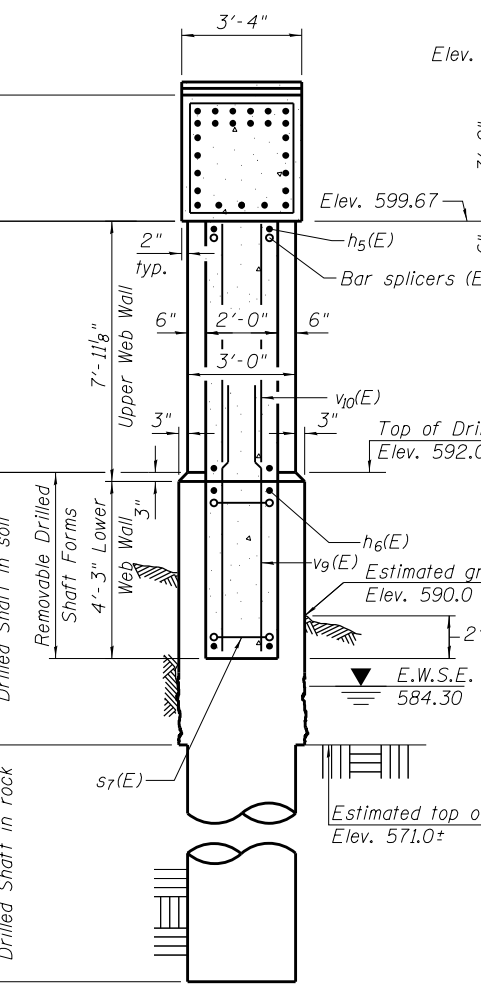
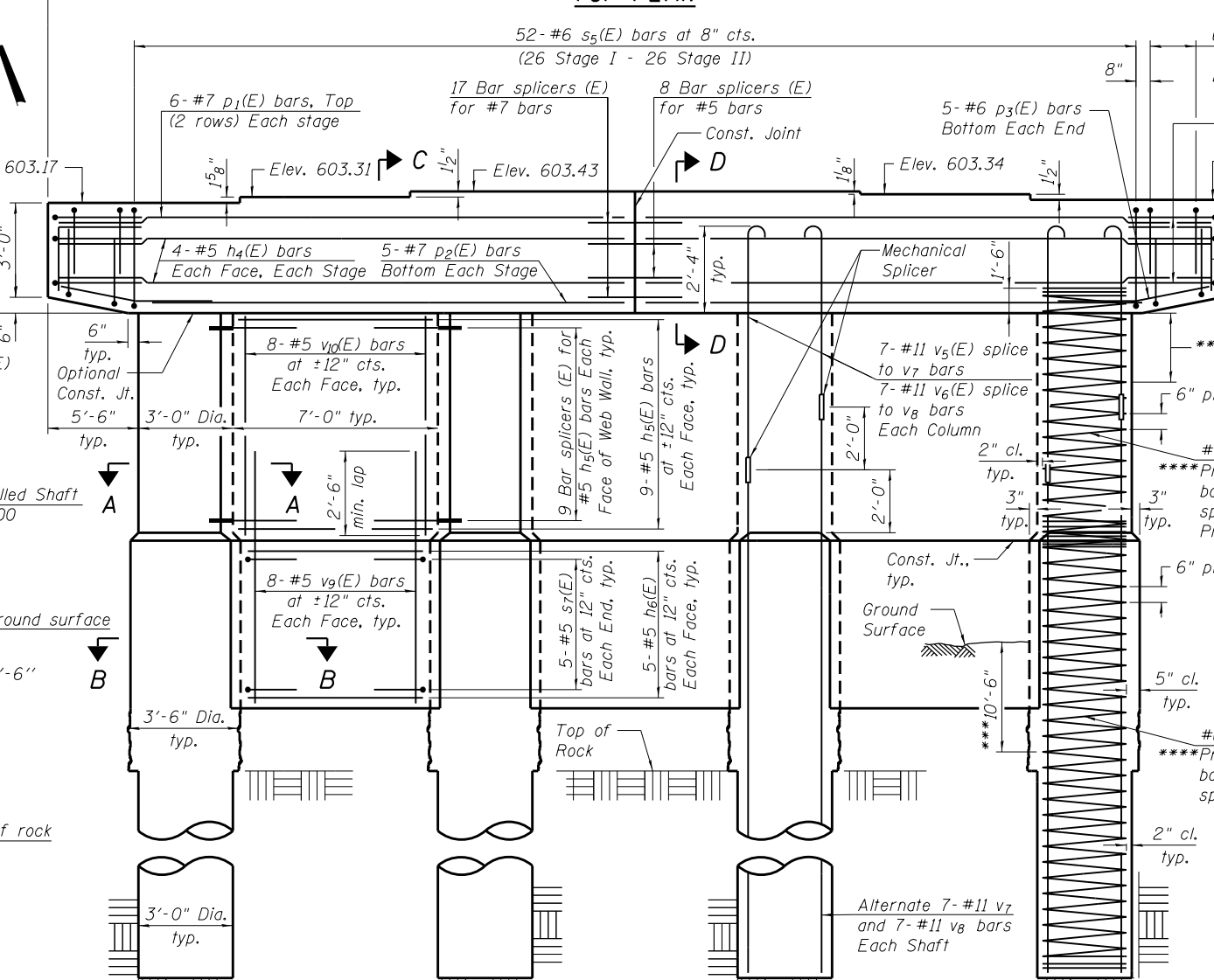


*** Splicing of the reinforcement will not be allowed in this region.
 **** Allowable substitution: Provide 1/2" extra turns top and bottom with 135° standard hook into core at ends of spiral.



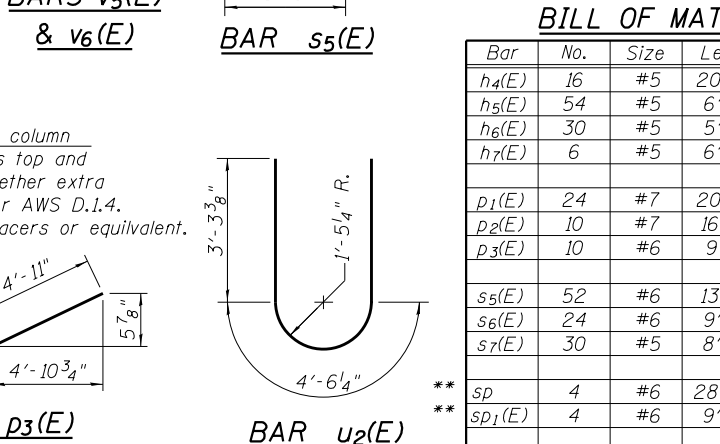
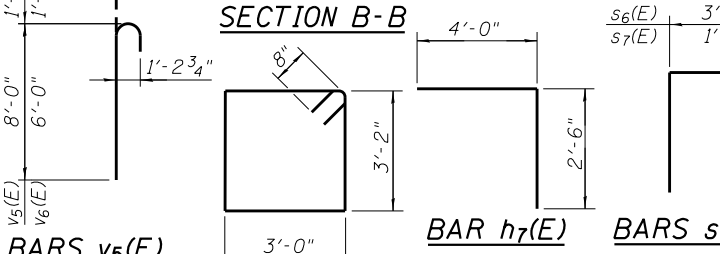
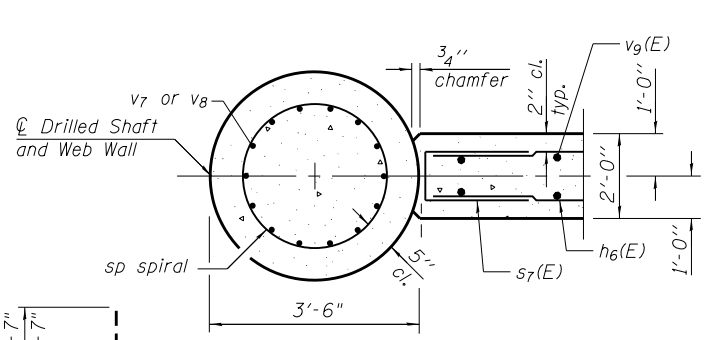
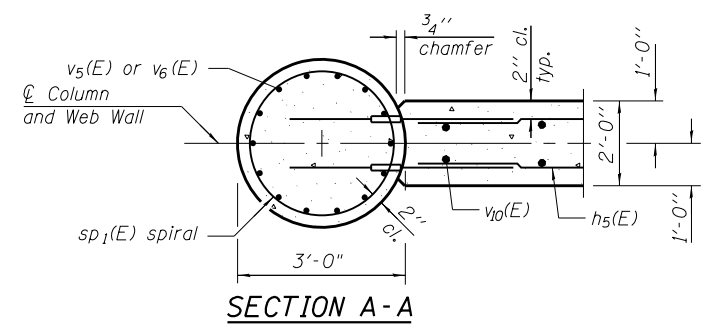
SECTION D-D

Note:
 Shafts must be poured the same day as the rock socket excavation.
 Contractor may elect to eliminate the use of Mechanical Splicers and use one length of v5(E) bars.
 Upper and lower webwalls at the stage construction line shall be constructed during stage II construction.



ELEVATION (Looking North)

* 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.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h4(E)	16	#5	20'-2"	—
h5(E)	54	#5	6'-8"	—
h6(E)	30	#5	5'-8"	—
h7(E)	6	#5	6'-6"	└
p1(E)	24	#7	20'-2"	—
p2(E)	10	#7	16'-8"	—
p3(E)	10	#6	9'-1"	└
s5(E)	52	#6	13'-8"	□
s6(E)	24	#6	9'-0"	└
s7(E)	30	#5	8'-2"	└
sp	4	#6	28'-10"	≡
sp1(E)	4	#6	9'-2"	≡
u2(E)	12	#5	11'-1"	└
v5(E)	28	#11	9'-7"	└
v6(E)	28	#11	7'-7"	└
v7	28	#11	30'-10"	—
v8	28	#11	32'-10"	—
v9(E)	48	#5	6'-7"	—
v10(E)	48	#5	7'-7"	—
Structure Excavation		Cu. Yd.	20	
Concrete Structures		Cu. Yd.	45.6	
Reinforcement Bars		Pound	12,490	
Reinforcement Bars, Epoxy Coated		Pound	8,510	
Bar Splicers		Each	133	
Drilled Shaft in Soil		Cu. Yd.	30.0	
Drilled Shaft in Rock		Cu. Yd.	8.4	
Mechanical Splicers		Each	56	

Cast steps monolithically with cap.
 Space cap reinforcement to miss anchor bolts. Minimum lap for spirals = 2'-7"
 ** Length is height of spiral.

- 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.

LIN ENGINEERING, LTD.
 Consulting Engineers
 Springfield, Illinois

USER NAME = *OPERATOR*	DESIGNED - RPW	REVISED
FILE NAME = 0110514-72A61.dgn	CHECKED - TBP	REVISED
PLOT SCALE = 0:2.0000 1' = 1/8"	DRAWN - AJF	REVISED
PLOT DATE = 9/26/2013	CHECKED - MTH	REVISED

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PIER 1
 STRUCTURE NO. 011-0514**
 SHEET NO. 18 OF 31 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(4)I; 136B-1	CHRISTIAN	97	58
* 75 (IL27) & 714 (IL 48)		CONTRACT NO. 72A61		

ILLINOIS FED. AID PROJECT