Illinois Department of Transportation

BILL OF MATERIAL-BENT 2

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	184	#5	3'- 0"	———
Concrete Structures			Cu. Yd.	25.9
Reinforcement Bars, Epoxy Coated			Pound	3,650
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	116
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	840
Driving Piles			Foot	840

BILL OF MATERIAL-BENT 3

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	184	#5	3'- 0"	———
Concrete Structures			Cu. Yd.	25.9
Reinforcement Bars, Epoxy Coated			Pound	3,650
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	116
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	783
Driving Piles			Foot	783

BILL OF MATERIAL-BENT 4

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	184	#5	3'- 0"	———
Concrete Structures			Cu. Yd.	25.9
Reinforcement Bars, Epoxy Coated			Pound	3,650
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	117
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	777
Driving Piles			Foot	777

BILL OF MATERIAL-BENT 5

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'-11"	———
h(E)	6	#5	32'-9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
Concrete Structures			Cu. Yd.	25.9
Reinforcement Bars, Epoxy Coated			Pound	3,080
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	117
Concrete Sealer			Sq. Ft.	789
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	833
Driving Piles			Foot	833

BILL OF MATERIAL-BENT 6

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	184	#5	3'- 0"	———
Concrete Structures			Cu. Yd.	25.9
Reinforcement Bars, Epoxy Coated			Pound	3,650
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	118
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	779
Driving Piles			Foot	779

BILL OF MATERIAL-BENT 7

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	184	#5	3'- 0"	———
Concrete Structures			Cu. Yd.	25.9
Reinforcement Bars, Epoxy Coated			Pound	3,650
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	116
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	768
Driving Piles			Foot	768

BILL OF MATERIAL-BENT 8

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	184	#5	3'- 0"	———
Concrete Structures			Cu. Yd.	25.9
Reinforcement Bars, Epoxy Coated			Pound	3,650
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	113
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	903
Driving Piles			Foot	903

BILL OF MATERIAL-BENT 9

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	92	#5	3'- 0"	———
Concrete Structures			Cu. Yd.	25.9
Reinforcement Bars, Epoxy Coated			Pound	3,360
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	109
Concrete Sealer			Sq. Ft.	789
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	837
Driving Piles			Foot	837

BILL OF MATERIAL-BENT 10

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	184	#5	3'- 0"	———
Concrete Structures			Cu. Yd.	25.9
Reinforcement Bars, Epoxy Coated			Pound	3,650
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	106
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	840
Driving Piles			Foot	840

BILL OF MATERIAL-BENT 11

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	184	#5	3'- 0"	———
Concrete Structures			Cu. Yd.	25.9
Reinforcement Bars, Epoxy Coated			Pound	3,650
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	106
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	931
Driving Piles			Foot	931

BILL OF MATERIAL-BENT 12

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	184	#5	3'- 0"	———
Concrete Structures			Cu. Yd.	25.9
Reinforcement Bars, Epoxy Coated			Pound	3,650
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	104
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	896
Driving Piles			Foot	896

BILL OF MATERIALS-BENT 15

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	184	#5	3'- 0"	———
Concrete Structures			Cu. Yd.	28.2
Reinforcement Bars, Epoxy Coated			Pound	3,650
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	111
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	736
Driving Piles			Foot	736

BILL OF MATERIALS-BENT 16

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	184	#5	3'- 0"	———
Concrete Structures			Cu. Yd.	28.2
Reinforcement Bars, Epoxy Coated			Pound	3,650
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	113
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	746
Driving Piles			Foot	746

BILL OF MATERIAL-BENT 17

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	92	#5	3'- 0"	———
Concrete Structures			Cu. Yd.	26.7
Reinforcement Bars, Epoxy Coated			Pound	3,360
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	111
Concrete Sealer			Sq. Ft.	789
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	854
Driving Piles			Foot	854

BILL OF MATERIALS-BENT 18

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	184	#5	3'- 0"	———
Concrete Structures			Cu. Yd.	26.7
Reinforcement Bars, Epoxy Coated			Pound	3,650
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	111
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	784
Driving Piles			Foot	784

BILL OF MATERIALS-BENT 19

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	184	#5	3'- 0"	———
Concrete Structures			Cu. Yd.	26.7
Reinforcement Bars, Epoxy Coated			Pound	3,650
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	111
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	802
Driving Piles			Foot	802

BILL OF MATERIALS-BENT 20

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	184	#5	3'- 0"	———
Concrete Structures			Cu. Yd.	26.2
Reinforcement Bars, Epoxy Coated			Pound	3,650
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	108
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	644
Driving Piles			Foot	644

BILL OF MATERIAL-BENT 21

Bar	No.	Size	Length	Shape
p(E)	36	#7	25'- 11"	———
h(E)	6	#5	32'- 9"	———
s_{10}(E)	94	#4	9'- 5"	⬚
u(E)	6	#5	6'- 7"	⊔
u_1(E)	68	#4	7'- 2"	⊔
v(E)	184	#5	3'- 0"	———
v_1(E)	92	#5	3'- 8"	⌞
Concrete Structures			Cu. Yd.	25.9
Reinforcement Bars, Epoxy Coated			Pound	4,000
Bar Splicers			Each	12
Structure Excavation			Cu. Yd.	103
Porous Granular Embankment (Special)			Cu. Yd.	48
Furnishing Metal Shell Piles - 14" x 0.312"			Foot	600
Driving Piles			Foot	600

DESIGNED	- J. Vermillion
CHECKED	- J. Refvik
DRAWN	- J. Vermillion
CHECKED	- R. DiGiulio

TYPICAL BENT DETAILS II
STRUCTURE NO. 022-0012

PATRICK ENGINEERING
PATRICK ENGINEERING INC.
4970 VARSITY DRIVE
LISLE, IL 60532
patrickengineering.com

SHEET NO.	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SA22 OF SA37	2578	532B	DUPAGE	781	626
			CONTRACT NO. 60477		
	12/3/2010	ILLINOIS	FED. AID PROJECT		

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