SUMMARY OF QUANTITIES

S.I.	CODE NO.	ITEM	TOTAL QUANTITY	UNIT	CONSTRUCTION TYPE CODE: ROADWAY 0011	SAFETY 0021	TRAINEES 0042
	50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	1	EACH	1		
	50200100	STRUCTURE EXCAVATION	540	CU YD	540		
	50200300	COFFERDAM EXCAVATION	60	CU YD	60		
	50201101	COFFERDAM (TYPE 1) (LOCATION - 1)	2	EACH	2		
	50300225	CONCRETE STRUCTURES	425	CU YD	425		
	50300255	CONCRETE SUPERSTRUCTURE	320	CU YD	320		
	50300260	BRIDGE DECK GROOVING	600	SQ YD	600		
	50300300	PROTECTIVE COAT	150	SQ YD	150		
	50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	1	L SUM	1		
	50500505	STUD SHEAR CONNECTORS	6,090	EACH	6,090		
	50800105	REINFORCEMENT BARS	7,385	POUND	7,385		
	50800205	REINFORCEMENT BARS, EPOXY COATED	108,330	POUND	108,330		
	50800515	BAR SPLICERS	72	EACH	72		
*	50900105	ALUMINUM RAILING, TYPE L	209	FOOT	209		
	51201600	FURNISHING STEEL PILES HP12X53	2,438	FOOT	2,438		
	51201800	FURNISHING STEEL PILES HP14X73	456	FOOT	456		
	51202305	DRIVING PILES	2,894	FOOT	2,894		
	51203600	TEST PILE STEEL HP12X53	4	EACH	4		
	51203800	TEST PILE STEEL HP14X73	2	EACH	2		
	51300105	TEMPORARY BRIDGE COMPLETE	1	EACH	1		
	51500100	NAME PLATES	1	EACH	1		
	Z0043900	PREFORMED JOINT FILLER	74	FOOT	74		
	52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	15	EACH	15		

1

* – INDICATES SPECIALTY ITEMS

FILE NAME = 11519_02-QUAN-01 - IDOT P02	USER NAME =	DESIGNED – JPH	REVISED – 1 4/10/2017	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED – PKB	REVISED –	
	PLOT SCALE =	DRAWN – KWM	REVISED –	
	PLOT DATE = 01/30/17	CHECKED – AG	REVISED –	

WOODLAWN AVENUE WEST
BRIDGE REPLACEMENT
SUMMARY OF QUANTITIES

SCALE: NONE | SHEET NO. 04 OF 62 SHEETS | STA. | TO STA.

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17	11-00095-00-BR	COOK	62	04
		CONTRACT NO. 61D83		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT N/A

SHEET INDEX

GENERAL NOTES

1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized in painted areas and ASTM A325 Type 3 in unpainted areas. Bolts 7/8 in. dia., holes 15/16 in. dia., unless noted otherwise.
2. All structural steel shall be AASHTO M270 Grade 50.
3. Calculated weight of Structural Steel = 155,750 lbs (AASHTO M270 GR. 50)
   Calculated weight of Structural Steel = 19,250 lbs (AASHTO M270 GR. 36)
4. No field welding is permitted except as specified in the contract documents.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. The organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat for all steel surfaces shall be Gray, Munsell No. 5B 7/1.
7. If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
8. Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
9. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
10. Slipforming of the parapets is not allowed.
11. The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for the removal and replacement of the superstructure.
12. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
13. The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR 3704 Floodway Construction permit number allowing permanent construction as shown in the contract plans.
14. 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.
15. The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Soil Retention System.
16. A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

TOTAL BILL OF MATERIALS

ITEM	UNIT	SUPER	SUB	TOTAL	
Removal of Existing Structures No. 1	Each		1	1	
Removal of Existing Structures No. 2	Each		1	1	
Structure Excavation	Cu. Yd.		540	540	
Cofferdam Excavation	Cu. Yd.		60	60	
Cofferdam Typ 1 Loc 1	Each		2	2	
Concrete Structures	Cu.-Yd.		425	425	
Concrete Superstructure	Cu.-Yd.	320		320	
Bridge Deck Grooving	Sq. Yd.	600		600	
Protective Coat	Sq. Yd.		150	150	
Furnishing and Erecting Structural Steel	Pounds	175,000		175,000	
Stud Shear Connectors	Each	6,090		6,090	
Reinforcement Bars	Pound		7,385	7,385	
Reinforcement Bars, Epoxy Coated	Pound	72,180	36,150	108,330	
Bar Splicers	Each	72		72	
Aluminum Railing, Type L	Foot	209		209	1
Furnishing Steel Piles HP 14x73	Foot		456	456	
Furnishing Steel Piles HP 12x53	Foot		2,438	2,438	
Driving Steel Piles	Foot		2,894	2,894	
Temporary Bridge Complete	Each		1	1	1
Test Pile - HP 14x73	Each		2	2	
Test Pile - HP 12x53	Each		4	4	
Name Plates	Each	1		1	
Preformed Joint Filler 2"	Foot	74		74	
Elastomeric Bearing Assembly, Type I	Each	15		15	
Steel Bearing Assembly	Each	5		5	
Anchor Bolts, 1 1/2"	Each	40		40	
Geocomposite Wall Drain	Sq. Yd.		150	150	
Pipe Underdrains for structures, 4"	Foot		135	135	
Granular Backfill for Structures	Cu. Yd.		380	380	
Temporary Soil Retention System	Sq. Ft.		1,200	1,200	
Drainage Scuppers, DS-12	Each	6		6	

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17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3626

ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

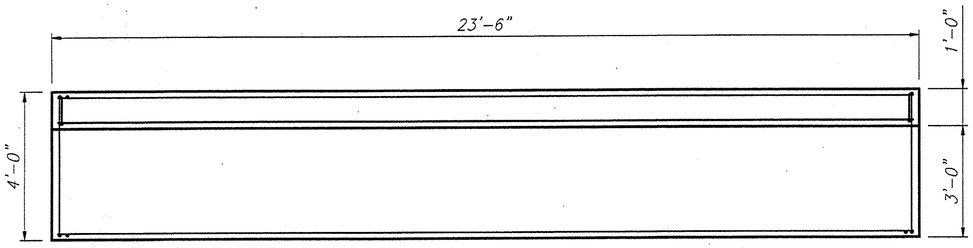
USER NAME =	DESIGNED - RSF	REVISED - 1 4/10/2017	
	CHECKED - PGV	REVISED -	
PLOT SCALE =	DRAWN -	REVISED -	
PLOT DATE = 02/10/2017	CHECKED -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

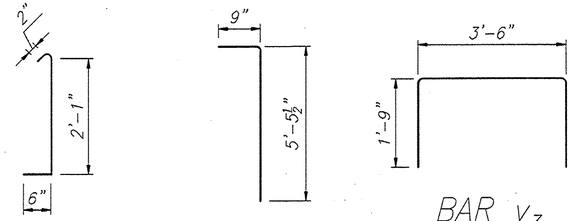
GENERAL DATA
STRUCTURE NO. 016-8048

SCALE: NOT TO SCALE | SHEET NO. 02 OF 37 SHEETS | STA. 5+73.51 TO STA. 7+49.74

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17	11-00095-00-BR	COOK	62	17
		CONTRACT NO. 61D83		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



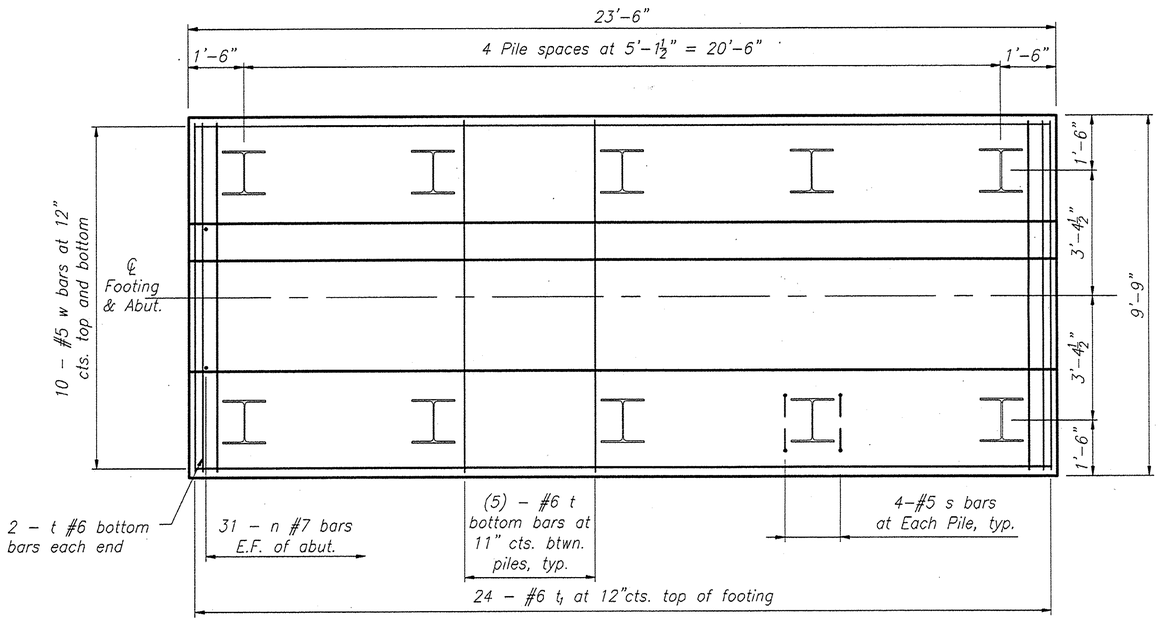
ABUTMENT PLAN



BAR s

BAR v_2

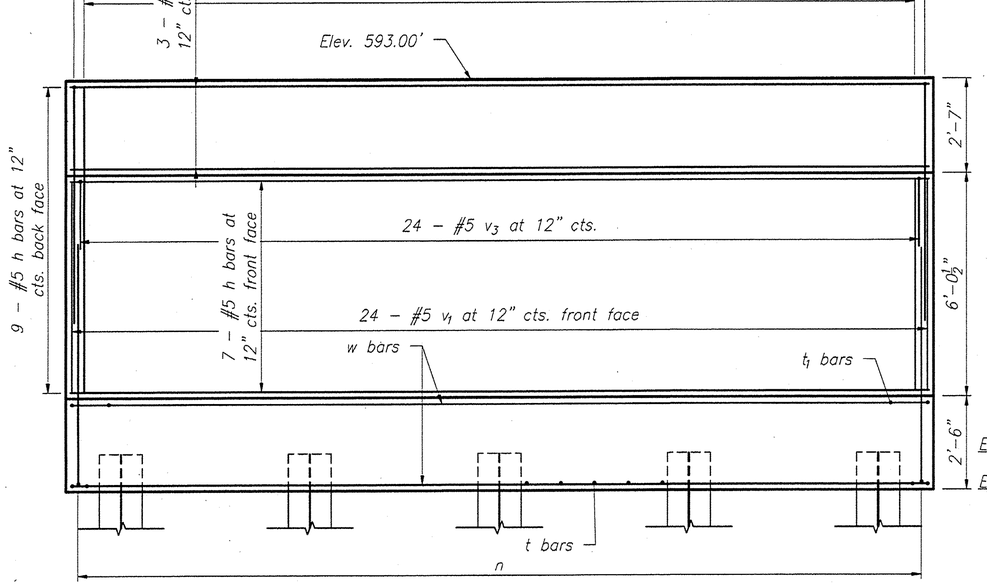
BAR v_3



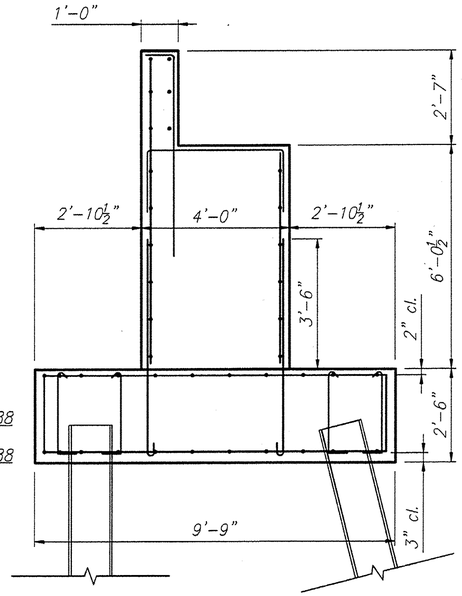
FOOTING PLAN

PILE DATA

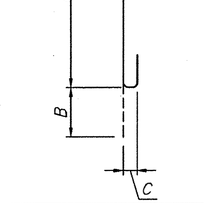
Type: HP12x53
Nominal Required Bearing: 313 kips
Factored Resistance Available: 172 kips
Est. Length: 28'
No. Production Piles: 9
No. Test Piles: 1



ELEVATION



SECTION THRU ABUTMENT



BAR	A	B	C
n	5'-8"	10"	4½"

BAR n

BILL OF MATERIAL - TEMP. SOUTH ABUTMENT

BAR	QTY.	SIZE	LENGTH	SHAPE
h	19	#5	23'-2"	
n	62	#7	6'-6"	
s	40	#5	2'-11"	
t	24	#6	9'-4"	
t_1	24	#6	9'-4"	
v	31	#7	8'-3"	
v_1	24	#5	5'-8"	
v_2	24	#6	6'-2"	
v_3	24	#5	7'-0"	
w	20	#5	23'-0"	
Reinforcement Bars		Pounds	3620	
Concrete Structure		Cu. Yd.	44.6	
Structure Excavation		Cu. Yd.	80	
Furnishing Steel Piles, HP12x53		Feet	342	
Driving Piles		Feet	342	
Test Pile, HP12x53		Each	1	

1

Notes:
All edges shall have ¾" chamfer except as noted.
Pour steps monolithically with cap
Space reinforcement in cap to miss anchor bolts
See Structural Sheet 33 of 37 for pile details

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(708) 331-6700 FAX (708) 331-3828

ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

USER NAME =	DESIGNED - RSF	REVISED - 1 4/10/2017	
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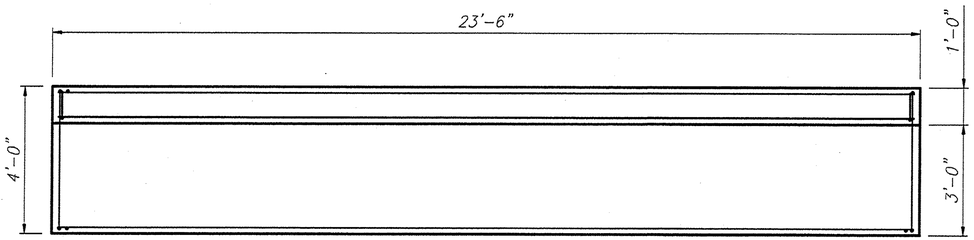
PLOT SCALE =	DRAWN -	REVISED -	
PLOT DATE = 02/10/2017	CHECKED -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

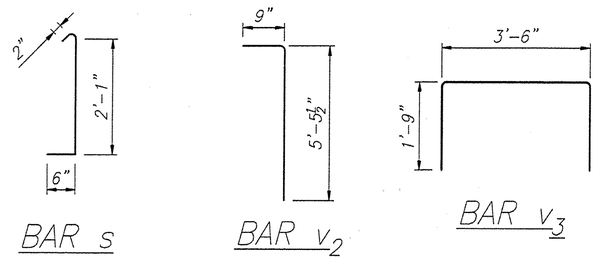
TEMPORARY BRIDGE - SOUTH ABUTMENT
STRUCTURE NO. 016-6048

SCALE: NOT TO SCALE | SHEET NO. 25 OF 37 SHEETS | STA. 5+73.51 TO STA. 7+49.74

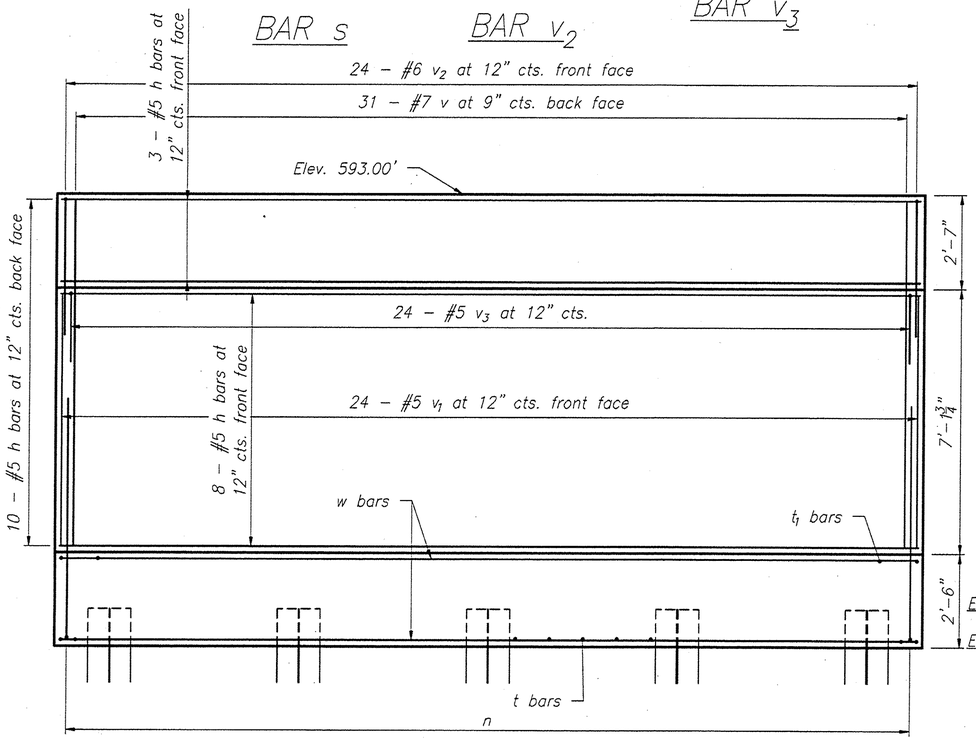
MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17	11-00095-00-BR	COOK	62	40
		CONTRACT NO. 61D83		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



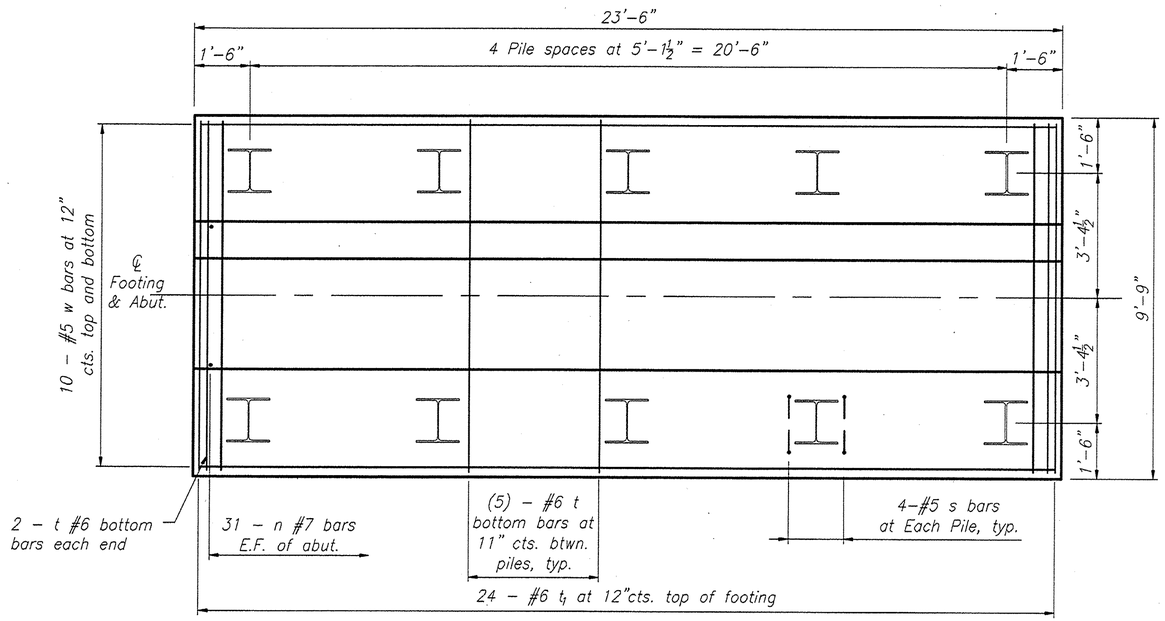
ABUTMENT PLAN



BAR s BAR v_2 BAR v_3

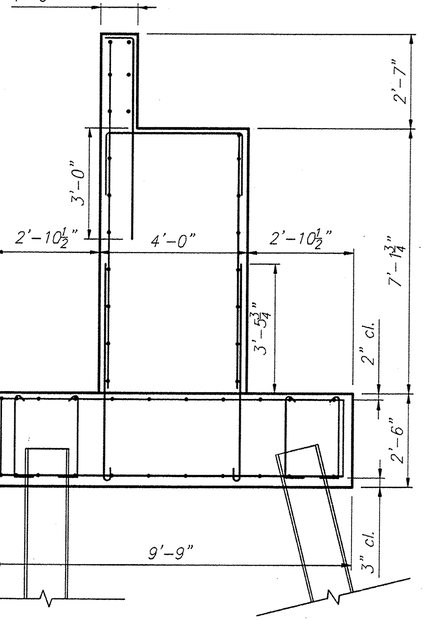


ELEVATION



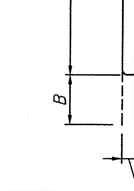
PILE DATA

Type: HP12x53
Nominal Required Bearing: 382 kips
Factored Resistance Available: 210 kips
Est. Length: 27'
No. Production Piles: 9
No. Test Piles: 1



SECTION THRU ABUTMENT

FOOTING PLAN



BAR	A	B	C
n	5'-8"	10"	4½"

BAR n

BILL OF MATERIAL - TEMP. NORTH ABUTMENT

BAR	QTY.	SIZE	LENGTH	SHAPE
h	21	#5	23'-2"	
n	62	#7	6'-6"	
s	40	#5	2'-11"	
t	24	#6	9'-4"	
t_1	24	#6	9'-4"	
v	31	#7	9'-4"	
v_1	24	#5	6'-9"	
v_2	24	#6	6'-2"	
v_3	24	#5	7'-0"	
w	20	#5	23'-0"	

Reinforcement Bars	Pounds	3765
Concrete Structure	Cu. Yd.	48.3
Structure Excavation	Cu. Yd.	80
Furnishing Steel Piles, HP12x53	Feet	333
Driving Piles	Feet	333
Test Pile, HP12x53	Each	1

1

Notes:
All edges shall have ¾" chamfer except as noted.
Pour steps monolithically with cap
Space reinforcement in cap to miss anchor bolts
See Structural Sheet 33 of 37 for pile details

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(708) 331-5700 FAX (708) 331-3826

ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

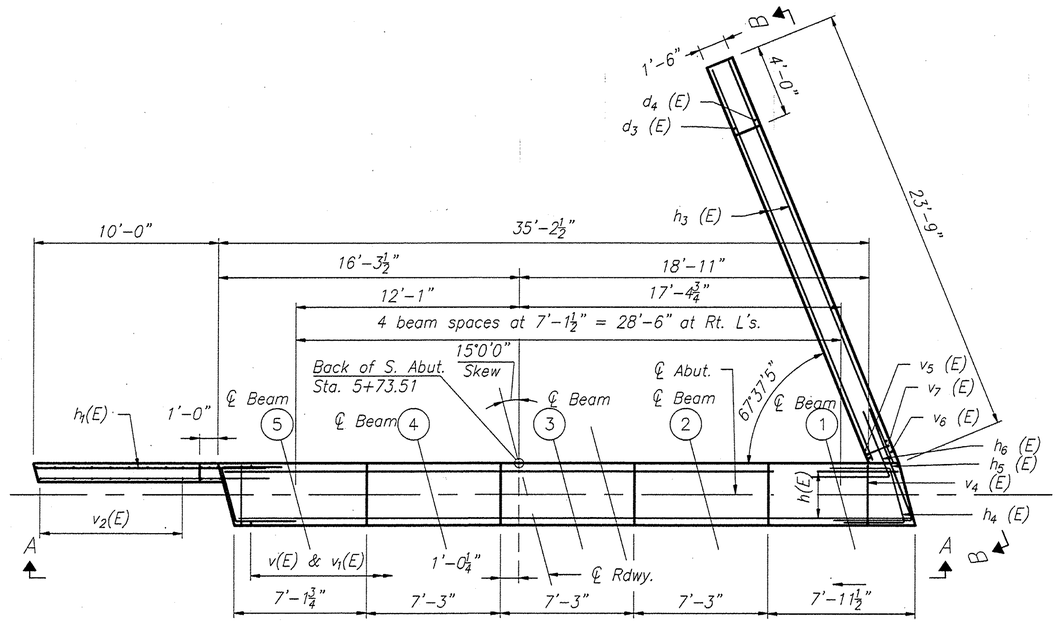
USER NAME =	DESIGNED - RSF	REVISED - 1 4/10/2017	
	CHECKED - PGV	REVISED -	
PLOT SCALE =	DRAWN -	REVISED -	
PLOT DATE = 02/10/2017	CHECKED -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

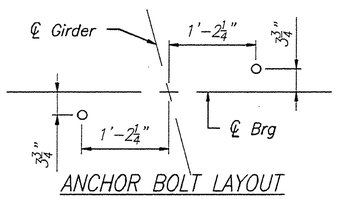
TEMPORARY BRIDGE - NORTH ABUTMENT
STRUCTURE NO. 016-8048

SCALE: NOT TO SCALE | SHEET NO. 26 OF 37 SHEETS | STA. 5+73.51 TO STA. 7+49.74

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17	11-00095-00-BR	COOK	62	41
		CONTRACT NO. 61D83		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

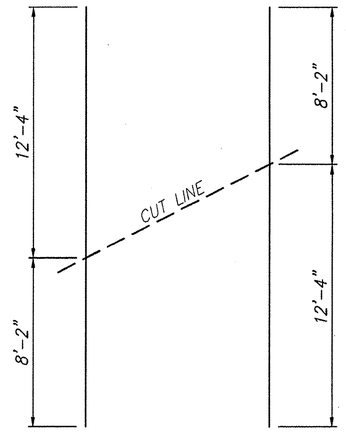


PLAN

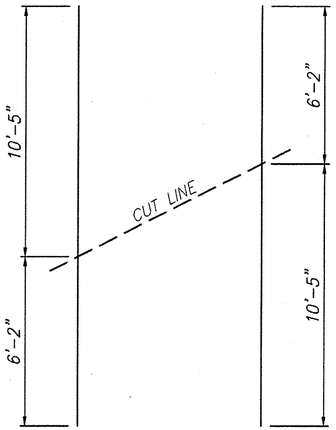


ANCHOR BOLT LAYOUT

FOOTING PLAN



BAR v_2 (E)



BAR h_2 (E)

BILL OF MATERIAL – SOUTH ABUTMENT

BAR	QTY.	SIZE	LENGTH	SHAPE
d(E)	20	#6	5'-7"	
d_1(E)	20	#4	4'-7"	
d_2(E)	6	#4	2'-0"	
d_3(E)	5	#6	7'-0"	
d_4(E)	5	#4	6'-0"	
e(E)	6	#4	19'-4"	
h(E)	20	#5	36'-4"	
h_1(E)	20	#5	15'-2"	
h_2(E)	3	#5	16'-7"	
h_3(E)	28	#5	23'-4"	
h_4(E)	20	#5	9'-4"	
h_5(E)	10	#5	10'-6"	
h_6(E)	10	#5	8'-0"	
h_7(E)	10	#4	3'-8"	
n(E)	188	#8	6'-6"	
s(E)	100	#5	2'-11"	
t(E)	91	#6	9'-3"	
t_1(E)	53	#6	8'-0"	
v(E)	49	#8	8'-4"	
v_1(E)	37	#5	8'-4"	
v_2(E)	9	#8	20'-6"	
v_3(E)	6	#5	12'-3"	
v_4(E)	37	#5	6'-10"	
v_5(E)	32	#8	12'-3"	
v_6(E)	24	#5	12'-3"	
v_7(E)	24	#5	4'-8"	
w(E)	20	#5	49'-0"	
w_1(E)	18	#5	28'-10"	

Reinforcement Bars, Epoxy Coated	Pounds	13,350
Concrete Structure	Cu. Yd.	125
Structure Excavation	Cu. Yd.	---
Furnishing Steel Piles, HP12x53	Feet	912
Driving Piles	Feet	912
Test Pile, HP12x53	Each	1

1

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

Notes:

All edges shall have ¾" chamfer except as noted.
Pour steps monolithically with cap
Space reinforcement in cap to miss anchor bolts
See Structural Sheet 33 of 37 for pile details

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(708) 331-6700 FAX (708) 331-3826

ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

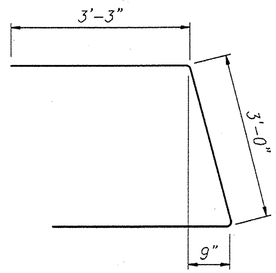
USER NAME =	DESIGNED – RSF	REVISED – 1 4/10/2017	
	CHECKED – PGV	REVISED –	
PLOT SCALE =	DRAWN –	REVISED –	
PLOT DATE = 02/10/2017	CHECKED –	REVISED –	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

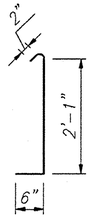
SOUTH ABUTMENT DETAILS
STRUCTURE NO. 016-6048

SCALE: NOT TO SCALE | SHEET NO. 27 OF 37 SHEETS | STA. 5+73.51 TO STA. 7+49.74

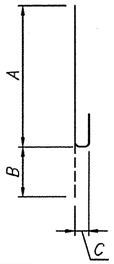
MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17	11-00095-00-BR	COOK	62	42
		CONTRACT NO. 61D83		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



Bar $h_4(E)$

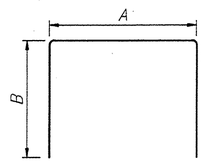


BAR $s(E)$



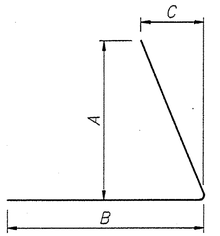
BAR	A	B	C
n(E)	7'-11"	12"	4½"

BAR $n(E)$



BAR	A	B
$v_4(E)$	2'-11"	2'-0"
$v_7(E)$	1'-2"	1'-6"
$d_2(E)$	6"	1'-0"

BAR $v_x(E)$ & $d_x(E)$



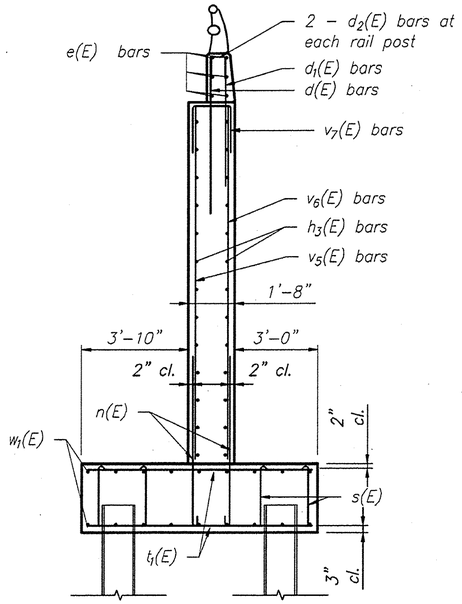
BAR	A	B	C
$h_5(E)$	6'-0"	4'-2"	2'-3"
$h_6(E)$	3'-6"	4'-2"	1'-4"

BAR $h_x(E)$

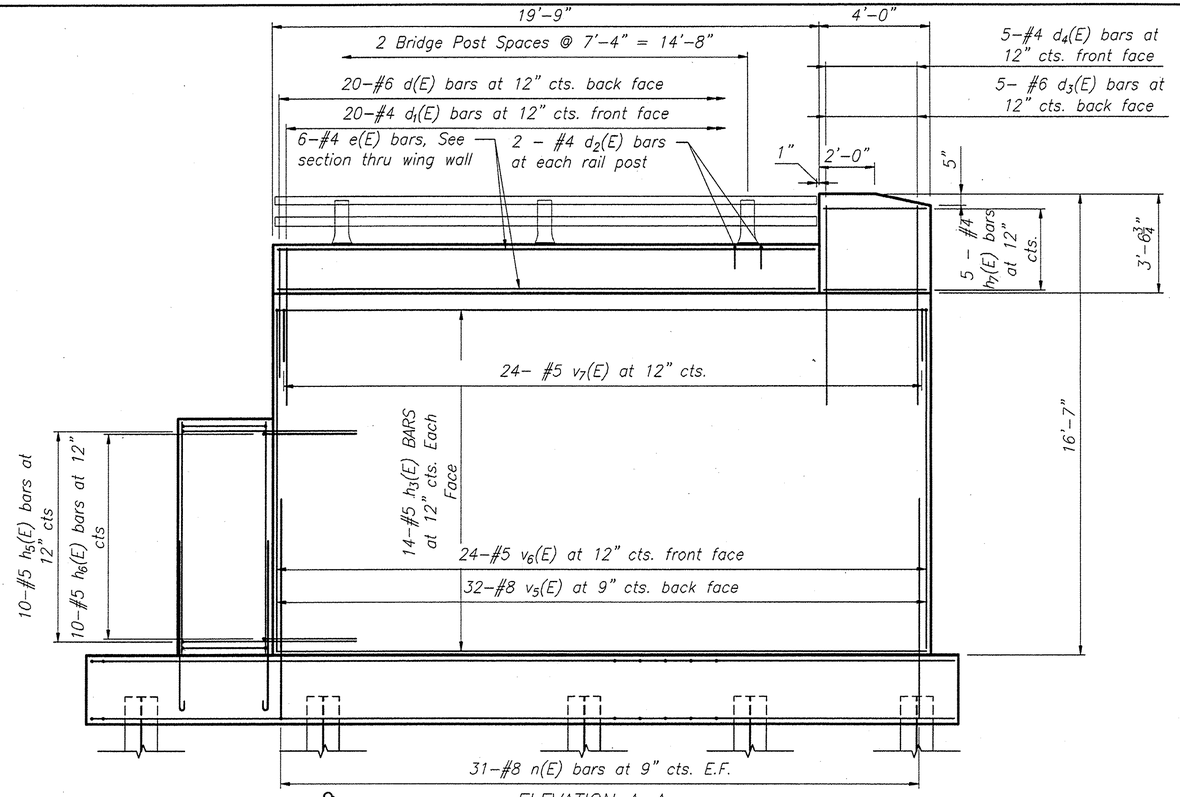
PILE DATA

Type: HP12x53
Nominal Required Bearing: 313 kips
Factored Resistance Available: 172 kips
Est. Length: 28'
No. Production Piles: 24
No. Test Piles: 1

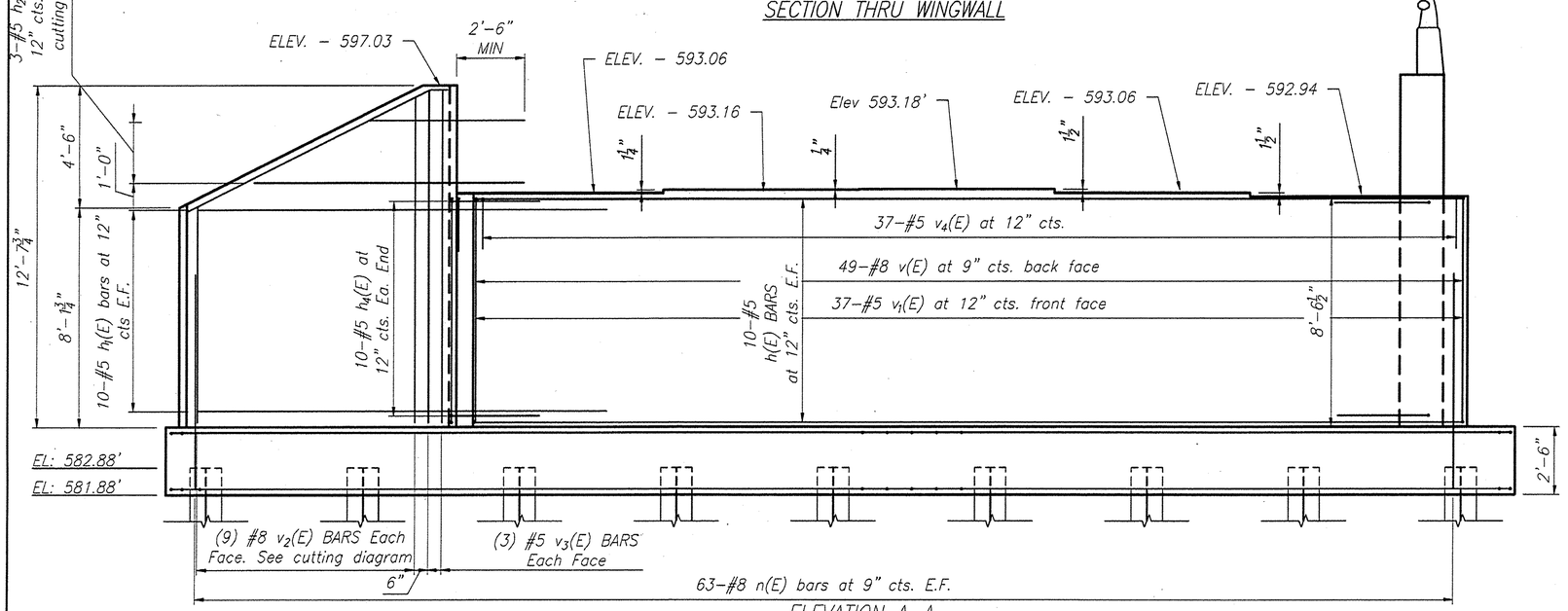
1



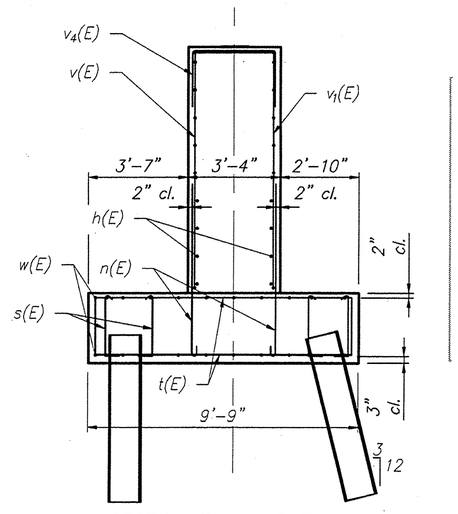
SECTION THRU WINGWALL



ELEVATION A–A



ELEVATION A–A
(LOOKING SOUTH)



SECTION THRU ABUTMENT

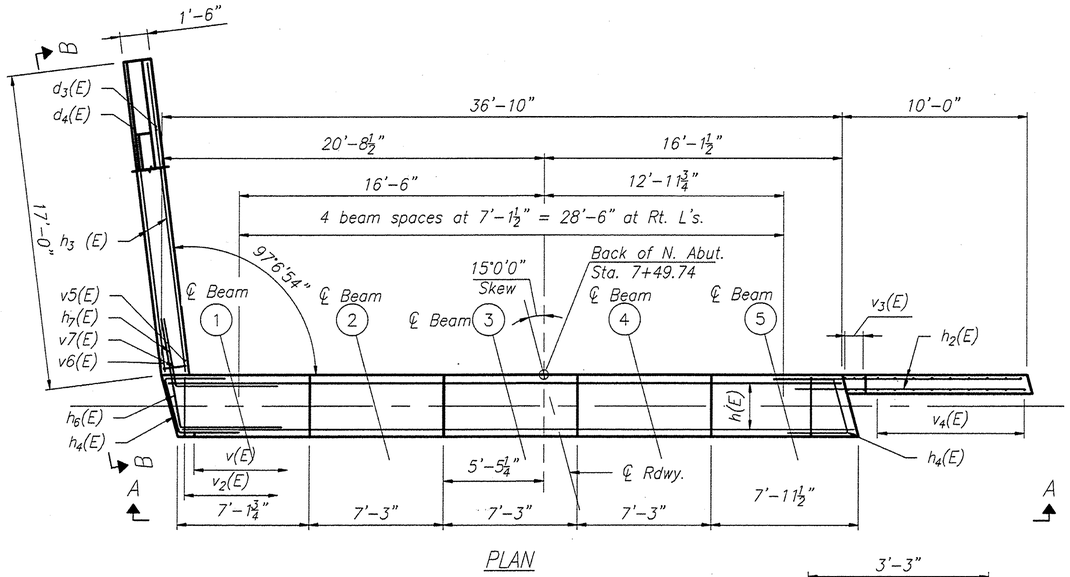
USER NAME =	DESIGNED – RSF	REVISED – 1 4/10/2017	
	CHECKED – PGV	REVISED –	
PLOT SCALE =	DRAWN –	REVISED –	
PLOT DATE = 02/10/2017	CHECKED –	REVISED –	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

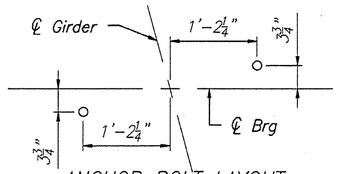
SOUTH ABUTMENT DETAILS
STRUCTURE NO. 016-8048

SCALE: NOT TO SCALE | SHEET NO. 28 OF 37 SHEETS | STA. 5+73.51 TO STA. 7+49.74

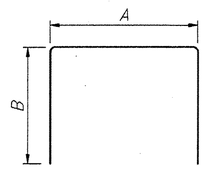
MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17	11-00095-00-BR	COOK	62	43
		CONTRACT NO. 61D83		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



PLAN

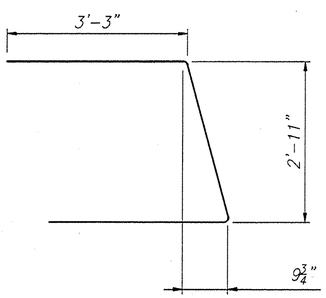


ANCHOR BOLT LAYOUT

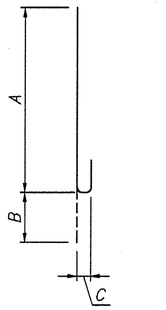


BAR	A	B
$d_2(E)$	6"	1'-0"
$v_2(E)$	3'-0"	1'-6"
$v_7(E)$	1'-2"	1'-6"

BAR $v_x(E)$ & $d_2(E)$

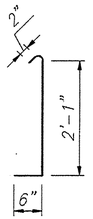


BAR $h_4(E)$

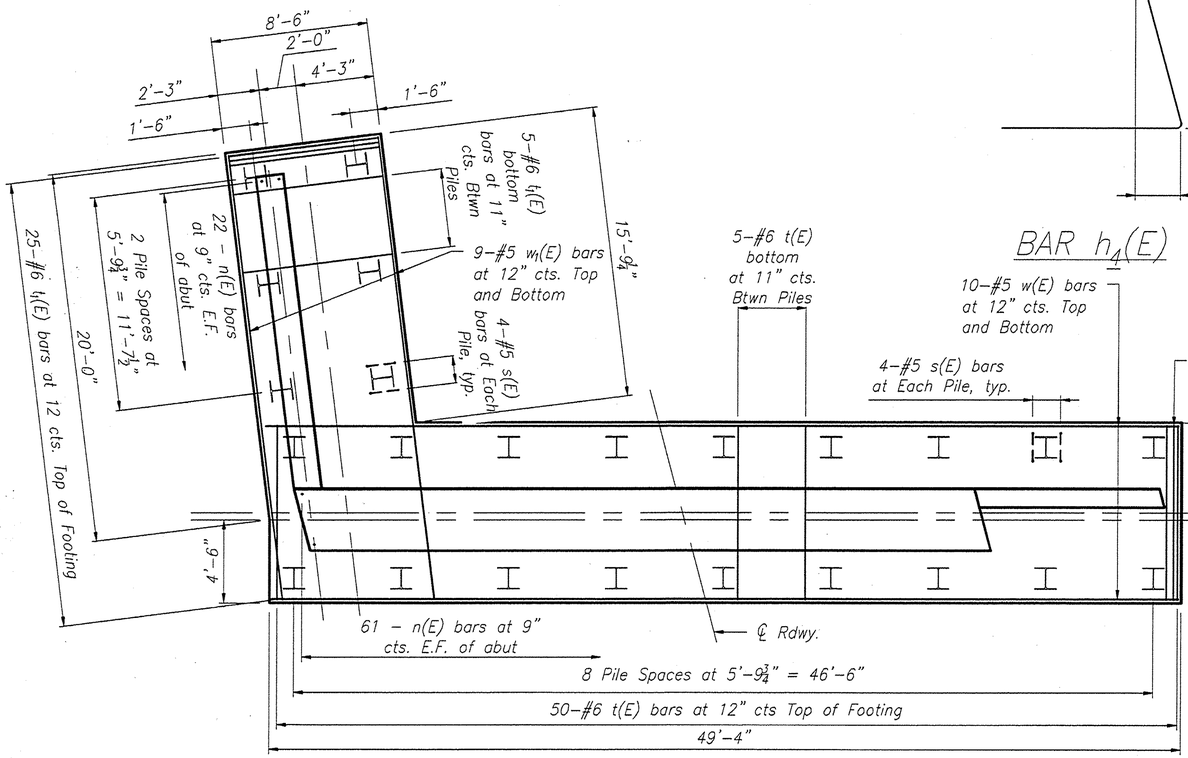


BAR	A	B	C
n(E)	7'-11"	12"	4½"

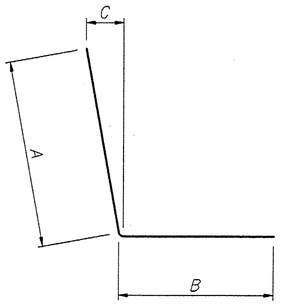
BAR n(E)



BAR s(E)



FOOTING PLAN



BAR	A	B	C
$h_6(E)$	6'-0"	5'-6"	1'-2"
$h_7(E)$	3'-8"	5'-6"	8½"

BAR $h_x(E)$

BILL OF MATERIAL – NORTH ABUTMENT

BAR	QTY.	SIZE	LENGTH	SHAPE
d(E)	13	#6	5'-7"	
d_1(E)	13	#4	4'-7"	
d_2(E)	4	#4	2'-0"	
d_3(E)	5	#6	7'-0"	
d_4(E)	5	#4	6'-0"	
e(E)	6	#4	12'-8"	
h(E)	12	#5	36'-6"	
h_1(E)	12	#5	12'-3"	
h_2(E)	6	#5	17'-2"	
h_3(E)	20	#5	16'-8"	
h_4(E)	12	#5	9'-4"	
h_5(E)	6	#5	11'-4"	
h_6(E)	6	#5	9'-4"	
h_7(E)	8	#4	3'-8"	
n(E)	166	#8	6'-6"	
s(E)	96	#5	2'-11"	
t(E)	92	#6	9'-3"	
t_1(E)	47	#6	8'-0"	
v(E)	50	#8	5'-2"	
v_1(E)	37	#5	5'-2"	
v_2(E)	37	#5	6'-3"	
v_3(E)	6	#5	9'-1"	
v_4(E)	18	#8	20'-6"	
v_5(E)	22	#8	9'-4"	
v_6(E)	16	#5	9'-4"	
v_7(E)	16	#5	4'-6"	
w(E)	20	#5	49'-0"	
w_1(E)	18	#5	25'-0"	
Reinforcement Bars, Epoxy Coated		Pounds	11,070	
Concrete Structure		Cu. Yd.	96	
Structure Excavation		Cu. Yd.	---	
Furnishing Steel Piles, HP12x53		Feet	851	
Driving Piles		Feet	851	
Test Pile, HP12x53		Each	1	

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

Notes:
All edges shall have ¾" chamfer except as noted.
Pour steps monolithically with cap
Space reinforcement in cap to miss anchor bolts
See Structural Sheet 33 of 37 for pile details

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(708) 331-5700 FAX (708) 331-3828

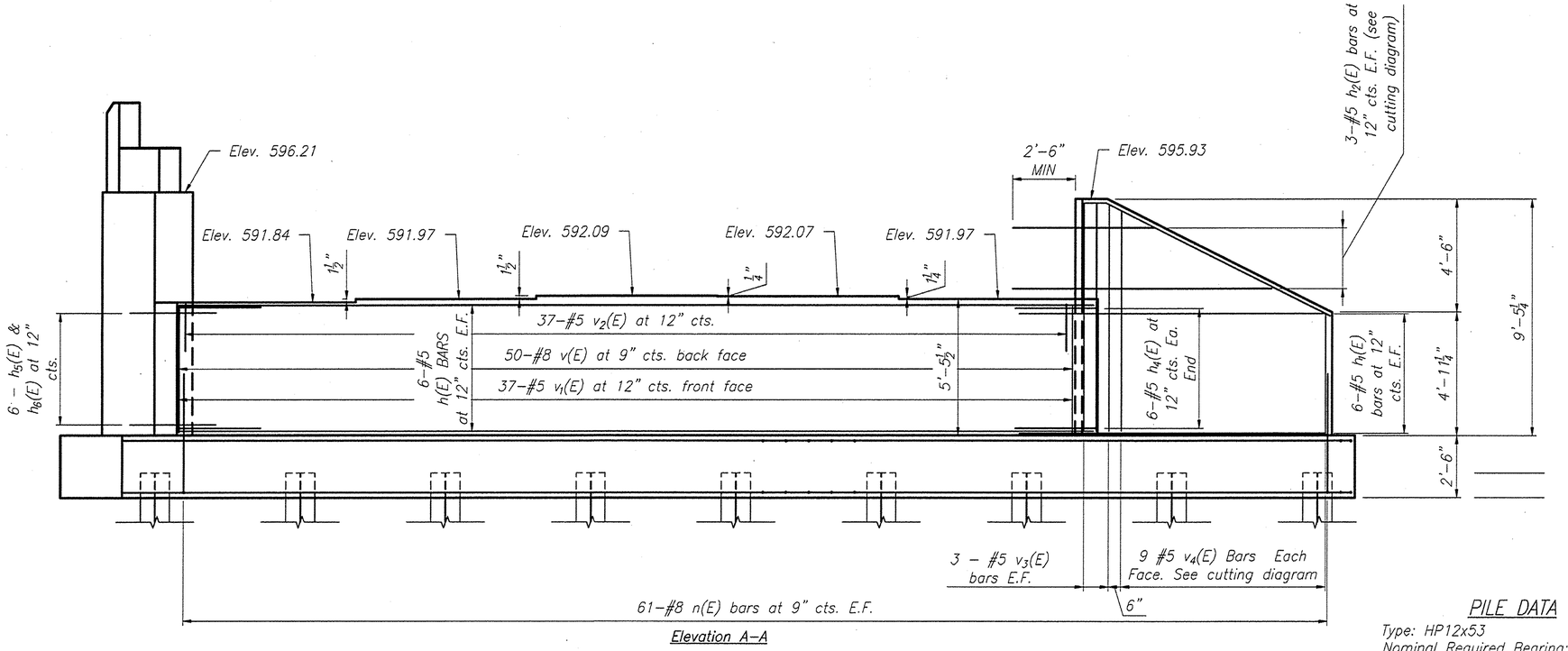
USER NAME =	DESIGNED – RSF	REVISED – 1 4/10/2017	
	CHECKED – PGV	REVISED –	
PLOT SCALE =	DRAWN –	REVISED –	
PLOT DATE = 02/10/2017	CHECKED –	REVISED –	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

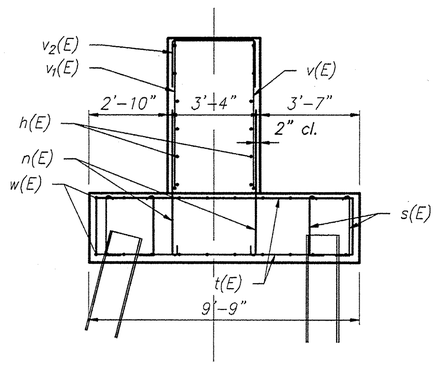
NORTH ABUTMENT DETAILS
STRUCTURE NO. 016-8048

SCALE: NOT TO SCALE | SHEET NO. 29 OF 37 SHEETS | STA. 5+73.51 TO STA. 7+49.74

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17	11-00095-00-BR	COOK	62	44
		CONTRACT NO. 61D83		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



Elevation A-A

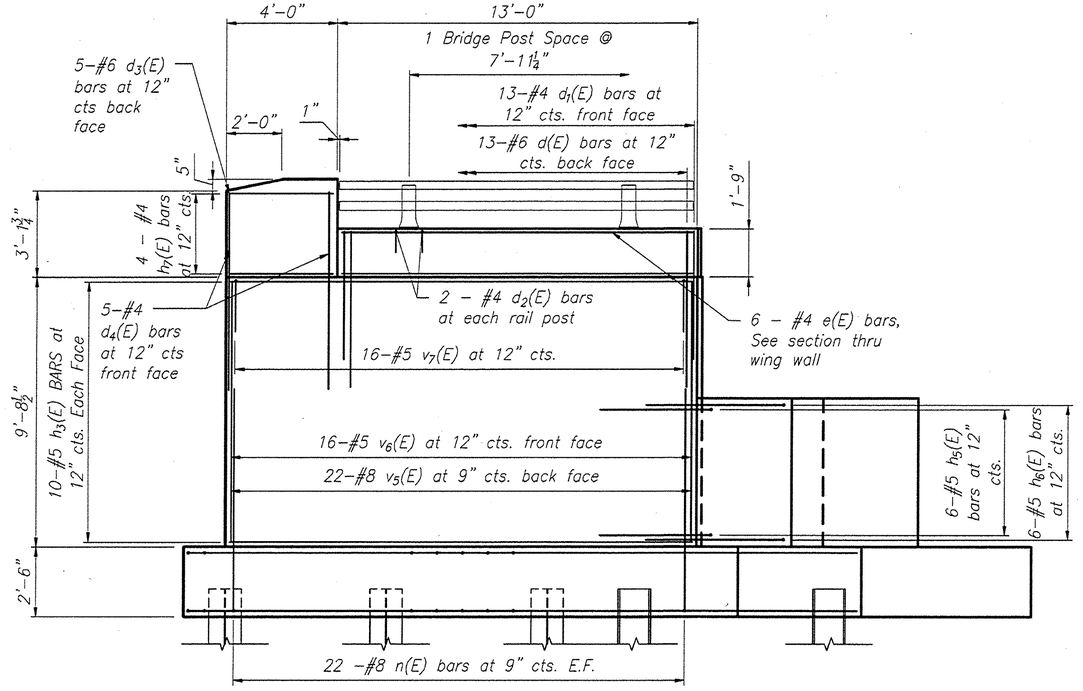


Section thru Abutment

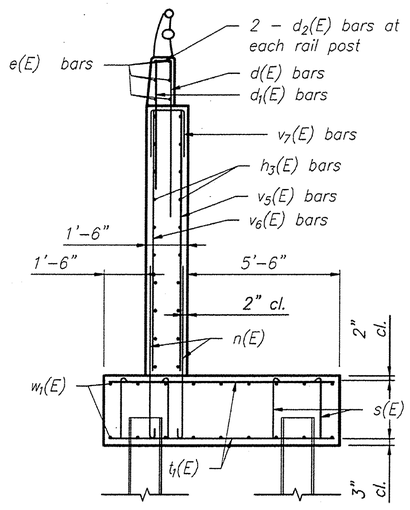
PILE DATA

Type: HP12x53
Nominal Required Bearing: 382 kips
Factored Resistance Available: 210 kips
Est. Length: 27'
No. Production Piles: 23
No. Test Piles: 1

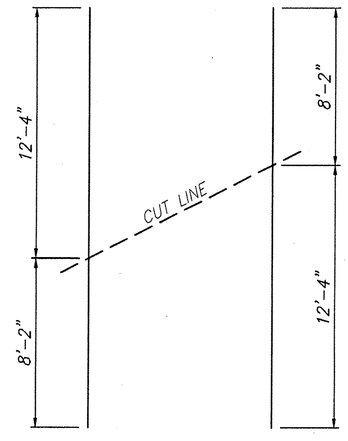
1



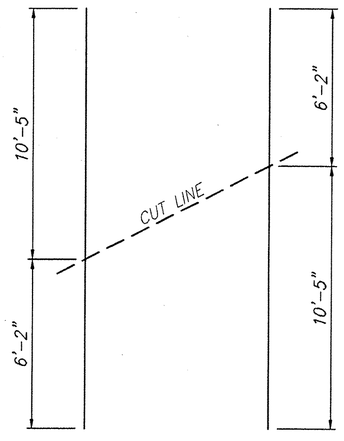
Elevation B-B



Section thru Wingwall



BAR v_2 (E)



BAR h_2 (E)

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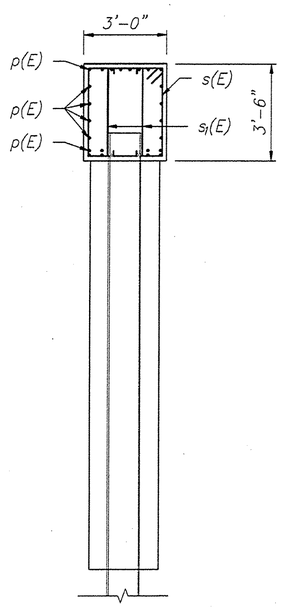
	CHECKED — PGV	REVISED —	
PLOT SCALE =	DRAWN —	REVISED —	
PLOT DATE = 02/10/2017	CHECKED —	REVISED —	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

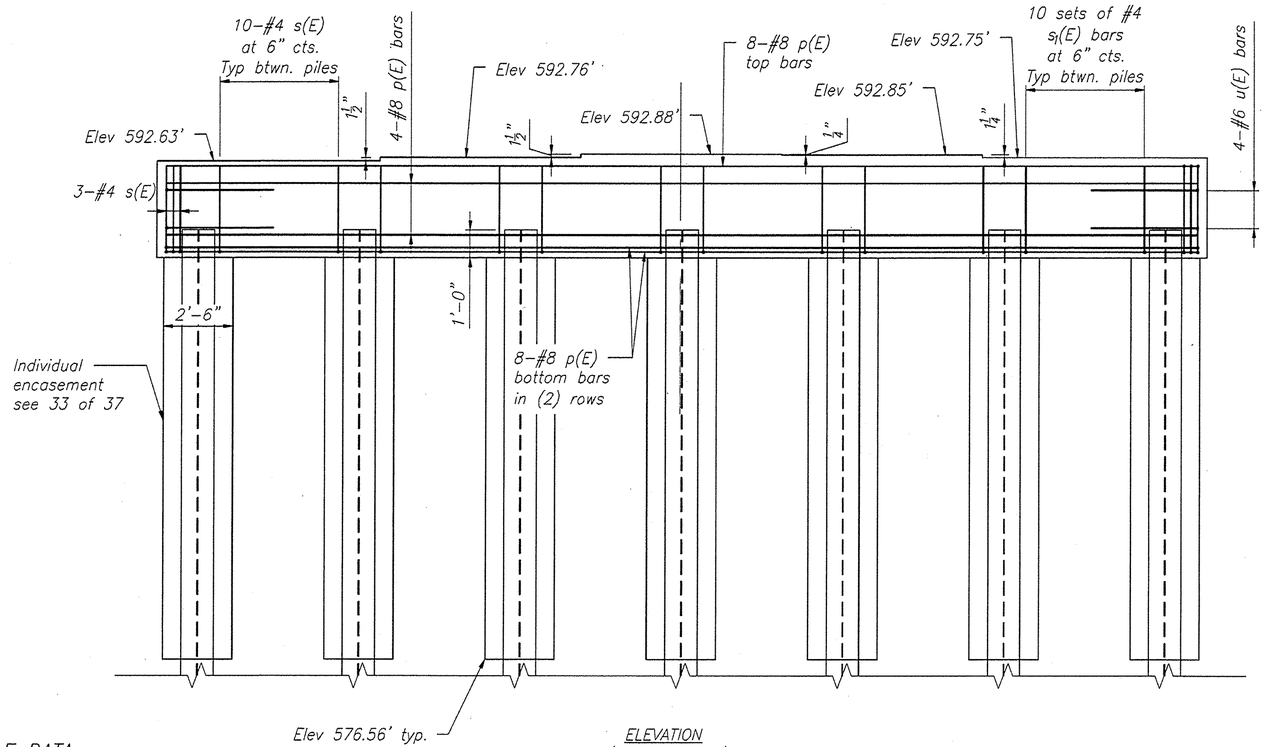
NORTH ABUTMENT DETAILS
STRUCTURE NO. 016-6048

SCALE: NOT TO SCALE | SHEET NO. 30 OF 37 SHEETS | STA. 5+73.51 TO STA. 7+49.74

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17	11-00095-00-BR	COOK	62	45
		CONTRACT NO. 61D83		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



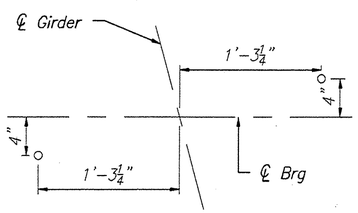
SECTION



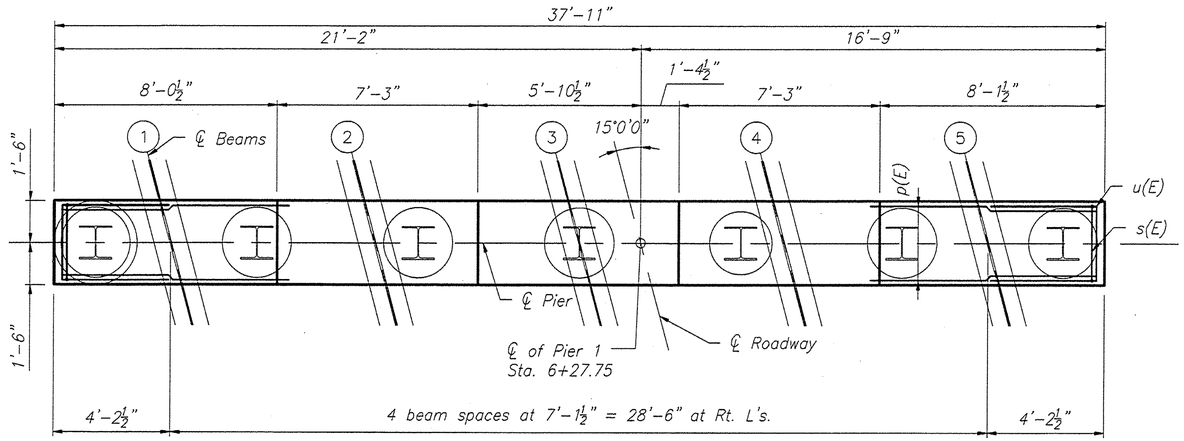
ELEVATION
(Looking North)

PILE DATA

Type: HP14x73
Nominal Required Bearing: 381 kips
Factored Resistance Available: 210 kips
Est. Length: 28'
No. Production Piles: 6
No. Test Piles: 1



ANCHOR BOLT LAYOUT



TOP PLAN

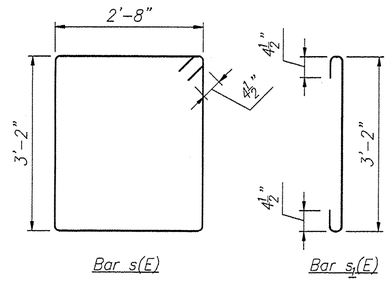
BILL OF MATERIAL – PIER 1 (SOUTH PIER)

BAR	QTY.	SIZE	LENGTH	SHAPE
p(E)	24	#8	37'-5"	
s(E)	66	#4	12'-3"	
s_1(E)	132	#4	4'-3"	
u(E)	8	#6	10'-3"	
Reinforcement Bars, Epoxy Coated			Pounds	3,920
Concrete Structure			Cu. Yd.	33
Structure Excavation			Cu. Yd.	---
Furnishing Steel Piles, HP14x73			Feet	228
Driving Piles			Feet	228
Test Pile, HP14x73			Each	1

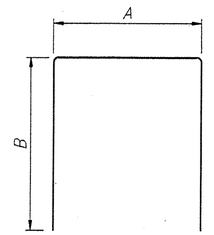
1

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

Notes:
All edges shall have ¾" chamfer except as noted.
Pour steps monolithically with cap
Space reinforcement in cap to miss anchor bolts
See Structural Sheet 33 of 37 for pile details



Bar s(E) Bar s_1(E)



BAR	A	B
u(E)	2'-7"	3'-10"

Bar u(E)

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ILLINOIS DESIGN FIRM REGISTRATION NO. 184001128

USER NAME =	DESIGNED – RSF	REVISED – 1 4/10/2017	
	CHECKED – PGV	REVISED –	
PLOT SCALE =	DRAWN –	REVISED –	
PLOT DATE = 02/10/2017	CHECKED –	REVISED –	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 (SOUTH PIER)
STRUCTURE NO. 016-8048

SCALE: NOT TO SCALE | SHEET NO. 31 OF 37 SHEETS | STA. 5+73.51 TO STA. 7+49.74

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17	11-00095-00-BR	COOK	62	46
		CONTRACT NO. 61D83		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

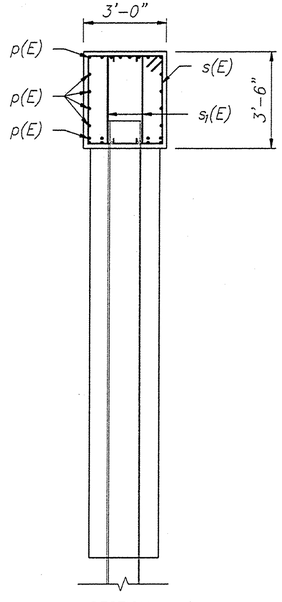
BILL OF MATERIAL – PIER 2 (NORTH PIER)

BAR	QTY.	SIZE	LENGTH	SHAPE
p(E)	24	#8	37'–5"	
s(E)	66	#4	12'–3"	
s_1(E)	132	#4	4'–3"	
u(E)	8	#6	10'–3"	
Reinforcement Bars, Epoxy Coated			Pounds	3,920
Concrete Structure			Cu. Yd.	33
Structure Excavation			Cu. Yd.	---
Furnishing Steel Piles, HP14x73			Feet	228
Driving Piles			Feet	228
Test Pile, HP14x73			Each	1

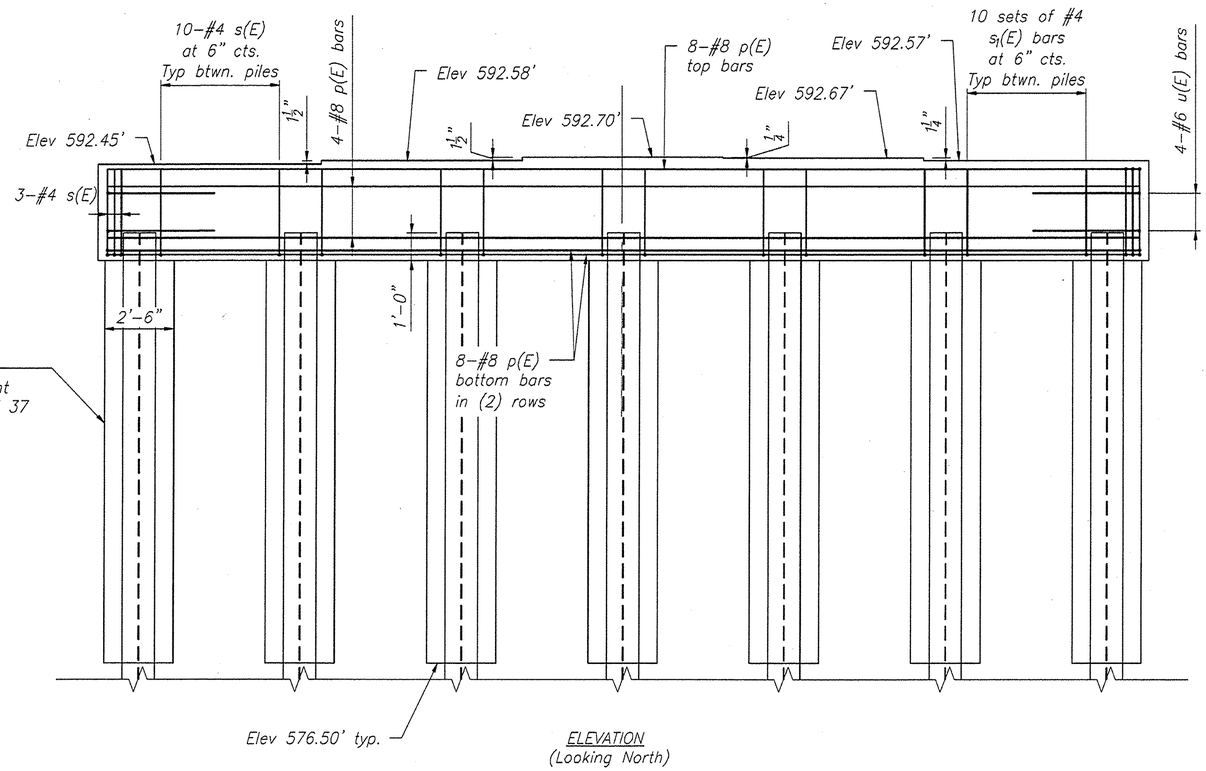
1

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

Notes:
All edges shall have $\frac{3}{4}$" chamfer except as noted.
Pour steps monolithically with cap
Space reinforcement in cap to miss anchor bolts
See Structural Sheet 33 of 37 for pile details



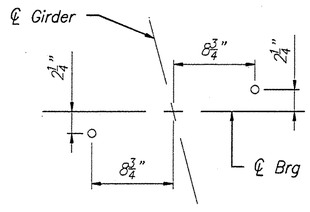
SECTION



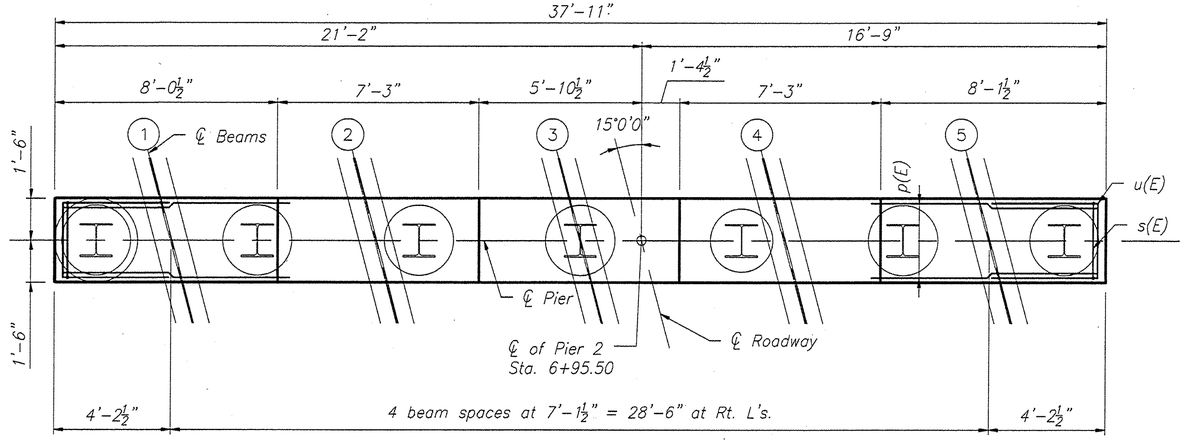
ELEVATION
(Looking North)

PILE DATA

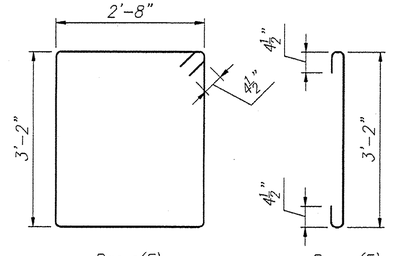
Type: HP14x73
Nominal Required Bearing: 578 kips
Factored Resistance Available: 318 kips
Est. Length: 28'
No. Production Piles: 6
No. Test Piles: 1



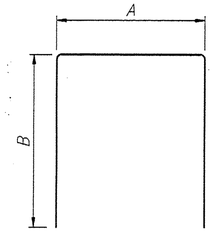
ANCHOR BOLT LAYOUT



TOP PLAN



Bar s(E) Bar s_1(E)



BAR	A	B
u(E)	2'–7"	3'–10"

Bar u(E)

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USER NAME =	DESIGNED – RSF	REVISED – 1 4/10/2017	
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PLOT SCALE =	DRAWN –	REVISED –	
PLOT DATE = 02/10/2017	CHECKED –	REVISED –	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 (NORTH PIER)
STRUCTURE NO. 016-8048

SCALE: NOT TO SCALE | SHEET NO. 32 OF 37 SHEETS | STA. 5+73.51 TO STA. 7+49.74

MUN	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17	11-00095-00-BR	COOK	62	47
		CONTRACT NO. 61D83		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		