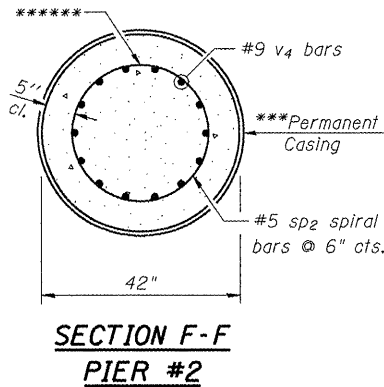
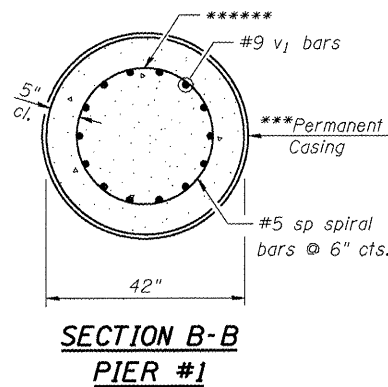
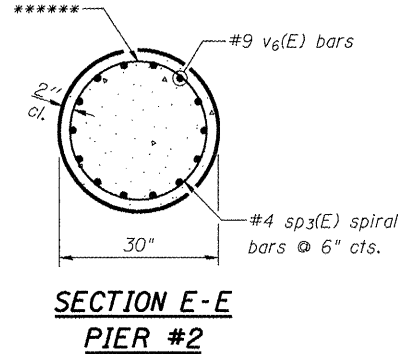
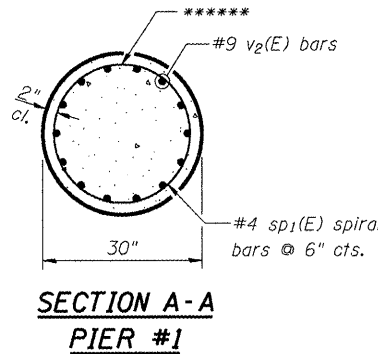
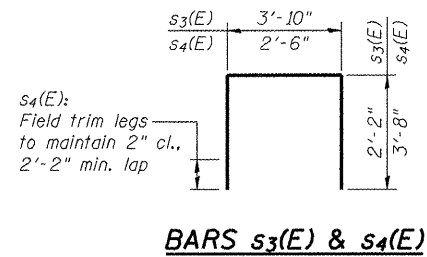
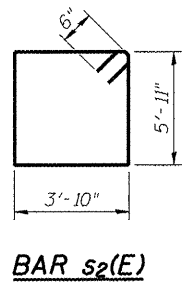
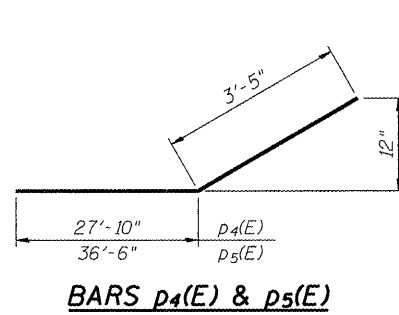
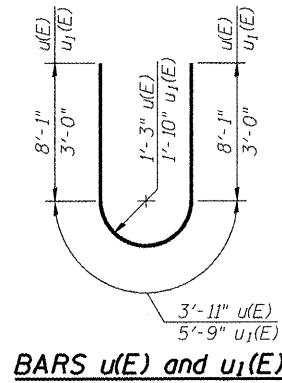
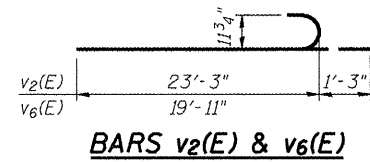


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PIER #1 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₁ (E)	10	#5	28'-7"	—
h ₂ (E)	10	#5	37'-3"	—
p(E)	10	#7	28'-7"	—
p ₁ (E)	10	#7	37'-3"	—
p ₂ (E)	13	#9	31'-3"	—
p ₃ (E)	13	#9	39'-11"	—
p ₄ (E)	9	#9	31'-3"	—
p ₅ (E)	9	#9	39'-11"	—
s ₂ (E)	66	#5	20'-6"	□
s ₄ (E)	246	#5	9'-10"	□
sp	6	#5	40'-3"	≡
sp ₁ (E)	6	#4	17'-6"	≡
u(E)	6	#9	20'-1"	≡
u ₁ (E)	14	#5	11'-9"	≡
v ₁	84	#9	44'-9"	—
v ₂ (E)	84	#9	24'-6"	≡
v ₃ (E)	8	#5	5'-11"	—
Concrete Structures	Cu. Yd.	112.9		
Reinforcement Bars	Pound	17,500		
Reinforcement Bars, Epoxy Coated	Pound	20,020		
Drilled Shaft in Soil	Cu. Yd.	47.0		
Drilled Shaft in Rock	Cu. Yd.	26.7		
Permanent Casing	Foot	132		
Structure Excavation	Cu. Yd.	46		

- Notes:
1. Cast steps monolithically with cap.
 2. Space cap reinforcement to miss anchor bolts. See Sht. 16 of 33 for Anchor Bolt Placement.
 3. Minimum lap for spirals = 3'-0" for #5 sp and 2'-5" for #4 sp₁(E).

PIER #1 BEARING SEATS

Girder	Seat Elev.	Step Height
G1	508.59	0"
G2	508.59	1 1/4"
G3	508.69	0"
G4	508.69	1 3/8"
G5	508.80	3"
G6	508.55	2 7/8"
G7	508.31	3"
G8	508.06	3"
G9	507.82	2 7/8"

PIER #2 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₁ (E)	38	#5	28'-7"	—
h ₂ (E)	38	#5	37'-3"	—
p(E)	10	#7	28'-7"	—
p ₁ (E)	10	#7	37'-3"	—
p ₂ (E)	13	#9	31'-3"	—
p ₃ (E)	13	#9	39'-11"	—
p ₄ (E)	9	#9	31'-3"	—
p ₅ (E)	9	#9	39'-11"	—
s ₃ (E)	132	#5	8'-2"	□
s ₄ (E)	246	#5	9'-10"	□
sp ₂	6	#5	35'-0"	≡
sp ₃ (E)	6	#4	14'-8"	≡
u(E)	6	#9	20'-1"	≡
u ₁ (E)	42	#5	11'-9"	≡
v ₄	84	#9	39'-6"	—
v ₅ (E)	84	#9	20'-8"	—
v ₆ (E)	84	#9	21'-2"	—
v ₇ (E)	140	#5	20'-8"	—
Concrete Structures	Cu. Yd.	263.6		
Reinforcement Bars	Pound	15,400		
Reinforcement Bars, Epoxy Coated	Pound	29,750		
Drilled Shaft in Soil	Cu. Yd.	18.7		
Drilled Shaft in Rock	Cu. Yd.	39.3		
Permanent Casing	Foot	53		
Underwater Structure Excavation Protection Location 1	Each	1		
Structure Excavation	Cu. Yd.	46		

- Notes:
1. Cast steps monolithically with cap.
 2. Space cap reinforcement to miss anchor bolts. See Sht. 16 of 33 for Anchor Bolt Placement.
 3. Minimum lap for spirals = 3'-0" for #5 sp₂ and 2'-5" for #4 sp₃(E).

PIER #2 BEARING SEATS

Girder	Seat Elev.	Step Height
G1	505.79	0"
G2	505.79	1 3/8"
G3	505.90	0"
G4	505.90	1 1/4"
G5	506.00	2 7/8"
G6	505.76	3"
G7	505.51	2 7/8"
G8	505.27	3"
G9	505.02	3"

* If the prevailing water surface elevation during construction is consistently different than estimated on the plans, the contractor may propose an adjustment to the top of the drilled shaft elevation as part of their installation procedure. The top of all drilled shafts within a substructure unit shall be constructed to the same elevation and extend above the prevailing water surface. 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.

** Length is height of spiral.

*** 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.

**** Use Bar Splicers at Stage Construction Joint.

***** 3/4" minimum bearing seat step height provide 5/8" thick shim plates at G2 and G4 both piers.

***** See Shts. 19 & 20 of 33 for 5'-0" long splice exclusion regions at ends or columns and drilled shafts. When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1/2 extra turns at the ends to be spliced. The spirals shall be also provided with 1/2 extra turns at the top and bottom ends of spirals. These additional turns shall either be welded together according to AWS D1.4 or shall both terminate with a 135° standard hook.

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

STS AECOM 111 NE Jefferson Avenue Peoria, IL 61602 T 309.678.8464 Fax 309.678.5445 IL Design Firm Reg. No. 184-001518 www.stsconsultants.com	SHEET NO. 21 OF 33 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		6578	(1-R)RS(1-VC)BR	PEORIA	142	81
		STRUCTURE NO. 072-0201		CONTRACT NO. 68092		
		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

**PIER DETAILS
AIRPORT ROAD OVER U.P.R.R.
AND KICKAPOO CREEK TRIBUTARY
STATION 45+42.00**