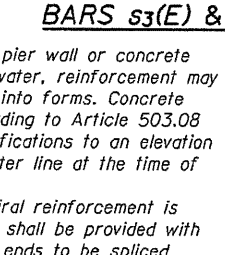
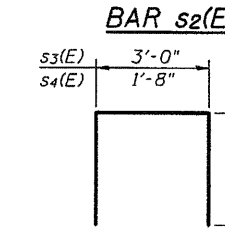
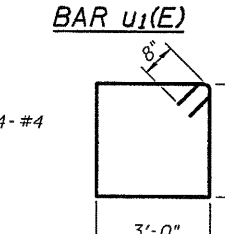
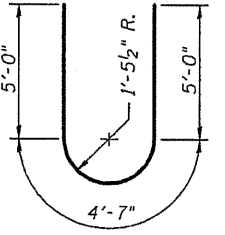
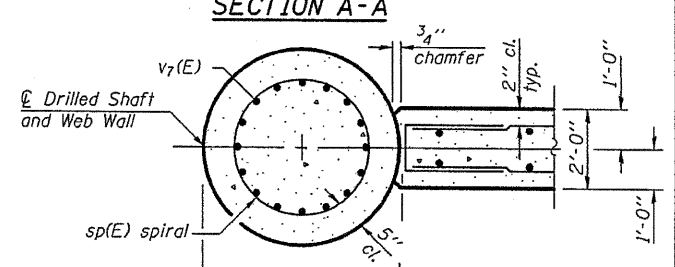
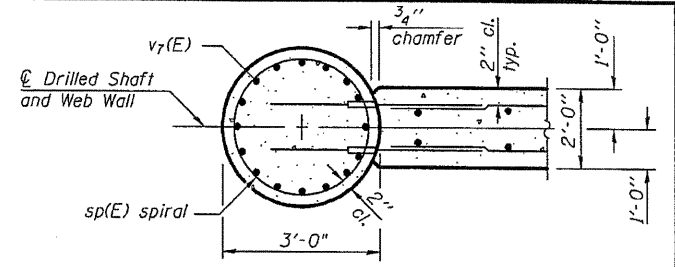
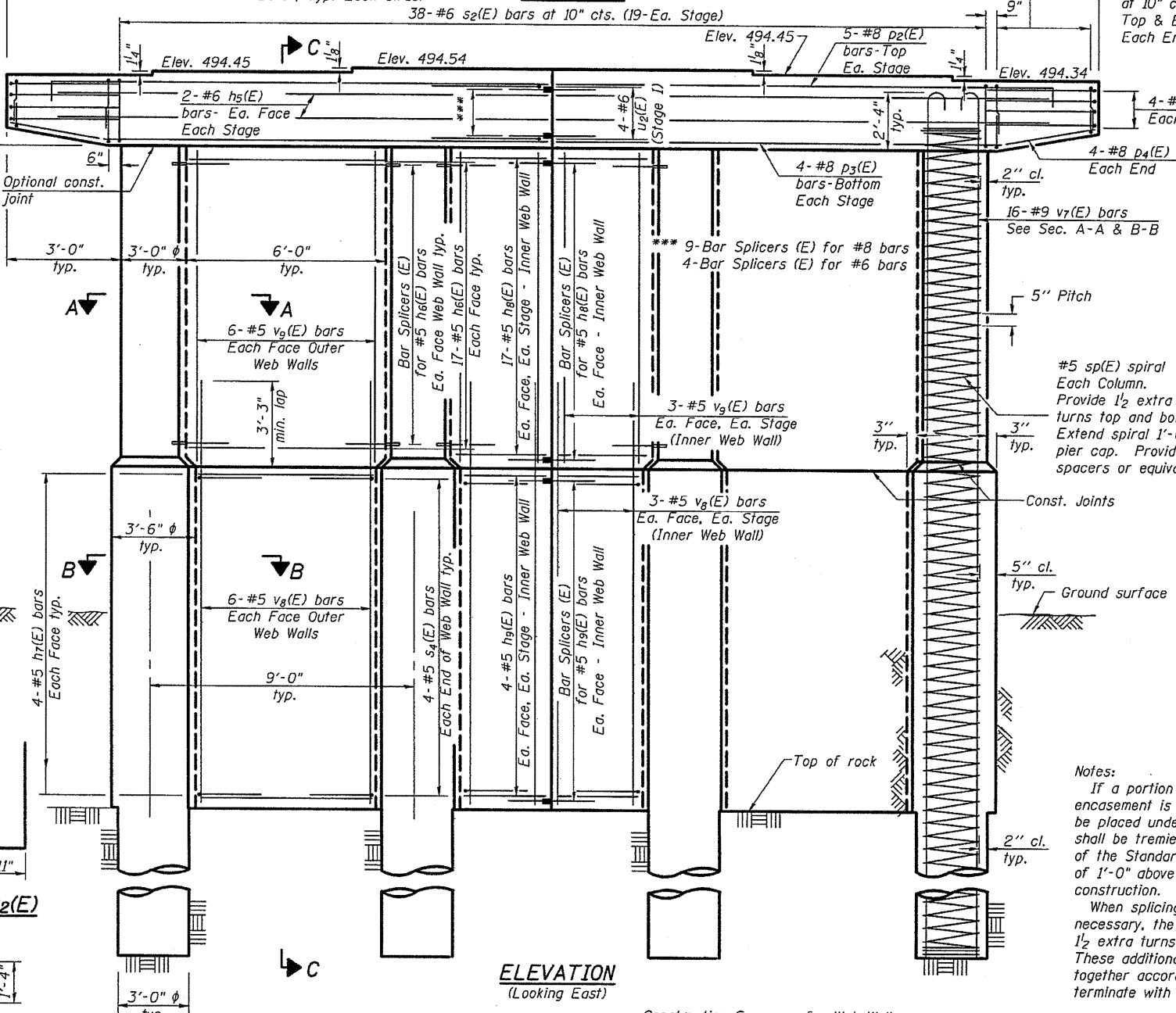
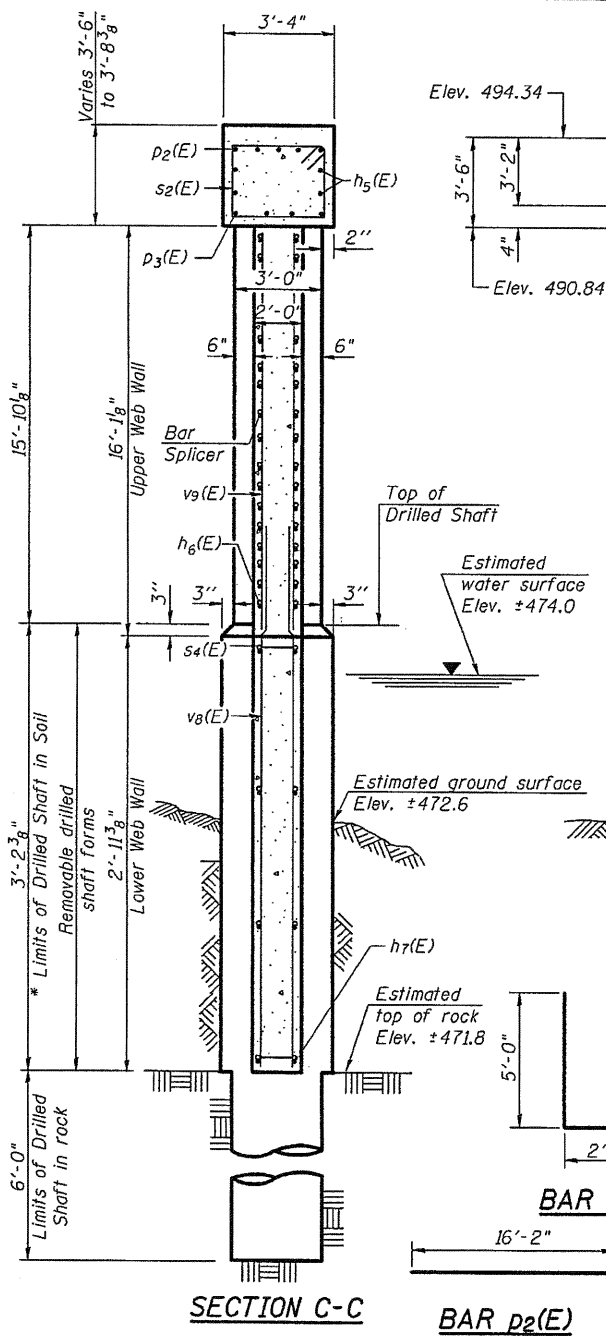
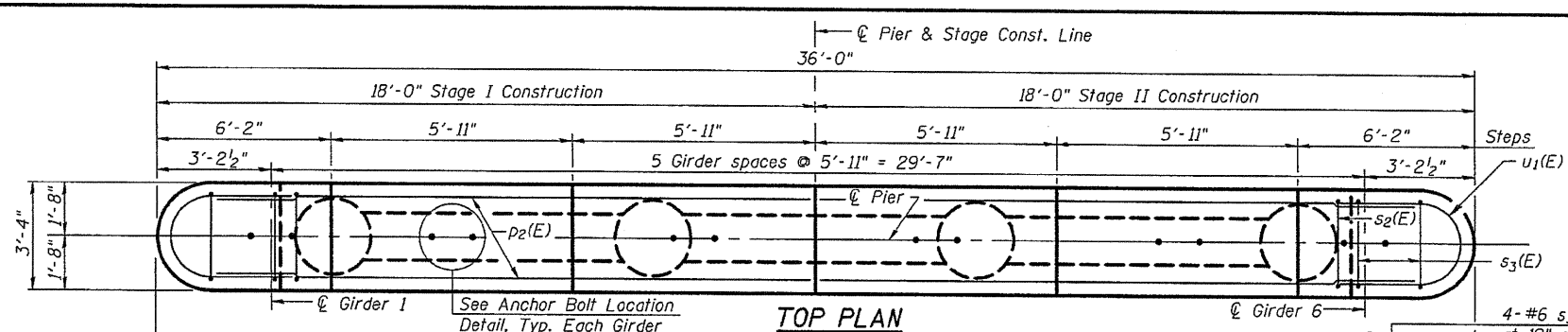
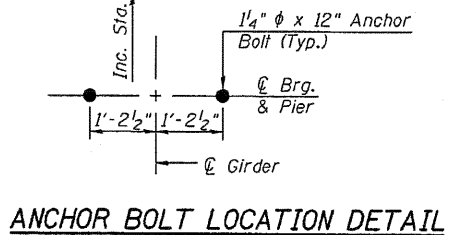


9/10/2010

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**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h5(E)	8	#6	16'-2"	—
h6(E)	68	#5	5'-8"	—
h7(E)	16	#5	5'-2"	—
h8(E)	68	#5	2'-8"	—
h9(E)	16	#5	2'-5"	—
p2(E)	10	#8	17'-6"	—
p3(E)	8	#8	15'-6"	—
p4(E)	8	#8	2'-6"	—
s2(E)	38	#6	13'-8"	□
s3(E)	16	#6	8'-8"	□
s4(E)	24	#5	8'-2"	□
sp(E)	4	#5	26'-5"	~
u1(E)	8	#6	14'-7"	U
u2(E)	4	#6	12'-11"	U
v7(E)	64	#9	28'-8"	—
v8(E)	36	#5	6'-8"	—
v9(E)	36	#5	15'-9"	—
<b>Concrete Structures</b> Cu. Yd. 56.3				
<b>Reinforcement Bars, Epoxy Coated</b> Pound 13,000				
<b>Underwater Structure Excavation Protection Location 1</b> Each 1				
<b>Bar Splicers</b> Each 259				
<b>Drilled Shaft in Soil</b> Cu. Yd. 4.6				
<b>Drilled Shaft in Rock</b> Cu. Yd. 6.3				
<b>Structure Excavation</b> Cu. Yd. 3				

**Notes:**  
 If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.  
 When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4, or shall both terminate with a 135° standard hook.

- Construction Sequence for Web Wall:**
- Excavate between shafts to elevation of web wall base and set lower web wall forms through water to bear on the circular edge of drilled shafts. Secure in place with fill, struts or tie forms together as required.
  - Place the lower web wall reinforcement cage into the forms using spacers to maintain proper clearances.
  - If the forms can be sealed against the shafts and streambed to allow dewatering, the reinforcement and the concrete placement may be completed in the dry. Alternatively, the rebar cage can be lowered into position through water and the concrete discharged at the base of the excavation through a tremie pipe or pump hose, displacing water, sediment, and tainted concrete out the top of the forms.
  - Construct Columns.
  - Construct upper web walls.

DESIGNED	RJP
CHECKED	ADL
DRAWN	RJP
CHECKED	ADL

\* 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.

SHEET NO. 31	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	713	120B-3	SCHUYLER	75	51
45 SHEETS	FED. ROAD DIST. NO. _ ILLINOIS		CONTRACT NO. 72A03		
FED. AID PROJECT					

**PIER 1**  
S.N. 085-0514

Klingner & Associates P.C.