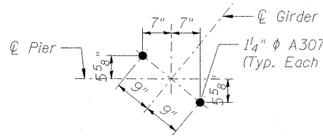
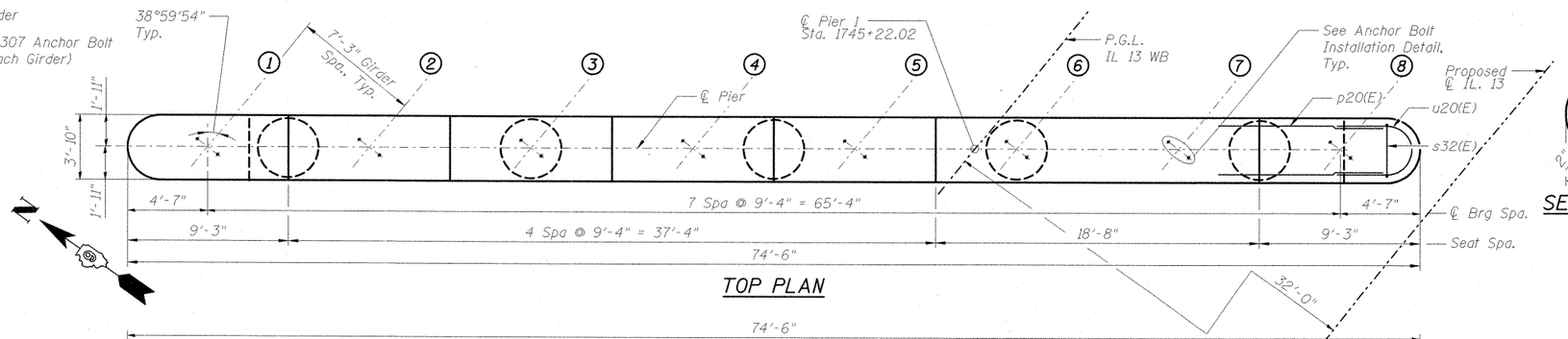
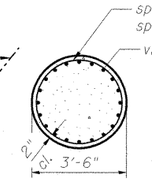


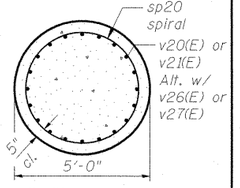
ANCHOR BOLT INSTALLATION DETAIL



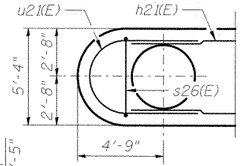
TOP PLAN



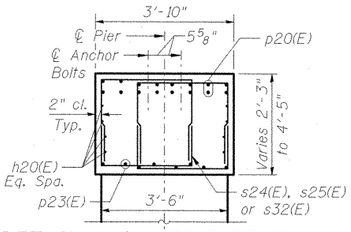
SECTION A-A



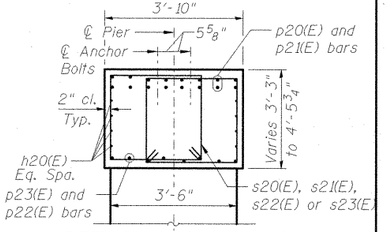
SECTION B-B



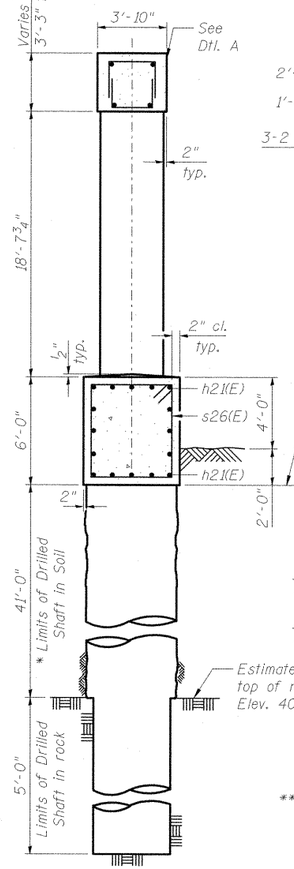
SECTION D-D



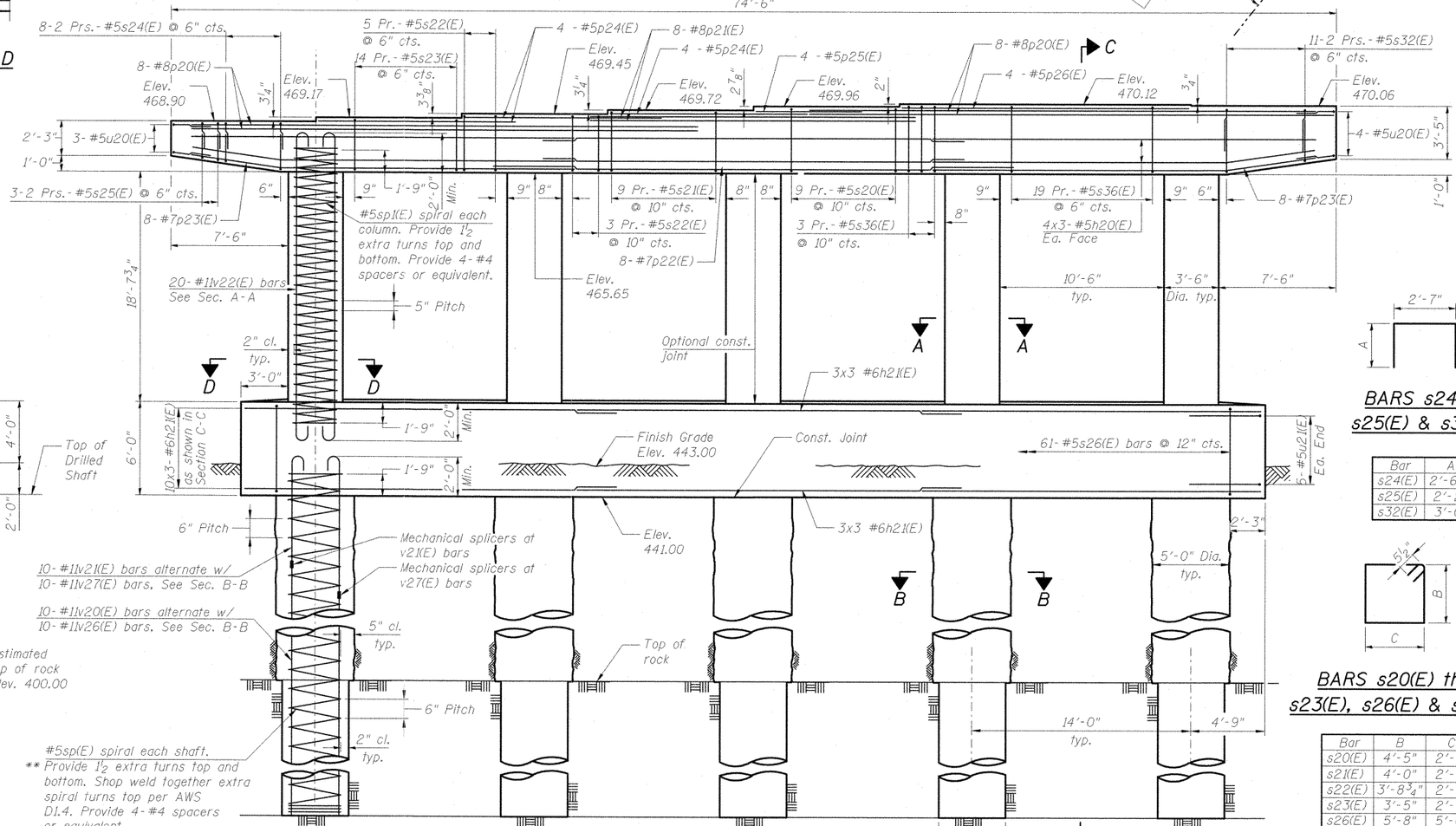
DETAIL A (CANTILEVER ENDS)



DETAIL A (MIDSPAN)



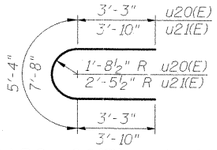
SECTION C-C



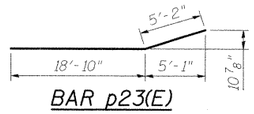
ELEVATION
(Looking East)

* The quantities and reinforcement detailing are based on the top of shaft and the estimated top of rock elevations shown and may change based on the actual top of rock encountered at each shaft and the final top of shaft elevation.

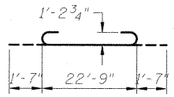
** Allowable substitution: Provide 1½ extra turns top and bottom with 135° standard hook into core at ends of spiral



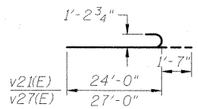
BARS u20(E) and u21(E)



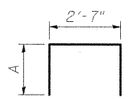
BAR p23(E)



BAR v22(E)



BARS v21(E) and v27(E)



BARS s24(E), s25(E) & s32(E)

Bar	A
s24(E)	2'-6½"
s25(E)	2'-2"
s32(E)	3'-0"

BARS s20(E) thru s23(E), s26(E) & s36(E)

Bar	B	C
s20(E)	4'-5"	2'-7"
s21(E)	4'-0"	2'-7"
s22(E)	3'-8¾"	2'-7"
s23(E)	3'-5"	2'-7"
s26(E)	5'-8"	5'-0"
s36(E)	4'-2¾"	2'-7"

MINIMUM BAR LAP

#5(E) Bar = 3'-3"
#6(E) Bar = 3'-10"
#7(E) Bar = 5'-2"
#8(E) Bar = 6'-9"

Cast steps monolithically with cap. Space cap reinforcement to miss anchor bolts.
** Length is height of spiral.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h20(E)	24	#5	25'-9"	
h21(E)	48	#6	22'-8"	
p20(E)	32	#8	31'-9"	
p21(E)	16	#8	20'-9"	
p22(E)	8	#7	33'-2"	
p23(E)	16	#7	24'-0"	
p24(E)	12	#5	12'-7"	
p25(E)	4	#5	6'-9"	
p26(E)	4	#5	18'-4"	
s20(E)	18	#5	14'-11"	
s21(E)	18	#5	14'-1"	
s22(E)	16	#5	13'-7"	
s23(E)	28	#5	12'-11"	
s24(E)	32	#5	7'-8"	
s25(E)	12	#5	6'-11"	
s26(E)	61	#5	22'-3"	
s32(E)	44	#5	8'-7"	
s36(E)	44	#5	14'-7"	
** sp(E)	5	#5	47'-9"	
** sp1(E)	5	#5	22'-3"	
u20(E)	7	#5	11'-10"	
u21(E)	10	#5	15'-4"	
v20(E)	50	#11	24'-0"	
v21(E)	50	#11	25'-7"	
v22(E)	100	#11	25'-11"	
v26(E)	50	#11	21'-0"	
v27(E)	50	#11	28'-7"	
Structure Excavation		Cu. Yd.	48.0	
Concrete Structures		Cu. Yd.	319.2	
Reinforcement Bars, Epoxy Coated		Pound	52,800	
Mechanical Splicers		Each	100	
Drilled Shaft in Soil		Cu. Yd.	149.1	
Drilled Shaft in Rock		Cu. Yd.	14.7	

CMT
CRAWFORD MURPHY & TILLY, INC.
CONSULTING ENGINEERS
SPRINGFIELD, IL ■ AURORA, IL ■ ST. LOUIS, MO
ROCKFORD, IL ■ PEORIA, IL ■ CHICAGO, IL

USER NAME = Gary Davis	DESIGNED - MCC	REVISED -
	CHECKED - ATI	REVISED -
PLOT SCALE =	DRAWN - GLD	REVISED -
PLOT DATE = 1/10/2012	CHECKED - ATI	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 DETAILS
STRUCTURE NO. 100-0093 (W.B.)
SHEET NO.S-30 OF S-41 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(1X-1)VB-1	WILLIAMSON	367	196
		CONTRACT NO. 98859		
	ILLINOIS FED. AID PROJECT			

FILE NAME = l:\dot\09066603\dgn\loadd_sheets\structural plans\bmsf rr bridge\PIER1_N BRIDGE.dgn