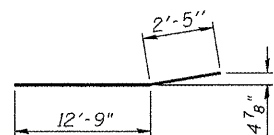
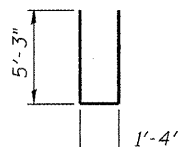




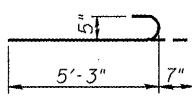
BAR h₂(E)



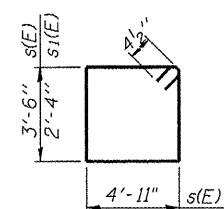
BAR h₄(E)



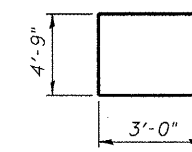
BAR n(E)



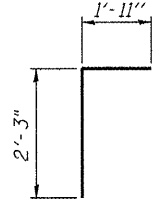
BAR n₁(E)



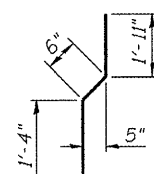
BARS s(E) & s₁(E)



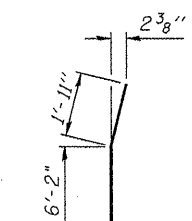
BAR u(E)



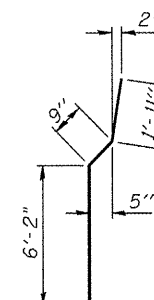
BAR v(E)



BAR v₆(E)



BAR v₃(E)



BAR v₄(E)

PILE DATA

Type: HP 14x102 w/ Pile Shoes
 Nominal Required Bearing: 645
 Factored Resistance Available: 160 k
 Est. Length: 69'-0"
 No. Production Piles: 13
 No. Test Piles: 1

8-pairs #5 h₂(E) bars each end

4- #6 u(E) bars each end

Concrete Encasement typ.

Bar Splicers (E) for #5 bars at 12" cts. See section thru abutment
 34- #4 v₅(E) bars at 12" cts. each face (17 Stage I and 17 Stage II)
 Elev. 525.53

7- #6 h₁(E) bars (each stage) See section thru abutment
 10- #5 n(E) bars (each stage) See section thru abutment
 Elev. 523.69

Construction joint optional

2- #4 s(E) bars each end
 2- #4 s(E) bars at 11" cts. typ. between piles
 8- #7 p(E) bars (each stage) See section thru abutment
 Elev. 519.69

Construction joint optional

ELEVATION
(Looking North)

Elev. 515.68

TOP VIEW

Symmetrical about $\bar{\kappa}$ Roadway

Stage II Construction Stage I Construction

Back Abutment Sta. 760+76.08

W.P.

h₂(E)

6"

5'-3"

1'-6"

3'-3"

17'-7"

35'-2"

17'-7"

16'-0"

11'-6"

16'-0 1/2"

16'-0 1/2"

11 Pile spaces at 2'-11" = 32'-1"

35'-2"

PLAN - PILE CAP

**NORTH ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	20	#5	15'-9"	—
h ₁ (E)	14	#6	15'-9"	—
h ₂ (E)	32	#5	7'-6"	└
h ₃ (E)	26	#4	15'-3"	—
h ₄ (E)	18	#4	15'-2"	—
n(E)	26	#5	11'-10"	┌
n ₁ (E)	12	#5	5'-10"	┌
p(E)	16	#7	17'-3"	—
p ₁ (E)	12	#7	18'-0"	—
s(E)	26	#4	17'-7"	┌
s ₁ (E)	30	#4	10'-1"	┌
u(E)	8	#6	10'-9"	┌
v(E)	34	#5	4'-2"	┌
v ₂ (E)	32	#5	8'-6"	—
v ₃ (E)	6	#5	8'-1"	—
v ₄ (E)	26	#5	8'-10"	—
v ₅ (E)	68	#4	6'-10"	—
v ₆ (E)	34	#4	3'-9"	—
Structure Excavation		Cu. Yd.	132	
Concrete Structures		Cu. Yd.	55.5	
Concrete Encasement		Cu. Yd.	7.7	
Reinforcement Bars, Epoxy Coated		Pound	4,520	
Furnishing Steel Piles HP 14x102		Foot	897	
Driving piles		Foot	897	
Test Piles Steel HP 14x102		Each	1	
Pile Shoes		Each	14	

For details of Bar Splicers, see sheet 32 of 41.
 For details of piles and Concrete Encasement, see sheet 32 of 41.

A-1 7-1-10

USER NAME = dheberling	DESIGNED - BRD/FLL	REVISED -
FILE NAME = 0550003-68482.dgn	CHECKED - SDS/JHP	REVISED -
PLOT DATE = 12/21/2010	DRAWN - DLH	REVISED -
PLOT TIME = 10:31:01 AM	CHECKED - CWC/SDS	REVISED -

WHKS & CO.
 ENGINEERING
 7018 KINGSMILL CT.,
 SPRINGFIELD, IL
 (217) 483-9457
 DESIGN FIRM #184001036

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**NORTH ABUTMENT
S.N. 055-0083**

SHEET NO. 25 OF 41 SHEETS

F.A.P. RTE. 542	SECTION 105BR-1	COUNTY MCDONOUGH	TOTAL SHEETS 117	SHEET NO. 65
			CONTRACT NO. 68482	
ILLINOIS FED. AID PROJECT				