


CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE														
				90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE				
				ROADWAY 0004 URBAN	S.N. 016-1000 S.N. 016-1001 0014 URBAN	S.N. 016-1005 0014 URBAN	S.N. 016-2455 0014 URBAN	S.N. 016-2457 0014 URBAN	S.N. 016-0483 0014 URBAN	S.N. 016-1026 0014 URBAN	S.N. 016-0486 0014 URBAN	S.N. 016-0488 0014 URBAN	SAFETY 0021 URBAN	SIGN STRUCTURES 0040 URBAN	DRAINAGE 0044 URBAN			
50101700	REMOVAL OF EXISTING SUPERSTRUCTURES NO. 1	EACH	1		1													
50101800	REMOVAL OF EXISTING SUPERSTRUCTURES NO. 2	EACH	1		1													
50102400	CONCRETE REMOVAL	CU YD	269.3		112.2		27.0	0.8	33.2		59.4	36.7						
50104650	SLOPE WALL REMOVAL	SO YD	557		8		8		17		31	493						
50104701	REMOVAL OF EXISTING CONCRETE DECK NO. 1	EACH	1				1											
50104702	REMOVAL OF EXISTING CONCRETE DECK NO. 2	EACH	1					1										
50104703	REMOVAL OF EXISTING CONCRETE DECK NO. 3	EACH	1						1									
50104704	REMOVAL OF EXISTING CONCRETE DECK NO. 4	EACH	1							1								
50104705	REMOVAL OF EXISTING CONCRETE DECK NO. 5	EACH	1								1							
50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	1									1						
50157300	PROTECTIVE SHIELD	SO YD	15,540		931		1904	6087	2098	355	3752	413						
50200100	STRUCTURE EXCAVATION	CU YD	1550		392		92	68	213		495	290						
50200300	COFFERDAM EXCAVATION	CU YD	258						258									
50201121	COFFERDAM (TYPE 2) (LOCATION - 1)	EACH	1						1									

• SPECIALTY ITEM

Rev. 9-11-14

Rev.

FILE NAME * ...N:\General\10160316-shr-500-04.dgn	DESIGNED - AAA	REVISED -		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.P. RTE. 372/373	SECTION 2013-0388-R	COUNTY COOK	TOTAL SHEETS 621	SHEET NO. 7
USER NAME * tblank	DRAWN - TMB	REVISED -						SCALE:	SHEET 4 OF 21 SHEETS	STA. TO STA.	CONTRACT NO. 60J16	
PLOT DATE * 6/23/2014	CHECKED - JMM	REVISED -			ILLINOIS FED. AID PROJECT							

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE														
				90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE				
				ROADWAY 0004 URBAN	S.N. 016-1000 S.N. 016-1001 URBAN	S.N. 016-1005 URBAN	S.N. 016-2455 URBAN	S.N. 016-2457 URBAN	S.N. 016-0483 URBAN	S.N. 016-1026 URBAN	S.N. 016-0486 URBAN	S.N. 016-0488 URBAN	SAFETY 0021 URBAN	SIGN STRUCTURES 0040 URBAN	DRAINAGE 0044 URBAN			
50201122	COFFERDAM (TYPE 2) (LOCATION - 2)	EACH	1															
50201123	COFFERDAM (TYPE 2) (LOCATION - 3)	EACH	1															
50201124	COFFERDAM (TYPE 2) (LOCATION - 4)	EACH	1															
50300100	FLOOR DRAINS	EACH	123		8					40		71	4					
50300225	CONCRETE STRUCTURES	CU YD	716.1 ¹		145.7		53.7	54.9	187.2			168.9 ²	105.7					
50300255	CONCRETE SUPERSTRUCTURE	CU YD	6671.3		718.6		749.4	1994.2	931.8	105.9		1692.6	478.8					
50300260	BRIDGE DECK GROOVING	SO YD	20,190		2142		2300	6171	2901	292		5075	1309					
50300265	SEAL COAT CONCRETE	CU YD	183.0							183.0								
50300280	CONCRETE ENCASEMENT	CU YD	5.3				0.7		1.8			2.1	0.7					
50300300	PROTECTIVE COAT	SO YD	26,969		2780	2257	2765	7558	3488	409		6213	1499					
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		0.39				0.17	0.28		0.13	0.03					
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	9210				1640					7570						
50500505	STUD SHEAR CONNECTORS	EACH	54,517		11,448		2,112	12,246	10,752			12,577	5,382					
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,827,810		225,640		195,400	533,200	267,310 ¹	30,980		461,380 ²	113,900					

• SPECIALTY ITEM

¹ Rev. 9-11-14
² Rev. 9-4-14

Rev.

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE											
				90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE
				ROADWAY	S.N. 016-1000 S.N. 016-1001	S.N. 016-1005	S.N. 016-2455	S.N. 016-2457	S.N. 016-0483	S.N. 016-1026	S.N. 016-0486	S.N. 016-0488	SAFETY	SIGN STRUCTURES	DRAINAGE
	0004	0014	0014	0014	0014	0014	0014	0014	0014	0021	0040	0044			
	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN			
Z0018002	DRAINAGE SCUPPERS, DS-11	EACH	23				2	17	4						
Z0018010	DRAINAGE SCUPPERS, DS-33	EACH	3				3								
NP Z0018500	DRAINAGE STRUCTURES TO BE CLEANED	EACH	36												36
Z0018700	DRAINAGE STRUCTURES TO BE REMOVED	EACH	20												20
Z0018800	DRAINAGE SYSTEM	L SUM	1				1								
Z0021904	SILICONE JOINT SEALER, 1"	FOOT	58							58					
Z0026407	TEMPORARY SHEET PILING	SQ FT	1488		1488										
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	316										316		
Z0033020	LUMINAIRE SAFETY CABLE ASSEMBLY	EACH	101										101		
Z0033028	MAINTENANCE OF LIGHTING SYSTEM	CAL MO	13	13											
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	718		274		95		55		180	114			
<u>Z0048665</u>	<u>RAILROAD PROTECTIVE LIABILITY INSURANCE</u>	<u>L SUM</u>	<u>1</u>	<u>1</u>											
Z0062456	TEMPORARY PAVEMENT	SQ YD	6248	6248											
Z0064800	SELECTIVE CLEARING	UNIT	10		2	1		1	1	3	2				
Z0073002	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	746								746				

• SPECIALTY ITEM
 NP- Non-participating (100% State)

Rev. 9-11-14

Rev.

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE												
				90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE		
				ROADWAY 0004 URBAN	S.N. 016-1000 S.N. 016-1001 0014 URBAN	S.N. 016-1005 0014 URBAN	S.N. 016-2455 0014 URBAN	S.N. 016-2457 0014 URBAN	S.N. 016-0483 0014 URBAN	S.N. 016-1026 0014 URBAN	S.N. 016-0486 0014 URBAN	S.N. 016-0488 0014 URBAN	SAFETY 0021 URBAN	SIGN STRUCTURES 0040 URBAN	DRAINAGE 0044 URBAN	
Z0073200	TEMPORARY SHORING AND CRIBBING	EACH	22				9	7	3	3						
Z0073400	TEMPORARY SUPPORT SYSTEM	EACH	4							4						
∅ Z0076600	TRAINEES	HOUR	1000	1000												
∅ Z0076604	TRAINEES TRAINING PROGRAM GRADUATE HOUR	HOUR	1000	1000												
X0322936	REMOVE EXISTING FLARED END SECTION	EACH	2				2									
X0323586	PIPE DRAIN REMOVAL	FOOT	499													499
X0323710	REMOVE CONDUIT ATTACHED TO STRUCTURE	FOOT	10104			810	800	3008	1626	1410	1950	500				
X0323879	SERVICE PATROL	CAL DAY	210										210			
X0324058	OUTLET SPECIAL	EACH	1													1
X0326232	FENDER SYSTEM	L SUM	1								1					
X0326659	CURED-IN-PLACE LINER, 18"	FOOT	123													123
X0326662	CURED-IN-PLACE LINER, 24"	FOOT	112													112
X0326850	MAIN DRAIN JOINT REPAIR	FOOT	10													10
* X0327303	REMOVAL OF EXISTING SIGN LIGHTING UNIT WITH NO SALVAGE	EACH	5											5		
* X2501800	SEEDING, CLASS 4 (MODIFIED)	ACRE	2.50	2.50												

∅ SPECIALTY ITEM
∅ 0042

Rev. 9-11-14

FILE NAME =	DESIGNED -	REVISED -
...\\Ganana\10168316-ahc-500-19.dgn	DRAWN -	REVISED -
USER NAME = sblank	CHECKED -	REVISED -
PLOT DATE = 6/23/2014	DATE - 6/23/2014	REVISED -



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES	
SCALE:	SHEET 19 OF 21 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
312/313	2013-0388-R	COOK	821	22
CONTRACT NO. 60J16			ILLINOIS FED. AID PROJECT	

GENERAL NOTES

- Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 7/8" dia., holes 1 1/16" dia., unless otherwise noted.
 - Calculated weight of structural steel =
M270 Grade 36: 16,780 lbs.
M270 Grade 50: 104,590 lbs.
 - No field welding is permitted except as specified in the contract documents.
 - The Contractor shall test the existing welds by non-destructive methods within 2 ft. of the end of the existing cover plates for cracks after removal of the existing concrete deck. Dye penetrant (PT), magnetic particle (MT), or other approved testing method shall be performed by qualified personnel approved by the Engineer. If cracks are found, report them to the Bureau of Bridges and Structures for disposition. The cost of testing is included in Removal of Existing Concrete Deck. The cost of crack repair, if necessary, will be paid for according to Article 109.04 of the Standard Specifications.
 - Reinforcement bars designated (E) shall be epoxy coated.
 - Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.
- As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/4 in. deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
- If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations 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.
 - Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
 - Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8" (0.01). Adjustment shall be made either by grinding the surface or shimming the bearings.
 - Concrete Sealer shall be applied to the designated areas of all abutments including Ramp F, and Piers 5 thru 7.
 - The existing structural steel coating contains lead. The Contractor shall take all precautions to deal with the presence of lead on this project.
 - The Inorganic Zinc Rich Primer/Acrylic/Acrylic Paint System shall be used for shop and field painting of new structural steel and the steel portions of new elastomeric bearings. Only Inorganic Zinc Rich Primer shall be applied to the new structural steel and the steel portions of the new elastomeric bearings in the shop under this contract and is included in "Furnishing and Erecting Structural Steel" and the elastomeric bearing pay items, respectively. The intermediate and top coats shall be applied under a separate painting contract.
 - Existing structural steel shall only be cleaned and painted as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
 - The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

INDEX OF SHEETS

- SG1 Overall General Plan and Elevation
- SG2 General Plan and Elevation Spans 1 through 5
- SG3 General Plan and Elevation Spans 6 through 12
- SG4 General Notes, Bill of Material and Index of Sheets
- SG5 Foundation Layout (1 of 2)
- SG6 Foundation Layout (2 of 2)
- SG7 Stage Construction Details Spans 1 and 2
- SG8 Stage Construction Details Spans 3 thru 5
- SG9 Stage Construction Details Span 6
- SG10 Stage Construction Details Span 7
- SG11 Stage Construction Details Spans 8 thru 12
- SG12 Temporary Concrete Barrier for Stage Construction
- SG13 Top of Slab Elevations Plan Spans 1 thru 5
- SG14 Top of Slab Elevations Spans 1 and 2 (1 of 2)
- SG15 Top of Slab Elevations Spans 1 and 2 (2 of 2)
- SG16 Top of Slab Elevations Spans 3 through 5 (1 of 4)
- SG17 Top of Slab Elevations Spans 3 through 5 (2 of 4)
- SG18 Top of Slab Elevations Spans 3 through 5 (3 of 4)
- SG19 Top of Slab Elevations Spans 3 through 5 (4 of 4)
- SG20 Top of Slab Elevations Plan Spans 6 thru 12
- SG21 Top of Slab Elevations Spans 6 and 7 (1 of 4)
- SG22 Top of Slab Elevations Spans 6 and 7 (2 of 4)
- SG23 Top of Slab Elevations Spans 6 and 7 (3 of 4)
- SG24 Top of Slab Elevations Spans 6 and 7 (4 of 4)
- SG25 Top of Slab Elevations Spans 8 through 12 (1 of 3)
- SG26 Top of Slab Elevations Spans 8 through 12 (2 of 3)
- SG27 Top of Slab Elevations Spans 8 through 12 (3 of 3)
- SG28 Top of South Approach Slab Elevations
- SG29 Top of North Approach Slab Elevations
- SG30 Top of Ramp F Approach Slab Elevations
- SG31 Deck Plan and Cross Section Spans 1 and 2
- SG32 Deck Plan and Cross Section Spans 3 thru 5
- SG33 Deck Plan and Cross Section Span 6 Ramp F
- SG34 Deck Plan and Cross Section Span 7 Ramp F
- SG35 Deck Plan and Cross Section Spans 6 and 7
- SG36 Deck Plan and Cross Section Spans 8 thru 12
- SG37 Parapet Details Spans 1 and 2
- SG38 Parapet Details Spans 3 thru 5
- SG39 Parapet Details Spans 6 and 7
- SG40 Parapet Details Spans 8 thru 12
- SG41 Superstructure Details
- SG42 Reinforcing Bar Details and Bill of Material Spans 1 thru 5
- SG43 Reinforcing Bar Details and Bill of Material Spans 6 thru 12
- SG44 Concrete Parapet Slipforming Option
- SG45 Preformed Joint Strip Seal
- SG46 South Bridge Approach Slab Plan
- SG47 South Bridge Approach Slab Details
- SG48 North Bridge Approach Slab Plan
- SG49 North Bridge Approach Slab Details
- SG50 Ramp F Bridge Approach Slab Plan
- SG51 Ramp F Bridge Approach Slab Details
- SG52 Steel Removal and Repair Plan Unit A & B
- SG53 Steel Removal and Repair Plan Unit C & D
- SG54 Structural Steel Repair Details (1 of 2)
- SG55 Structural Steel Repair Details (2 of 2)
- SG56 Framing Plan Spans 6 and 7
- SG57 Girder Elevations and Details - Spans 6 and 7
- SG58 Framing Plan and Girder Elevation Spans 8 thru 12
- SG59 Steel Diaphragm Details Spans 6-12
- SG60 Girder Splice Details
- SG61 Moment and Reaction Tables (1 of 2)
- SG62 Moment and Reaction Tables (2 of 2)
- SG63 Bearing Details (1 of 2)
- SG64 Bearing Details (2 of 2)
- SG65 South Abutment Concrete Removal and Repair Details
- SG66 Ramp F Abutment Concrete Removal and Repair Details
- SG67 North Abutment Concrete Removal and Repair Details
- SG68 Pier 1 and 2 Repair Details
- SG69 Pier 3 and 4 Repair Details
- SG70 Pier 5 and 6 Repair Details
- SG71 Pier 7 and 8 Repair Details
- SG72 Pier 9 and 10 Repair Details
- SG73 Pier 11 Repair Details
- SG74 South Abutment Widening Details (1 of 3)
- SG75 South Abutment Widening Details (2 of 3)
- SG76 South Abutment Widening Details (3 of 3)
- SG77 Ramp F Abutment Widening Details (1 of 3)
- SG78 Ramp F Abutment Widening Details (2 of 3)

STATION 30+12.59
RE-BUILT 20... BY
STATE OF ILLINOIS
FAP 373-SEC. 2013-038B-R
LOADING HS-20
STRUCTURE NO. 016-0486

SB NAME PLATE
(See Std. 515001)

Existing Name Plate shall be cleaned and relocated next to the new Name Plate. Cost included with Name Plates.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu Yd		59.4	59.4
Slope Wall Removal	Sq Yd		31.0	31.0
Removal of Existing Concrete Deck No. 5	Each	1		1
Protective Shield	Sq Yd	3,752		3,752
Structure Excavation	Cu Yd		495	495
Floor Drains	Each	71		71
Concrete Structures	Cu Yd		168.9	168.9
Concrete Superstructure	Cu Yd	1,692.6		1,692.6
Bridge Deck Grooving	Sq Yd	5,075.0		5,075
Concrete Encasement	Cu Yd		2.1	2.1
Protective Coat	Sq Yd	6,213		6,213
Furnishing and Erecting Structural Steel	L Sum	0.13		0.13
Stud Shear Connectors	Each	12,577		12,577
Reinforcement Bars, Epoxy Coated	Pound	431,120	130,260	461,380
Bar Splicers	Each	139		139
Slope Wall 4 Inch	Sq Yd		150	150
Furnishing Steel Piles HP12x53	Foot		660	660
Driving Piles	Foot		660	660
Test Pile Steel HP12x53	Each		3	3
Pile Shoes	Each		18	18
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	353.5		353.5
Elastomeric Bearing Assembly, Type I	Each	11		11
Elastomeric Bearing Assembly, Type II	Each	4		4
Anchor Bolts, 3/4"	Each	43		43
Anchor Bolts, 1"	Each	4		4
Anchor Bolts, 1 1/2"	Each	2		2
Concrete Sealer	Sq Ft		1,271	1,271
Epoxy Crack Injection	Foot		102	102
Geocomposite Weir Drain	Sq Yd		112	112
Structural Steel Removal	Pound	125,740		125,740
Structural Steel Repair	Pound	7,270		7,270
Cleaning Bridge Seats	Sq Ft		2,300	2,300
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq Ft		301	301
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq Ft		16	16
Silicone Joint Sealer, 1"	Foot	58		58
Pipe Underdrains for Structures 4"	Foot		180	180
Selective Clearing	Unit		3	3
Remove Conduit Attached to Structure	Foot	1,950		1,950
Fender System	L Sum		1	1
Granular Backfill For Structures	Cu Yd		280	280

* Quantity includes a contingency (above the amounts shown in the bills of material) to account for uncertainties associated with the condition of the existing substructure and the age of the original inspection (2008-2009). Actual repair areas will be determined by the Engineer in the field.

INDEX OF SHEETS (CONT'D)

- SG79 Ramp F Abutment Widening Details (3 of 3)
- SG80 North Abutment Widening Details (1 of 3)
- SG81 North Abutment Widening Details (2 of 3)
- SG82 North Abutment Widening Details (3 of 3)
- SG83 Abutment Bar Bends and Bill of Material
- SG84 Pier 7 Widening Details
- SG85 Pier 8 Widening Details
- SG86 Pier 9 Widening Details
- SG87 Piers 7, 8 & 9 Sections
- SG88 Piers 7, 8 & 9 Bar Bends and Bill of Material
- SG89 Pier 5 & 6 Cap Details
- SG90 Pier 10 & 11 Cap Details
- SG91 Piers 5, 6, 10 & 11 Bar Bends and Bill of Material
- SG92 Bar Splicer Assembly and Mechanical Splicer Details
- SG93 HP Pile Details
- SG94 Soil Boring Logs South Abutment
- SG95 Soil Boring Logs Ramp F Abutment
- SG96 Soil Boring Logs Pier 7
- SG97 Soil Boring Logs Pier 8
- SG98 Soil Boring Logs Pier 9
- SG99 Soil Boring Logs Pier 10
- SG100 Soil Boring Logs North Abutment

For existing bridge plans, see Sheets SGX1 thru SGX48 immediately following Sheet SG100.

SCOPE OF WORK

- Remove existing concrete deck and microsilica concrete overlay and replace with new 8" reinforced concrete deck.
- Retrofit steel superstructure fatigue prone details.
- Remove wind bracing in spans 3 through 5 (bottom lateral angles).
- Perform miscellaneous repairs including repairing unseated or missing anchor bolts and side retainers, and removing debris.
- Replace or repair damaged or corroded cross frames, diaphragms and connection plates.
- Install new girders, diaphragms and cross frames for widening.
- Remove and replace selected existing girders and cross frames.
- Make new deck composite in positive moment areas only by adding shear studs to all girders and beams where not already installed.
- Remove and dispose of abandoned electrical conduits and junction boxes attached to the beams and/or deck.
- Strengthen beam ends and replace diaphragms at expansion joints.
- Repair spalls, delaminations and open cracks in substructure using structural repair of concrete and epoxy crack injection.
- Widen Piers 7, 8 & 9 and all abutments.
- Construct additions to caps at Piers 5, 6, 10 & 11.
- Remove and replace existing abutment backwalls.
- Widen and repair existing stopwalls.
- Remove and replace existing expansion joints.
- Remove and replace approach slabs and drainage at abutments.
- Fix conduit and exposed wires at Ramp F abutment.
- Repair timber fenders at Piers 3 and 4.
- Remove and replace navigational lighting.



Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

FILE NAME : 0160486_00116_004_General_Notes.dgn	USER NAME : sharris	DESIGNED - DTS	REVISED - 9/11/2014 AWH
PL01 SCALE :	PL01 DATE : 9/11/2014	CHECKED - KJN	REVISED -
		DRAWN - RMG	REVISED -
		CHECKED - KJN	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL NOTES, BILL OF MATERIAL AND INDEX OF SHEETS
STRUCTURE NO. 016-0486**

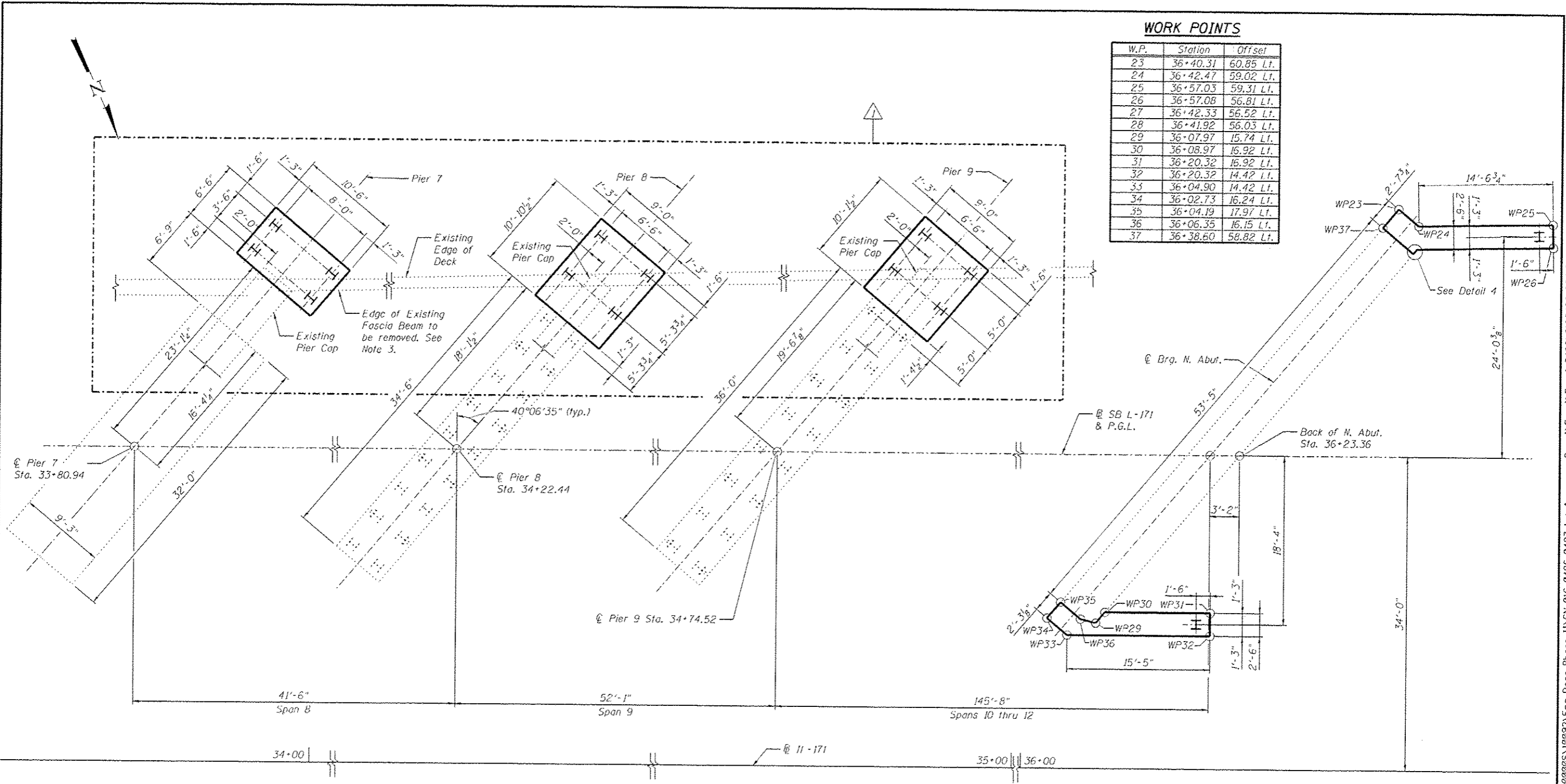
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
373	2013-038B-R	COOK	821	594
CONTRACT NO. 60J16			ILLINOIS FED. AID PROJECT	

SHEET NO. SG4 OF 50100 SHEETS

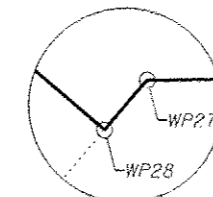
Y:\chicago\100003\Eng-Docs-Phase_1\SN_016_0486_0486_V01E0486_00116_004_General_Notes.dgn 12:47:17 PM 9/11/2014

WORK POINTS

W.P.	Station	Offset
23	36+40.31	60.85 Lt.
24	36+42.47	59.02 Lt.
25	36+57.03	59.31 Lt.
26	36+57.08	56.81 Lt.
27	36+42.33	56.52 Lt.
28	36+41.92	56.03 Lt.
29	36+07.97	15.74 Lt.
30	36+08.97	16.92 Lt.
31	36+20.32	16.92 Lt.
32	36+20.32	14.42 Lt.
33	36+04.90	14.42 Lt.
34	36+02.73	16.24 Lt.
35	36+04.19	17.97 Lt.
36	36+06.35	16.15 Lt.
37	36+38.60	58.82 Lt.



PLAN - FOUNDATION LAYOUT



DETAIL 4

NOTES:

1. For pier details, see Sheets SG84 to SG88.
2. For abutment details, see Sheets SG74 to SG83.
3. Existing beams shall be removed prior to installation of piles. See Sheet SG53.

benesch
engineers · scientists · planners

Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10093

FILE NAME -	USER NAME - aharris	DESIGNED - AWH	REVISED - 9/11/2014 AWH
0163486_60J16_S06_Foundation_2_of_2.dgn	PLT SCALE -	CHECKED - AJK	REVISED -
	PLT DATE - 9/11/2014	DRAWN - KMS	REVISED -
		CHECKED - AJK	REVISED -

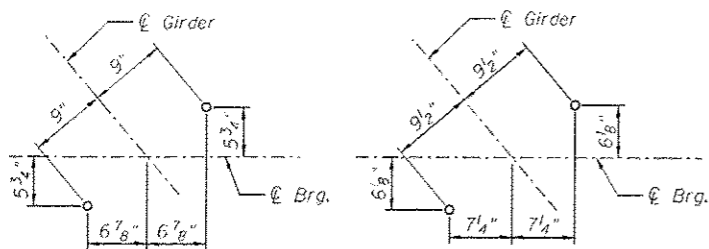
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FOUNDATION LAYOUT (2 OF 2)
STRUCTURE NO. 016-0486**

SHEET NO. S06 OF S0100 SHEETS

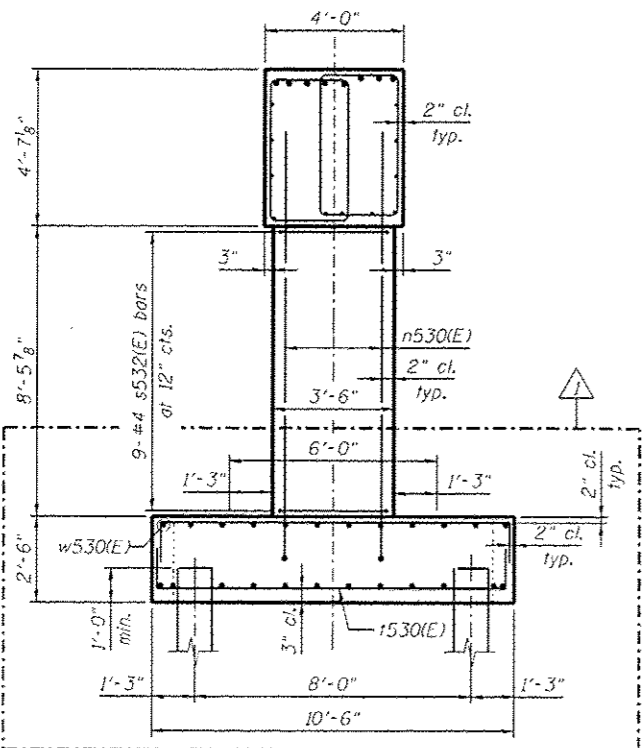
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
373	2013-0388-R	COOK	821	596
CONTRACT NO. 60J16			ILLINOIS FED. AID PROJECT	

Y:\chicago\10093\Eng_Docs_Phase_1\1\SN_016_0486_0487_1st_Ave_over_Canal\NF.incl_0486\0160486_60J16_006_Foundation_2_of_2.dgn 1:24:20 PM 9/11/2014



**ANCHOR BOLT LAYOUT
GIRDERS D1 & D2**

**ANCHOR BOLT LAYOUT
GIRDER C1**



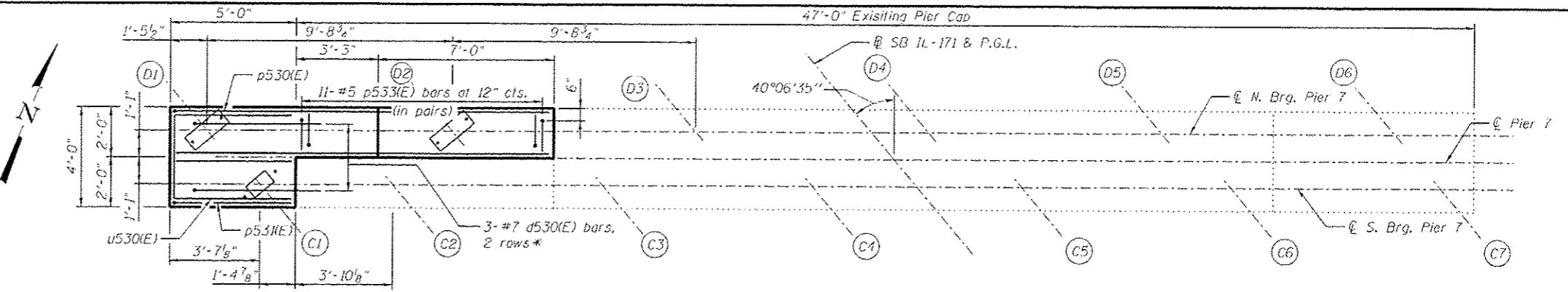
END VIEW

PILE DATA

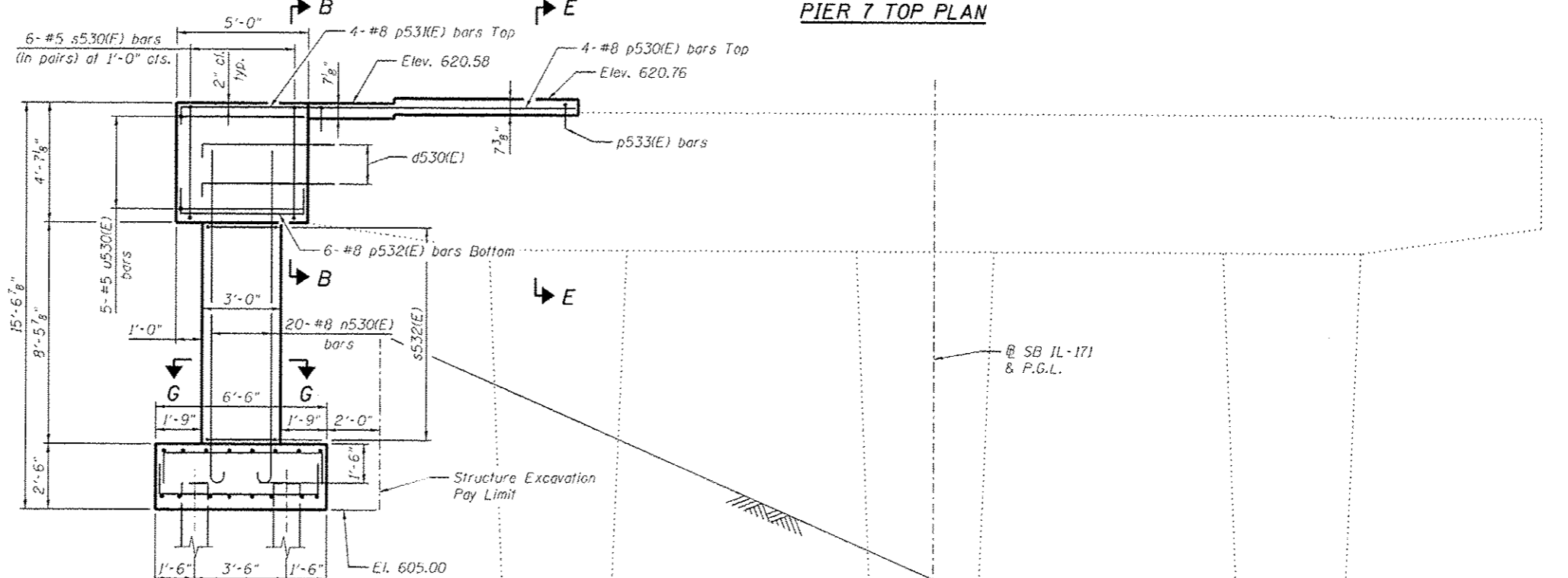
Type: HP12x53 with Pile Shoes
 Nominal Required Bearing: 394 kips
 Allowable Resistance Available: 131 kips
 Est. Length: 45 ft
 No. Production Piles: 3
 No. Test Piles: 1

NOTES:

1. Pour steps monolithically with cap.
2. See Sheet SG87 for Section B-B, Section E-E, and Section G-G.
3. See Sheet SG6 for pile layout.
4. See Sheet SG88 for Bar Bends and Bill of Material.



PIER 7 TOP PLAN



**PIER 7 ELEVATION
(Looking Upstation)**

PIER 7 FOOTING PLAN

benesch
 engineers · scientists · planners
 Alfred Benesch & Company
 205 North Michigan Avenue, Suite 2400
 Chicago, Illinois 60601
 312-565-6450 Job No. 10093

FILE NAME -	USER NAME - pharris	DESIGNED - AWH	REVISED - 9/11/2014 AWH
0162486_60316_084_Pier_7_Widening_Details.dwg	SCALE -	CHECKED - AJK	REVISED -
PLDT DATE - 9/11/2014		DRAWN - KMS	REVISED -
		CHECKED - AJK	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

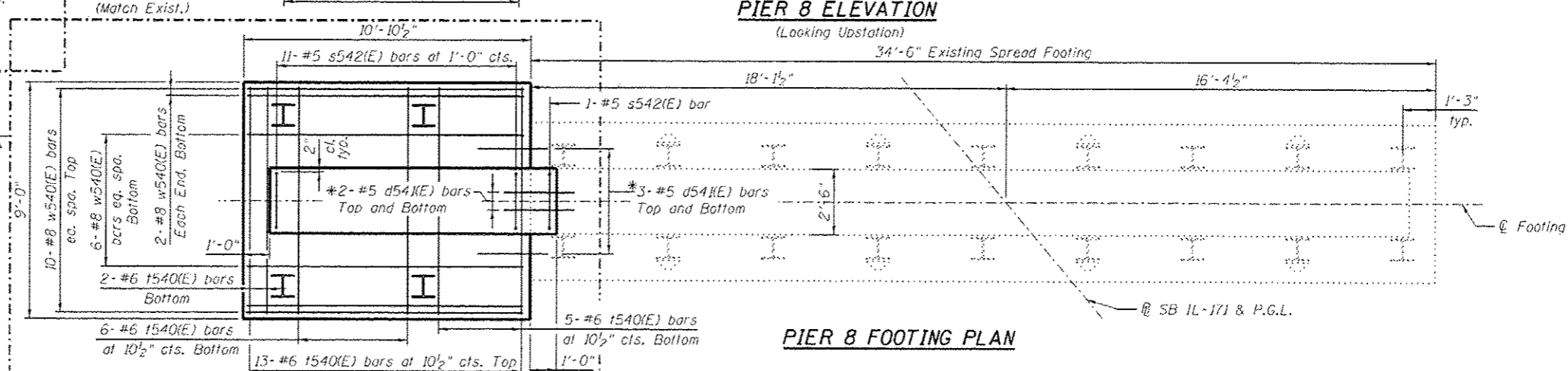
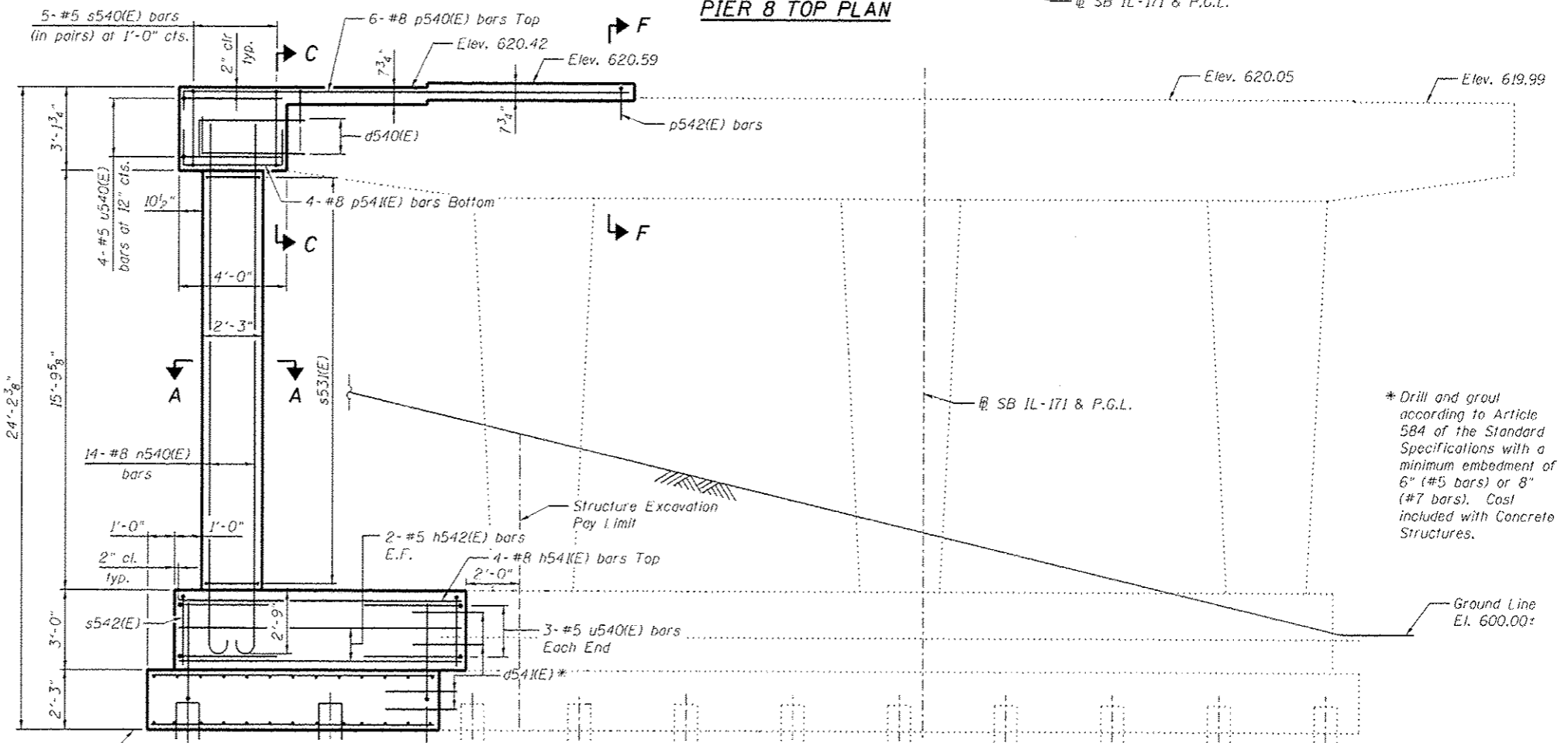
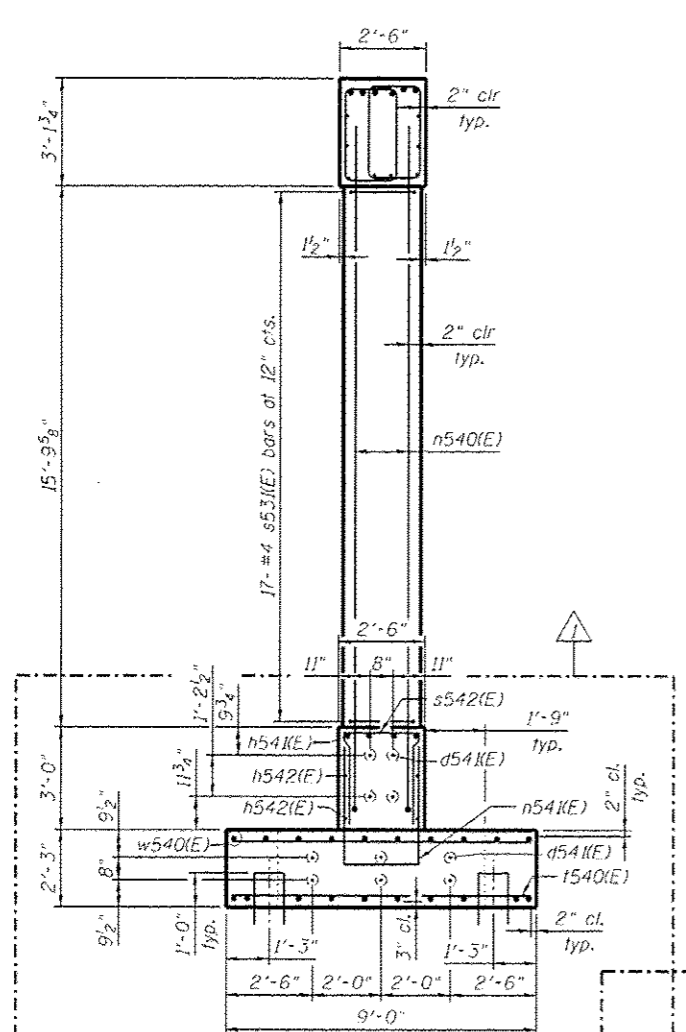
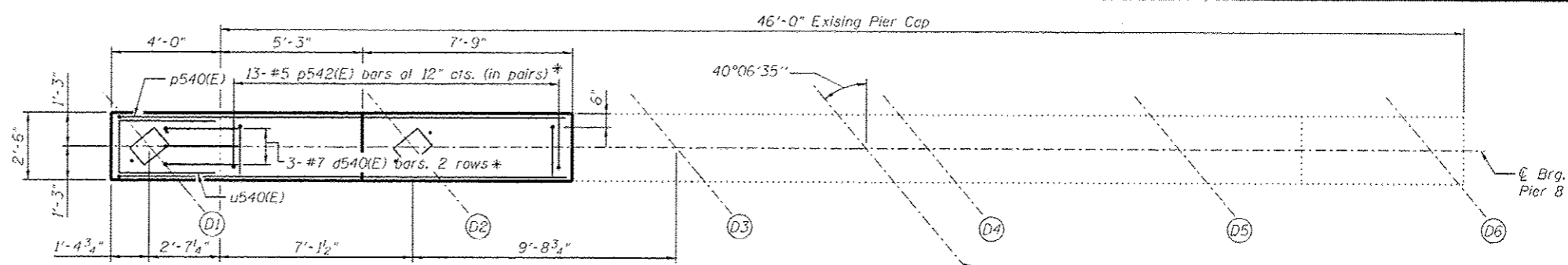
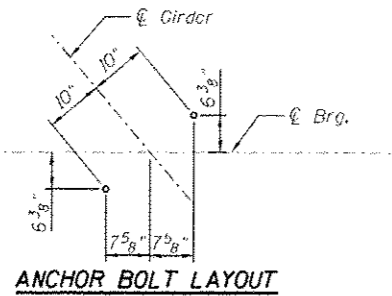
**PIER 7 WIDENING DETAILS
STRUCTURE NO. 016-0486**

SHEET NO. 5084 OF 50100 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
373	2013-0388-R	COOK	821	674
CONTRACT NO. 60J16			ILLINOIS FED. AID PROJECT	

* Drill and grout according to Article 584 of the Standard Specifications with a minimum embedment of 8". Cost included with Concrete Structures.

Y:\chicago\100805\10093\Eng_Docs_Phase_11\SN_016_0486_0487_1st_Ave_over_Canal\Final\Final_0486_0160486_60J16_084_Pier_7_Widening_Details.dwg 1:24:21 PM 9/11/2014



* Drill and grout according to Article 584 of the Standard Specifications with a minimum embedment of 6" (#5 bars) or 8" (#7 bars). Cost included with Concrete Structures.

NOTES:

1. Pour steps monolithically with cap.
2. See Sheet SG87 for Section A-A, Section C-C, and Section F-F.
3. See Sheet SG6 for pile layout.
4. See Sheet SG88 for Bar Bends and Bill of Material.

PILE DATA

Type: HP12x53 with Pile Shoes
 Nominal Required Bearing: 293 kips
 Allowable Resistance Available: 98 kips
 Est. Length: 40 ft
 No. Production Piles: 3
 No. Test Piles: 1

benesch
engineers · scientists · planners

Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-665-0450 Job No. 16093

FILE NAME :	USER NAME :	DESIGNED :	REVISIONS :
8162406_00116_RBS_Pier_8_Widening_Details.dgn	eharris	AWH	9/11/2014 AWH
PL07 DATE :	CHECKED :	DRAWN :	REVISIONS :
9/11/2014	AJK	KWS	
	CHECKED :	REVISIONS :	
	AJK		

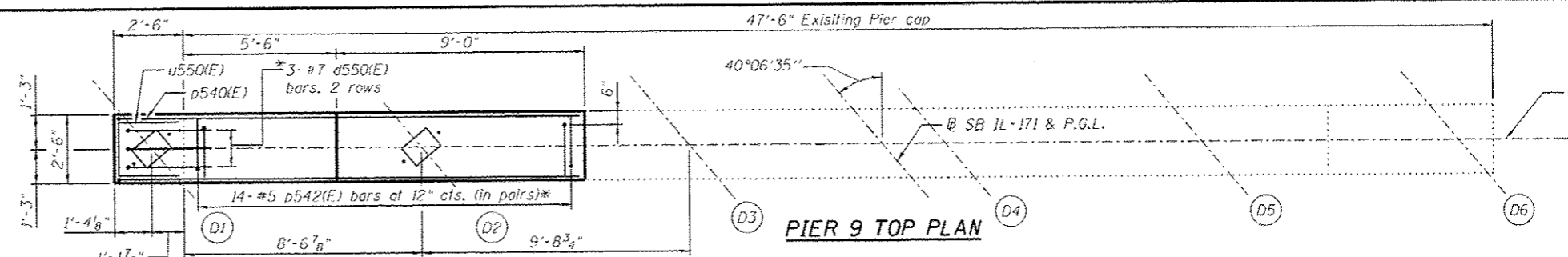
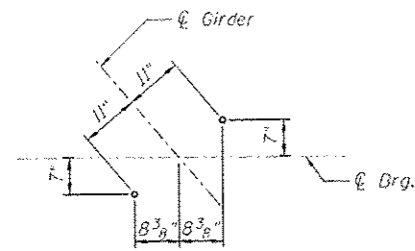
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 8 WIDENING DETAILS
STRUCTURE NO. 016-0486
SHEET NO. SC85 OF SC100 SHEETS

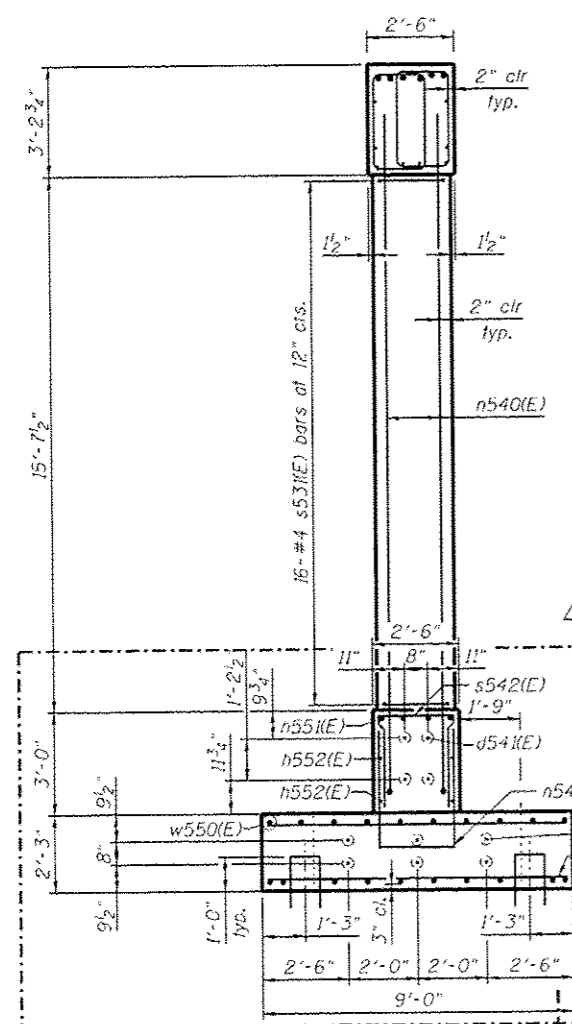
F.A.P. R.T.E. :	SECTION :	COUNTY :	TOTAL SHEETS :	SHEET NO. :
373	2013-0388-R	COOK	821	675
			CONTRACT NO. :	60J16
			ILLINOIS FED. AID PROJECT :	

Y:\chicago\100005\10093\Eng_Docs\Phase-11\SN-016_0486_0487_1st_Ave_over_Cornal\Final\0486_0487_Pier_8_Widening_Details.dgn
 1:24:22 PM
 9/11/2014

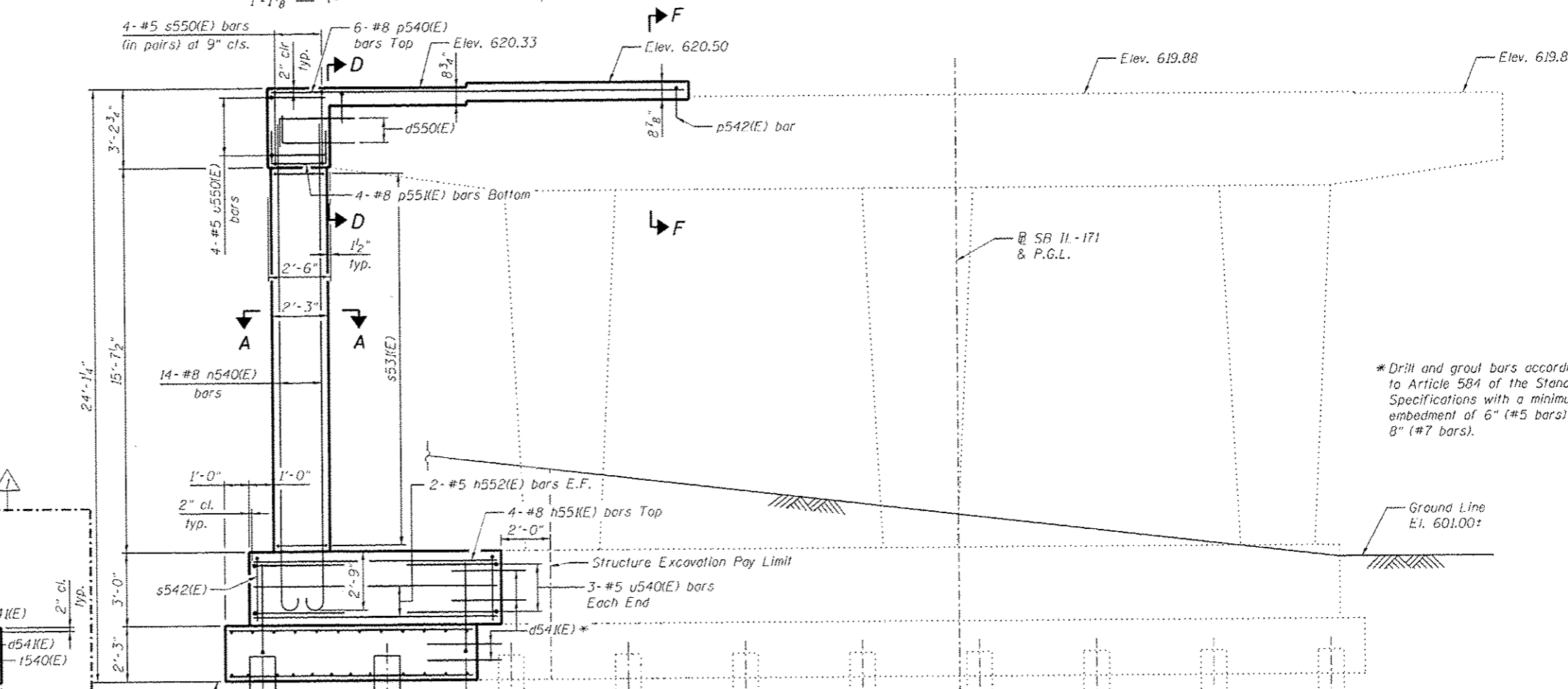
ANCHOR BOLT LAYOUT



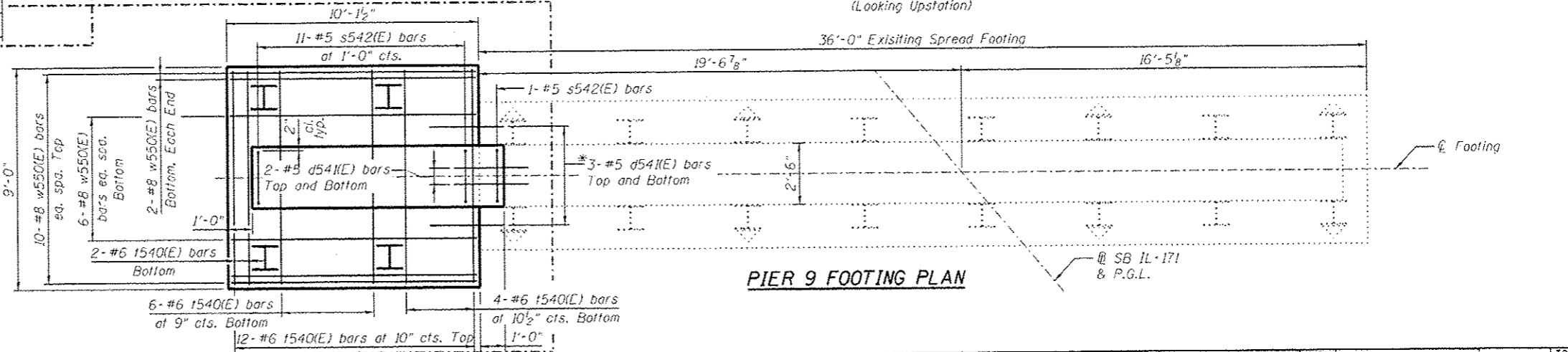
PIER 9 TOP PLAN



END VIEW



PIER 9 ELEVATION
(Looking Upstation)



PIER 9 FOOTING PLAN

PILE DATA
 Type: HP12x53 with Pile Shoes
 Nominal Required Bearing: 314 kips
 Allowable Resistance Available: 105 kips
 Est. Length: 45 ft
 No. Production Piles: 3
 No. Test Piles: 1

- NOTES:**
1. Pour steps monolithically with cap.
 2. See Sheet SG87 for Section A-A, Section D-D, and Section F-F.
 3. See Sheet SG6 for pile layout.
 4. See Sheet SG88 for Bar Bends and Bill of Material.

benesch
 engineers • scientists • planners
 Alfred Benesch & Company
 205 North Michigan Avenue, Suite 2400
 Chicago, Illinois 60601
 312-565-0450 Job No. 10093

FILE NAME: 0168486_CB116_R86_Pier_9_Widening_Details	USER NAME: aborris	DESIGNED: AWH	REVISION: 9/11/2014 AWH
		CHECKED: AJK	REVISION:
		DRAWN: KMS	REVISION:
		CHECKED: AJK	REVISION:

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 9 WIDENING DETAILS
STRUCTURE NO. 016-0486
 SHEET NO. SG86 OF SG100 SHEETS

F.A.P. RTEL: 373	SECTION: 2013-0388-R	COUNTY: COOK	TOTAL SHEETS: 821	SHEET NO.: 676
CONTRACT NO. 60J16			ILLINOIS FED. AID PROJECT	

Y:\chicago\100005\10093\Eng_Docs_Phase_1\15N_016_0486_0487_1st_Ave_Over_Canal\1\16_0486\0160486_56J16_086_Pier_9_Widening_Details.dgn
 1:24:24 PM 9/11/2014

PIER 7 BILL OF MATERIAL

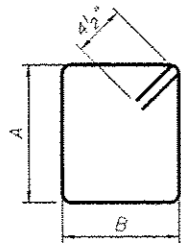
Bar	No.	Size	Length	Shape
d530(E)	6	#7	6'-2"	—
n530(E)	20	#8	13'-11"	—
p530(E)	4	#8	16'-3"	—
p531(E)	4	#8	6'-0"	—
p532(E)	6	#8	7'-4"	—
p533(E)	22	#5	2'-3"	—
s530(E)	12	#5	15'-3"	—
s532(E)	9	#4	12'-5"	—
l530(E)	15	#7	12'-6"	—
u530(E)	5	#5	13'-3"	—
w530(E)	24	#6	8'-2"	—
Structure Excavation	Cu. Yd.	4		
Concrete Structures	Cu. Yd.	13.5		
Reinforcement Bars, Epoxy Coated	Pound	2,240		
Furnishing Steel Piles HP12x53	Foot	135		
Driving Piles	Foot	135		
Test Pile Steel HP12x53	Each	1		
Pile Shoes	Each	4		
Concrete Sealer	Sq. Ft.	229		

PIER 8 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d540(E)	6	#7	5'-2"	—
d541(E)	10	#5	4'-0"	—
n541(E)	4	#8	10'-6"	—
n542(E)	4	#5	10'-6"	—
n540(E)	14	#8	18'-11"	—
n541(E)	11	#6	9'-10"	—
p540(E)	6	#8	17'-10"	—
p541(E)	4	#8	6'-4"	—
p542(E)	26	#5	2'-11"	—
s531(E)	17	#4	8'-5"	—
s540(E)	10	#5	9'-3"	—
s542(E)	12	#5	7'-6"	—
l540(E)	26	#6	8'-8"	—
u540(E)	10	#5	9'-9"	—
w540(E)	20	#8	10'-6"	—
Structure Excavation	Cu. Yd.	96		
Concrete Structures	Cu. Yd.	16.1		
Reinforcement Bars, Epoxy Coated	Pound	2,850		
Furnishing Steel Piles HP12x53	Foot	120		
Driving Piles	Foot	120		
Test Pile Steel HP12x53	Each	1		
Pile Shoes	Each	4		

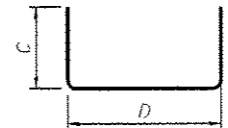
PIER 9 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d541(E)	10	#5	4'-0"	—
d550(E)	6	#7	3'-8"	—
n551(E)	4	#8	9'-9"	—
n552(E)	4	#5	9'-9"	—
n540(E)	14	#8	18'-11"	—
n541(E)	11	#6	9'-10"	—
p540(E)	6	#8	17'-10"	—
p542(E)	28	#5	2'-11"	—
p551(E)	4	#8	4'-10"	—
s531(E)	16	#4	8'-5"	—
s542(E)	12	#5	7'-6"	—
s550(E)	8	#5	9'-5"	—
l540(E)	24	#6	8'-8"	—
u540(E)	6	#5	9'-9"	—
u550(E)	4	#5	6'-9"	—
w550(E)	20	#8	9'-9"	—
Structure Excavation	Cu. Yd.	62		
Concrete Structures	Cu. Yd.	15.1		
Reinforcement Bars, Epoxy Coated	Pound	2,710		
Furnishing Steel Piles HP12x53	Foot	135		
Driving Piles	Foot	135		
Test Pile Steel HP12x53	Each	1		
Pile Shoes	Each	4		



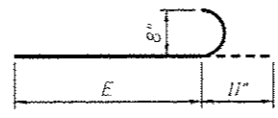
BARS s530(E), s531(E), s532(E), s540(E) & s550(E)

Bar	A	B
s530(E)	4'-3"	3'-0"
s531(E)	1'-11"	1'-11"
s532(E)	3'-2"	2'-8"
s540(E)	2'-9"	1'-6"
s550(E)	2'-10"	1'-6"



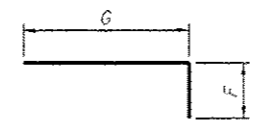
BARS n541(E), p541(E), s542(E), u540(E), p551(E), u550(E), p532(E), u530(E), l530(E) & w530(E)

Bar	C	D
n541(E)	3'-10"	2'-2"
p541(E)	1'-4"	3'-8"
s542(E)	2'-8"	2'-2"
u540(E)	3'-10"	2'-1"
p551(E)	1'-4"	2'-2"
u550(E)	2'-4"	2'-1"
p532(E)	1'-4"	4'-8"
u530(E)	4'-10"	3'-7"
l530(E)	1'-2"	10'-2"
w530(E)	1'-0"	6'-2"



BARS n530(E) & n540(E)

Bar	E
n530(E)	13'-0"
n540(E)	18'-0"



BARS d540(E), p540(E), p542(E), d550(E), p530(E), p531(E), p533(E) & d530(E)

Bar	F	G
d540(E)	1'-2"	4'-0"
p540(E)	1'-4"	16'-6"
p542(E)	11"	1'-10"
d550(E)	1'-2"	2'-6"
p530(E)	1'-4"	14'-11"
p531(E)	1'-4"	4'-8"
p533(E)	11"	1'-4"
d530(E)	1'-2"	5'-0"



Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-865-0450 Job No. 10093

FILE NAME	USER NAME	DESIGNED	REVISED
0162486_60J16_898_Pier_7_8_9_Bar_Bends_Bill_of_Material.dgn	aharris	- AWH	9/11/2014 AWH
		CHECKED	REVISED
		- AJK	-
		DRAWN	REVISED
		- AWH	-
		CHECKED	REVISED
		- AJK	-
		PLT DATE	9/11/2014

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PIERS 7, 8 & 9 BAR BENDS AND BILL OF MATERIAL
STRUCTURE NO. 016-0486**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
373	2013-0388-R	COOK	821	678
CONTRACT NO. 60J16			9/11/2014	
[ILLINOIS] FED. AID PROJECT				

SHEET NO. 5088 OF 50100 SHEETS

Y:\chicago\100005\10093\Eng_Docs_Phase_1\1\SN_016_2486_0486_016_898_Pier_7_8_9_Bar_Bends_Bill_of_Material.dgn 1:24:25 PM 9/11/2014