

BILL OF MATERIAL

Light Tower Service Pad, Special with 3'-6" Wall (Note 4)

Bar	No.	Size	Length	Shape
h ₁₃ (E)	1	#5	23'-6"	
h ₁₄ (E)	1	#5	18'-11"	
h ₁₅ (E)	1	#5	13'-7"	
h ₁₆ (E)	1	#5	8'-4"	
h ₁₇ (E)	1	#4	22'-1"	
h ₁₈ (E)	1	#4	17'-9"	
h ₁₉ (E)	1	#4	12'-9"	
h ₂₀ (E)	1	#4	7'-10"	
n ₂ (E)	25	#6	5'-10"	
t ₁ (E)	25	#6	5'-1"	
v ₃ (E)	7	#4	3'-10"	
v ₄ (E)	7	#4	3'-2"	
w ₁ (E)	1	#5	24'-4"	
w ₂ (E)	1	#5	21'-7"	
w ₃ (E)	1	#5	18'-10"	
w ₄ (E)	1	#5	15'-5"	
w ₅ (E)	1	#5	11'-6"	
Concrete Structures		Cu. Yd.	2.2	
Reinforcement Bars, Epoxy Coated		Pound	150	
Protective Coat		Sq. Yd.	24	
Rustication Finish		Sq. Ft.	32	

BILL OF MATERIAL

Light Tower Service Pad, Special with 5'-0" Wall (Note 4)

Bar	No.	Size	Length	Shape
h ₁ (E)	1	#5	23'-6"	
h ₂ (E)	1	#5	20'-10"	
h ₃ (E)	1	#5	17'-8"	
h ₄ (E)	1	#5	14'-6"	
h ₅ (E)	1	#5	11'-4"	
h ₆ (E)	1	#5	8'-2"	
h ₇ (E)	1	#4	22'-1"	
h ₈ (E)	1	#4	19'-7"	
h ₉ (E)	1	#4	16'-7"	
h ₁₀ (E)	1	#4	13'-7"	
h ₁₁ (E)	1	#4	10'-8"	
h ₁₂ (E)	1	#4	7'-8"	
n ₁ (E)	25	#6	7'-4"	
t ₁ (E)	25	#6	5'-1"	
v ₁ (E)	7	#4	5'-0"	
v ₂ (E)	8	#4	4'-8"	
w ₁ (E)	1	#5	24'-4"	
w ₂ (E)	1	#5	21'-7"	
w ₃ (E)	1	#5	18'-10"	
w ₄ (E)	1	#5	15'-5"	
w ₅ (E)	1	#5	11'-6"	
Concrete Structures		Cu. Yd.	3.0	
Reinforcement Bars, Epoxy Coated		Pound	210	
Protective Coat		Sq. Yd.	26	
Rustication Finish		Sq. Ft.	53	

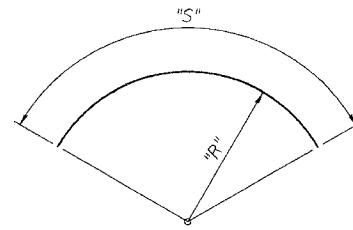
TOTAL BILL OF MATERIAL

Item	Unit	Total
Light Tower Service Pad, 6"	Sq. Ft.	816
Light Tower Service Pad, Special	Sq. Ft.	1,496
Structure Excavation	Cu. Yd.	
Concrete Structures	Cu. Yd.	28.2
Reinforcement Bars, Epoxy Coated	Pound	1,950
Rustication Finish	Sq. Ft.	457
Protective Coat	Sq. Yd.	274

HMLT SERVICE PAD/RETAINING WALL SCHEDULE

HMLT I.D.	Service Pad/Retaining Wall Requirements
7 UGH1	Light Tower Service Pad w/ 5'-0" Wall
7 UGH3	Light Tower Service Pad, No Wall
7 VMN3	Light Tower Service Pad, No Wall
7 VMN2	Light Tower Service Pad w/ 3'-6" Wall
7 VEF3	Light Tower Service Pad w/ 5'-0" Wall
7 VEF2	Light Tower Service Pad w/ 5'-0" Wall
7 VEF1	Light Tower Service Pad w/ 5'-0" Wall
7 VGH1	Light Tower Service Pad w/ 5'-0" Wall
7 VGH2	Light Tower Service Pad, No Wall
7 VGH3	Light Tower Service Pad, No Wall
7 VHG4	Light Tower Service Pad w/ 3'-6" Wall
7 WEF6	Light Tower Service Pad, No Wall
7 WEF4	Light Tower Service Pad, No Wall
7 WEF2	Light Tower Service Pad w/ 3'-6" Wall
7 WGH3	Light Tower Service Pad w/ 3'-6" Wall
7 WGH4	Light Tower Service Pad w/ 3'-6" Wall
7 WGH5	Light Tower Service Pad w/ 3'-6" Wall

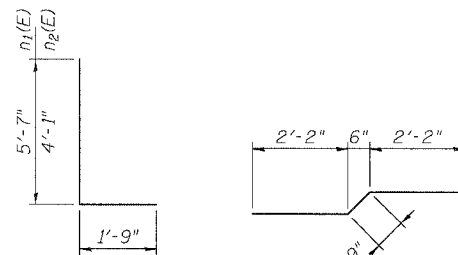
BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com



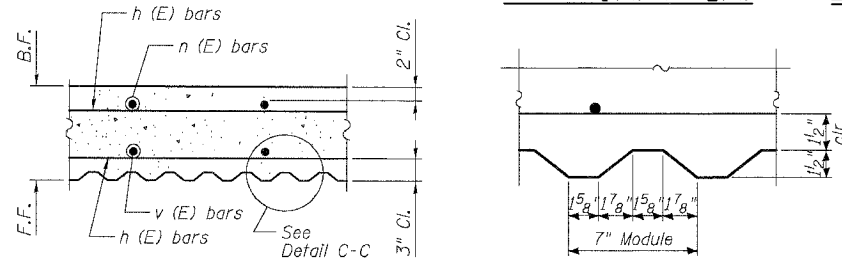
Bar	"R"	"S"	Bar	"R"	"S"
h ₁ (E)	7'-7"	23'-6"	h ₁₄ (E)	7'-7"	18'-11"
h ₂ (E)	7'-7"	20'-10"	h ₁₅ (E)	7'-7"	13'-7"
h ₃ (E)	7'-7"	17'-8"	h ₁₆ (E)	7'-7"	8'-4"
h ₄ (E)	7'-7"	14'-6"	h ₁₇ (E)	7'-1 1/2"	22'-1"
h ₅ (E)	7'-7"	11'-4"	h ₁₈ (E)	7'-1 1/2"	17'-9"
h ₆ (E)	7'-7"	8'-2"	h ₁₉ (E)	7'-1 1/2"	12'-9"
h ₇ (E)	7'-1 1/2"	22'-1"	h ₂₀ (E)	7'-1 1/2"	7'-10"
h ₈ (E)	7'-1 1/2"	19'-7"	w ₁ (E)	7'-7"	24'-4"
h ₉ (E)	7'-1 1/2"	16'-7"	w ₂ (E)	6'-8"	21'-7"
h ₁₀ (E)	7'-1 1/2"	13'-7"	w ₃ (E)	5'-10"	18'-10"
h ₁₁ (E)	7'-1 1/2"	10'-8"	w ₄ (E)	4'-9"	15'-5"
h ₁₂ (E)	7'-1 1/2"	7'-8"	w ₅ (E)	3'-6"	11'-6"
h ₁₃ (E)	7'-7"	23'-6"			

Note: "R" and "S" measured along bar @

BARS w₁(E) thru w₅(E) & h₁(E) thru h₂₀(E)

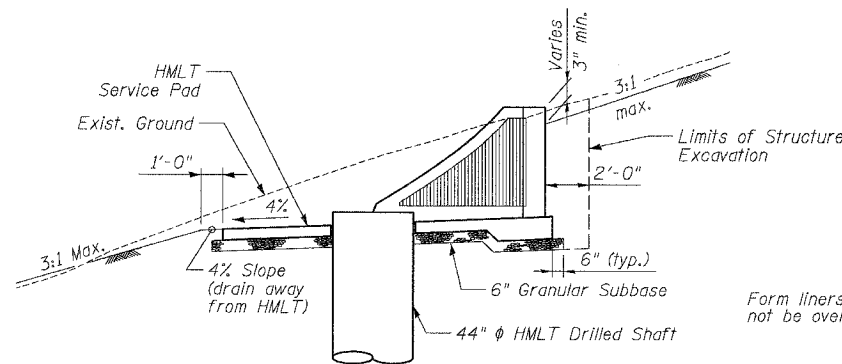


BARS n₁(E) & n₂(E) BAR t₁(E)



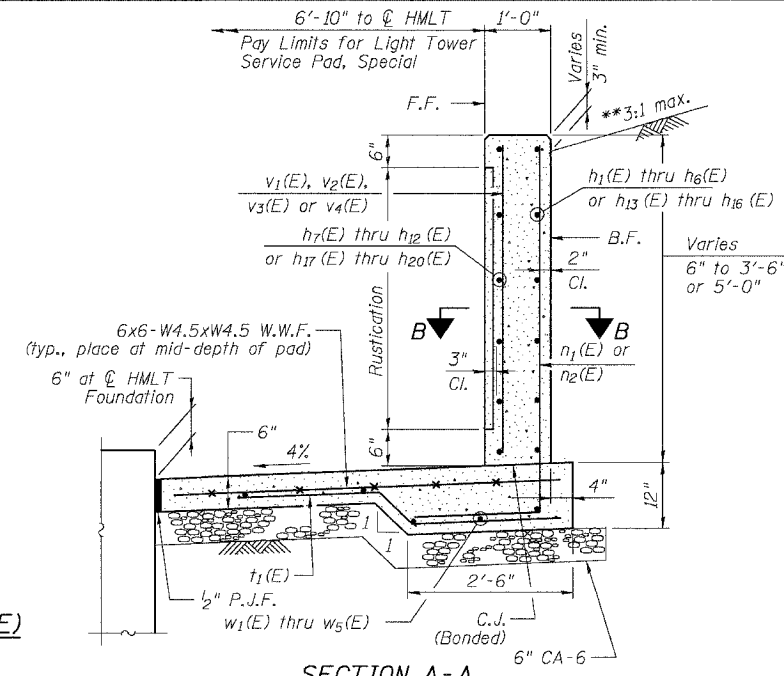
SECTION B-B

DETAIL C-C



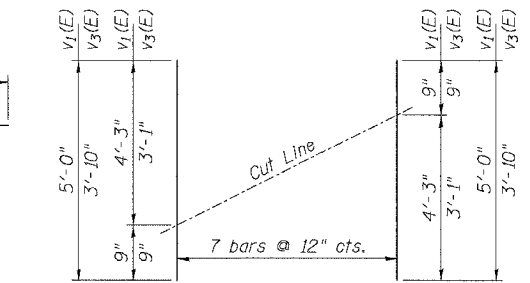
SECTION THRU EMBANKMENT

(At Typ. Tower Location)
HMLT not shown for clarity



SECTION A-A

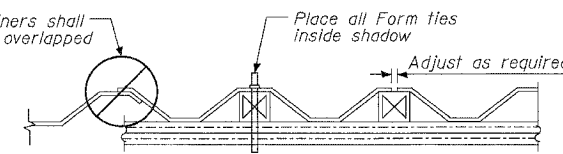
**See Roadway Cross Section Shts.



*** CUTTING DIAGRAM**

Bars v₁(E) & v₃(E)

Order v₁(E) & v₃(E) bars full length and cut to fit as shown. Use remainder of bars as indicated on plans.



SUGGESTED FORMWORK DETAIL

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	565	421
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62301	*12021-922 PT2 ETC	2324.6-1P	R-10	

NOTES

1. F.F. and B.F. denote Front Face and Back Face, respectively.
2. HMLT denotes High Mast Light Tower.
3. For location of High Mast Light Tower Foundations, see Roadway Lighting Plan sheets.
4. Bars n₁(E), n₂(E), t₁(E) and w₁(E) thru w₅(E) will not be measured and paid separately but will be included in the cost of Light Tower Service Pad, Special. See Special Provisions.
5. See IDOT Standard Drawing BE501 for additional High Mast Light Tower foundation and ground well details.
6. Reinforcement Bars designated (E) shall be epoxy coated.
7. Refer to High Mast Light Tower Service Pad & Retaining Wall Details 1 for location and orientation of conduit sleeves and grounding wells.
8. Contractor shall maintain integrity of Frontage Roads as may be required in excavating for HMLT service pad walls.
9. Provide Protective Coat to top, front face and ends of walls and to the top of the concrete service pad.

SHEET SD7 OF SD11

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
GARFIELD BLVD TO 31ST STREET (NB LOCAL LANES)
HIGH MAST LIGHT TOWER SERVICE PAD & RETAINING WALL DETAILS 2

SCALE: NTS
DATE: JUNE 9, 2006

DRAWN BY: MTR
CHECKED BY: BLU

11660-CADD/CAD/INSTRUMENTING WALLS/660-1851/MLT_02.dwg 6/7/2006 5:46:35 PM