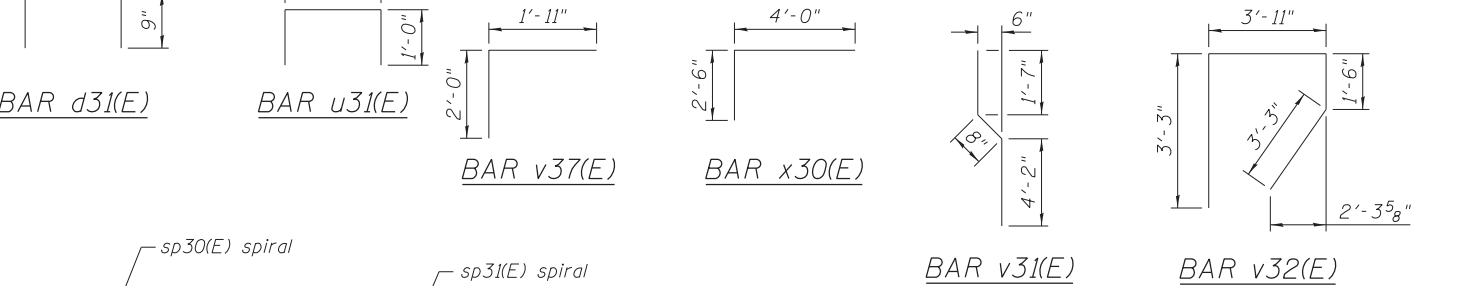


**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
b30(E)	11	#5	1'-2"	—
c30(E)	3	#5	9'-6"	—
c31(E)	3	#5	2'-4"	—
d30(E)	104	#5	5'-9"	—
d31(E)	59	#4	2'-7"	—
e30(E)	8	#4	19'-11"	—
e31(E)	8	#4	21'-11"	—
e32(E)	8	#4	11'-7"	—
h30(E)	26	#5	30'-6"	—
h31(E)	44	#5	11'-7"	—
h32(E)	2	#5	11'-7"	—
h33(E)	6	#5	20'-3"	—
h34(E)	6	#5	21'-6"	—
h35(E)	8	#5	7'-1"	—
h36(E)	24	#5	9'-5"	—
h37(E)	12	#5	7'-9"	—
h38(E)	12	#5	4'-0"	—
n30(E)	62	#5	7'-1"	—
n31(E)	139	#9	13'-1"	—
n32(E)	13	#5	7'-1"	—
n33(E)	25	#9	13'-2"	—
n34(E)	256	#10	15'-3"	—
p30(E)	42	#5	32'-2"	—
p31(E)	3	#5	9'-8"	—
sp30(E)	16	#4	76'-0"	—
sp31(E)	2	#4	76'-0"	—
t30(E)	41	#9	16'-7"	—
t31(E)	166	#9	14'-8"	—
u31(E)	11	#4	3'-11"	—

Bar	No.	Size	Length	Shape
v30(E)	59	#5	6'-1"	—
v31(E)	59	#5	6'-5"	—
v32(E)	59	#5	11'-11"	—
v33(E)	62	#5	16'-9"	—
v34(E)	123	#9	16'-9"	—
v35(E)	32	#9	41'-9"	—
v36(E)	448	#10	42'-11"	—
v37(E)	62	#5	3'-11"	—
v38(E)	13	#5	21'-11"	—
v39(E)	25	#9	21'-11"	—
v40(E)	6	#5	4'-9"	—
v41(E)	36	#5	6'-3"	—
Porous Granular Embankment		Cu Yd	1,111	
Concrete Structures		Cu Yd	278.0	
Concrete Superstructure		Cu Yd	12.6	
Protective Coat		Sq Yd	25	
Reinforcement Bars, Epoxy Coated		Pound	159,300	
Permanent Casing		Foot	1,156	
Drilled Shaft in Soil, 30"		Cu Yd	27	
Drilled Shaft in Soil, 42"		Cu Yd	361	
Drilled Shaft in Rock, 24"		Cu Yd	1	
Drilled Shaft in Rock, 36"		Cu Yd	11	
Concrete Sealer		Sq Ft	2,132	
Geocomposite Wall Drain		Sq Yd	171	
Braced Excavation		Cu Yd	2,200	
Pipe Underdrains for Structures 6"		Foot	84	



**NOTES**

- Reinforcement bars designated (E) shall be epoxy coated.
- Bars noted thus, 3x2-#5 indicates 3 lines of bars with 2 lengths of bars per line.
- Apply concrete sealer to all exposed concrete surfaces of the abutment.
- All edges shall have standard 3/4" chamfer.

Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"
#10	10'-10"

**HBM** ENGINEERING GROUP, LLC. CONSULTING & DESIGN INSPECTION & RATING RESEARCH & TESTING. 4415 WEST HARRISON ST. SUITE 231 HILLSIDE, IL 60162. PHONE: (708) 236-0900 FAX: (708) 236-0901. 0161709-60W25-S34-Nor-thAbut3.dgn. USER NAME = will.mar-dous. PLOT SCALE = 3/8"=1'-0". PLOT DATE = 6/14/2013.

DESIGNED	-	MI, MAF	REVISED	-
DRAWN	-	LAB, MAF	REVISED	-
CHECKED	-	MAI, MI, WM	REVISED	-
DATE	-	6/17/2013	REVISED	-

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**NORTH ABUTMENT SECTIONS AND DETAILS STRUCTURE NO. 016-1709**

SCALE: SHEET S1-34 OF 51 SHEETS STA. TO STA.

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-007R	COOK	317	178
CONTRACT NO. 60W25			ILLINOIS FED. AID PROJECT	