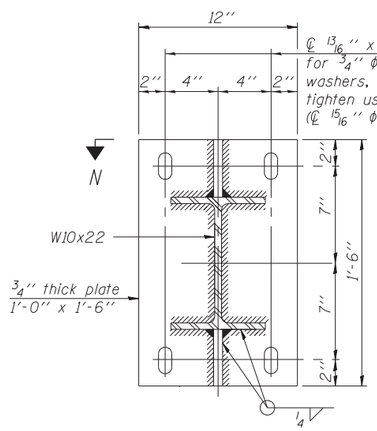


DETAIL B - WELDED W10x22 TO W6x12 CONNECTION



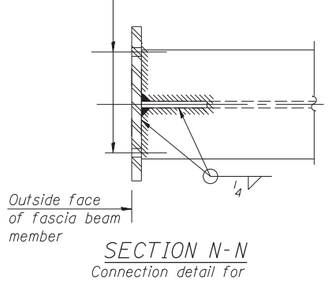
DETAIL B - ALTERNATE BOLTED W10x22 TO W6x12 CONNECTION

Alternate may be substituted by contractor to facilitate construction or galvanizing, especially on long struts for skewed bridges.



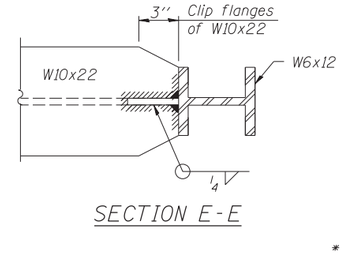
SECTION C-C

Steel beam connection plate details



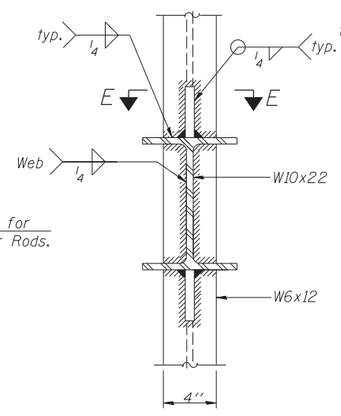
SECTION N-N

Connection detail for W10x22 to fascia beam.

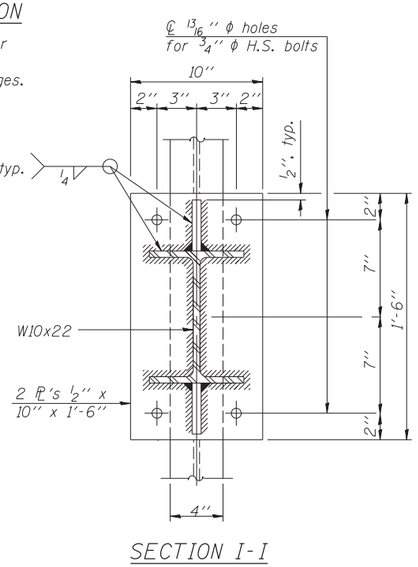


VIEW F-F

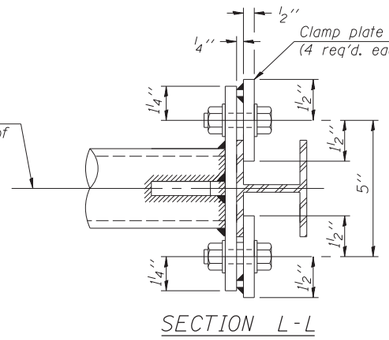
* 13/16" ϕ holes for galvanizing. After galvanizing, install 7/8" ϕ A307 hot-dip galvanized bolt to close hole in angle. (No bolt required in 1/2" plate.)



SECTION H-H



SECTION I-I



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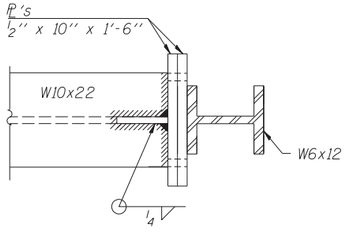

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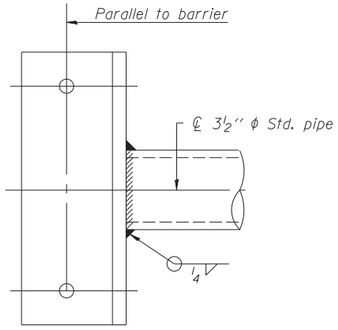
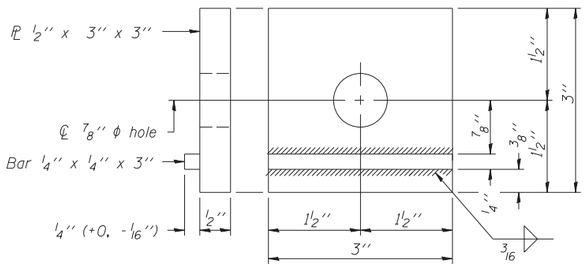


SECTION M-M

Connection detail for 3 1/2" ϕ pipe to barrier.



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE MOUNT SIGN STRUCTURES CONNECTION DETAILS
EXISTING STRUCTURE NO. 016-2115

SCALE: | SHEET SSR-3 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	121
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

ELECTRICAL SYMBOLS FOR PROPOSED WORK

LIGHT TOWER:
400W HPS LUMINAIRES
ARROWS INDICATE QUANTITY AND ORIENTATION OF LUMINAIRES.
HANDHOLE LOCATION AS INDICATED
NUMBER INSIDE HEXAGON INDICATES TOWER TYPE

TYPE		TOWER HEIGHT
10	-	100 FEET
11	-	110 FEET
12	-	120 FEET

LIGHTING UNIT: TYPE AS INDICATED

47'-6" M.H., 15 FT. DAVIT ARM
400W HPS M-C-III LUMINAIRE.
BREAKAWAY TRANSFORMER BASE

47'-6" M.H., 2-15 FT. DAVIT ARM
2-400W HPS M-C-III LUMINAIRES.
BREAKAWAY TRANSFORMER BASE

TEMPORARY LUMINAIRE AND POLE

UNDERPASS LUMINAIRE:
70 WATT HPS (PRIMARY DISTRIBUTION PATTERN DIRECTION AS INDICATED BY ARROW)

ELECTRIC HANDHOLE: TYPE AS INDICATED

TYPE E1: PRECAST CONCRETE, 21.5"x21.5"x30", IDOT STANDARD 814001

TYPE E2: PRECAST CONCRETE-HEAVY DUTY, 22"x22"x30", IDOT STANDARD 814001

TYPE C1: COMMUNICATIONS VAULT, 49 5/8"x32 1/8"x57"

TYPE S1: PRECAST CONCRETE-HEAVY DUTY, 22"x22"x36"

TYPE S2: PRECAST CONCRETE-HEAVY DUTY SPECIAL, 30"x30"x36"

JUNCTION BOX: TYPE AND SIZE AS INDICATED ON PLANS

PULL BOX: TYPE AND SIZE AS INDICATED ON PLANS

TELEPHONE CONNECTION

FIBER OPTIC COMMUNICATIONS HUT

EXISTING LIGHTING UNIT, TWIN LUMINAIRE

EXISTING LIGHTING UNIT

EXISTING TEMPORARY LIGHTING UNIT

EXISTING CDOT LIGHTING UNIT

EXISTING UNDERPASS LUMINAIRE

EXISTING ELECTRIC HANDHOLE

EXISTING JUNCTION BOX

EXISTING PULL BOX

EXISTING TELEPHONE CONNECTION

EXISTING FIBER OPTIC COMMUNICATIONS HUT

EXISTING ELECTRIC HANDHOLE/MANHOLE

EXISTING CDOT SURVEILLANCE CABINET

LIGHTED SIGN STRUCTURE-CANTILEVER TYPE (NUMBER OF FLUORESCENT FIXTURES AS INDICATED - TYP.)

LIGHTED SIGN STRUCTURE-TRUSS TYPE

LIGHTED SIGN STRUCTURE-BRIDGE MOUNT TYPE

DYNAMIC MESSAGE SIGN

FLASHING BEACON SIGN

CLOSED CIRCUIT TELEVISION CAMERA

MICROWAVE DETECTOR

DETECTOR LOOP

CONTROLLER CABINET: LIGHTING, RADIO CONTROL DUPLEX TYPE WITH SCADA (DOOR SIDE AS INDICATED)

CONTROLLER CABINET: SURVEILLANCE

CONTROLLER CABINET: SURVEILLANCE, TYPE 334

RAMP METER SIGNAL POLE/HEAD

RAMP METER FLASHER POST

TEMPORARY WOOD POLE, 50 FOOT LENGTH (10 FOOT BURIED, 40 FOOT INSTALLED HEIGHT)

HIGHWAY ADVISORY RADIO ANTENNA

ELECTRIC UTILITY POLE

CCTV CAMERA POLE

POLE MOUNTED ELECTRIC UTILITY TRANSFORMER(S)

PAD MOUNTED ELECTRIC UTILITY TRANSFORMER

GROUND ROD

MAIN SERVICE FUSED DISCONNECT SWITCH (RATING AS INDICATED)

PHOTOCELL

AERIAL CABLE

FLEXIBLE CONDUIT

RACEWAY EMBEDDED IN STRUCTURE

EXPOSED CONDUIT

RACEWAY OR DIRECT BURIAL CABLE UNDERGROUND WITHOUT ENCASEMENT

RIGID GALVANIZED STEEL CONDUIT SLEEVE, TRENCHED OR PUSHED

UNDERGROUND REINFORCED CONCRETE ENCASED CONDUIT DUCTBANK, UNLESS NOTED OTHERWISE. (NUMBER, TYPE, AND SIZE OF DUCTS AS SHOWN)

CONDUIT TURNED DOWN

CONDUIT TURNED UP

ELECTRICAL SYMBOLS FOR EXISTING CONDITIONS

EXISTING CDOT ELECTRIC HANDHOLE/MANHOLE

EXISTING LIGHTED SIGN STRUCTURE-CANTILEVER TYPE

EXISTING LIGHTED SIGN STRUCTURE-TRUSS TYPE

EXISTING LIGHTED SIGN STRUCTURE-BRIDGE MOUNT TYPE

EXISTING DYNAMIC MESSAGE SIGN

EXISTING FLASHING BEACON SIGN

EXISTING CLOSED CIRCUIT TELEVISION CAMERA

EXISTING MICROWAVE DETECTOR

EXISTING DETECTOR LOOP

EXISTING LIGHTING CONTROLLER, DUPLEX

EXISTING CONTROLLER CABINET

EXISTING RAMP METER SIGNAL POLE/HEAD

EXISTING RAMP METER FLASHER

EXISTING HIGHWAY ADVISORY RADIO ANTENNA

EXISTING CCTV CAMERA POLE

EXISTING UTILITY SERVICE CONNECTION, POLE MOUNTED

EXISTING UTILITY SERVICE CONNECTION, PAD MOUNTED

EXISTING CONCEALED CONDUIT IN STRUCTURE

EXISTING EXPOSED CONDUIT

EXISTING RACEWAY OR DIRECT BURIED CABLE WITHOUT ENCASEMENT

EXISTING CONCEALED CONDUIT UNDERGROUND, TRENCHED OR PUSHED

EXISTING ELECTRIC CABLE IN CONDUIT SLEEVE

EXISTING AERIAL CABLE TO REMAIN

GENERAL ELECTRICAL CALLOUTS

10 — 7 WAB1
NUMBER OF LUMINAIRES
CONTROLLER DESIGNATION
CIRCUIT DESIGNATION (RED PHASE)
CIRCUIT DESIGNATION (BLACK PHASE)
UNIT NUMBER

FO 01 C01 - CABLE DESIGNATOR
FIBER OPTIC
START LOCATION
END LOCATION

NN	SHELTER NUMBER
C	CCTV CAMERA
H	HAR
V	VEHICLE DETECTOR
R	RAMP METER
S	DYNAMIC MESSAGE SIGN

WA3
STA. 1700+00, 65RT
CONTROLLER DESIGNATION
CIRCUIT DESIGNATION
LIGHTING UNIT NUMBER

4 SM, 1-4
FIBER COUNT
SINGLE MODE
NUMBER OF FIBERS

CKT. C&D: 3#2, 1#4 GND, 1 1/4" UD

4" RGC BELOW GRADE

6 — W1
NUMBER OF LUMINAIRES
CONTROLLER DESIGNATION
SIGN STRUCTURE NUMBER

HHXX
TYPE E1
HANDHOLE NUMBER
TYPE DESIGNATION

PROPOSED IDOT CONTROLLER "U"
STA. 1528+10, 160LT

JB, SS, 18"x18"x8" ATS

150LF
CONDUIT-SPARE
CONDUIT WITH CABLE OR UNITDUCT
DUCTBANK LENGTH

TYPICAL EXISTING TO BE REMOVED SYMBOLS

EXISTING LIGHTING UNIT TO BE REMOVED

EXISTING UNDERPASS LUMINAIRE TO BE REMOVED

EXISTING JUNCTION BOX TO BE REMOVED

EXISTING LIGHTED SIGN STRUCTURE-CANTILEVER TYPE TO BE REMOVED

DYNAMIC MESSAGE SIGN TO BE REMOVED

FLASHING BEACON SIGN TO BE REMOVED

EXISTING LIGHTING CONTROLLER, DUPLEX TO BE REMOVED

EXISTING CONTROLLER CABINET TO BE REMOVED

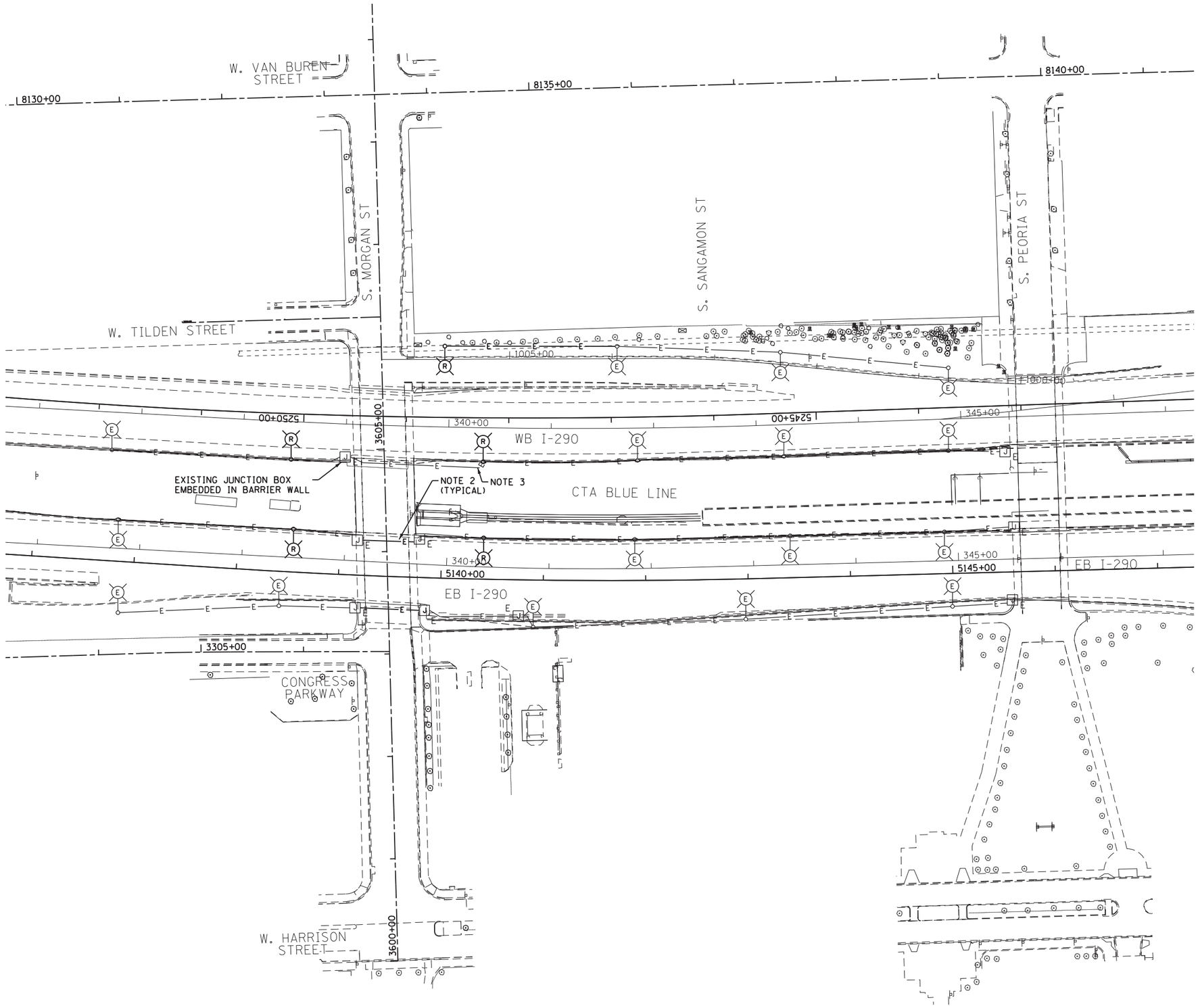
EXISTING DETECTOR LOOP TO BE REMOVED

EXISTING RAMP METER SIGNAL POLE/HEAD TO BE REMOVED

EXISTING RAMP METER FLASHER TO BE REMOVED

EXISTING POLE MOUNTED UTILITY SERVICE CONNECTION TO BE REMOVED

E-01



NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. THE EXISTING CONDUIT ATTACHED TO STRUCTURE FOR THE ROADWAY LIGHTING CIRCUITS CANNOT BE DISCONNECTED AND REMOVED UNTIL THE TEMPORARY FEED HAS BEEN INSTALLED. SEE DRAWING E-03 FOR THE TEMPORARY POWER PLANS.
3. THE EXISTING ROADWAY LIGHTING CIRCUITS BETWEEN MEDIAN MOUNTED LIGHT POLES ON EITHER SIDE OF THE BRIDGE WILL BE DISRUPTED DURING THE MORGAN STREET BRIDGE CONSTRUCTION. PROVIDE A TEMPORARY LIGHTING FEED AS SHOWN ON DRAWING E-03.

N

GRAPHIC SCALE
0 50 100
FEET

E-02

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USER NAME = myersc	DRAWN - CAM	REVISED -	
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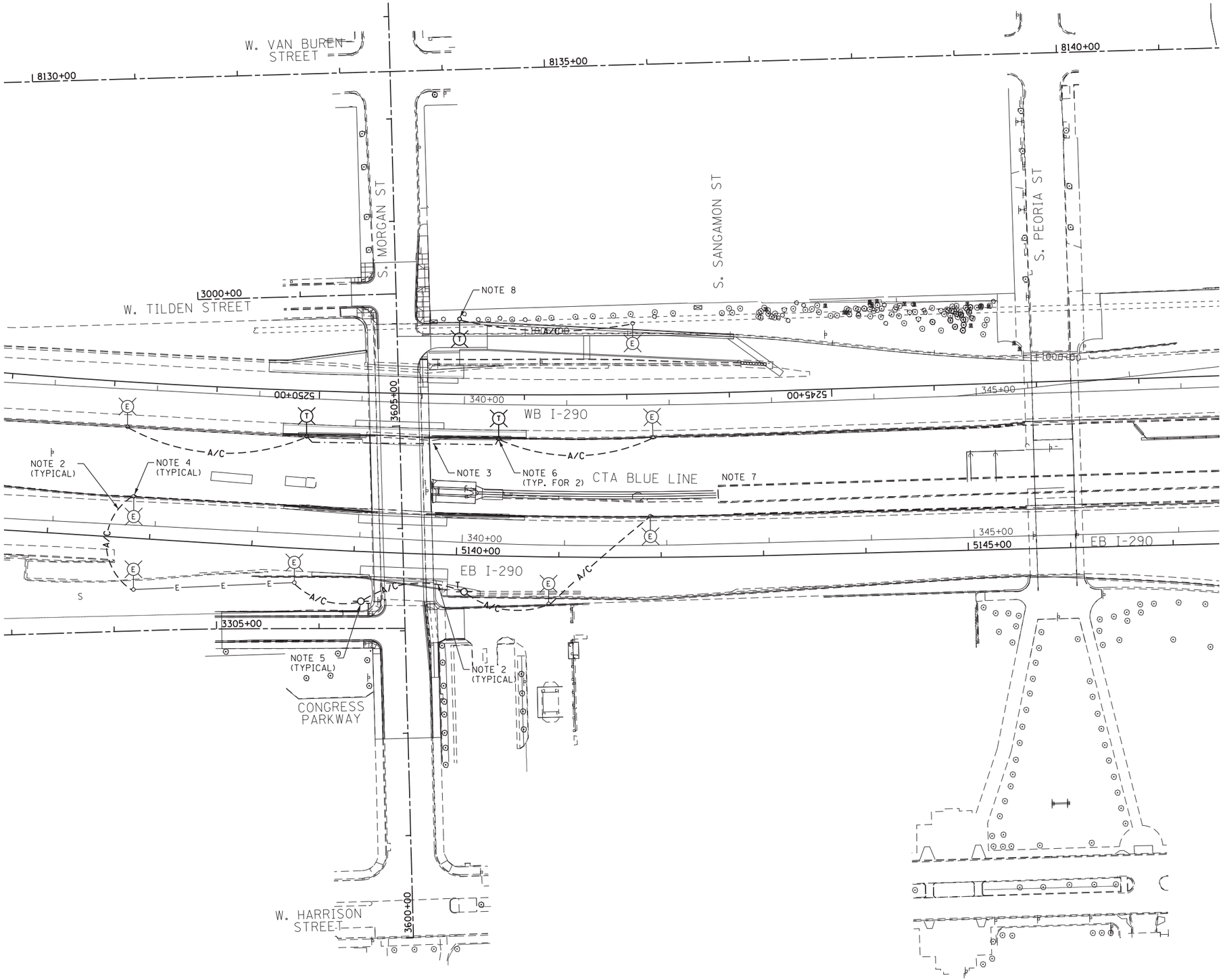
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I-290 EXISTING/DEMOLITION LIGHTING PLAN

SCALE: | SHEET 2 OF 11 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	123
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. PROVIDE A TEMPORARY AERIAL CABLE POWER FEED FOR THE ROADWAY LIGHTING CIRCUITS. THE FEED SHALL BE 3-1/C NO. 2 WITH MESSENGER.
3. PROVIDE A TEMPORARY POWER FEED FOR THE ROADWAY LIGHTING CIRCUITS. THE FEED SHALL BE 3-1/C NO. 2 WITH 1/C NO. 4 GROUND XLP TYPE USE CABLES IN A 1 1/2" UNIT DUCT INSTALLED BEHIND THE MEDIAN BARRIER WALL. THIS TEMPORARY FEED SHALL BE PROTECTED DURING THE BRIDGE RECONSTRUCTION AND MEDIAN BARRIER WORK AND WILL BE REMOVED AT THE CONCLUSION OF THE PROJECT. REMOVAL OF THIS FEED WILL NOT BE PAID FOR SEPARATELY AND WILL BE INCLUDED IN THE COST OF THE "UNIT DUCT" PAY ITEM.
4. ATTACH AERIAL CABLES TO EXISTING LIGHT POLES.
5. PROVIDE 25 FEET OF SLACK CABLE ON EACH TEMPORARY WOOD POLE TO ALLOW FOR RELOCATION OF WOOD POLES DURING CONSTRUCTION.
6. INSTALL THE TEMPORARY LIGHTING UNITS IN GRADE BEHIND THE PERMANENT MEDIAN BARRIER WALL.
7. THIS DRAWING SHOWS THE INTERIM TEMPORARY POWER FEEDS REQUIRED TO BE INSTALLED PRIOR TO THE MORGAN STREET BRIDGE RECONSTRUCTION WORK. DRAWING NO. E-04 SHOWS THE FINAL CONDITIONS FOR THE TEMPORARY ROADWAY LIGHTING CONNECTIONS TO REMAIN AT THE CONCLUSION OF THIS CONTRACT.
8. INSTALL A TEMPORARY LIGHTING UNIT IN GRADE 11 FEET FROM THE EDGE OF PAVEMENT.

N

GRAPHIC SCALE
0 50 100
FEET

E-03

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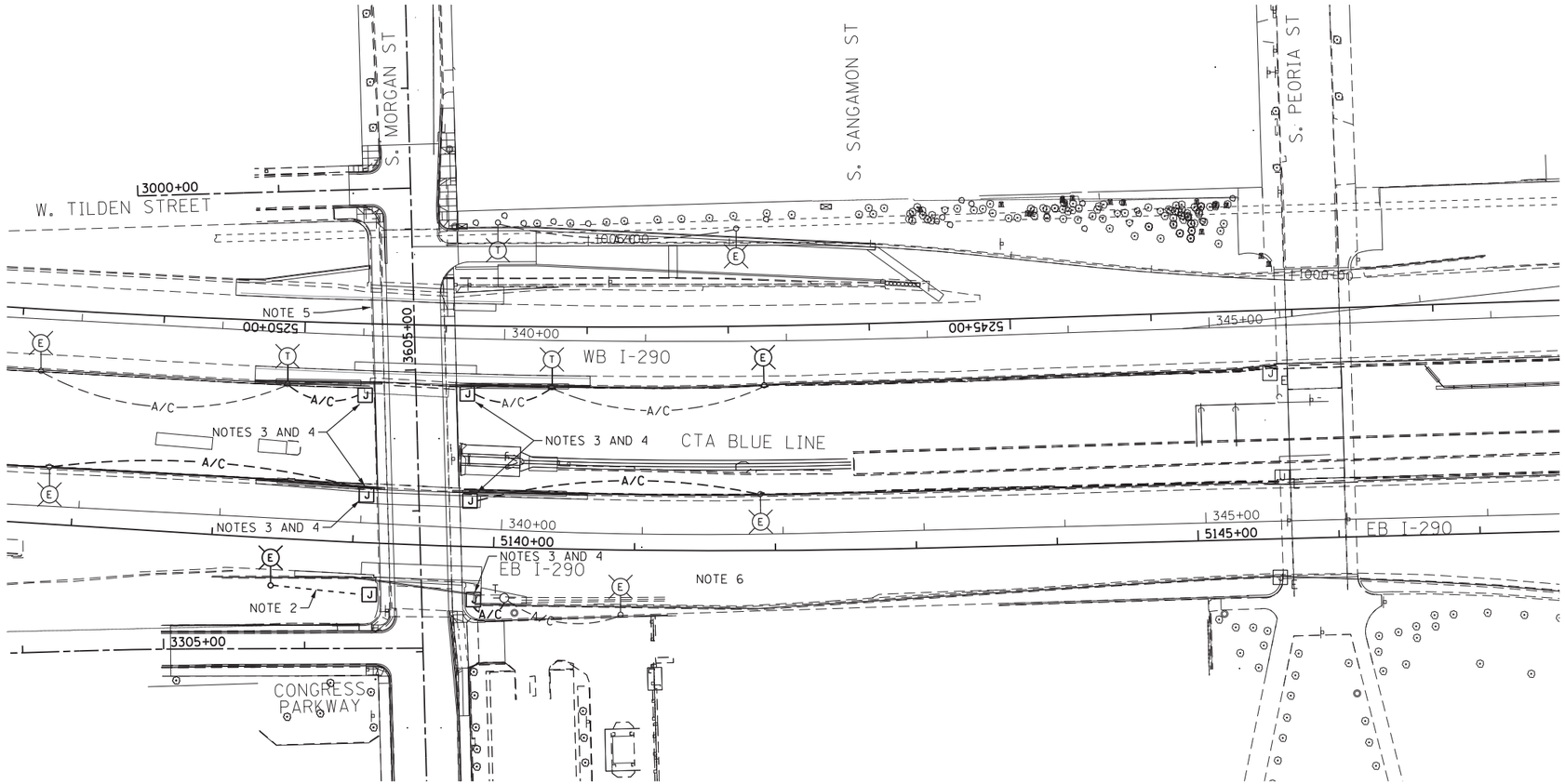
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I-290 TEMPORARY POWER PLAN

SCALE: | SHEET 3 OF 11 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	124
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. PROVIDE 3-1/C NO. 2 WITH 1/C NO. 4 GROUND XLP TYPE USE CABLES IN A 1 1/2" UNIT DUCT.
3. CONNECT THE AERIAL CABLES TO THE 3-1/C NO. 2 AND 1/C NO. 4 GROUND IN 3" DIAMETER PVCC RGS CONDUIT ROUTED ACROSS THE BRIDGE STRUCTURE FOR ROADWAY LIGHTING.
4. PROVIDE A TEMPORARY AERIAL CABLE FEED, 3-1/C NO. 2 WITH MESSENGER FROM JUNCTION BOX MOUNTED ON THE BRIDGE TO THE TEMPORARY LIGHTING UNIT AS SHOWN TO CONNECT THE ROADWAY LIGHTING CIRCUITS TO THE UNDERPASS LIGHTING SYSTEM.
5. SEE DRAWING NO. E-05 FOR THE MORGAN STREET UNDERPASS LIGHTING PLAN.
6. THIS DRAWING SHOWS THE FINAL CONDITION FOR THE TEMPORARY ROADWAY LIGHTING CONNECTIONS.

N

GRAPHIC SCALE
0 50 100
FEET

E-04

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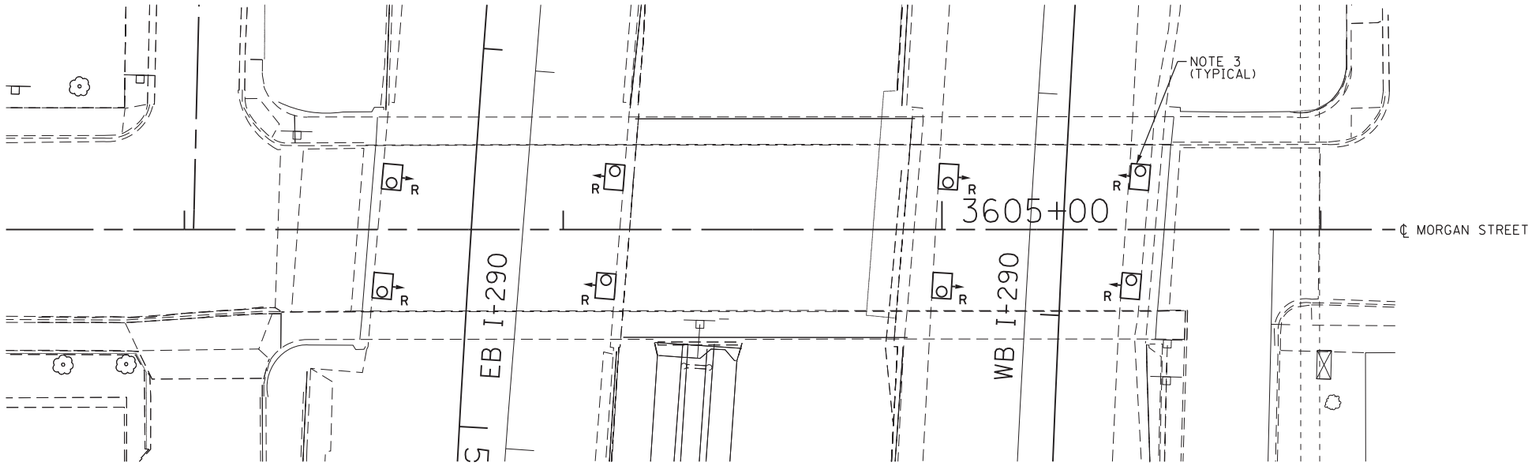
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

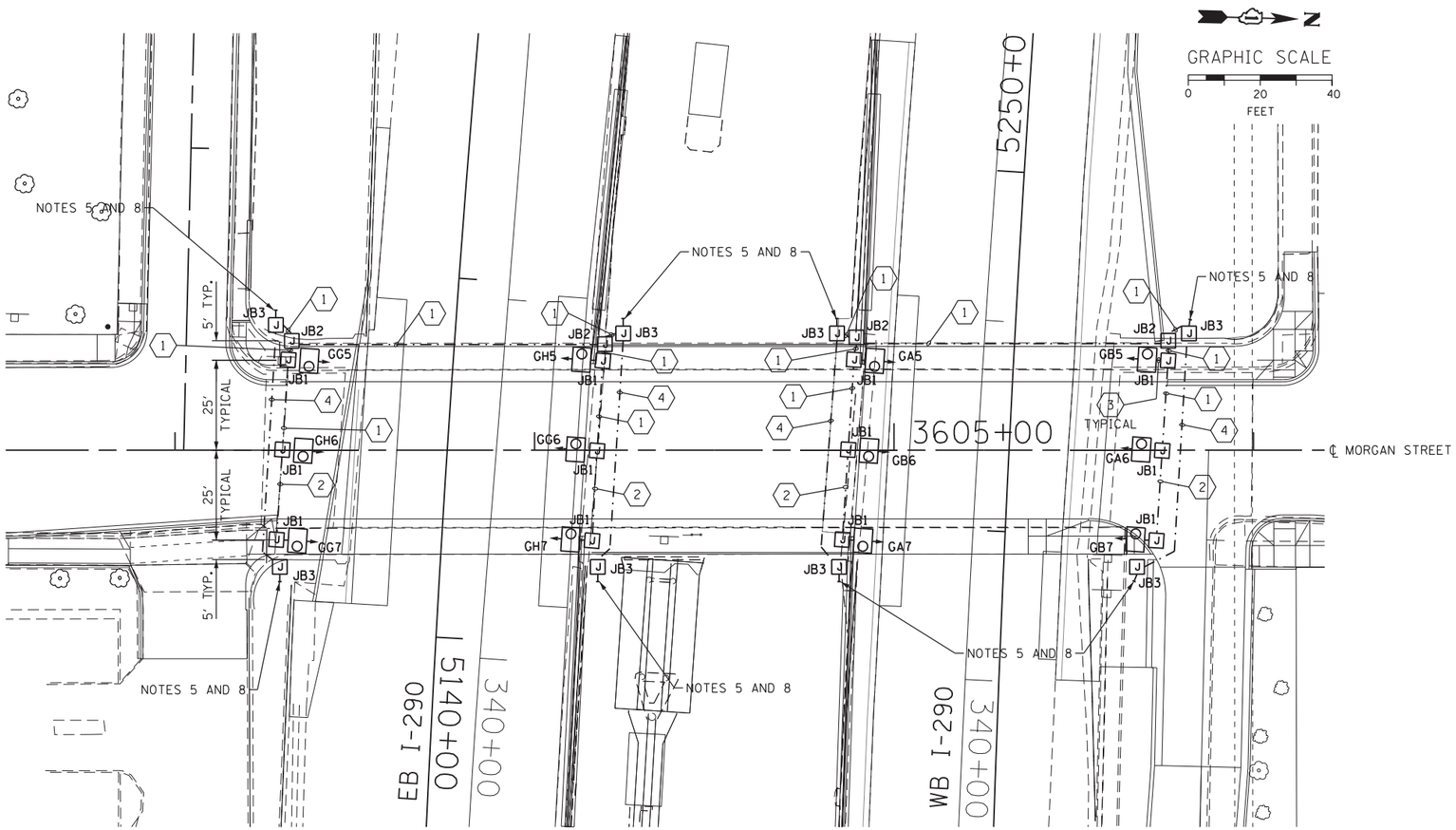
I-290 PROPOSED LIGHTING PLAN

SCALE: | SHEET 4 OF 11 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	125
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		



EXISTING UNDERPASS LIGHTING PLAN



PROPOSED UNDERPASS LIGHTING PLAN

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS AND ABBREVIATIONS.
2. LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT SHOWN ON THIS DRAWING ARE APPROXIMATIONS AND MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
3. THE REMOVAL OF EXISTING UNDERPASS LUMINAIRES MUST INCLUDE THE REMOVAL OF ALL CABLES, CONDUIT, AND HARDWARE ASSOCIATED WITH THE EXISTING UNDERPASS LIGHTING. COST FOR THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED AS PART OF THE "REMOVAL OF LIGHTING UNIT, SALVAGE" PAY ITEM.
4. ALL PROPOSED UNDERPASS LUMINAIRES SHOWN ON THIS DRAWING MUST BE PIER OR ABUTMENT WALL MOUNTED. SEE IDOT STANDARD DRAWING BE-902 FOR ADDITIONAL DETAILS.
5. STUB AND CAP 3" DIAMETER RIGID STEEL PVC COATED (PVCC) CONDUIT FOR FUTURE USE.
6. ALL PROPOSED UNDERPASS LIGHTING UNITS SHOWN ON THIS DRAWING WILL BE FED FROM EXISTING IDOT LIGHTING CONTROLLER "G".
7. SEE DRAWING E-04 FOR THE TEMPORARY POWER CONNECTIONS TO THE UNDERPASS LIGHTING SYSTEM.
8. COIL 3 FEET OF CABLE IN JUNCTION BOX FOR FUTURE CONNECTIONS.

JUNCTION BOX SCHEDULE		
NO.	SIZE	DESCRIPTION
JB1	6"X6"X4"	STAINLESS STEEL, ATTACHED TO STRUCTURE, UNDERPASS LIGHTING
JB2	12"X10"X6"	STAINLESS STEEL, ATTACHED TO STRUCTURE, UNDERPASS LIGHTING
JB3	18"X18"X8"	STAINLESS STEEL, ATTACHED TO STRUCTURE, UNDERPASS LIGHTING

CABLE / CONDUIT SCHEDULE	
1	3-1/C#10, 1-1/C#10 GND IN 1" DIA PVCC RGC ATTACHED TO STRUCTURE (CKTS AS INDICATED ON THIS DRAWING)
2	2-1/C#10, 1-1/C#10 GND IN 1" DIA PVCC RGC ATTACHED TO STRUCTURE (CKTS AS INDICATED ON THIS DRAWING)
3	2-1/C#10, 1-1/C#10 GND IN 1" DIA LIQUID TIGHT FLEXIBLE CONDUIT (CKTS AS INDICATED ON THIS DRAWING)
4	3-1/C#2, 1-1/C#4 GND IN 3" DIA PVCC RGC ATTACHED TO STRUCTURE (CKTS AS INDICATED ON THIS DRAWING)

E-05

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MORGAN STREET UNDERPASS LIGHTING PLAN

SCALE: | SHEET 5 OF 11 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	126
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

PROPOSED	PRESENT	
○▷	●▶	SIGNAL, TRAFFIC 3 SECTION 1-WAY ADJUSTABLE, 12" OR AS NOTED
◁○▷	◀●▶	SIGNAL, TRAFFIC 3 SECTION 2-WAY ADJUSTABLE, 12" OR AS NOTED
✳	✳	SIGNAL OPTICALLY PROGRAMMED
		SIGNAL, PEDESTRIAN, DON'T WALK/WALK
▷	▶	SIGNAL FACE ARROW, 12" COLOR AS NOTED
		SIGNAL FACE, 1 SECTION YELLOW/GREEN ARROW DUAL INDICATION
◎	⊙	PUSH BUTTON, PEDESTRIAN
		SIGN, ILLUMINATED, WITH MESSAGE OR SYMBOL AS INDICATED
		MAST ARM, MONOTUBE, STEEL. SIZE AS INDICATED (SEE DWG. #870)
		MAST ARM, TRUSS, ALUMINUM. SIZE AS INDICATED
		CONTROLLER, TRAFFIC SIGNAL. PEDESTAL OR BASE MOUNTED AS INDICATED
⊠	⊠	CONTROLLER, STREET LIGHTING. PEDESTAL OR BASE MOUNTED. (DWG. 876 or 880)
		CONTROLLER, STREET LIGHTING. POLE MOUNTED (DWG. #1194O)
		POLE, WOOD. COMMONWEALTH EDISON COMPANY, SERVICE
◫	◧	POLE, CITY STEEL, ANCHOR BASE, 34'6",7 GA. 10" DI A. AND 15"B.C. 24"X7' FND. W/1 1/4" ANCHOR RODS DRG. #818.
◫H	◧H	POLE, CITY STEEL, ANCHOR BASE, 34'-6", 3 GA. 10" DIA. AND 15" B.C. 24"X9' FND. W/1 1/4" ANCHOR RODS DRG. #818 (16',20' or 26'M.A.)
◪H	◪H	POLE, CITY STEEL, ANCHOR BASE, 34"-6", 3GA., 11" DIA. AND 17 1/4" B.C. 30"X9' FND. W/1 1/4" ANCHOR RODS DRG. #816. (30' M.A.)
⊗H	◐H	POLE, CITY STEEL, ANCHOR BASE 34'-6", 3 GA. 12 1/2" DIA. AND 16 1/2"B.C. 30"X11' FND. W/1 1/2" ANCHOR RODS DRG.#817. (35',40' or 44' M.A.)
▣H	▣H	POLE, CITY STEEL, ANCHOR BASE, 32'-6", 3 GA. 10" DIA., WITH 3 GA. BAL. HSG. BASE AND 17 1/4" B. C. ON 30"X9' FND. W/ 11/4" ANCHOR RODS DRG. #816.
	◐	POLE, CITY STEEL, ANCHOR BASE, 20',27'-6",29'-6", 7 GA. WITH STEEL BAL. HSG. BASE AND FND. W/10" D. B.C. AND 1" ANCHCR RODS DRG. #716.
	◍	POLE, CITY STEEL, ANCHOR BASE, 20',27'-6",29'-6", 3 GA., WITH STEEL BAL. HSG. BASE AND FND. W/10" D. B.C. AND 1" ANCHCR RODS DWG.#719.
	◐	POLE, CITY STEEL, ANCHOR BASE, 20',27'-6",29'-6" 7 GA., AND FND. WITH 10" B.C. AND 1" ANCHOR RODS DWG. #11408B.
	◐	POLE, CITY STEEL, ANCHOR BASE, 20',27'-6",29'-6" 3 GA.,AND FND. WITH 10" B.C. AND 1" ANCHOR RODS DWG. #11408B.
⊘	●	POLE , CITY STEEL, ANCHOR BASE, 32'-6", 7 CA., AND FND. WITH 11 1/2" B.C. AND 1" ANCHOR RODS DWG. #753.
⊘H	◐H	POLE, CITY STEEL, ANCHR BASE, 32'-6", 3 GA., AND FND. WITH 11 1/2" B.C. AND 1" ANCHOR RODS DWG. #753.
	◙	POLE, CITY STEEL, ANCHOR BASE, 32'-6" 7 GA., ALUM. BHB AND FND. WITH 15" B.C.-24"X7' WITH 1" ANCHOR RODS DRG. #691.
	◙H	POLE, CITY STEEL, ANCHOR BASE, 32'-6", 3 GA., ALUM. BHB AND FND. WITH 15" B.C. 24"X 7' WITH 1" ANCHOR RODS DWG. #691.
	◐	POLE, CITY ALUMINUM, WITH ROUND BAL. HSG. BASE, 25', 28', or 30' ON FND.WITH 14" B.C., ACQUIRED FROM CHICAGO PARK DISTRICT.
◉	◉	POLE, CITY STEEL, EMBEDDED, 4"X 9"X 35' 7 GA., TAPERED TUBULAR. (DWG. #658)
◉H	◉H	POLE, CITY STEEL, EMBEDDED, 4"X 9"X 35' 3 GA., TAPERED TUBULAR. (DWG. #658)
	◉	POLE, CITY STEEL, EMBEDDED. (ACQUIRED FROM CTA)
	⊠	COLUMN, ELEVATED STRUCTURE
⌀	⌀	POLE, WOOD. (SIZE AS NOTED)
⌀	⌀	POLE, FOUNDATION WITH ELBOWS AS INDICATED.(SIZE AS NOTED)
○	●	POLE, ORNAMENTAL OR OTHER, AS INDICATED ON THE PLANS

PROPOSED	PRESENT	
Ⓗ	Ⓗ	HANDHOLE, HEAVY DUTY, 36" I.D. (DWG.#866)
◌	○	HANDHOLE, CIRCULAR WITH 24"FRAME & COVER,30"I.D. (#867)
⬚	□	MANHOLE, CITY 3'X4'X4' DWG. #729 or 730; 4'X6'X6' DWG. #732or 733.
◿	◢	FOUNDATION, CONTROLLER OR PEDESTAL, 13" B.C.,20"X5' (DWG. #709)
▭	▭	FOUNDATION, TRAFFIC CONTROLLER DWG. #854. F.A. TERMINAL FND. DWG. #11972
[P]	[P]	FOUNDATION, TRAFFIC TYPE "P", BASE MOUNT. (DWG. #888)
⬭	⬭	FOUNDATION,CONTROLLER STREET LIGHT ,SPECIAL. 100A & 200A. (DWG.#876 & # 880)
▨	◣	FOUNDATION, TRANSCLOSURE: TRANSCLOSURE HOUSING. (DWG.# 583 & #891)
⊠	▬	CONTROLLER,UNDERPASS LIGHTING 120V. & 240V. (DWG. #860 & #861)
	[E]	MANHOLE, UTILITY, E=COMMONWEALTH EDISON; T=ILL.BELL TEL.; G=PEOPLES GAS; W=CITY WATER; P=CHGO PARK DISTRICT; CTA=C.T.A; S= SEWER
Ⓙ	⌀	JUNCTION BOX, IN PAVEMENT (DWG. #815)
▨	▨	DETECTOR LOOP IN PAVEMENT
		CONDUIT or P.V.C., NUMBER,SIZE & TYPE. (AS NOTED)
2D	2D	CONDUIT or P.V.C. ENCASED IN CONCRETE. (SECTION or NUMBER OF CONDUIT INDICATED
◎	◉	LUMINAIRE, H.P.S.V. 400W LAMP, 240V, SEMI-CUTOFF
◎	◉	LUMINAIRE, H.P.S.V. 400W LAMP, 240V, CUTOFF
⊗	⊗	LUMINAIRE, H.P.S.V. 310W LAMP, 240V
⊗	⊗	LUMINAIRE, H.P.S.V. 310W LAMP 240V, CUTOFF
Ⓥ	Ⓥ	LUMINAIRE, H.P.S.V. 150W LAMP, 240V
⊖	⊖	LUMINAIRE, H.P.S.V. 150W LAMP, 120V
Ⓐ	Ⓐ	LUMINAIRE, H.P.S.V. 250W LAMP, 120V. (ALLEY LIGHT)
⊕	⊕	LUMINAIRE, H.P.S.V. 250W LAMP, 120V.
Ⓣ	ⓉⒸ	TERMINAL, CABINET F.A. & P.C.
Ⓕ	ⓕ	FIRE ALARM BOX, MOUNTED
Ⓕ	ⓕ	FIRE ALARM BOX, POLE MOUNTED
PR	PR	CABLE, TRAFFIC SIGNAL, COMMUNICATION, 1-PAIR #14 SHIELDED, IN CONDUIT
2	2	CABLE, TRAFFIC SIGNAL POWER SUPPLY, 2/C- #4, 600 V. EPR. IN CONDUIT
III	III	CABLE, TRAFFIC SIGNAL POWER SUPPLY, 2 1/C-#2 or #1/0 600V. EPR IN CONDUIT
II	II	CABLE, TRAFFIC SIGNAL POWER SUPPLY, 2/C-#10 or #6, 600V NSRI, IN CONDUIT
VII	VII	CABLE, TRAFFIC SIGNAL, 7/C-#12 or #14, 600V, EPR IN CONDUIT
X	X	CABLE, TRAFFIC SIGNAL, 10/C-#12 or #14, 600V, EPR IN CONDUIT
	XIV	CABLE, TRAFFIC SIGNAL, 14/C-#12 600V. EPR IN CONDUIT
XIX	XIX	CABLE, TRAFFIC SIGNAL, 19/C-#12 or #14, 600V, EPR IN CONDUIT
2N	2N	CABLE, STREET LIGHT, 2 1/C-#6, 600V. RINS IN PARKWAY
2NC	2NC	CABLE, STREET LIGHT, 2 1/C-#6, 600V. RINS IN CONDUIT
3TC	3TC	CABLE, STREET LIGHT, 2 1/C-#6 EPRN 600V. & 1 1/C-#8 GREEN, TRIPLEXED,IN CONDUIT
3NC	3NC	CABLE, STREET LIGHT, 3 1/C-#1/0, or #2/0, or #4, 600V. EPR IN CONDUIT
2W	2W	WIRE, STREET LIGHT, 2 1/C-#6, HDNS. AERIAL
3W	3W	WIRE, STREET LIGHT, 2 1/C-#6 & 1 1/C #8. HDNS. AERIAL
III	III	CABLE, STREET LIGHT AERIAL, 3 1/C-#4 or #2 SELF SUPPORTING, 600V EPR
W FA	W FA	WIRE, F.A. & P.C. AERIAL, 1/C-#1C, NUMERAL DENOTES QUANTITY
PR	PR	CABLE, F.A. & P.C. AERIAL, W/ MESSENGER #19-(NUMBER OF PAIRS AS INDICATED)
6 PR	6 PR	CABLE, F.A. & P.C. AERIAL, SELF SUPPORTING, #19-(NUMBER OF PAIRS AS INDICATED)
37 PR	37 PR	CABLE, F.A. & P.C.. IN CONDUIT, #19-(NUMBER OF PAIRS AS INDICATED)
		DOWNLIGHT ASSEMBLY. (DWG. #850)
		LIGHT, TRAFFIC SAFETY ISLAND
		FLASHING BEACON & DOWNLIGHT

ORNAMENTAL LUMINAIRES

PROPOSED	EXISTING		
		310W PENDANT	(240V)
		400W PENDANT	(240V)
		250W PENDANT	(240V)
		150W ACORN	(120V)
		150W ACORN	(240V)
		50W ACORN	(240V)
		100W ACORN	(240V)
		150W GLOBE	(240V)
		100W GLOBE	(240V)
		50W GLOBE	(240V)

NOTES:

1. ALL PROPOSED UNDERGROUND CONDUITS MUST MAINTAIN THIRTY-SIX (36) INCHES CLEARANCE BETWEEN THE NEW CONDUITS AND THE EXISTING WATER MAINS.
2. ALL LOCATIONS SHOWN ON DRAWINGS ARE APPROXIMATIONS BASED ON INFORMATION AVAILABLE AT THE TIME OF DESIGN. DETERMINE AND STAKE THE FINAL INSTALLATION LOCATIONS IN THE FIELD DURING CONSTRUCTION FOR REVIEW AND APPROVAL BY THE COMMISSIONER PRIOR TO THE COMMENCEMENT OF WORK. MAKE ANY ADJUSTMENTS AS REQUIRED OR AS DIRECTED BY THE COMMISSIONER AT NO ADDITIONAL COST TO THE CITY.

C	04-01-02	REVISED/REDRAW R.POOL/B.I.
B	12-4-01	ADDED ORNAMENTAL SYMBOLS
A	8-6-96	REDRAWN
DATE		REVISION

STANDARD CODE FOR TRAFFIC SIGNALS/ STREET LIGHTING

CITY OF CHICAGO
DEPT. OF STREETS AND SANITATION
BUREAU OF ELECTRICITY
DIVISION OF ELECTRICAL ENGINEERING

DRAFTSMAN:	CHIEF DRAFTSMAN:	ENGINEER:
R. IVY	R. CARTER	R. POOL/R.C/W.T.

SUPERVISING ENGINEER: ELEC. DESIGN ENGR.
ENGINEER OF ELECTRICITY:
GEN'L SUPT. OF CONSTRUCTION:
DEPUTY COMMISSIONER: Brian Scherpelz

DWG. NO. 826

SIZE: 22" | 36" SCALE: DATE:

ABBREVIATIONS

A	AMPERES
AC	ALTERNATING CURRENT
A/C	AERIAL CABLE
AR	ANCHOR ROD
ATS	ATTACHED TO STRUCTURE
BC	BOLT CIRCLE
BHB	BALLAST HOUSING BASE
BOE	CITY OF CHICAGO BUREAU OF ELECTRICITY
BRKR(S)	BREAKER(S)
C	CONDUIT
CDOT	CITY OF CHICAGO DEPARTMENT OF TRANSPORTATION
COMED	COMMONWEALTH EDISON COMPANY
CKT(S)	CIRCUIT(S)
℄	CENTERLINE
CMH	CERAMIC METAL HALIDE
CTA	CHICAGO TRANSIT AUTHORITY
DIA	DIAMETER
DWG(S)	DRAWING(S)
ECA	ELECTRIC CABLE ASSEMBLY
F	FEET

ABBREVIATIONS CONTINUED

FAC	FIRE ALARM CONTROLLER
FND	FOUNDATION
GA	GAUGE
GFCI	GROUND FAULT CIRCUIT INTERRUPT
GND	GROUND
GRS	GALVANIZED RIGID STEEL
GS	GALVANIZED STEEL
HDPE	HIGH DENSITY POLYETHYLENE CONDUIT
HH	HANDHOLE
HPS	HIGH PRESSURE SODIUM
ID	INSIDE DIAMETER
IN	INCHES
JB	JUNCTION BOX
KVA	KILOVOLT-AMPERE
KW	KILOWATTS
L	ELEVATED STRUCTURE
LF	LINEAL FEET
LT	LEFT
MA	MAST ARM
MAX	MAXIMUM

ABBREVIATIONS CONTINUED

MH	MANHOLE
MI	MALLEABLE IRON
MIN	MINIMUM
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
P	POLE
PH	PHASE
PROJ	PROJECTION
PVC	POLYVINYL CHLORIDE
ROW	RIGHT OF WAY
RT	RIGHT
SCH	SCHEDULE
SS	STAINLESS STEEL
STA	STATION
STRUCT	STRUCTURE
TS	TRAFFIC SIGNAL

ABBREVIATIONS CONTINUED

TSC	TRAFFIC SIGNAL CONTROLLER
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VOLT
W	WATT
WP	WEATHER PROOF

E-06

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

DI60W25-sht-Light-06	DESIGNED - WDS	REVISED -	
USER NAME = myersc	DRAWN - CAM	REVISED -	
PLOT SCALE = 1.0000 ' / in.	CHECKED - JPC	REVISED -	
PLOT DATE = 5/9/2013	DATE - 5/14/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

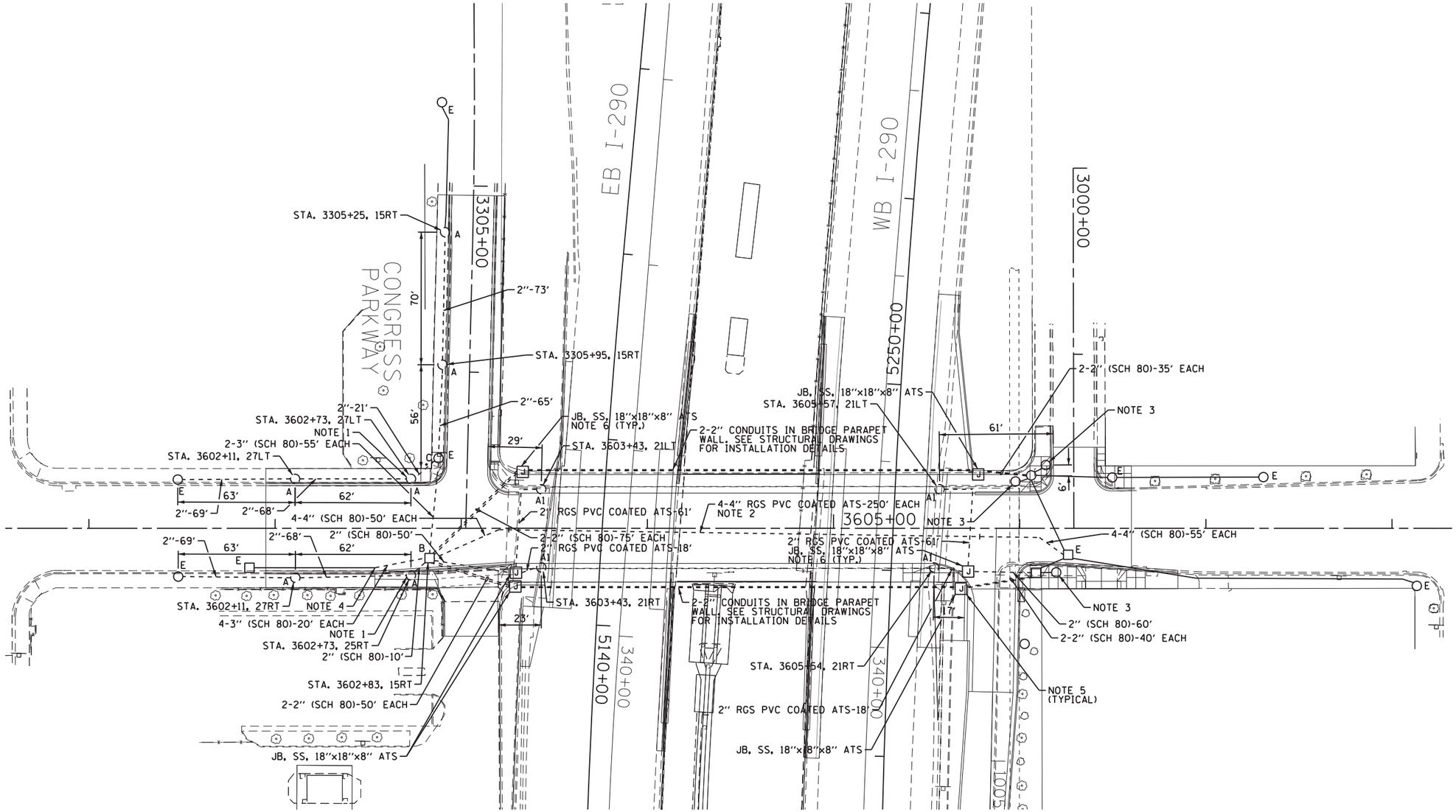
ELECTRICAL SYMBOLS AND ABBREVIATIONS

SCALE: | SHEET 6 OF 11 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	127
		CONTRACT NO. 60W25		
		ILLINOIS FED. AID PROJECT		

TOTAL SHEETS	SHEET NO.
317	128

GRAPHIC SCALE
0 30 60
FEET



"A" PROVIDE 24"x7', 1-1/4" A.R., 15" B.C. FOUNDATION FOR RELOCATED LIGHT POLE, PER DWG. NOS. 818 AND 837.

"A1" LIGHT POLE FOUNDATION IS INTEGRAL TO THE BRIDGE STRUCTURE. SEE STRUCTURAL PLANS FOR DETAILS AND FINAL LOCATION OF FOUNDATION.

"B" PROVIDE 3'x4'x4' CONCRETE MANHOLE PER DWG. NO. 730 WITH 24" FRAME AND COVER.

"C" DRILL EXISTING MANHOLE/HANDHOLE.

"E" EXISTING TO REMAIN.

NOTES:

1. INTERCEPT EXISTING LIGHTING CONDUIT TO EXISTING LIGHT POLE. CUT CONDUIT AND EXTEND END OF EXISTING CONDUIT TO NEW FOUNDATION.
2. PROVIDE 4-4-INCH RIGID GALVANIZED STEEL PVC COATED CONDUITS ATTACHED TO STRUCTURE. THE CONDUITS SHALL BE MOUNTED UNDER THE BRIDGE DECK WITH THE ELECTRIC UTILITY (COMED) CONDUITS. SEE STRUCTURAL DRAWINGS.
3. SEE THE TRAFFIC SIGNAL PLANS FOR LOCATION OF COMBINATION TRAFFIC SIGNAL/LIGHT POLE FOUNDATION.
4. INTERCEPT EXISTING CONDUITS AND CONNECT TO NEW CONDUITS ROUTED TO PROPOSED MANHOLE.
5. SEE DRAWING NO. E-10 FOR EMBEDDED CONDUIT EXITING PARAPET WALL DETAILS.
6. COORDINATE THE LOCATION OF THE JUNCTION BOXES AND CONDUITS ROUTED THROUGH THE ABUTMENT WITH THE LOCATION OF THE CONDUIT SLEEVES OPENINGS SHOWN ON THE STRUCTURAL PLANS.

FOR LIGHTING CABLE AND EQUIPMENT INSTALLATION PLANS SEE DRAWING NO. E-08.

FOR LIGHTING REMOVAL PLANS SEE DRAWING NO. E-09.

Circle INTERCHANGE

DATE	REVISION

CITY OF CHICAGO

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

CONSULTANT:
AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

WORK ORDER NO. _____ DATE _____
COST ALLOCATION ACCOUNT _____
APPROPRIATION ACCOUNT { MATERIAL _____ LABOR _____

MORGAN STREET
LIGHTING CONDUIT AND
FOUNDATION PLAN

CITY OF CHICAGO
DEPT. OF TRANSPORTATION
DIVISION OF ELECTRICAL OPERATIONS

DRAFTSMAN: CAM	CHIEF DRAFTSMAN:	ENGINEER: WDS
SUPERVISING ENGINEER: JPC	ELEC. DESIGN ENGR.	E-07
ENGINEER OF ELECTRICITY:		
GEN'L SUPT. OF ELECTRICITY:		
DEPUTY COMMISSIONER:		
SIZE: 22"	34"	SCALE: 1" = 30'	DATE:
DATE: 6/17/2013		DWG. NO.: 7 OF 11
C.D.O.T. PROJECT NO.:		

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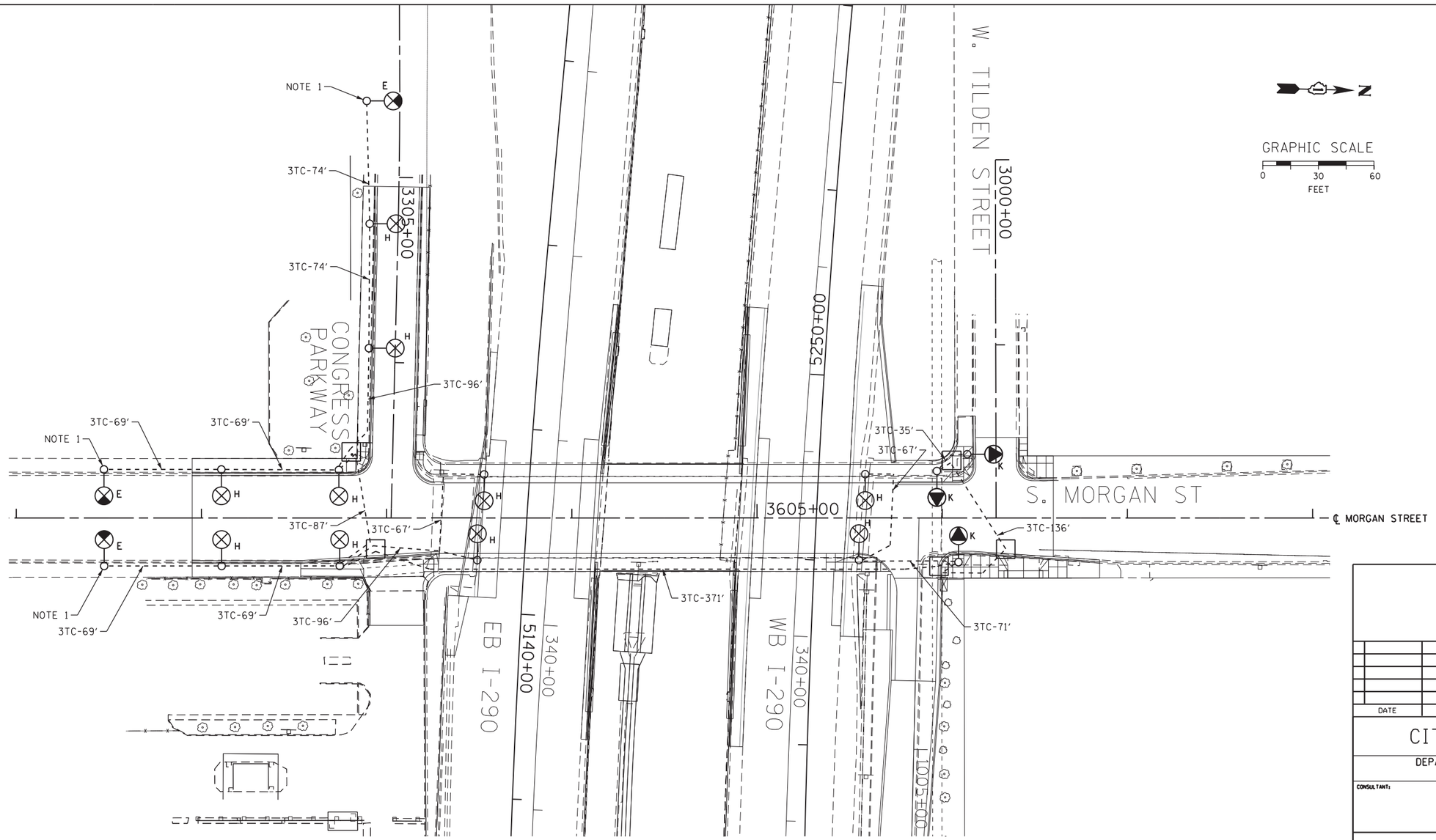
6/14/2013 8:40:02 AM

TOTAL SHEETS	SHEET NO.
317	129



NOTES:

1. SPLICE NEW CABLES TO EXISTING LIGHTING CIRCUITS LOCATED IN EXISTING POLE.

"H" INSTALL CDOT FURNISHED STEEL POLE, LUMINAIRE, MAST ARM AND BALLAST HOUSING BASE PER DRAWING NOS. 808 AND 785.

"K" REINSTALL MAST ARM AND LUMINAIRE ON A RELOCATED TRAFFIC SIGNAL/LIGHT COMBINATION POLE. SEE TRAFFIC SIGNAL PLANS FOR POLE LOCATIONS.

FOR CONDUIT AND FOUNDATION PLANS SEE DRAWING NO. E-07.

FOR LIGHTING REMOVAL PLANS SEE DRAWING NO. E-09.

Circle INTERCHANGE

DATE	REVISION

CITY OF CHICAGO

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

CONSULTANT:
AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

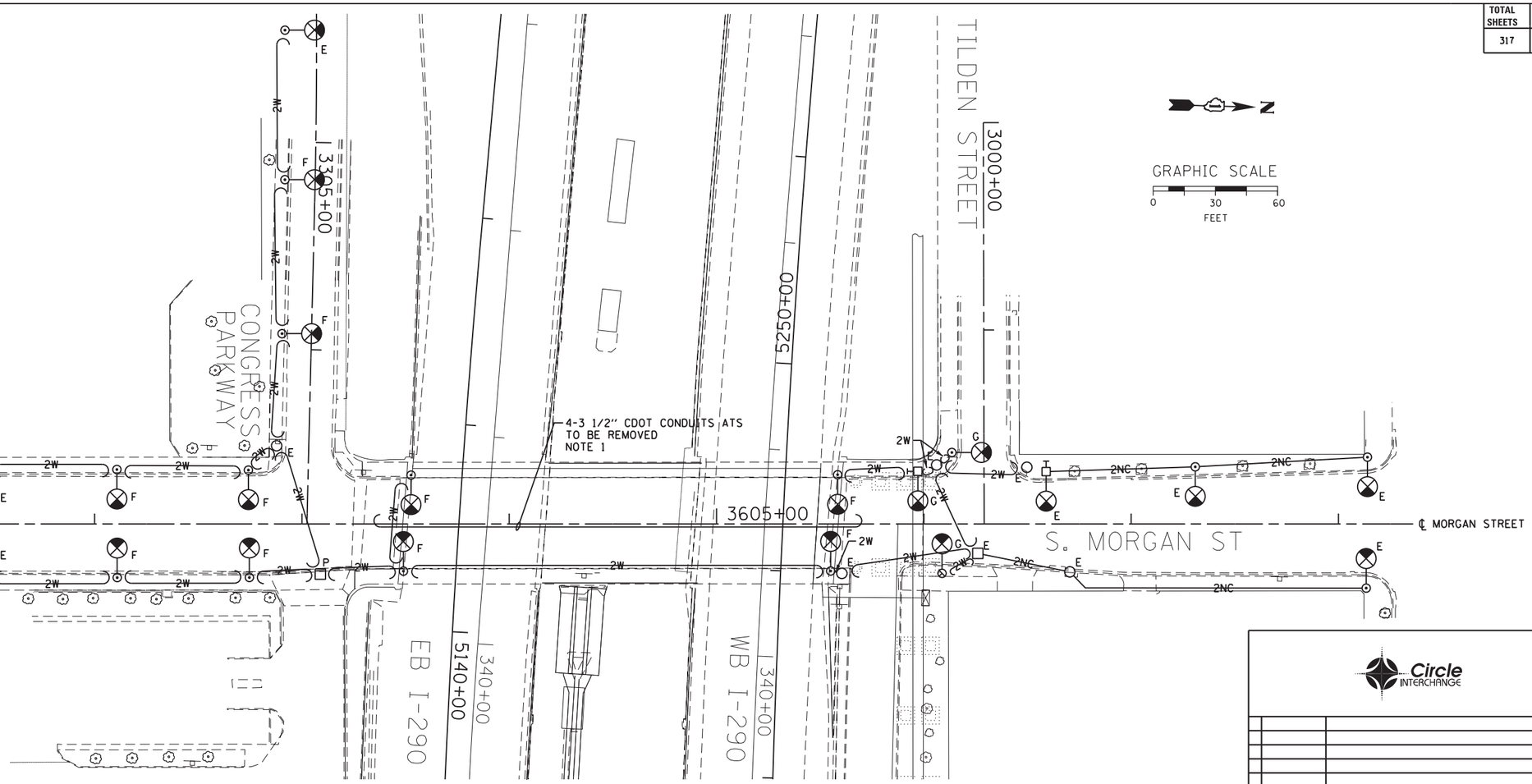
WORK ORDER NO. _____ DATE _____
COST ALLOCATION ACCOUNT _____
APPROPRIATION ACCOUNT { MATERIAL _____ LABOR _____

MORGAN STREET
LIGHTING CABLE AND EQUIPMENT
INSTALLATION PLAN

CITY OF CHICAGO
DEPT. OF TRANSPORTATION
DIVISION OF ELECTRICAL OPERATIONS

DRAFTSMAN: CAM	CHIEF DRAFTSMAN:	ENGINEER: WDS
SUPERVISING ENGINEER: JPC	ELEC. DESIGN ENGR.	E-08
ENGINEER OF ELECTRICITY:		
GEN'L SUPT. OF ELECTRICITY:		
DEPUTY COMMISSIONER:		
SIZE: 22" | 34"	SCALE: 1" = 30'	DATE:
DATE: 6/17/2013		DWG. NO.: 8 OF 11
C.D.O.T. PROJECT NO.:		

TOTAL SHEETS	SHEET NO.
317	130



"E" EXISTING TO REMAIN

"F" REMOVE AND SALVAGE EXISTING STEEL POLE, LUMINAIRE, MAST ARM AND BALLAST HOUSING. BREAKDOWN CONCRETE FOUNDATION COMPLETE.

"G" REMOVE LUMINAIRE AND MAST ARM. ANCHOR BASE STEEL POLE AND CONCRETE FOUNDATION TO BE REMOVED WITH TRAFFIC SIGNAL WORK.

"P" REMOVE EXISTING MANHOLE COMPLETE

NOTES:

1. THE EXISTING CDOT CONDUITS ATTACHED TO THE UNDERSIDE OF THE BRIDGE STRUCTURE MAY CONTAIN ASBESTOS MATERIALS. THE CONDUITS SHALL BE REMOVED AND DISPOSED OF PROPERLY PRIOR TO THE BRIDGE DEMOLITION. THE CDOT ASBESTOS CONDUIT REMOVAL SHALL BE COORDINATED WITH THE REMOVAL OF THE COMED ASBESTOS CONDUITS ATTACHED TO THE UNDERSIDE OF THE BRIDGE. ASBESTOS CONDUIT REMOVAL SHALL BE PAID FOR UNDER THE REMOVAL OF ASBESTOS CEMENT CONDUIT PAY ITEM.

FOR CONDUIT AND FOUNDATION PLANS SEE DRAWING NO. E-07.

FOR LIGHTING CABLE AND EQUIPMENT INSTALLATION PLANS SEE DRAWING NO. E-08.

Circle INTERCHANGE

DATE	REVISION

CITY OF CHICAGO

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING

CONSULTANT:
AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

WORK ORDER NO. _____ DATE _____
COST ALLOCATION ACCOUNT _____
APPROPRIATION ACCOUNT { MATERIAL _____ LABOR _____

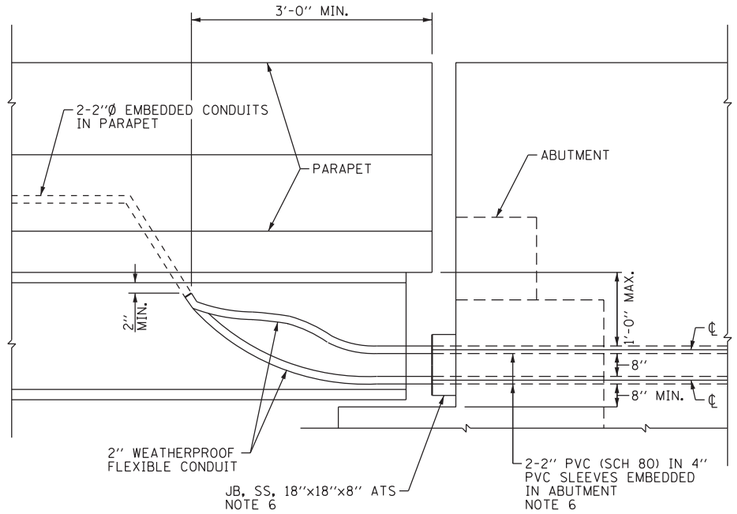
MORGAN STREET
LIGHTING REMOVAL PLAN

CITY OF CHICAGO
DEPT. OF TRANSPORTATION
DIVISION OF ELECTRICAL OPERATIONS

DRAFTSMAN: CAM	CHIEF DRAFTSMAN:	ENGINEER: WDS	
SUPERVISING ENGINEER: JPC	ELEC. DESIGN ENGR.		E-09
	ENGINEER OF ELECTRICITY:		
	GEN'L SUPT. OF ELECTRICITY:		
	DEPUTY COMMISSIONER:		
SIZE: 22" | 34"	SCALE: 1" = 30'	DATE:	
DATE: 6/17/2013		DWG. NO.: 9 OF 11	
C.D.O.T. PROJECT NO.:			

NOTES:

1. SEE DRAWING E-01 FOR IDOT ELECTRICAL SYMBOLS.
2. 2" PVCC CONDUITS SHALL HAVE A MINIMUM BENDING RADIUS OF 10".
3. SEE STRUCTURAL PLANS FOR LOCATION OF EMBEDDED CONDUITS.
4. JUNCTION BOXES SHALL HAVE A 1 1/2" WIRE MESH DRAIN IN THE BOTTOM.
5. WEATHERPROOF FLEXIBLE CONDUIT WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE PRICE FOR "CONDUIT EMBEDDED IN STRUCTURE" PAY ITEM. COST OF 4" SLEEVES IS INCLUDED WITH CONCRETE STRUCTURES.
6. COORDINATE THE LOCATION OF THE JUNCTION BOX AND CONDUITS ROUTED THROUGH THE ABUTMENT WITH THE LOCATION OF THE CONDUIT SLEEVE OPENINGS SHOWN ON THE STRUCTURAL PLANS.



EMBEDDED BRIDGE CONDUIT DETAIL

AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

DI60W25-sht-Light-10	DESIGNED - WDS	REVISED -
USER NAME = myersc	DRAWN - CAM	REVISED -
PLOT SCALE = 1.0000 ' / in.	CHECKED - JPC	REVISED -
PLOT DATE = 6/10/2013	DATE - 6/17/2013	REVISED -

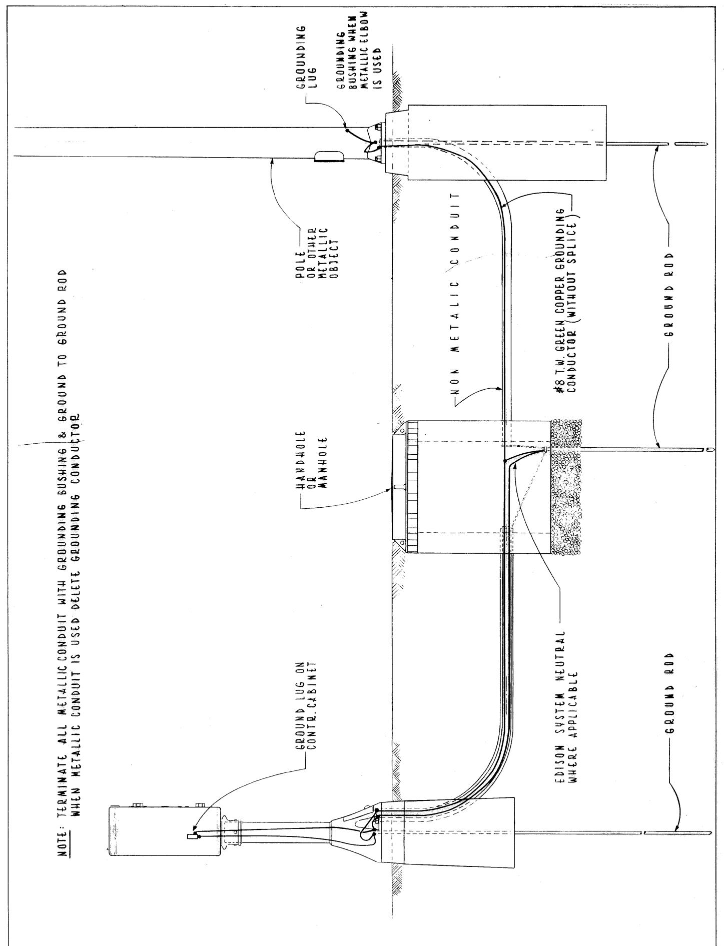
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS ELECTRICAL DETAILS

SCALE: | SHEET 10 OF 11 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	130A
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

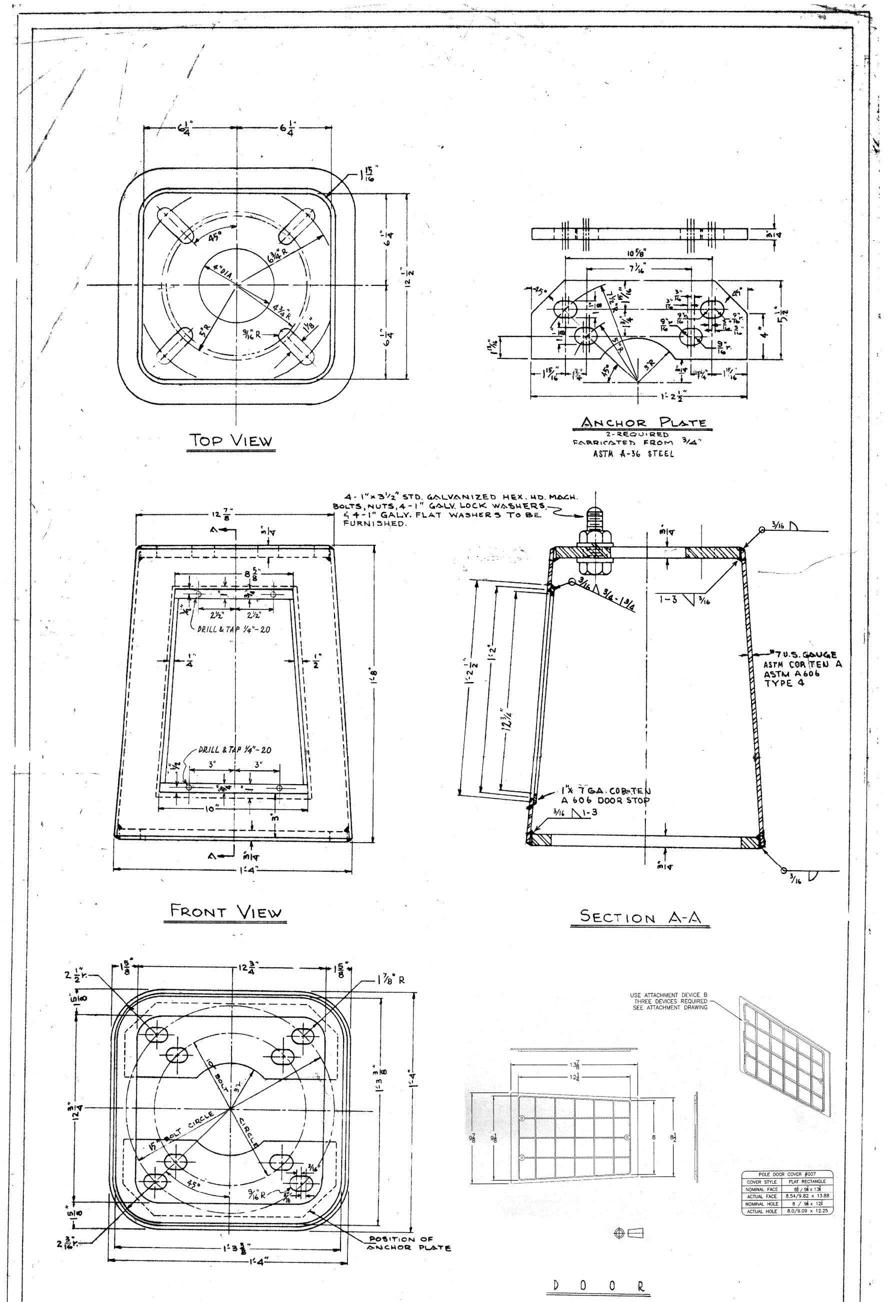
FILE PATH = pw:\\388039-pwntl.aecomonline.local!PWAECOM001\Documents\01 Americas\Transportation\60269938 Circle\Phase II\002.CAD\016.Electrical\Sheets\60W25-sht-Light-10



TYPICAL GROUNDING METHODS FOR BUREAU OF ELECTRICITY EQUIPMENT

CITY OF CHICAGO
DEPT. OF STREETS & SANITATION
BUREAU OF ELECTRICITY
DIVISION OF ELEC. ENGINEERING

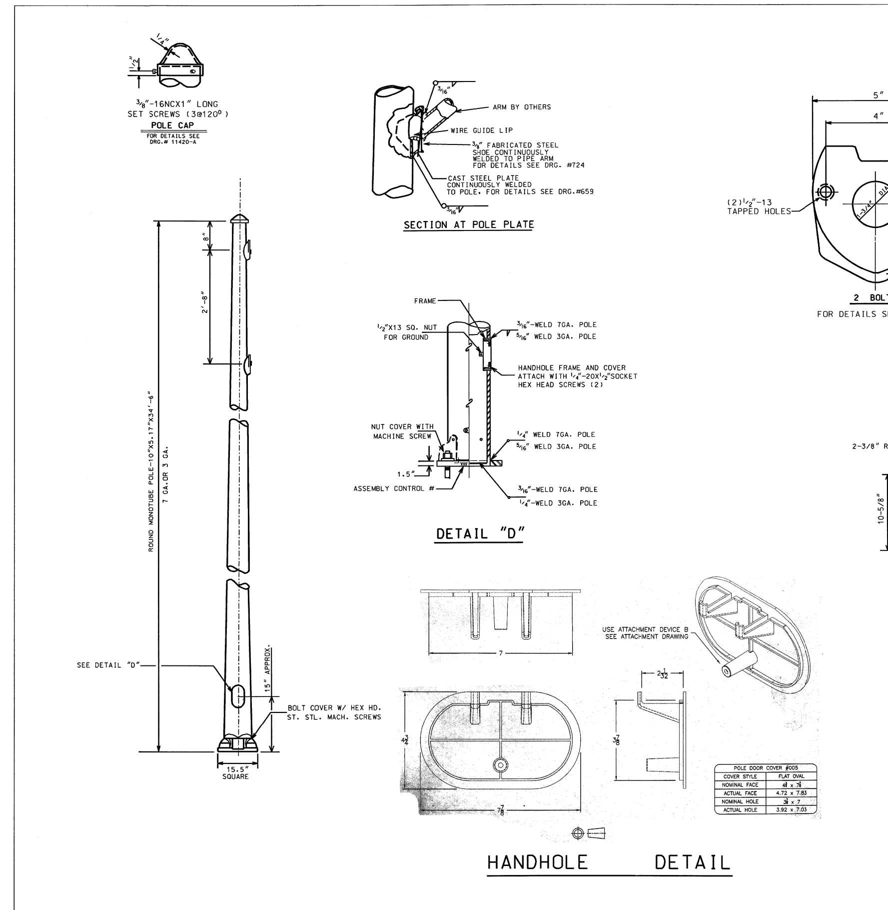
REVISED	DRAWN: E. GERULIS	CHECKED: M. SHINE	ENGINEER: J. O'CONNOR
A	ENG. OF ELEC.:		DWG. NO. 736
B			
C	SUPT. OF CONST.:		
D	DEPUTY COMM.:		
E			
F	SIZE: 8½" x 14"	SCALE: 1" = 10	DATE: 5-12-76



BALLAST HOUSING BASE WITH ANCHOR PLATES FOR 10" & 15" BOLT CIRCLE

CITY OF CHICAGO
DEPT. OF STREETS & ELECTRICITY
DIVISION OF ELECTRICAL ENGINEERING

REVISED		DRAWN: E. GERULIS	CHECKED: M. J. SHINE	ENGINEER: M. R. GREEN
A	AUG 5, 1981	ENGR. OF ELECT.		DRG. NO. 785
B	OCT. 19, 1981	SUPT. OF CONST.		
C		DEPUTY COMM.		
D				
E				
F				
G		SIZE 14"×25"	SCALE 3" = 1'-0"	DATE MARCH 25, 1977

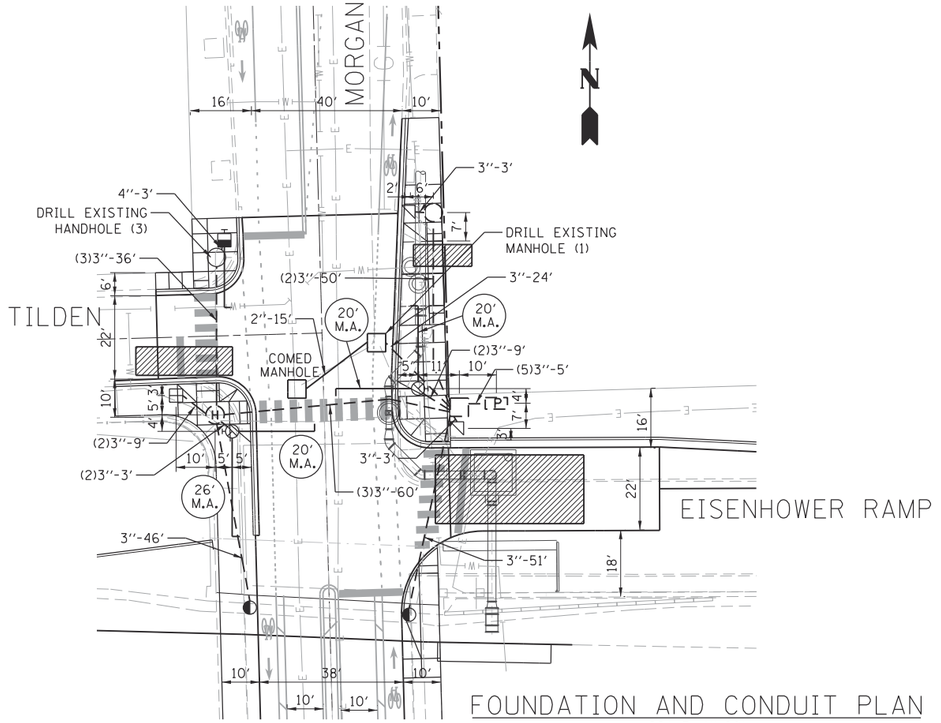


5.17"x10.0" STEEL/34'-6" POLE 7 OR 3 GAUGE

CITY OF CHICAGO
DEPT. OF STREETS AND SANITATION
BUREAU OF ELECTRICITY
DIVISION OF ELECTRICAL ENGINEERING

DRAFTSMAN: ROBERT IVY	CHIEF DRAFTSMAN: ROBERT CARTER	ENGINEER: RON POOL
SUPERVISING ENGINEER:	ELEC. DESIGN ENGR.	DWG. NO. 808
ENGINEER OF ELECTRICITY:		
GEN'L SUPT. OF ELECTRICITY:		
DEPUTY COMMISSIONER:		
		10-03-01

E-11



FOUNDATION AND CONDUIT PLAN

SCALE: 1''=20'

CONSTRUCTION NOTES

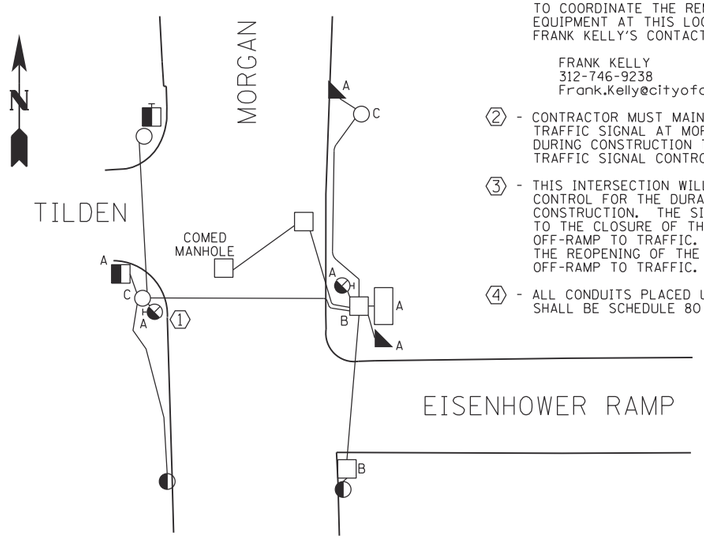
1. CONTRACTOR MUST CONTACT FRANK KELLY AT THE OFFICE OF EMERGENCY MANAGEMENT AND COMMUNICATIONS (OEMC) PRIOR TO THE REMOVAL OF ANY SIGNAL EQUIPMENT TO COORDINATE THE REMOVAL AND REINSTALLATION OF OEMC EQUIPMENT AT THIS LOCATION BY OEMC STAFF. FRANK KELLY'S CONTACT IS PROVIDED BELOW.

   FRANK KELLY
   312-746-9238
   Frank.Kelly@cityofchicago.org

2. CONTRACTOR MUST MAINTAIN ELECTRICAL SERVICE TO THE TRAFFIC SIGNAL AT MORGAN ST. AND VAN BUREN ST. (DWG. #14738) DURING CONSTRUCTION THAT IS CURRENTLY BEING FED FROM THE TRAFFIC SIGNAL CONTROLLER AT THIS INTERSECTION.

3. THIS INTERSECTION WILL BE PLACED UNDER ALL-WAY STOP SIGN CONTROL FOR THE DURATION OF THE MORGAN STREET BRIDGE CONSTRUCTION. THE SIGNAL MUST REMAIN OPERATIONAL PRIOR TO THE CLOSURE OF THE MORGAN STREET BRIDGE AND/OR EISENHOWER OFF-RAMP TO TRAFFIC. THE SIGNAL MUST BE OPERATIONAL PRIOR THE REOPENING OF THE MORGAN STREET BRIDGE AND/OR EISENHOWER OFF-RAMP TO TRAFFIC.

4. ALL CONDUITS PLACED UNDER PAVEMENT SHALL BE SCHEDULE 80

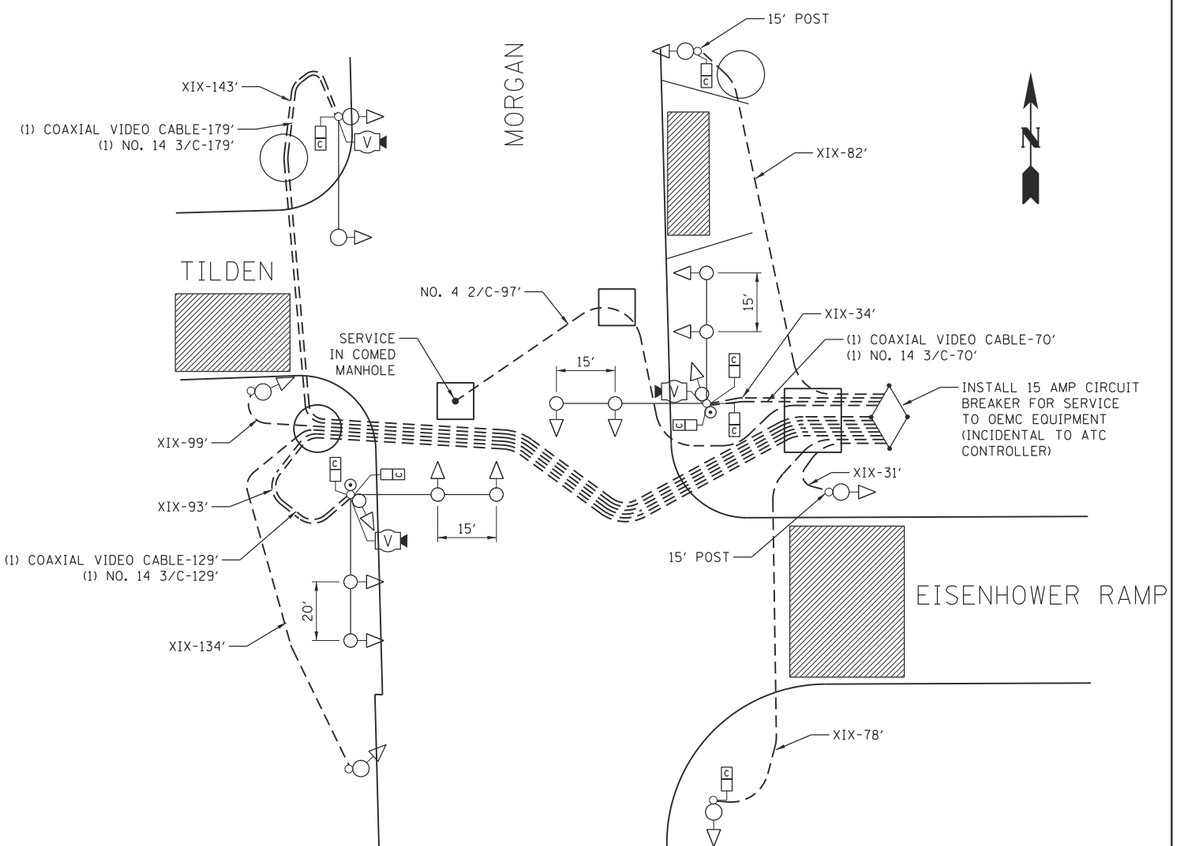


FOUNDATION REMOVAL PLAN

NOT TO SCALE

REMOVAL LEGEND

- A - BREAKDOWN FOUNDATION
- B - BREAKDOWN MANHOLE
- C - BREAKDOWN HANDHOLE
- D - REMOVE TRAFFIC SIGNAL
- E - REMOVE PEDESTRIAN SIGNAL
- F - REMOVE TRAFFIC SIGNAL POST OR POLE
- G - REMOVE TRAFFIC SIGNAL MAST ARM
- H - REMOVE TRAFFIC SIGNAL CONTROLLER
- J - REMOVE ILLUMINATED SIGN
- K - REMOVE VIDEO DETECTION CAMERA
- L - REMOVE PEDESTRIAN PUSHBUTTON
- ⌐ - CABLE TO BE REMOVED

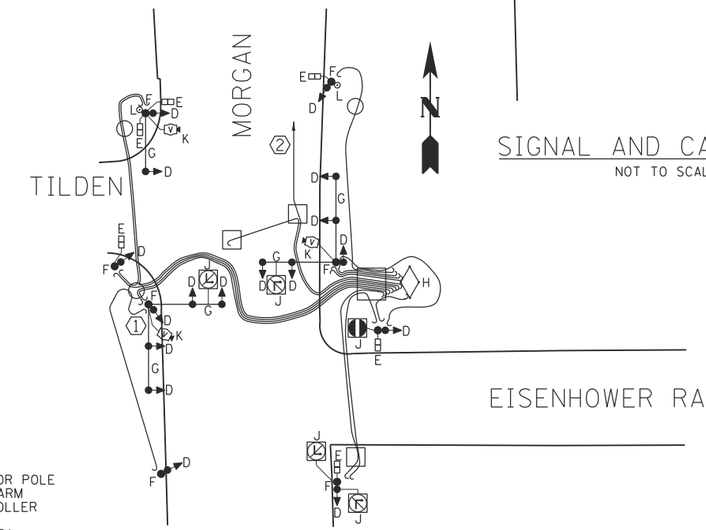


SIGNAL AND CABLE LEGEND:

- V - VIDEO DETECTION CAMERA
- C - LED PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER
- VIDEO DETECTION ZONE

SIGNAL AND CABLE PLAN

NOT TO SCALE



SIGNAL AND CABLE REMOVAL PLAN

NOT TO SCALE

A	
DATE	REVISION

SUPERSEDES DRAWING NO.: 14737 DATED: 3-28-07

TRAFFIC CONTROL SIGNALS MORGAN/EISENHOWER EXIT/TILDEN

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
DIVISION OF ELECTRICAL OPERATIONS

DRAFTSMAN:	CHIEF DRAFTSMAN:	ENGINEER: G. GEDEMER
SUPERVISING ENGINEER:	ELEC. DESIGN ENGR.	DWG. NO. 14737
ENGINEER OF ELECTRICITY:		
GEN'L SUPT. OF ELECTRICITY:		
DEPUTY COMMISSIONER:		
SIZE:	SCALE: AS NOTED	DATE:

EJM ENGINEERING, INC.
411 South Wells Street Suite 1000
Chicago, Illinois 60607

D160W25-sht-Ts-01.dgn	DESIGNED - GG	REVISED -	
USER NAME = Ggedemer	DRAWN - PWF	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED - JW	REVISED -	
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SIGNALS
MORGAN/EISENHOWER EXIT/TILDEN

SCALE: AS NOTED | SHEET 1 OF 10 SHEETS | STA. | TO STA.

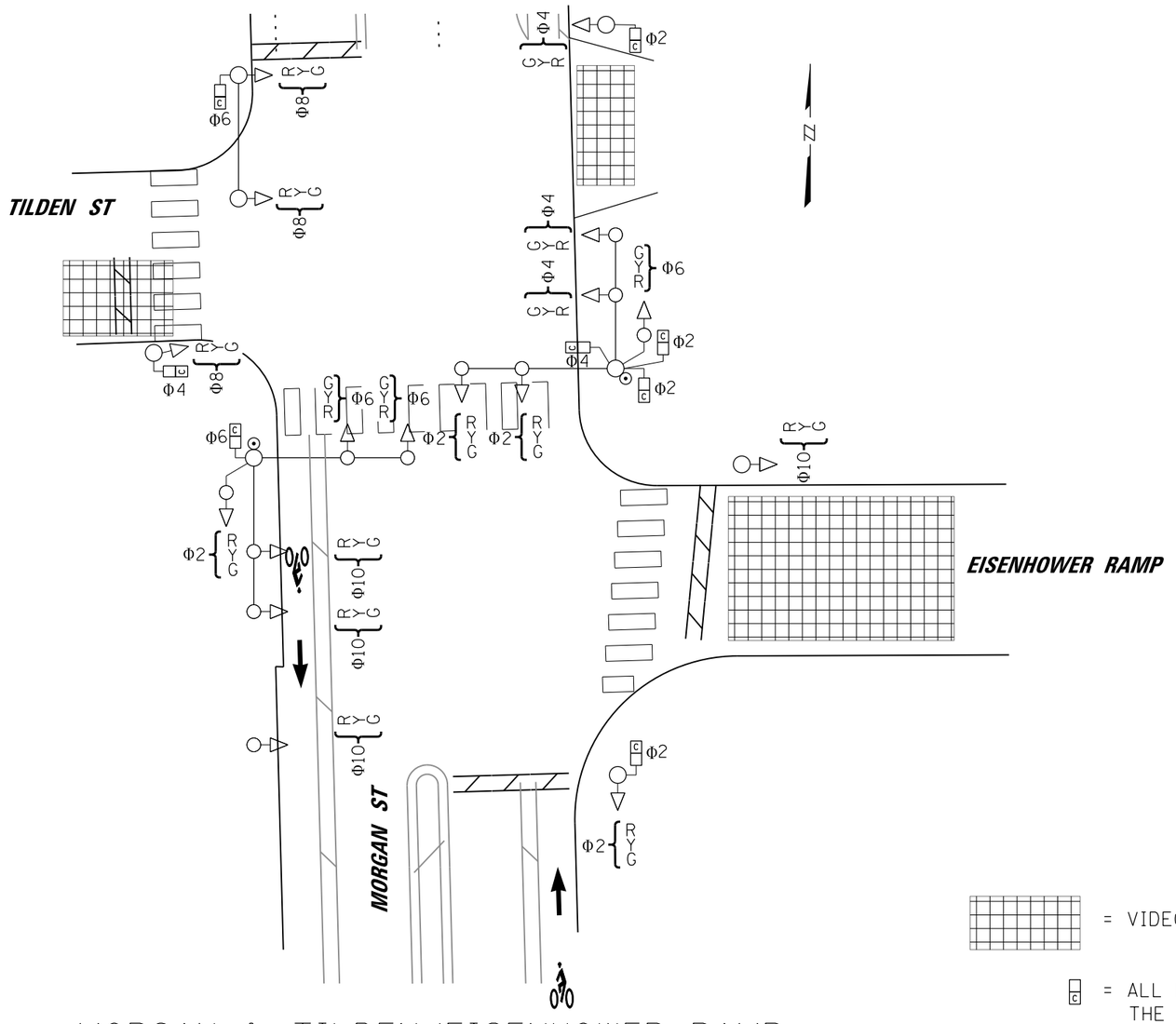
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	131
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

FILE PATH = c:\ewworking\eecom00\ggedemer\d0204534\D160W25-sht-Ts-01.dgn

DIAL	CYCLE LENGTH	OFFSET	TIMES OF OPERATION	FLASH OPERATION
1	75''	0''	ALL TIMES	RΦ2, RΦ6, RΦ4, RΦ8, RΦ10 ALL ARROWS AND WALK/DON'T WALK OFF
2				
3				
4				

DIAL 1

	PHASE								
PHASE NUMBER	1	2	3	4	5	6	7	8	10
DIRECTION	SBLT	NB	WBLT	EB	NBLT	SB	EBLT	WB-1	WB-2
MIN GREEN		22		8		22		8	8
VEHICLE EXT.				5				5	5
MAX GREEN				18				18	23
YELLOW CHANGE		3		3		3		3	3
RED CLEARANCE		2		2		2		2	2
WALK		13		7		13		7	0
PED CLEARANCE		9		11		9		11	0
RECALL		DWELL				DWELL			



= VIDEO CAMERA DETECTION ZONE

[C] = ALL PEDESTRIAN SIGNALS ARE OF THE COUNTDOWN TYPE.

MORGAN & TILDEN/EISENHOWER RAMP

DEO/BOE DRAWING NUMBER: 14737

CITY OF CHICAGO
DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL TIMING SCHEDULE

S. MORGAN ST., W. TILDEN ST., & WB. EISENHOWER EXIT

426 S./1000 W.

DESIGNED BY: PWF
DATE: 04/17/13
CHECKED BY: GG
DATE: 04/17/13

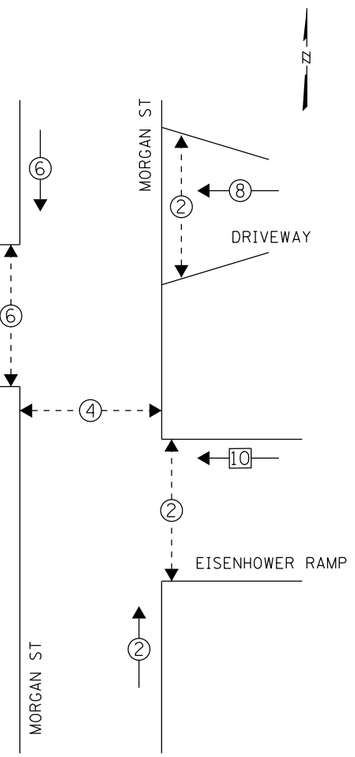
APPROVED:

TRAFFIC ENGINEER:

PAGE 1 OF 1

SENT: INSTALLED:

CONTROLLER SEQUENCE



LEGEND

- (#) DUAL ENTRY PHASE
- [#] SINGLE ENTRY PHASE
- OL OVERLAP
- (#) PEDESTRIAN PHASE
- # NUMBER REFERS TO ASSOCIATED PHASE
- * COORDINATED PHASE

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EJM ENGINEERING, INC.
411 South Wells Street Suite 1000
Chicago, Illinois 60607

D160W25-sht-Ts-02.dgn	DESIGNED - PWF	REVISED -	
USER NAME = Ggedemer	DRAWN - PWF	REVISED -	
PLOT SCALE = 1.0000 ' / in.	CHECKED - GG	REVISED -	
PLOT DATE = 5/9/2013	DATE - 05/14/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL TIMING SCHEDULE
MORGAN ST/TILDEN ST/WB EISENHOWER EXIT

SCALE: NONE | SHEET 2 OF 10 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	132
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		

PROPOSED	PRESENT	
○▻	●▻	SIGNAL, TRAFFIC 3 SECTION 1-WAY ADJUSTABLE, 12" OR AS NOTED
◁○▷	◀●▶	SIGNAL, TRAFFIC 3 SECTION 2-WAY ADJUSTABLE, 12" OR AS NOTED
✳	✳	SIGNAL OPTICALLY PROGRAMMED
DON'T WALK	DON'T WALK	SIGNAL, PEDESTRIAN, DON'T WALK/WALK
→	→	SIGNAL FACE ARROW, 12" COLOR AS NOTED
	Y G	SIGNAL FACE, 1 SECTION YELLOW/GREEN ARROW DUAL INDICATION
◎	⊙	PUSH BUTTON, PEDESTRIAN
INS	INS	SIGN, ILLUMINATED, WITH MESSAGE OR SYMBOL AS INDICATED
		MAST ARM, MONOTUBE, STEEL. SIZE AS INDICATED (SEE DWG. #870)
		MAST ARM, TRUSS, ALUMINUM. SIZE AS INDICATED
		CONTROLLER, TRAFFIC SIGNAL. PEDESTAL OR BASE MOUNTED AS INDICATED
⊠	⊠	CONTROLLER, STREET LIGHTING. PEDESTAL OR BASE MOUNTED. (DWG. 876 or 880)
⊠	⊠	CONTROLLER, STREET LIGHTING. POLE MOUNTED (DWG. #1194O)
	⊠	POLE, WOOD. COMMONWEALTH EDISON COMPANY, SERVICE
◫	◧	POLE, CITY STEEL, ANCHOR BASE, 34'6",7 GA. 10" DI A. AND 15"B.C. 24"X7' FND. W/1¼" ANCHOR RODS DRG. #818.
◫	◧	POLE, CITY STEEL, ANCHOR BASE, 34'-6", 3 GA. 10" DIA. AND 15" B.C. 24"X9' FND. W/1¼" ANCHOR RODS DRG. #818 (16',20' or 26' M.A.)
◫	◩	POLE, CITY STEEL, ANCHOR BASE, 34"-6", 3GA., 11" DIA. AND 17¼" B.C. 30"X9' FND. W/1¼" ANCHOR RODS DRG. #816. (30' M.A.)
◫	◕	POLE, CITY STEEL, ANCHOR BASE 34'-6", 3 GA. 12½" DIA. AND 16½"B.C. 30"X11' FND. W/1½" ANCHOR RODS DRG.#817. (35',40' or 44' M.A.)
◫	◐	POLE, CITY STEEL, ANCHOR BASE, 32'-6", 3 GA. 10" DIA., WITH 3 GA. BAL. HSG. BASE AND 17¼" B. C. ON 30"X9' FND. W/ 11/4" ANCHOR RODS DRG. #816.
	◐	POLE, CITY STEEL, ANCHOR BASE, 20',27'-6",29'-6", 7 GA. WITH STEEL BAL. HSG. BASE AND FND. W/10" D. B.C. AND 1" ANCHOR RODS DRG. #716.
	◐	POLE, CITY STEEL, ANCHOR BASE, 20',27'-6",29'-6", 3 GA., WITH STEEL BAL. HSG. BASE AND FND. W/10" D. B.C. AND 1" ANCHOR RODS DWG.#719.
	◐	POLE, CITY STEEL, ANCHOR BASE, 20',27'-6",29'-6" 7 GA., AND FND. WITH 10" B.C. AND 1" ANCHOR RODS DWG. #11408B.
	◐	POLE, CITY STEEL, ANCHOR BASE, 20',27'-6",29'-6" 3 GA.,AND FND. WITH 10" B.C. AND 1" ANCHOR RODS DWG. #11408B.
⊘	◐	POLE , CITY STEEL, ANCHOR BASE, 32'-6", 7 GA., AND FND. WITH 11½" B.C. AND 1" ANCHOR RODS DWG. #753.
⊘	◐	POLE, CITY STEEL, ANCHR BASE, 32'-6", 3 GA., AND FND. WITH 11½" B.C. AND 1" ANCHOR RODS DWG. #753.
	◙	POLE, CITY STEEL, ANCHOR BASE, 32'-6" 7 GA., ALUM. BHB AND FND. WITH 15" B.C.-24"X7' WITH 1" ANCHOR RODS DRG. #691.
	◙	POLE, CITY STEEL, ANCHOR BASE, 32'-6", 3 GA., ALUM. BHB AND FND. WITH 15" B.C. 24"X 7' WITH 1" ANCHOR RODS DWG. #691.
	◐	POLE, CITY ALUMINUM, WITH ROUND BAL. HSG. BASE, 25', 28', or 30' ON FND.WITH 14" B.C., ACQUIRED FROM CHICAGO PARK DISTRICT.
◉	◉	POLE, CITY STEEL, EMBEDDED, 4"X 9"X 35' 7 GA., TAPERED TUBULAR. (DWG. #658)
◉	◉	POLE, CITY STEEL, EMBEDDED, 4"X 9"X 35' 3 GA., TAPERED TUBULAR. (DWG. #658)
	◉	POLE, CITY STEEL, EMBEDDED. (ACQUIRED FROM CTA)
	⊠	COLUMN,ELEVATED STRUCTURE
⌀	⌀	POLE, WOOD. (SIZE AS NOTED)
⌀	●	POLE, FOUNDATION WITH ELBOWS AS INDICATED.(SIZE AS NOTED)
○	●	POLE, ORNAMENTAL OR OTHER, AS INDICATED ON THE PLANS

PROPOSED	PRESENT	
Ⓗ	Ⓗ	HANDHOLE, HEAVY DUTY, 36" I.D. (DWG.#866)
○	○	HANDHOLE, CIRCULAR WITH 24"FRAME & COVER,30"I.D. (#867)
⬚	□	MANHOLE, CITY 3'X4'X4' DWG. #729 or 730; 4'X6'X6' DWG. #732or 733.
◿	◢	FOUNDATION, CONTROLLER OR PEDESTAL, 13" B.C.,20"X5' (DWG. #709)
▭	▭	FOUNDATION, TRAFFIC CONTROLLER DWG. #854. F.A. TERMINAL FND. DWG. #11972
[P]	[P]	FOUNDATION, TRAFFIC TYPE "P", BASE MOUNT. (DWG. #888)
⬭	⬭	FOUNDATION,CONTROLLER STREET LIGHT ,SPECIAL, 100A & 200A. (DWG.#876 & # 880)
◹	◣	FOUNDATION, TRANSCLOSURE; TRANSCLOSURE HOUSING. (DWG.# 583 & #891)
⊠	⊠	CONTROLLER,UNDERPASS LIGHTING 120V. & 240V. (DWG. #860 & #861)
	[E]	MANHOLE, UTILITY, E=COMMONWEALTH EDISON; T=ILL.BELL TEL.; G=PEOPLES GAS; W=CITY WATER; P=CHGO PARK DISTRICT; CTA=C.T.A; S= SEWER
Ⓙ	⌀	JUNCTION BOX, IN PAVEMENT (DWG. #815)
▨	▨	DETECTOR LOOP IN PAVEMENT
		CONDUIT or P.V.C., NUMBER,SIZE & TYPE. (AS NOTED)
2D	2D	CONDUIT or P.V.C. ENCASED IN CONCRETE. (SECTION or NUMBER OF CONDUIT INDICATED
◬	◬	LUMINAIRE, H.P.S.V. 400W LAMP, 240V, SEMI-CUTOFF
◬	◬	LUMINAIRE, H.P.S.V. 400W LAMP, 240V, CUTOFF
⊗	⊗	LUMINAIRE, H.P.S.V. 310W LAMP, 240V
⊗	⊗	LUMINAIRE, H.P.S.V. 310W LAMP 240V, CUTOFF
ⓥ	ⓥ	LUMINAIRE, H.P.S.V. 150W LAMP, 240V
⊖	⊖	LUMINAIRE, H.P.S.V. 150W LAMP, 120V
◬	◬	LUMINAIRE, H.P.S.V. 250W LAMP, 120V, (ALLEY LIGHT)
⊕	⊕	LUMINAIRE, H.P.S.V. 250W LAMP, 120V
Ⓣ	Ⓣ	TERMINAL, CABINET F.A. & P.C.
Ⓕ	Ⓕ	FIRE ALARM BOX, MOUNTED
Ⓕ	Ⓕ	FIRE ALARM BOX, POLE MOUNTED
PR	PR	CABLE, TRAFFIC SIGNAL, COMMUNICATION, 1-PAIR #14 SHIELDED, IN CONDUIT
2	2	CABLE, TRAFFIC SIGNAL POWER SUPPLY, 2/C- #4, 600 V. EPR. IN CONDUIT
III	III	CABLE, TRAFFIC SIGNAL POWER SUPPLY, 2 1/C-#2 or #1/0 600V. EPR IN CONDUIT
II	II	CABLE, TRAFFIC SIGNAL POWER SUPPLY, 2/C-#10 or #6, 600V NSR1, IN CONDUIT
VII	VII	CABLE, TRAFFIC SIGNAL, 7/C-#12 or #14, 600V, EPR IN CONDUIT
X	X	CABLE, TRAFFIC SIGNAL, 10/C-#12 or #14, 600V, EPR IN CONDUIT
	XIV	CABLE, TRAFFIC SIGNAL, 14/C-#12 600V. EPR IN CONDUIT
XIX	XIX	CABLE, TRAFFIC SIGNAL, 19/C-#12 or #14, 600V, EPR IN CONDUIT
2N	2N	CABLE, STREET LIGHT, 2 1/C-#6, 600V. RINS IN PARKWAY
2NC	2NC	CABLE, STREET LIGHT, 2 1/C-#6, 600V. RINS IN CONDUIT
3TC	3TC	CABLE, STREET LIGHT, 2 1/C-#6 EPRN 600V. & 1 1/C-#8 GREEN, TRIPLEXED,IN CONDUIT
3NC	3NC	CABLE, STREET LIGHT, 3 1/C-#1/0, or #2/0, or #4, 600V. EPR IN CONDUIT
2W	2W	WIRE, STREET LIGHT, 2 1/C-#6, HDNS. AERIAL
3W	3W	WIRE, STREET LIGHT, 2 1/C-#6 & 1 1/C #8, HDNS. AERIAL
III	III	CABLE, STREET LIGHT AERIAL, 3 1/C-#4 or #2 SELF SUPPORTING, 600V EPR
W F.A	W F.A	WIRE, F.A. & P.C. AERIAL, 1/C-#10, NUMERAL DENOTES QUANTITY
PR	PR	CABLE, F.A. & P.C. AERIAL, W/ MESSENGER #19-(NUMBER OF PAIRS AS INDICATED)
PR 6 6	6 PR	CABLE, F.A. & P.C. AERIAL, SELF SUPPORTING, #19-(NUMBER OF PAIRS AS INDICATED)
37 PR	37 PR	CABLE, F.A. & P.C., IN CONDUIT, #19-(NUMBER OF PAIRS AS INDICATED)
		DOWNLIGHT ASSEMBLY. (DWG. #850)
		LIGHT, TRAFFIC SAFETY ISLAND
◁○	◀○	FLASHING BEACON & DOWNLIGHT

ORNAMENTAL LUMINAIRES

PROPOSED	EXISTING	
◈	◈	310W PENDANT (240V)
◈	◈	400W PENDANT (240V)
◈	◈	250W PENDANT (240V)
⊖	⊖	150W ACORN (120V)
ⓥ	ⓥ	150W ACORN (240V)
⊗	⊗	50W ACORN (240V)
⊙	⊙	100W ACORN (240V)
ⓥ	ⓥ	150W GLOBE (240V)
⊡	⊡	100W GLOBE (240V)
⊗	⊗	50W GLOBE (240V)

C	04-01-02	REVISED/REDRAW R.POOL/B.I.
B	12-4-01	ADDED ORNAMENTAL SYMBOLS
A	8-6-96	REDRAWN
DATE		REVISION

STANDARD CODE FOR TRAFFIC SIGNALS/ STREET LIGHTING

CITY OF CHICAGO
DEPT. OF STREETS AND SANITATION
BUREAU OF ELECTRICITY
DIVISION OF ELECTRICAL ENGINEERING

DRAFTSMAN:	CHIEF DRAFTSMAN:	ENGINEER:
R, IVY	R. CARTER	R. POOL/R.C/W.T.

SUPERVISING ENGINEER: ELEC. DESIGN ENGR.
ENGINEER OF ELECTRICITY:
GEN'L SUPT. OF CONSTRUCTION:
DEPUTY COMMISSIONER:

DWG. NO. 826

SIZE: 22"| 36" | SCALE: | DATE:

FILE PATH = H:\Circle CAD\D160W25-sht-Ts-03.dgn

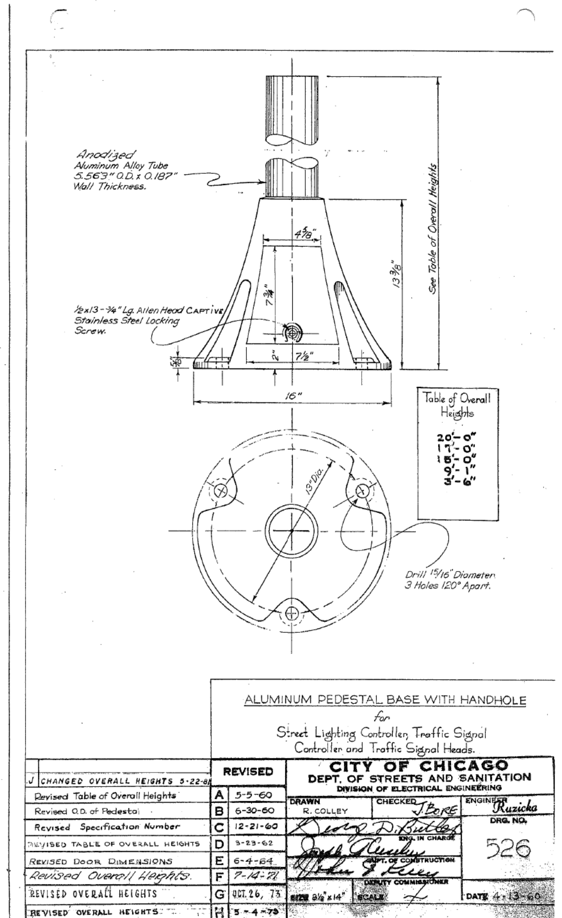
EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	D160W25-sht-Ts-03.dgn	DESIGNED - PWF	REVISED -
	USER NAME = Ggedemer	DRAWN - PWF	REVISED -
	PLOT SCALE = 1.0000 ' / in.	CHECKED - GG	REVISED -
	PLOT DATE = 5/9/2013	DATE - 05/14/2013	REVISED -

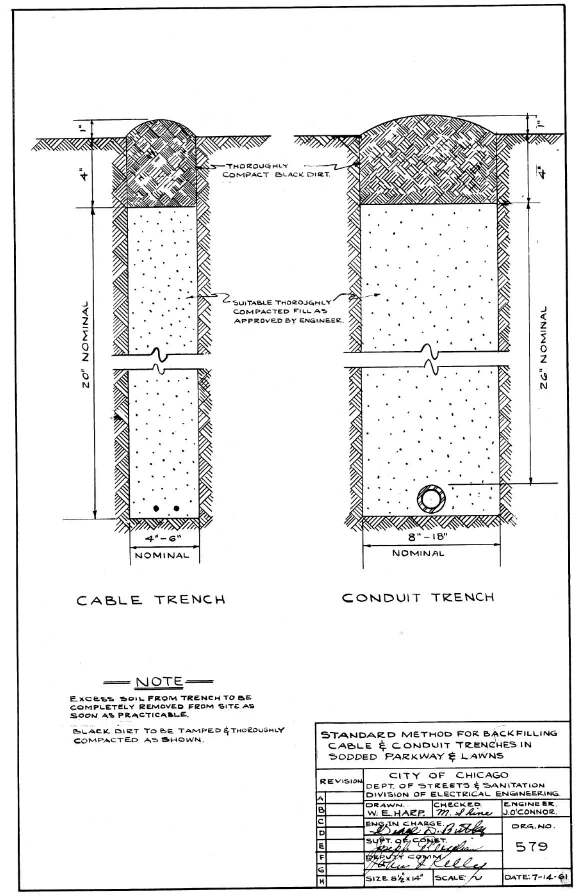
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

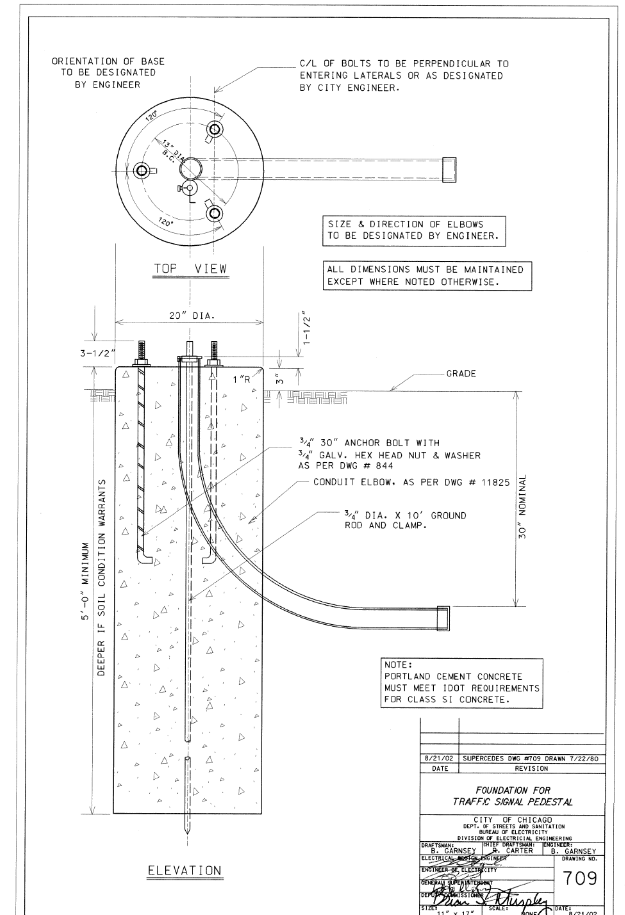
CDOT STANDARD DRAWINGS FOR TRAFFIC SIGNALS

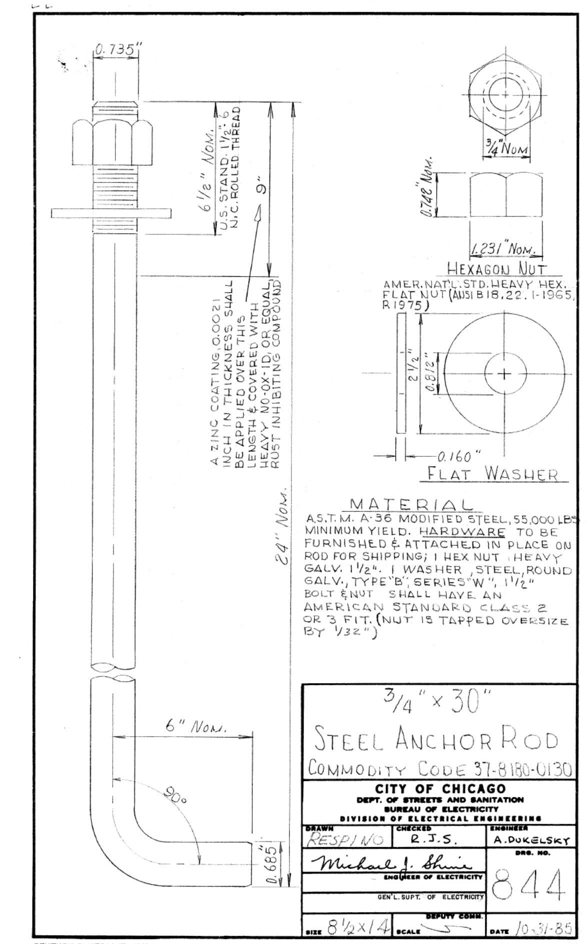
SCALE: NONE | SHEET 3 OF 10 SHEETS | STA. | TO STA.

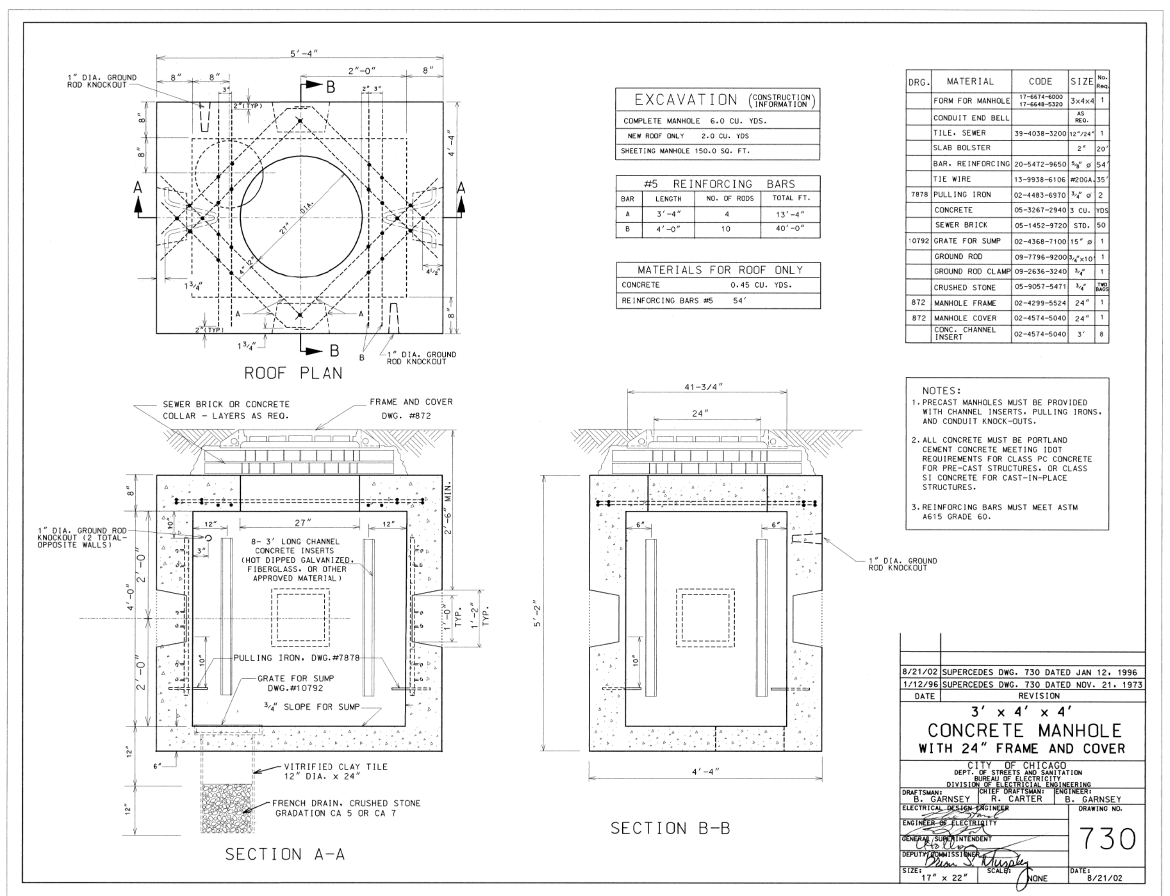
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	133
		CONTRACT NO. 60W25		
		ILLINOIS FED. AID PROJECT		

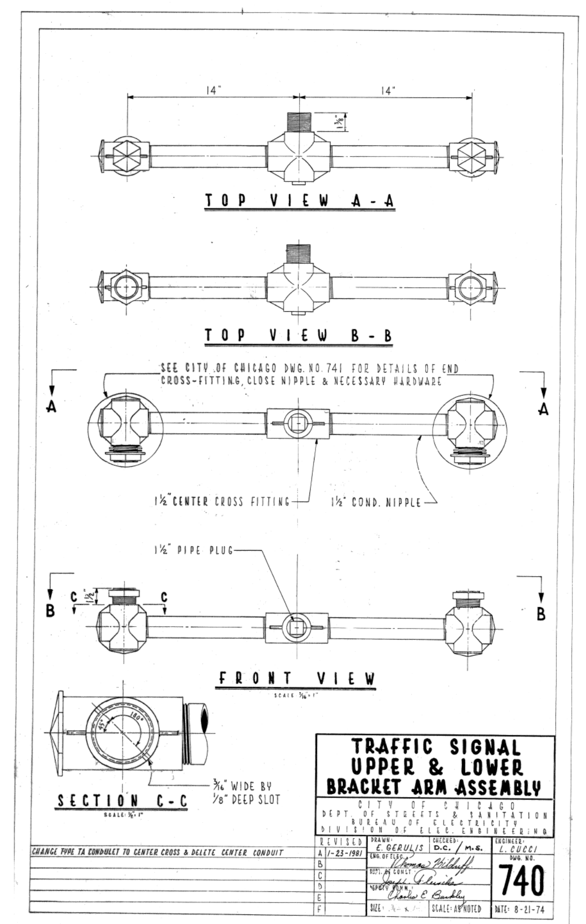

Anodized Aluminum Alloy Tube 5.563" O.D. x 0.187" Wall Thickness.
See Table of Overall Heights
Table of Overall Heights
Drill 1 5/16" Diameter 3 Holes 120° Apart.
16"
ALUMINUM PEDESTAL BASE WITH HANDHOLE
for Street Lighting Controller, Traffic Signal Controller and Traffic Signal Heads.
CITY OF CHICAGO
DEPT. OF STREETS AND SANITATION
DIVISION OF ELECTRICAL ENGINEERING
REVISED
CHANGED OVERALL HEIGHTS
Revised Table of Overall Heights
Revised O.D. of Pedestal
Revised Specification Number
REVISED TABLE OF OVERALL HEIGHTS
REVISED DOOR DIMENSIONS
Revised Overall Heights
REVISED OVERALL HEIGHTS
REVISED OVERALL HEIGHTS
526

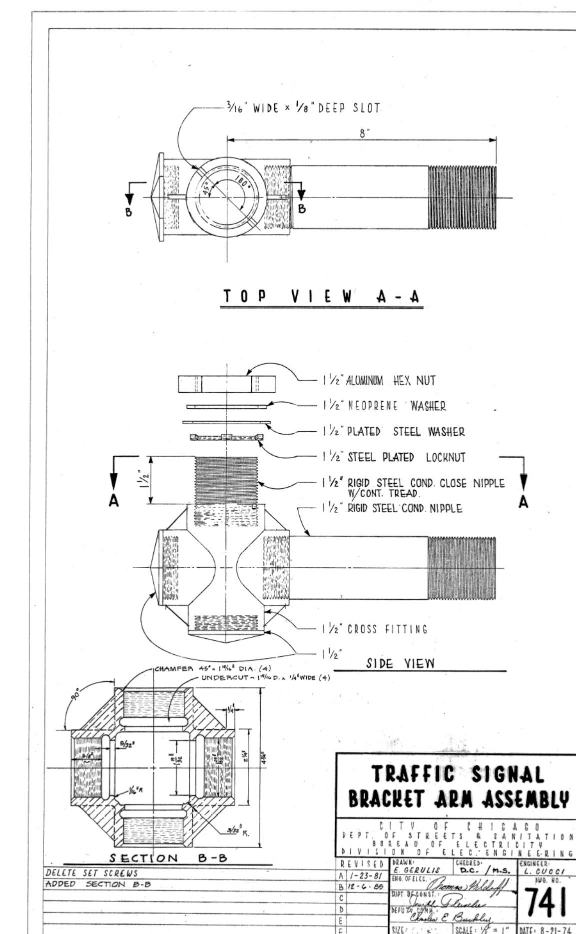

THOROUGHLY COMPACT BLACK DIRT
SUITABLE THOROUGHLY COMPACTED FILL AS APPROVED BY ENGINEER
20" NOMINAL
26" NOMINAL
4"-6" NOMINAL
8"-18" NOMINAL
CABLE TRENCH
CONDUIT TRENCH
NOTE
EXCESS SOIL FROM TRENCH TO BE COMPLETELY REMOVED FROM SITE AS SOON AS PRACTICABLE.
BLACK DIRT TO BE TAMPED & THOROUGHLY COMPACTED AS SHOWN.
STANDARD METHOD FOR BACKFILLING CABLE & CONDUIT TRENCHES IN SODDED PARKWAY & LAWNS
CITY OF CHICAGO
DEPT. OF STREETS & SANITATION
DIVISION OF ELECTRICAL ENGINEERING
579


ORIENTATION OF BASE TO BE DESIGNATED BY ENGINEER
C/L OF BOLTS TO BE PERPENDICULAR TO ENTERING LATERALS OR AS DESIGNATED BY CITY ENGINEER.
TOP VIEW
SIZE & DIRECTION OF ELBOWS TO BE DESIGNATED BY ENGINEER.
ALL DIMENSIONS MUST BE MAINTAINED EXCEPT WHERE NOTED OTHERWISE.
20" DIA.
GRADE
3/4" 30" ANCHOR BOLT WITH 3/4" GALV. HEX HEAD NUT & WASHER AS PER DWG # 844
CONDUIT ELBOW, AS PER DWG # 11825
3/4" DIA. X 10' GROUND ROD AND CLAMP.
30" NOMINAL
5'-0" MINIMUM DEEPER IF SOIL CONDITION WARRANTS
NOTE:
PORTLAND CEMENT CONCRETE MUST MEET IDOT REQUIREMENTS FOR CLASS SI CONCRETE.
ELEVATION
FOUNDATION FOR TRAFFIC SIGNAL PEDESTAL
CITY OF CHICAGO
709


0.735"
6 1/8" Nom.
9"
U.S. STAND 1 1/2" N.C. ROLLED THREAD
A ZINC COATING 0.0021 INCH IN THICKNESS SHALL BE APPLIED OVER THIS LENGTH & COVERED WITH HEAVY NO-OX-ID OR EQUAL RUST INHIBITING COMPOUND
24" Nom.
6" Nom.
90°
3/4" Nom.
1.231" Nom.
Hexagon Nut
AMER. NAT'L STD. HEAVY HEX. FLAT NUT (ANSI B18.22.1-1965, R1975)
0.160"
Flat Washer
MATERIAL
A.S.T.M. A-36 MODIFIED STEEL, 55,000 LBS MINIMUM YIELD. HARDWARE TO BE FURNISHED & ATTACHED IN PLACE ON ROD FOR SHIPPING; 1 HEX NUT, HEAVY GALV. 1 1/2", 1 WASHER, STEEL, ROUND GALV., TYPE "B", SERIES "W", 1 1/2" BOLT & NUT SHALL HAVE AN AMERICAN STANDARD CLASS 2 OR 3 FIT. (NUT IS TAPPED OVERSIZE 1/64" - 1/32")
3/4" x 30"
Steel Anchor Rod
Commodity Code 37-8180-0130
CITY OF CHICAGO
DEPT. OF STREETS AND SANITATION
BUREAU OF ELECTRICITY
DIVISION OF ELECTRICAL ENGINEERING
844


ROOF PLAN
SECTION A-A
SECTION B-B
SEWER BRICK OR CONCRETE COLLAR - LAYERS AS REQ.
FRAME AND COVER DWG. #872
8 - 3' LONG CHANNEL CONCRETE INSERTS (HOT DIPPED GALVANIZED, FIBERGLASS, OR OTHER APPROVED MATERIAL)
PULLING IRON, DWG. #7878
GRATE FOR SUMP DWG. #10792
3/4" SLOPE FOR SUMP
VITRIFIED CLAY TILE 12" DIA. x 24"
FRENCH DRAIN, CRUSHED STONE GRADATION CA 5 OR CA 7
1" DIA. GROUND ROD KNOCKOUT
EXCAVATION (CONSTRUCTION INFORMATION)
COMPLETE MANHOLE 6.0 CU. YDS.
NEW ROOF ONLY 2.0 CU. YDS.
SHEETING MANHOLE 150.0 SQ. FT.
#5 REINFORCING BARS
MATERIALS FOR ROOF ONLY
CONCRETE 0.45 CU. YDS.
REINFORCING BARS #5 54'
NOTES:
1. PRECAST MANHOLES MUST BE PROVIDED WITH CHANNEL INSERTS, PULLING IRONS, AND CONDUIT KNOCK-OUTS.
2. ALL CONCRETE MUST BE PORTLAND CEMENT CONCRETE MEETING IDOT REQUIREMENTS FOR CLASS PC CONCRETE FOR PRE-CAST STRUCTURES, OR CLASS SI CONCRETE FOR CAST-IN-PLACE STRUCTURES.
3. REINFORCING BARS MUST MEET ASTM A615 GRADE 60.
8/21/02 SUPERCEDES DWG. 730 DATED JAN 12, 1996
1/12/96 SUPERCEDES DWG. 730 DATED NOV. 21, 1973
3' x 4' x 4'
CONCRETE MANHOLE
WITH 24" FRAME AND COVER
CITY OF CHICAGO
730

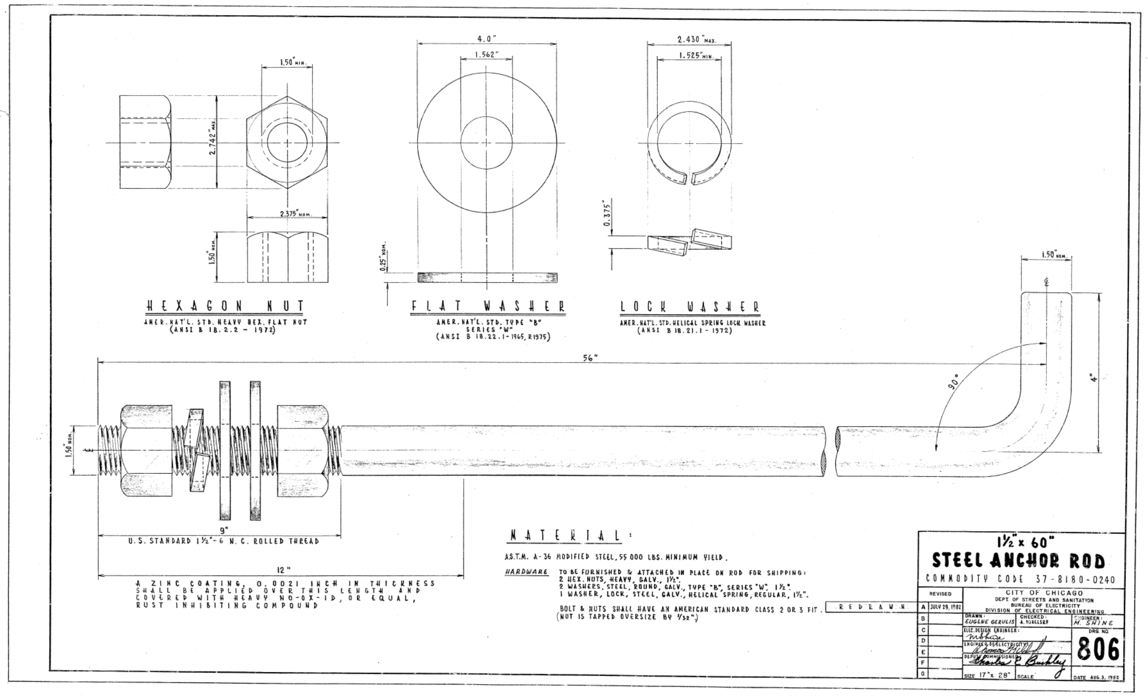

TOP VIEW A-A
TOP VIEW B-B
SEE CITY OF CHICAGO DWG NO. 741 FOR DETAILS OF END CROSS-FITTING, CLOSE NIPPLE & NECESSARY HARDWARE
1 1/2" CENTER CROSS FITTING
1 1/2" COND. NIPPLE
1 1/2" PIPE PLUG
FRONT VIEW
3/4" WIDE BY 3/8" DEEP SLOT
SECTION C-C
TRAFFIC SIGNAL UPPER & LOWER BRACKET ARM ASSEMBLY
740

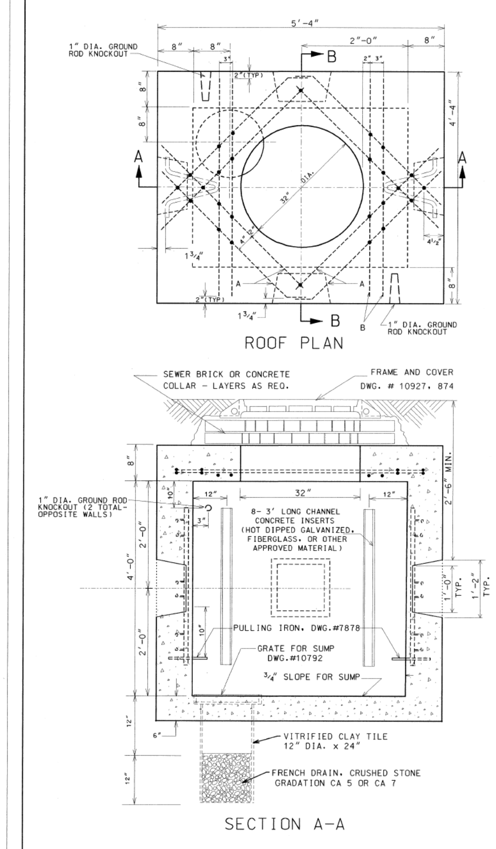

3/16" WIDE x 3/8" DEEP SLOT
TOP VIEW A-A
1 1/2" ALUMINUM HEX. NUT
1 1/2" NEOPRENE WASHER
1 1/2" PLATED STEEL WASHER
1 1/2" STEEL PLATED LOCKNUT
1 1/2" RIGID STEEL COND. CLOSE NIPPLE W/CONT. TREAD
1 1/2" RIGID STEEL COND. NIPPLE
1 1/2" CROSS FITTING
SIDE VIEW
SECTION B-B
TRAFFIC SIGNAL BRACKET ARM ASSEMBLY
741

FILE PATH : H:\Circle CAD\D160W25-sht-Ts-04.dgn

EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	D160W25-sht-Ts-04.dgn	DESIGNED - PWF	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CDOT STANDARD DRAWINGS FOR TRAFFIC SIGNALS
	USER NAME = Ggedemer	DRAWN - PWF	REVISED -		
	PLOT SCALE = 1.0000 ' / in.	CHECKED - GG	REVISED -		
	PLOT DATE = 5/9/2013	DATE - 05/14/2013	REVISED -		SCALE: NONE SHEET 4 OF 10 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	134
		CONTRACT NO. 60W25		
		ILLINOIS FED. AID PROJECT		





EXCAVATION (CONSTRUCTION INFORMATION)
COMPLETE MANHOLE 5.0 CU. YDS.
NEW ROOF ONLY 2.0 CU. YDS
SHEETING MANHOLE 150.0 SQ. FT.

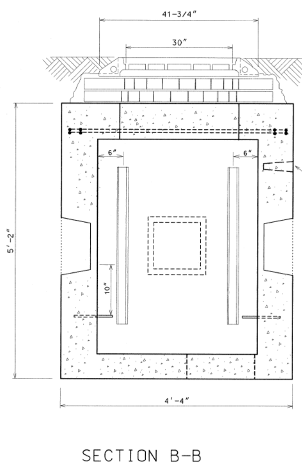
#5 REINFORCING BARS

BAR	LENGTH	NO. OF RODS	TOTAL FT.
A	2'-9"	8	22'-0"
B	4'-0"	4	16'-0"

MATERIALS FOR ROOF ONLY	
CONCRETE	0.5 CU. YDS.
REINFORCING BARS #5	38'

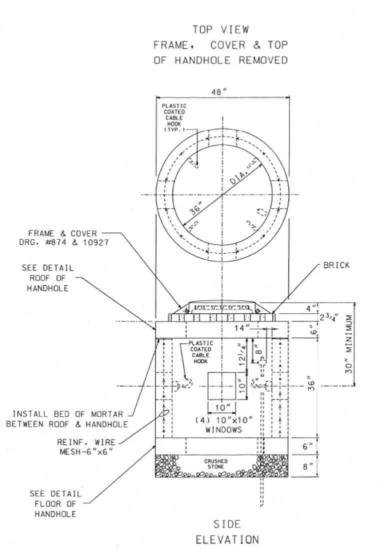
DRG.	MATERIAL	CODE	SIZE	No. Req.
	FORM FOR MANHOLE	17-6674-6000 17-6648-5320	3x4x4	1
	CONDUIT END BELL		AS REQ.	
	TILE, SEWER	39-4038-3200	12"/24"	
	SLAB BOLSTER		2"	20'
	BAR, REINFORCING	20-5472-9650	⅝" ø	38'
	TIE WIRE	13-9938-6106	#20GA.	35'
7878	PULLING IRON	02-4483-6970	¾" ø	2
	CONCRETE	05-3267-2940	3 CU.	YDS
	SEWER BRICK	05-1452-9720	STD.	50
10792	GRATE FOR SUMP	02-4368-7100	15" ø	1
	GROUND ROD	09-7796-9200	¾"x10'	1
	GROUND ROD CLAMP	09-2636-3240	¾"	1
	CRUSHED STONE	05-9057-5471	¾"	ONE BAG
874	MANHOLE FRAME	02-4299-5524	30"	1
10927	MANHOLE COVER	02-4574-5040	30"	1
	CONC. CHANNEL INSERT	02-4574-5040	3'	8

NOTES:
1. PRECAST MANHOLES MUST BE PROVIDED WITH CHANNEL INSERTS, PULLING IRONS, AND CONDUIT KNOCK-OUTS.
2. ALL CONCRETE MUST BE PORTLAND CEMENT CONCRETE MEETING IDOT REQUIREMENTS FOR CLASS PC CONCRETE FOR PRE-CAST STRUCTURES, OR CLASS SI CONCRETE FOR CAST-IN-PLACE STRUCTURES.
3. REINFORCING BARS MUST MEET ASTM A615 GRADE 60.



DATE	REVISION
8/21/02	SUPERCEDES DWG. 729 DATED JAN 12, 1996
1/12/96	SUPERCEDES DWG. 729 DATED NOV. 21, 1973

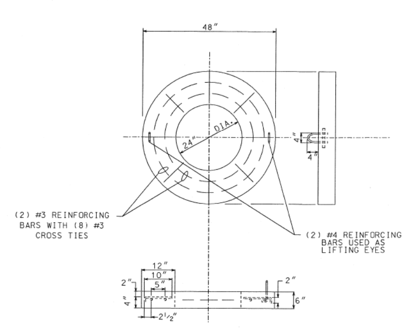
3' x 4' x 4' CONCRETE MANHOLE WITH 30" FRAME AND COVER
CITY OF CHICAGO
DEPT. OF STREETS AND SANITATION
BUREAU OF ELECTRICITY
DIVISION OF ELECTRICAL ENGINEERING
DRAFTSMAN: B. GARNSEY | CHIEF DRAFTSMAN: R. CARTER | ENGINEER: B. GARNSEY
DRAWING NO. 729
SIZE: 17" x 22" | SCALE: NONE | DATE: 8/21/02



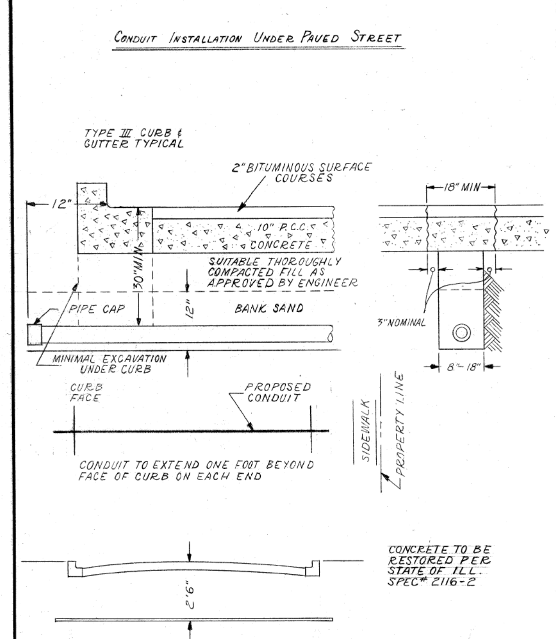
COMPLETE COMMODITY CODE NO. 05-6610-5310M			
CODE NO.	MATERIALS	SIZE	QUAN.
(1) 05-6610-5312	PRE-CAST HANDHOLE	36" X 36"	1
(2) 05-6610-5312	PRE-CAST ROOF & FLOOR	SEE DETAIL	2
05-9075-5470	STONE ¾" CRUSHED	BAG	5
05-1452-9720	BRICK		24
02-4299-5524	FRAME, MANHOLE	30"	1
02-4574-5624	COVER, MANHOLE	30"	1
09-7796-9312	GROUND ROD	¾" x12'	1
09-2636-3240	GROUND CLAMP		1
(3) 05-5082-5330	SONO TUBE	36"	1
(3) 05-5082-5342	SONO TUBE	48"	1
(3) 05-3267-2940	CONC. REDI-MIX	CU. YD.	1
(3) 20-5472-9630	REINFORCING BAR	#3 (⅜")	40'
(3) 20-5472-9630	REINFORCING BAR	#3 (⅜")	16'
(3) 20-5472-9640	REINFORCING BAR	#4 (½")	8'
(3) 57-0770-0000	(MESH (6" X6")	36" X 11'	1

(1) PRE-CAST HANDHOLE SHALL INCLUDE CABLE HOOKS AND CONDUIT KNOCK-OUTS.
(2) PRE-CAST ROOF & FLOOR SHALL INCLUDE LIFTING EYES.
(3) THESE ITEMS ARE FOR POURED-IN-PLACE HANDHOLES ONLY.

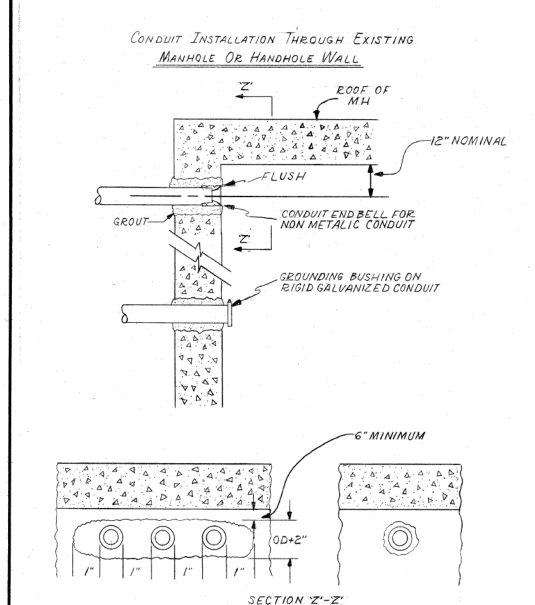
CONSTRUCTION NOTES:
1 - 8" BED OF STONE FOR DRAINAGE.
2 - ALL METALLIC CONDUIT(S) ENTERING HANDHOLE SHALL EXTEND MIN. 1" & MAX. OF 3" INSIDE INNER WALL & BE EQUIPPED WITH AN APPROVED TYPE THREADED GROUNDING BUSHING.



36" DIA. HEAVY DUTY CONCRETE HANDHOLE WITH 30" FRAME & COVER FOR STREET INSTALLATION
CITY OF CHICAGO
DWG. NO. 871
SCALE: NONE | DATE: 1-12-96



INSTALLATION METHOD OF INSTALLING CONDUIT UNDER PAVED ROADWAY
CITY OF CHICAGO
DEPT. OF STREETS AND SANITATION
BUREAU OF ELECTRICITY
DIVISION OF ELECTRICAL ENGINEERING
DRAWN: A.M. JOHNSON | CHECKED: R. SYCKOWSKI | ENGINEER: R.L. MARTIN
DWG. NO. 813
SIZE: 8½"X14" | SCALE: N.T.S. | DATE: 5-13-81



OPENING THROUGH WALL TO BE KEPT TO MINIMUM SIZE TO ADMIT CONDUIT AND SUFFICIENT GROUT TO ASSURE SEALING WALL.

INSTALLATION METHOD OF INSTALLING CONDUIT THRU MANHOLE WALL
CITY OF CHICAGO
DEPT. OF STREETS AND SANITATION
BUREAU OF ELECTRICITY
DIVISION OF ELECTRICAL ENGINEERING
DRAWN: A.M. JOHNSON | CHECKED: R. SYCKOWSKI | ENGINEER: R.L. MARTIN
DWG. NO. 814
SIZE: 8½"X14" | SCALE: N.T.S. | DATE: 5-13-81

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EJM ENGINEERING, INC.
411 South Wells Street Suite 1000
Chicago, Illinois 60607

D160W25-sht-Ts-05.dgn	DESIGNED - PWF	REVISED -
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PLOT DATE = 5/9/2013	DATE - 05/14/2013	REVISED -

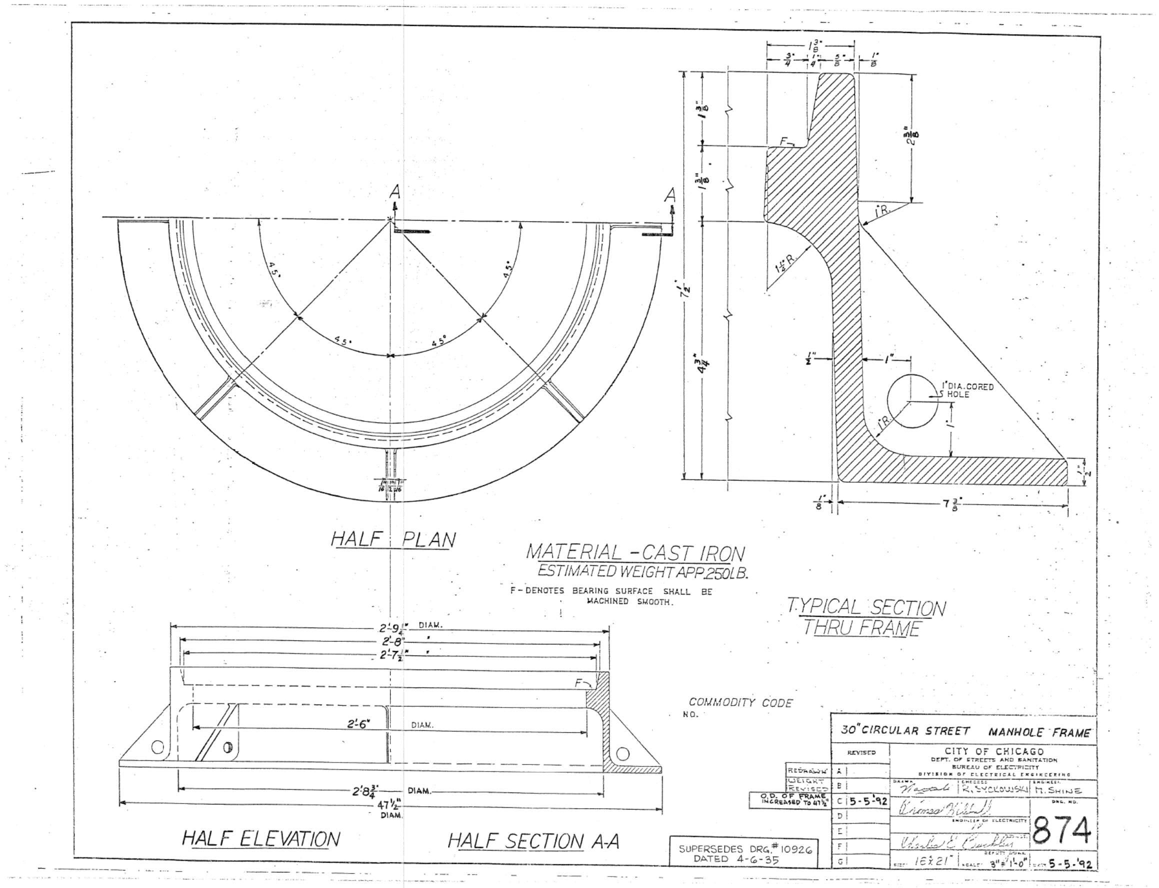
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

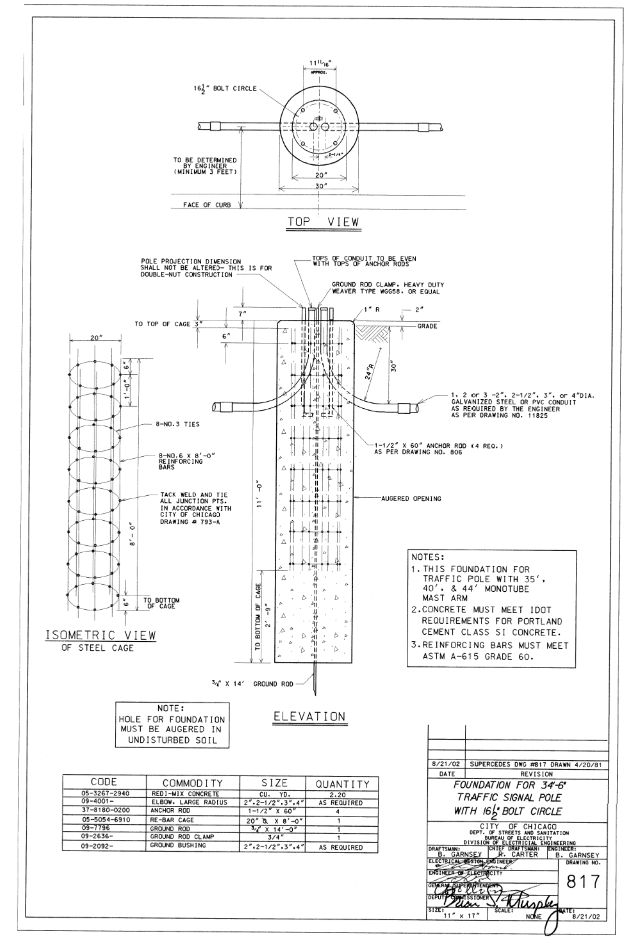
CDOT STANDARD DRAWINGS FOR TRAFFIC SIGNALS

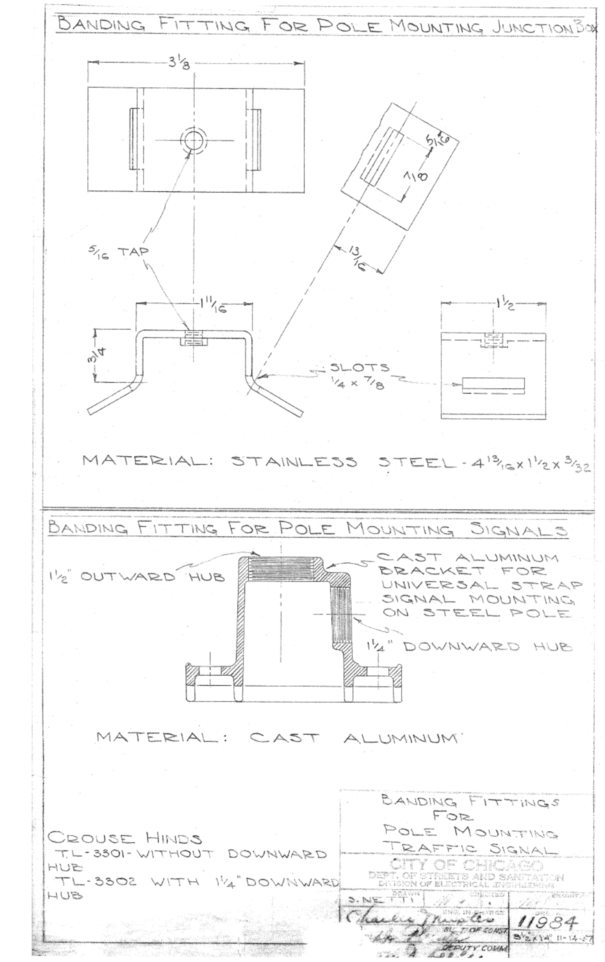
SCALE: NONE | SHEET 5 OF 10 SHEETS | STA. TO STA.

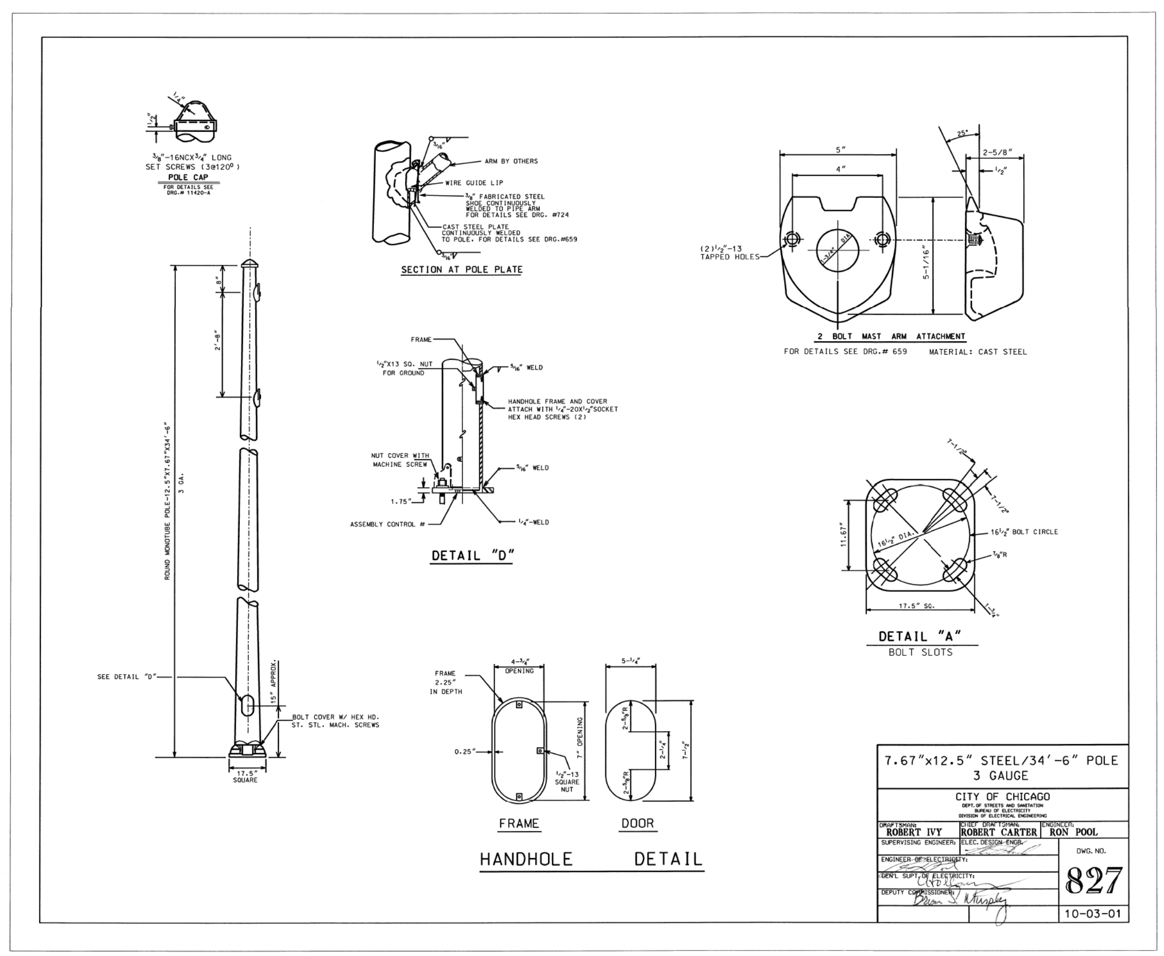
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	135

CONTRACT NO. 60W25
ILLINOIS FED. AID PROJECT









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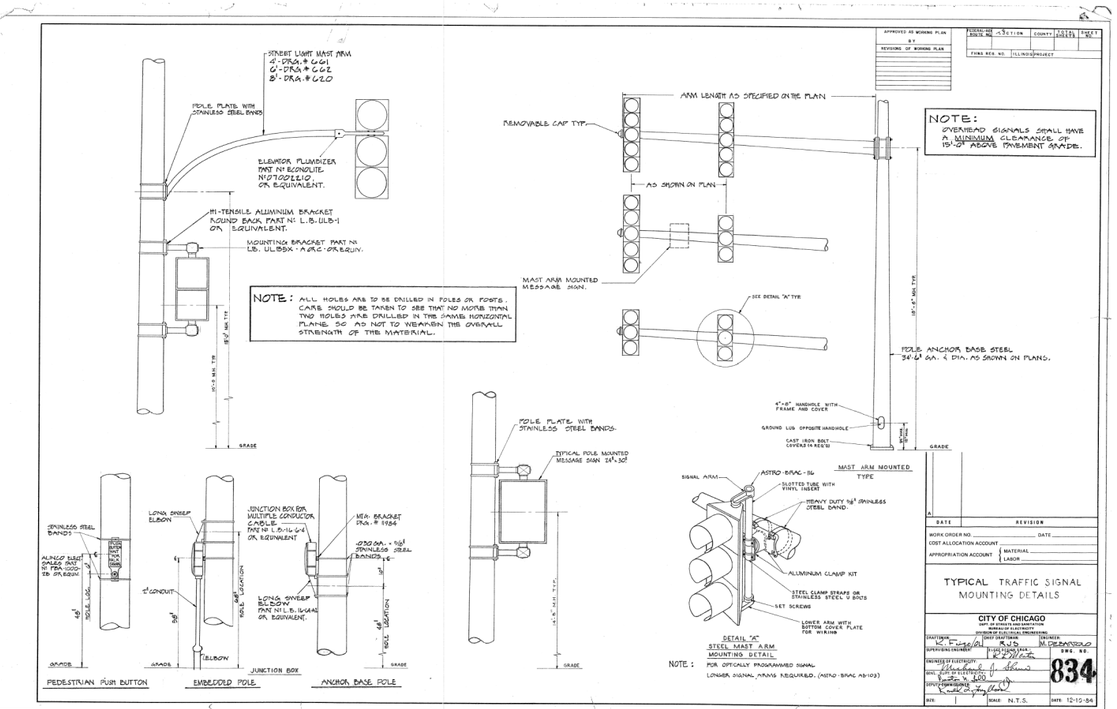
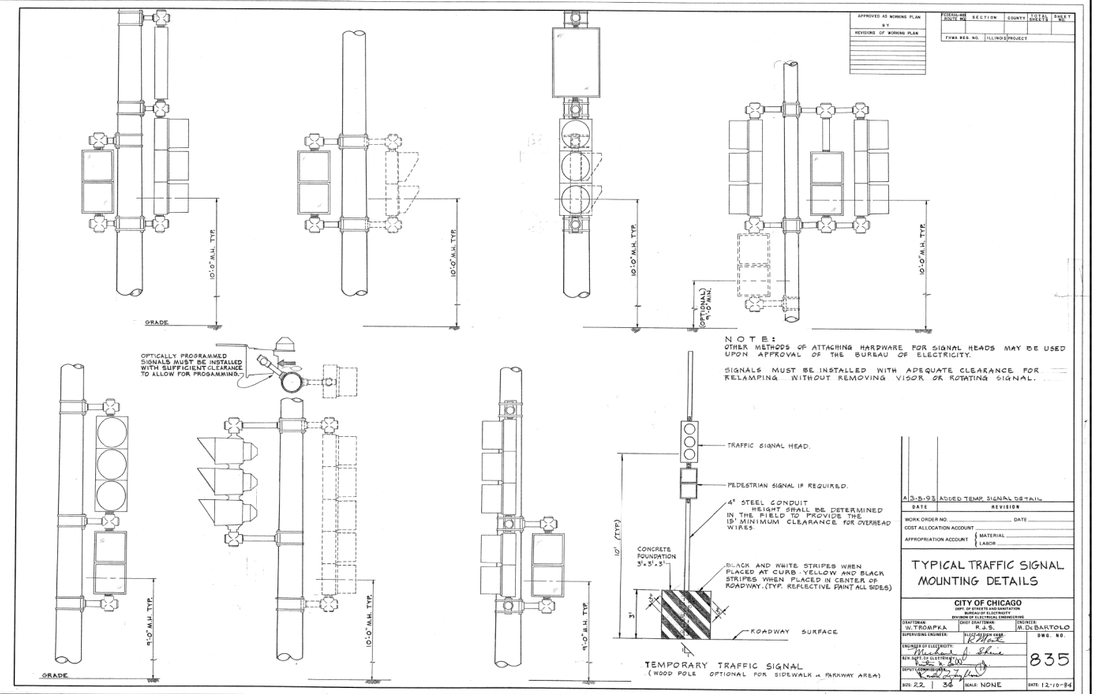
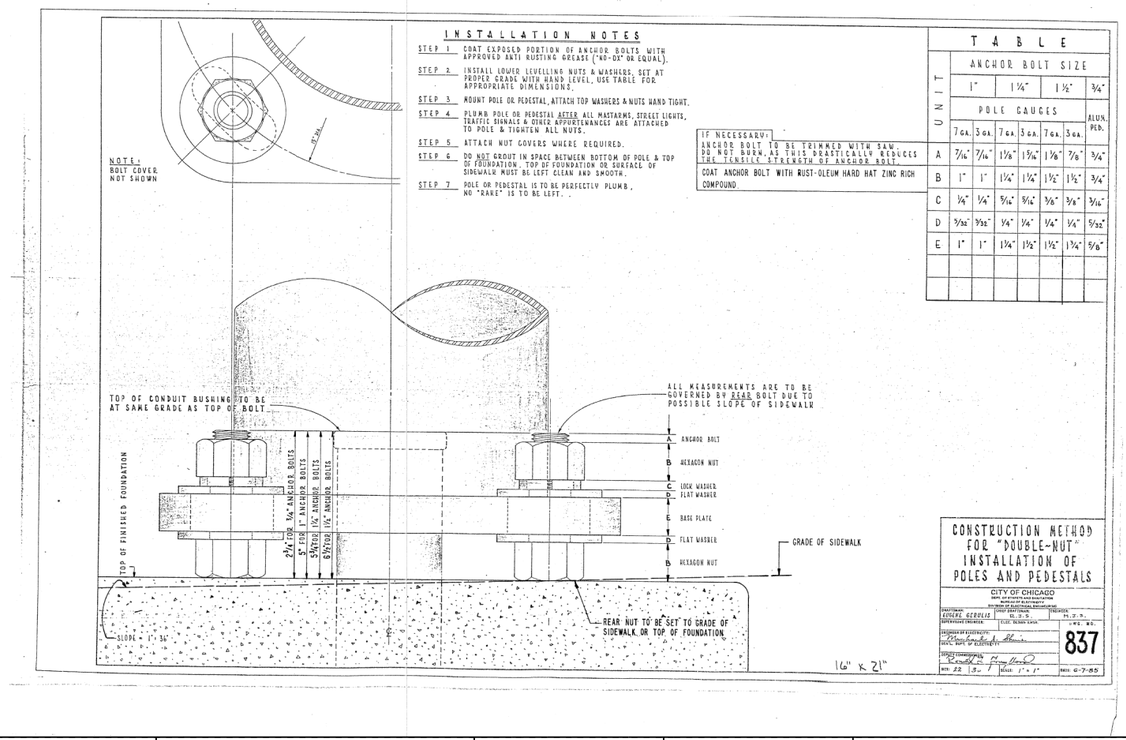
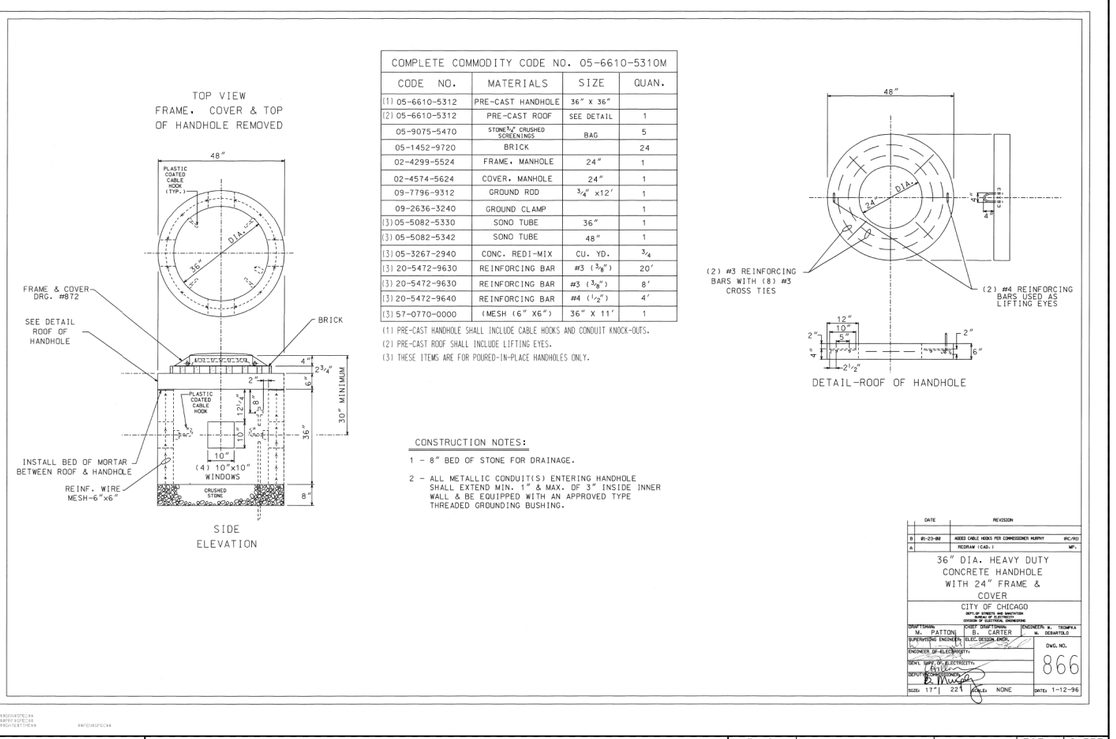
	PLOT DATE = 5/9/2013	DATE - 05/14/2013	REVISED -		SCALE: NONE SHEET 6 OF 10 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	136
		CONTRACT NO. 60W25		
		ILLINOIS FED. AID PROJECT		









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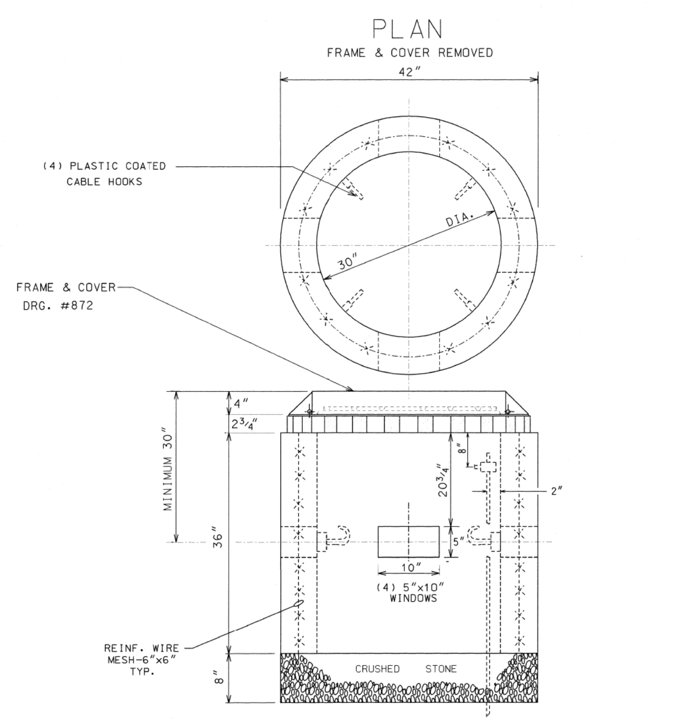
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CDOT STANDARD DRAWINGS FOR TRAFFIC SIGNALS

SCALE: NONE | SHEET 7 OF 10 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	137
		CONTRACT NO. 60W25		
		ILLINOIS FED. AID PROJECT		



COMPLETE COMMODITY CODE NO. 05-6610-5310M			
CODE NO.	MATERIALS	SIZE	QUAN.
(1) 05-6610-5310	PRE-CAST HANDHOLE	30"X36"	1
(2) 05-9075-5470	STONE 3/4" CRUSHED	BAG	5
(2) 05-5082-5330	SONO TUBE	30"	1
(2) 05-5082-5342	SONO TUBE	42"	1
(2) 05-3267-2940	CONC. REDI-MIX	CU. YD.	1/2
(2) 57-0770-0000	6" X 6" MESH	36"X10'	1
05-1452-9720	BRICK		24
02-4299-5524	FRAME MANHOLE	24"	1
02-4574-5040	COVER, MANHOLE	24"	1
09-7796-9312	GROUND ROD	3/4"X12'	1
09-2630-3240	GROUND CLAMP		1

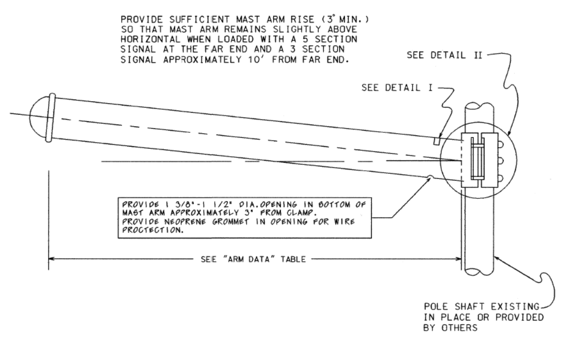
(1) PRE-CAST HANDHOLE SHALL INCLUDE CABLE HOOKS AND CONDUIT KNOCKOUTS.
(2) THESE ITEMS ARE FOR POURED-IN-PLACE HANDHOLES ONLY.

CONSTRUCTION NOTES:

1. 8" BED OF STONE FOR DRAINAGE.
2. ALL METALLIC CONDUITS ENTERING HANDHOLE SHALL EXTEND MINIMUM 1" & MAXIMUM 3" INSIDE INNER WALL AND BE EQUIPPED WITH AN APPROVED TYPE OF THREADED GROUNDING BUSHING.

B 01-23-00 ADDED CABLE HOOKS PER COMMISSIONER MURPHY
A 12-8-95 REDRAW (CAD)

30" DIA. CONCRETE HANDHOLE
CITY OF CHICAGO
DWG. NO. 867

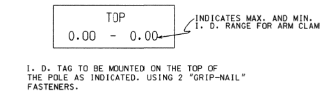


ARM DATA

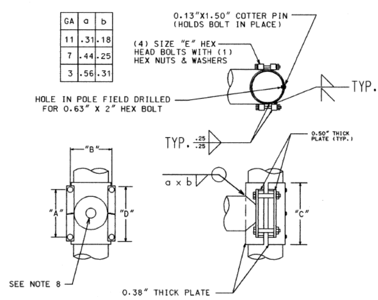
CLAMP RANGE (INCHES)	POLE END (INCHES)	SIGNAL END (INCHES)	LENGTH (FEET)	GAUGE	WEIGHT (POUNDS)	TEST LOAD (POUNDS)	MAX. DEFLECTION (INCHES)
7.45-7.95	7.0	4.76	16	7	241	1700	6.5
7.45-7.95	7.0	4.20	20	7	274	1300	12.0
7.45-7.95	7.0	3.36	26	7	315	1000	24.0
8.45-8.95	8.0	3.80	30	7	409	1100	29.0
9.95-10.45	9.0	4.10	35	7	529	1200	36.0
9.95-10.45	9.0	3.40	40	7	559	1000	52.0
9.95-10.45	10.0	3.84	44	7		1200	57.0

NOTES:

1. TRAFFIC SIGNAL ARM SHAFT ASTM DESIGNATION: A595 GRADE C, 60,000 PSI MINIMUM YIELD STRENGH WITH A LINEAR TAPER -0.14"/FT.
2. TRAFFIC SIGNAL ARM END CAP SECURED IN PLACE WITH 3 SET SCREWS AND 1 THRU ARM END BOLT. (PLATED HARDWARE)
3. ALL THREADED FASTENERS TO BE GALVANIZED TO ASTM DESINATION: A153
4. ALL VEHICULAR AND/OR PEDESTRIAN SIGNAL LIGHTS AND NECESSARY HARDWARE FOR ATTACHMENT TO BE FIELD LOCATED AND FURNISHED BY OTHERS.
5. ALL ARM END CAPS AND ARM CLAMPS TO BE FULLY ASSEMBLED AND ATTACHED TO THE ARM PRIOR TO SHIPPING.
6. ARM ASSEMBLY TO BE DEGREASED; CLEANED; CHEMICALLY PRETREATED; GIVEN AN EXTERIOR THERMOSETTING POLYESTER POWDER COAT; AND AN INTERIOR THERMOPLASTIC HYDROCARBON RESIN POWDER COAT. ALL PAINTING TO BE IN ACCORDANCE WITH SPECIFICATION 1454, SECTION 8, "PAINTING".
7. MAST ARM SHALL BE TESTED IN ACCORDANCE WITH SPECIFICATION 1454, SECTION 9 WITH TEST VALUES AS SHOWN ON THE "ARM DATA" TABLE.
8. HOLE IN CLAMP TO BE 4.0" (MIN.). HOLE TO BE GROUND SMOOTH AND DEBURRED TO PROVIDE A SMOOTH WIRE ENTRY FROM POLE TO MAST ARM.



DETAIL I
I. D. TAG

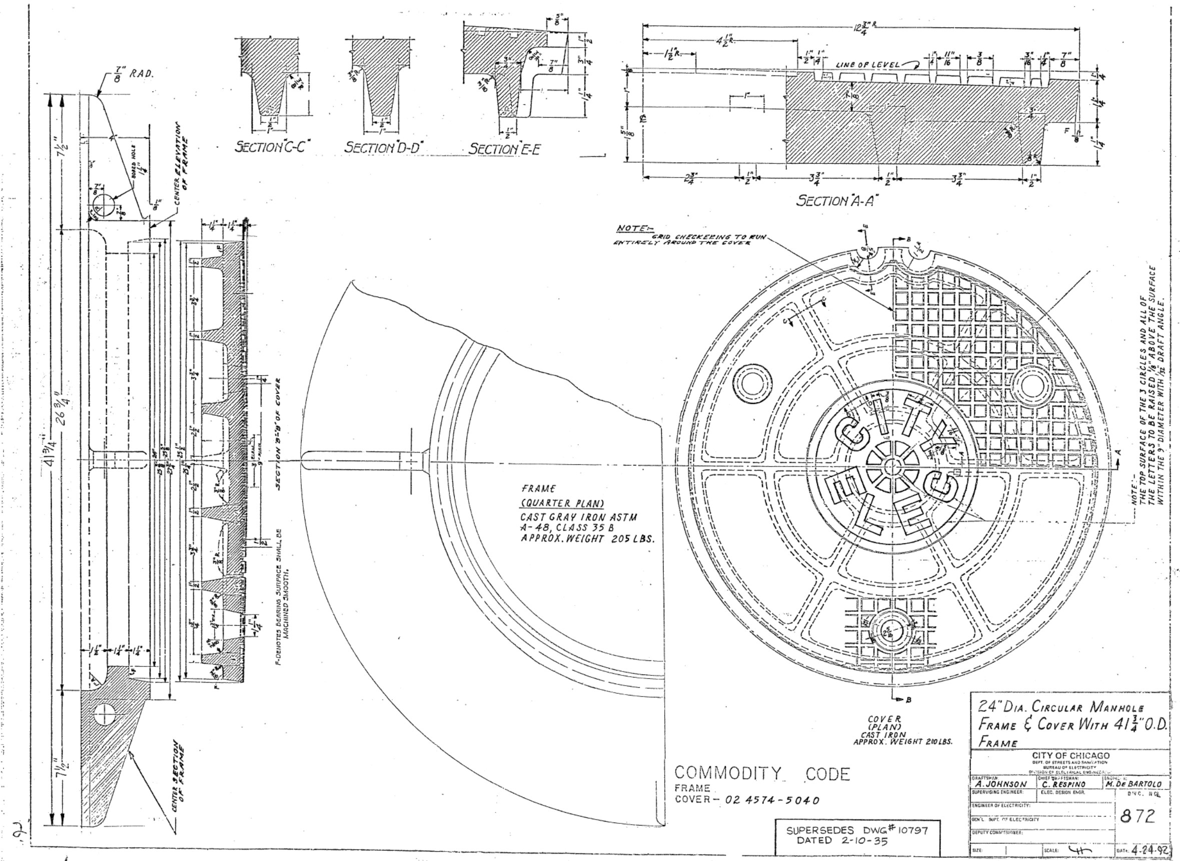


DETAIL II
ARM ATTACHMENT

SIGNAL ARM ATTACHMENT DATA					
CLAMP RANGE	"A"	"B"	"C"	"D"	"E"
7.45" - 7.95"	7.25"	9.92"	10.80"	10.32"	1.00" X 7.50"
8.45" - 8.95"	9.00"	10.66"	13.06"	12.50"	1.00" X 8.00"
9.95" - 10.45"	10.25"	12.66"	15.30"	13.50"	1.25" X 8.50"

B 10-29-02 REFERENCES SPEC. 1454
A 8-6-93 WIRE OPENING ON MAST ARM

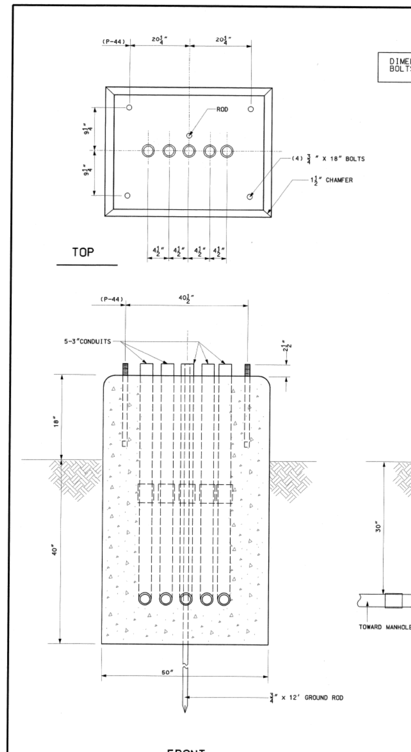
STEEL TRAFFIC SIGNAL MAST ARM-MONOTUBE
CITY OF CHICAGO
DRAFTSMAN R. IVY — CHIEF DRAFTSMAN ROBERT CARTER — ENGINEER RON POOL
DWG. NO. 870



24" DIA. CIRCULAR MANHOLE FRAME & COVER WITH 41½" O.D. FRAME
CITY OF CHICAGO
A. JOHNSON — C. BERNING — M. DeBARTOLO
872

COMMODITY CODE
FRAME
COVER - 02 4574-5040

SUPERSEDES DWG.# 10797 DATED 2-10-35



TYPE "P" FOUNDATION
FOR BASE MOUNTED
TRAFFIC SIGNAL CONTROL CABINET
CITY OF CHICAGO
DWG. NO. 888

EJM ENGINEERING, INC. 411 South Wells Street Suite 1000 Chicago, Illinois 60607	D160W25-sht-Ts-08.dgn	DESIGNED - PWF	REVISED -
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	PLOT DATE = 5/9/2013	DATE - 05/14/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CDOT STANDARD DRAWINGS FOR TRAFFIC SIGNALS

SCALE: NONE — SHEET 8 OF 10 SHEETS — STA. — TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	138
		CONTRACT NO. 60W25		
		ILLINOIS FED. AID PROJECT		

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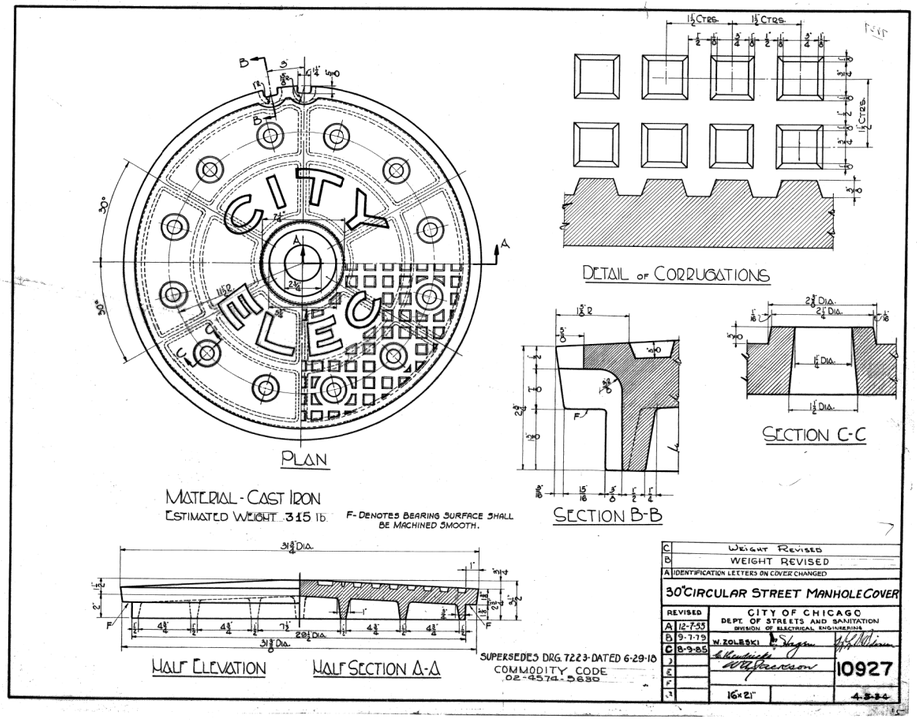

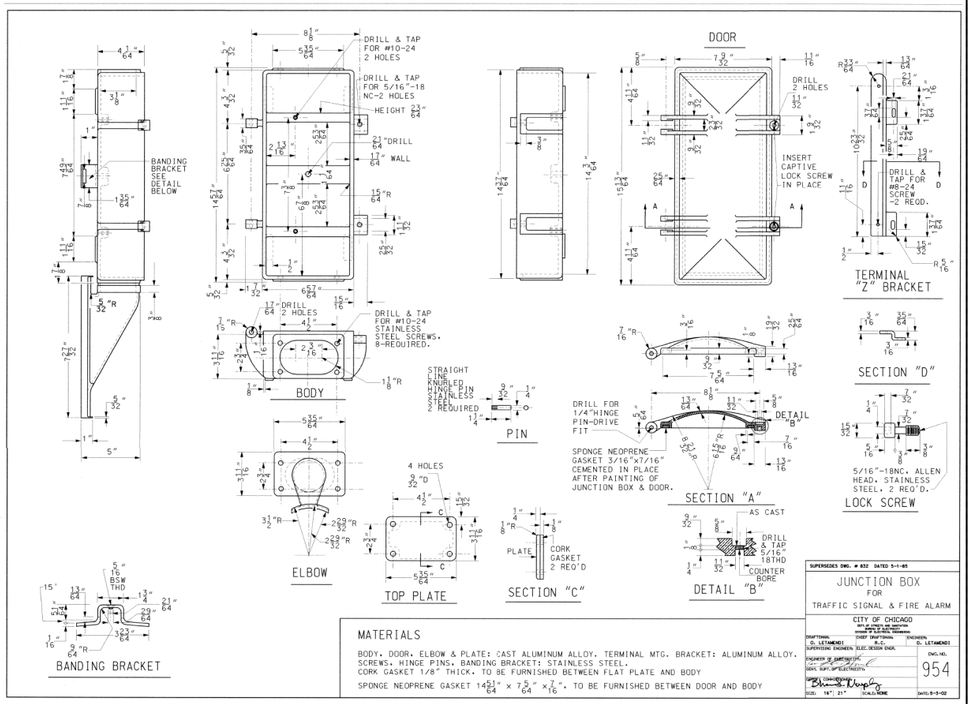

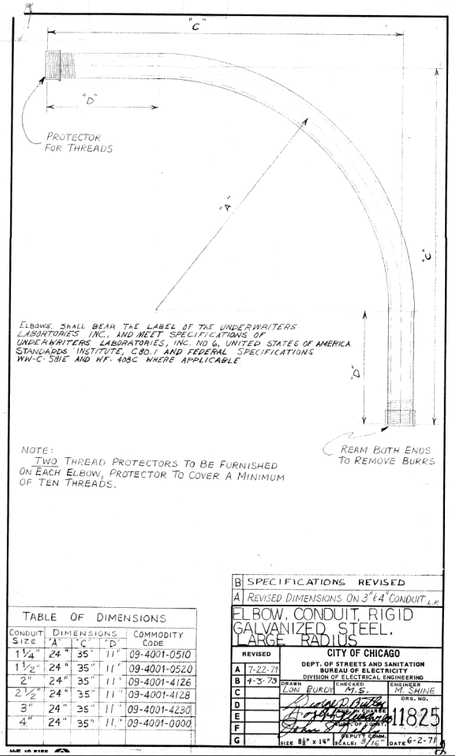

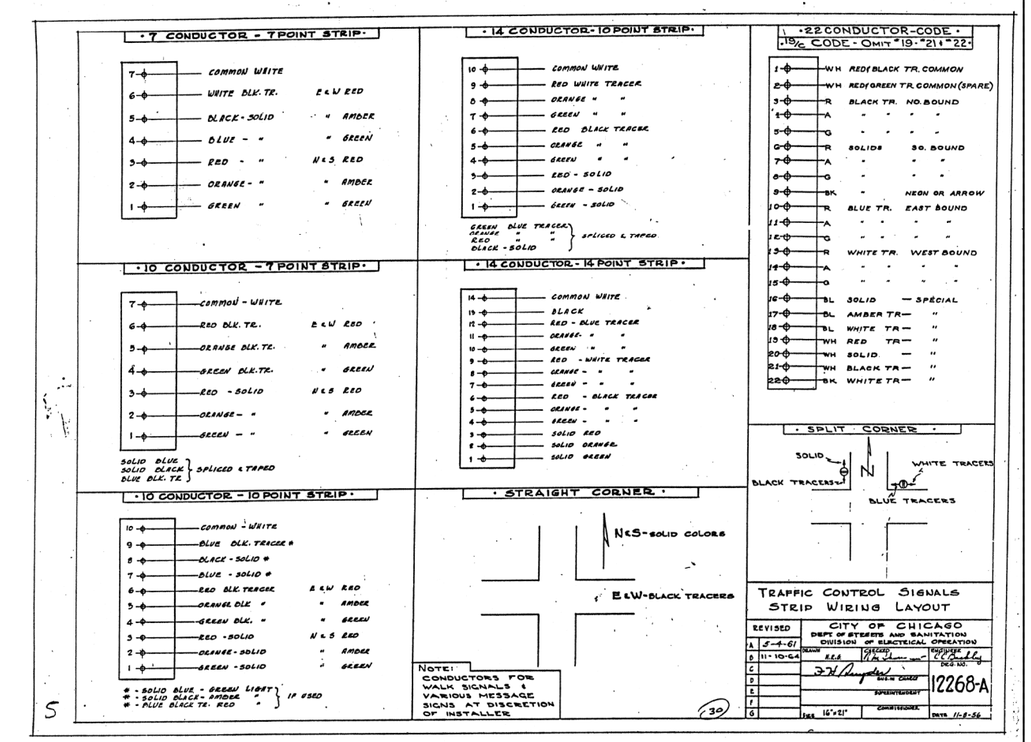

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CDOT STANDARD DRAWINGS FOR TRAFFIC SIGNALS

SCALE: NONE | SHEET 9 OF 10 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	139
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

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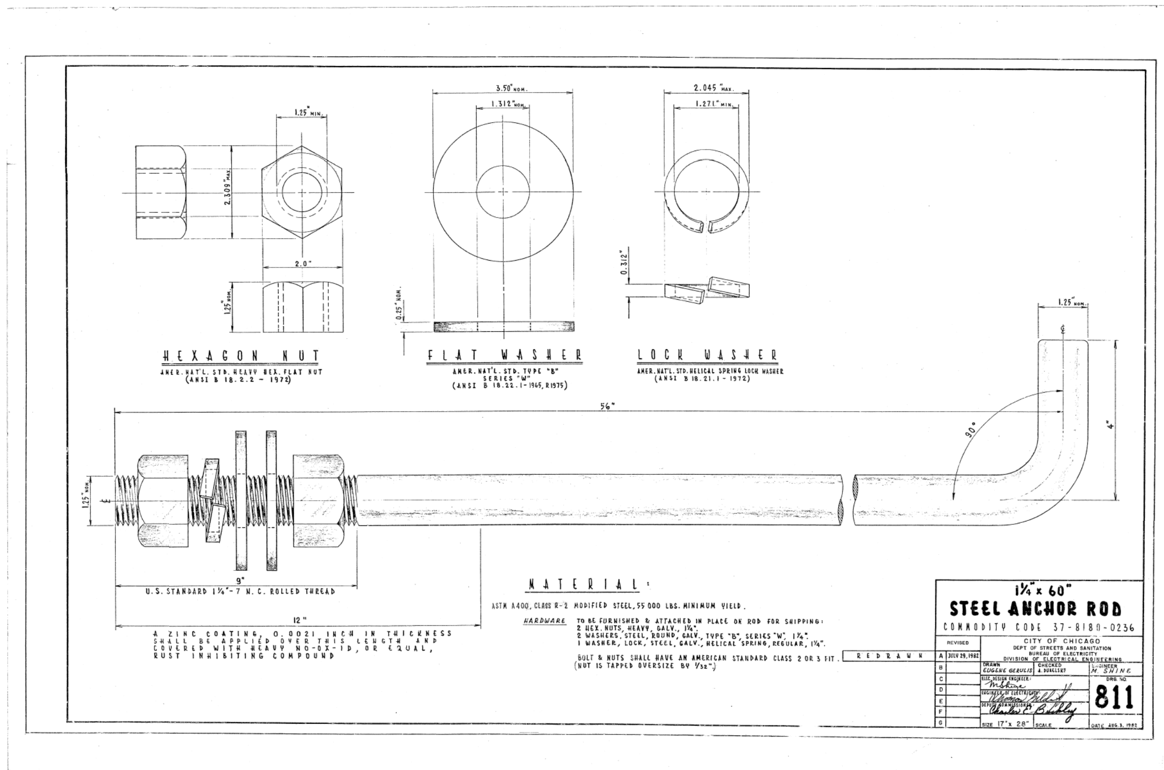
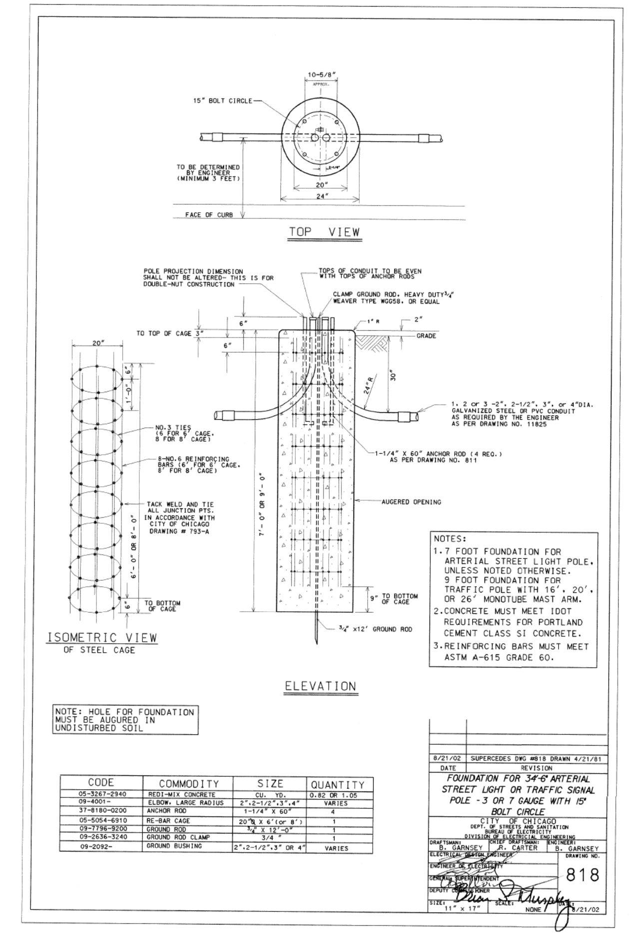
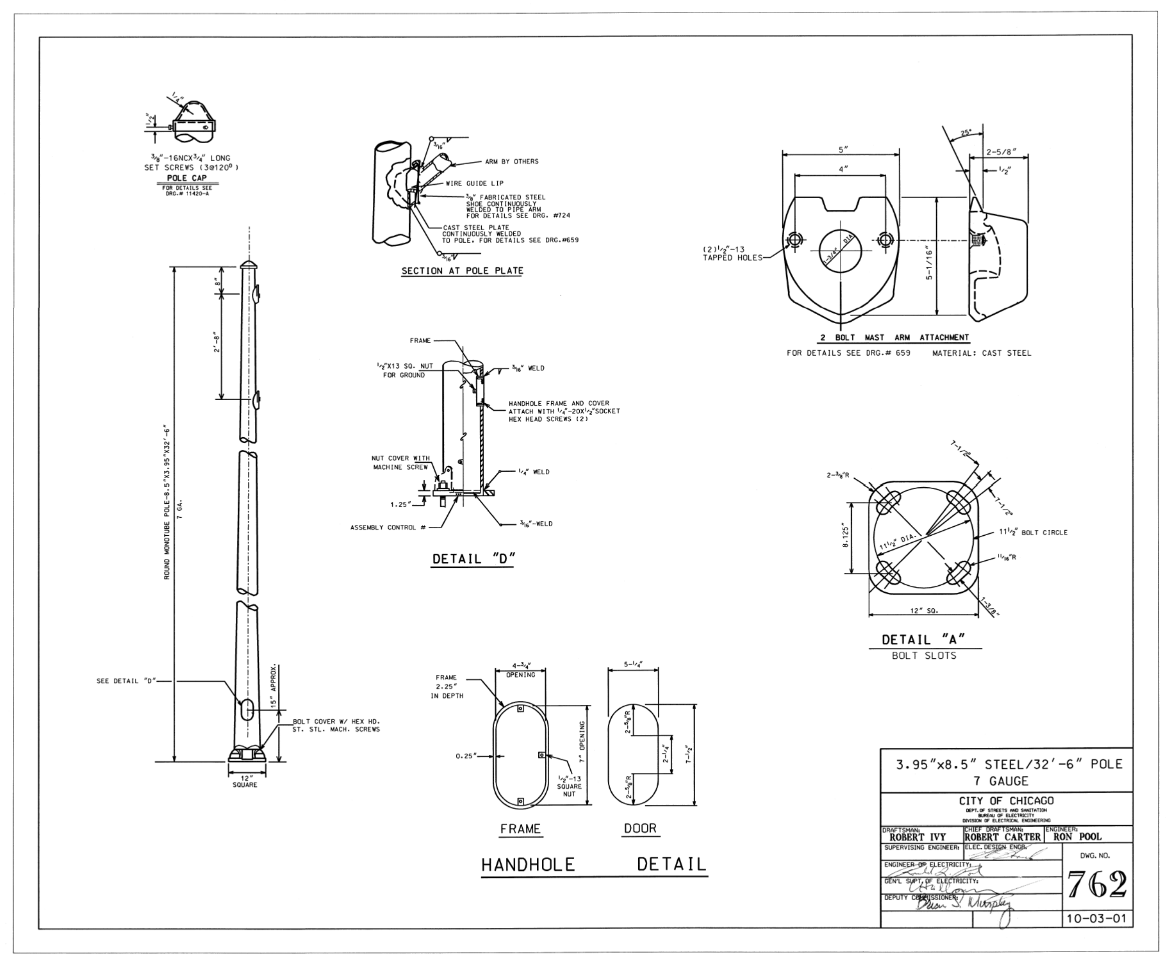



TOP VIEW
ISOMETRIC VIEW
OF STEEL CAGE
ELEVATION
NOTES:
1. 7 FOOT FOUNDATION FOR ARTERIAL STREET LIGHT POLE, UNLESS NOTED OTHERWISE. 9 FOOT FOUNDATION FOR TRAFFIC POLE WITH 16', 20', OR 26' MONOTUBE MAST ARM.
2. CONCRETE MUST MEET IDOT REQUIREMENTS FOR PORTLAND CEMENT CLASS SI CONCRETE.
3. REINFORCING BARS MUST MEET ASTM A-615 GRADE 60.
NOTE: HOLE FOR FOUNDATION MUST BE AUGURED IN UNDISTURBED SOIL
CODE
COMMODITY
SIZE
QUANTITY
CITY OF CHICAGO
818



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DEPARTMENT OF TRANSPORTATION

CDOT STANDARD DRAWINGS FOR TRAFFIC SIGNALS

SCALE: NONE | SHEET 10 OF 10 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	140

CONTRACT NO. 60W25

ILLINOIS FED. AID PROJECT

S. MORGAN ST

S. SANGAMON ST

W. TILDEN STREET

3000+00

EXISTING ELECTRIC CABLES AND CONDUIT TO REMAIN

DISCONNECT AND REMOVE EX. ITS CABLES TO BE ABANDONED. PROTECT IN PLACE DURING CONSTRUCTION THE EX. ITS CABINET, AND ITS CABLES TO REMAIN. CONNECT NEW ITS COMM. AND POWER CABLES UPON COMPLETION OF MORGAN ST. BRIDGE WORK.

N

GRAPHIC SCALE

0 30 60

FEET

EXISTING ITS CABLES AND CONDUIT TO REMAIN

EXISTING ITS CABLES TO BE REPLACED, EXISTING CONDUIT TO REMAIN

EXISTING ITS CABLES AND CONDUIT TO BE ABANDONED

1005+00

EXISTING ITS HAND HOLE TO REMAIN

EXISTING DETECTOR LOOP TO BE REPLACED

335+00

5250+00

EXISTING ITS CABLES AND CONDUIT ATS TO BE ABANDONED

3605+00

340+00

WB I-290

EXISTING ITS CABLES AND CONDUIT TO BE ABANDONED

5245+00

EXISTING DETECTOR LOOPS TO BE REPLACED

CTA BLUE LINE

EXISTING DETECTOR LOOPS TO REMAIN

335+00

5135+00

340+00

5140+00

EB I-290

3305+00

CONGRESS PARKWAY

DISCONNECT AND REMOVE EX. ITS CABLES TO BE ABANDONED. PROTECT IN PLACE DURING CONSTRUCTION THE EX. ITS CABINET, INDUCTION LOOPS AND ITS CABLES TO REMAIN. CONNECT NEW ITS COMM. AND POWER CABLES UPON COMPLETION OF MORGAN ST. BRIDGE WORK.

EXISTING ITS CABLES AND CONDUIT TO BE ABANDONED

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AECOM
303 EAST WACKER DRIVE, SUITE 1400
CHICAGO, IL 60601-5276
PHONE: (312) 373-7700 FAX: (312) 373-6800

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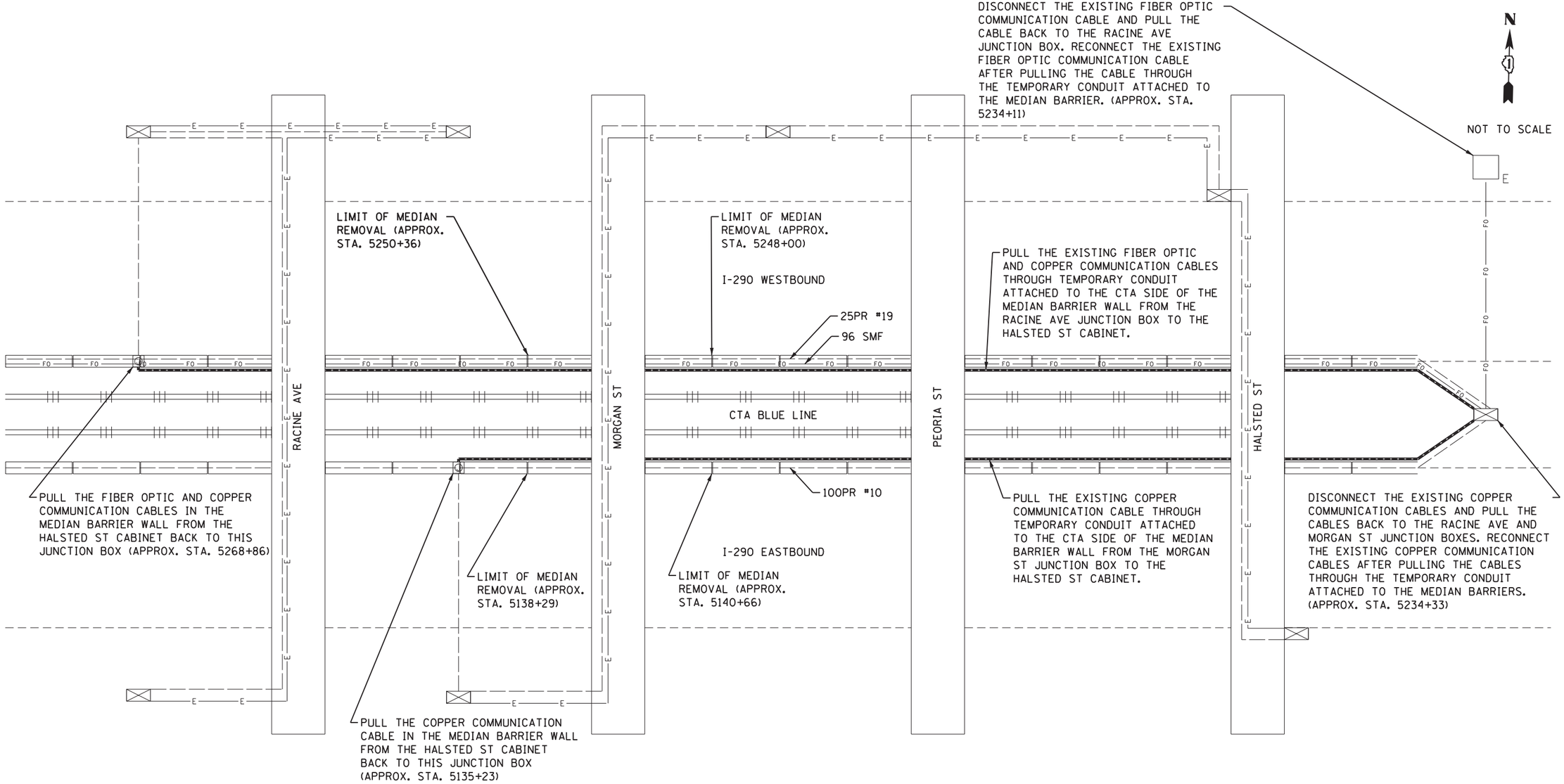
DEPARTMENT OF TRANSPORTATION

MORGAN STREET – ITS PLANS
ITS REMOVAL

SCALE: 1" = 30' | SHEET 1 OF 4 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	141
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



NOTES

1. SEE SHEET 144 FOR DETAILS TO ACCESS MEDIAN WALL JUNCTION BOXES FOR TEMPORARY ITS REROUTING.
2. DURING MEDIAN REMOVAL THE CONTRACTOR IS RESPONSIBLE FOR MAINTINING THE ITS INFRASTRUCTURE LOCATED IN THE MEDIAN WALLS.
3. THE CONTRACTOR MUST MAINTAIN THE TEMPORARY ITS CONNECTION THROUGH THE PIER REMOVAL WORK ZONE. CONDUIT ATTACHMENT TO BARRIER MAY NOT BE POSSIBLE IN THE WORK ZONE.
4. ALL TERMINATIONS SHALL BE COMPLETED AT LOCATIONS SHOWN ON THIS SHEET. IF THERE ARE ANY EXISTING INTERMEDIATE SPLICING LOCATIONS NOT SHOWN ON THE PLANS, CONTRACTOR SHALL COORDINATE THIS ACTIVITY WITH IDOT ENGINEER BEFORE COMMENCING ANY SPLICING.
5. ALL FIBER SHALL BE FUSION SPLICED AND ALL COPPER CABLES SHALL BE SPLICED AND BONDED WITH COPPER SHIELDING.
6. SEE THE TEMPORARY ITS SPECIAL PROVISION FOR ADDITIONAL INFORMATION.
7. THIS DRAWING IS DIAGRAMMATICAL AND FOR INFORMATIONAL PURPOSES ONLY.

LEGEND

- EXISTING ITS COPPER COMMUNICATION CABLE
- FO — EXISTING ITS FIBER OPTIC COMMUNICATION CABLE
- E — EXISTING ITS POWER CABLE
- PROPOSED TEMPORARY CONDUIT
- EXISTING ITS MEDIAN WALL JUNCTION BOX
- EXISTING ITS CABINET
- E — EXISTING FIBER OPTIC COMMUNICATIONS HUT

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DEPARTMENT OF TRANSPORTATION

MORGAN STREET – ITS PLANS
TEMPORARY ITS

SCALE: NO SCALE | SHEET 2 OF 4 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	142
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

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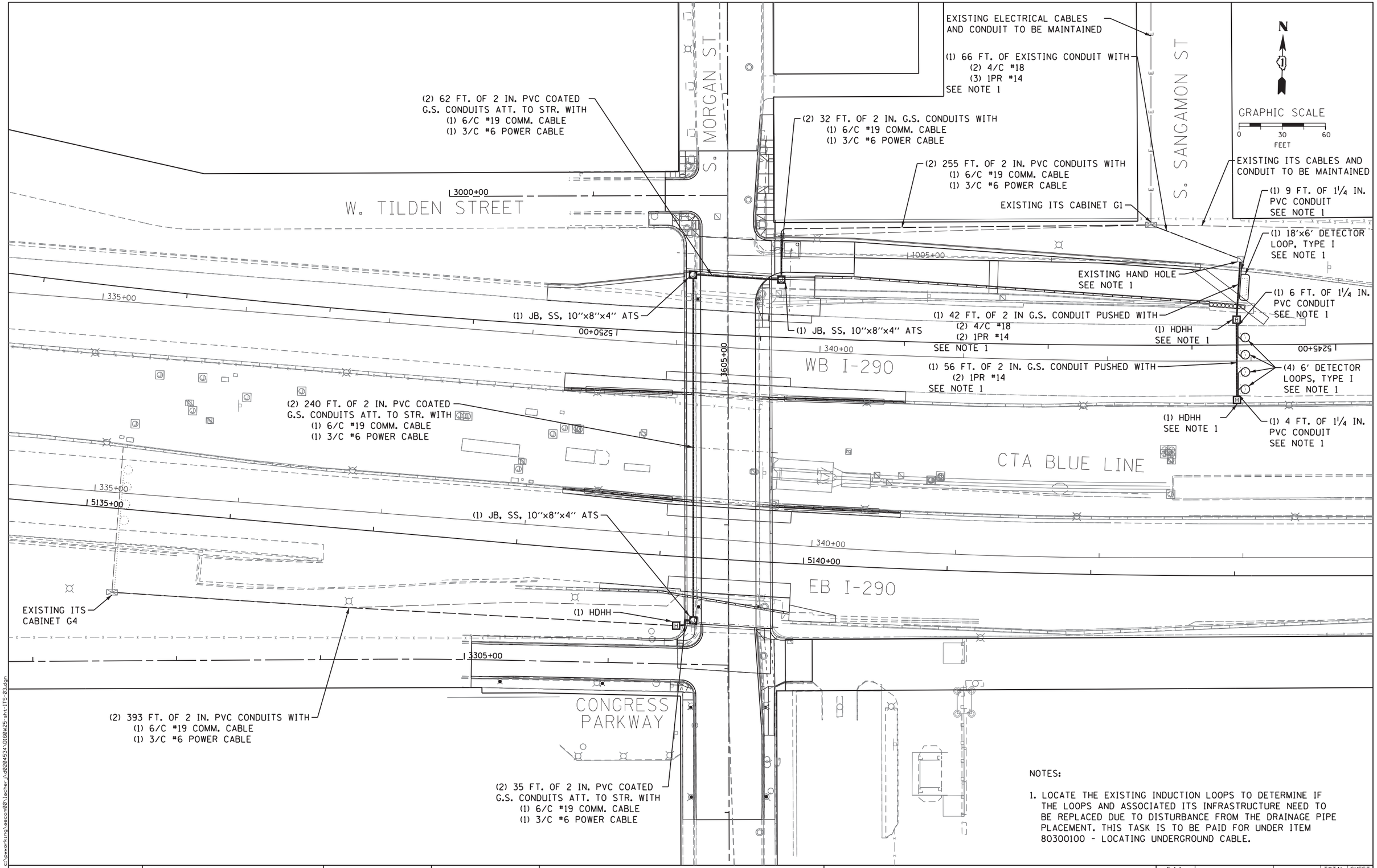

NOTES:

1. LOCATE THE EXISTING INDUCTION LOOPS TO DETERMINE IF THE LOOPS AND ASSOCIATED ITS INFRASTRUCTURE NEED TO BE REPLACED DUE TO DISTURBANCE FROM THE DRAINAGE PIPE PLACEMENT. THIS TASK IS TO BE PAID FOR UNDER ITEM 80300100 - LOCATING UNDERGROUND CABLE.

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DEPARTMENT OF TRANSPORTATION

MORGAN STREET – ITS PLANS
PROPOSED ITS

SCALE: 1" = 30' | SHEET 3 OF 4 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	143
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		

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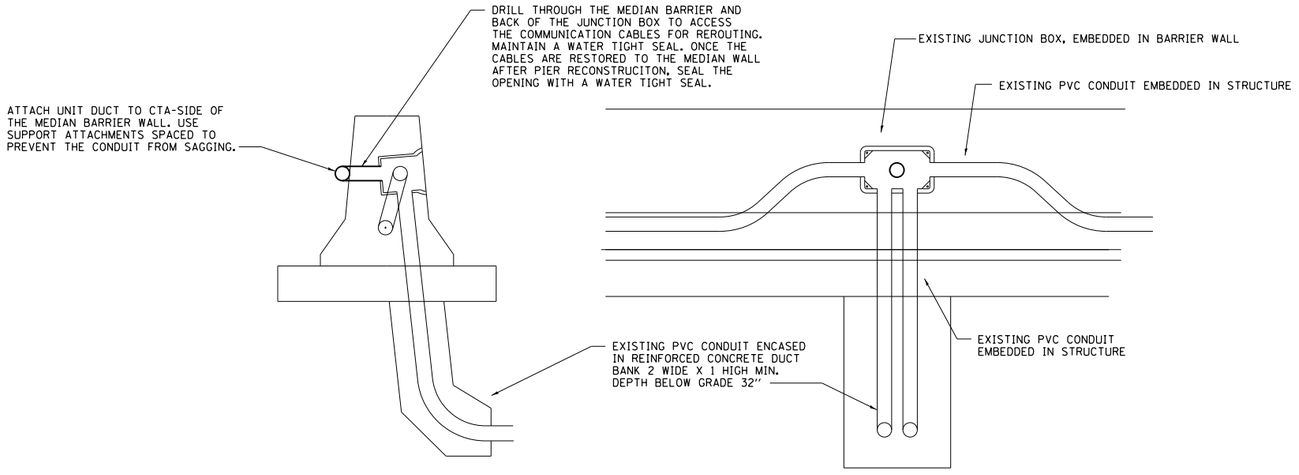

TYPICAL ACCESS TO JUNCTION BOX EMBEDDED IN BARRIER WALL FOR TEMPORARY ITS ROUTING

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MORGAN STREET – ITS PLANS
ITS DETAILS

SCALE: NO SCALE | SHEET 4 OF 4 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	144
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		

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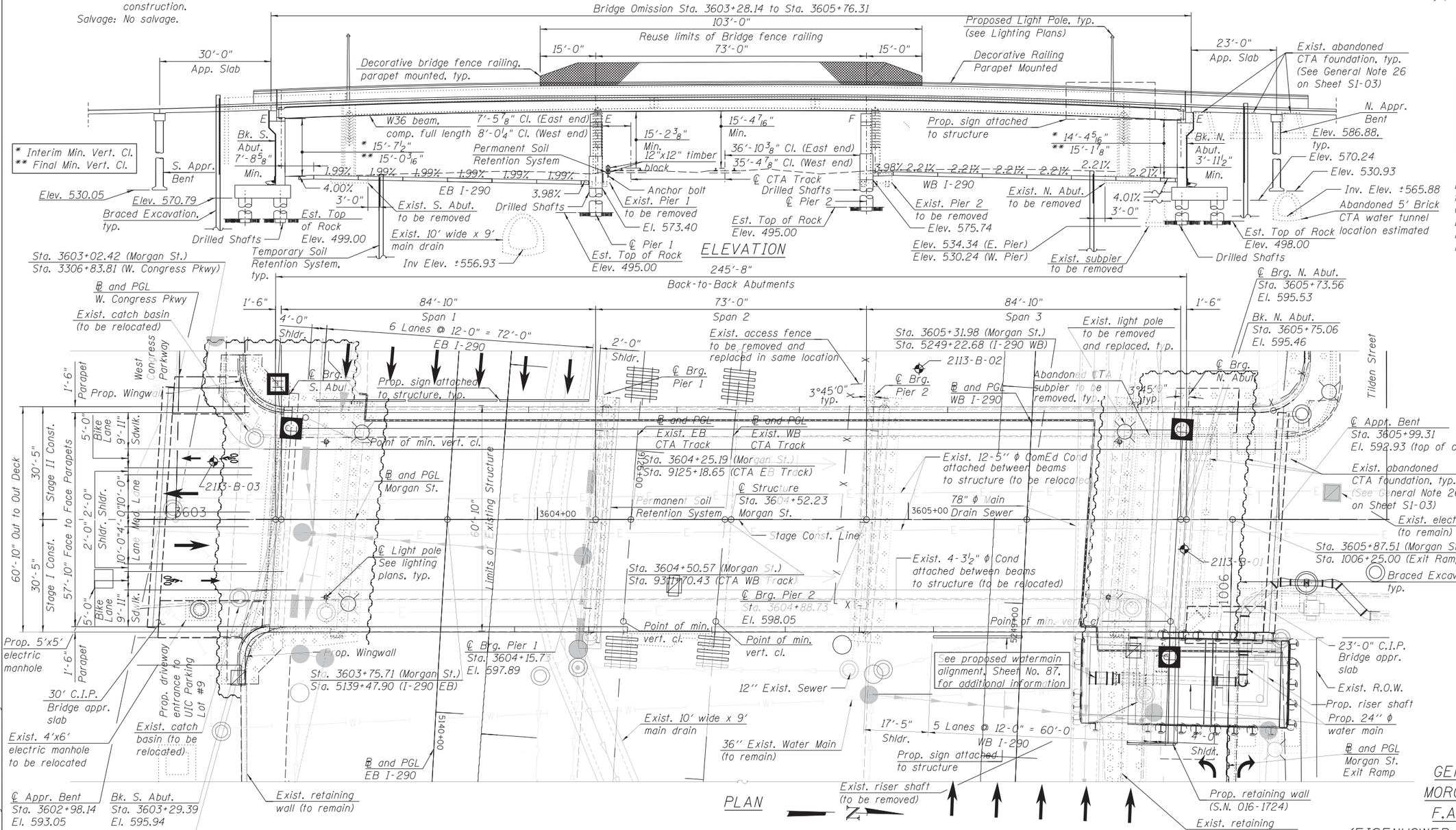
Benchmark: Cut square on northwest corner of sign foundation at north side of Harrison Street, approximately 80' west of west line of Morgan Street. Elevation 593.07.
Cut square on east wall of Morgan Street at approximately centerline of I-290, near north entrance to CTA. Elevation 600.63.

Existing Structure: S.N. 016-2113 was originally constructed in 1951 as a three-span structure carrying 4 lanes of traffic over I-290 Eisenhower Expressway and CTA (FA Route 131; Sections I-B-2 and I-F-2). Improvements were performed on the superstructure and substructure in 1990. The bridge has an overall length of approximately 213'-10" (back-to-back abutments; 67'-0" / 74'-10" / 67'-0" spans), an overall width of 60'-10" (out-to-out superstructure) and consists of a 6½"-thick reinforced concrete deck with 2" overlay supported on ten (10) W33x220 steel I-beams. The substructure consists of reinforced concrete piers and abutments on timber piles. The bridge is oriented in the north-south direction with a skew of 4°41'00". This structure will be removed and replaced. Stage construction on the new bridge is required due to utility concerns; however, Morgan Street and the associated exit ramp will be closed to vehicular and pedestrian traffic during construction. Morgan Street traffic will be detoured via local roads during construction.

Salvage: No salvage.

NOTES:

1. For Profile Grade Lines, Index of Sheets and Total Bill of Material, see Sheet S1-02.
2. For General Notes, see Sheet S1-03.
3. Stage construction lines are different for superstructure and substructure.
4. For replacing/repairing Congress parkway, see Roadway plans for details and quantities.



STA. 3604+52.23
BUILT 20-- BY
STATE OF ILLINOIS
FAI RT. 290 SEC. 2013-007R
LOADING HL-93
STRUCTURE. NO. 016-1709

NAME PLATE

Locate Name Plate at the front face of parapet at the Southwest Corner. Existing Name Plate shall be cleaned and relocated next to new Name plate. Cost included with Name Plates.

LEGEND:

Combined Sewer
Electric —E—
Fiber Optic —FO—
Soil Boring
Storm Sewer
Water Line —W—
Fire Hydrant
Light Pole

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)
f_y = 50,000 psi (M270 Grade 50)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.086g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.144g
Soil Site Class = D

STATE OF ILLINOIS — MOUSSA A. ISSA — 081-005738 — CHICAGO, ILLINOIS — LICENSED STRUCTURAL ENGINEER

Signed Moussa A. Issa
Moussa A. Issa, HBM — Il. Lic. No. 081-005738
Expires 11-30-2014

Date 6/17/2013 — For Sheets S1-01 Thru S1-51

GENERAL PLAN
MORGAN ST. OVER
F.A.I. RTE. 290
(EISENHOWER EXPRESSWAY) AND CTA
F.A.I. RTE. 290 - SECTION 2013-007R
COOK COUNTY
STATION 3604+52.23
STRUCTURE NO. 016-1709

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HBM ENGINEERING GROUP, LLC. CONSULTING & DESIGN INSPECTION & RATING RESEARCH & TESTING
4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

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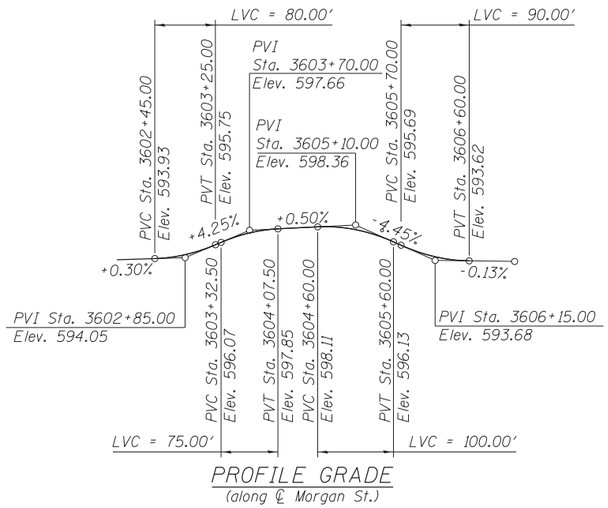
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

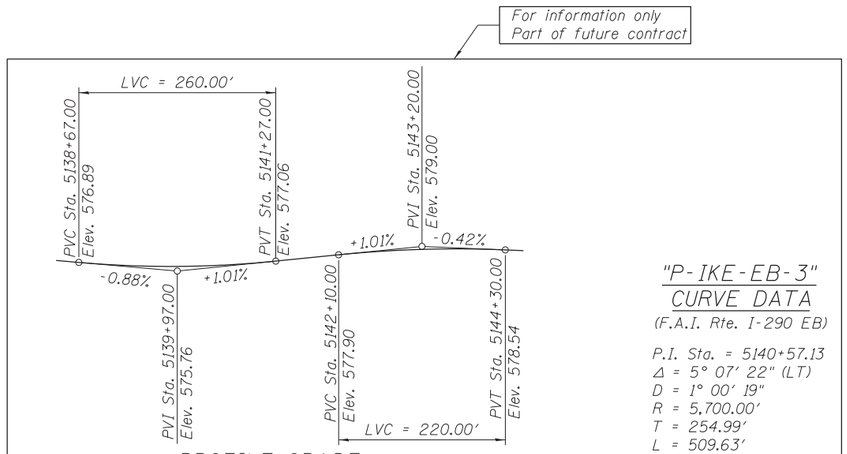
GENERAL PLAN AND ELEVATION
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-01 OF 51 SHEETS | STA. | TO STA.

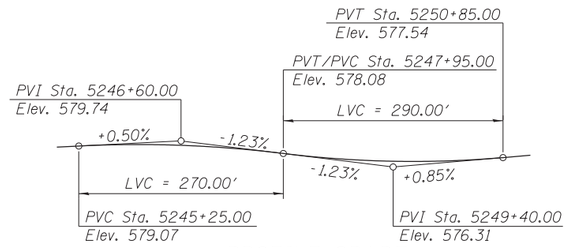
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	145
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



PROFILE GRADE
(along ℄ Morgan St.)



PROFILE GRADE
(EB I-290, see Plan on Sheet S-1 for PGL location)



PROFILE GRADE
(WB I-290, see Plan on Sheet S-1 for PGL location)

"P-IKE-EB-3" CURVE DATA
(F.A.I. Rte. I-290 EB)

P.I. Sta. = 5140+57.13
Δ = 5° 07′ 22" (LT)
D = 1° 00′ 19"
R = 5,700.00′
T = 254.99′
L = 509.63′
E = 5.70′
e = RC (2.00%)
T.R. = 96′
S.E. Run = 96′
P.C. Sta. = 5138+02.14
P.T. Sta. = 5143+11.78

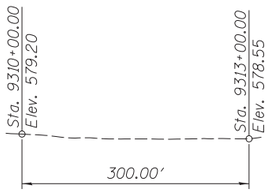
"P-IKE-WB-3" CURVE DATA
(F.A.I. Rte. I-290 WB)

P.I. Sta. = 5251+25.31
Δ = 9° 58′ 24" (RT)
D = 0° 53′ 03"
R = 6,480.00′
T = 565.40′
L = 1,127.95′
E = 24.62′
e = RC (2.00%)
T.R. = 72′
S.E. Run = 72′
P.C. Sta. = 5245+59.91
P.T. Sta. = 5256+87.86

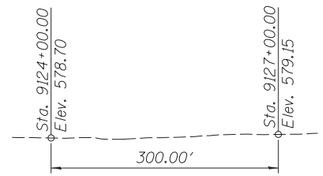
INDEX OF SHEETS

TOTAL BILL OF MATERIAL

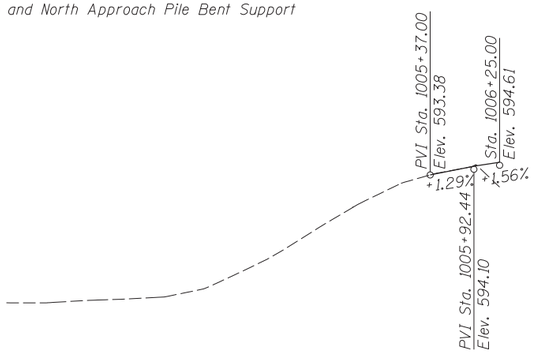
CODE NUMBERS	ITEM	UNIT	SUPER.	SUB.	TOTAL QUANTITY
20700220	Porous Granular Embankment	CU YD	-	2,508	2,508
50100300	Removal of Existing Structures No. 1	EACH	1	-	1
50157300	Protective Shield	SQ YD	1,895	-	1,895
50200100	Structure Excavation	CU YD	-	157	157
50300225	Concrete Structures	CU YD	-	848.6	848.6
50300255	Concrete Superstructure	CU YD	766.2	-	766.2
50300260	Bridge Deck Grooving	SQ YD	1,287	-	1,287
50300285	Form Liner Textured Surface	SQ FT	-	4,168	4,168
50300300	Protective Coat	SQ YD	2,237	-	2,237
50500105	Furnishing and Erecting Structural Steel	L. SUM	1	-	1
50500505	Stud Shear Connectors	EACH	10,044	-	10,044
50800205	Reinforcement Bars, Epoxy Coated	POUND	166,780	494,450	661,230
50800515	Bar Splicers	EACH	824	222	1,046
51500100	Name Plates	EACH	1	-	1
51602000	Permanent Casing	FOOT	-	5,113	5,113
51603000	Drilled Shaft in Soil, 24"	CU YD	-	112	112
51603000	Drilled Shaft in Soil, 30"	CU YD	-	132	132
51603000	Drilled Shaft in Soil, 42"	CU YD	-	1,226	1,226
51604000	Drilled Shaft in Rock, 24"	CU YD	-	4	4
51604000	Drilled Shaft in Rock, 36"	CU YD	-	38	38
52000110	Preformed Joint Strip Seal	FOOT	124	-	124
52100010	Elastomeric Bearing Assembly, Type I	EACH	24	-	24
52100020	Elastomeric Bearing Assembly, Type II	EACH	12	-	12
52100520	Anchor Bolts, 1"	EACH	96	-	96
58700300	Concrete Sealer	SQ FT	-	9,023	9,023
59100100	Geocomposite Wall Drain	SQ YD	-	391	391
81200230	Conduit Embedded in Structure, 2" Dia., PVC	FOOT	956	-	956
X0322400	Pile Extraction	EACH	-	26	26
X0326486	Decorative Railing Parapet Mounted	FOOT	644	-	644
X2020502	Braced Excavation	CU YD	-	4,770	4,770
X4240800	Detectable Warnings (Special)	SQ FT	18	-	18
X5091730	Bridge Fence Railing (Special)	FOOT	180	-	180
Z0046306	Pipe Underdrains For Structures 6"	FOOT	-	203	203
Z0073002	Temporary Soil Retention System	SQ FT	-	1,332	1,332



PROFILE GRADE
(WB CTA Track, along ℄ Track)



PROFILE GRADE
(EB CTA Track, along ℄ Track)



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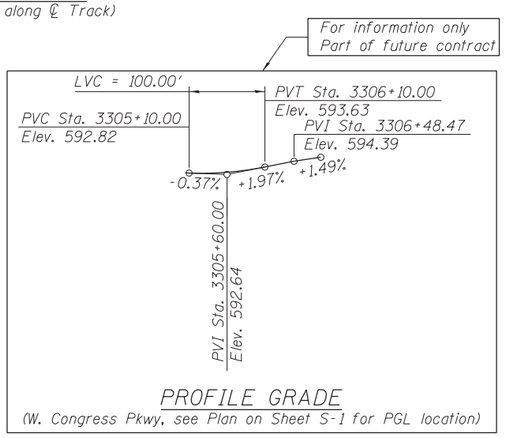
(Morgan Street Exit Ramp, see Plan on Sheet S-1 for PGL location)



PROFILE GRADE
(W. Congress Pkwy, see Plan on Sheet S-1 for PGL location)

HBM ENGINEERING GROUP, LLC
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INSPECTION & RATING
RESEARCH & TESTING
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, PGLS AND TOTAL BILL OF MATERIAL
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-02 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	146
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

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GENERAL NOTES:

1. Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts $^{7}/_{8}$ in. ϕ, holes $^{15}/_{16}$" in. ϕ, unless otherwise noted.
2. Calculated weight of Structural Steel = 645,360 lbs.
3. All structural steel shall be AASHTO M 270 Grade 50, unless otherwise noted.
4. All structural steel shall be hot-dipped galvanized. Cost included with Furnishing & Erecting Structural Steel. (See Special Provisions.)
5. No field welding is permitted except as specified in the contract documents.
6. Reinforcement bars designated (E) shall be epoxy coated.
7. All (embedded and separate) bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.
8. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
9. The existing structural steel coating contains lead. The Contractor shall take appropriate precaution to deal with the presence of lead on this project.
10. If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
11. The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection. Forms for deck slab shall be removed prior to placement of bridge approach slab.
12. All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
13. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $^{1}/_{8}$ in. Adjustment shall be made either by grinding the surface or by shimming the bearings.
14. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
15. Two $^{1}/_{8}$ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
16. Concrete Sealer shall be applied to the designated areas of the Piers, Abutments and Wingwalls.
17. All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
18. Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.
19. Backfill shall be placed behind the abutment after the superstructure has been poured and falsework removed. See Article 502.10 of the Standard Specifications.
20. Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.
21. For Conduit Attached to Structure quantities and details, see Electrical Plans.
22. The Contractor shall exercise extreme caution during construction to make certain that construction activities, live load surcharge and other loads applied to the structures will not have detrimental effects on the adjacent building foundations.
23. Driving piles and temporary sheet piling is not allowed.
24. Girders have bearing stiffeners and connection plates as required by design. Additional stiffeners may be added at the Contractor's expense as necessary to prevent distortion of the girders during galvanizing. The Contractor shall coordinate with the fabricator and the galvanizer to determine if additional stiffeners are necessary, and where these should be placed. Any proposed changes shall be submitted to the Engineer for approval prior to making any changes.
25. Temporary stiffener angles shall be bolted to each side of the splice ends of each girder segment to prevent distortion during galvanizing. Temporary stiffener angles shall bolt or fit tight against top & bottom flanges and include spacer tubes to minimize damage to galvanizing during removal. Cost included with Furnishing & Erecting Structural Steel.
26. For light pole support system, see Sheets S1-04, S1-18, S1-24 and Electrical and ITS Plans.
27. Existing CTA subpier and piers were most likely removed or partially removed when existing abutments and approach slab were constructed. Any existing foundation that is within the proposed excavation for the new bridge structure construction shall be included with FOUNDATION REMOVAL.
28. The Contractor shall exercise extreme caution during construction to make certain that construction activities, live load surcharge, structure excavation, drilling shafts and other loads applied to the pier 2 will not have detrimental effects on the 10'x9' main drain. Any damage to the main drain during construction shall be repaired by the contractor at his expense and no charge to IDOT.
29. Abandoned 5' Brick CTA Water Tunnel must be filled prior to the start of wall construction. The tunnel must be filled so that wall foundation construction will not be impacted by tunnel. A number of the wall foundations will be placed through this tunnel. Drilling operations must account for the presence of debris, brick material, CLSM and bedding material in addition to soil and other expected materials to be encountered.
30. For proposed watermain alignment, see Sheet No. 87.

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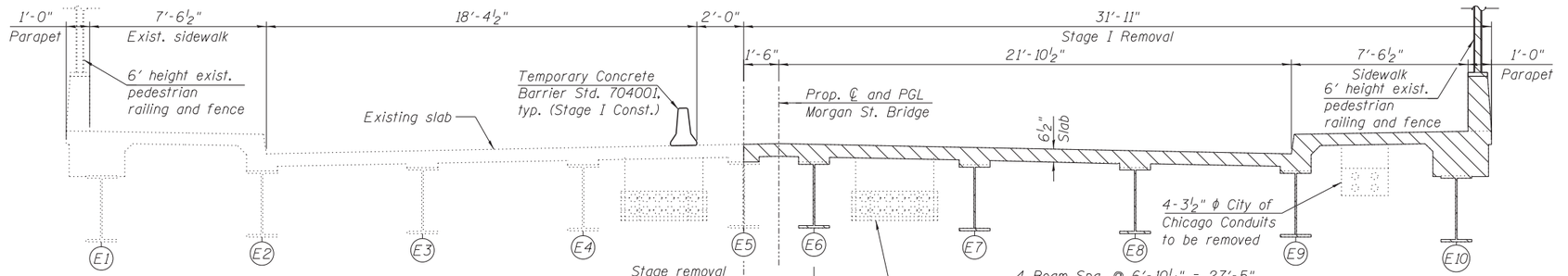
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND MISCELLANEOUS DETAILS
STRUCTURE NO. 016-1709

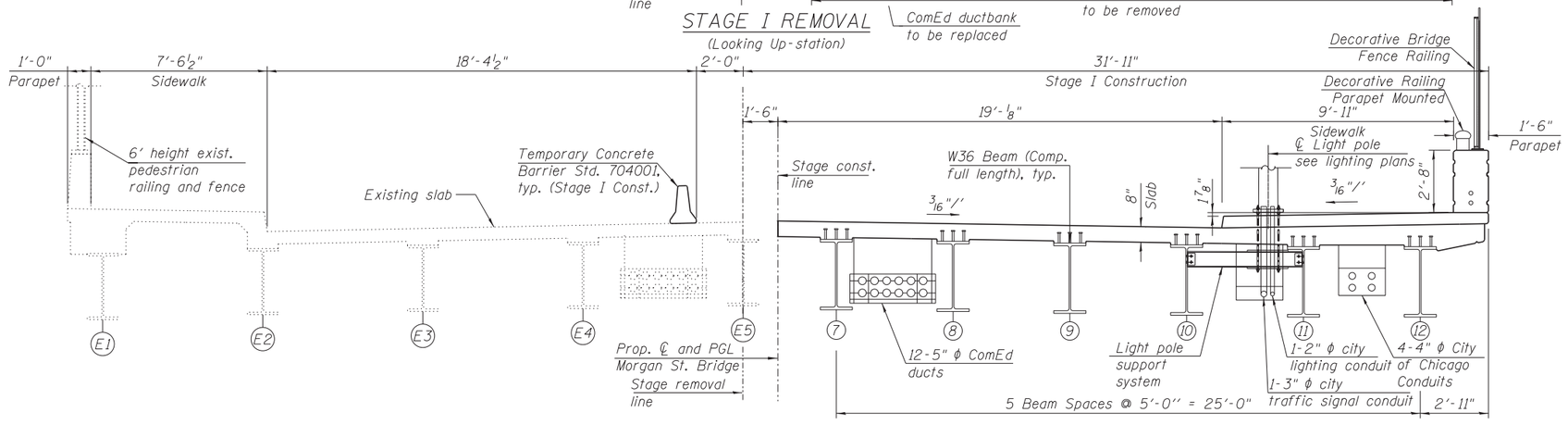
SCALE: | SHEET S1-03 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	147
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		



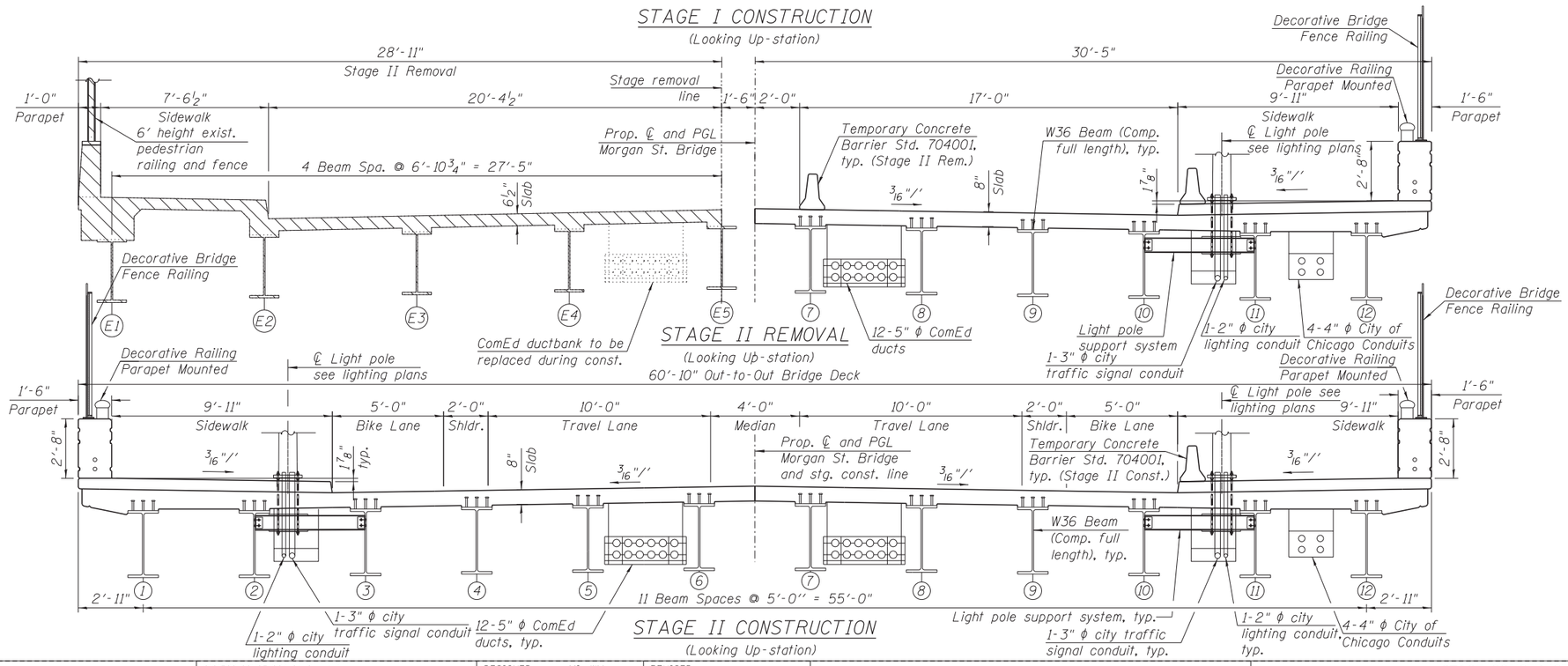
STAGE I REMOVAL

(Looking Up-station)



STAGE I CONSTRUCTION

(Looking Up-station)



STAGE II REMOVAL

(Looking Up-station)

60'-10" Out-to-Out Bridge Deck

STAGE II CONSTRUCTION

(Looking Up-station)

STAGE I REMOVAL

1. Install temporary concrete barrier as shown to locate construction work area on the east side of the existing structure.
2. Install Braced Excavation System behind abutments.
3. Remove the existing ComEd ductbank between existing beams 6 and 7 and remove the existing City of Chicago ductbank between existing beams 9 and 10. See Lighting and ITS plans.
4. Remove the existing structure on the east side of the stage removal line.

STAGE I CONSTRUCTION

The following construction items will be performed within the limits of Stage I Construction:

1. Drill and cast drilled shafts for abutments and piers as shown in footing layout.
2. Construct abutments and piers.
3. Erect Beams 7 thru 12.
4. Cast reinforced concrete deck with sidewalk, parapet, railing and decorative fence.
5. Perform bridge deck grooving for the bridge deck.
6. Apply protective coat for the bridge deck and top and inside faces of parapets.
7. Paint pavement markings on the top of deck.

STAGE II REMOVAL

1. Install temporary concrete barrier as shown to locate construction work area on the Stage I Constructed portion of the bridge.
2. Relocate the existing ductbank to the new constructed portion of the bridge. See Lighting and ITS plans.
3. Remove the existing structure on the west side of the stage removal line.

STAGE II CONSTRUCTION

The following construction items will be performed within the limits of Stage II Construction:

1. Drive and cast drilled shafts for piers as shown in footing layout.
2. Construct remaining portions of piers.
3. Erect Beams 1 thru 6.
4. Cast reinforced concrete deck with sidewalk, parapet, railing and decorative fence.
5. Perform bridge deck grooving for the bridge deck.
6. Apply protective coat for the bridge deck and top and inside faces of parapets.
7. Paint pavement markings on the top of deck.

NOTES:

1. For ComEd conduits relocation details and quantities, see ComEd plans by others.
2. Place conduits below diaphragms.

LEGEND

Removal Area

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STATE OF ILLINOIS
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STAGE CONSTRUCTION
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-04 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	148
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		

BILL OF MATERIAL

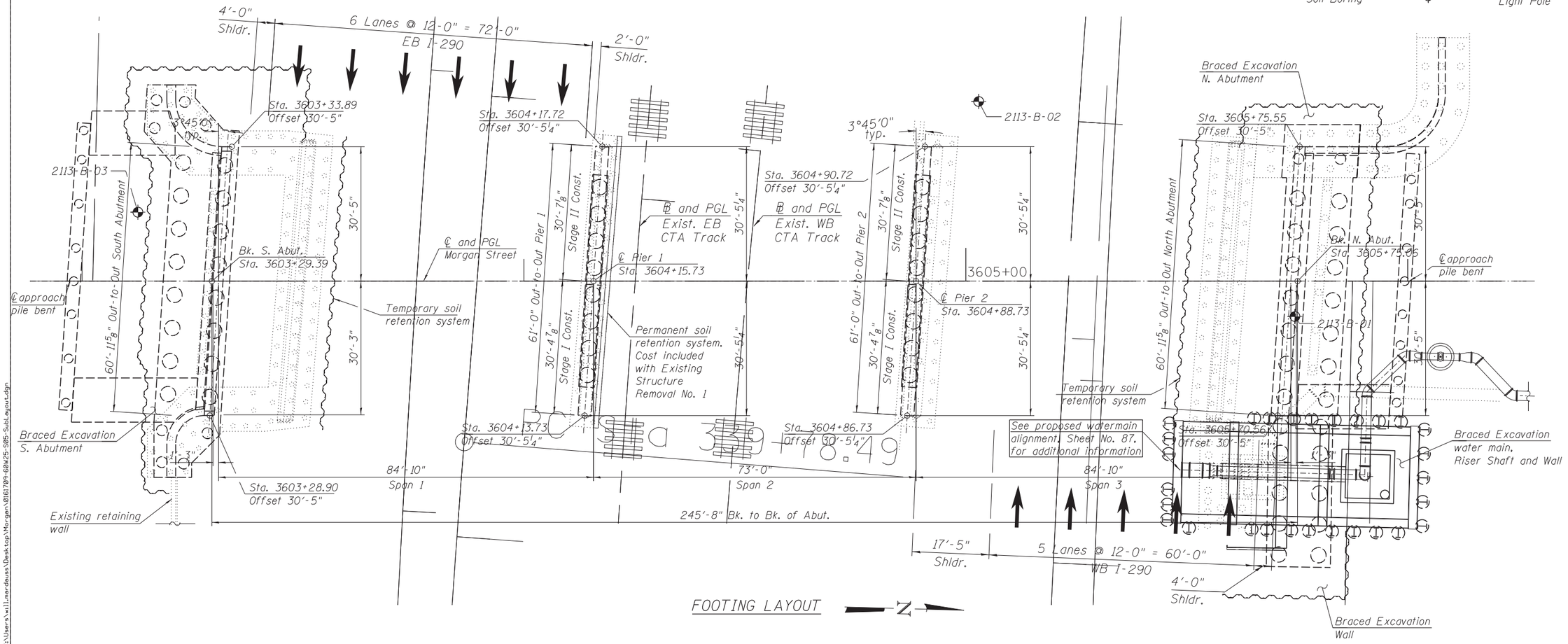
ITEM	UNIT	TOTAL
Temporary Soil Retention System	SQ FT	1,332

NOTES:

1. Existing light poles to be removed.

LEGEND:

Combined Sewer — CS
Storm Sewer — S
Electric — E
Water Line — W
Fiber Optic — FO
Fire Hydrant
Soil Boring
Light Pole



FOOTING LAYOUT

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE LAYOUT
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-05 OF 51 SHEETS | STA. | TO STA.

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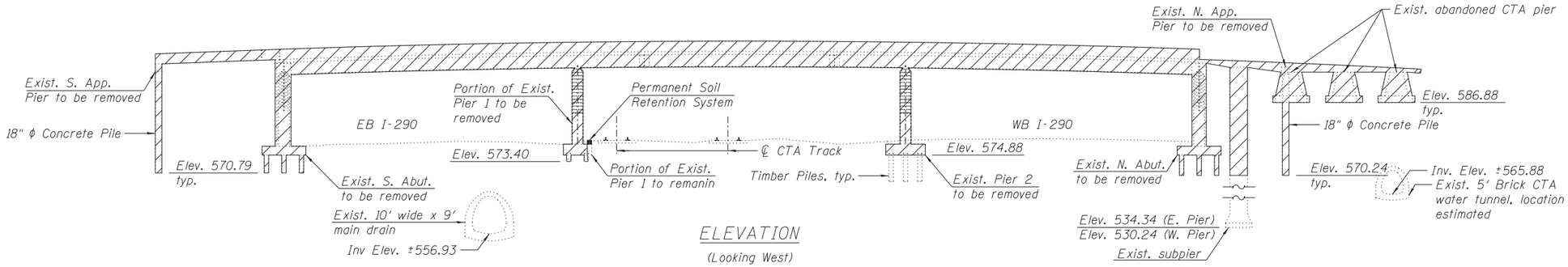
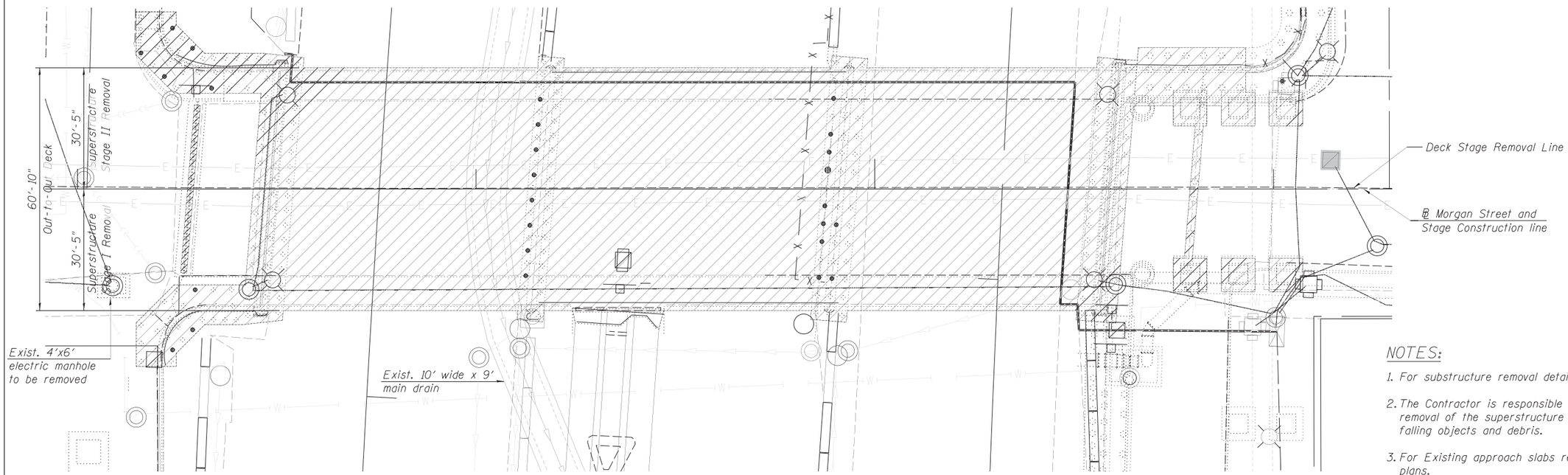
	ILLINOIS FED. AID PROJECT			



ELEVATION

(Looking West)



PLAN

NOTES:

1. For substructure removal details see sheets S1-107 & S1-108.
2. The Contractor is responsible to protect the tracks during removal of the superstructure and substructure elements falling objects and debris.
3. For Existing approach slabs removal quantities, see Roadway plans.

LEGEND:

Removal Area

Pile Extraction

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal of Existing Structures No. 1	Each	1
Protective Shield	Sq Yd	1,895
Pile Extraction	Each	26

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STATE OF ILLINOIS
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EXISTING STRUCTURE REMOVAL PLAN AND ELEVATION
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-06 OF 51 SHEETS | STA. | TO STA.

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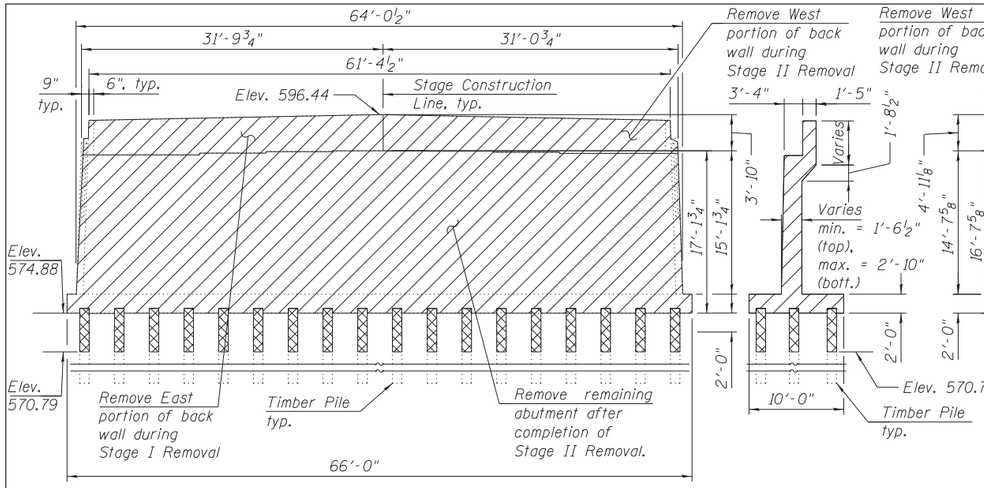
	ILLINOIS	FED. AID PROJECT		

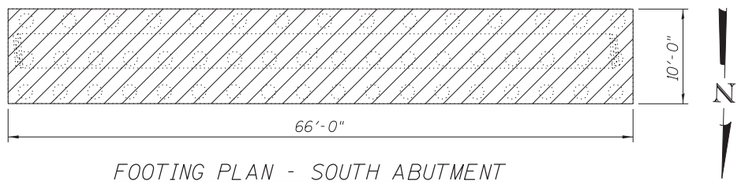


ELEVATION - SOUTH ABUTMENT

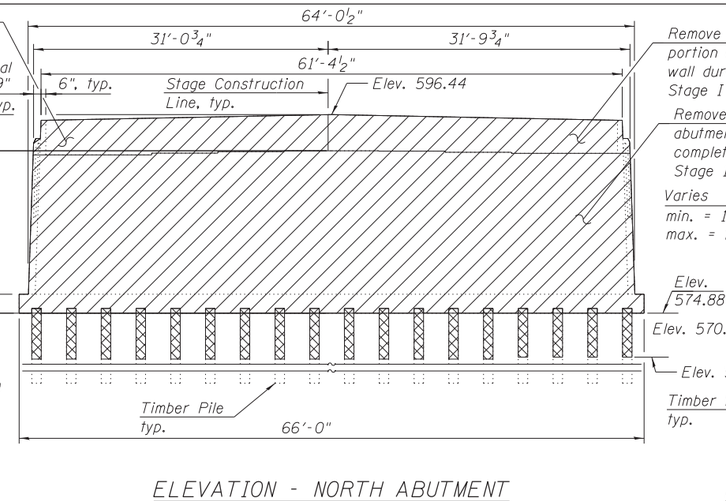
(Looking South)

SECTION - SOUTH ABUTMENT

(Looking East)

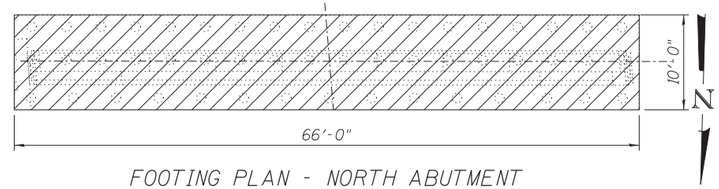


FOOTING PLAN - SOUTH ABUTMENT

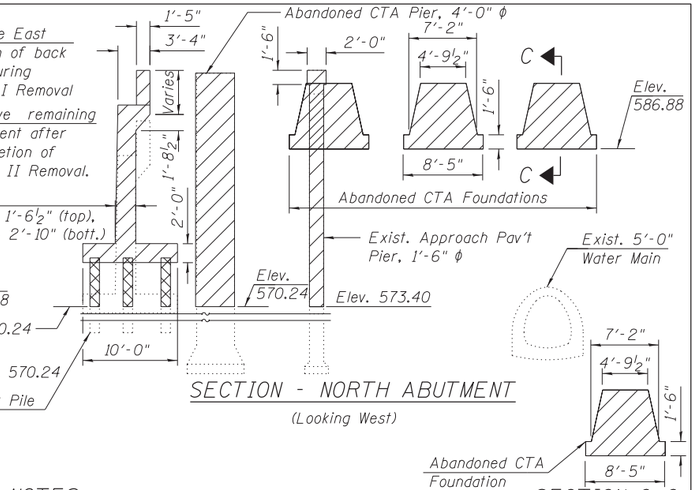


ELEVATION - NORTH ABUTMENT

(Looking North)



FOOTING PLAN - NORTH ABUTMENT



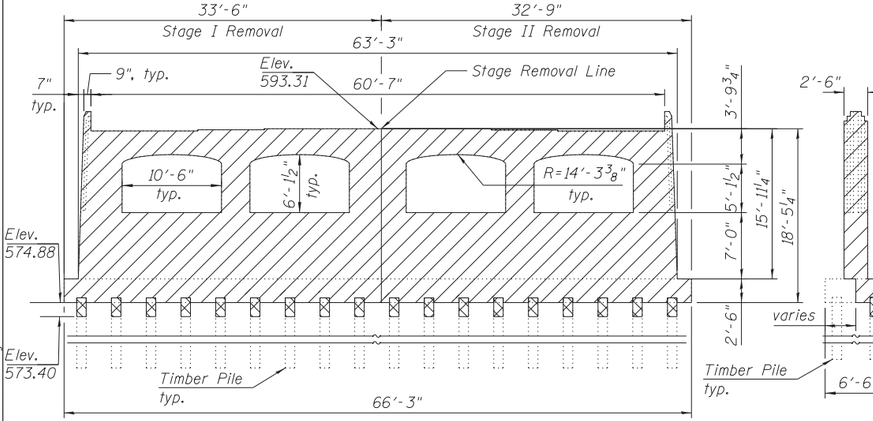
SECTION - NORTH ABUTMENT

(Looking West)

SECTION C-C

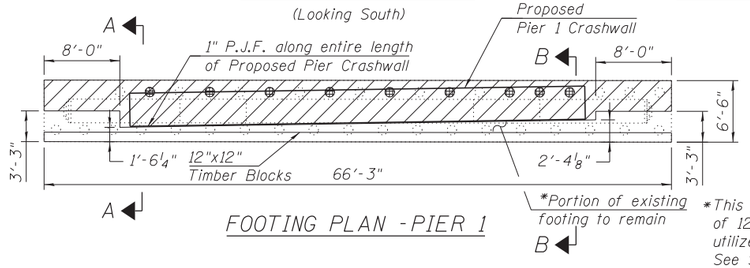
NOTES:

1. Dimensions shown have been taken from historical design drawing and may not represent "as built" conditions. The Contractor must verify all dimensions in the field. Variation in the field dimensions shall not warrant additional compensation for Removal of Existing Structure No. 1 or Foundation Removal.
2. Existing abandoned CTA subpier and foundations were most likely removed or partially removed when existing approach slab was constructed. Any existing foundation that is within the proposed excavation for the new bridge structure construction shall be included with Foundation Removal.
3. Stage Construction lines are different for superstructure and substructure elements.
4. Any damages to the CTA tracks by the Contractor during construction shall be their responsibility. Cost of any repair required due to these damages shall be paid by the Contractor.



ELEVATION - PIER 1

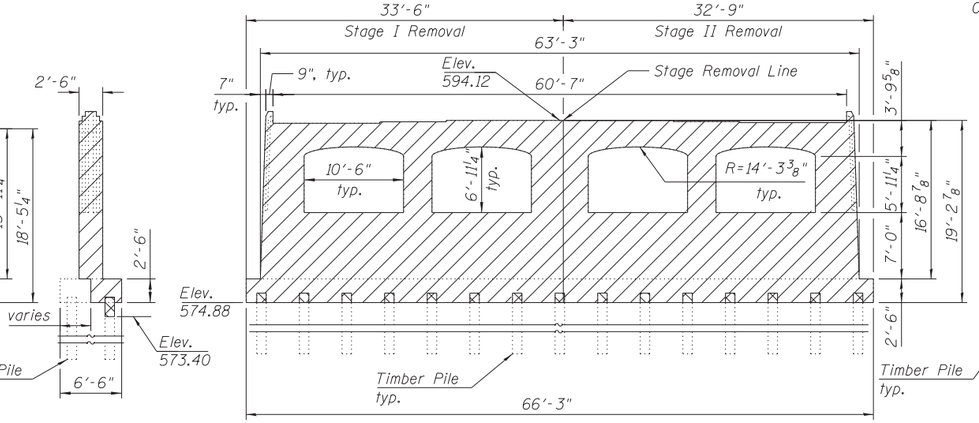
(Looking South)



FOOTING PLAN - PIER 1

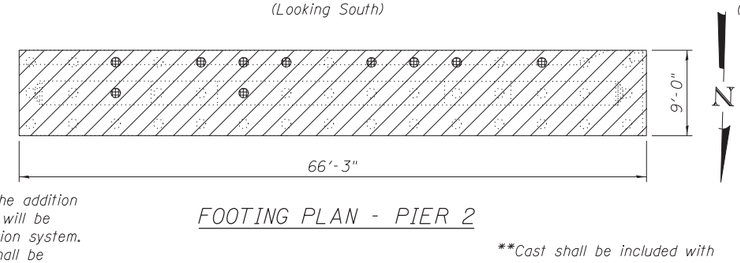
SIDE ELEVATION - PIER 1

(Looking East)

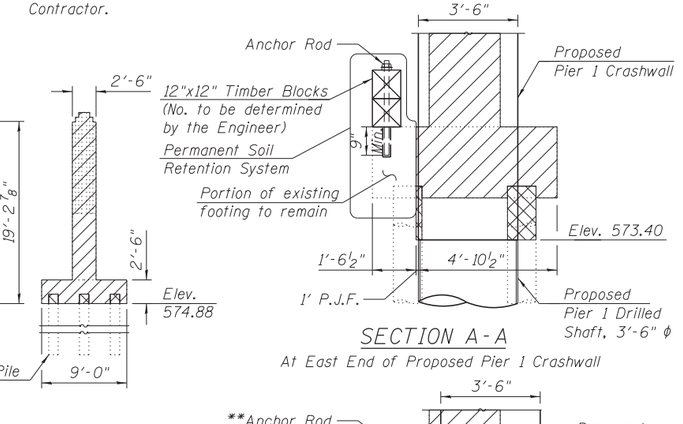


ELEVATION - PIER 2

(Looking South)



FOOTING PLAN - PIER 2

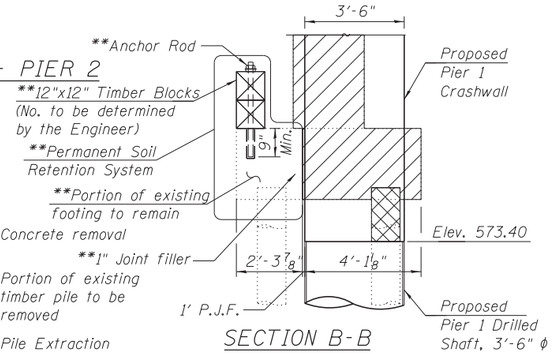


SIDE ELEVATION - PIER 2

(Looking East)

SECTION A-A

At East End of Proposed Pier 1 Crashwall



SECTION B-B

At West End of Proposed Pier 1 Crashwall

*This portion of the footing, with the addition of 12"x12" timber blocks above it, will be utilized as a permanent soil retention system. See Sections A-A & B-B. Cost shall be included with Existing Structure Removal No. 1

**Cost shall be included with Existing Structure Removal No. 1

LEGEND:

- Concrete removal
- Portion of existing timber pile to be removed
- Pile Extraction

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EXISTING STRUCTURE REMOVAL DETAILS 1 OF 2
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-07 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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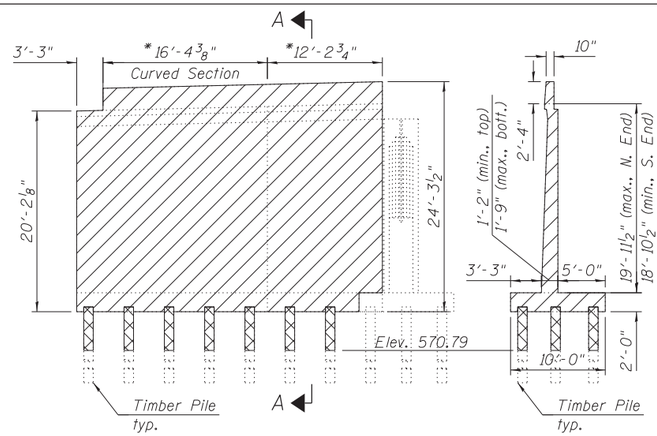
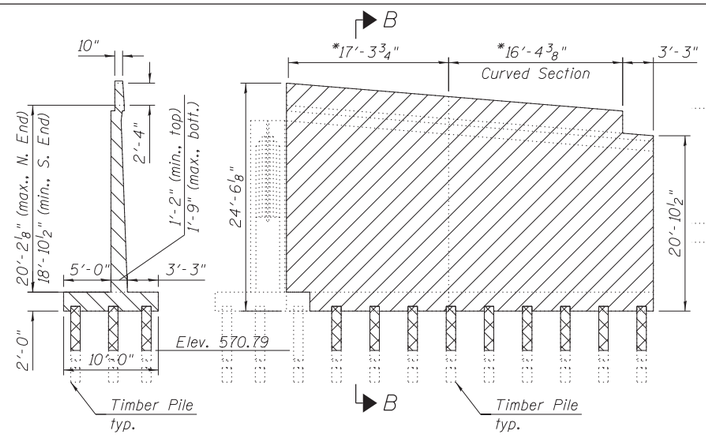
		CONTRACT NO. 60W25		
		ILLINOIS	FED. AID PROJECT	



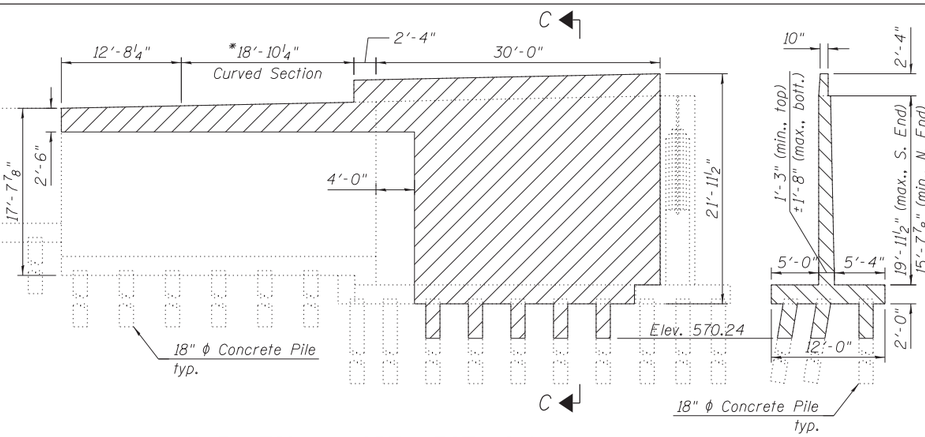
ELEVATION - SOUTHEAST WINGWALL SECTION A-A

(Looking Southwest)



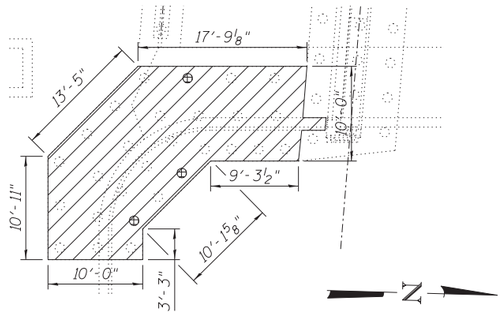
SECTION B-B ELEVATION - SOUTHWEST WINGWALL

(Looking Southeast)

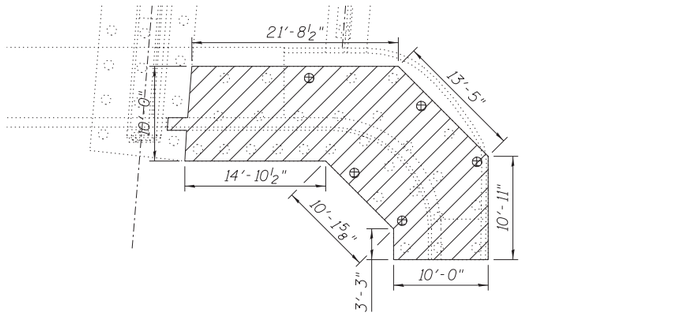


ELEVATION - NORTHWEST WINGWALL SECTION C-C

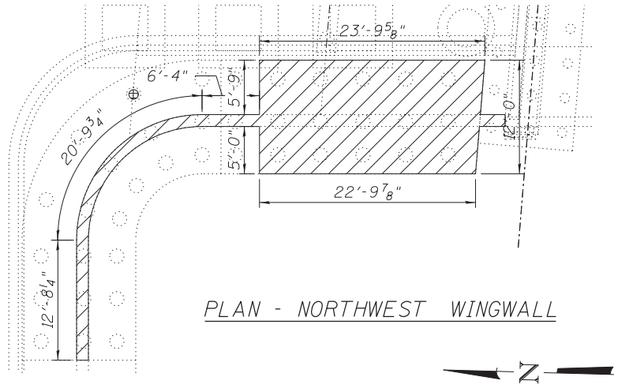
(Looking at Northeast)



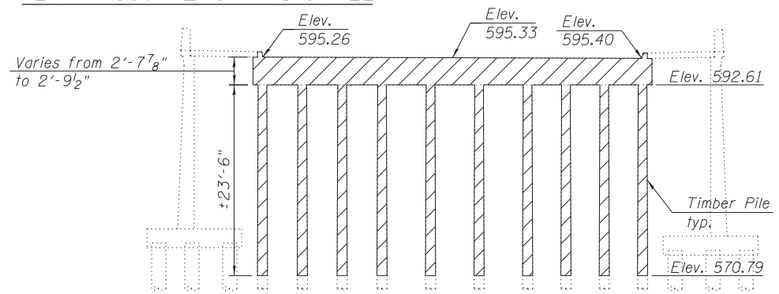
PLAN - SOUTHEAST WINGWALL



PLAN - SOUTHWEST WINGWALL

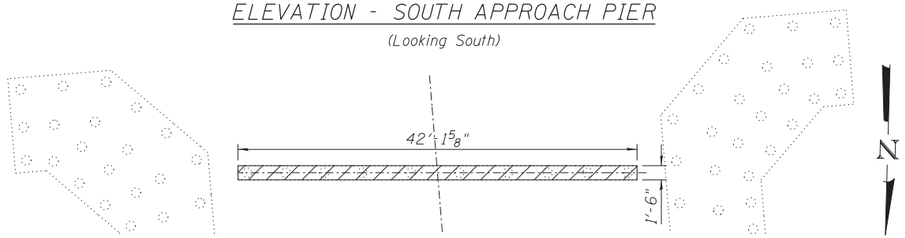


PLAN - NORTHWEST WINGWALL



ELEVATION - SOUTH APPROACH PIER

(Looking South)



PLAN - SOUTH APPROACH PIER

LEGEND:

Concrete removal

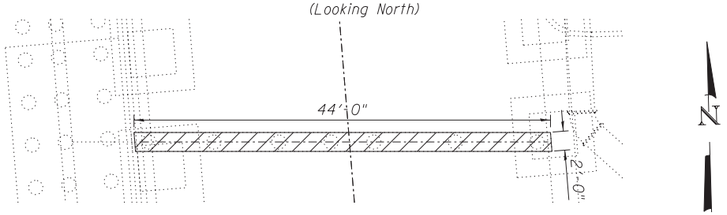
Portion of existing timber pile to be removed

Pile Extraction

* Measured along front face of wingwall.

ELEVATION - NORTH APPROACH PIER

(Looking North)



PLAN - NORTH APPROACH PIER

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EXISTING STRUCTURE REMOVAL DETAILS 2 OF 2
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-08 OF 51 SHEETS | STA. | TO STA.

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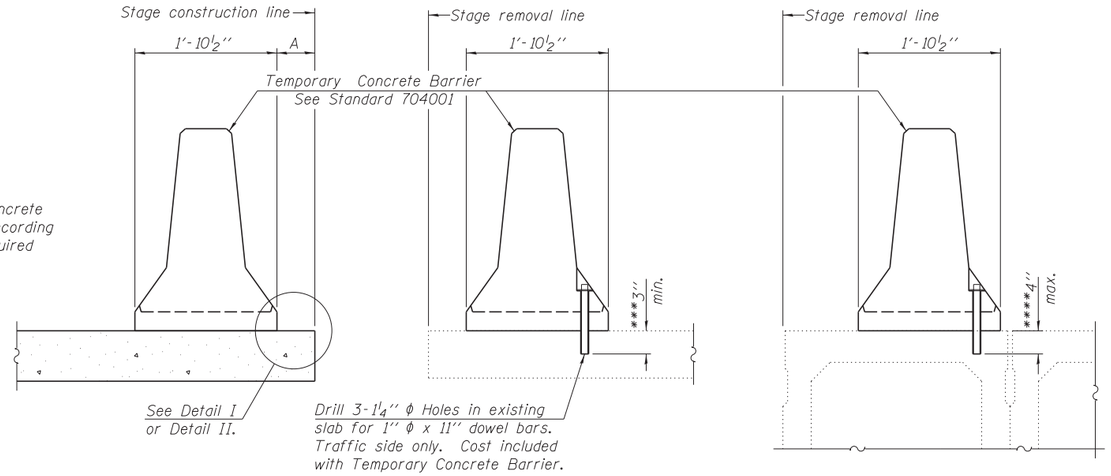
90/94/290	2013-007R	COOK	317	152
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

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



NEW SLAB | EXISTING SLAB | EXISTING DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1'' x 7' 'x ''W'' steel ℄ to the top layer of couplers with 2-$\frac{5}{8}$'' ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1'' x 7'' x ''W'' steel ℄ to the concrete slab or concrete wearing surface with 2-$\frac{5}{8}$'' ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

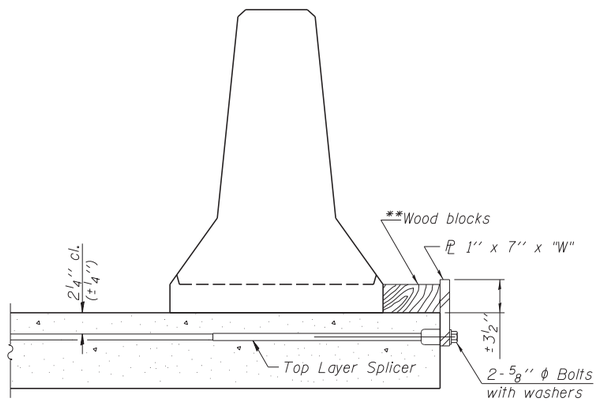
Cost of anchorage is included with Temporary Concrete Barrier.

The 1'' x 7'' x ''W'' plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

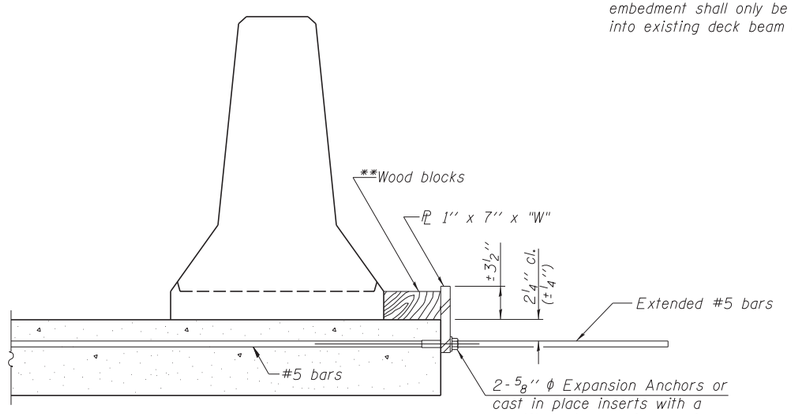
SECTIONS THRU SLAB OR DECK BEAM

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

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



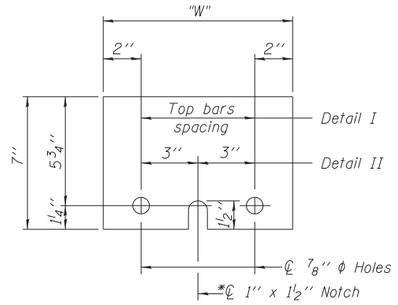
DETAIL I



DETAIL II

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

"W" = Top bars spacing + 4''



STEEL RETAINER ℄ 1'' x 7'' x ''W''

* Required only with Detail II

R-27

7-1-10

FILE PATH = C:\Users\will.mardauss\Desktop\Morgan\0161709-60W25-S09-TempConcBarrier.dgn

HBM ENGINEERING GROUP, LLC.
CONSULTING & DESIGN INSPECTION & RATING RESEARCH & TESTING
4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

0161709-60W25-S09-TempConcBarrier.dgn	DESIGNED - MI, MAF, JMG	REVISED -	
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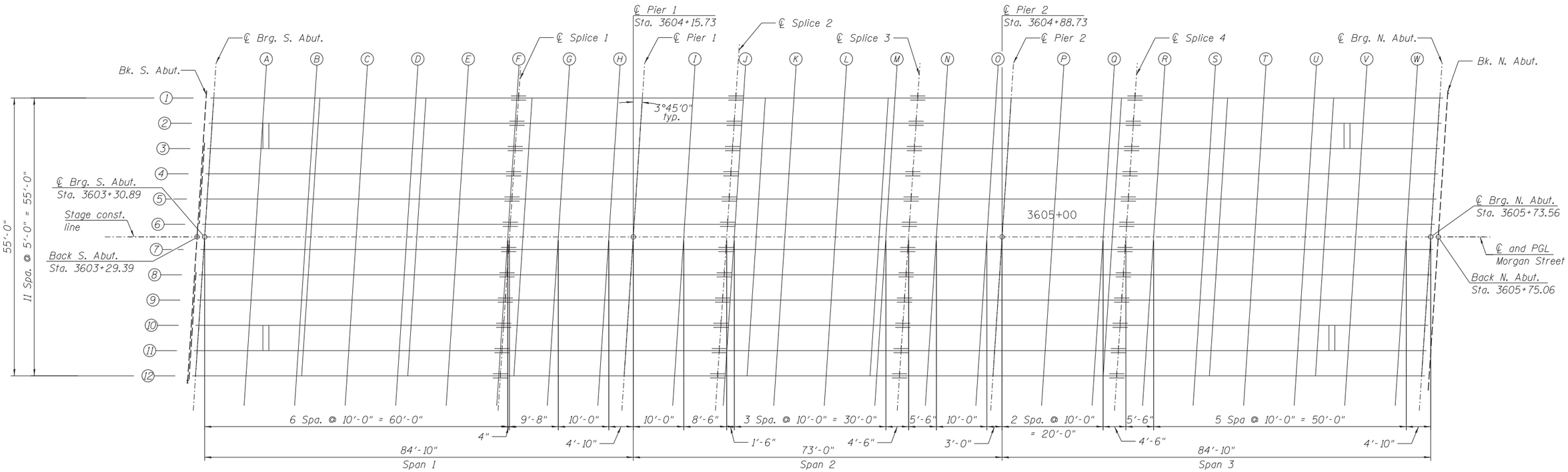
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

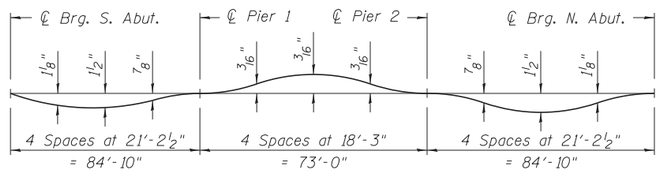
TEMPORARY CONCRETE BARRIER
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-09 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	153
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



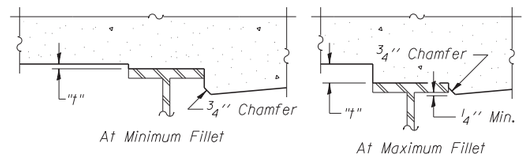
ELEVATION LOCATION PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown below.



At Minimum Fillet

At Maximum Fillet

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

The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown below. For grinding the deck, see Special Provisions.

FILLET HEIGHTS

FILE PATH = C:\Users\will.mardauss\Desktop\Morgan\0161709-60W25-S10-Screed.dgn

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0161709-60W25-S10-Screed.dgn	DESIGNED - MI, LAB	REVISED -	
USER NAME = will.mardauss	DRAWN - LAB	REVISED -	
PLOT SCALE = 10.00 ' / in.	CHECKED - MAI, MI, JJS	REVISED -	
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATION LOCATIONS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-10 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	154
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	3603+31.19	-27.50'	595.66	595.66
Centerline Brg. S. Abut.	3603+32.69	-27.50'	595.72	595.72
A	3603+42.69	-27.50'	596.12	596.18
B	3603+52.69	-27.50'	596.47	596.57
C	3603+62.69	-27.50'	596.77	596.89
D	3603+72.69	-27.50'	597.02	597.14
E	3603+82.69	-27.50'	597.22	597.33
F	3603+92.69	-27.50'	597.37	597.45
Centerline Splice 1	3603+93.03	-27.50'	597.37	597.45
G	3604+02.69	-27.50'	597.47	597.51
H	3604+12.69	-27.50'	597.52	597.53
Centerline Pier 1	3604+17.53	-27.50'	597.55	597.55
I	3604+27.53	-27.50'	597.60	597.58
Centerline Splice 2	3604+36.03	-27.50'	597.64	597.62
J	3604+37.53	-27.50'	597.65	597.63
K	3604+47.53	-27.50'	597.70	597.68
L	3604+57.53	-27.50'	597.75	597.73
M	3604+67.53	-27.50'	597.78	597.76
Centerline Splice 3	3604+72.03	-27.50'	597.78	597.76
N	3604+77.53	-27.50'	597.77	597.75
O	3604+87.53	-27.50'	597.71	597.70
Centerline Pier 2	3604+90.53	-27.50'	597.68	597.68
P	3605+00.53	-27.50'	597.55	597.60
Q	3605+10.53	-27.50'	597.38	597.46
Centerline Splice 4	3605+15.03	-27.50'	597.28	597.37
R	3605+20.53	-27.50'	597.15	597.26
S	3605+30.53	-27.50'	596.88	597.00
T	3605+40.53	-27.50'	596.56	596.68
U	3605+50.53	-27.50'	596.18	596.29
V	3605+60.53	-27.50'	595.76	595.83
W	3605+70.53	-27.50'	595.31	595.33
Centerline Brg. N. Abut.	3605+75.36	-27.50'	595.10	595.10
Bk. N. Abut.	3605+76.86	-27.50'	595.04	595.04

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	3603+30.86	-22.50'	595.65	595.65
Centerline Brg. S. Abut.	3603+32.36	-22.50'	595.71	595.71
A	3603+42.36	-22.50'	596.11	596.17
B	3603+52.36	-22.50'	596.46	596.56
C	3603+62.36	-22.50'	596.76	596.88
D	3603+72.36	-22.50'	597.01	597.14
E	3603+82.36	-22.50'	597.21	597.32
F	3603+92.36	-22.50'	597.36	597.44
Centerline Splice 1	3603+92.70	-22.50'	597.37	597.45
G	3604+02.36	-22.50'	597.46	597.51
H	3604+12.36	-22.50'	597.52	597.53
Centerline Pier 1	3604+17.20	-22.50'	597.54	597.54
I	3604+27.20	-22.50'	597.59	597.58
Centerline Splice 2	3604+35.70	-22.50'	597.64	597.62
J	3604+37.20	-22.50'	597.64	597.63
K	3604+47.20	-22.50'	597.69	597.68
L	3604+57.20	-22.50'	597.74	597.73
M	3604+67.20	-22.50'	597.78	597.76
Centerline Splice 3	3604+71.70	-22.50'	597.78	597.76
N	3604+77.20	-22.50'	597.77	597.75
O	3604+87.20	-22.50'	597.71	597.70
Centerline Pier 2	3604+90.20	-22.50'	597.68	597.68
P	3605+00.20	-22.50'	597.56	597.60
Q	3605+10.20	-22.50'	597.39	597.46
Centerline Splice 4	3605+14.70	-22.50'	597.29	597.38
R	3605+20.20	-22.50'	597.16	597.27
S	3605+30.20	-22.50'	596.89	597.01
T	3605+40.20	-22.50'	596.57	596.69
U	3605+50.20	-22.50'	596.20	596.30
V	3605+60.20	-22.50'	595.77	595.85
W	3605+70.20	-22.50'	595.32	595.34
Centerline Brg. N. Abut.	3605+75.03	-22.50'	595.11	595.11
Bk. N. Abut.	3605+76.53	-22.50'	595.05	595.05

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	3603+30.54	-17.50'	595.71	595.71
Centerline Brg. S. Abut.	3603+32.04	-17.50'	595.78	595.78
A	3603+42.04	-17.50'	596.18	596.23
B	3603+52.04	-17.50'	596.53	596.62
C	3603+62.04	-17.50'	596.83	596.95
D	3603+72.04	-17.50'	597.08	597.21
E	3603+82.04	-17.50'	597.28	597.39
F	3603+92.04	-17.50'	597.44	597.52
Centerline Splice 1	3603+92.37	-17.50'	597.44	597.52
G	3604+02.04	-17.50'	597.54	597.58
H	3604+12.04	-17.50'	597.60	597.61
Centerline Pier 1	3604+16.87	-17.50'	597.62	597.62
I	3604+26.87	-17.50'	597.67	597.66
Centerline Splice 2	3604+35.37	-17.50'	597.71	597.70
J	3604+36.87	-17.50'	597.72	597.70
K	3604+46.87	-17.50'	597.77	597.75
L	3604+56.87	-17.50'	597.82	597.80
M	3604+66.87	-17.50'	597.86	597.84
Centerline Splice 3	3604+71.37	-17.50'	597.86	597.84
N	3604+76.87	-17.50'	597.85	597.83
O	3604+86.87	-17.50'	597.79	597.78
Centerline Pier 2	3604+89.87	-17.50'	597.77	597.77
P	3604+99.87	-17.50'	597.64	597.69
Q	3605+09.87	-17.50'	597.47	597.55
Centerline Splice 4	3605+14.37	-17.50'	597.38	597.47
R	3605+19.87	-17.50'	597.25	597.35
S	3605+29.87	-17.50'	596.98	597.10
T	3605+39.87	-17.50'	596.66	596.78
U	3605+49.87	-17.50'	596.29	596.39
V	3605+59.87	-17.50'	595.87	595.94
W	3605+69.87	-17.50'	595.42	595.44
Centerline Brg. N. Abut.	3605+74.70	-17.50'	595.20	595.20
Bk. N. Abut.	3605+76.20	-17.50'	595.14	595.14

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	3603+30.21	-12.50'	595.78	595.78
Centerline Brg. S. Abut.	3603+31.71	-12.50'	595.84	595.84
A	3603+41.71	-12.50'	596.24	596.30
B	3603+51.71	-12.50'	596.60	596.69
C	3603+61.71	-12.50'	596.90	597.02
D	3603+71.71	-12.50'	597.15	597.28
E	3603+81.71	-12.50'	597.36	597.47
F	3603+91.71	-12.50'	597.51	597.59
Centerline Splice 1	3603+92.04	-12.50'	597.52	597.59
G	3604+01.71	-12.50'	597.61	597.66
H	3604+11.71	-12.50'	597.67	597.68
Centerline Pier 1	3604+16.54	-12.50'	597.70	597.70
I	3604+26.54	-12.50'	597.75	597.73
Centerline Splice 2	3604+35.04	-12.50'	597.79	597.77
J	3604+36.54	-12.50'	597.80	597.78
K	3604+46.54	-12.50'	597.85	597.83
L	3604+56.54	-12.50'	597.90	597.88
M	3604+66.54	-12.50'	597.94	597.92
Centerline Splice 3	3604+71.04	-12.50'	597.94	597.92
N	3604+76.54	-12.50'	597.93	597.91
O	3604+86.54	-12.50'	597.87	597.86
Centerline Pier 2	3604+89.54	-12.50'	597.85	597.85
P	3604+99.54	-12.50'	597.73	597.77
Q	3605+09.54	-12.50'	597.55	597.63
Centerline Splice 4	3605+14.04	-12.50'	597.46	597.55
R	3605+19.54	-12.50'	597.33	597.44
S	3605+29.54	-12.50'	597.07	597.18
T	3605+39.54	-12.50'	596.75	596.87
U	3605+49.54	-12.50'	596.38	596.48
V	3605+59.54	-12.50'	595.96	596.03
W	3605+69.54	-12.50'	595.52	595.54
Centerline Brg. N. Abut.	3605+74.38	-12.50'	595.30	595.30
Bk. N. Abut.	3605+75.88	-12.50'	595.23	595.23

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	3603+29.88	-7.50'	595.84	595.84
Centerline Brg. S. Abut.	3603+31.38	-7.50'	595.90	595.90
A	3603+41.38	-7.50'	596.31	596.36
B	3603+51.38	-7.50'	596.66	596.76
C	3603+61.38	-7.50'	596.97	597.09
D	3603+71.38	-7.50'	597.22	597.35
E	3603+81.38	-7.50'	597.43	597.54
F	3603+91.38	-7.50'	597.58	597.66
Centerline Splice 1	3603+91.71	-7.50'	597.59	597.67
G	3604+01.38	-7.50'	597.69	597.73
H	3604+11.38	-7.50'	597.75	597.76
Centerline Pier 1	3604+16.21	-7.50'	597.77	597.77
I	3604+26.21	-7.50'	597.82	597.81
Centerline Splice 2	3604+34.71	-7.50'	597.87	597.85
J	3604+36.21	-7.50'	597.87	597.86
K	3604+46.21	-7.50'	597.92	597.91
L	3604+56.21	-7.50'	597.97	597.96
M	3604+66.21	-7.50'	598.01	598.00
Centerline Splice 3	3604+70.71	-7.50'	598.02	598.00
N	3604+76.21	-7.50'	598.01	597.99
O	3604+86.21	-7.50'	597.95	597.95
Centerline Pier 2	3604+89.21	-7.50'	597.93	597.93
P	3604+99.21	-7.50'	597.81	597.85
Q	3605+09.21	-7.50'	597.64	597.72
Centerline Splice 4	3605+13.71	-7.50'	597.55	597.64
R	3605+19.21	-7.50'	597.42	597.52
S	3605+29.21	-7.50'	597.15	597.27
T	3605+39.21	-7.50'	596.84	596.96
U	3605+49.21	-7.50'	596.47	596.58
V	3605+59.21	-7.50'	596.05	596.13
W	3605+69.21	-7.50'	595.61	595.63
Centerline Brg. N. Abut.	3605+74.05	-7.50'	595.39	595.39
Bk. N. Abut.	3605+75.55	-7.50'	595.33	595.33

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	3603+29.55	-2.50'	595.90	595.90
Centerline Brg. S. Abut.	3603+31.05	-2.50'	595.97	595.97
A	3603+41.05	-2.50'	596.37	596.43
B	3603+51.05	-2.50'	596.73	596.83
C	3603+61.05	-2.50'	597.04	597.16
D	3603+71.05	-2.50'	597.29	597.42
E	3603+81.05	-2.50'	597.50	597.61
F	3603+91.05	-2.50'	597.66	597.74
Centerline Splice 1	3603+91.39	-2.50'	597.66	597.74
G	3604+01.05	-2.50'	597.77	597.81
H	3604+11.05	-2.50'	597.83	597.84
Centerline Pier 1	3604+15.89	-2.50'	597.85	597.85
I	3604+25.89	-2.50'	597.90	597.89
Centerline Splice 2	3604+34.39	-2.50'	597.94	597.93
J	3604+35.89	-2.50'	597.95	597.93
K	3604+45.89	-2.50'	598.00	597.98
L	3604+55.89	-2.50'	598.05	598.03
M	3604+65.89	-2.50'	598.09	598.07
Centerline Splice 3	3604+70.39	-2.50'	598.10	598.08
N	3604+75.89	-2.50'	598.09	598.07
O	3604+85.89	-2.50'	598.03	598.03
Centerline Pier 2	3604+88.89	-2.50'	598.01	598.01
P	3604+98.89	-2.50'	597.89	597.93
Q	3605+08.89	-2.50'	597.72	597.80
Centerline Splice 4	3605+13.39	-2.50'	597.63	597.72
R	3605+18.89	-2.50'	597.51	597.61
S	3605+28.89	-2.50'	597.24	597.36
T	3605+38.89	-2.50'	596.93	597.05
U	3605+48.89	-2.50'	596.56	596.67
V	3605+58.89	-2.50'	596.15	596.22
W	3605+68.89	-2.50'	595.70	595.72
Centerline Brg. N. Abut.	3605+73.72	-2.50'	595.48	595.48
Bk. N. Abut.	3605+75.22	-2.50'	595.42	595.42

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0161709-60W25-S11-Screed2.dgn	DESIGNED - MI, LAB	REVISED -	
USER NAME = will.mardauss	DRAWN - LAB	REVISED -	
PLOT SCALE = 01.0000 ' / in.	CHECKED - MAI, MI, JJS	REVISED -	
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (SHEET 1 OF 3)
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-11 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	155
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

℄ ROADWAY & PGL MORGAN STREET

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	3603+29.39	0.00′	595.94	595.94
Centerline Brg. S. Abut.	3603+30.89	0.00′	596.00	596.00
A	3603+40.89	0.00′	596.41	596.46
B	3603+50.89	0.00′	596.76	596.86
C	3603+60.89	0.00′	597.07	597.19
D	3603+70.89	0.00′	597.33	597.45
E	3603+80.89	0.00′	597.54	597.65
F	3603+90.89	0.00′	597.70	597.78
Centerline Splice 1	3603+91.22	0.00′	597.70	597.78
G	3604+00.89	0.00′	597.80	597.85
H	3604+10.89	0.00′	597.86	597.87
Centerline Pier 1	3604+15.72	0.00′	597.89	597.89
I	3604+25.72	0.00′	597.94	597.92
Centerline Splice 2	3604+34.22	0.00′	597.98	597.96
J	3604+35.72	0.00′	597.99	597.97
K	3604+45.72	0.00′	598.04	598.02
L	3604+55.72	0.00′	598.09	598.07
M	3604+65.72	0.00′	598.13	598.11
Centerline Splice 3	3604+70.22	0.00′	598.14	598.12
N	3604+75.72	0.00′	598.13	598.11
O	3604+85.72	0.00′	598.07	598.07
Centerline Pier 2	3604+88.72	0.00′	598.05	598.05
P	3604+98.72	0.00′	597.93	597.98
Q	3605+08.72	0.00′	597.77	597.84
Centerline Splice 4	3605+13.22	0.00′	597.68	597.77
R	3605+18.72	0.00′	597.55	597.65
S	3605+28.72	0.00′	597.28	597.40
T	3605+38.72	0.00′	596.97	597.09
U	3605+48.72	0.00′	596.61	596.71
V	3605+58.72	0.00′	596.19	596.27
W	3605+68.72	0.00′	595.75	595.77
Centerline Brg. N. Abut.	3605+73.56	0.00′	595.53	595.53
Bk. N. Abut.	3605+75.06	0.00′	595.46	595.46

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	3603+29.23	2.50′	595.89	595.89
Centerline Brg. S. Abut.	3603+30.73	2.50′	595.95	595.95
A	3603+40.73	2.50′	596.36	596.42
B	3603+50.73	2.50′	596.72	596.81
C	3603+60.73	2.50′	597.03	597.15
D	3603+70.73	2.50′	597.29	597.41
E	3603+80.73	2.50′	597.50	597.60
F	3603+90.73	2.50′	597.65	597.73
Centerline Splice 1	3603+91.06	2.50′	597.66	597.74
G	3604+00.73	2.50′	597.76	597.81
H	3604+10.73	2.50′	597.82	597.83
Centerline Pier 1	3604+15.56	2.50′	597.85	597.85
I	3604+25.56	2.50′	597.90	597.88
Centerline Splice 2	3604+34.06	2.50′	597.94	597.92
J	3604+35.56	2.50′	597.95	597.93
K	3604+45.56	2.50′	598.00	597.98
L	3604+55.56	2.50′	598.05	598.03
M	3604+65.56	2.50′	598.09	598.07
Centerline Splice 3	3604+70.06	2.50′	598.10	598.08
N	3604+75.56	2.50′	598.09	598.07
O	3604+85.56	2.50′	598.04	598.03
Centerline Pier 2	3604+88.56	2.50′	598.01	598.01
P	3604+98.56	2.50′	597.90	597.94
Q	3605+08.56	2.50′	597.73	597.81
Centerline Splice 4	3605+13.06	2.50′	597.64	597.73
R	3605+18.56	2.50′	597.52	597.62
S	3605+28.56	2.50′	597.25	597.37
T	3605+38.56	2.50′	596.94	597.06
U	3605+48.56	2.50′	596.57	596.68
V	3605+58.56	2.50′	596.16	596.23
W	3605+68.56	2.50′	595.72	595.74
Centerline Brg. N. Abut.	3605+73.39	2.50′	595.50	595.50
Bk. N. Abut.	3605+74.89	2.50′	595.43	595.43

BEAM 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	3603+28.90	7.50′	595.80	595.80
Centerline Brg. S. Abut.	3603+30.40	7.50′	595.86	595.86
A	3603+40.40	7.50′	596.27	596.33
B	3603+50.40	7.50′	596.63	596.73
C	3603+60.40	7.50′	596.94	597.06
D	3603+70.40	7.50′	597.20	597.32
E	3603+80.40	7.50′	597.41	597.52
F	3603+90.40	7.50′	597.57	597.65
Centerline Splice 1	3603+90.73	7.50′	597.58	597.66
G	3604+00.40	7.50′	597.68	597.73
H	3604+10.40	7.50′	597.74	597.75
Centerline Pier 1	3604+15.23	7.50′	597.77	597.77
I	3604+25.23	7.50′	597.82	597.80
Centerline Splice 2	3604+33.73	7.50′	597.86	597.84
J	3604+35.23	7.50′	597.87	597.85
K	3604+45.23	7.50′	597.92	597.90
L	3604+55.23	7.50′	597.97	597.95
M	3604+65.23	7.50′	598.01	597.99
Centerline Splice 3	3604+69.73	7.50′	598.02	598.00
N	3604+75.23	7.50′	598.01	597.99
O	3604+85.23	7.50′	597.96	597.95
Centerline Pier 2	3604+88.23	7.50′	597.94	597.94
P	3604+98.23	7.50′	597.82	597.87
Q	3605+08.23	7.50′	597.66	597.74
Centerline Splice 4	3605+12.73	7.50′	597.57	597.66
R	3605+18.23	7.50′	597.44	597.55
S	3605+28.23	7.50′	597.18	597.30
T	3605+38.23	7.50′	596.87	596.99
U	3605+48.23	7.50′	596.51	596.61
V	3605+58.23	7.50′	596.10	596.17
W	3605+68.23	7.50′	595.65	595.67
Centerline Brg. N. Abut.	3605+73.07	7.50′	595.43	595.43
Bk. N. Abut.	3605+74.57	7.50′	595.37	595.37

BEAM 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	3603+28.57	12.50′	595.71	595.71
Centerline Brg. S. Abut.	3603+30.07	12.50′	595.77	595.77
A	3603+40.07	12.50′	596.18	596.24
B	3603+50.07	12.50′	596.54	596.64
C	3603+60.07	12.50′	596.85	596.97
D	3603+70.07	12.50′	597.11	597.24
E	3603+80.07	12.50′	597.33	597.44
F	3603+90.07	12.50′	597.49	597.57
Centerline Splice 1	3603+90.40	12.50′	597.49	597.57
G	3604+00.07	12.50′	597.60	597.64
H	3604+10.07	12.50′	597.67	597.67
Centerline Pier 1	3604+14.90	12.50′	597.69	597.69
I	3604+24.90	12.50′	597.74	597.72
Centerline Splice 2	3604+33.40	12.50′	597.78	597.77
J	3604+34.90	12.50′	597.79	597.77
K	3604+44.90	12.50′	597.84	597.82
L	3604+54.90	12.50′	597.89	597.87
M	3604+64.90	12.50′	597.93	597.91
Centerline Splice 3	3604+69.40	12.50′	597.94	597.92
N	3604+74.90	12.50′	597.93	597.92
O	3604+84.90	12.50′	597.89	597.88
Centerline Pier 2	3604+87.90	12.50′	597.86	597.86
P	3604+97.90	12.50′	597.75	597.79
Q	3605+07.90	12.50′	597.59	597.66
Centerline Splice 4	3605+12.40	12.50′	597.50	597.59
R	3605+17.90	12.50′	597.37	597.48
S	3605+27.90	12.50′	597.11	597.23
T	3605+37.90	12.50′	596.80	596.92
U	3605+47.90	12.50′	596.44	596.55
V	3605+57.90	12.50′	596.03	596.11
W	3605+67.90	12.50′	595.59	595.61
Centerline Brg. N. Abut.	3605+72.74	12.50′	595.37	595.37
Bk. N. Abut.	3605+74.24	12.50′	595.30	595.30

BEAM 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	3603+28.24	17.50′	595.61	595.61
Centerline Brg. S. Abut.	3603+29.74	17.50′	595.68	595.68
A	3603+39.74	17.50′	596.09	596.14
B	3603+49.74	17.50′	596.45	596.55
C	3603+59.74	17.50′	596.77	596.88
D	3603+69.74	17.50′	597.03	597.15
E	3603+79.74	17.50′	597.24	597.35
F	3603+89.74	17.50′	597.41	597.49
Centerline Splice 1	3603+90.08	17.50′	597.41	597.49
G	3603+99.74	17.50′	597.52	597.56
H	3604+09.74	17.50′	597.59	597.59
Centerline Pier 1	3604+14.58	17.50′	597.61	597.61
I	3604+24.58	17.50′	597.66	597.65
Centerline Splice 2	3604+33.08	17.50′	597.70	597.69
J	3604+34.58	17.50′	597.71	597.69
K	3604+44.58	17.50′	597.76	597.74
L	3604+54.58	17.50′	597.81	597.79
M	3604+64.58	17.50′	597.85	597.84
Centerline Splice 3	3604+69.08	17.50′	597.86	597.84
N	3604+74.58	17.50′	597.86	597.84
O	3604+84.58	17.50′	597.81	597.80
Centerline Pier 2	3604+87.58	17.50′	597.79	597.79
P	3604+97.58	17.50′	597.67	597.72
Q	3605+07.58	17.50′	597.51	597.59
Centerline Splice 4	3605+12.08	17.50′	597.43	597.52
R	3605+17.58	17.50′	597.30	597.41
S	3605+27.58	17.50′	597.04	597.16
T	3605+37.58	17.50′	596.73	596.86
U	3605+47.58	17.50′	596.38	596.48
V	3605+57.58	17.50′	595.97	596.04
W	3605+67.58	17.50′	595.52	595.54
Centerline Brg. N. Abut.	3605+72.41	17.50′	595.30	595.30
Bk. N. Abut.	3605+73.91	17.50′	595.24	595.24

BEAM 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	3603+27.92	22.50′	595.52	595.52
Centerline Brg. S. Abut.	3603+29.42	22.50′	595.59	595.59
A	3603+39.42	22.50′	596.00	596.05
B	3603+49.42	22.50′	596.36	596.46
C	3603+59.42	22.50′	596.68	596.80
D	3603+69.42	22.50′	596.94	597.07
E	3603+79.42	22.50′	597.16	597.27
F	3603+89.42	22.50′	597.32	597.40
Centerline Splice 1	3603+89.75	22.50′	597.33	597.41
G	3603+99.42	22.50′	597.44	597.48
H	3604+09.42	22.50′	597.51	597.51
Centerline Pier 1	3604+14.25	22.50′	597.53	597.53
I	3604+24.25	22.50′	597.58	597.57
Centerline Splice 2	3604+32.75	22.50′	597.62	597.61
J	3604+34.25	22.50′	597.63	597.61
K	3604+44.25	22.50′	597.68	597.66
L	3604+54.25	22.50′	597.73	597.71
M	3604+64.25	22.50′	597.78	597.76
Centerline Splice 3	3604+68.75	22.50′	597.78	597.76
N	3604+74.25	22.50′	597.78	597.76
O	3604+84.25	22.50′	597.73	597.73
Centerline Pier 2	3604+87.25	22.50′	597.71	597.71
P	3604+97.25	22.50′	597.60	597.64
Q	3605+07.25	22.50′	597.44	597.52
Centerline Splice 4	3605+11.75	22.50′	597.35	597.44
R	3605+17.25	22.50′	597.23	597.34
S	3605+27.25	22.50′	596.98	597.09
T	3605+37.25	22.50′	596.67	596.79
U	3605+47.25	22.50′	596.31	596.42
V	3605+57.25	22.50′	595.90	595.98
W	3605+67.25	22.50′	595.46	595.48
Centerline Brg. N. Abut.	3605+72.08	22.50′	595.24	595.24
Bk. N. Abut.	3605+73.58	22.50′	595.17	595.17

FILE PATH = C:\Users\will.mardauss\Desktop\Morgan\0161709-60W25-S12-Screed3.dgn

HBM ENGINEERING GROUP, LLC.
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0161709-60W25-S12-Screed3.dgn	DESIGNED - MI, LAB	REVISED -	
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PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (SHEET 2 OF 3)
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-12 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	156
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		

BEAM 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	3603+27.59	27.50'	595.51	595.51
Centerline Brg. S. Abut.	3603+29.09	27.50'	595.57	595.57
A	3603+39.09	27.50'	595.98	596.04
B	3603+49.09	27.50'	596.35	596.45
C	3603+59.09	27.50'	596.67	596.79
D	3603+69.09	27.50'	596.93	597.06
E	3603+79.09	27.50'	597.15	597.26
F	3603+89.09	27.50'	597.32	597.40
Centerline Splice 1	3603+89.42	27.50'	597.32	597.40
G	3603+99.09	27.50'	597.44	597.48
H	3604+09.09	27.50'	597.50	597.51
Centerline Pier 1	3604+13.92	27.50'	597.53	597.53
I	3604+23.92	27.50'	597.58	597.56
Centerline Splice 2	3604+32.42	27.50'	597.62	597.60
J	3604+33.92	27.50'	597.63	597.61
K	3604+43.92	27.50'	597.68	597.66
L	3604+53.92	27.50'	597.73	597.71
M	3604+63.92	27.50'	597.77	597.76
Centerline Splice 3	3604+68.42	27.50'	597.78	597.76
N	3604+73.92	27.50'	597.78	597.76
O	3604+83.92	27.50'	597.74	597.73
Centerline Pier 2	3604+86.92	27.50'	597.71	597.71
P	3604+96.92	27.50'	597.61	597.65
Q	3605+06.92	27.50'	597.45	597.53
Centerline Splice 4	3605+11.42	27.50'	597.36	597.45
R	3605+16.92	27.50'	597.24	597.34
S	3605+26.92	27.50'	596.98	597.10
T	3605+36.92	27.50'	596.68	596.80
U	3605+46.92	27.50'	596.32	596.43
V	3605+56.92	27.50'	595.92	595.99
W	3605+66.92	27.50'	595.48	595.50
Centerline Brg. N. Abut.	3605+71.75	27.50'	595.25	595.25
Bk. N. Abut.	3605+73.25	27.50'	595.19	595.19

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (SHEET 3 OF 3)
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-13 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	157
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

℄ WEST EDGE OF SOUTH APPROACH SLAB

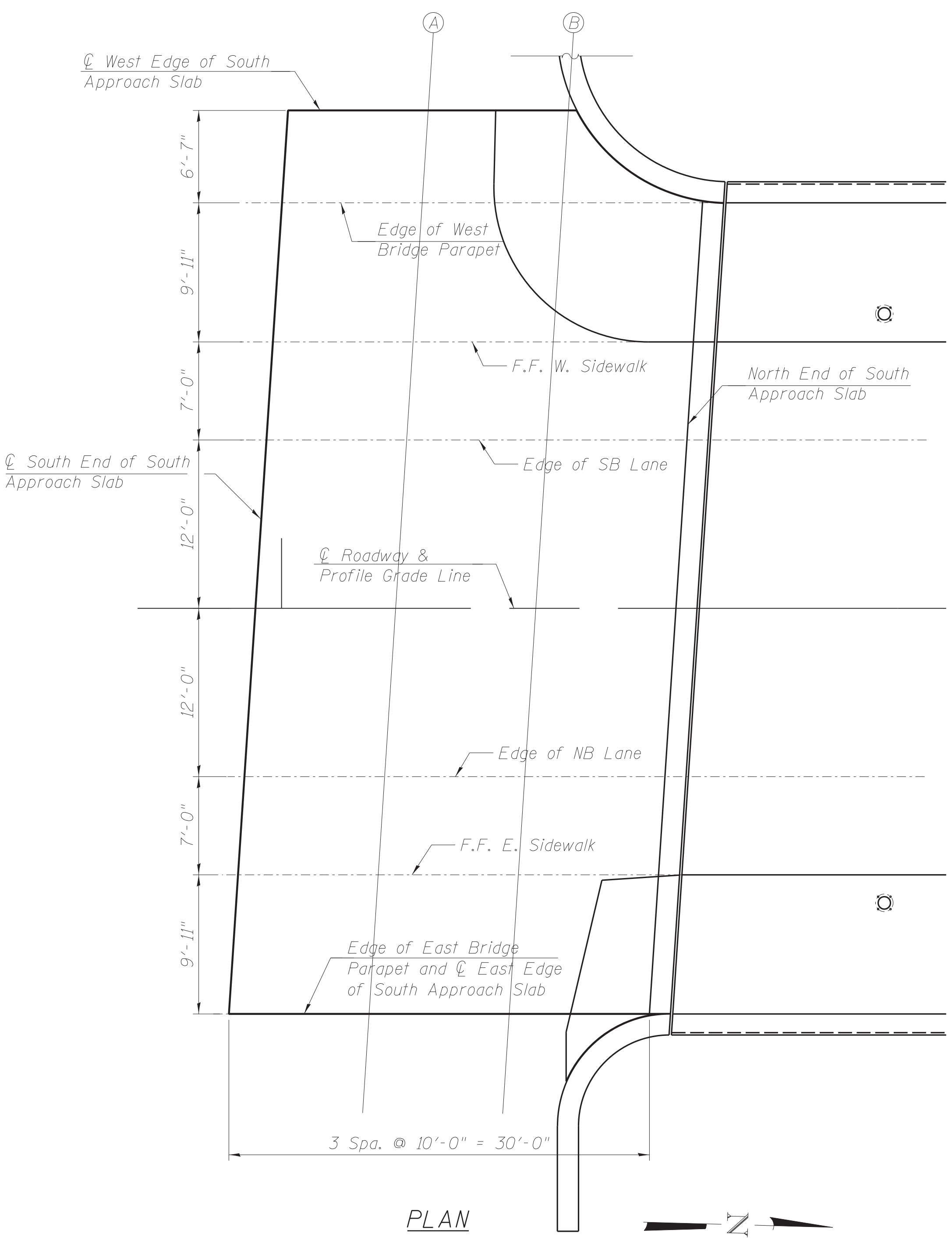
Location	Station	Offset	Theoretical Grade Elevations
℄ S. End South Appr. Slab	3603+00.46	35.50	594.30
A	3603+10.46	35.50	594.63
B	3603+20.46	35.50	594.81
N. End South Appr. Slab	-	-	-

EDGE OF WEST BRIDGE PARAPET

Location	Station	Offset	Theoretical Grade Elevations
℄ S. End South Appr. Slab	3603+00.03	28.92	594.39
A	3603+10.03	28.92	594.71
B	3603+20.03	28.92	595.11
N. End South Appr. Slab	3603+30.03	28.92	596.22

FRONT FACE OF WEST SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
℄ S. End South Appr. Slab	3602+99.38	19.00	594.52
A	3603+09.38	19.00	594.84
B	3603+19.38	19.00	595.22
N. End South Appr. Slab	3603+29.38	19.00	595.64



PLAN

EDGE OF SB LANE

Location	Station	Offset	Theoretical Grade Elevations
℄ S. End South Appr. Slab	3602+98.92	12.00	594.62
A	3603+08.92	12.00	594.94
B	3603+18.92	12.00	595.31
N. End South Appr. Slab	3603+28.92	12.00	595.73

℄ ROADWAY & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations
℄ S. End South Appr. Slab	3602+98.14	0.00	594.78
A	3603+08.14	0.00	595.10
B	3603+18.14	0.00	595.47
N. End South Appr. Slab	3603+28.14	0.00	595.88

EDGE OF NB LANE

Location	Station	Offset	Theoretical Grade Elevations
℄ S. End South Appr. Slab	3602+97.35	-12.00	594.57
A	3603+07.35	-12.00	594.89
B	3603+17.35	-12.00	595.25
N. End South Appr. Slab	3603+27.35	-12.00	595.66

FRONT FACE OF EAST SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
℄ S. End South Appr. Slab	3602+96.89	-19.00	594.45
A	3603+06.89	-19.00	594.76
B	3603+16.89	-19.00	595.12
N. End South Appr. Slab	3603+26.89	-19.00	595.53

EDGE OF EAST BRIDGE PARAPET AND ℄ EAST EDGE OF SOUTH APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
℄ S. End South Appr. Slab	3602+96.24	-28.92	594.76
A	3603+06.24	-28.92	595.13
B	3603+16.24	-28.92	595.53
N. End South Appr. Slab	3603+26.24	-28.92	596.11

FILE PATH = C:\Users\will.mardauss\Desktop\Morgan\0161709-60W25-S14-SoutApprScreed.dgn

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USER NAME = will.mardauss	DRAWN - LAB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
PLOT SCALE = 6:0.0000 ':" / in.	CHECKED - MAI, MI, JJS	REVISED -	
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

TOP OF SOUTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-14 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	158

CONTRACT NO. 60W25

ILLINOIS FED. AID PROJECT

EDGE OF WEST BRIDGE PARAPET

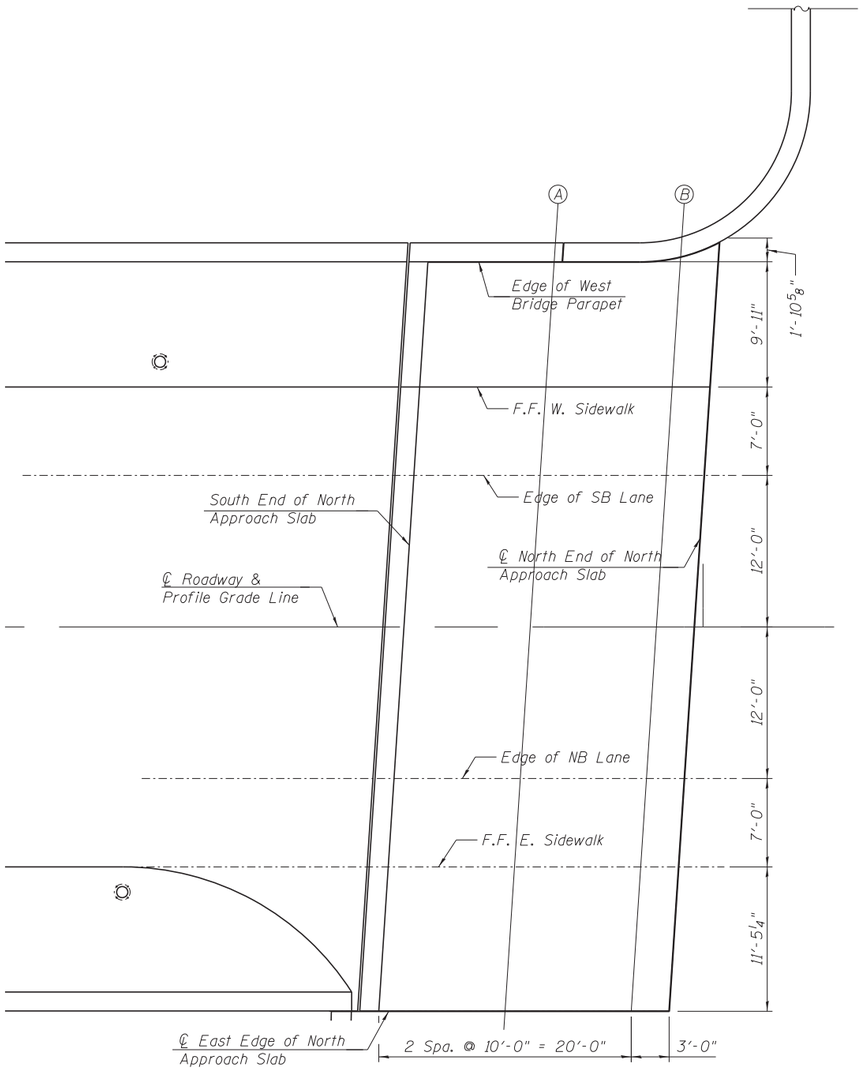
Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Slab	3605+78.21	28.92	595.72
A	3605+88.21	28.92	595.20
B	3605+98.23	29.30	594.69
℄ N. End North Appr. Slab	3606+01.31	30.80	594.56

FRONT FACE OF WEST SIDEWALK

	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Slab	3605+77.56	19.00	595.07
A	3605+87.56	19.00	594.68
B	3605+97.56	19.00	594.35
℄ N. End North Appr. Slab	3606+00.56	19.00	594.25

EDGE OF SB LANE

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Slab	3605+77.10	12.00	595.20
A	3605+87.10	12.00	594.81
B	3605+97.10	12.00	594.47
℄ N. End North Appr. Slab	3606+00.10	12.00	594.38



PLAN

℄ ROADWAY & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Slab	3605+76.31	0.00	595.42
A	3605+86.31	0.00	595.03
B	3605+96.31	0.00	594.68
℄ N. End North Appr. Slab	3605+99.31	0.00	594.59

EDGE OF NB LANE

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Slab	3605+75.53	-12.00	595.26
A	3605+85.53	-12.00	594.87
B	3605+95.53	-12.00	594.52
℄ N. End North Appr. Slab	3605+98.53	-12.00	594.43

FRONT FACE OF EAST SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Slab	3605+75.07	-19.00	595.17
A	3605+85.07	-19.00	594.77
B	3605+95.07	-19.00	594.43
℄ N. End North Appr. Slab	3605+98.07	-19.00	594.33

℄ EAST EDGE OF NORTH APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
S. End North Appr. Slab	3605+74.32	-30.44	595.02
A	3605+84.32	-30.44	594.62
B	3605+94.32	-30.44	594.27
℄ N. End North Appr. Slab	3605+97.32	-30.44	594.18

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-15 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	159
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		

Provide conduit expansion/deflection fitting at all expansion jts., typ.

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

1x10-#5 b(E) bar bott. of sidewalk as shown in cross section

℄ Brg. S. Abut. ℄ of Pier 1 ℄ of Pier 2 ℄ N. Abut.

244-#5 c1(E) bars at 12" cts. top of sidewalk

** 361-#7 a4(E) bars, lap with each top a(E) bar

1'-6" Parapet
9'-11" Sidewalk
30'-5" Stage II Construction
19'-0"
30'-5" Stage I Construction
19'-0"
9'-11" Sidewalk
1'-6" Parapet
60'-10" Out-to-Out Deck

1-#5 c1(E) bar, as shown

11x10-#5 b(E) bars at 12" cts. top of sidewalk

1-#5 c1(E) bar, as shown

4-#5 a1(E) bars at 6" cts. top of slab, each end
3-#5 a2(E) bars at 6" cts. bott. of slab, each end

30-#6 b1(E) bars at 12" cts. top of slab over pier

25x11-#5 b2(E) bars spa. as shown in cross section, bott. of slab

30-#6 b1(E) bars at 12" cts. top of slab over pier

31x10-#5 b(E) bars at 12" cts. top of slab

246-#5 c(E) bars at 12" cts. f.f. of sidewalk, lap with each e1(E) bar

355-#5 a(E) bars at 8" cts. top of slab
284-#5 a(E) bars at 10" cts. bottom of slab

375-Bar Splicers (E) for #5 bars top of slab
294-Bar Splicers (E) for #5 bars bott. of slab

Stage const. line & const. joint

19'-0", typ. 31'-0", typ. 31'-0", typ. 19'-0", typ.

℄ Structure

1-#5 a3(E) bar bottom of slab, typ. each end

31-#5 x(E) bars @ ±12" cts. each end (see Section Thru Expansion Joint on Sheet S1-18)

℄ and PGL Morgan St.

3°45'0" 3°45'0"

4-#5 a1(E) bars at 6" cts. top of slab, each end
3-#5 a2(E) bars at 6" cts. bott. of slab, each end

355-#5 a(E) bars at 8" cts. top of slab

*6-#5 a(E) bars at 8" cts. top of slab
*5-#5 a(E) bars at 10" cts. bottom of slab

30-#6 b1(E) bars at 12" cts. top of slab over pier

284-#5 a(E) bars at 10" cts. bottom of slab

25x11-#5 b2(E) bars spa. as shown in cross section, bott. of slab

30-#6 b1(E) bars at 12" cts. top of slab over pier

31x10-#5 b(E) bars at 12" cts. top of slab

243-#5 c(E) bars @ 12" cts. f.f. of sidewalk, lap with each c1(E) bar

225-#5 c1(E) bars at 12" cts. top of sidewalk

31-#5 x(E) bars @ ±12" cts. each end (see Section Thru Expansion Joint on Sheet S1-18)

ADA Ramp
1-#5 c1(E) bar, as shown

℄ Light pole See lighting plans, typ.

1x10-#5 b(E) bar bott. of sidewalk as shown in cross section

A A

11x10-#5 b(E) bars at 12" cts. top of sidewalk

ADA Ramp

** 361-#7 a4(E) bars lap with each top a(E) bar

** 18-#5 c1(E) bars at 12" cts. top of sidewalk

1'-1" End of deck
84'-10" Span 1
73'-0" Span 2
84'-10" Span 3
1'-1" End of deck
244'-10" End-to-End Deck

DECK PLAN

** Order bars full length, cut to fit.

NOTES:

1. For ADA Ramps plan, details and top of sidewalk elevations, see Roadway Plans.
2. Bars in the sidewalk interfering with the ADA Ramp Construction shall be bent and/or cut to fit based on the sidewalk depth in these areas.

Decorative Bridge Fence Railing Parapet Mounted, typ.

Decorative Railing /Parapet Mounted, typ.

60'-10" Out-to-Out Deck

1'-6" 9'-11" Sidewalk | 30'-5" Stage II Construction: 5'-0" Bike lane, 2'-0" Shldr., 10'-0" Travel lane | 4'-0" Median | 30'-5" Stage I Construction: 10'-0" Travel lane, 2'-0" Shldr., 5'-0" Bike lane, 9'-11" Sidewalk 1'-6"

2'-8"
a4(E) c1(E) b(E) 3/16"/' 6" Curb, typ. 8" Slab 2¼" cl. (±¼") 3/16"/' a(E) 3/16"/' a(E) 1" cl. 1½" typ. 1¾" cl. typ. a4(E) b(E) c1(E) 3/16"/'
b2(E) b(E) c(E) b2(E) b1(E) 4-#5 b2(E) bars eq. spaced, typ. b(E) c(E) b2(E) b2(E)

℄ and PGL Morgan St. Bridge
℄ Structure
Stage const. line and const. joint
Bar Splicers

℄ of Light Standard City of Chicago BOE Standard 808 W/8' mast 400 watt HPS, typ.
℄ Light pole see Lighting plans

Proposed light pole foundation system, see Sheet S1-18

1 2 3 4 5 6 7 8 9 10 11 12

W36 Beam (Comp. full length), typ.

ComEd ductbank

Cross section near pier | Cross section near midspan

ComEd ductbank

1-3" ϕ city traffic signal conduit
1-2" ϕ city lighting conduit
4-4" ϕ City of Chicago Conduits

2'-11" 11 Beam Spaces @ 5'-0" = 55'-0" 2'-11"

PROPOSED CROSS SECTION

(Looking North)

NOTE

1. For notes, see Sheet S1-18.

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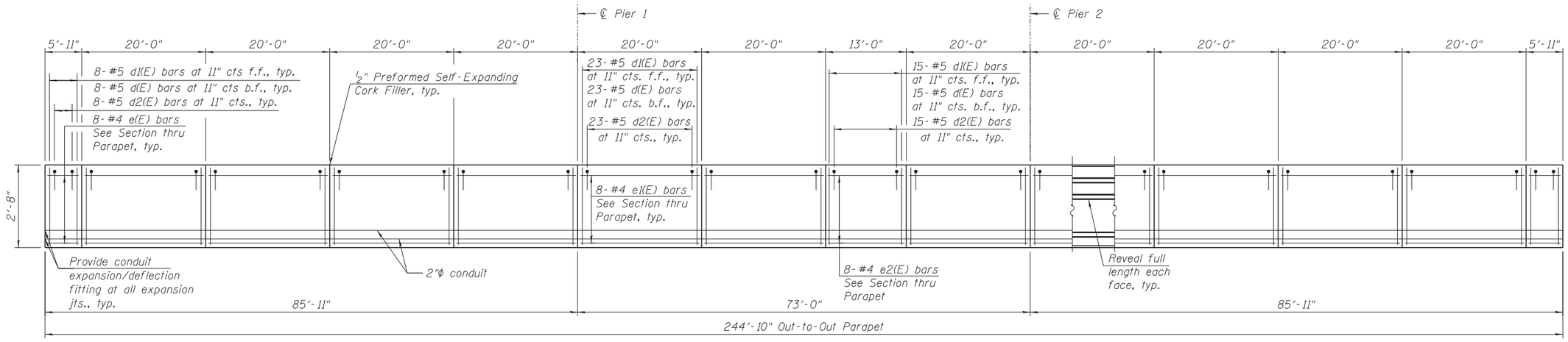
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN AND CROSS SECTION
STRUCTURE NO. 016-1709

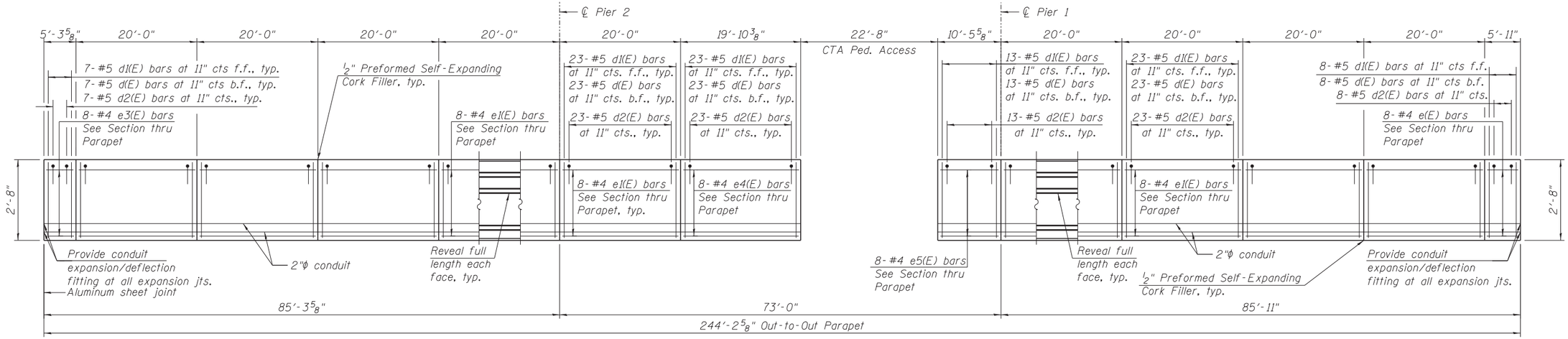
SCALE: | SHEET S1-16 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	160
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



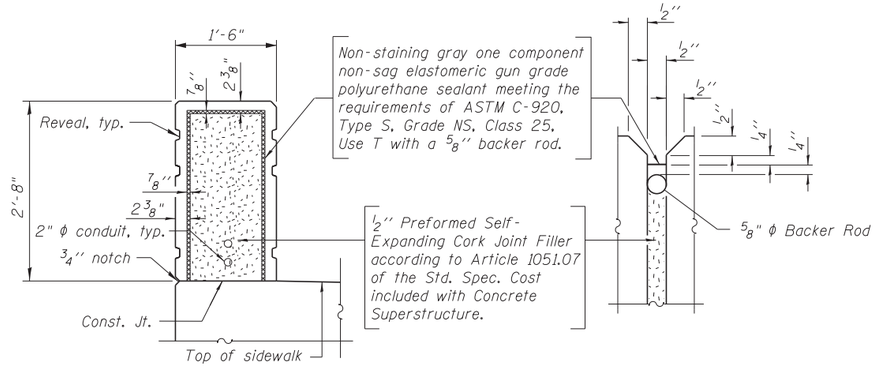
INSIDE ELEVATION OF WEST PARAPET

(Looking West)
(Architectural details are not shown for clarity)
(See Note 5)



INSIDE ELEVATION OF EAST PARAPET

(Looking East)
(Architectural details are not shown for clarity)
(See Note 5)



PARAPET JOINT DETAILS

NOTES:

1. For notes, see Sheet S1-18.
2. For bar diagrams, see Sheet S1-18.
3. For bill of material, see Sheet S1-18.
4. All edges shall be chamfered 3/4".
5. For architectural details on the parapets, see Roadway plans.
6. For Bridge Fence Railing (special) details, see Sheet S1-21.
7. For Bridge Fence Railing (special) layout and post spacing, see Roadway plans.
8. For Decorative Railing Parapet Mounted details, see Sheet S1-20.
9. For Decorative Railing Parapet Mounted layout and post spacing, see Roadway plans.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET ELEVATIONS AND DETAILS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-17 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	161
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

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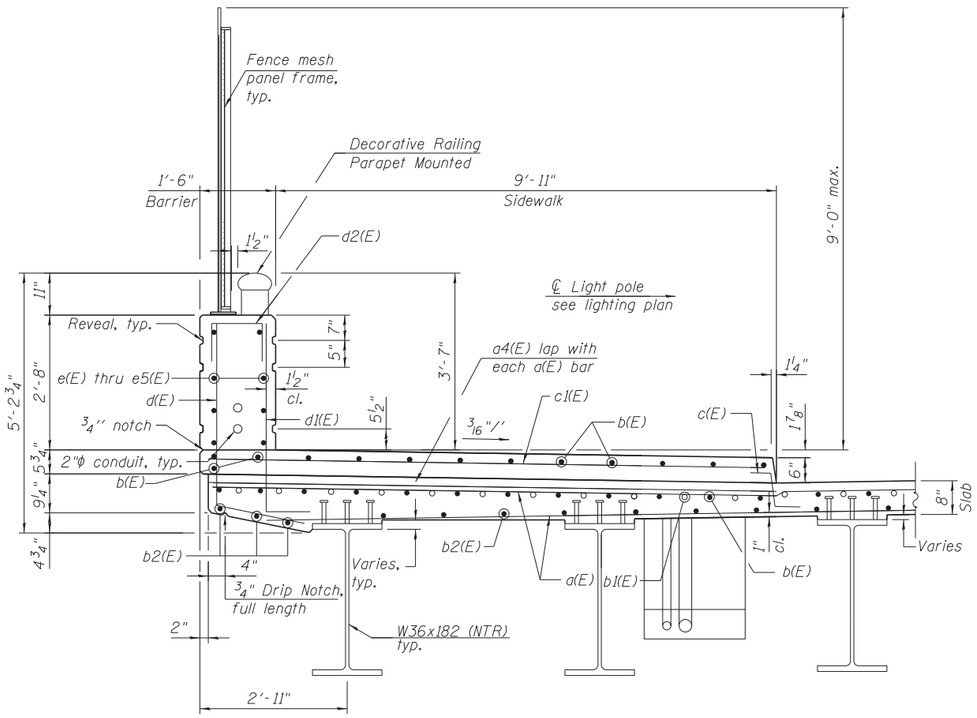
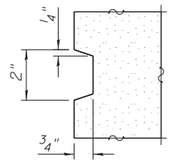
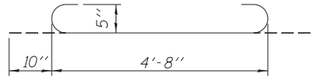


SECTION THRU WEST PARAPET AT PIER

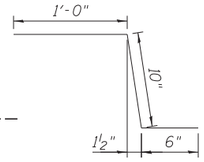
(Looking Up-Station at Pier typ. for East Parapet)



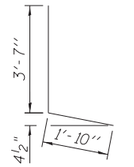
REVEAL DETAIL



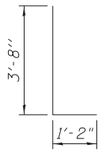
a2(E) BAR



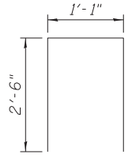
BAR c(E)



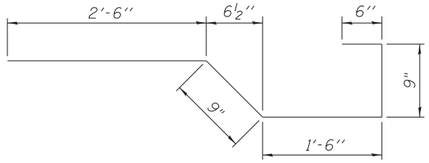
BAR d(E)



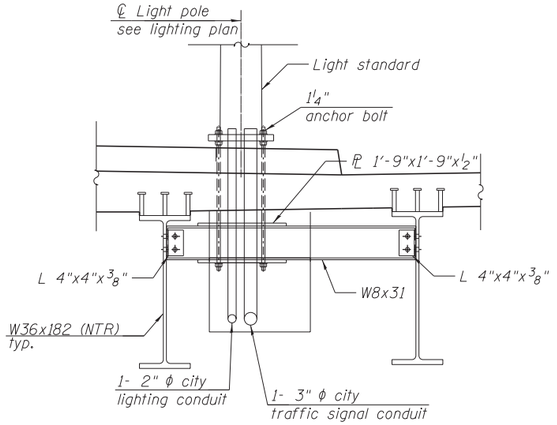
BAR d1(E)



BAR d2(E)



BAR x(E)

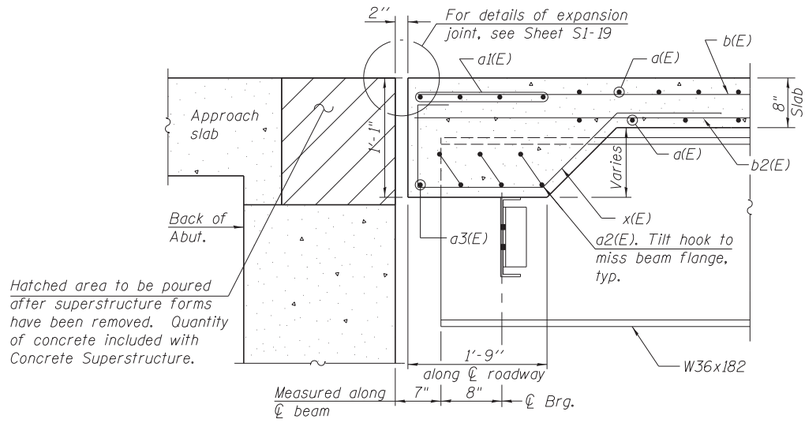


LIGHT POLE SUPPORT ELEVATION

BILL OF MATERIAL

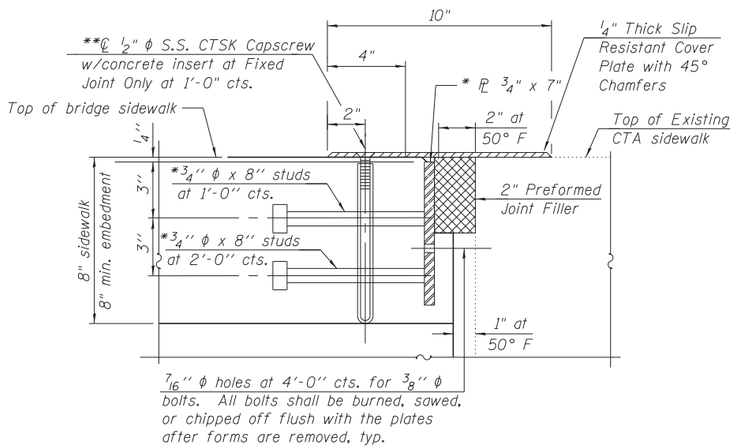
Bar	No.	Size	Length	Shape
a(E)	1289	#5	30'-0"	
a1(E)	16	#5	30'-3"	
a2(E)	66	#5	6'-4"	
a3(E)	4	#5	30'-3"	
a4(E)	722	#7	11'-3"	
b(E)	860	#5	27'-5"	
b1(E)	120	#6	50'-0"	
b2(E)	550	#5	25'-3"	
c(E)	490	#5	2'-4"	
c1(E)	490	#5	11'-0"	
d(E)	542	#5	5'-5"	
d1(E)	542	#5	4'-10"	
d2(E)	542	#5	3'-7"	
e(E)	24	#4	5'-7"	
e1(E)	160	#4	19'-7"	
e2(E)	8	#4	12'-9"	
e3(E)	8	#4	4'-11"	
e4(E)	8	#4	19'-6"	
e5(E)	8	#4	10'-1"	
x(E)	124	#5	6'-0"	
Concrete Superstructure		Cu Yd	574.5	
Bridge Deck Grooving		Sq Yd	980	
Protective Coat		Sq Yd	1,827	
Reinforcement Bars, Epoxy Coated		Pound	123,940	
Name Plates		Each	1	
Conduit Embedded in Structure, 2" Dia. PVC		Foot	956	
Detectable Warnings (Special)		Sq Ft	10	

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"



SECTION THRU EXPANSION JOINT

(Looking West, South joint shown North joint similar)



SECTION A-A
AT CTA ENTRANCE

NOTES:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars noted thus 3x2-#5 indicates 3 lines of bars with 2 bars per line.
3. For parapet details, see Sheet S1-17.
4. For bar splicer detail, see Sheet S1-43.
5. For light pole location, bolt circle, and quantity of conduits attached to structure, see Electrical plans.
6. For light pole support system sections and details, see Sheet S1-24.
7. For ADA ramp locations, layout, elevations and details see Roadway plans.

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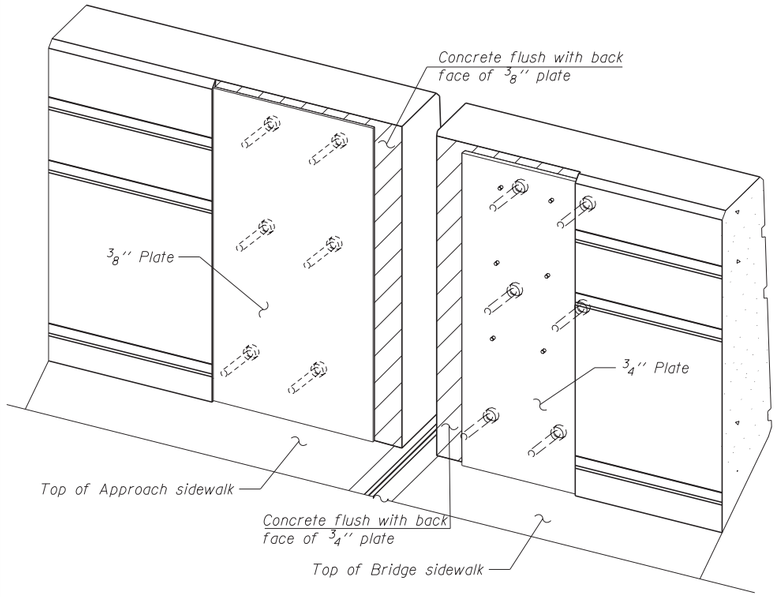
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK CROSS SECTIONS, DETAILS AND BILL OF MATERIAL
STRUCTURE NO. 016-1709

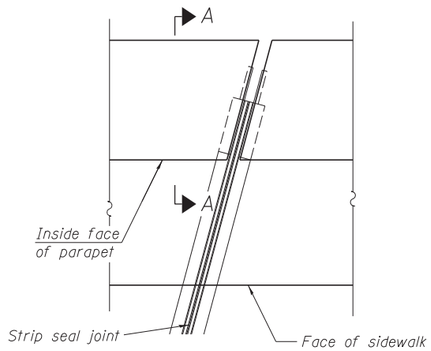
SCALE: | SHEET S1-18 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	162
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		



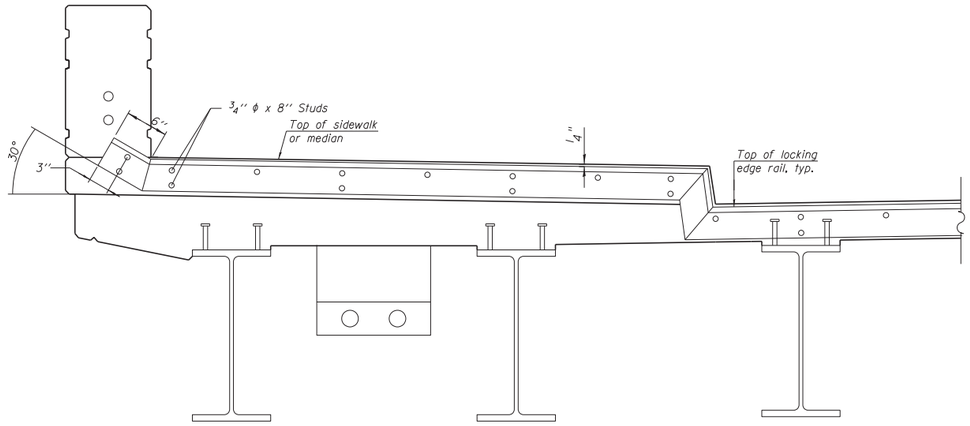
TRIMETRIC VIEW

(Showing back plates only)



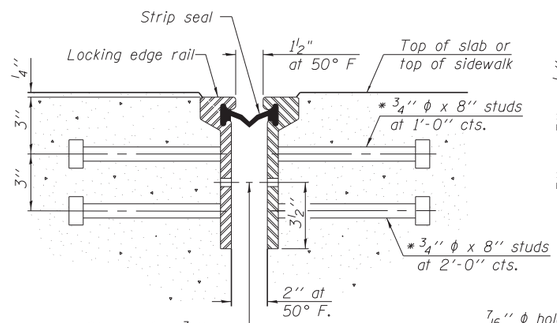
PLAN

(For skews ≤ 30°)



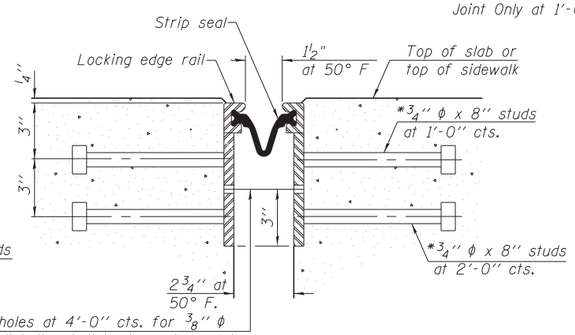
TYPICAL END TREATMENT AT SIDEWALK

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



7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

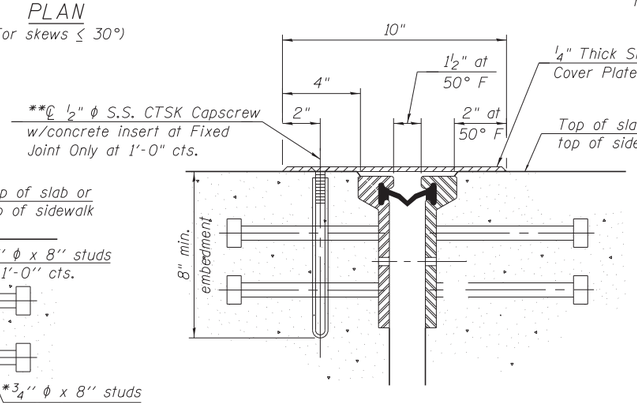
SECTION THRU ROLLED RAIL JOINT



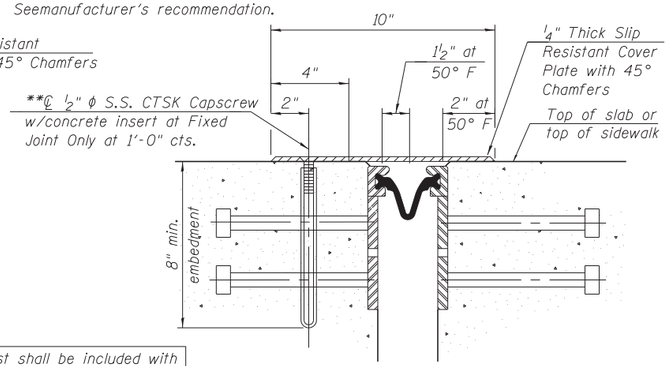
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT

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



SECTION THRU ROLLED RAIL JOINT AT ADA RAMP



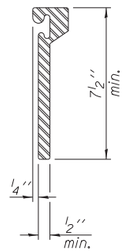
**Cost shall be included with Preformed Joint Strip Seal

SECTION THRU WELDED RAIL JOINT AT ADA RAMP

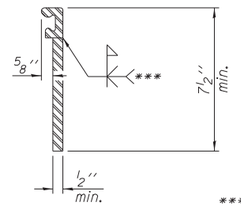
Notes:
At East Abut. and West Abut. attach cover plate to the Ramp Pavement with 1/2" ϕ S.S. CTSK capscrew with concrete insert at 1'-0" cts.
All steel components shall be galvanized according to Article 520.03 of the Standard Specifications.

NOTES:

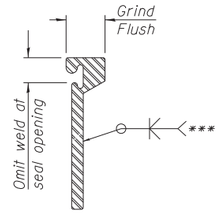
1. The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
2. The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.
3. The manufacturer's recommended installation methods shall be followed.
4. The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.
5. All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications. Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.
6. Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.



ROLLED EXTRUDED RAIL



WELDED RAIL



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

LOCKING EDGE RAILS

LOCKING EDGE RAIL SPLICE

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	124

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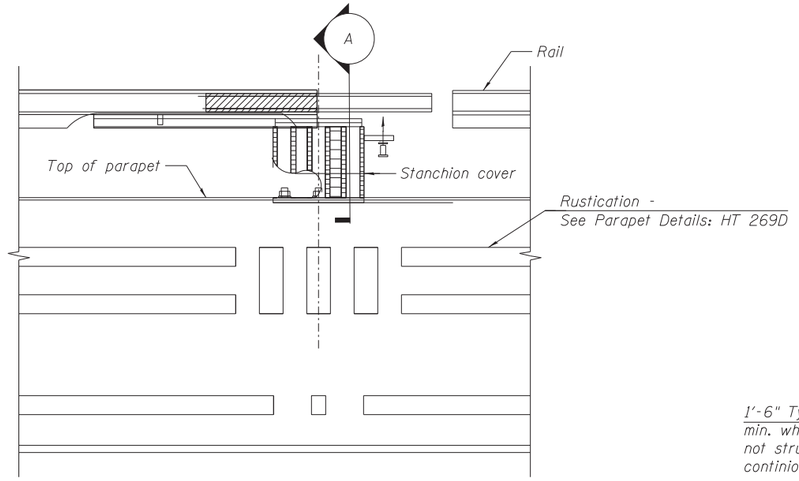
0161709-60W25-S19-ExpJoint.dgn	DESIGNED - MI. WM	REVISED -	
USER NAME = will.mardauss	DRAWN - WM. MAF	REVISED -	
PLOT SCALE = 1:0.0000 '' / in.	CHECKED - MAI. MI. JJS	REVISED -	
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-19 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	163
		CONTRACT NO. 60W25		
		ILLINOIS	FED. AID PROJECT	



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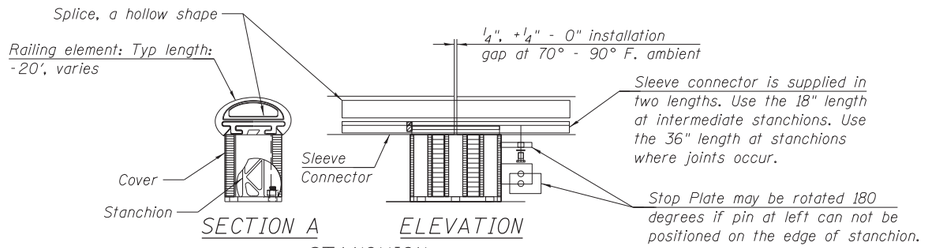
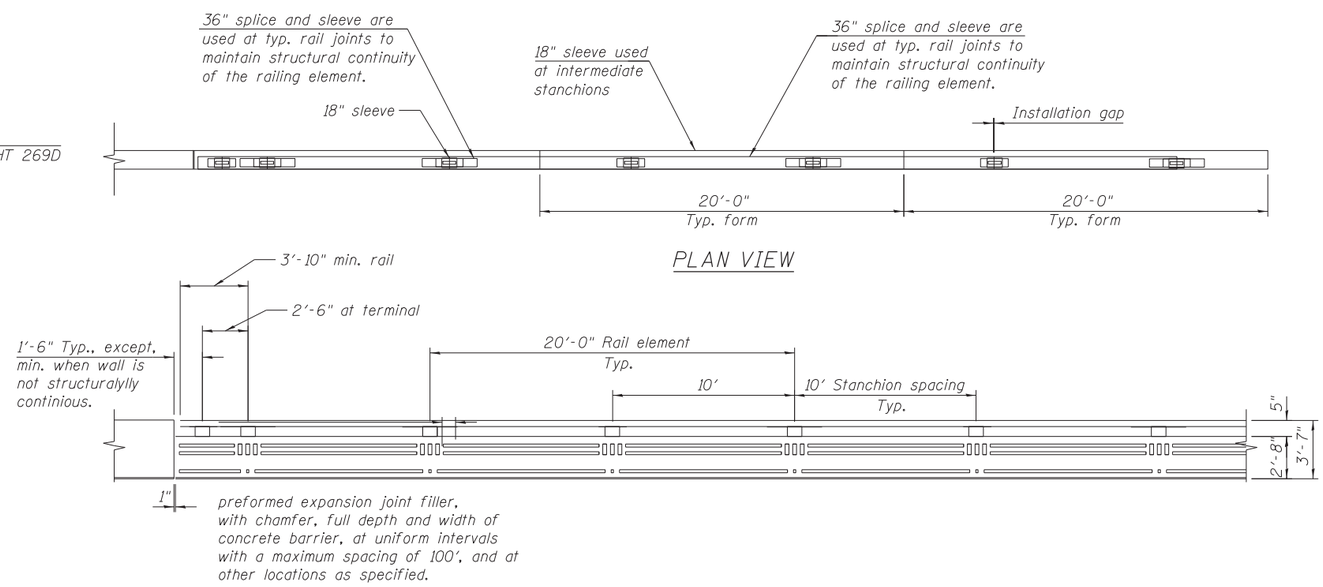


SECTION A ELEVATION

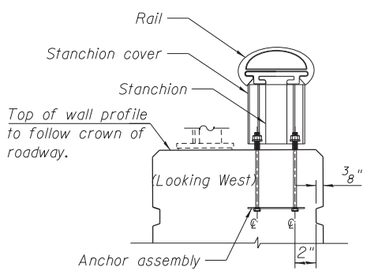
STANCHION



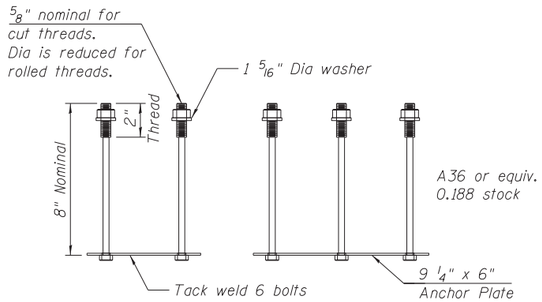
ELEVATION

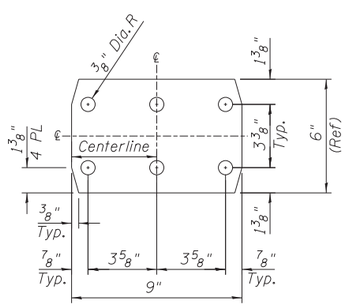
RAIL DETAIL - STANCHION LOCATION AND SPACING

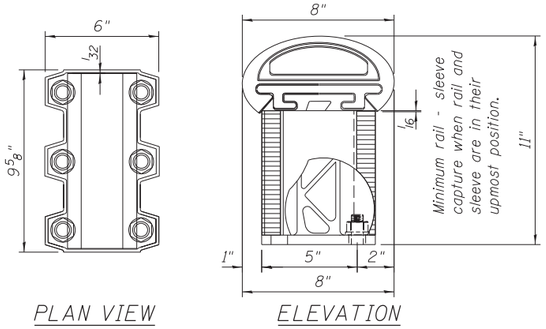
TYPICAL CHICAGO PARAPET DETAIL



SECTION A







ANCHOR ASSEMBLY NOTES:

1. All fasteners to meet, or exceed, A-307 strength requirements.
2. Galvanize per A-153 after fabrication.
3. The size and position of parapet reinforcing must be consistent with capture of the anchor assembly. See structural drawings for rebar detailis.

ELASTOMERIC PAD NOTES:

1. Elastomeric pad for stanchion made from 1/16" thick stock.
2. One required per stanchion.

STANCHION COVER NOTES:

1. Cover is shown superimposed over stanchion with anchors in place.
2. The stanchion cover is a non-structural element, serving an aesthetic function. it rests on the flange of the stanchion, without fasteners and is captured in place by the rail and stanchion.

NOTES:

1. When walls without rail are adjacent to Chicago wall with rail, their traffic face, or the terminus of their traffic face, must be in the same plane as Chicago wall with rail.
2. Rustication may vary at terminal ends and is subject to site conditions and site approval. In all other situations, the middle 2.5" x 1.5" rustication is aligned with the center of the stanchion.
3. Wall details above show that portion of the wall above the gutter break, the sub structure is not shown. Note that sub structure(s) depth variations could significantly alter the required top of wall profile.
4. Field cutting of rail elements is acceptable. The cut edge will no longer be anodized. Saw cut only, flame cut not allowed.
5. End caps shall be used at all rail terminals.
6. Railing system to be produced using extruded aluminum that can be anodized to match the process and color as previously supplied on Lake Shore Dr.
7. Alloy selection is based upon the above color requirement and the engineering sufficiency analysis which must be supplied by the contractor.
8. Physical appearance to be equal to "Valentine Urban Systems - Chicago wall with rail".

BILL OF MATERIAL

Item	Unit	Total
Decorative Railing Parapet Mounted	FOOT	644

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PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECORATIVE RAILING PARAPET MOUNTED DETAILS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-20 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	164
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

BILL OF MATERIAL

Item	Unit	Total
Bridge Fence Railing (Special)	FOOT	180

FILE PATH = C:\Users\will.mardauss\Desktop\Morgan\0161709-60W25-S21-BrideDeckRailing.dgn

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PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE FENCE RAILING (SPECIAL)
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-21 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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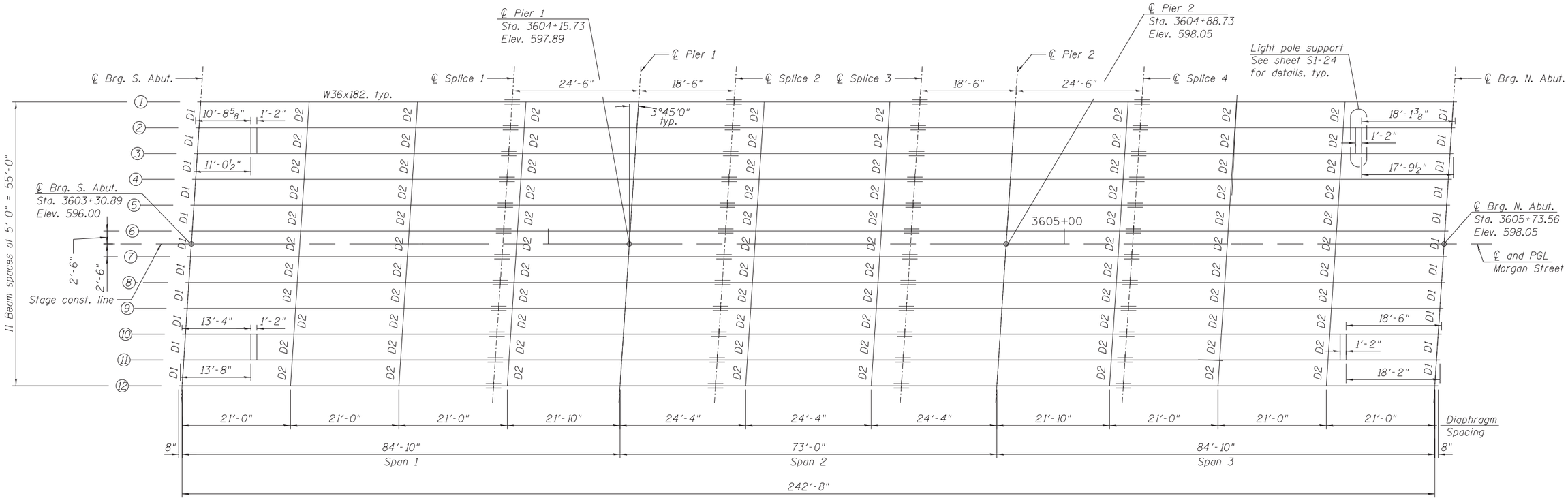
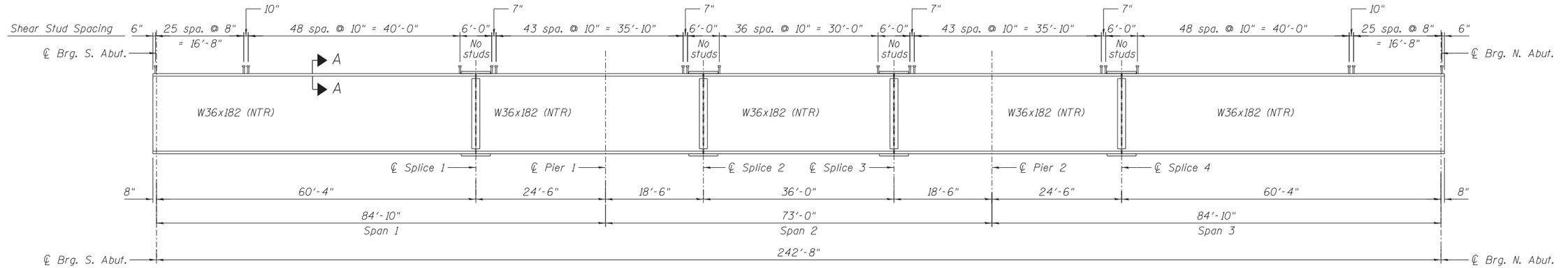
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		



FRAMING PLAN



BEAM ELEVATION

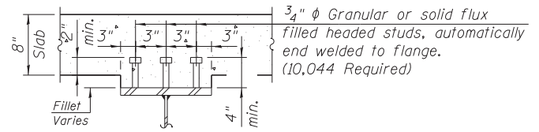
TOP OF BEAM ELEVATIONS

(for fabrication only)

Girder	℄ Brg. S. Abut.	F.S. 1	Pier 1	F.S. 2	F.S. 3	Pier 2	F.S. 4	℄ Brg. N. Abut.
1	594.97	596.72	596.80	596.87	597.01	596.93	596.65	594.35
2	594.96	596.72	596.79	596.87	597.01	596.93	596.66	594.36
3	595.03	596.79	596.87	596.94	597.09	597.02	596.74	594.45
4	595.09	596.87	596.95	597.02	597.17	597.10	596.83	594.55
5	595.15	596.97	597.02	597.09	597.24	597.18	596.91	594.64
6	595.22	597.01	597.10	597.17	597.32	597.26	597.00	594.73
7	595.20	597.01	597.10	597.17	597.32	597.26	597.01	594.75
8	595.11	596.93	597.02	597.09	597.24	597.19	596.93	594.68
9	595.02	596.84	596.94	597.01	597.17	597.11	596.86	594.62
10	594.93	596.76	596.86	596.93	597.09	597.04	596.79	594.55
11	594.84	596.68	596.78	596.85	597.01	596.96	596.72	594.49
12	594.82	596.68	596.78	596.85	597.01	596.96	596.73	594.50

NOTES:

1. For diaphragms details, see Sheet S1-24.
2. F.S. denotes girder field splice.
3. All structural steel shall be hot-dipped galvanized. Cost included with Furnishing and Erecting Structural Steel.
4. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
5. Girders have bearing stiffeners and connection plates as required by design. Additional stiffeners may be added at the Contractor's expense as necessary to prevent distortion of the girders during galvanizing. The Contractor shall coordinate with the fabricator and the galvanizer to determine if additional stiffeners are necessary, and where these should be placed. Any proposed changes shall be submitted to the Engineer for approval prior to making any changes.
6. Temporary stiffener angles shall be bolted to each side of the splice ends of each girder segment to prevent distortion during galvanizing. Temporary stiffener angles shall bolt or fit tight against top & bottom flanges and include spacer tubes to minimize damage to galvanizing during removal. Cost included with Furnishing & Erecting Structural Steel.



SECTION A-A

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	L SUM	1
Stud Shear Connectors	EACH	10,044

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4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162 PHONE: (708) 236-0900 FAX: (708) 236-0901

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN AND BEAM ELEVATION
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-22 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	166
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

INTERIOR GIRDER MOMENT TABLE - BEAMS 2-11						
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Span 3
I_s	(in^4)	11,300	11,300	11,300	11,300	11,300
$I_c(n)$	(in^4)	24,700.7	-	24,700.7	-	24,700.7
$I_c(3n)$	(in^4)	17,939.6	-	17,939.6	-	17,939.6
$I_c(cr)$	(in^4)	-	13,724.5	-	13,724.5	-
S_s	(in^3)	623	623	623	623	623
$S_c(n)$	(in^3)	845.9	-	845.9	-	845.9
$S_c(3n)$	(in^3)	758.2	-	758.2	-	758.2
$S_c(cr)$	(in^3)	-	637.9	-	637.9	-
DC1	(k/')	0.770	0.770	0.770	0.770	0.770
M_{DC1}	('k)	442	462	21	462	442
DC2	(k/')	0.486	0.486	0.486	0.486	0.486
M_{DC2}	('k)	295	312	11	312	295
DW	(k/')	0.250	0.250	0.250	0.250	0.250
M_{DW}	('k)	152	161	6	161	152
M_{L+IM}	('k)	825	742	573	761	825
M_u (Strength I)	('k)	2,592.1	2,508.0	1,052.7	2,541.3	2,592.1
$\phi_f M_n$	('k)	4,122.3	3,025.8	4,122.3	3,032.5	4,122.3
f_s DC1	(ksi)	8.51	8.90	0.40	8.90	8.51
f_s DC2	(ksi)	4.67	5.87	0.17	5.87	4.67
f_s DW	(ksi)	2.41	3.03	0.09	3.03	2.41
f_s (L+IM)	(ksi)	11.70	13.96	8.13	14.32	11.70
f_s (Service II)	(ksi)	30.80	35.95	11.23	36.42	30.80
$0.95R_hF_{yf}$	(ksi)	47.50	47.50	47.50	47.50	47.50
f_s (Total)(Strength I)	(ksi)	40.57	47.44	15.08	48.07	40.57
$\phi_f F_n$	(ksi)	50	50	50	50	50
V_f	(k)	27.89	49.40	27.63	49.40	29.54

INTERIOR GIRDER REACTION TABLE - BEAMS 2-11					
		S. Abut.	Pier 1	Pier 2	N. Abut.
R_{DC1}	(k)	26.04	62.78	62.78	26.04
R_{DC2}	(k)	16.93	42.04	42.04	16.93
R_{DW}	(k)	8.71	21.62	21.62	8.71
R_{L+IM}	(k)	64.39	100.42	100.42	64.39
R_{Total}	(k)	116.07	226.86	226.86	116.07

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

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

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

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

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

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

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

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

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

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

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

M_u (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

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

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

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
$M_{L+IM} / S_c(n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s(L+IM)$

$0.95R_hF_yf$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_s(L+IM)$

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

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

Note:
M_{L} and R_{L} include the effects of centrifugal force and superelevation.

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PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

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DEPARTMENT OF TRANSPORTATION

GIRDER MOMENT AND REACTION TABLES
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-23 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	167
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

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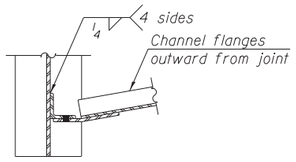
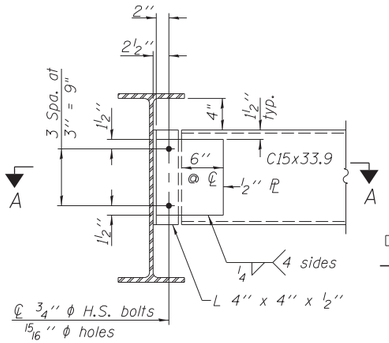


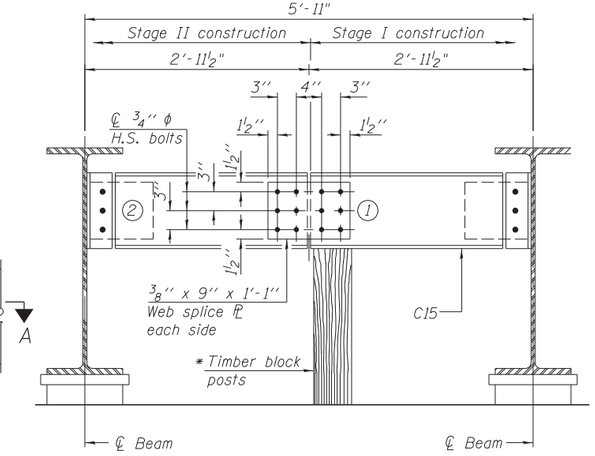
SECTION A-A



END DIAPHRAGM

Note: (22 Required)
Two hardened washers required for each set of oversized holes.

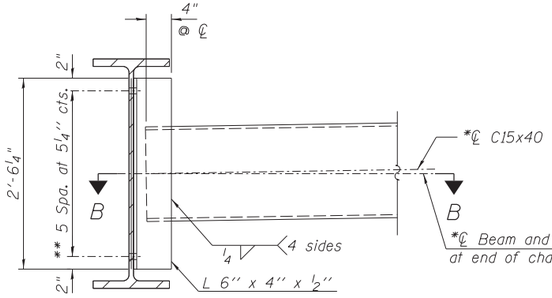
* Cost of Timber Block Posts is included with Structural Steel.



END DIAPHRAGM

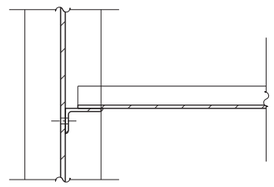
END DIAPHRAGM STAGE CONSTRUCTION SEQUENCE

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



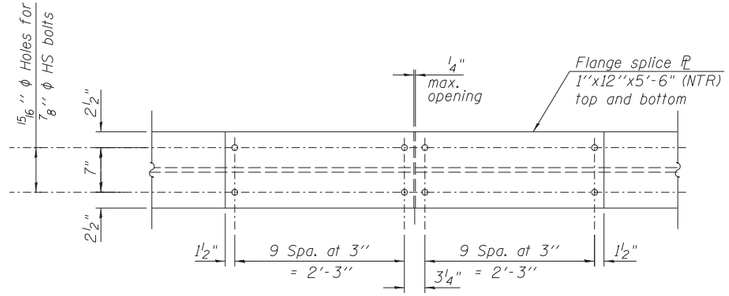
INTERIOR DIAPHRAGM

(110 Required)

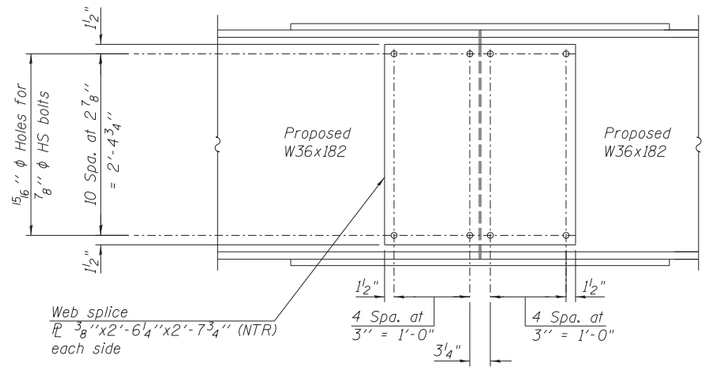


SECTION B-B

Note:
Two hardened washers required for each set of oversized holes.
*Alternate channel C15x50 is permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
**¾" ϕ HS bolts, 15/16" ϕ holes.



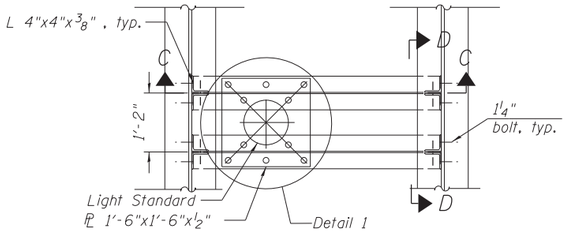
PLAN



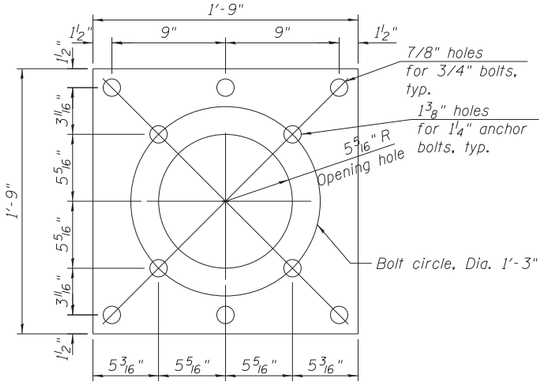
ELEVATION

FIELD SPLICE DETAIL

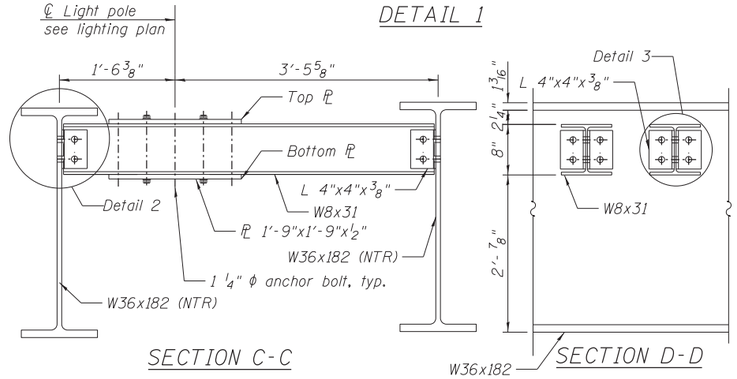
(48 Required)



LIGHT POLE SUPPORT SYSTEM PLAN

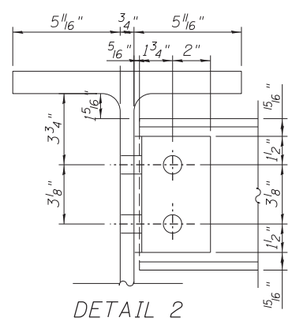


DETAIL 1



SECTION C-C

SECTION D-D



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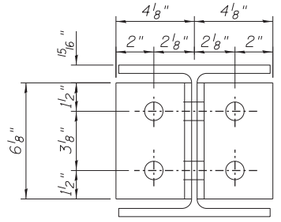

DETAIL 3

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4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162 PHONE: (708) 236-0900 FAX: (708) 236-0901

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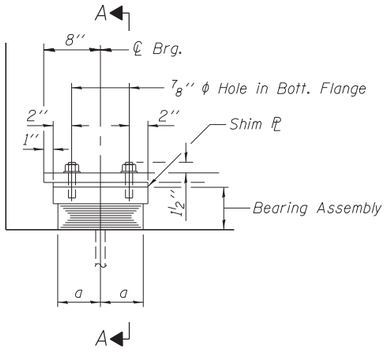
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

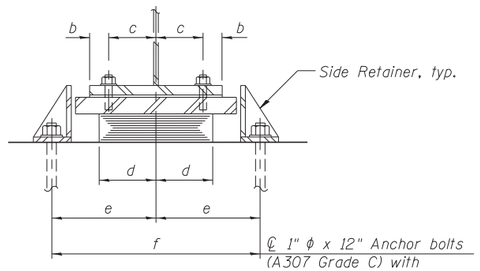
STRUCTURAL STEEL DETAILS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-24 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	168
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

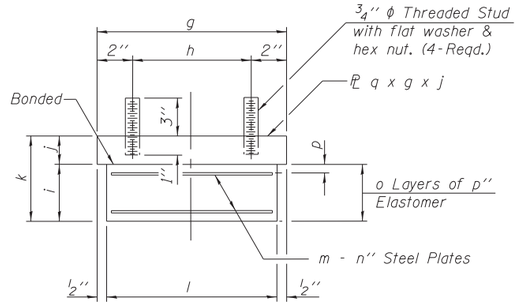


ELEVATION AT ABUT.



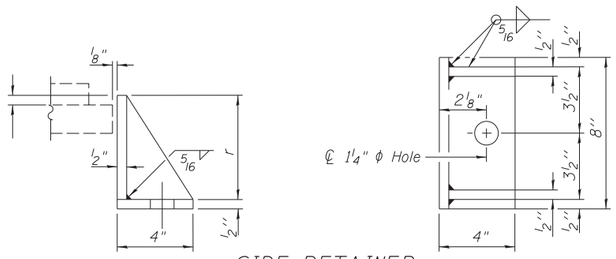
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.
AT NORTH ABUTMENT AND PIER 1



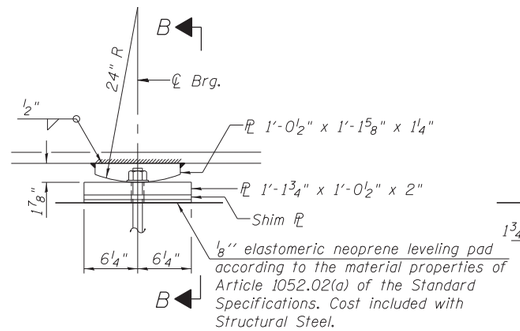
BEARING ASSEMBLY

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



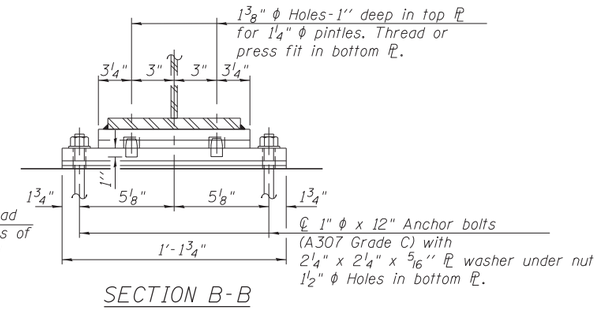
SIDE RETAINER

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

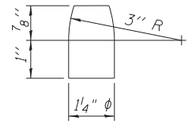


ELEVATION AT PIER

FIXED BEARING
AT PIER 2



SECTION B-B



PINTLE

BILL OF MATERIAL

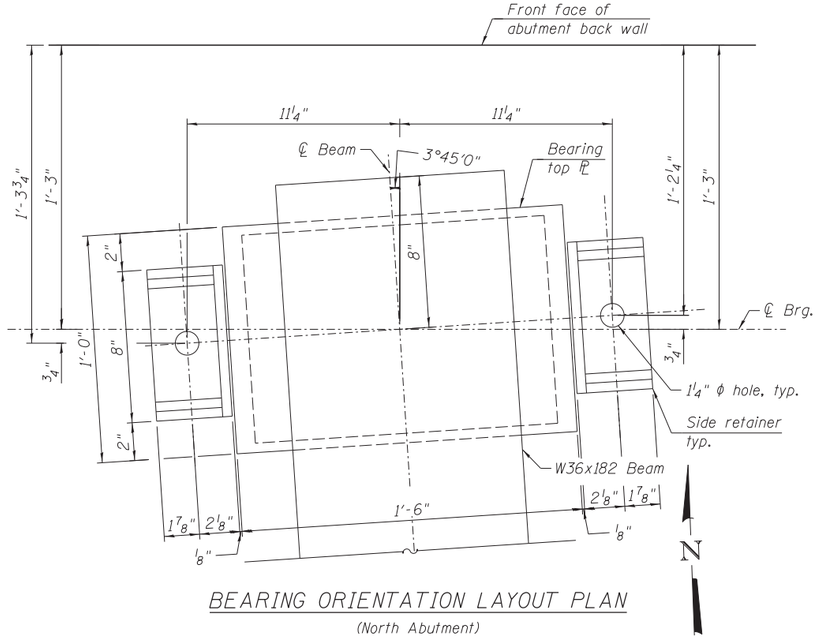
Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	24
Anchor Bolts, 1"	Each	72

BEARING DIMENSION TABLE

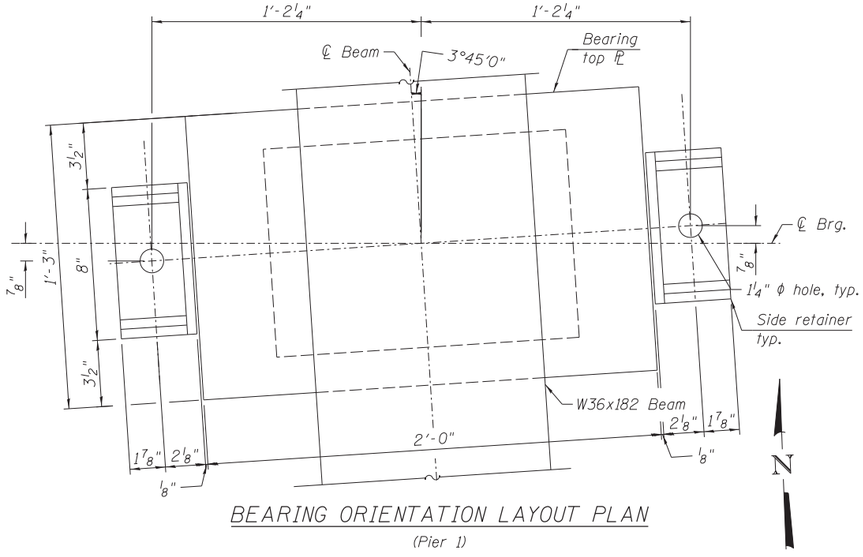
Location	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
N. Abut.	5 1/2"	2"	4"	8"	11 1/4"	1'-10 1/2"	12"	8"	3 5/8"	1 1/8"	5 1/2"	11"	5	1/8"	6	1/2"	18"	5 1/2"
Pier 1	7"	2"	4"	11"	1'-2 1/4"	2'-4 1/2"	1'-3"	11"	2 1/16"	2 3/4"	5 5/16"	1'-2"	2	3/16"	3	1/16"	2'-0"	5 1/4"

NOTES

1. Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
2. Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
3. Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
4. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
5. Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
6. Cost of fixed bearings shall be included with Furnishing and Erecting Structural Steel.
7. All structural steel included in Bearing Assemblies shall be hot dipped galvanized. Cost included with Furnishing and Erecting Structural Steel of Elastomeric Bearing Assembly Type I.



BEARING ORIENTATION LAYOUT PLAN
(North Abutment)



BEARING ORIENTATION LAYOUT PLAN
(Pier 1)

I-2E-1

1-27-12

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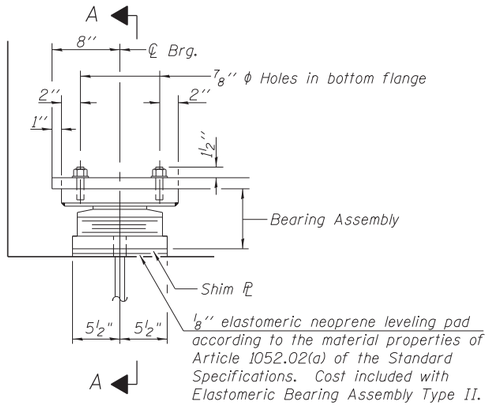
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

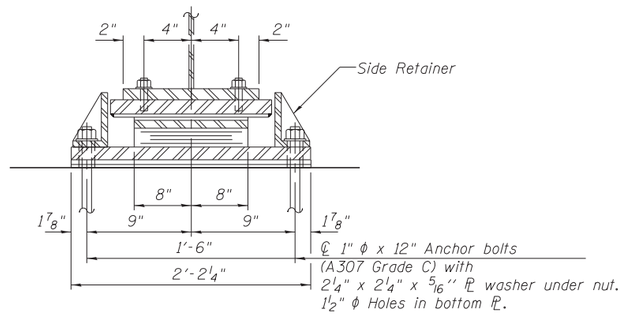
ELASTOMERIC BEARING TYPE I AND FIXED BEARING
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-25 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	169
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

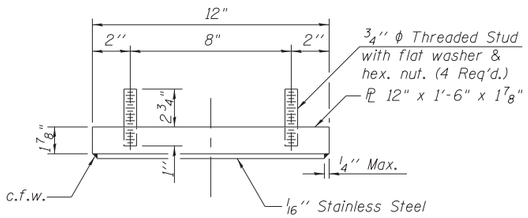


ELEVATION AT ABUT.

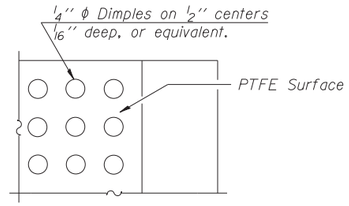


SECTION A-A

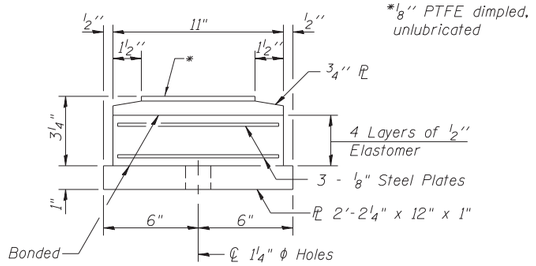
TYPE II ELASTOMERIC EXP. BRG. AT SOUTH ABUTMENT



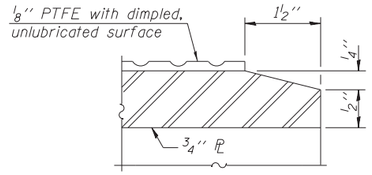
TOP BEARING ASSEMBLY



PLAN-PTFE SURFACE

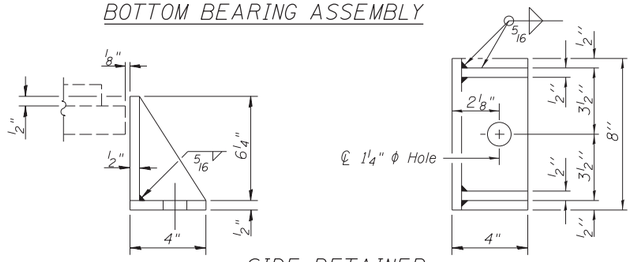


*1/8" PTFE dimpled, unlubricated



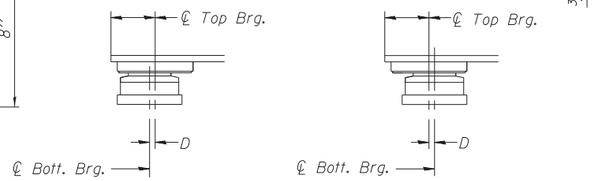
SECTION THRU PTFE

BOTTOM BEARING ASSEMBLY



SIDE RETAINER

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



BELOW 50°F. (Move bott. brg. away from fixed brg.)

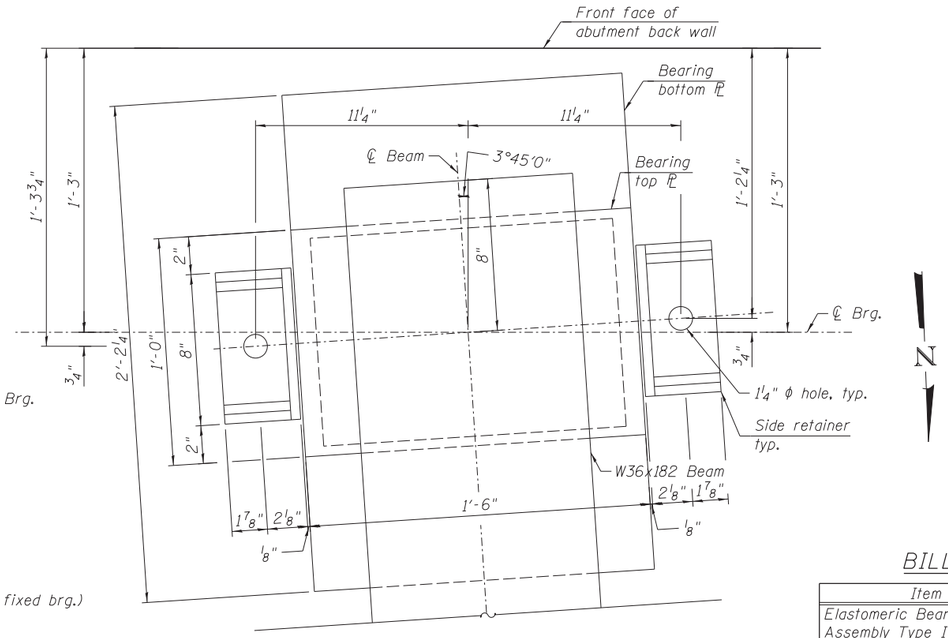
ABOVE 50°F. (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

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

NOTES

1. Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
2. Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
3. Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
4. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
5. Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.
6. The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
7. Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
8. All structural steel included in Bearing Assemblies shall be hot dipped galvanized. Cost included with Furnishing and Erecting Structural Steel or Elastomeric Bearing Assembly Type I.



BEARING ORIENTATION LAYOUT PLAN

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	12
Anchor Bolts, 1"	Each	24

I-2E-2

1-27-12

FILE PATH = C:\Users\will.mardauss\Desktop\Morgan\0161709-60W25-S26-Bearing2.dgn

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ELASTOMERIC BEARING TYPE II
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-26 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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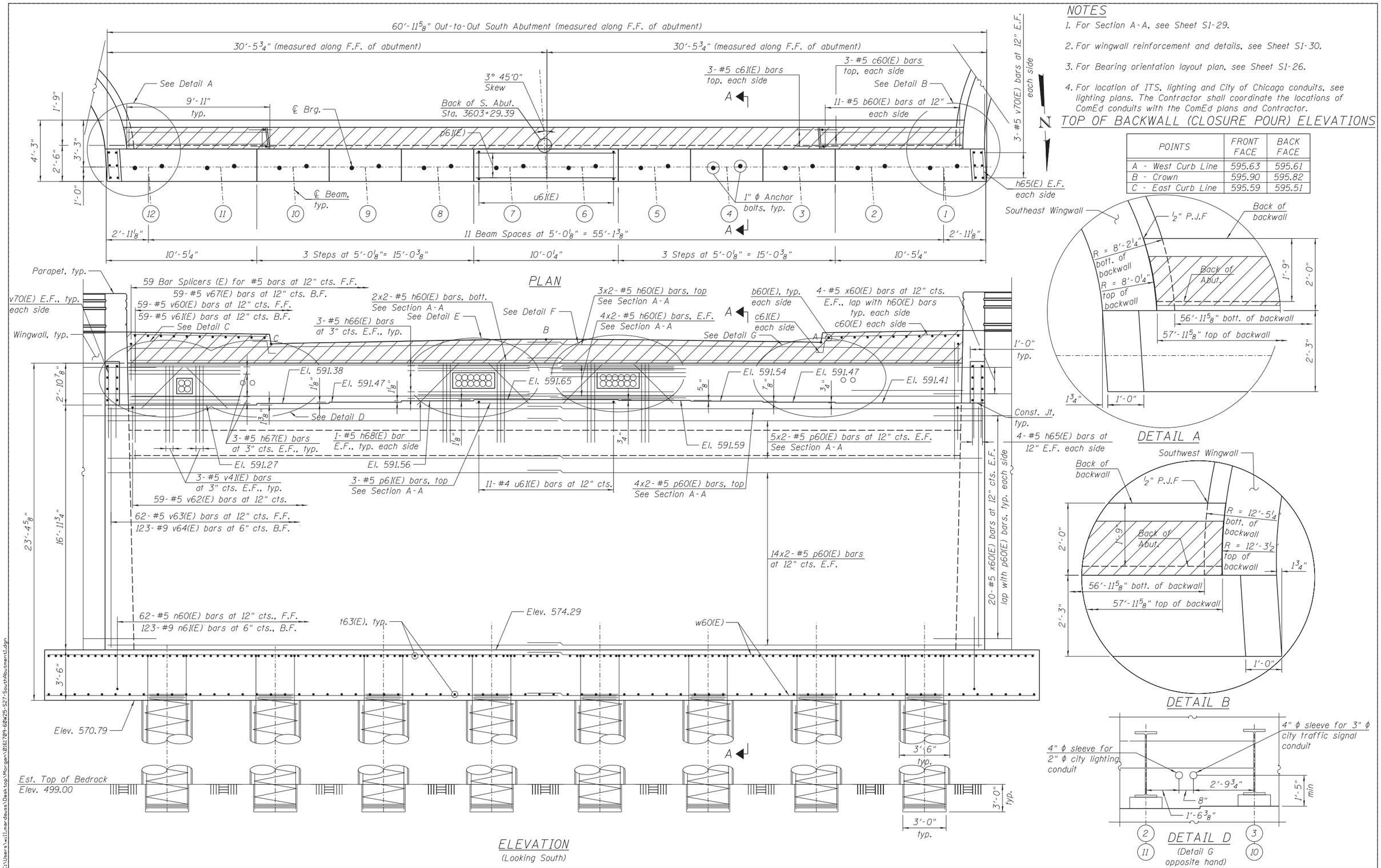
		CONTRACT NO. 60W25		
		ILLINOIS	FED. AID PROJECT	



NOTES

1. For Section A-A, see Sheet S1-29.
2. For wingwall reinforcement and details, see Sheet S1-30.
3. For Bearing orientation layout plan, see Sheet S1-26.
4. For location of ITS, lighting and City of Chicago conduits, see lighting plans. The Contractor shall coordinate the locations of ComEd conduits with the ComEd plans and Contractor.

TOP OF BACKWALL (CLOSURE POUR) ELEVATIONS

POINTS	FRONT FACE	BACK FACE
A - West Curb Line	595.63	595.61
B - Crown	595.90	595.82
C - East Curb Line	595.59	595.51

DETAIL A

ELEVATION
(Looking South)

DETAIL B

DETAIL D
(Detail G opposite hand)

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0161709-60W25-S27-SouthAbutment1.dgn	DESIGNED - MI, MAF	REVISED -	
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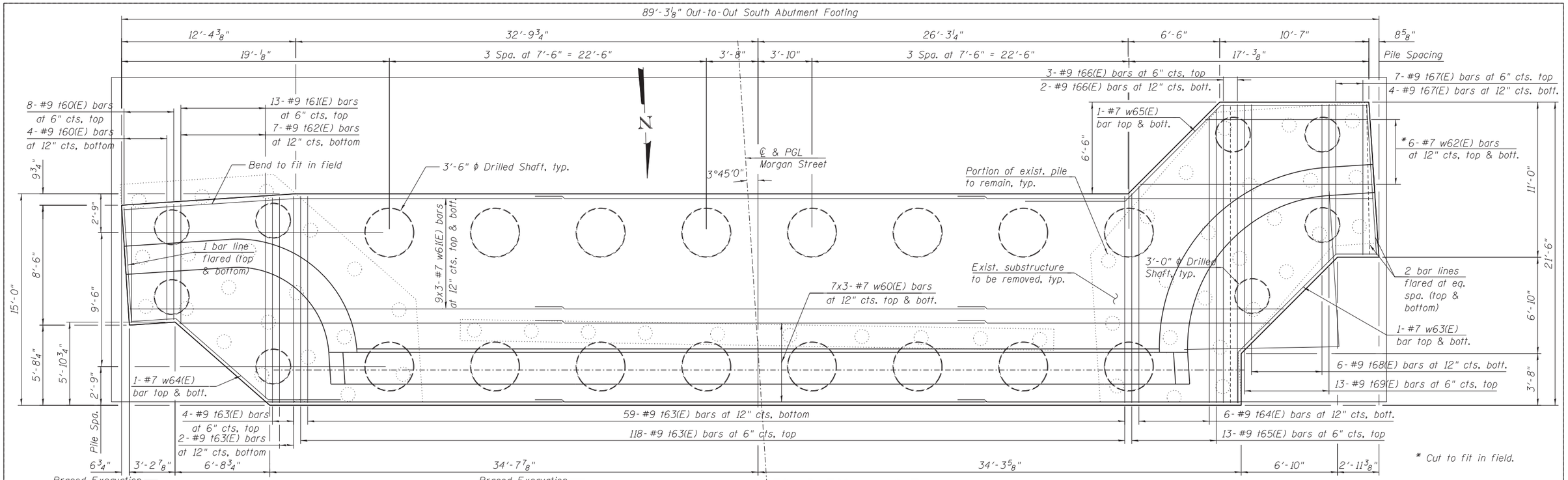
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT PLAN AND ELEVATION
STRUCTURE NO. 016-1709

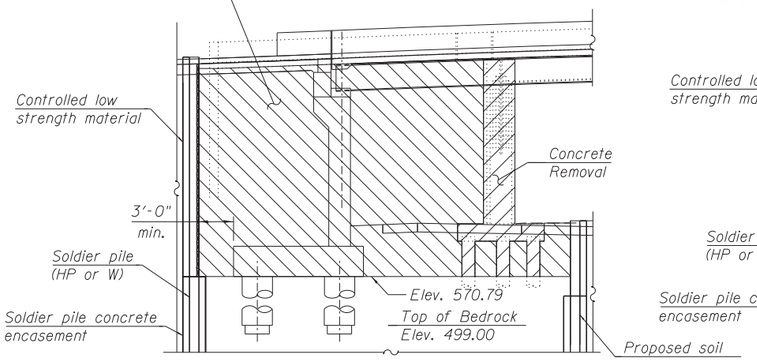
SCALE: | SHEET S1-27 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	171
		CONTRACT NO. 60W25		
		ILLINOIS FED. AID PROJECT		

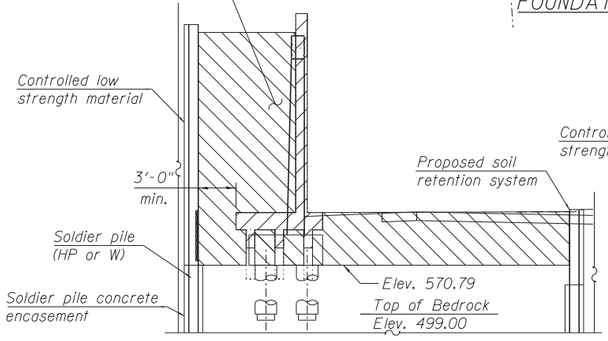


* Cut to fit in field.

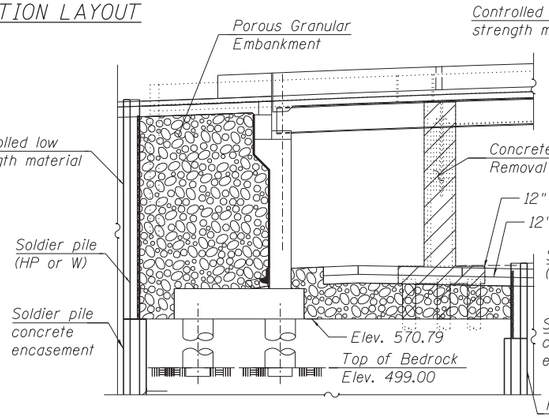
FOUNDATION LAYOUT



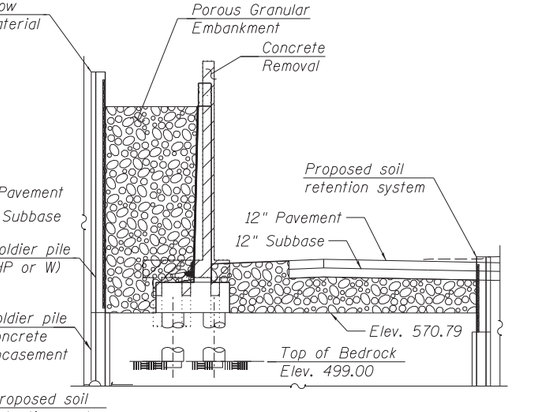
BRACED EXCAVATION - ABUTMENT



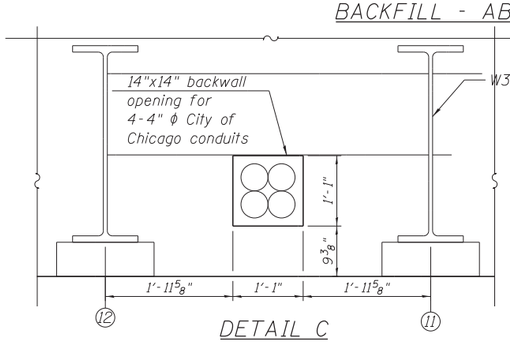
BRACED EXCAVATION- WINGWALL



BACKFILL - ABUTMENT



BACKFILL - WINGWALL



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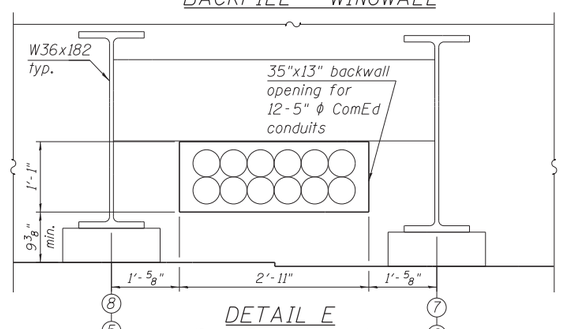

DETAIL E
(Detail F opposite hand)

LEGEND:

- Concrete Removal
- Braced Excavation
- Porous Granular Embankment

NOTES:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars noted thus 3x2- #5 indicates 3 lines of bars with 2 bars per line.
3. Driving piles and temporary sheet piling are not allowed.
4. For Bill of Materials, see Sheet S1-29.
5. For pile spacing of 3'-0" ϕ piles see Sheet S1-30.
6. For existing pile removal details see Sheet S1-08.
7. Space footing reinforcement to miss extended reinforcement from drilled shafts.
8. Order t61(E), t62(E), t64(E), t65(E), t68(E) and t69(E) full length. See Sheet S1-30 for bar cutting diagrams.

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PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT FOOTING PLAN AND SECTIONS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-28 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	172
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

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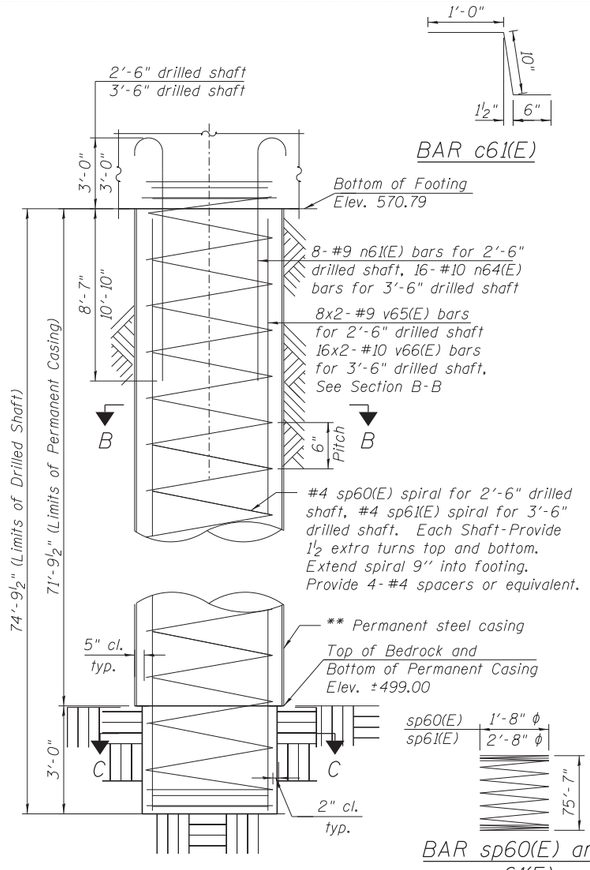

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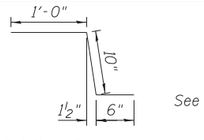
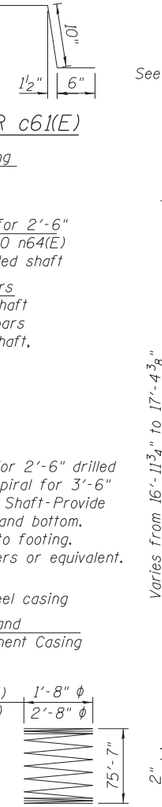
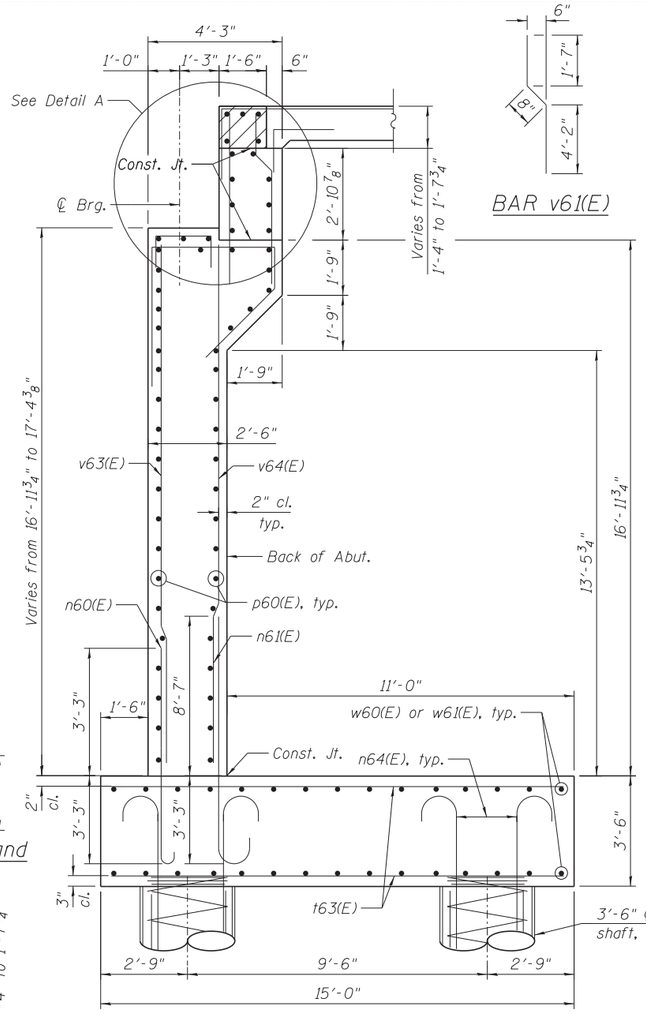


BAR c61(E)

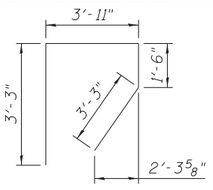


BAR sp60(E) and sp61(E)

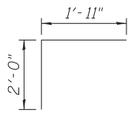


SECTION A-A

BAR v61(E)



BAR v62(E)



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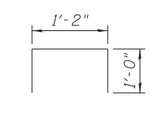

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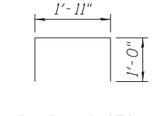

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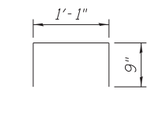
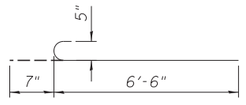


BAR d61(E)



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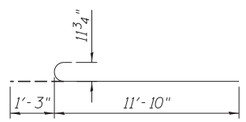

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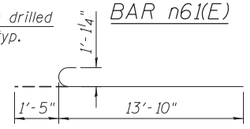

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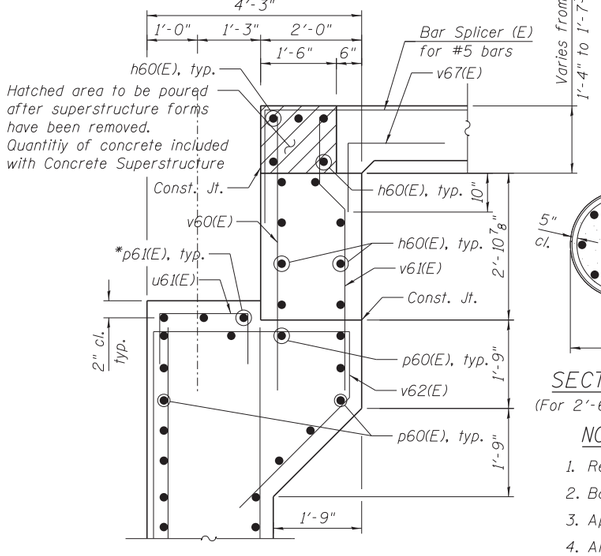
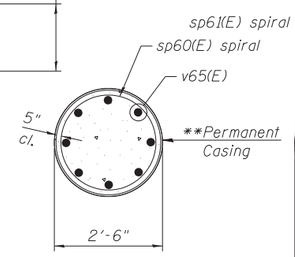
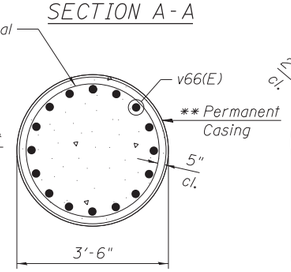


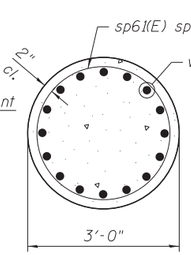
DETAIL A



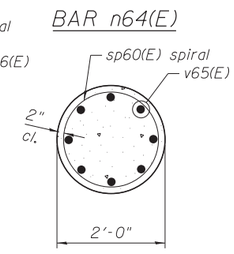
SECTION B-B
(For 2'-6" drilled shaft)



SECTION B-B
(For 3'-6" drilled shaft)



SECTION C-C
(For 3'-6" drilled shaft)



SECTION C-C
(For 2'-6" drilled shaft)

NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars noted thus, 3x2-#5 indicates 3 lines of bars with 2 lengths of bars per line.
3. Apply concrete sealer to all exposed concrete surfaces of the abutment.
4. All edges shall have standard ¾" chamfer.
5. For bar cutting diagram, see Sheet S1-30.

*Space p61(E) bars to miss anchor bolts.

**Contractor is responsible for determining the casing thickness and the actual tip elevation to be used. See Article 516.06(d) of the Standard Specifications. Pay limits for the Permanent Casing shall be based on the minimum length shown.

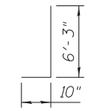
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
b60(E)	22	#5	1'-2"	
c60(E)	6	#5	9'-6"	
c61(E)	6	#5	2'-4"	
d60(E)	101	#5	5'-9"	
d61(E)	48	#4	2'-7"	
e60(E)	4	#4	19'-7"	
e61(E)	4	#4	22'-7"	
e62(E)	4	#4	21'-9"	
e63(E)	4	#4	24'-6"	
h60(E)	26	#5	30'-6"	
h61(E)	23	#5	19'-7"	
h62(E)	23	#5	22'-7"	
h63(E)	23	#5	21'-9"	
h64(E)	23	#5	24'-6"	
h65(E)	16	#5	1'-11"	
h66(E)	24	#5	9'-5"	
h67(E)	12	#5	7'-9"	
h68(E)	12	#5	4'-0"	
n60(E)	62	#5	7'-1"	
n61(E)	187	#9	13'-1"	
n62(E)	40	#5	7'-1"	
n63(E)	88	#9	13'-2"	
n64(E)	256	#10	15'-3"	
p60(E)	46	#5	32'-0"	
p61(E)	3	#5	9'-8"	
sp60(E)	8	#4	75'-7"	
sp61(E)	16	#4	75'-7"	
t60(E)	12	#9	8'-2"	
t61(E)	7	#9	22'-10"	
t62(E)	4	#9	22'-10"	
t63(E)	183	#9	14'-6"	
t64(E)	3	#9	35'-10"	
t65(E)	7	#9	35'-10"	
t66(E)	5	#9	21'-2"	
t67(E)	11	#9	10'-8"	
t68(E)	3	#9	28'-6"	
t69(E)	7	#9	28'-6"	

Bar	No.	Size	Length	Shape
u61(E)	11	#4	3'-11"	
v60(E)	59	#5	6'-1"	
v61(E)	59	#5	6'-5"	
v62(E)	59	#5	11'-11"	
v63(E)	62	#5	16'-8"	
v64(E)	123	#9	16'-8"	
v65(E)	128	#9	41'-7"	
v66(E)	256	#10	42'-8"	
v67(E)	62	#5	3'-11"	
v68(E)	40	#5	21'-9"	
v69(E)	88	#9	21'-9"	
v70(E)	12	#5	6'-1"	
v71(E)	36	#5	6'-3"	
w60(E)	42	#7	29'-3"	
w61(E)	54	#7	33'-2"	
w62(E)	12	#7	16'-2"	
w63(E)	2	#7	16'-3"	
w64(E)	2	#7	17'-4"	
w65(E)	2	#7	24'-9"	
x60(E)	96	#5	6'-6"	

Porous Granular Embankment	Cu Yd	1310
Concrete Structures	Cu Yd	344.0
Concrete Superstructure	Cu Yd	10.7
Protective Coat	Sq Yd	18
Reinforcement Bars, Epoxy Coated	Pound	154,320
Permanent Casing	Foot	1,723
Drilled Shaft in Soil, 30"	Cu Yd	105
Drilled Shaft in Soil, 42"	Cu Yd	410
Drilled Shaft in Rock, 24"	Cu Yd	3
Drilled Shaft in Rock, 36"	Cu Yd	13
Concrete Sealer	Sq Ft	2,591
Geocomposite Wall Drain	Sq Yd	220
Braced Excavation	Cu Yd	2,570
Pipe Underdrains for Structures 6"	Foot	119

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"
#10	10'-10"



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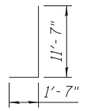

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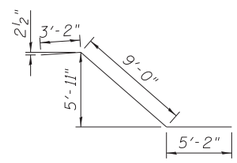

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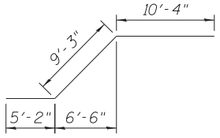

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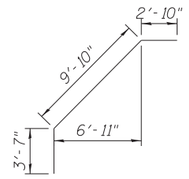

BAR w66(E)

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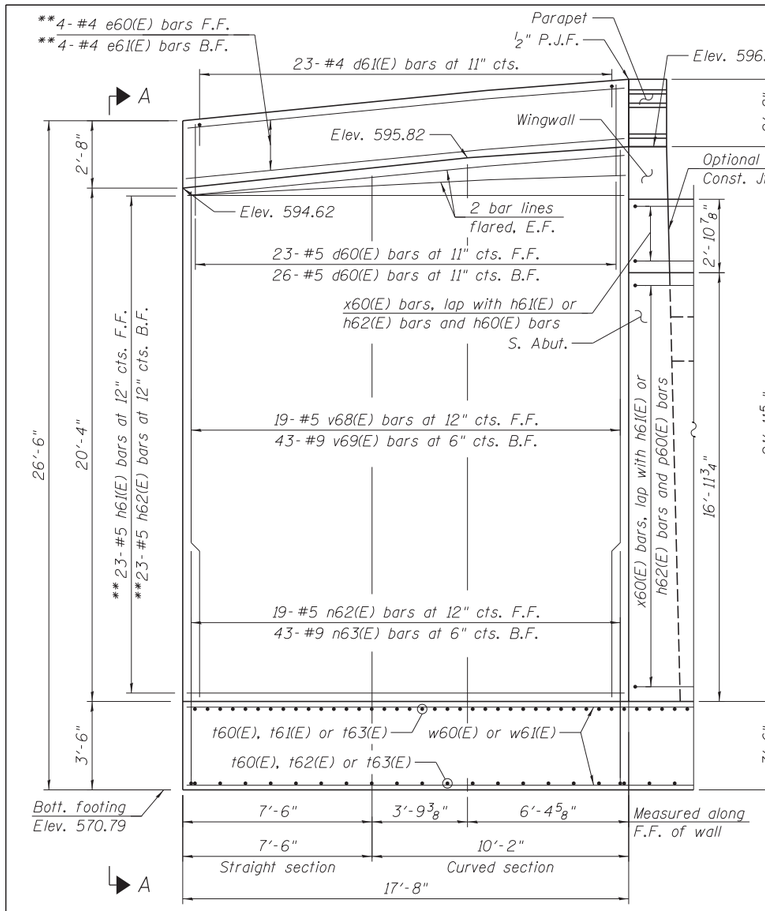
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT SECTIONS AND DETAILS
STRUCTURE NO. 016-1709

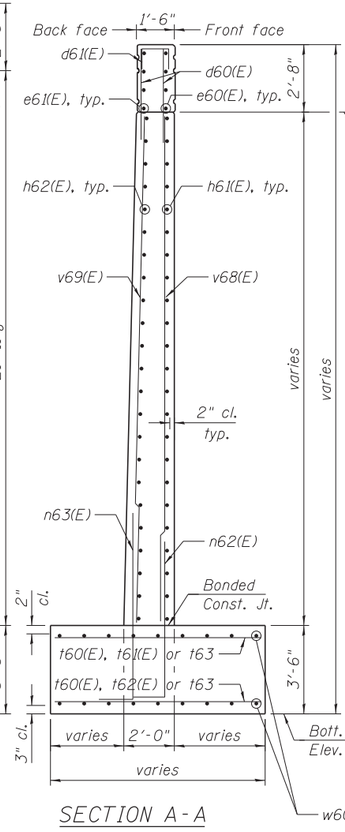
SCALE: | SHEET S1-29 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	173
		CONTRACT NO. 60W25		
		ILLINOIS FED. AID PROJECT		

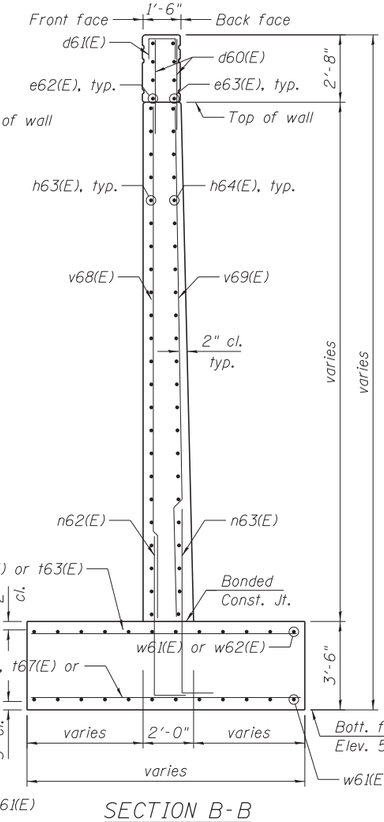


SOUTHEAST WINGWALL ELEVATION

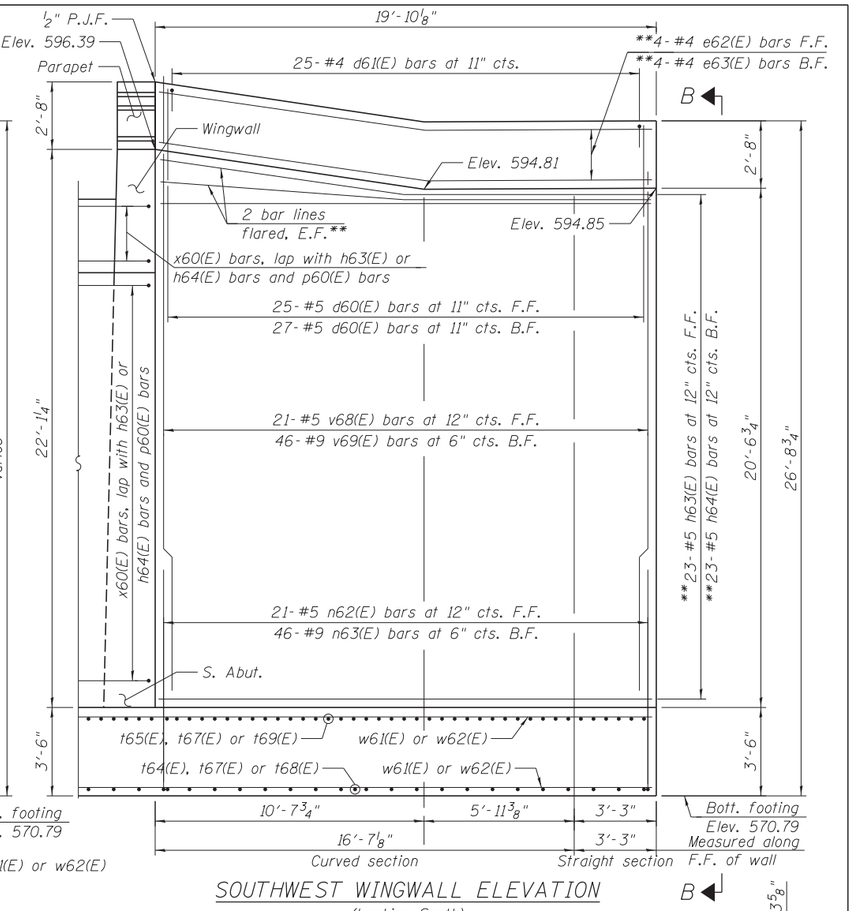
(Looking South)



SECTION A-A



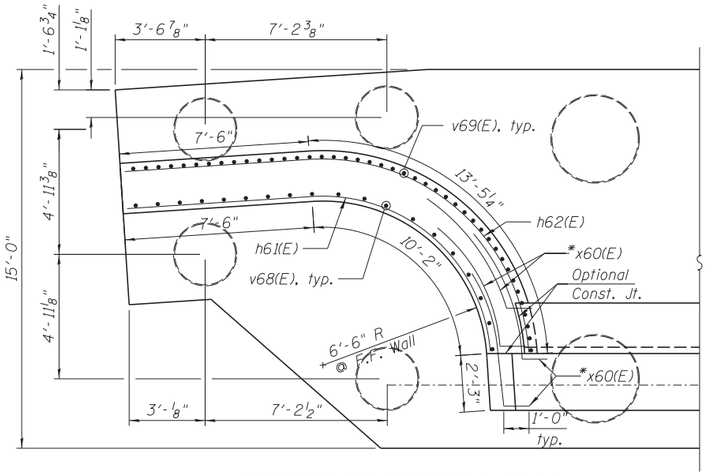
SECTION B-B



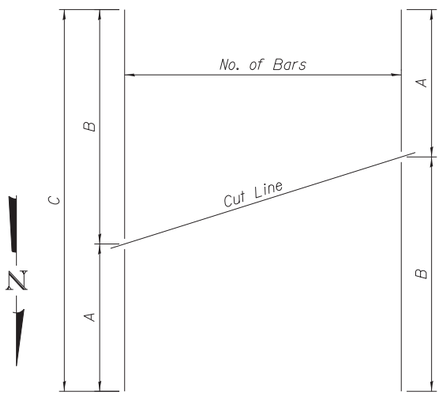
SOUTHWEST WINGWALL ELEVATION

(Looking South)

* Cut to fit in field
** Bend to fit in field



SOUTHEAST WINGWALL PLAN



SERIES OF BAR CUTTING DIAGRAM

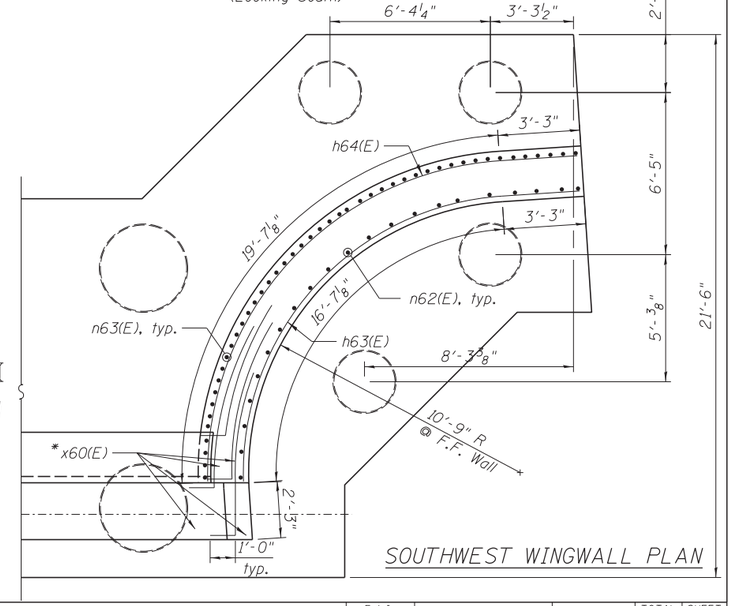
See table for dimensions. Make all cuts normal to bar axis

BAR TABLE SCHEDULE

Bar	No. of Sets Req'd	No. of Bars Per Set	A	B	C
t61(E)	1	7	8'-7"	14'-3"	22'-10"
t62(E)	1	4	8'-7"	14'-3"	22'-10"
t64(E)	1	3	14'-11"	20'-11"	35'-10"
t65(E)	1	7	14'-11"	20'-11"	35'-10"
t68(E)	1	3	11'-3"	17'-3"	28'-6"
t69(E)	1	7	11'-3"	17'-3"	28'-6"

NOTES:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars noted thus 3x2-#5 indicates 3 lines of bars with 2 bars per line.
3. Driving piles and temporary sheet piling is not allowed.
4. For Bill of Materials, see Sheet S1-29.
5. Concrete required for parapet shall be included with Superstructure.



SOUTHWEST WINGWALL PLAN

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INSPECTION & RATING
RESEARCH & TESTING
4415 WEST HARRISON ST. SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900
FAX: (708) 236-0901

0161709-60W25-S30-S.Abut.WingWall.dgn	DESIGNED - MI. MAF	REVISED -
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PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

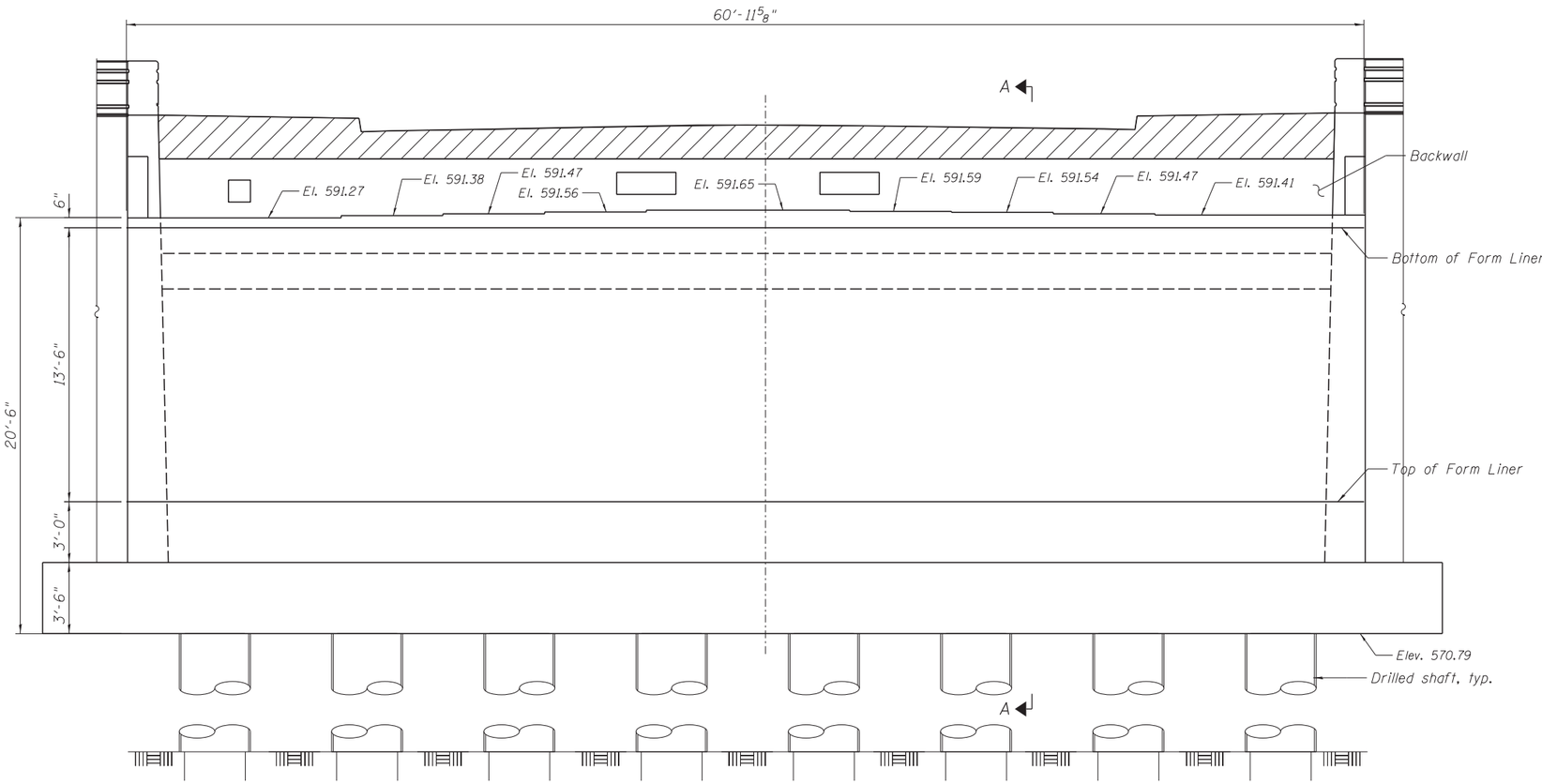
SOUTH ABUTMENT WINGWALLS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-30 OF 51 SHEETS | STA. | TO STA.

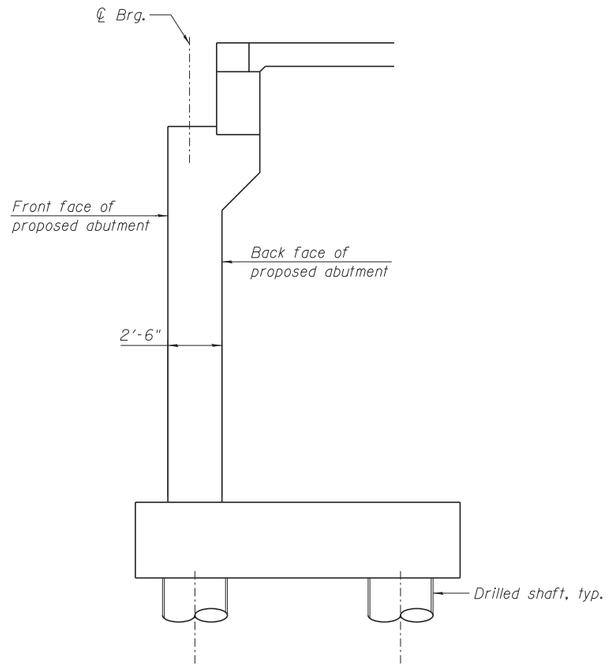
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	174
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Form Liner Textured Surface	SQ FT	1,288



SOUTH ABUTMENT ELEVATION
(Looking South)



SECTION

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT ARCHITECTURAL DETAILS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-31 OF 51 SHEETS | STA. | TO STA.

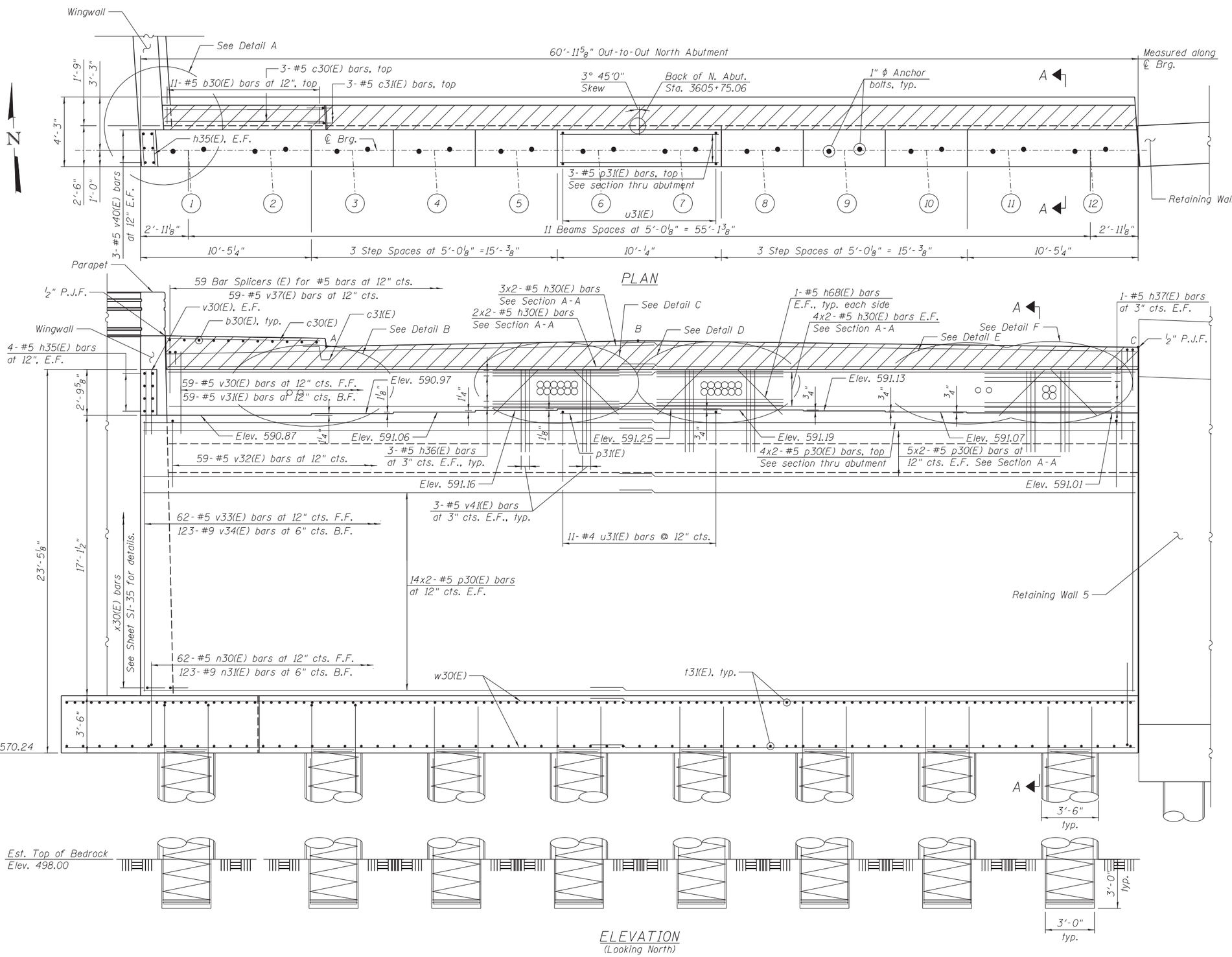
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	175
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

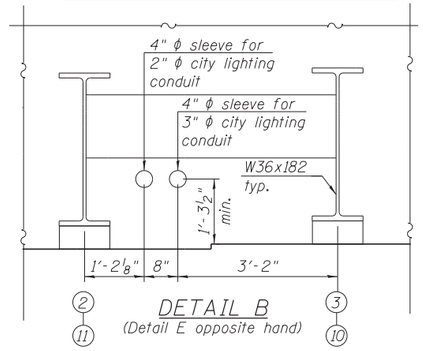
NOTES:

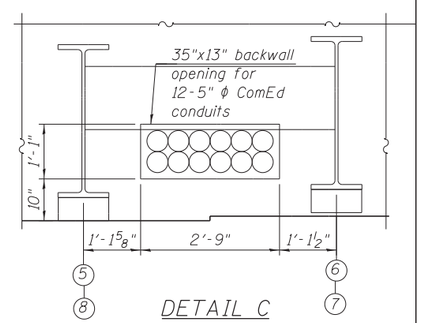
1. For section A-A, see Sheet S1-34.
2. For wingwall reinforcement and details, see Sheet S1-35.
3. For Bearing orientation layout plan, see Sheet S1-25.
4. For location of ITS, lightting and City of Chicago conduits, see lighting plans. The Contractor shall coordinate the locations of ComEd conduits with the ComEd plans and Contractor.

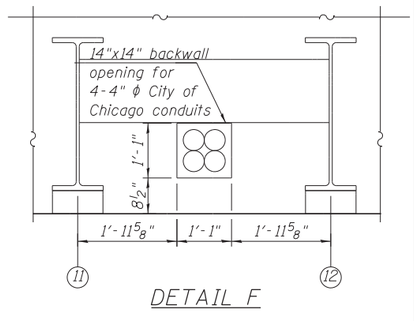
TOP OF BACK WALL ELEVATIONS

POINTS	FRONT FACE	BACK FACE
A - West Curb Line	595.13	595.05
B - Crown	595.48	595.40
C - E. Edge of Abut.	595.08	595.00









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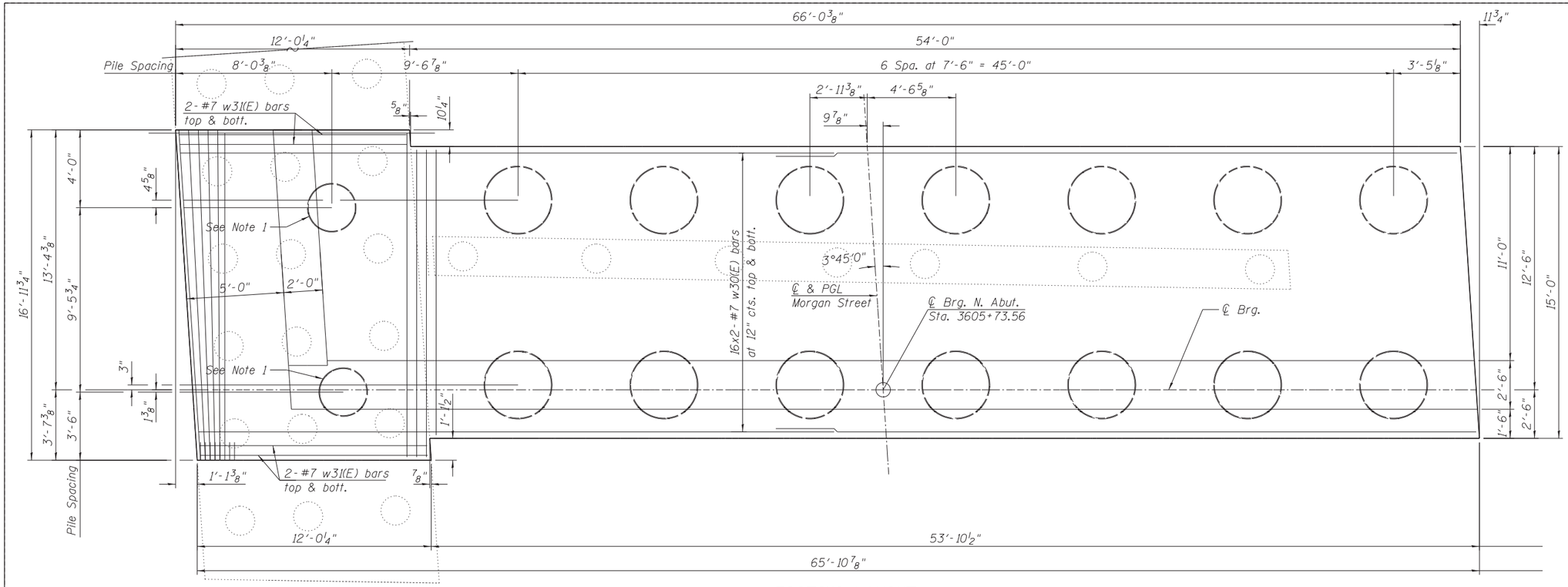
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT PLAN AND ELEVATION
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-32 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	176
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



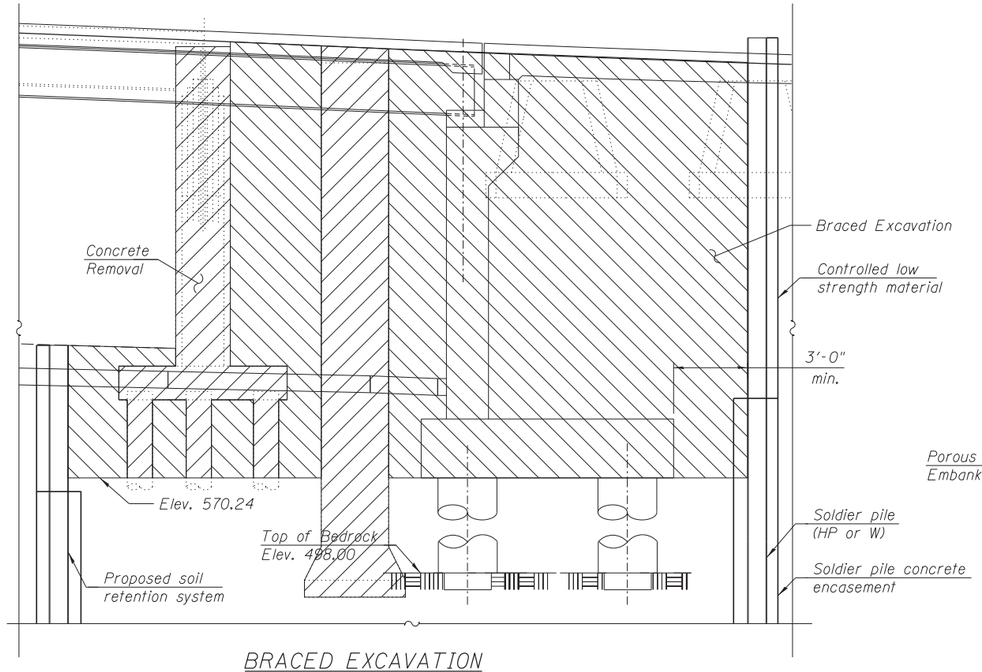
FOOTING LAYOUT

NOTES:

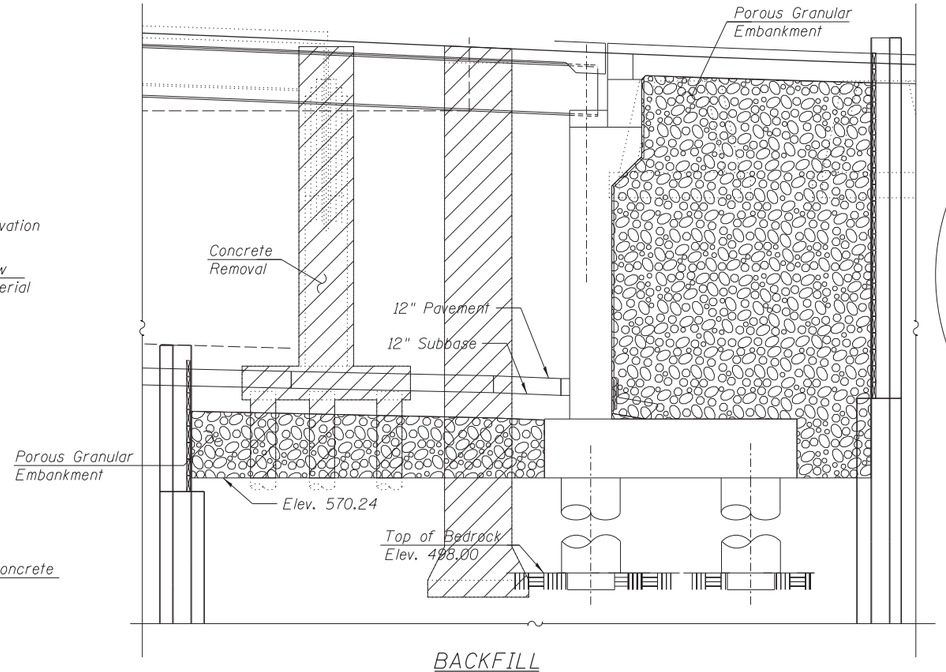
1. Contractor to drill through any interference with existing subpiers. Cost included with Drilled Shaft in Soil.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Bars noted thus 3x2-#5 indicates 3 lines of bars with 2 bars per line.
4. Driving piles and temporary sheet piling are not allowed.
5. For Bill of Materials, see Sheet S1-34.
6. For existing pile removal details see Sheet S1-08.
7. Space footing reinforcement to miss extended drilled shaft reinforcement.

LEGEND:

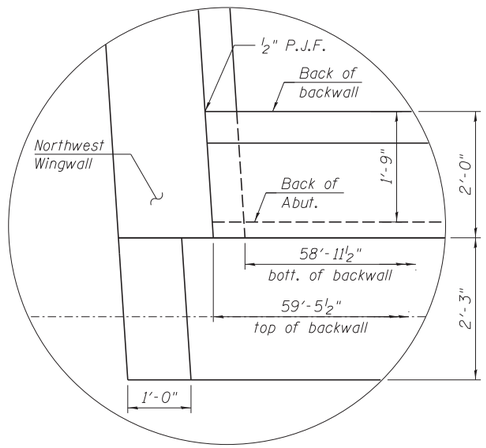
- Concrete Removal
- Braced Excavation
- Porous Granular Embankment



BRACED EXCAVATION



BACKFILL



DETAIL A

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HBM ENGINEERING GROUP, LLC
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT FOOTING PLAN AND SECTIONS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-33 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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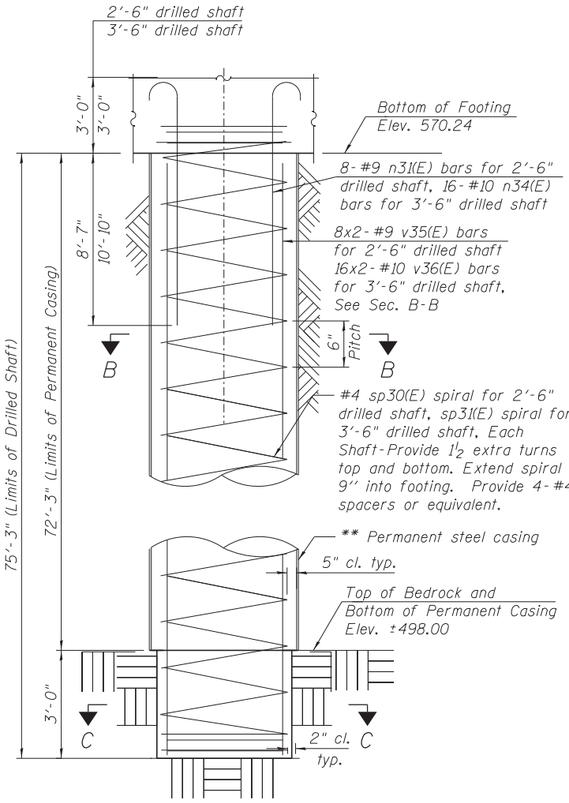
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



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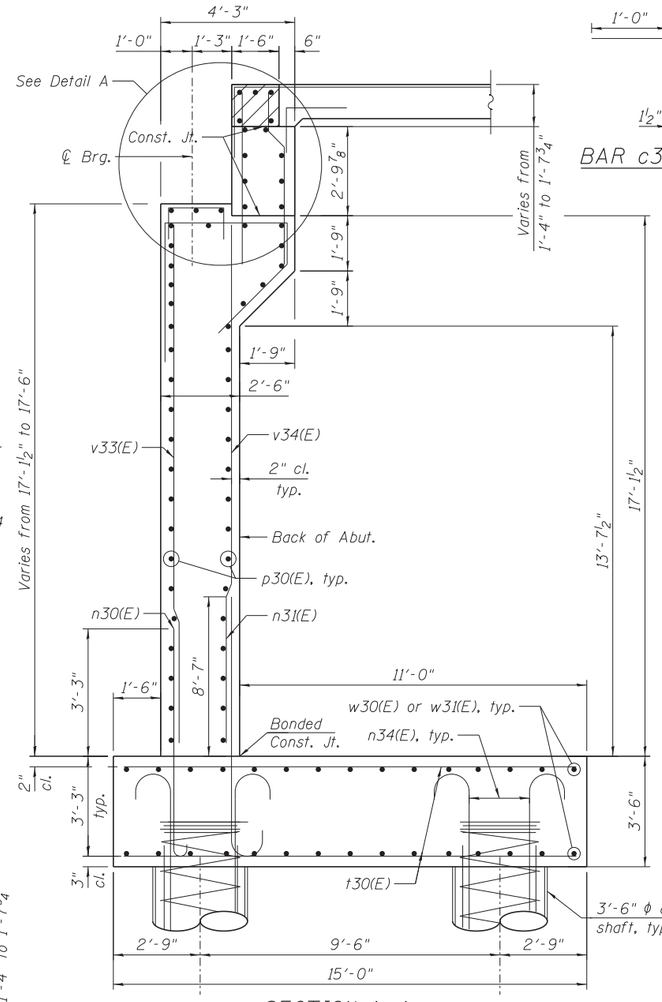
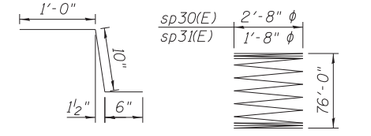
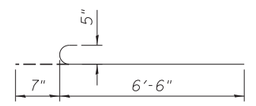


SECTION A-A



BAR c31(E)

BAR sp30(E) and sp31(E)



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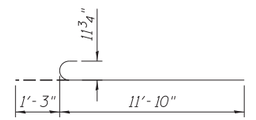

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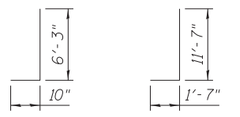
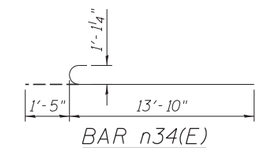


BAR n32(E) BAR n33(E)

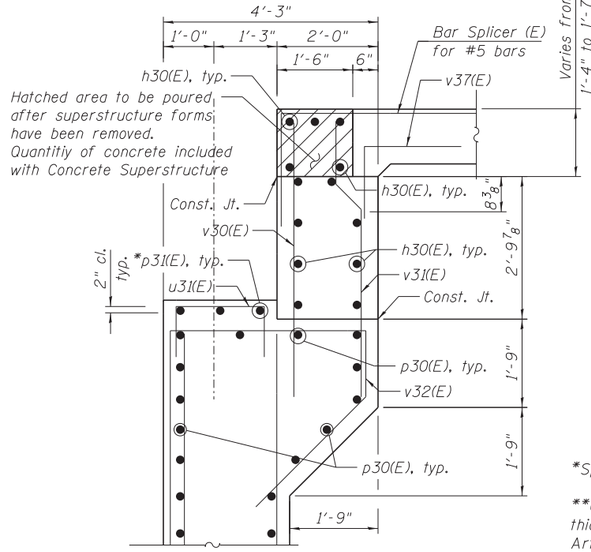


BAR n34(E)

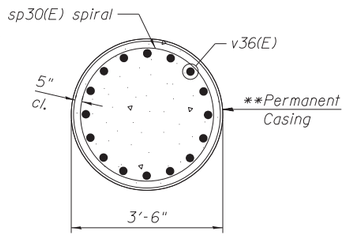
Bar	No.	Size	Length	Shape
b30(E)	11	#5	1'-2"	
c30(E)	3	#5	9'-6"	
c31(E)	3	#5	2'-4"	
d30(E)	104	#5	5'-9"	
d31(E)	59	#4	2'-7"	
e30(E)	8	#4	19'-11"	
e31(E)	8	#4	21'-11"	
e32(E)	8	#4	11'-7"	
h30(E)	26	#5	30'-6"	
h31(E)	44	#5	11'-7"	
h32(E)	2	#5	11'-7"	
h33(E)	6	#5	20'-3"	
h34(E)	6	#5	21'-6"	
h35(E)	8	#5	7'-1"	
h36(E)	24	#5	9'-5"	
h37(E)	12	#5	7'-9"	
h38(E)	12	#5	4'-0"	
n30(E)	62	#5	7'-1"	
n31(E)	139	#9	13'-1"	
n32(E)	13	#5	7'-1"	
n33(E)	25	#9	13'-2"	
n34(E)	256	#10	15'-3"	
p30(E)	42	#5	32'-2"	
p31(E)	3	#5	9'-8"	
sp30(E)	16	#4	76'-0"	
sp31(E)	2	#4	76'-0"	
t30(E)	41	#9	16'-7"	
t31(E)	166	#9	14'-8"	
u31(E)	11	#4	3'-11"	

Bar	No.	Size	Length	Shape
v30(E)	59	#5	6'-1"	
v31(E)	59	#5	6'-5"	
v32(E)	59	#5	11'-11"	
v33(E)	62	#5	16'-9"	
v34(E)	123	#9	16'-9"	
v35(E)	32	#9	41'-9"	
v36(E)	448	#10	42'-11"	
v37(E)	62	#5	3'-11"	
v38(E)	13	#5	21'-11"	
v39(E)	25	#9	21'-11"	
v40(E)	6	#5	4'-9"	
v41(E)	36	#5	6'-3"	
w30(E)	64	#7	35'-5"	
w31(E)	8	#7	11'-7"	
x30(E)	48	#5	6'-6"	

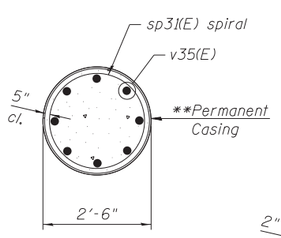
Porous Granular Embankment	Cu Yd	1,111
Concrete Structures	Cu Yd	278.0
Concrete Superstructure	Cu Yd	12.6
Protective Coat	Sq Yd	25
Reinforcement Bars, Epoxy Coated	Pound	159,300
Permanent Casing	Foot	1,156
Drilled Shaft in Soil, 30"	Cu Yd	27
Drilled Shaft in Soil, 42"	Cu Yd	361
Drilled Shaft in Rock, 24"	Cu Yd	1
Drilled Shaft in Rock, 36"	Cu Yd	11
Concrete Sealer	Sq Ft	2,132
Geocomposite Wall Drain	Sq Yd	171
Braced Excavation	Cu Yd	2,200
Pipe Underdrains for Structures 6"	Foot	84



DETAIL A



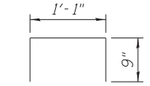
SECTION B-B
(For 3'-6" drilled shaft)



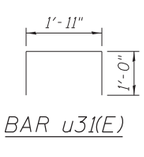
SECTION B-B
(For 2'-6" drilled shaft)

*Space p31(E) bars to miss anchor bolts.

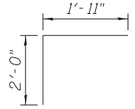
**Contractor is responsible for determining the casing thickness and the actual tip elevation to be used. See Article 516.06(d) of the Standard Specifications. Pay limits for the Permanent Casing shall be based on the minimum length shown.



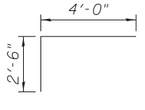
BAR d31(E)



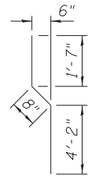
BAR u31(E)



BAR v37(E)



BAR x30(E)



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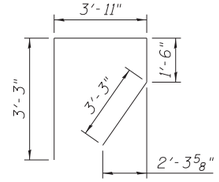

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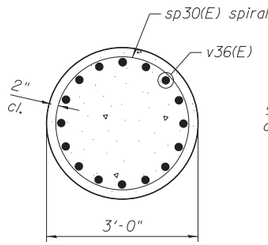
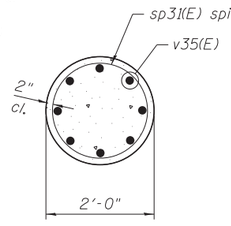


SECTION C-C
(For 3'-6" drilled shaft)



SECTION C-C
(For 2'-6" drilled shaft)

NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars noted thus, 3x2-#5 indicates 3 lines of bars with 2 lengths of bars per line.
3. Apply concrete sealer to all exposed concrete surfaces of the abutment.
4. All edges shall have standard ¾" chamfer.

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"
#10	10'-10"

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT SECTIONS AND DETAILS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-34 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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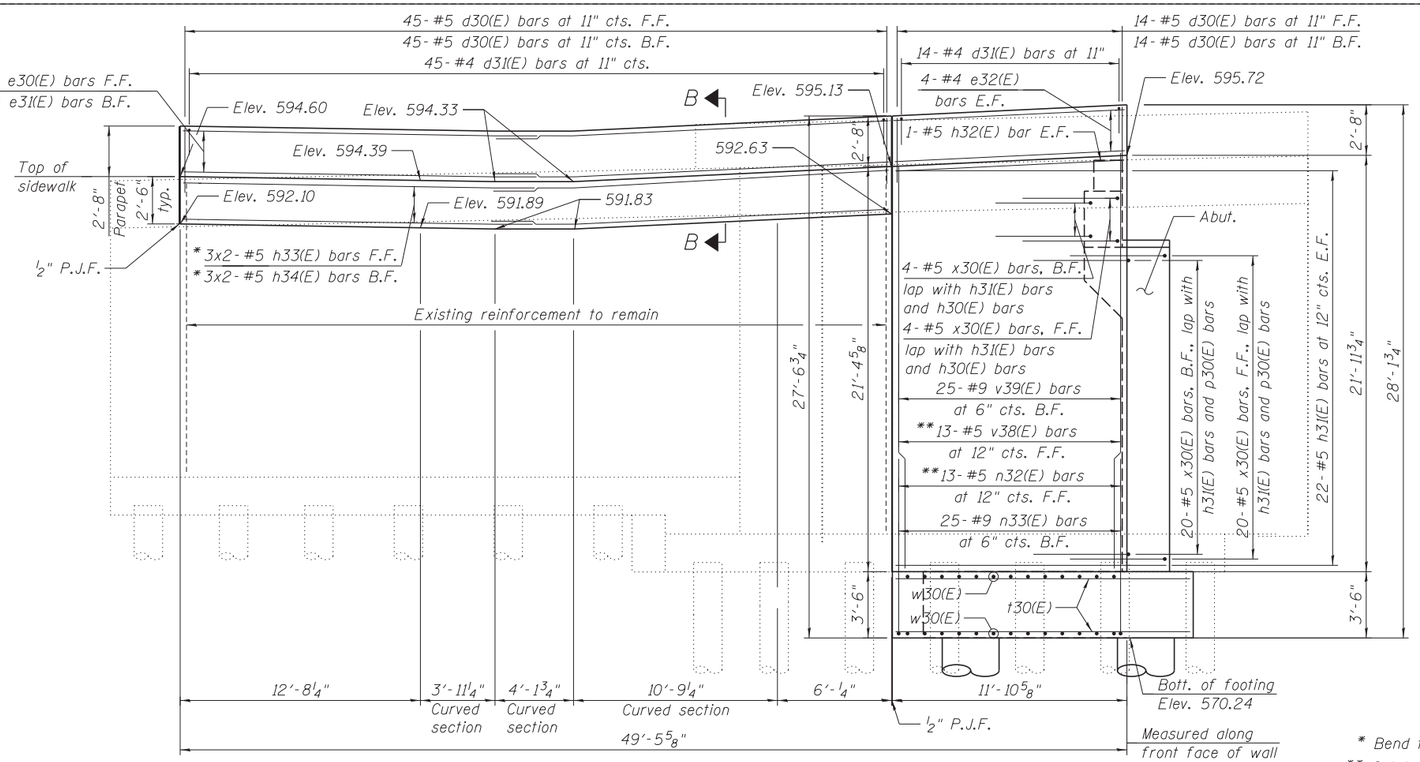
		CONTRACT NO. 60W25		
		ILLINOIS FED. AID PROJECT		

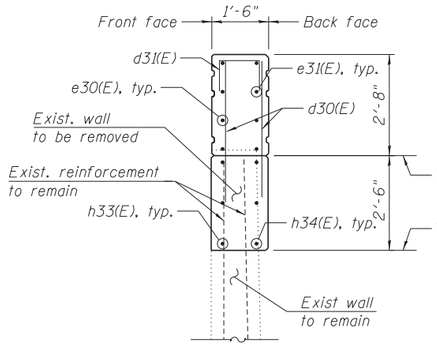


ELEVATION

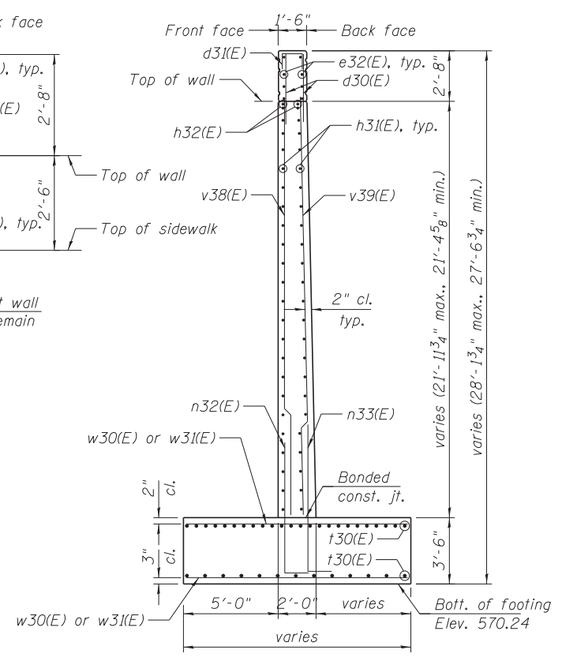
(Looking Northeast)

* Bend to fit in field

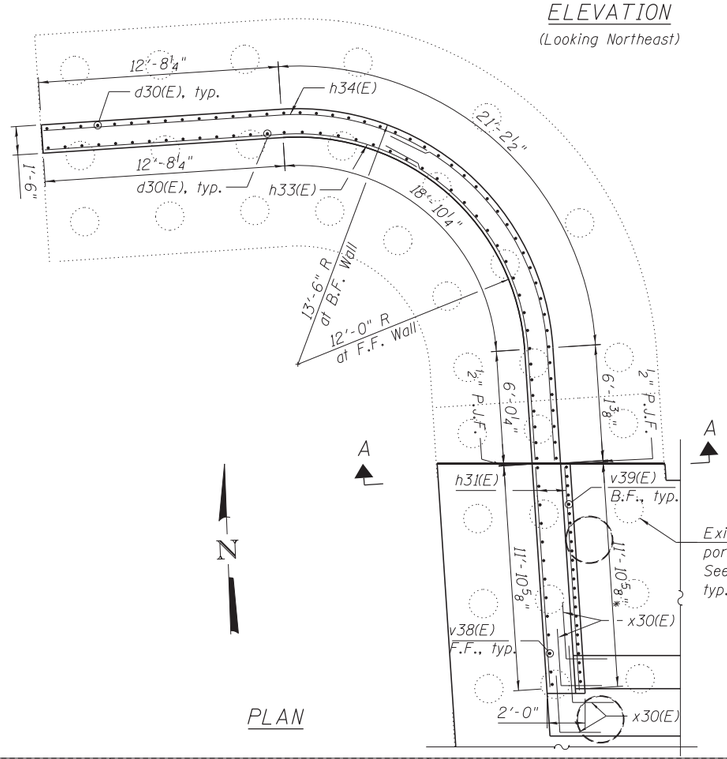
** Cut to fit in field



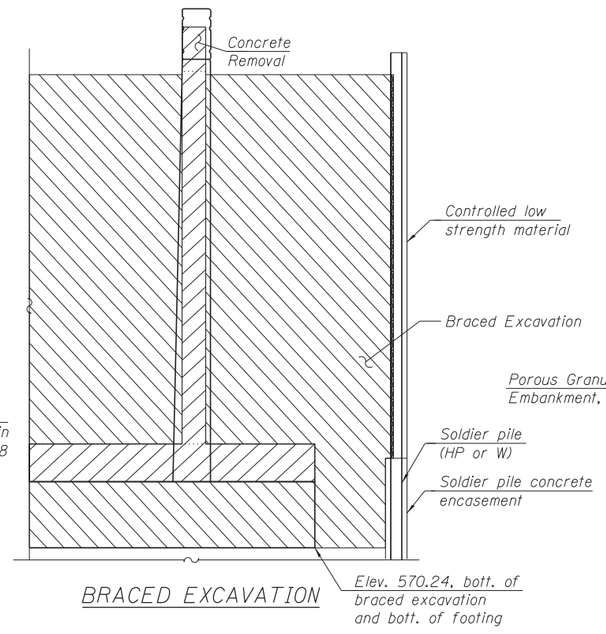
SECTION B-B



SECTION A-A



PLAN



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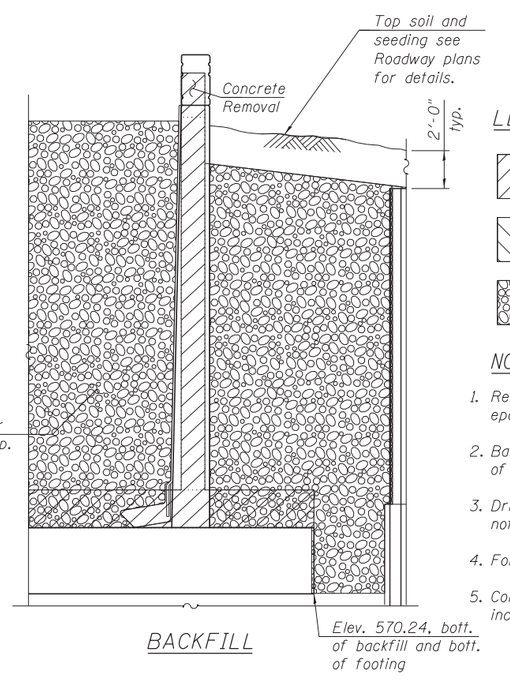

BACKFILL

LEGEND:

- Concrete Removal
- Braced Excavation
- Porous Granular Embankment

NOTES:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars noted thus 3x2-#5 indicates 3 lines of bars with 2 bars per line.
3. Driving piles and temporary sheet piling is not allowed.
4. For Bill of Materials, see Sheet S1-34.
5. Concrete required for parapet shall be included with concrete superstructure.

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0161709-60W25-S35-NorthAbutWW.dgn	DESIGNED - MI. MAF	REVISED -	
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

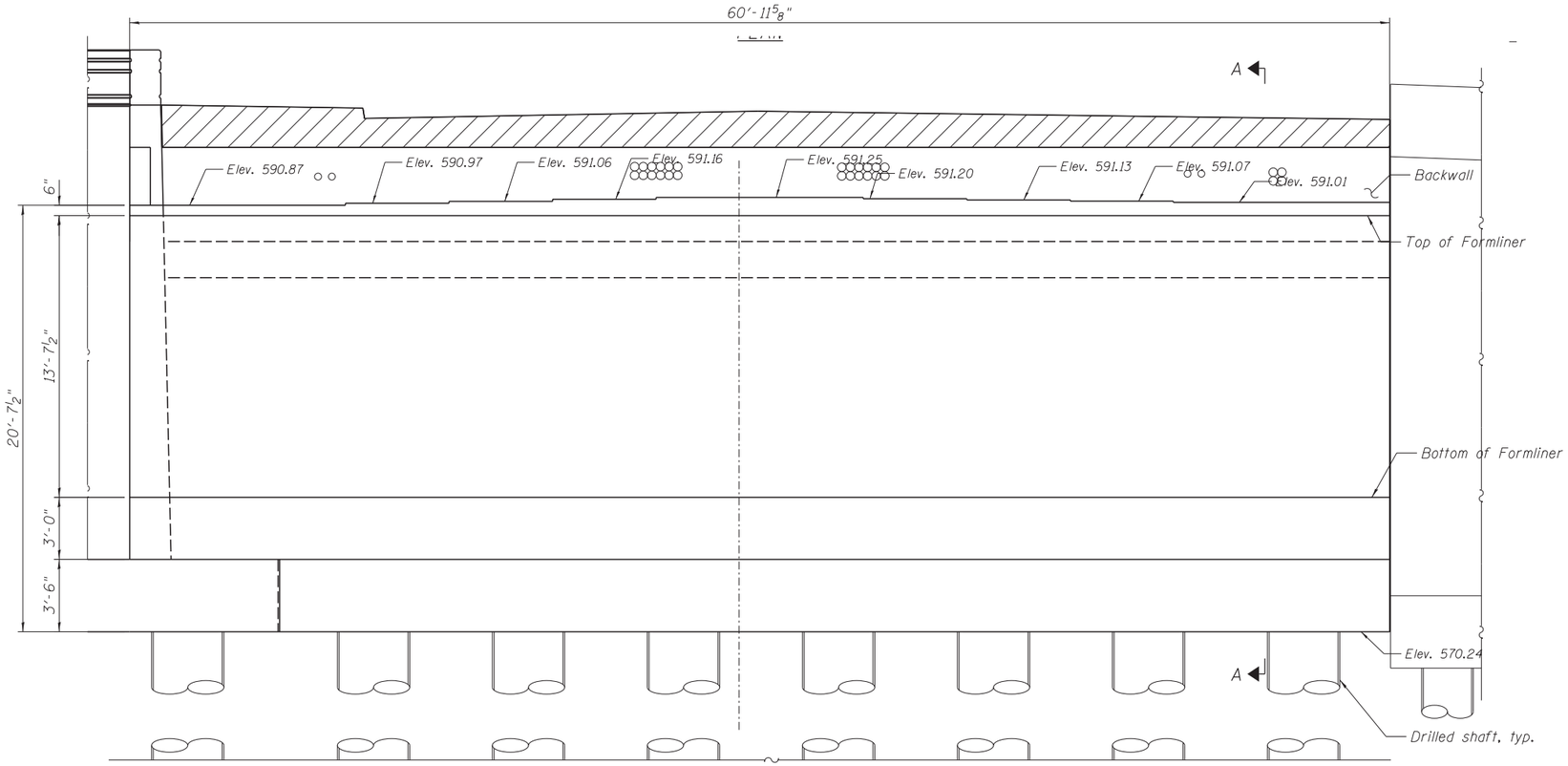
NORTH ABUTMENT WINGWALLS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-35 OF 51 SHEETS | STA. | TO STA.

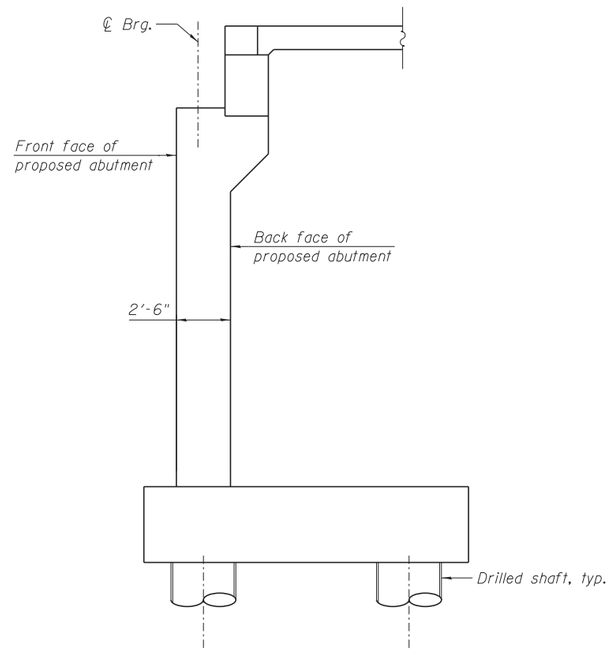
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	179
		CONTRACT NO. 60W25		
		ILLINOIS FED. AID PROJECT		

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Form Liner Textured Surface	SQ FT	1,067



NORTH ABUTMENT ELEVATION
(Looking North)



SECTION

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NORTH ABUTMENT ARCHITECTURAL DETAILS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-36 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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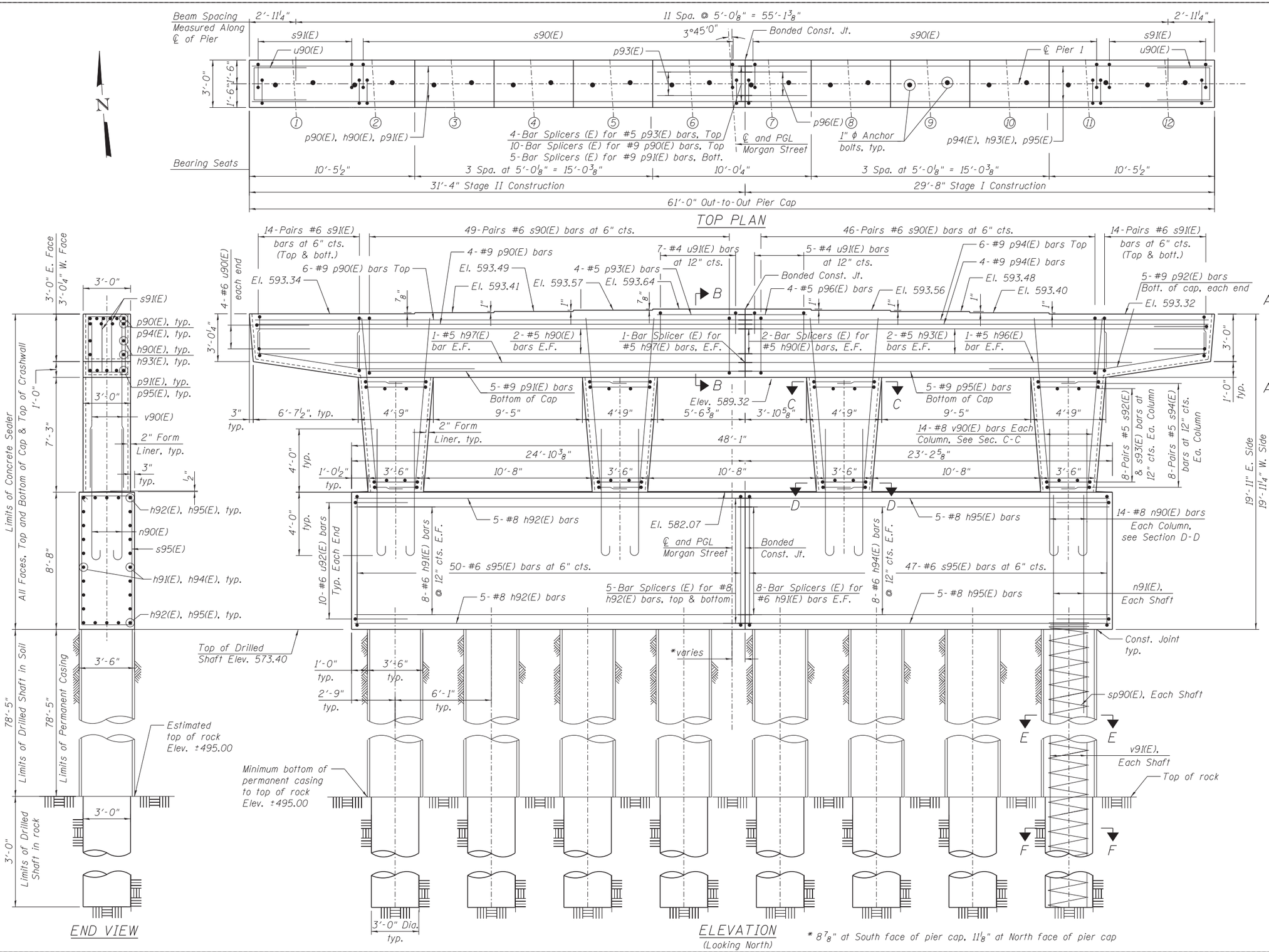
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars equally spaced, unless otherwise noted.
3. Apply concrete sealer to all exposed concrete surfaces of the pier.
4. All edges shall have standard ¾" chamfer.
5. See Sheet S1-38 for Bill of Material, Section A-A, B-B, C-C, D-D, E-E & F-F, and Drilled Shaft details.
6. Pour steps monolithically with cap.
7. Space reinforcement in cap to miss anchor bolts.
8. The quantities and reinforcement detailing are based on the top of shaft and the estimated elevations shown and may change based on the actual elevations encountered at each shaft and the final top of shaft elevation.
9. Contractor is responsible for determining the casing thickness and the actual tip elevation to be used. See Article 516.06 (d) of the Standard Specifications. Pay limits for the Permanent Casing shall be based on the minimum length shown.
10. For Bearing orientation layout plan, see Sheet S1-25.

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"

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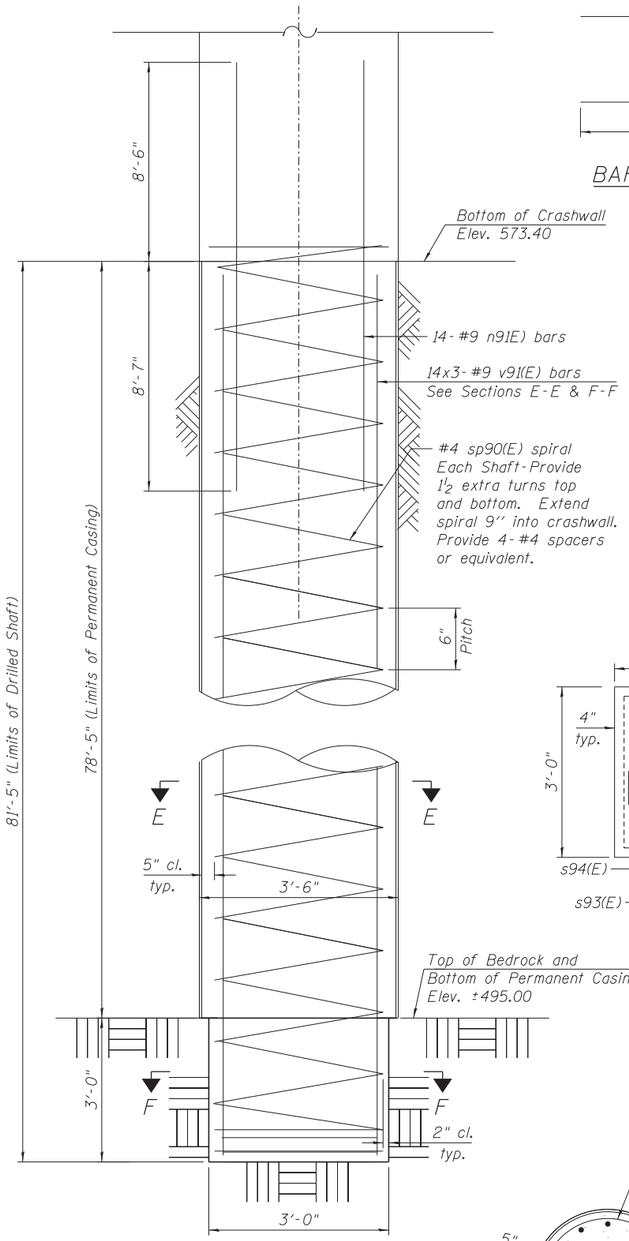
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

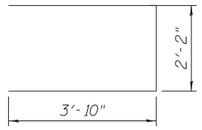
PIER 1 PLAN AND ELEVATION
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-37 OF 51 SHEETS | STA. | TO STA.

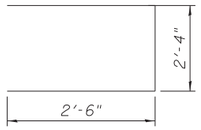
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	181
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



END VIEW



BAR u90(E)



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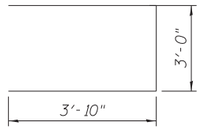
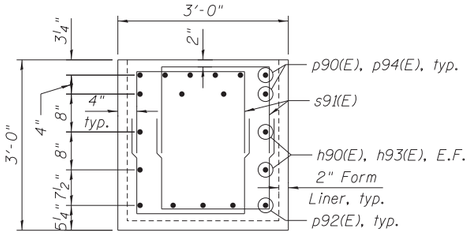
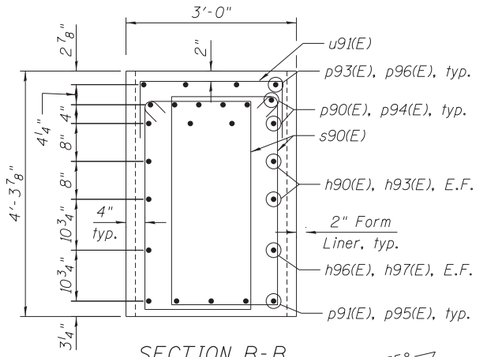


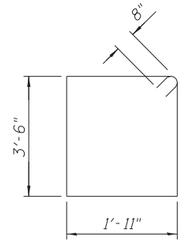
BAR u92(E)



SECTION A-A
End of Pier Cap



SECTION B-B
Middle of Pier Cap



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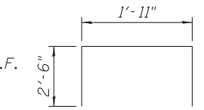

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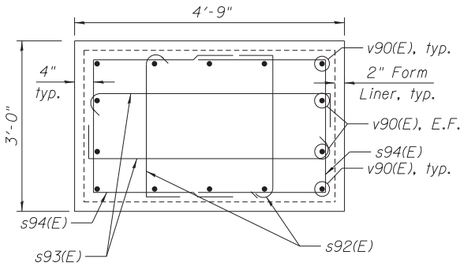
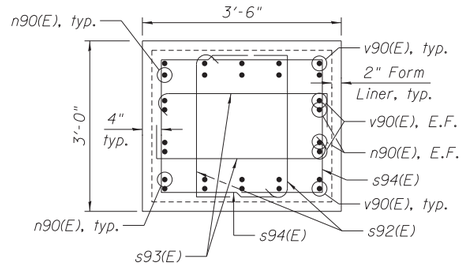


SECTION C-C
At Top of Column



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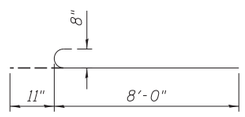
At Bottom of Column



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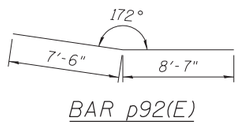

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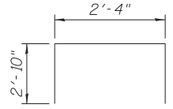

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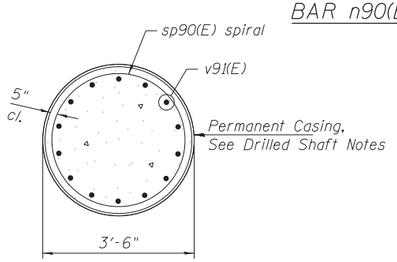
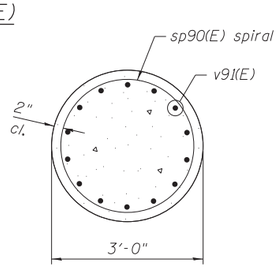
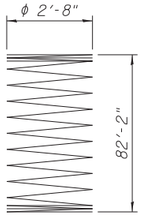


SECTION E-E



SECTION F-F



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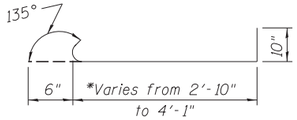
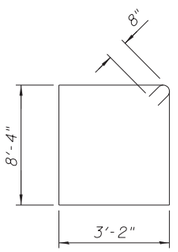


BAR s92(E)

* Bend and cut to fit in field

BAR s93(E)



BAR s95(E)

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h90(E)	4	#5	30'-7"	
h91(E)	16	#6	24'-6"	
h92(E)	10	#8	24'-6"	
h93(E)	4	#5	28'-11"	
h94(E)	16	#6	22'-10"	
h95(E)	10	#8	22'-10"	
h96(E)	2	#5	25'-9"	
h97(E)	2	#5	27'-5"	
n90(E)	56	#8	8'-11"	
n91(E)	112	#9	17'-1"	
p90(E)	10	#9	30'-9"	
p91(E)	5	#9	23'-11"	
p92(E)	10	#9	16'-1"	
p93(E)	4	#5	5'-6"	
p94(E)	10	#9	29'-1"	
p95(E)	5	#9	22'-3"	
p96(E)	4	#5	3'-10"	
s90(E)	190	#6	12'-2"	
s91(E)	112	#6	6'-11"	
s92(E)	64	#5	3'-8"	
s93(E)	64	#5	5'-5"	
s94(E)	64	#5	8'-0"	
s95(E)	97	#6	24'-4"	
sp90(E)	8	#4	82'-2"	
u90(E)	8	#6	9'-10"	
u91(E)	12	#4	7'-4"	
u92(E)	20	#6	10'-8"	
v90(E)	56	#8	10'-9"	
v91(E)	336	#9	32'-9"	
Porous Granular Embankment		Cu Yd	16	
Structure Excavation		Cu Yd	38	
Concrete Structures		Cu Yd	94.6	
Reinforcement Bars, Epoxy Coated		Pound	70,220	
Permanent Casing		Foot	628	
Drilled Shaft in Soil, 42"		Cu Yd	224	
Drilled Shaft in Rock, 36"		Cu Yd	7	
Concrete Sealer		Sq Ft	2,252	

DRILLED SHAFT NOTES

1. Contractor is responsible for determining the casing thickness and the actual tip elevation to be used. See Article 516.06(d) of the Standard Specifications.
2. Pay limits for the Permanent Casing shall be based on the minimum length shown.

NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars noted thus, 3x2 - #5 indicates 3 lines of bars with 2 lengths of bars per line.
3. Bars equally spaced, unless otherwise noted.
4. Apply concrete sealer to all exposed concrete surfaces of the pier.
5. All edges shall have standard 3/4" chamfer.

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HILLSIDE, IL 60162
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FAX: (708) 236-0901

0161709-60W25-S38-Pier1Details.dgn	DESIGNED - MI, MAF	REVISED -
USER NAME = will.mardauss	DRAWN - LAB, MAF	REVISED -
PLOT SCALE = 1:4 ':' / in.	CHECKED - MAI, MI, MWM	REVISED -
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 SECTIONS AND DETAILS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-38 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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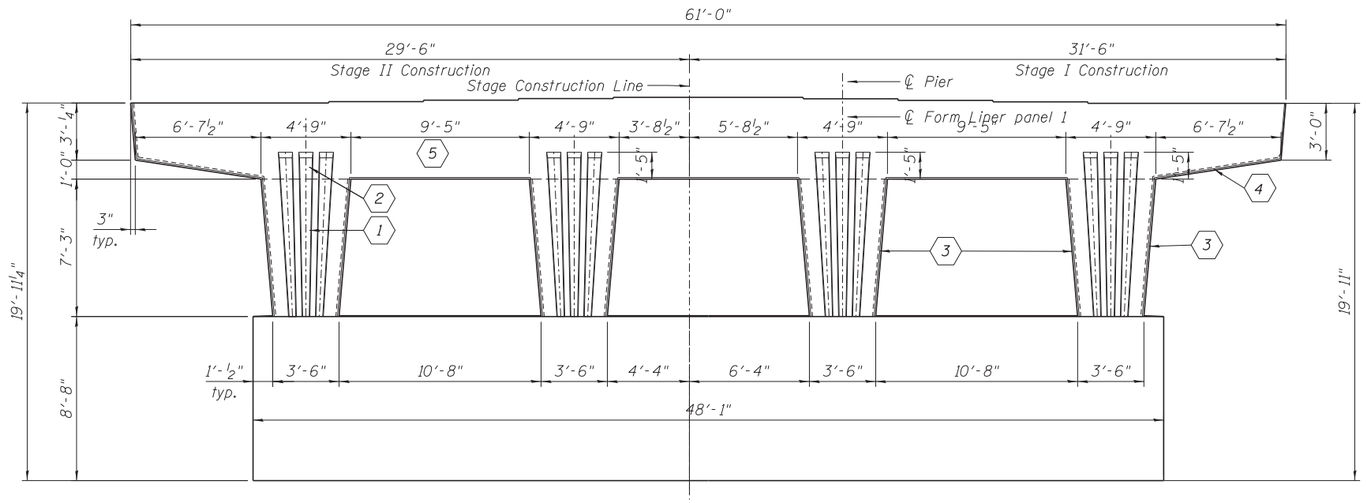
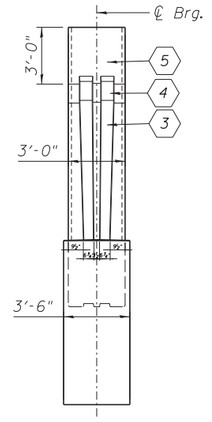
		CONTRACT NO. 60W25		
		ILLINOIS FED. AID PROJECT		



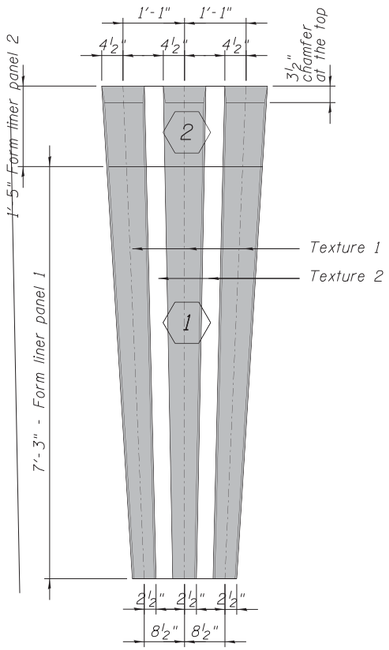
PIER 1 ELEVATION

(Looking North)

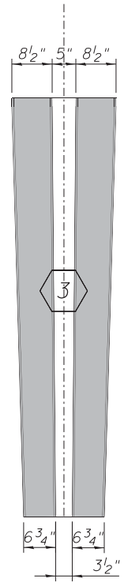


PIER 1 END VIEW

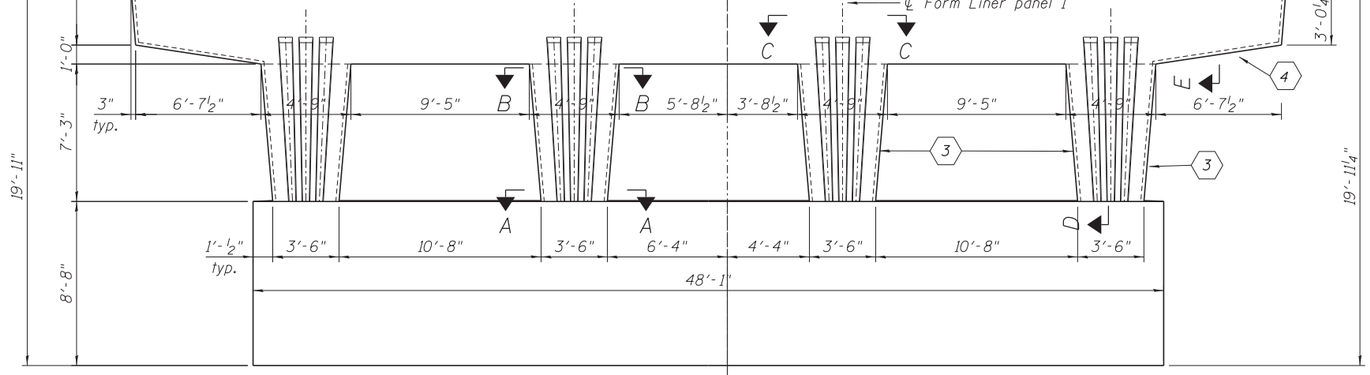
(Looking West)



FORM LINER PANEL 1 & 2 -

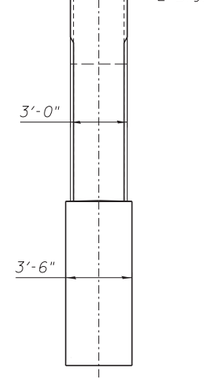


FORM LINER PANEL 3 -



PIER 1 ELEVATION

(Looking South)



Section D-D

(Looking East)

1 2 3 4 Textured Form Liner: Texture 1 & 2

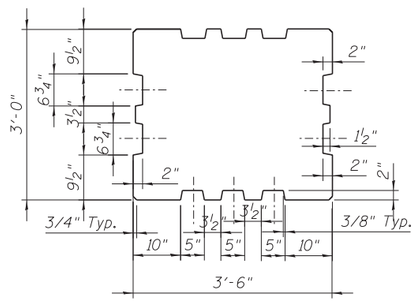
5 Textured Form Liner: Texture 1 & 2

Note: For surface indicated as 5, contractor can chose to build those large protrusion directly into there forms, providing a smooth uniform surface and stain all piers and caps with light gray semi transparent stain.

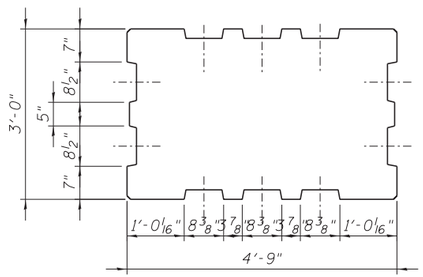
NOTES:

BILL OF MATERIAL

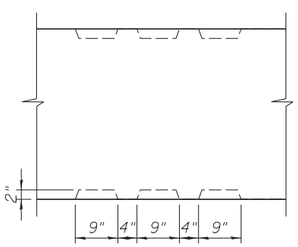
ITEM	UNIT	TOTAL
Form Liner Textured Surface	SQ FT	920



Section A-A



Section B-B



Section C-C

Section E-E

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HBM ENGINEERING GROUP, LLC. CONSULTING & DESIGN INSPECTION & RATING RESEARCH & TESTING	4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162 PHONE: (708) 236-0900 FAX: (708) 236-0901		
0161709-60W25-S39-PierlArch.dgn	DESIGNED - MI. LAB	REVISED -	
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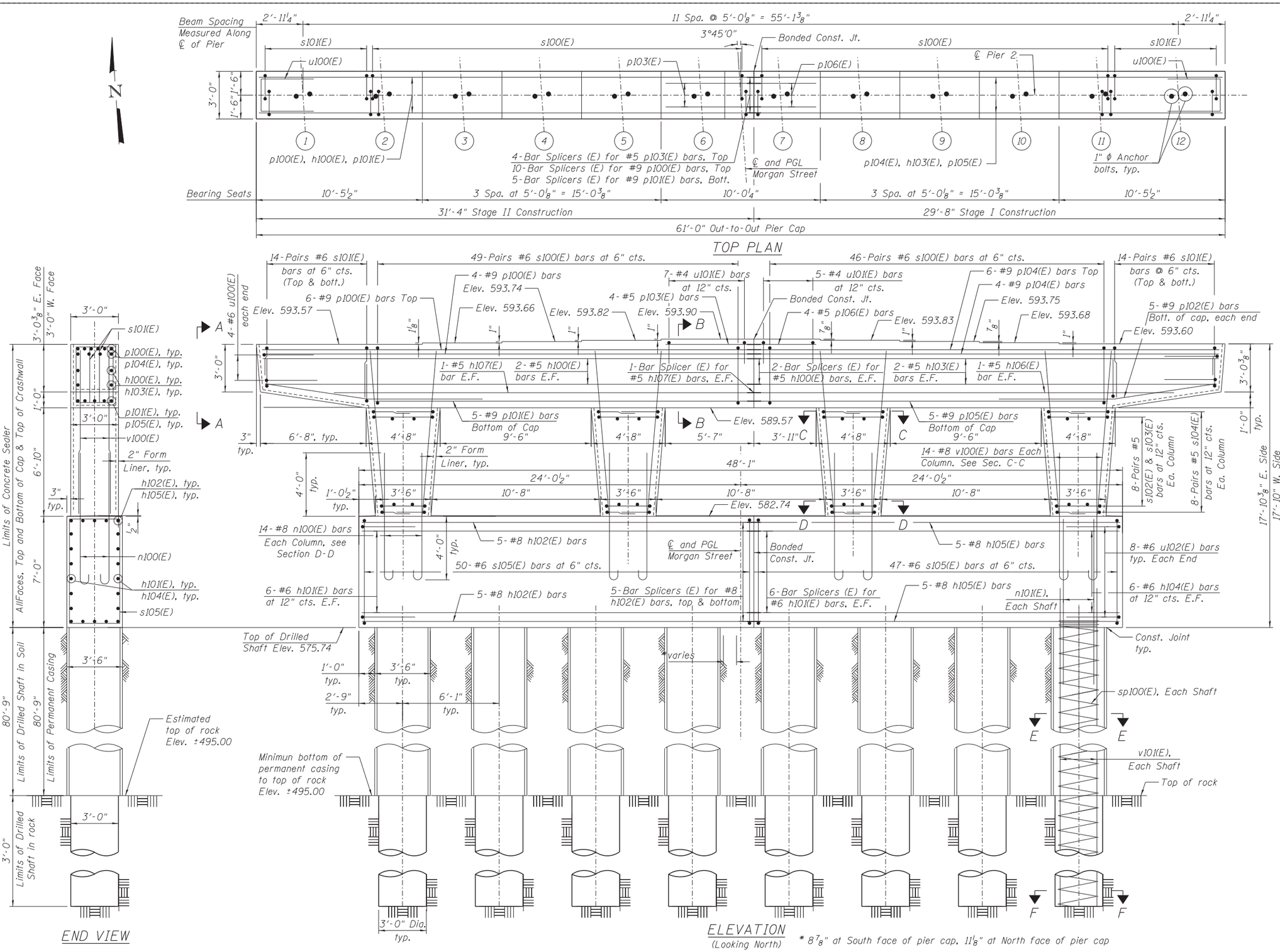
PLOT SCALE = 4:0.0000 '' / in.	CHECKED - MAI, MAI, JJS	REVISED -	
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 ARCHITECTURAL DETAILS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-39 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	183
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars equally spaced, unless otherwise noted.
3. Apply concrete sealer to all exposed concrete surfaces of the pier.
4. All edges shall have standard 3/4" chamfer.
5. See Sheet S1-41 for Bill of Material, Section A-A, B-B, C-C, D-D, E-E & F-F, and Drilled Shaft details.
6. Pour steps monolithically with cap.
7. Space reinforcement in cap to miss anchor bolts.
8. The quantities and reinforcement detailing are based on the top of shaft and the estimated elevations shown and may change based on the actual elevations encountered at each shaft and the final top of shaft elevation.
9. Contractor is responsible for determining the casing thickness and the actual tip elevation to be used. See Article 516.06 (d) of the Standard Specifications. Pay limits for the Permanent Casing shall be based on the minimum length shown.
10. For Bearing orientation layout plan, see Sheet S1-25.

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"

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4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162 PHONE: (708) 236-0900 FAX: (708) 236-0901

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USER NAME = will.mardauss	DRAWN - LAB. MAF	REVISED -	
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PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 PLAN AND ELEVATION
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-40 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	184
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

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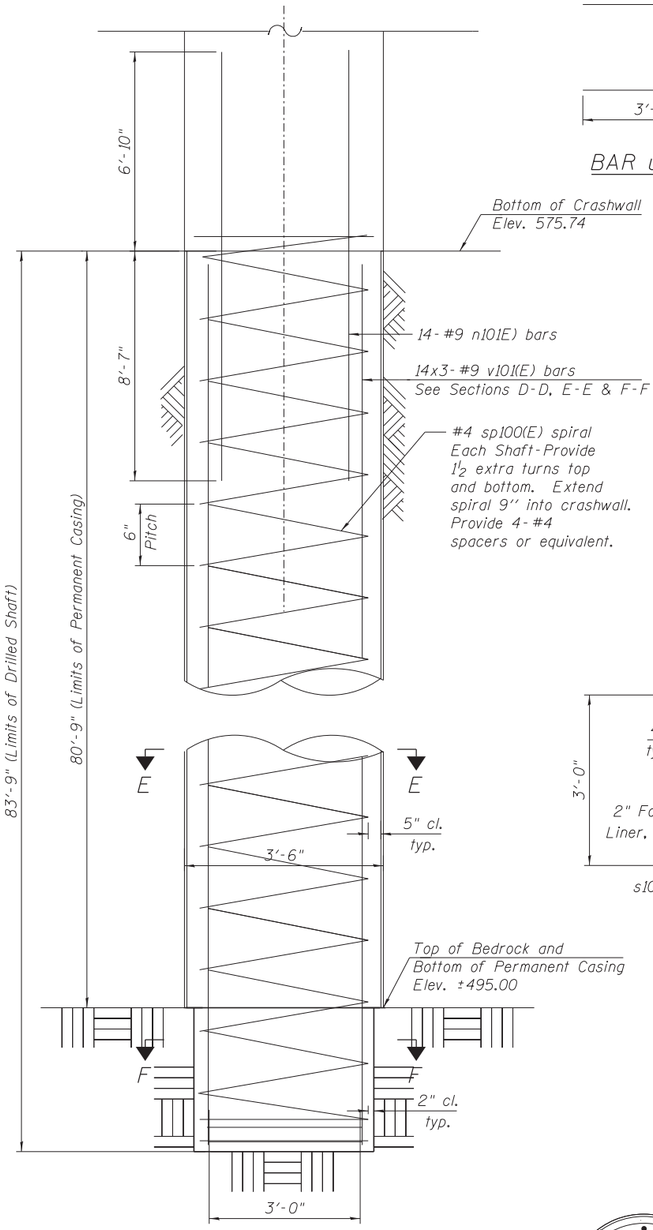
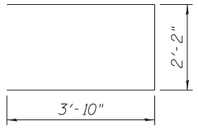


END VIEW



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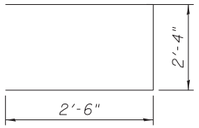

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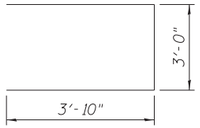

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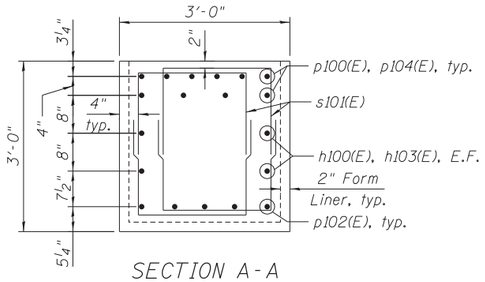
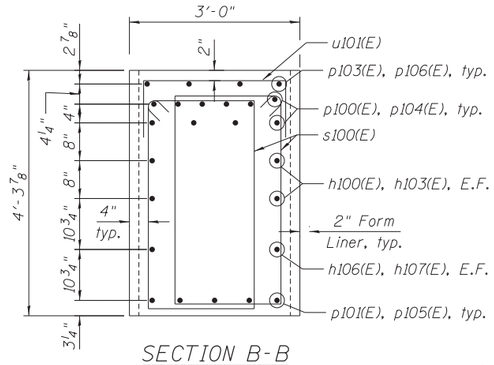
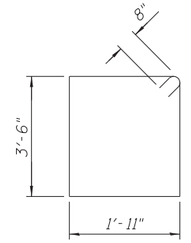


SECTION A-A
End of Pier Cap



SECTION B-B
Middle of Pier Cap



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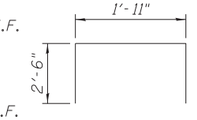

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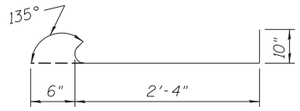

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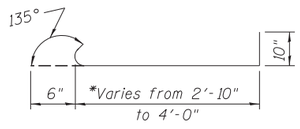
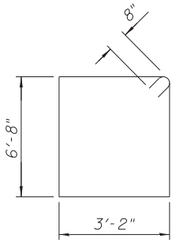


* Bend and cut to fit in field

BAR s103(E)



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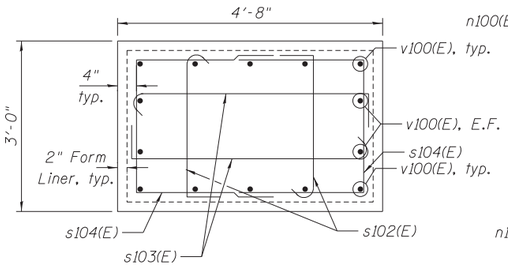
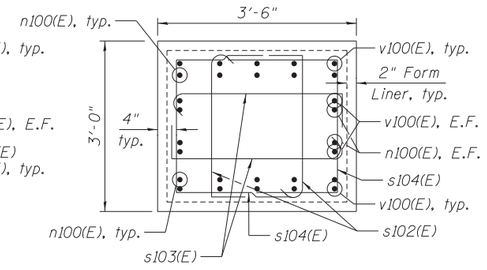
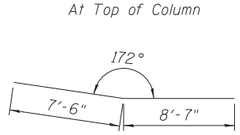


SECTION C-C
At Top of Column



SECTION D-D
At Bottom of Column



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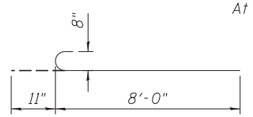

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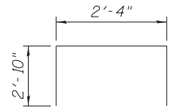

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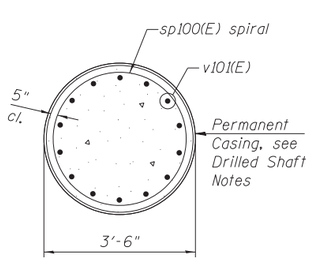
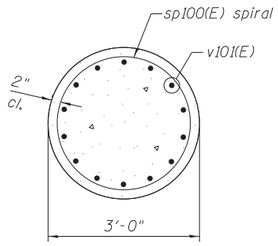
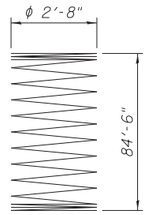


SECTION E-E



SECTION F-F



BAR sp100(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h100(E)	4	#5	30'-7"	
h101(E)	12	#6	24'-6"	
h102(E)	10	#8	24'-6"	
h103(E)	4	#5	28'-11"	
h104(E)	12	#6	22'-10"	
h105(E)	10	#8	22'-10"	
h106(E)	2	#5	25'-9"	
h107(E)	2	#5	27'-5"	
n100(E)	56	#8	8'-11"	
n101(E)	112	#9	15'-5"	
p100(E)	10	#9	30'-9"	
p101(E)	5	#9	23'-11"	
p102(E)	10	#9	16'-1"	
p103(E)	4	#5	5'-6"	
p104(E)	10	#9	29'-1"	
p105(E)	5	#9	22'-3"	
p106(E)	4	#5	3'-10"	
s100(E)	190	#6	12'-2"	
s101(E)	112	#6	6'-11"	
s102(E)	64	#5	3'-8"	
s103(E)	64	#5	5'-4"	
s104(E)	64	#5	8'-0"	
s105(E)	97	#6	21'-0"	
sp100(E)	8	#4	84'-6"	
u100(E)	8	#6	9'-10"	
u101(E)	12	#4	7'-4"	
u102(E)	16	#6	10'-8"	
v100(E)	56	#8	10'-6"	
v101(E)	336	#9	33'-7"	
Porous Granular Embankment		Cu Yd	71	
Structure Excavation		Cu Yd	54	
Concrete Structures		Cu Yd	83.8	
Reinforcement Bars, Epoxy Coated		Pound	69,870	
Permanent Casing		Foot	646	
Drilled Shaft in Soil, 42"		Cu Yd	231	
Drilled Shaft in Rock, 36"		Cu Yd	7	
Concrete Sealer		Sq Ft	2,048	

DRILLED SHAFT NOTES

1. Contractor is responsible for determining the casing thickness and the actual tip elevation to be used. See Article 516.06(d) of the Standard Specifications.
2. Pay limits for the Permanent Casing shall be based on the minimum length shown.

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"

NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars noted thus, 3x2-#5 indicates 3 lines of bars with 2 lengths of bars per line.
3. Bars equally spaced, unless otherwise noted.
4. Apply concrete sealer to all exposed concrete surfaces of the pier.
5. All edges shall have standard ¾" chamfer.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 SECTIONS AND DETAILS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-41 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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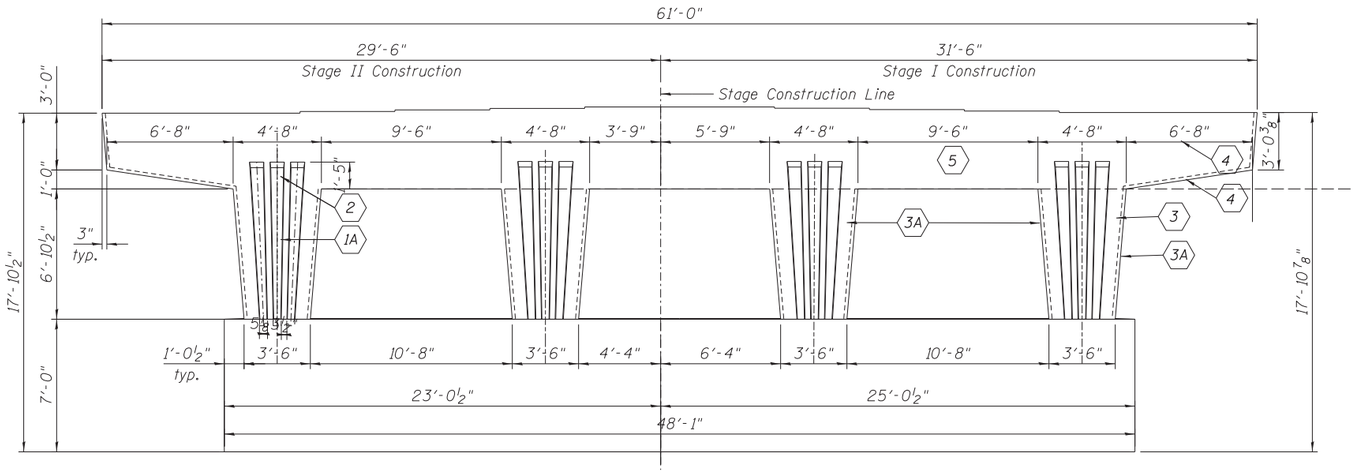
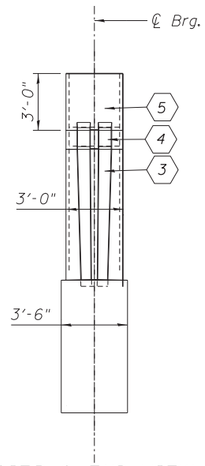
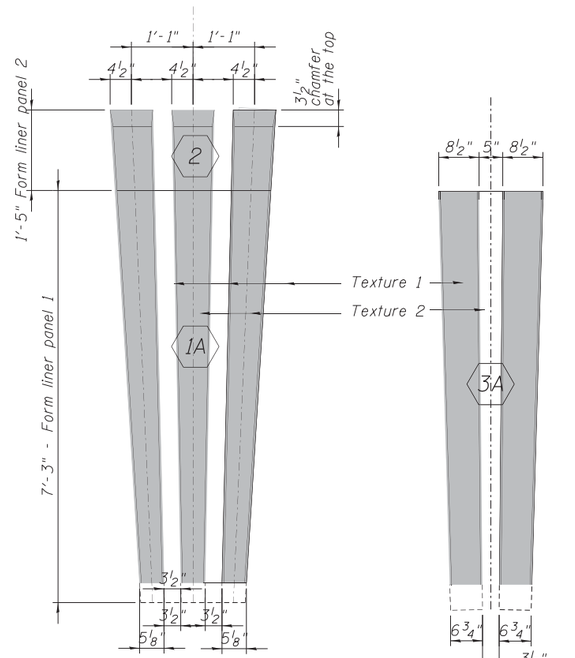
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



PIER 2 ELEVATION
(Looking North)



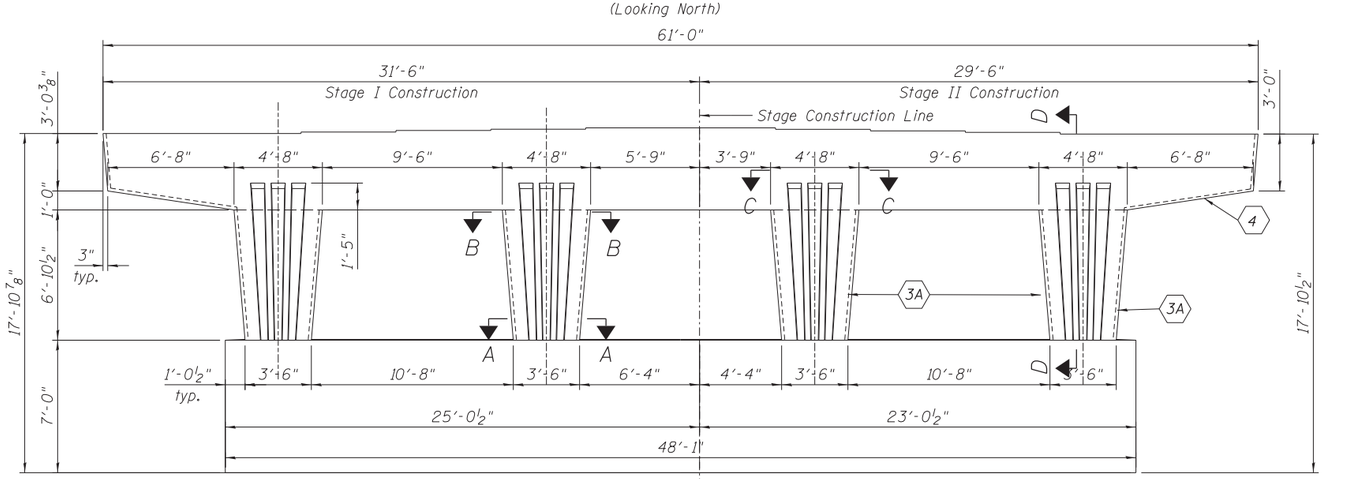
PIER 2 END VIEW
(Looking West)



FORM LINER PANEL 1A & 2 -

FORM LINER PANEL 3A -

Note:
For panel 1A and 3A use the same master mold as for panel 1. but shorter. Locate panel the same as on Pier 1. omit the lower portion to accommodate the shorter pier.



PIER 2 ELEVATION
(Looking South)

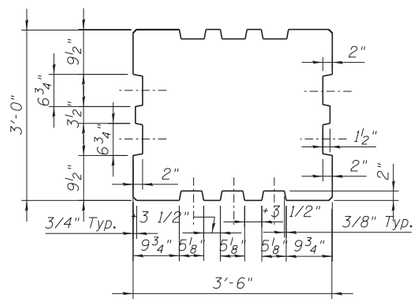
PIER 2 SECTION D-D
(Looking East)

1 2 3 4 Textured Form Liner: Texture 1 & 2

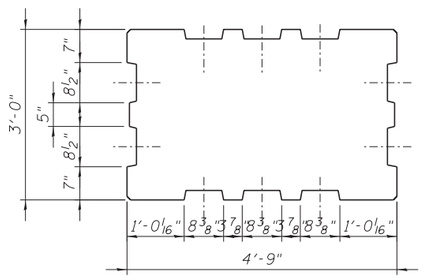
5 Textured Form Liner: Texture 2

Note: For surface indicated as 5, contractor can chose to build those large protrusion directly into there forms, providing a smooth uniform surface and stain all piers and caps with light gray semi transparent stain.

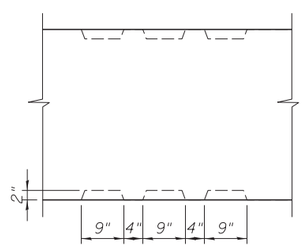
NOTES:



SECTION A-A
At Bottom of Column



SECTION B-B
At Top of Column



SECTION C-C

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Form Liner Textured Surface	SQ FT	893

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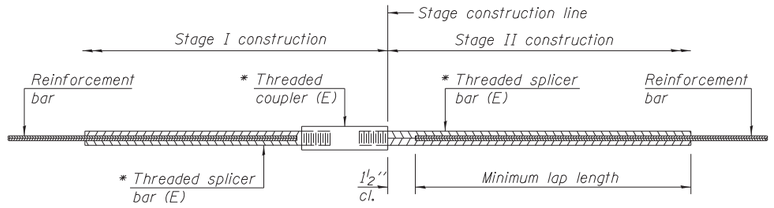
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 ARCHITECTURAL DETAILS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-42 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	186
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



STANDARD BAR SPLICER ASSEMBLY

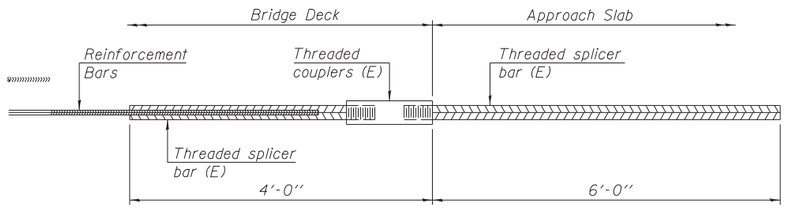
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C
Table 5: Epoxy bar, Class C
Table 6: Epoxy bar, Top bar top, Class C

Threaded splicer bar length = min. lap length + 1½" + thread length

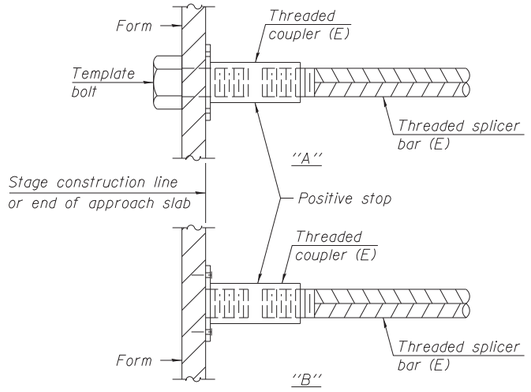
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	694	Table 5
Pier 1	#5	10	Table 5
Pier 1	#6	16	Table 5
Pier 1	#8	10	Table 5
Pier 1	#9	15	Table 5
Pier 2	#5	10	Table 5
Pier 2	#6	12	Table 5
Pier 2	#8	10	Table 5
Pier 2	#9	15	Table 5
South Approach	#4	25	Table 5
South Approach	#5	49	Table 5
North Approach	#4	20	Table 5
North Approach	#5	36	Table 5



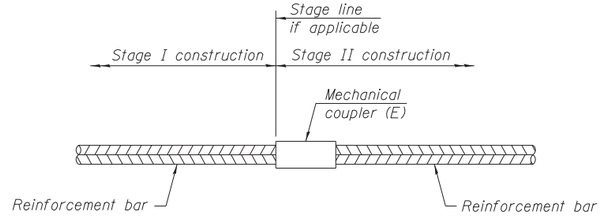
BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



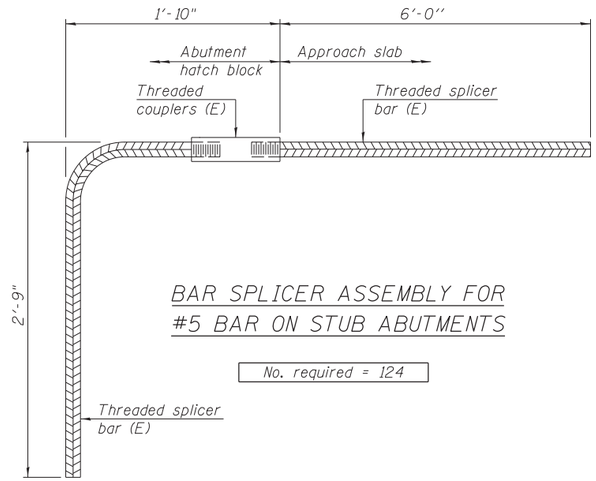
INSTALLATION AND SETTING METHODS

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



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 124

NOTES

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

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

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

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

BSD-1 1-27-12

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4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-43 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	187
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

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BORING LOG 2113-B-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: CIRCLE INTERCHANGE RECONSTRUCTION
Location: Chicago, IL

Datum: NGVD
Elevation: 594.97 ft
North: 1898089.14 ft
East: 1169854.00 ft
Station: 3605+74.45
Offset: 08.76 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	594.8	2.75-inch thick ASPHALT --PAVEMENT--						
	593.8	11.25-inch thick CONCRETE --PAVEMENT--						
		Loose to very dense, brown SANDY LOAM to SAND, trace gravel --FILL--			1	14 26 33	NP	31
			5		2	12 10 9	NP	18
					3	9 9 7	NP	25
			10		4	4 6 6	NP	28
					5	8 6 7	NP	36
			15		6	3 4 4	NP	43
	579.5	Very soft to medium stiff, gray CLAY to SILTY CLAY			7	0 1 1	0.33 B	23
			20		8	0 0 1	0.16 B	25
					9	0 0 0	0.08 B	26
			25		10	0 1 1	0.08 B	26
			30		11	0 1 1	0.25 B	28
					12	1 1 1	0.08 B	28
			35		13	0 1 2	0.18 B	28
			40		14	0 1 2	0.33 B	26
			45		15	0 1 2	0.41 B	27
			50		16	1 1 2	0.57 B	26

GENERAL NOTES

Begin Drilling: 02-18-2013 Complete Drilling: 02-24-2013
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR
Driller: R&J Logger: F.Bozga Checked by: C. Marin
Drilling Method: 2.25" SSA to 15', Mud Rotary 15' thereafter

WATER LEVEL DATA

While Drilling: 13.00 ft
At Completion of Drilling: MUD (10')
Time After Drilling: NA
Depth to Water: NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG 2113-B-01

WEI Job No.: 1100-04-01

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Project: CIRCLE INTERCHANGE RECONSTRUCTION
Location: Chicago, IL

Datum: NGVD
Elevation: 594.97 ft
North: 1898089.14 ft
East: 1169854.00 ft
Station: 3605+74.45
Offset: 08.76 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	543.0	Stiff to hard, gray SILTY CLAY LOAM, trace gravel --L_L(%)=28, P_L(%)=15-- --%Gravel=2.2-- --%Sand=16.9-- --%Silt=54.8-- --%Clay=26.1-- --A-6 (8)--			17	3 5 7	1.97 B	16
			60		18	6 9 14	5.82 B	13
			65		19	6 8 14	2.13 B	22
	528.2	Medium dense, gray SILTY LOAM, trace clay lenses --%Gravel=1.1-- --%Sand=6.7-- --%Silt=77.2-- --%Clay=15.0-- --A-4 (0)--			20	7 13 15	NP	20
	523.2	Hard, gray SILTY CLAY LOAM, trace gravel	75		21	19 32 41	> 4.50 P	12
			85		22	14 25 37	> 4.50 P	16
			85		23	17 26 47	> 4.50 P	15
	508.0	Very dense, gray SANDY LOAM	90		24	40 50/4"	NP	14
	503.0	Very dense, gray GRAVELLY SAND, some dolostone fragments --AUGER REFUSAL--	95		25	50/3"	NP	14
	499.0	Boring terminated at 96.00 ft	100					

GENERAL NOTES

Begin Drilling: 02-18-2013 Complete Drilling: 02-24-2013
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR
Driller: R&J Logger: F.Bozga Checked by: C. Marin
Drilling Method: 2.25" SSA to 15', Mud Rotary 15' thereafter

WATER LEVEL DATA

While Drilling: 13.00 ft
At Completion of Drilling: MUD (10')
Time After Drilling: NA
Depth to Water: NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 11000401.GPJ WANGENG.GDT 3/18/13

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS I
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-44 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	188
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

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BORING LOG 2113-B-02

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **CIRCLE INTERCHANGE RECONSTRUCTION**
Location: **Chicago, IL**

Datum: NGVD
Elevation: 577.90 ft
North: 1898016.29 ft
East: 1169807.29 ft
Station: 3605+02.99
Offset: 40.05 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	577.3	7-inch thick ASPHALT --PAVEMENT--						
	576.3	12-inch thick CONCRETE --PAVEMENT--						
		Very dense, brown GRAVELLY SAND --FILL--			1	36 50/3	NP	6
			5		2	3 5 5	NP	13
	572.4	Very soft, gray CLAY to SILTY CLAY, trace gravel			3	1 1 1	0.33 B	22
			10		4	0 0 0	0.16 B	28
					5	0 0 1	0.16 B	27
			15		6	0 0 0	0.16 B	28
					7	0 0 0	NA	
			20		8	0 0 1	0.08 B	27
					9	0 0 1	0.16 B	28
			25		10	1 1 1	0.33 B	23
	545.9	Medium stiff, gray SILTY CLAY			11	0 0 3	0.16 B	27
			30		12	0 2 2	0.41 B	27
			35		13	2 3 5	0.70 B	22
	540.9	Hard, gray SILTY CLAY LOAM, trace gravel			14	5 7 11	> 4.50 P	15
	535.9	Medium dense, gray SILTY LOAM, trace gravel	45		15	5 7 12	NP	15
		--Sand seams--	50		16	5 10 15	NP	15

GENERAL NOTES

Begin Drilling: **02-25-2013** Complete Drilling: **02-25-2013**
Drilling Contractor: **Wang Testing Services** Drill Rig: **B-57 TMR**
Driller: **R&J** Logger: **D.Kolpacki** Checked by: **C. Marin**
Drilling Method: **2.25" SSA to 10', Mud Rotary 10' thereafter**

WATER LEVEL DATA

While Drilling: **5.00 ft**
At Completion of Drilling: **MUD**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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BORING LOG 2113-B-02

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **CIRCLE INTERCHANGE RECONSTRUCTION**
Location: **Chicago, IL**

Datum: NGVD
Elevation: 577.90 ft
North: 1898016.29 ft
East: 1169807.29 ft
Station: 3605+02.99
Offset: 40.05 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	525.9	Medium dense to dense, gray SILTY LOAM, trace gravel						
			55		17	6 7 11	NP	12
		--L_L(%)=24, P_L(%)=15-- --%Gravel=1.5-- --%Sand=29.1-- --%Silt=53.4-- --%Clay=16.0-- --A-4 (4)--	60		18	13 21 25	NP	12
	515.9	Hard, gray SILTY CLAY LOAM, trace gravel						
		--L_L(%)=27, P_L(%)=14-- --%Gravel=0.4-- --%Sand=5.9-- --%Silt=69.6-- --%Clay=24.1-- --A-6 (10)--	65		19	11 17 21	> 4.50 P	13
	510.9	Very dense, gray SILTY LOAM, trace gravel						
		--%Gravel=2.1-- --%Sand=41.8-- --%Silt=53.6-- --%Clay=2.6-- --A-4 (0)--	70		20	25 47 53	NP	14
	505.9	Very dense, gray, fine SAND						
			75		21	23 43 53	NP	23
	500.9	Very dense, gray GRAVELLY SAND, little dolostone fragments			22	50/4	NP	11
			80					
	495.9	Strong, excellent rock quality, light gray, fresh, slightly fractured, joint breaks with little to no infill, slightly vuggy DOLOSTONE Run#1 : 82 to 92 feet --RECOVERY=98% --RQD=96%	85			CORE		
		ROCK MASS RATING: Strength of rock material = 12 Drill core quality RQD = 20 Spacing of joints = 20 Condition of joints =20 Groundwater condition =10	90		1			
	485.9	Boring terminated at 92.00 ft						
			95					
			100					

GENERAL NOTES

Begin Drilling: **02-25-2013** Complete Drilling: **02-25-2013**
Drilling Contractor: **Wang Testing Services** Drill Rig: **B-57 TMR**
Driller: **R&J** Logger: **D.Kolpacki** Checked by: **C. Marin**
Drilling Method: **2.25" SSA to 10', Mud Rotary 10' thereafter**

WATER LEVEL DATA

While Drilling: **5.00 ft**
At Completion of Drilling: **MUD**
Time After Drilling: **NA**
Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 11000401.GPJ WANGENG.GDT 3/18/13

FILE PATH = C:\Users\will.mardauss\Desktop\Morgan\0161709-60W25-S45-Boring2.dgn

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4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162 PHONE: (708) 236-0900 FAX: (708) 236-0901

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PLOT SCALE = 01.0000 ' / in.	CHECKED - MI, MAF	REVISED -
PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS II
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-45 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	189
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		

Wang Engineering
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1145 N Main Street
Lombard, IL 60148
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Fax: 630 953-9938

BORING LOG 2113-B-03

WEI Job No.: 1100-04-01

Client: AECOM
Project: CIRCLE INTERCHANGE RECONSTRUCTION
Location: Chicago, IL

Datum: NGVD
Elevation: 594.20 ft
North: 1897826.77 ft
East: 1169837.46 ft
Station: 3603+12.67
Offset: 15.39 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	593.8	5-inch thick ASPHALT --PAVEMENT--						
	592.9	11-inch thick CONCRETE --PAVEMENT--						
		Very loose to loose, brown, fine SAND, trace gravel and brick fragments --FILL--			1	2 3 4	NP	18
			5		2	2 1 2	NP	16
					3	1 3 3	NP	26
	586.2	Medium stiff to stiff, gray SILTY CLAY LOAM, trace gravel and brick fragments --FILL--	10		4	1 2 3	0.75 P	43
					5	1 2 3	1.64 B	21
	581.2	Very soft to soft, gray CLAY to SILTY CLAY						
			15		6	0 2 2	0.45 B	38
					7	2 1 1	0.33 B	28
			20		8	0 1 2	0.16 B	27
					9	0 1 1	0.08 B	27
			25		10	0 0 0	0.08 B	29
			30		11	0 0 2	0.08 B	26
					12	0 1 1	0.08 B	28
		--L_L(%)=33, P_L(%)=15-- --%Gravel=1.0-- --%Sand=15.5-- --%Silt=49.9-- --%Clay=33.6-- --A-6 (14)--	35		13	0 1 1	0.25 B	26
			40		14	0 0 2	0.33 B	27
			45		15	0 1 3	0.41 B	25
			50		16	2 3 3	0.33 B	22

GENERAL NOTES

Begin Drilling: 02-15-2013 Complete Drilling: 02-18-2013
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR
Driller: R&J Logger: F.Bozga Checked by: C. Marin
Drilling Method: 2.25" SSA to 15', Mud Rotary 15' thereafter

WATER LEVEL DATA

While Drilling: 87.00 ft
At Completion of Drilling: MUD (15')
Time After Drilling: NA
Depth to Water: NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 11000401.GPJ WANGENG.GDT 3/18/13

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BORING LOG 2113-B-03

WEI Job No.: 1100-04-01

Client: AECOM
Project: CIRCLE INTERCHANGE RECONSTRUCTION
Location: Chicago, IL

Datum: NGVD
Elevation: 594.20 ft
North: 1897826.77 ft
East: 1169837.46 ft
Station: 3603+12.67
Offset: 15.39 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	542.7	Very stiff, gray SILTY CLAY LOAM, trace gravel						
			55		17	6 7 10	3.28 B	20
	532.2	Medium dense, gray SANDY LOAM	60		18	6 7 14	2.55 B	20
	527.2	Stiff to hard, gray SILTY CLAY						
			65		19	9 8 8	NP	15
			70		20	6 6 7	1.80 B	27
			75		21	28 28 50	7.71 S	12
			80		22	13 20 30	8.04 B	16
		--L_L(%)=35, P_L(%)=13-- --%Gravel=0.1-- --%Sand=1.0-- --%Silt=60.6-- --%Clay=38.2-- --A-6 (21)--	85		23	12 12 19	3.36 B	20
	507.2	Very dense, gray GRAVELLY SANDY LOAM, some dolostone fragments						
			90		24	43 50/5	NP	9
		--HARD DRILLING--						
		--AUGER REFUSAL--			25	50/1	NP	4
	499.7	Boring terminated at 94.50 ft	95					
			100					

GENERAL NOTES

Begin Drilling: 02-15-2013 Complete Drilling: 02-18-2013
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR
Driller: R&J Logger: F.Bozga Checked by: C. Marin
Drilling Method: 2.25" SSA to 15', Mud Rotary 15' thereafter

WATER LEVEL DATA

While Drilling: 87.00 ft
At Completion of Drilling: MUD (15')
Time After Drilling: NA
Depth to Water: NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 11000401.GPJ WANGENG.GDT 3/18/13

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PLOT DATE = 6/14/2013	DATE - 6/17/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS III
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-46 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	190
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

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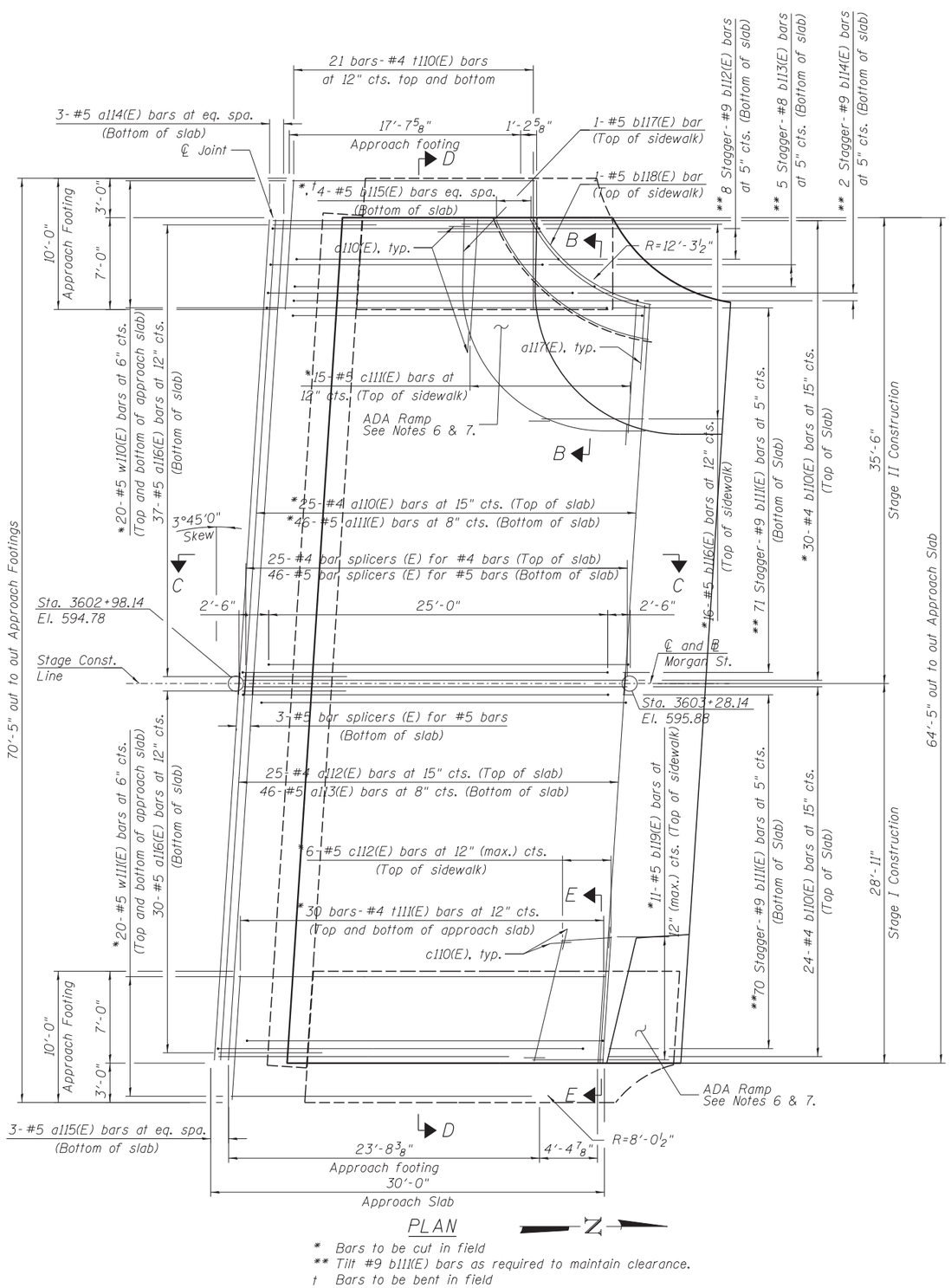


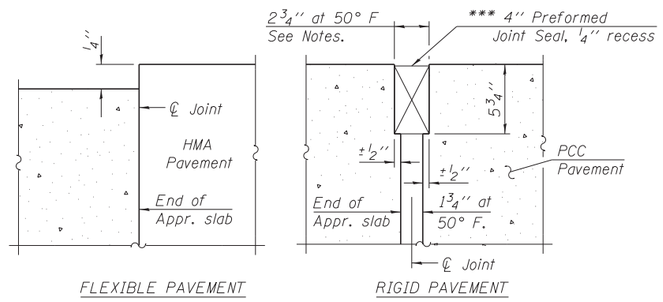
PLAN

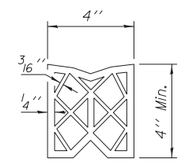
Z

* Bars to be cut in field

** Tilt #9 b111(E) bars as required to maintain clearance.

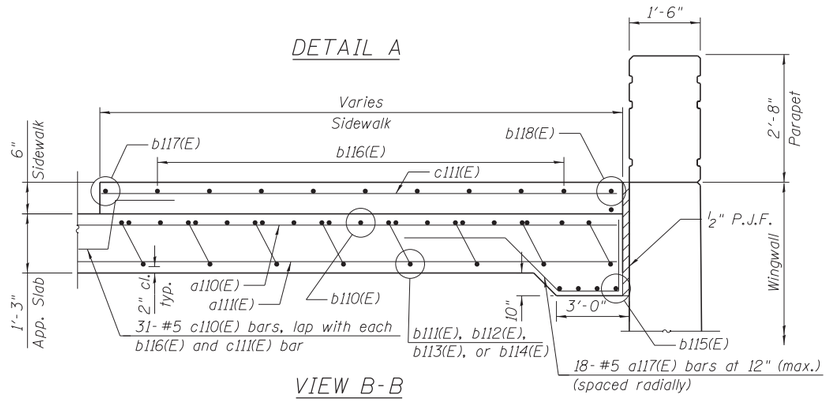
t Bars to be bent in field



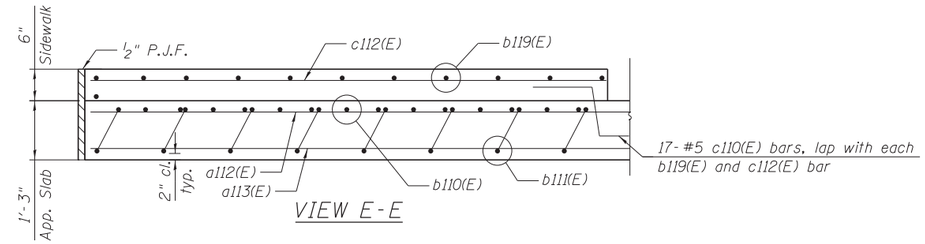


PREFORMED JOINT SEAL

DETAIL A



VIEW B-B



VIEW E-E

NOTES:

1. See Sheet S1-48 for Sections C-C and D-D.
2. a110(E), a111(E), a112(E), and a113(E) bar spacings measured along ℄ Rdwy.
3. The joint opening shall be determined per Article 520.04 except that on jointless structures, the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as half the bridge length plus the approach slab length. The minimum dimension shall be 1 1/2" for installation purposes.
4. For ADA ramp locations, layout, elevations and details see Roadway plans.
5. Provide 1/2" P.J.F. along the entire length of the South, East and West edges of the Approach Slab. See Detail A.
6. For ADA Ramps plan, details and top of sidewalk elevations, see Roadway Plans.
7. Bars in the sidewalk interfering with the ADA Ramp Construction shall be bent and/or cut to fit based on the sidewalk depth in these areas.

*** Cost included with Concrete Superstructure.

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PHONE: (708) 236-0900 FAX: (708) 236-0901

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH APPROACH SLAB PLAN
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-47 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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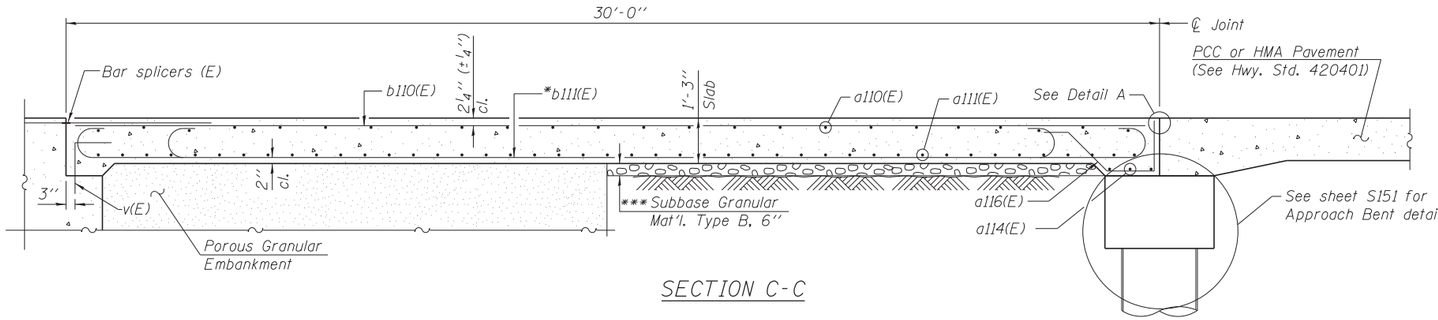
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



SECTION C-C

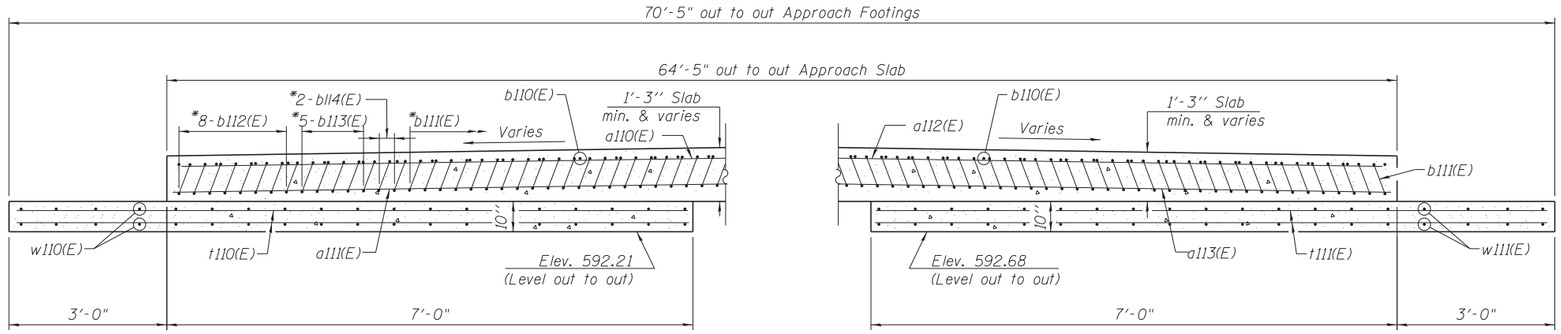
* Tilt #9 b111(E), b112(E), b113(E), and b114(E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure.

BILL OF MATERIAL

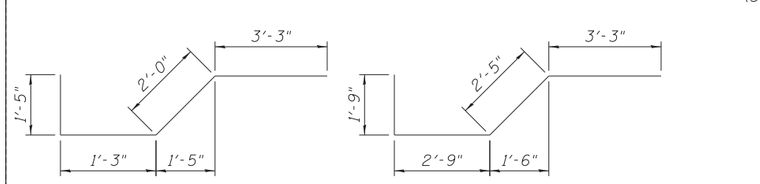
Bar	No.	Size	Length	Shape
a110(E)	25	#4	35'-2"	
a111(E)	46	#5	35'-2"	
a112(E)	25	#4	28'-7"	
a113(E)	46	#5	28'-7"	
a114(E)	3	#5	35'-2"	
a115(E)	3	#5	28'-7"	
a116(E)	67	#5	7'-11"	
a117(E)	18	#5	10'-2"	
b110(E)	54	#4	29'-8"	
b111(E)	141	#9	29'-9"	
b112(E)	8	#9	22'-9"	
b113(E)	5	#9	25'-6"	
b114(E)	2	#9	28'-9"	
b115(E)	4	#5	15'-6"	
b116(E)	16	#5	14'-4"	
b117(E)	1	#5	25'-5"	
b118(E)	1	#5	11'-5"	
b119(E)	11	#5	5'-3"	
c110(E)	48	#5	2'-4"	
c111(E)	15	#5	15'-9"	
c112(E)	6	#5	9'-6"	
t110(E)	42	#4	9'-8"	
t111(E)	60	#4	9'-8"	
w110(E)	40	#5	19'-2"	
w111(E)	40	#5	27'-10"	

Concrete Structures	Cu. Yd.	13.9
Concrete Superstructure	Cu. Yd.	95.6
Bridge Deck Grooving	Sq. Yd.	183
Protective Coat	Sq. Yd.	213
Reinforcement Bars, Epoxy Coated	Pound	25,090
Dectectable Warnings (Special)	Sq. Ft.	8



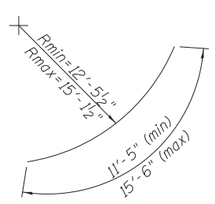
SECTION D-D

(See Plan on Sheet S1-47 for dimensions not shown)

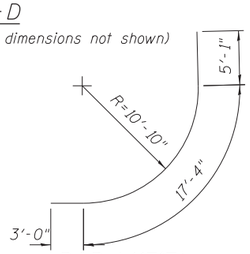


BAR a116(E)

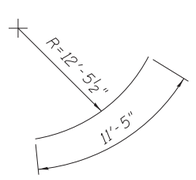
BAR a117(E)



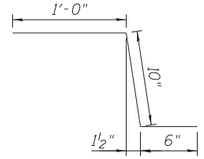
BAR b115(E)



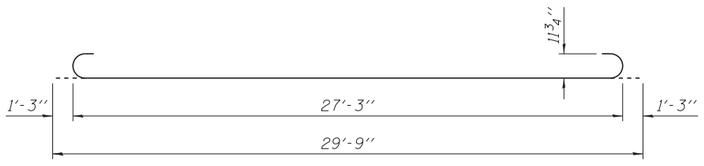
BAR b117(E)



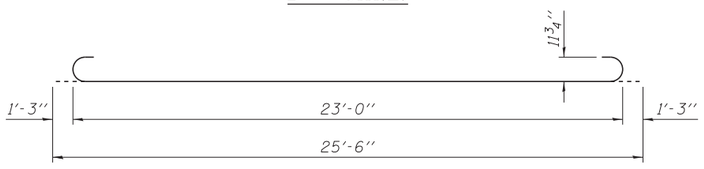
BAR b118(E)



BAR c110(E)



BAR b111(E)



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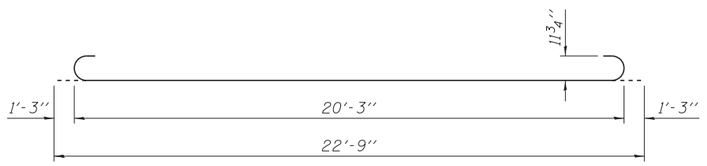
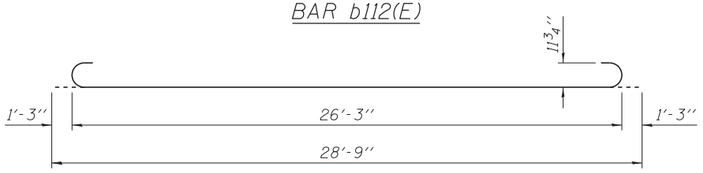


BAR b112(E)



BAR b114(E)

NOTES:

1. See Sheet S1-47 for Detail A.
2. Approach slab and sidewalk concrete shall be paid for as Concrete Superstructure.
3. Approach footing concrete shall be paid for as Concrete Structures.
4. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
5. For v(E) bar details, see Sheet S1-29.
6. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
7. For bar splicer details, see Sheet S1-43.
8. Cost of excavation for approach footing included with Concrete Structures.
9. For Porous Granular Embankment and drainage treatment details, see sheet S1-29.

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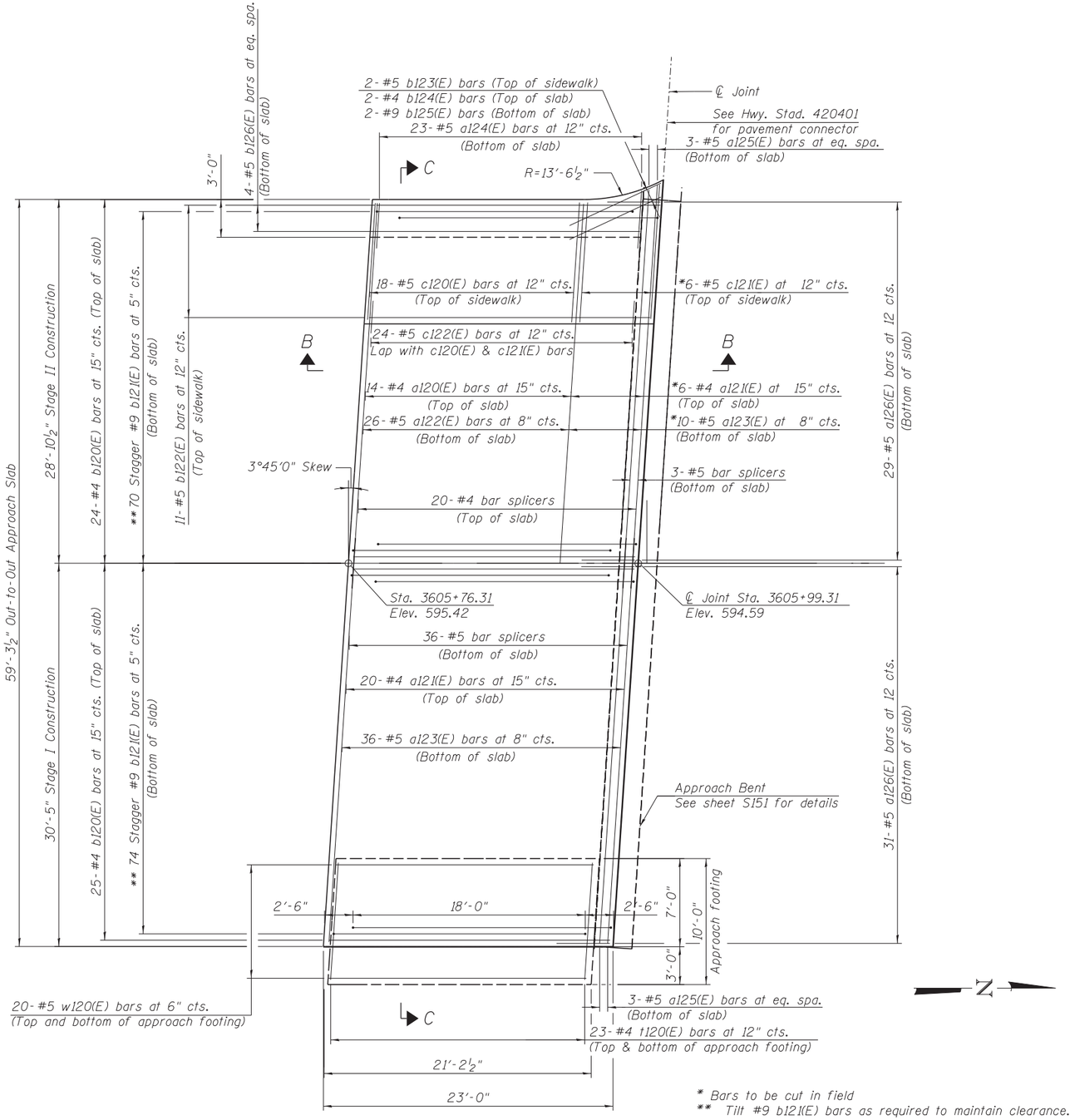
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH APPROACH SLAB SECTIONS AND DETAILS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-48 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	192
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



PLAN

* Bars to be cut in field
** Tilt #9 b121(E) bars as required to maintain clearance.

NOTES:

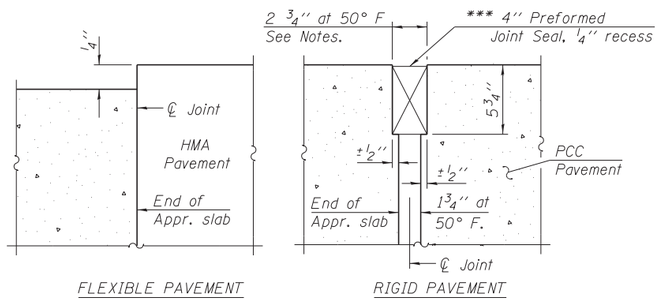
1. See sheet S1-50 for Sections C-C and D-D.

2. a120(E), a121(E), a122(E) and a123(E) bar spacings measured along ℄ Rdwy.

3. The joint opening shall be determined per Article 520.04 except that on jointless structures, the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as half the bridge length plus the approach slab length. The minimum dimension shall be 1½" for installation purposes.

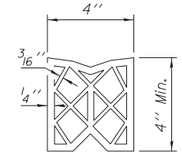
4. Provide 1/2" P.J.F. along the entire length of the North, East and West edgges of the Approach Slab. See Detail A.

*** Cost included with Concrete Superstructure.



FLEXIBLE PAVEMENT RIGID PAVEMENT

DETAIL A



PREFORMED JOINT SEAL

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	PLOT SCALE = 5.0000 '' / in.	CHECKED - MAI, MI, MWM	REVISED -	
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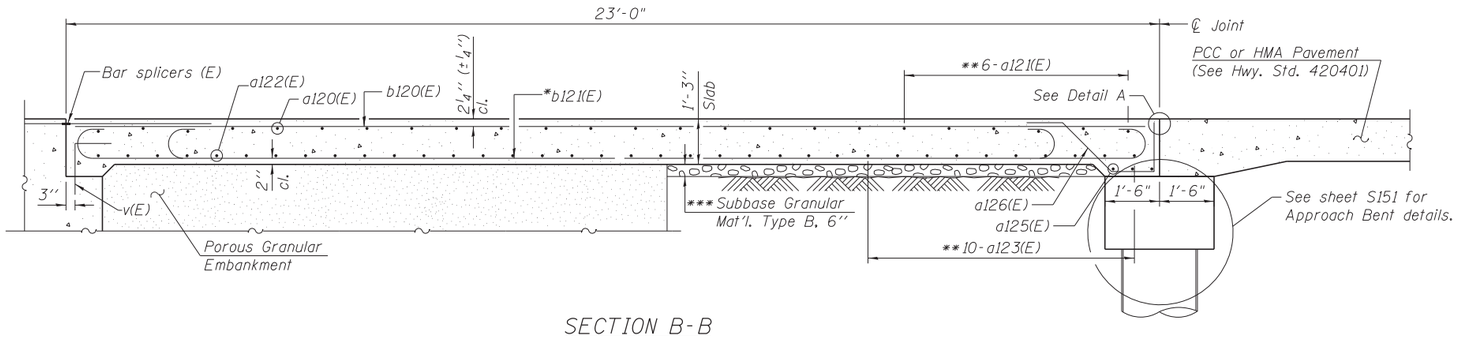
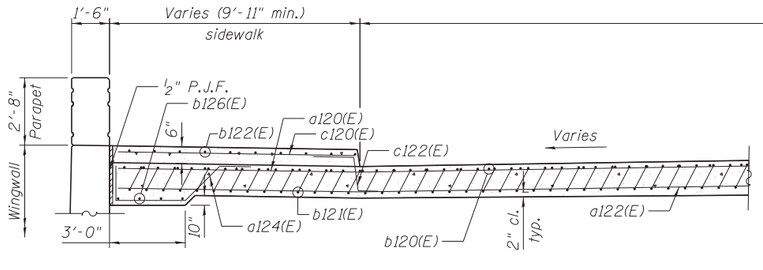
NORTH APPROACH SLAB PLAN
STRUCTURE NO. 016-1709

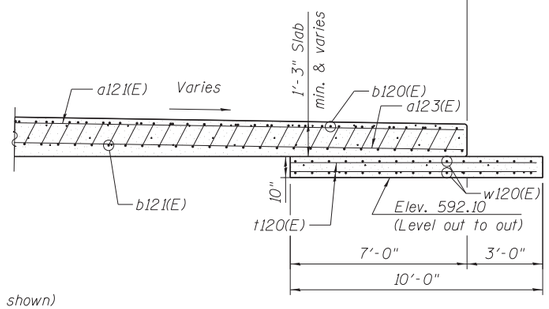
SCALE: | SHEET S1-49 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	193
		CONTRACT NO. 60W25		
		ILLINOIS FED. AID PROJECT		



SECTION B-B





SECTION C-C

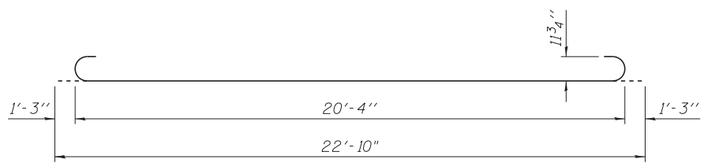
(See Plan for dimensions not shown)

NOTES:

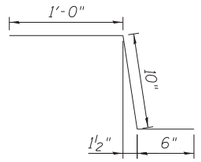
1. See Sheet S1-49 for Detail A.
2. Approach slab and sidewalk concrete shall be paid for as Concrete Superstructure.
3. Approach footing concrete shall be paid for as Concrete Structures.
4. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
5. For v(E) bar details, see sheet S1-34.
6. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
7. For bar splicer details, see Sheet S1-43.
8. Cost of excavation for approach footing included with Concrete Structures.
9. For Porous Granular Embankment and drainage treatment details, see sheet S1-34.

BILL OF MATERIAL

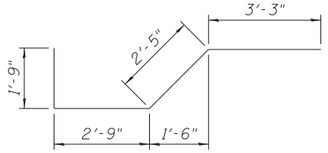
Bar	No.	Size	Length	Shape
a120(E)	14	#4	28'-6"	
a121(E)	26	#4	30'-1"	
a122(E)	26	#5	28'-6"	
a123(E)	46	#5	30'-1"	
a124(E)	23	#5	10'-2"	
a125(E)	6	#5	30'-1"	
a126(E)	60	#5	7'-11"	
b120(E)	49	#4	22'-8"	
b121(E)	144	#9	22'-10"	
b122(E)	11	#5	22'-8"	
b123(E)	2	#5	8'-0"	
b124(E)	2	#4	8'-0"	
b125(E)	2	#9	8'-0"	
b126(E)	4	#5	20'-1"	
c120(E)	18	#5	9'-6"	
c121(E)	6	#5	11'-1"	
c122(E)	24	#5	2'-4"	
t120(E)	46	#4	9'-8"	
w120(E)	40	#5	20'-10"	
Concrete Structures		Cu. Yd.	6.5	
Concrete Superstructure		Cu. Yd.	72.8	
Bridge Deck Grooving		Sq. Yd.	124	
Protective Coat		Sq. Yd.	154	
Reinforcement Bars, Epoxy Coated		Pound	17,750	



BAR b121(E)



BAR c122(E)



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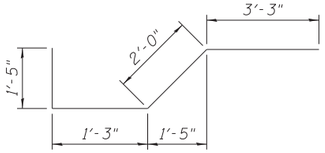

BAR a126(E)

* Tilt #9 b121(E) bars as required to maintain clearance.
** Bars to be cut in field.
*** Cost included with Concrete Superstructure.

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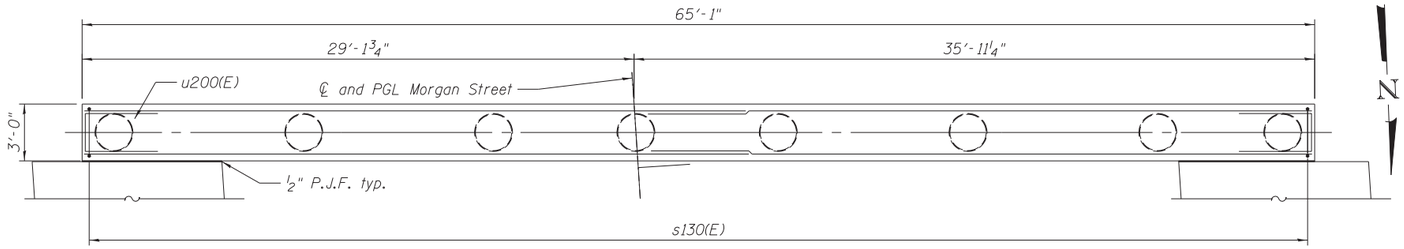
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

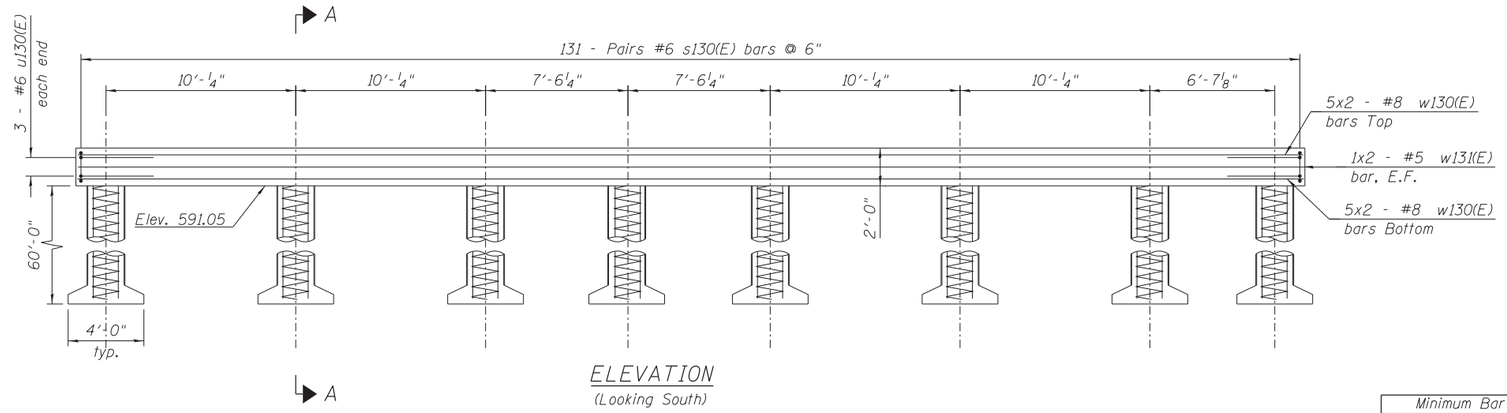
NORTH APPROACH SLAB SECTIONS AND DETAILS
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-50 OF 51 SHEETS | STA. | TO STA.

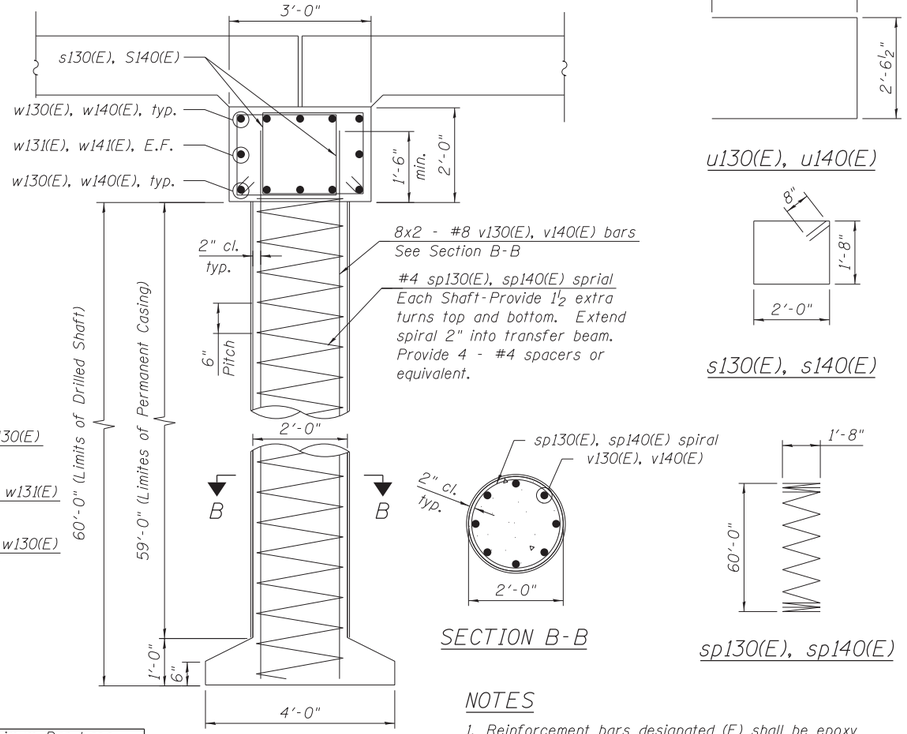
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	194
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



PLAN OF SOUTH APPROACH BENT

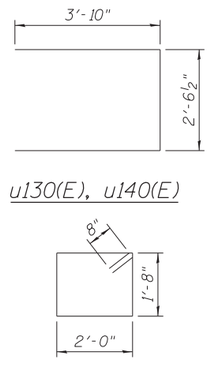


ELEVATION
(Looking South)



SECTION A-A

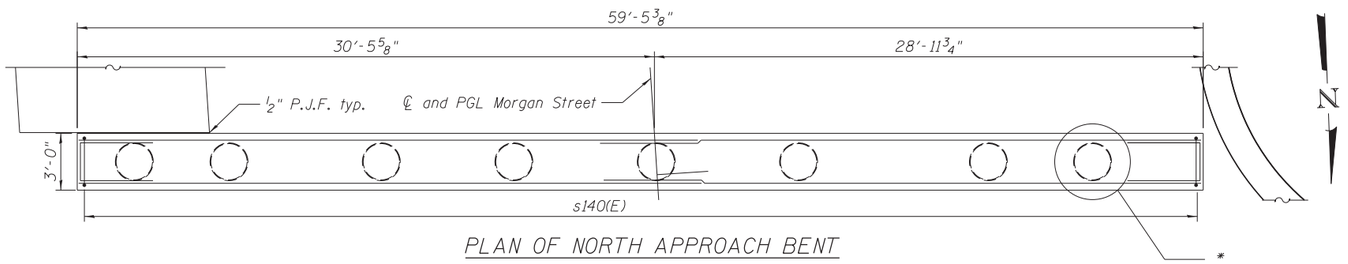
SECTION B-B



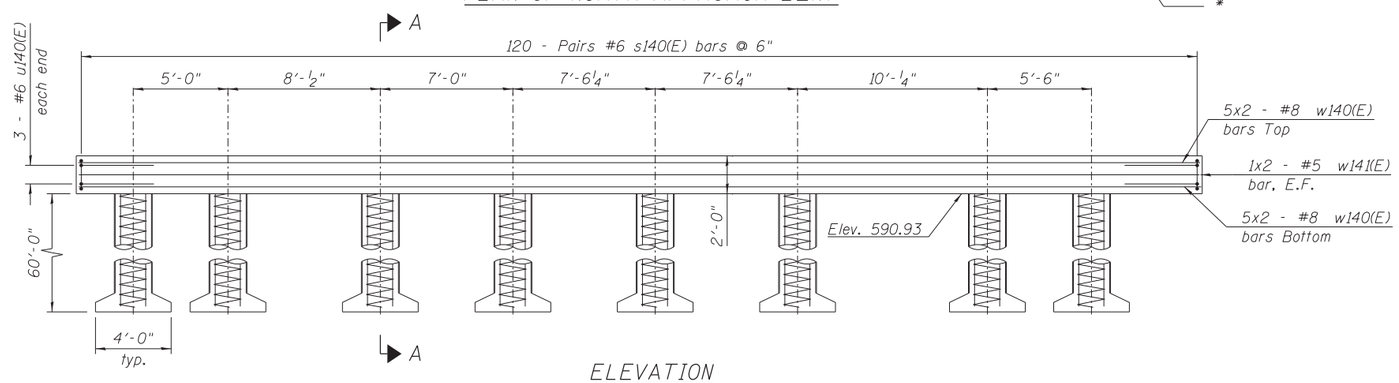
Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"

NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars indicated thus, 2x2-#5 etc., indicates 2 lines of bars with 2 lengths per line.
3. All edges shall have standard 3/4" chamfer.



PLAN OF NORTH APPROACH BENT



ELEVATION
(Looking South)

* Installation of pile requires coring through exisitng Northwest wingwall footing. Additional costs included in Drilled Shaft in Soil.

BILL OF MATERIAL
South Approach Bent

Bar	No.	Size	Length	Shape
w130(E)	20	#8	35-9"	
w131(E)	4	#5	34'-0"	
s130(E)	262	#6	8'-8"	
sp130(E)	8	#4	60'-0"	
u130(E)	6	#6	10'-3"	
v130(E)	128	#8	34'-2"	
Structure Excavation		Cu Yd	34	
Concrete Structures		Cu Yd	14.5	
Reinforcement Bars, Epoxy Coated		Pound	21,300	
Permanent Casing		Foot	480	
Drilled Shaft in Soil, 24"		Cu Yd	56	

BILL OF MATERIAL
North Approach Bent

Bar	No.	Size	Length	Shape
w140(E)	20	#8	33'-0"	
w141(E)	4	#5	31'-3"	
s140(E)	240	#6	8'-8"	
sp140(E)	8	#4	60'-0"	
u140(E)	6	#6	10'-3"	
v140(E)	112	#8	34'-2"	
Structure Excavation		Cu Yd	31	
Concrete Structures		Cu Yd	13.3	
Reinforcement Bars, Epoxy Coated		Pound	19,440	
Permanent Casing		Foot	480	
Drilled Shaft in Soil, 24"		Cu Yd	56	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH AND NORTH APPROACH PILE BENT SUPPORT
STRUCTURE NO. 016-1709

SCALE: | SHEET S1-51 OF 51 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	195
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

Benchmark: Cut square on northwest corner of sign foundation at north side of Harrison Street, approximately 80' west of west line of Morgan Street. Elevation 593.07. Cut square on east wall of Morgan Street at approximately centerline of I-290, near north entrance to CTA. Elevation 600.63.

Existing Structure: The retaining wall is comprised of reinforced concrete with attached guardrail above. The length of the retaining wall is 282'-6½" and the total exposed height varies from approximately 18'-5" at the west end to 1'-11" at the east end (measured from grade at front face of wall). The retained height varies from 22'-8" at the west end to 9'-3⅝" at the east end. There is a 2'-8" high crashwall in front of the retaining wall in Panels 1 through 3.

Salvage: No salvage.

DESIGN STRESSES

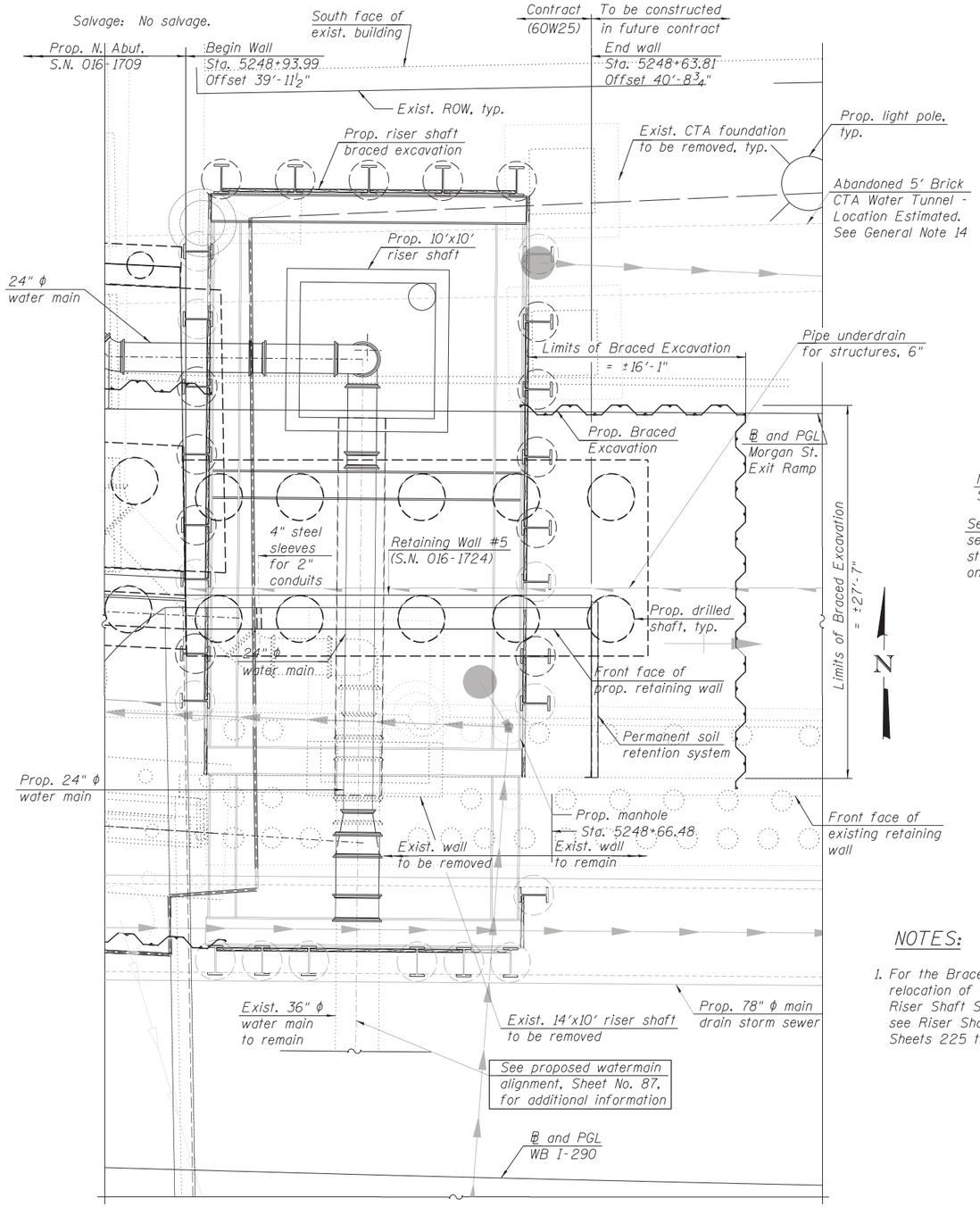
FIELD UNITS

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

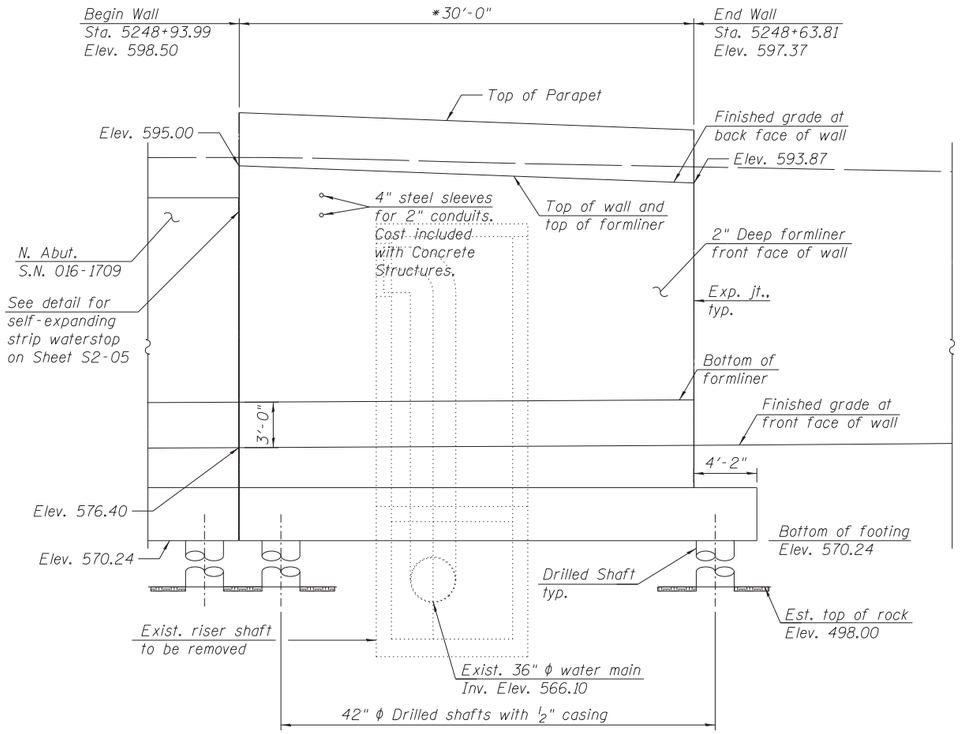
DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

* Measured along front face of wall.



PLAN

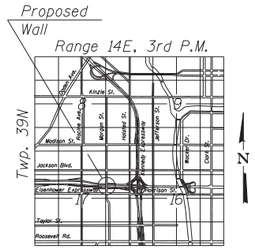


ELEVATION

(Looking at front face of wall)

LEGEND:

Front Face	F.F.
Back Face	B.F.
Combined Sewer	
Boring Log	
Electric	E
Fiber Optic	FO
Storm Sewer	
Braced Excavation	
Water Line	W
Fire Hydrant	
Light Pole	



LOCATION SKETCH

NOTES:

1. For the Braced Excavation required for the relocation of the existing water main and Riser Shaft Sections, details and quantities see Riser Shaft and Braced Excavation Sheets 225 thru 232.

STATE OF ILLINOIS — MOUSSA A. ISSA — 081-005738 — CHICAGO, ILLINOIS — LICENSED STRUCTURAL ENGINEER

Signed Moussa A. Issa

Moussa A. Issa, HBM Il. Lic. No. 081-005738
Expires 11-30-2014

Date 6/17/2013 For Sheets S2-01 Thru S2-07

GENERAL PLAN
RETAINING WALL 5 ALONG MORGAN ST. EXIT RAMP
F.A.I. RTE. 290 (EISENHOWER EXPRESSWAY) AND CTA
F.A.I. RTE. 290 - SECTION 2013-007R
COOK COUNTY
STA. 5248+93.99 TO STA. 5248+63.81
STRUCTURE NO. 016-1724

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 016-1724

SCALE: | SHEET S2-01 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	196
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES:

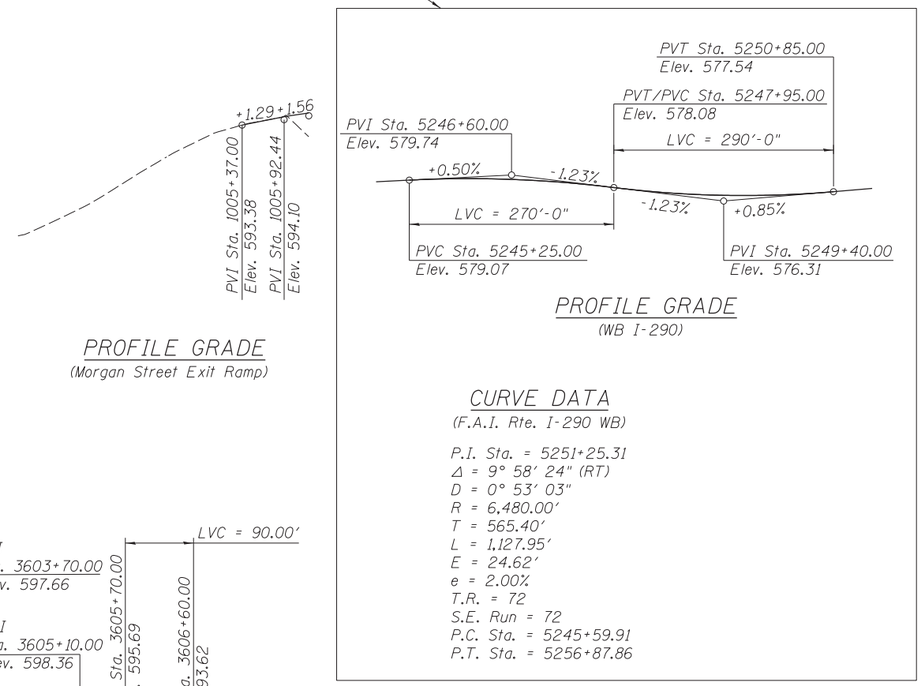
1. Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
2. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
3. All exposed concrete edges shall be chamfered $\frac{3}{4}$" except as noted.
4. Protective Coat shall be applied to exposed surfaces of the concrete wall.
5. Existing utilities in conflict with retaining wall construction shall be abandoned or relocated according to directions given on the roadway plans.
6. All elevations shown are based on the Chicago City Datum of 0.00, which is 579.19 feet above mean tide New York. (NAVD 88)
7. Proposed Retaining Wall 5 is located over an existing 36" ϕ water main. Location of this water main shall be determined prior to the wall foundation design to avoid any impact/conflict with the existing water main.
8. Any portions of existing substructure units and retaining wall foundations interfering with the new construction shall be removed.
9. For the removal of the portion of existing wall interfering with the riser shaft construction, see Sheet S2-03.
10. For the construction of the new wall interfering with the riser shaft construction, see Sheet S2-06.
11. The contractor shall exercise extreme caution during wall construction to make certain that construction activities, live load surcharge and other loads applied to the wall will not have detrimental effects on the adjacent building foundations.
12. Driving piles and temporary sheet piling is not allowed.
13. Existing CTA foundations were most likely removed or partially removed when the existing retaining wall was originally constructed. Any existing foundation that is within the proposed excavation for the new retaining wall and riser shaft construction shall be paid for as Foundation Removal.
14. Abandoned 5' Brick CTA Water Tunnel to be bulkheaded to the outside of the area of riser shaft construction (see civil sheets). In the area of the riser shaft construction, it will be necessary to remove any brick tunnel remnants. The removal of the existing tunnel is included as part of Structure Excavation or Braced Excavation as necessary, with proper disposal.
15. For proposed watermain alignment, see Sheet No. 87.

INDEX OF SHEETS

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL QUANTITY
Porous Granular Embankment	CU YD	266
Concrete Removal	CU YD	70
Concrete Structures	CU YD	115.9
Form Liner Textured Surface	SQ FT	467
Protective Coat	SQ YD	94
Furinishing and Erecting Structural Steel	POUND	6,340
Reinforcement Bars, Epoxy Coated	POUND	87,300
Permanent Casing	FOOT	783
Drilled Shaft in Soil - 42" Dia.	CU YD	278.8
Anchor Bolt, $\frac{3}{4}$"	EACH	25
Geocomposite Wall Drain	SQ YD	56
Braced Excavation	CU YD	381
Pipe Underdrains For Structures 6"	FOOT	47
Temporary Soil Retention System	SQ FT	66

For Information Only
Part of Future Contract

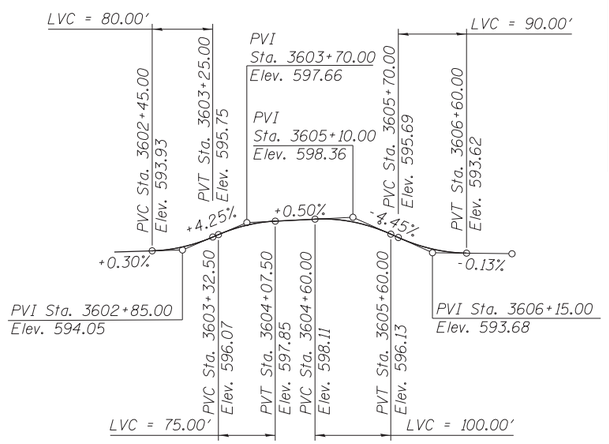


PROFILE GRADE
(WB I-290)

PROFILE GRADE
(Morgan Street Exit Ramp)

CURVE DATA
(F.A.I. Rte. I-290 WB)

P.I. Sta. = 5251+25.31
Δ = 9° 58' 24" (RT)
D = 0° 53' 03"
R = 6,480.00'
T = 565.40'
L = 1,127.95'
E = 24.62'
e = 2.00%
T.R. = 72
S.E. Run = 72
P.C. Sta. = 5245+59.91
P.T. Sta. = 5256+87.86



PROFILE GRADE
(along ℄ Morgan Street)

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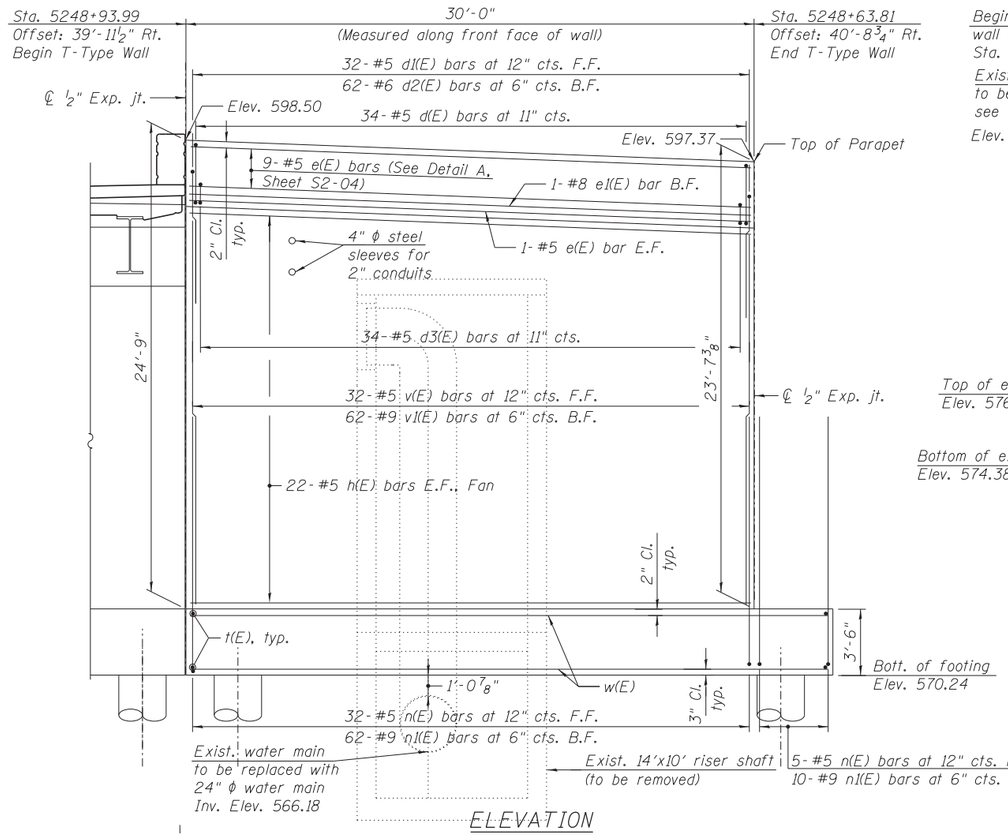
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS AND BILL OF MATERIAL
STRUCTURE NO. 016-1724

SCALE: | SHEET S2-02 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	197
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



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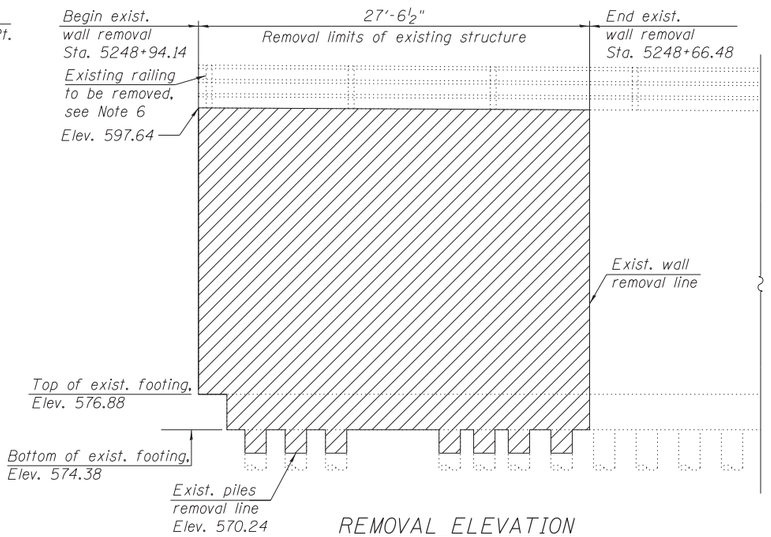
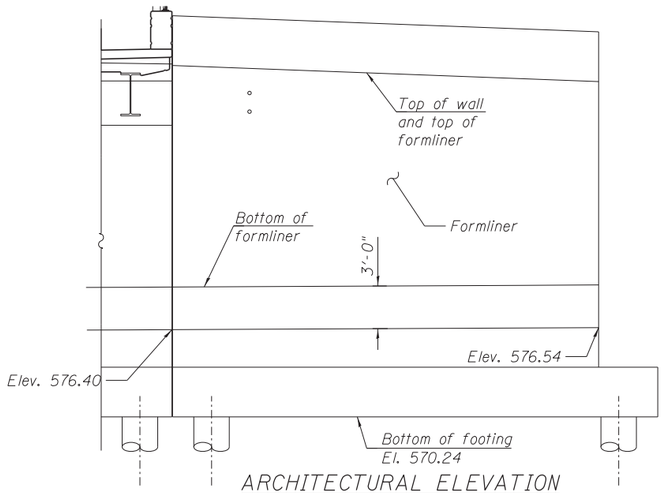
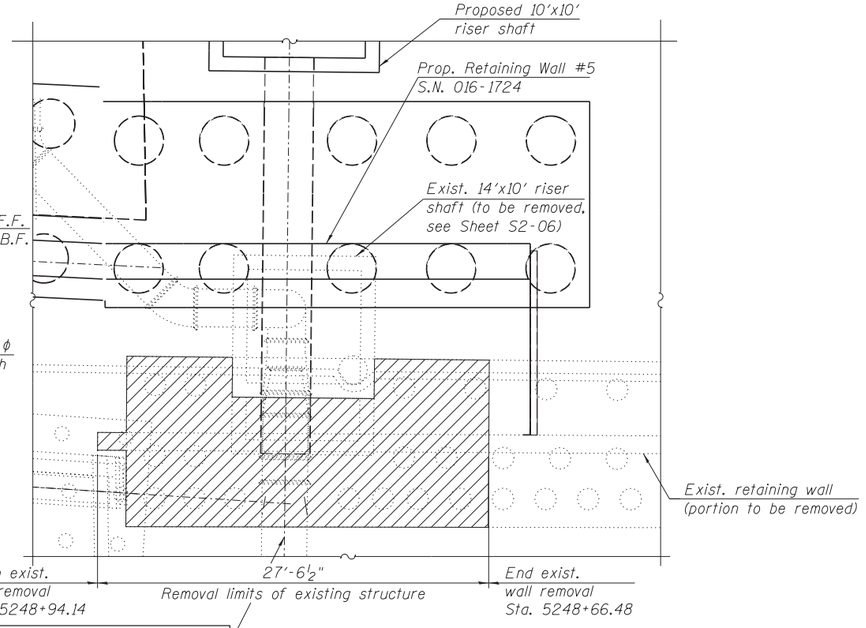
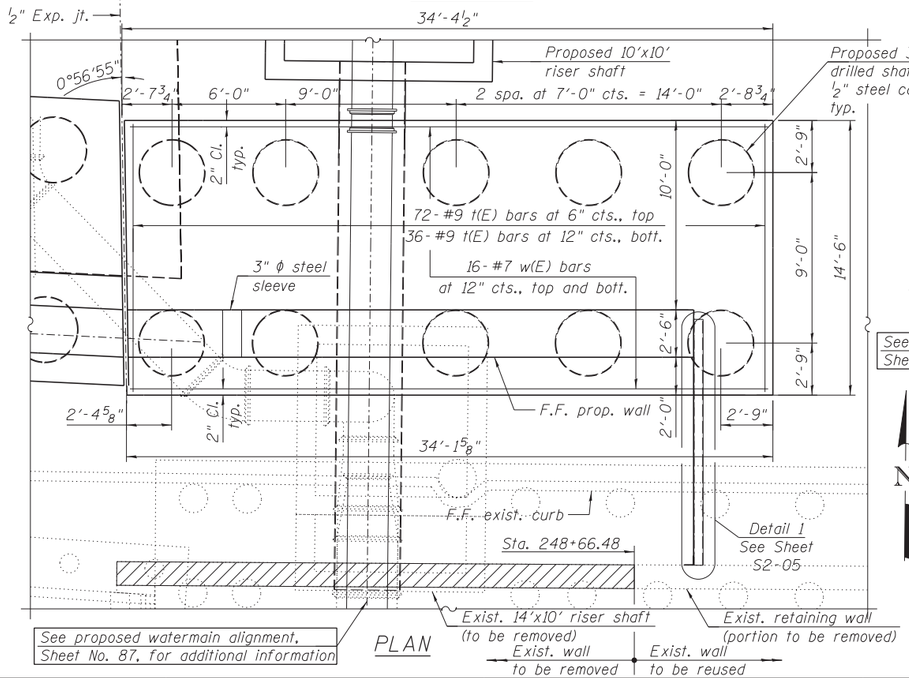


REMOVAL ELEVATION

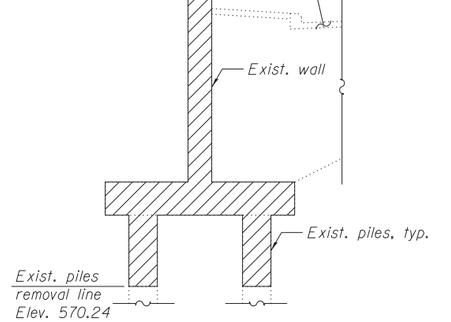


ARCHITECTURAL ELEVATION





PLAN



TYPICAL REMOVAL SECTION

Begin exist. wall removal Sta. 5248+94.14 — 27'-6½" Removal limits of existing structure — End exist. wall removal Sta. 5248+66.48

See proposed watermain alignment, Sheet No. 87, for additional information

REMOVAL PLAN

NOTES:

1. For sections and details, see Sheet S2-04 of 7.
2. For Lap Splices and Bill of Material, see Sheet S2-04 of 7.
3. All existing piles are 18" ϕ concrete piles.
4. During removal of the existing retaining wall and piles, soil disturbance shall be kept at a minimum, and coordinated and approved by the Engineer.
5. For Detail 1, Permanent Soil Retention System, see Sheet S2-05 of 7
6. Cost for removal of existing railing shall be included with "Concrete Removal"

LEGEND:

B.F. - denotes Back Face

E.F. - denotes Each Face

F.F. - denotes Front Face

Concrete Removal

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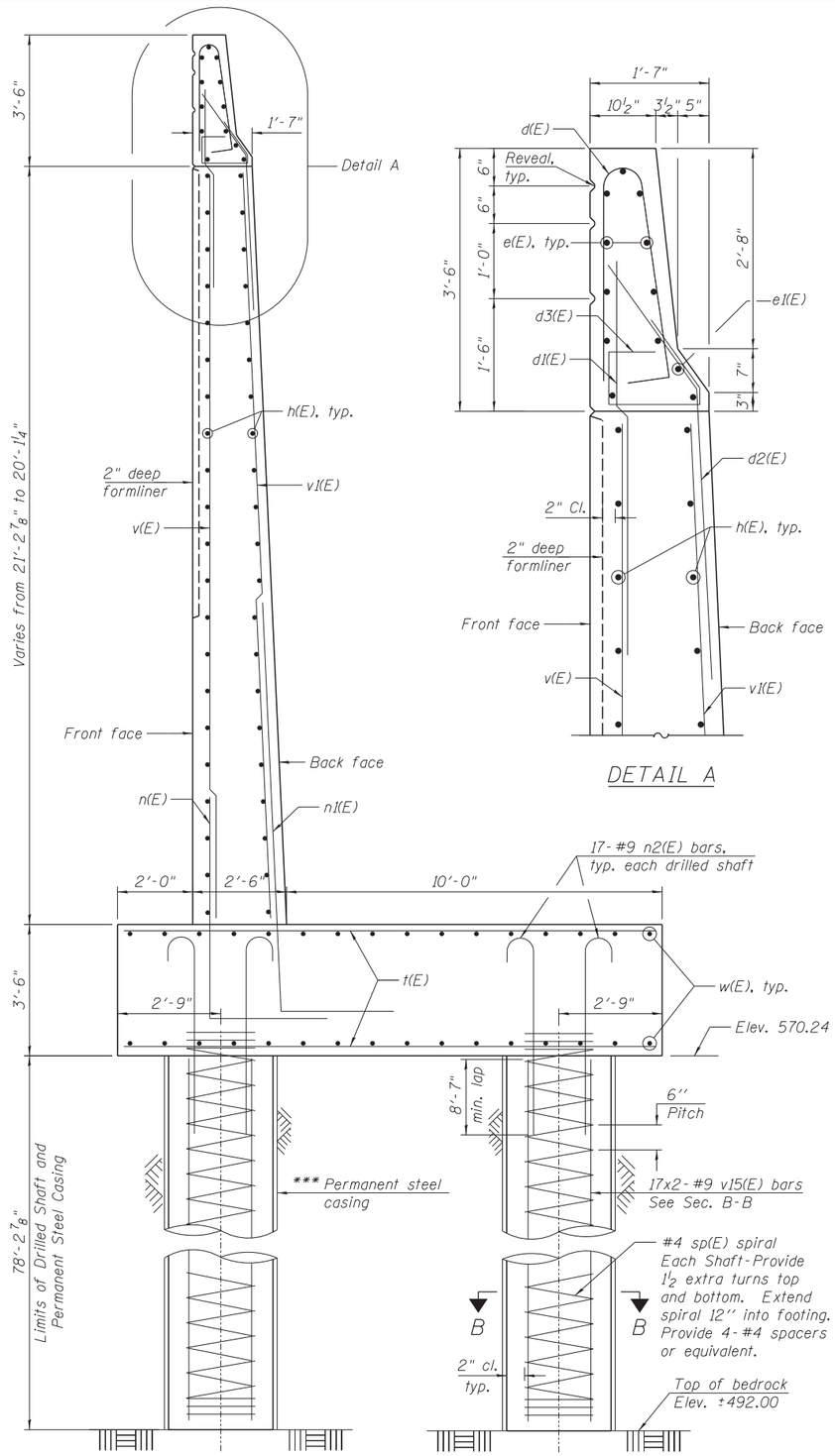
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & ELEVATION, REM. PLAN & ELEVATION, AND FORMLINER DETAILS
STRUCTURE NO. 016-1724

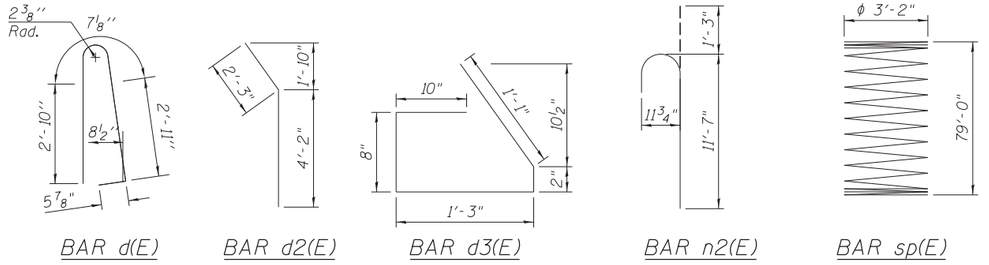
SCALE: | SHEET S2-03 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	198
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			

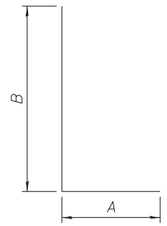


TYPICAL CROSS SECTION FOR VERTICAL CANTILEVER WALL ON DRILLED SHAFTS

DETAIL A

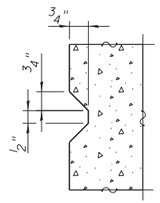


BAR d(E) BAR d2(E) BAR d3(E) BAR n2(E) BAR sp(E)



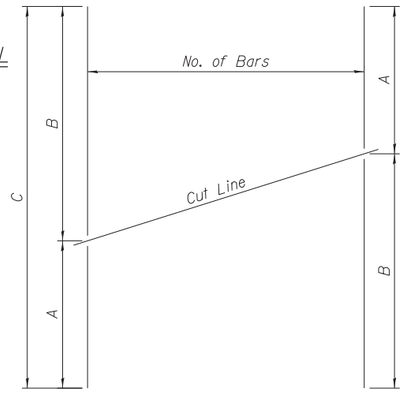
BARS n(E), n1(E)

Bar	A	B
n(E)	10"	6'-3"
n1(E)	1'-7"	11'-7"



REVEAL DETAIL

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"

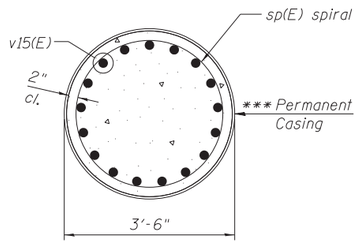


SERIES OF BAR CUTTING DIAGRAM

See table for dimensions. Make all cuts normal to bar axis

BAR TABLE SCHEDULE

Bar	No. of Sets Req'd	No. of Bars Per Set	A	B	C
v(E)	1	16	19'-9"	20'-11"	40'-2"
v1(E)	1	31	19'-9"	20'-11"	40'-2"



SECTION B-B

***Contractor is responsible for determining the casing thickness and the actual tip elevation to be used. See Article 516.06(d) of the Standard Specifications. Pay limits for the Permanent Casing shall be based on the minimum length shown.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	34	#5	6'-10"	
d1(E)	32	#5	6'-6"	
d2(E)	62	#6	6'-5"	
d3(E)	34	#5	4'-0"	
e(E)	11	#5	29'-8"	
e1(E)	1	#8	29'-8"	
h(E)	44	#5	29'-8"	
n(E)	37	#5	7'-1"	
n1(E)	72	#9	13'-2"	
n2(E)	170	#9	12'-10"	
t(E)	108	#9	14'-2"	
w(E)	32	#7	33'-10"	
v(E)	16	#5	40'-2"	
v1(E)	31	#9	40'-2"	
v15(E)	340	#9	43'-9"	
sp(E)	10	#4	79'-0"	
Concrete Removal			CU YD	70
Concrete Structures			CU YD	115.9
Form Liner Textured Surface			SQ FT	467
Protective Coat			SQ YD	94
Reinforcement Bars, Epoxy Coated			POUND	87,300
Permanent Casing			FOOT	783
Drilled Shaft in Soil - 42" Dia.			CU YD	278.8

Reinforcement bars designated (E) shall be epoxy coated.

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HBM ENGINEERING GROUP, LLC. CONSULTING & DESIGN INSPECTION & RATING RESEARCH & TESTING
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PLOT SCALE = 2.0 ' / in.	CHECKED -	MAI, MI, LAB	REVISED -
PLOT DATE = 6/14/2013	DATE -	6/17/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SECTIONS, DETAILS AND BILL OF MATERIAL
STRUCTURE NO. 016-1724

SCALE: | SHEET S2-04 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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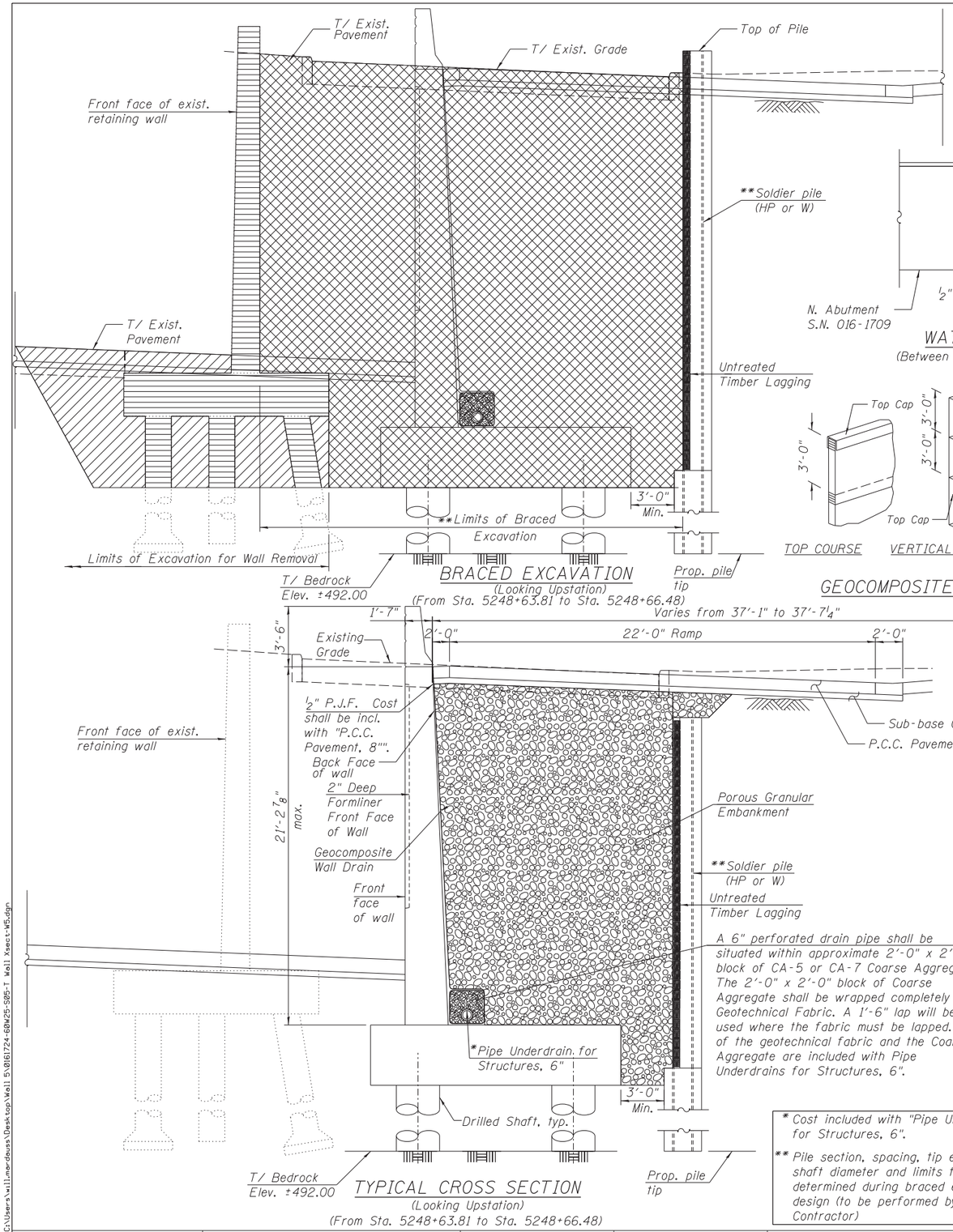
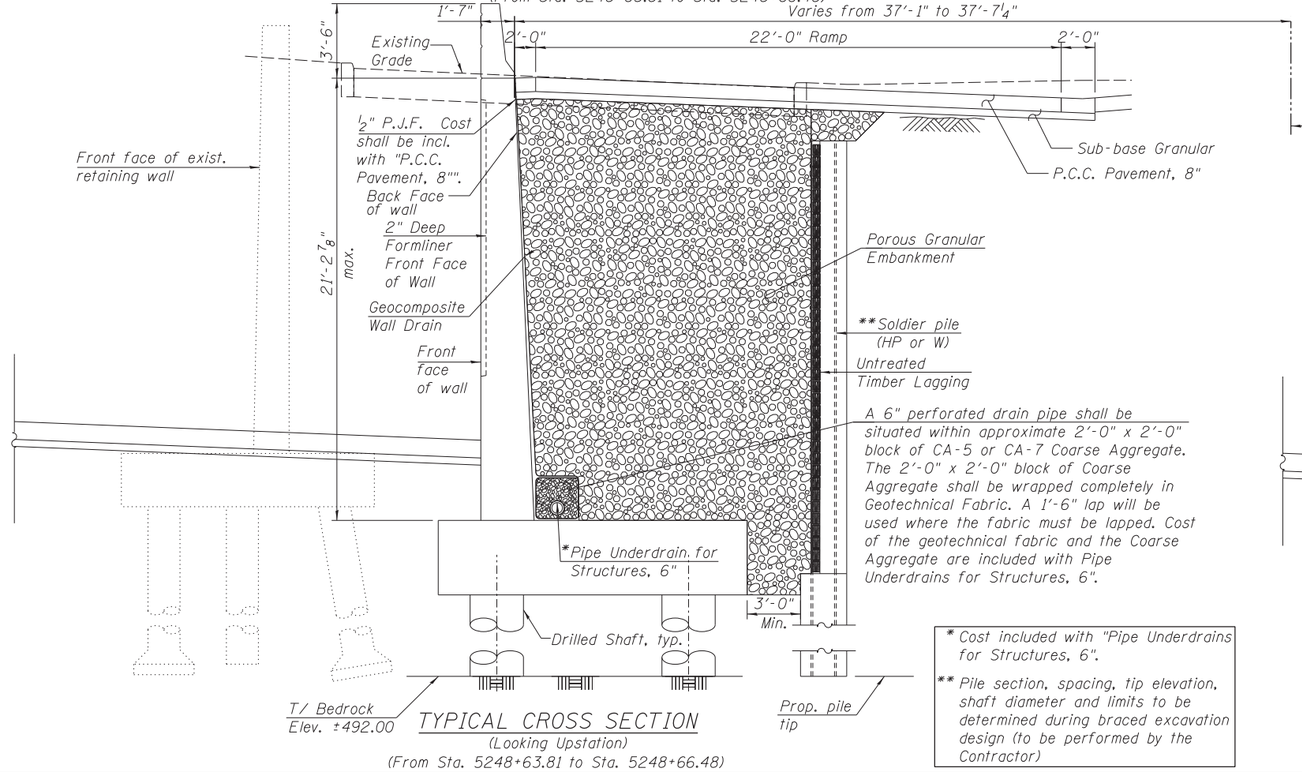
		CONTRACT NO. 60W25		
	ILLINOIS FED. AID PROJECT			



BRACED EXCAVATION

(Looking Upstation)
(From Sta. 5248+63.81 to Sta. 5248+66.48)



TYPICAL CROSS SECTION

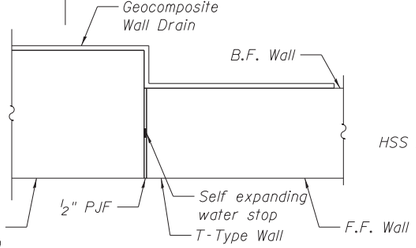
(Looking Upstation)
(From Sta. 5248+63.81 to Sta. 5248+66.48)

* Cost included with "Pipe Underdrains for Structures, 6".

** Pile section, spacing, tip elevation, shaft diameter and limits to be determined during braced excavation design (to be performed by the Contractor)

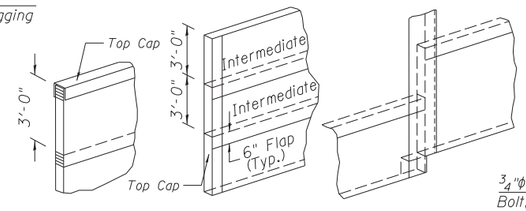
LEGEND

- Concrete Removal
- Porous Granular Embankment
- Braced Excavation
- Excavation for Wall Removal
- B.F. - Back Face
- F.F. - Front Face



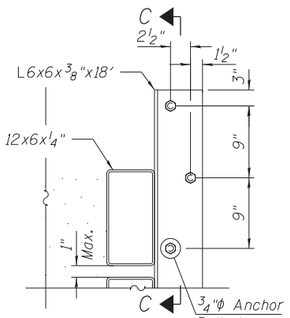
WATERSTOP DETAIL

(Between N. Abut. and Vert. Cant. Wall)

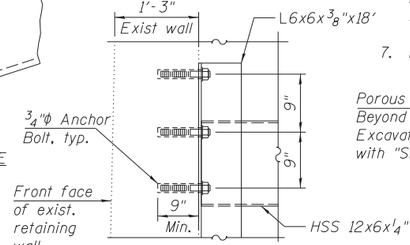


TOP COURSE VERTICAL CROSS SECTION BUTT SPLICE

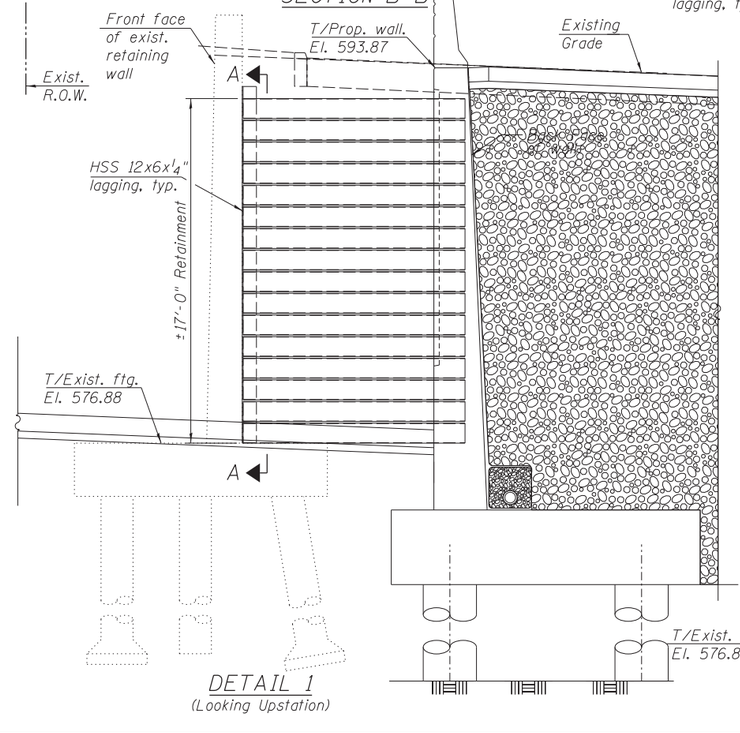
GEOCOMPOSITE WALL DRAIN DETAILS



DETAIL 2

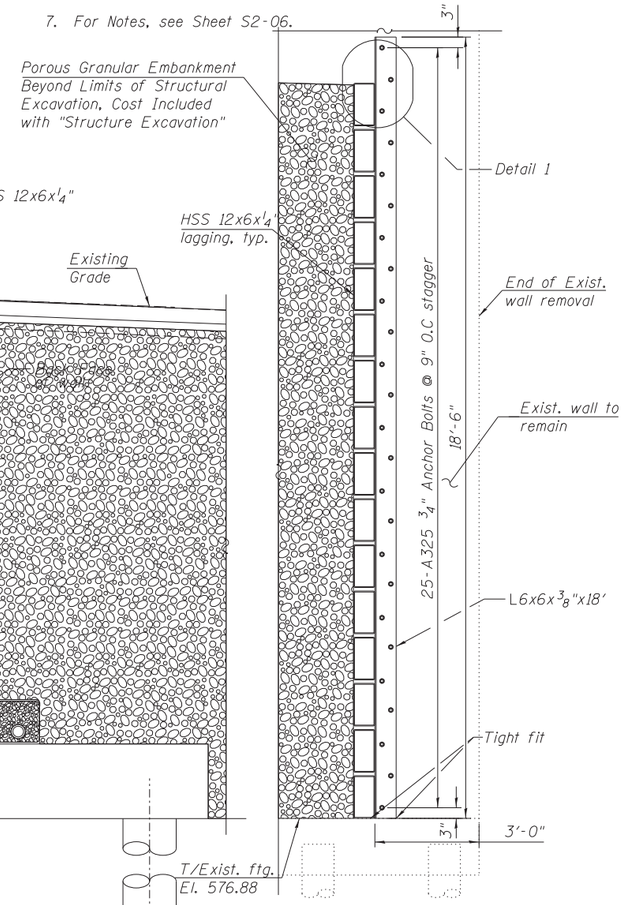


SECTION B-B



DETAIL 1

(Looking Upstation)



SECTION A-A

NOTES:

1. The Contractor shall design the braced excavation consisting of drilled soldier piles and structural steel sections (struts and walers). The braced excavation shall be designed to meet the City of Chicago Office of Underground Coordination (OUC) Building Requirements. The design shall be performed by a Structural Engineer, licensed and registered in the State of Illinois, and shall be approved by the Engineer.
2. For location, layout and details, see the water main design plan sheets.
3. The proposed retaining wall foundation locations may require adjustment based upon the field location of the water main which should be determined by the Engineer.
4. The proposed riser shaft location shall be adjusted as necessary to align with the water main location.
5. HSS 12x6x¼" to serve as lagging between existing wall & proposed wall. Cost of the steel lagging, as well as work necessary to place the lagging, shall be included with "Furnishing and Erecting Structural Steel".
7. For Notes, see Sheet S2-06.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Porous Granular Embankment	CU YD	266
Furnishing and Erecting Structural Steel	POUND	6,340
Anchor Bolts, ¾"	EACH	25
Geocomposite Wall Drain	SQ YD	56
Braced Excavation	CU YD	381
Pipe Underdrains for Structures 6"	FOOT	47

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FAX: (708) 236-0901

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SECTIONS AND DETAILS – STA. 5248+63.81 TO STA. 5248+66.48
STRUCTURE NO. 016-1724

SCALE: | SHEET S2-05 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	200
		CONTRACT NO. 60W25		
	ILLINOIS	FED. AID PROJECT		