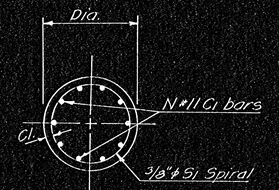
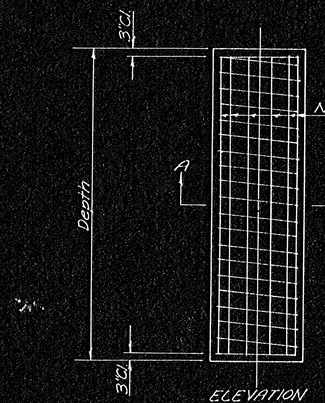
FHWA REGION NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS	35W-87-135W-1(33)46	1976	162	304

Construction Phase 3

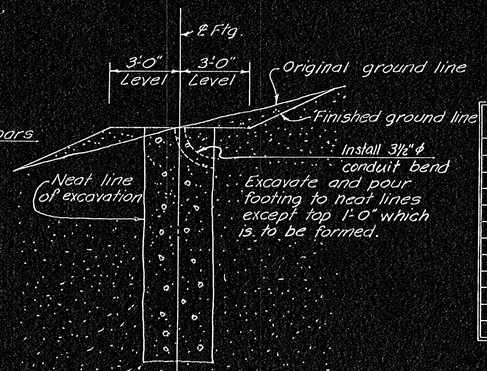


SECTION A-A

Dimension Pole Length	B.C.	S	P	Bolts	Dia.	N	Cl.	Spiral dia.
80'	1'-10"	1'-11"	3 3/4"	4-1 3/4"ϕ x 7'-6"	3'-0"	6	5 1/2"	2'-1"
90'	1'-11 1/2"	2'-0 1/2"	3 3/4"	4-1 3/4"ϕ x 7'-6"	3'-0"	6	5"	2'-2"
100'	2'-1 1/2"	2'-2 1/2"	4"	4-2"ϕ x 7'-6"	3'-0"	9	3 1/2"	2'-5"
110'	2'-0 1/2"	2'-5 1/2"	3 1/2"	6-1 3/4"ϕ x 7'-6"	3'-0"	11	4 1/2"	2'-3"
120'	2'-3 1/2"	2'-9"	3 1/2"	6-2"ϕ x 7'-6"	3'-6"	11	6"	2'-6"
130'	2'-6 3/4"	2'-11 1/2"	3 3/4"	6-2"ϕ x 7'-6"	3'-6"	13	4"	2'-10"
140'	2'-6 3/4"	3'-0 1/2"	2 1/4"	6-2 1/4"ϕ x 8'-0"	3'-6"	15	4"	2'-10"
150'	2'-6 3/4"	3'-0 1/2"	4 1/2"	6-2 1/4"ϕ x 8'-0"	3'-6"	17	4"	2'-10"



ELEVATION
(Showing reinf.)



SECTION IN PLACE

Location	Pole Length	Depth	L
Sta. 26+00 * Kellogg Ave.	110'	10'-0"	9'-6"
Sta. 32+00 * Kellogg Ave.	110'	18'-0"	17'-6"
Sta. 73+00 * Kellogg Ave.	110'	10'-0"	9'-6"
* 3' Rt. ℄			

Note: Contractor shall make certain that the anchor bolts are properly spaced to assure correct fit when the towers are erected.

GENERAL NOTES

LOADING: A uniform load is determined which will produce yield stress at the base of the pole, this load is increased by 25% and the resulting load is considered the ultimate load. The ultimate load is used to size the footing, 42% of ultimate load is used to determine reinforcing.

UNIT STRESSES: Fy (pole) = 55,000 p.s.i.; Fy (anchor bolts) = 55,000 psi.; Fy (reinf.) = 40,000 p.s.i.; f'c = 3,000 p.s.i. Footing is reinforced for pure bending at top by ACI 318-63. Footing size is determined by Research Report 105-3, Design of Footings for Minor Service Structures, Texas Transportation Institute.

CONCRETE: Use Class A Concrete throughout. Form top twelve inches of footing. Concrete shall be rodded and vibrated.

REINFORCING: All dimensions relative to reinforcing steel are to center line of bar unless otherwise noted.

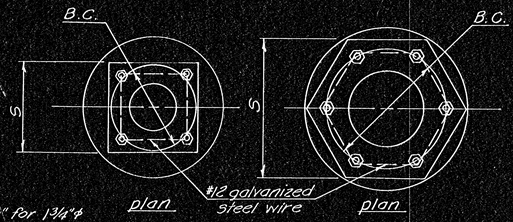
ANCHOR BOLTS: Anchor bolts shall conform to subsection 1006.13 (Type II) of the K.S.H.C. Standard Specifications. 1973 Edition.

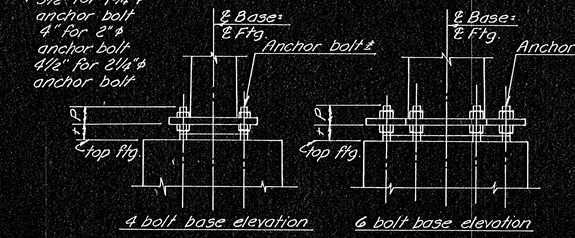
EXCAVATION: Footing holes shall be carefully drilled to the required size at the proper location. All excavation shall be disposed of within the right-of-way in such a manner as to blend uniformly with the existing surface and as approved by the Engineer. Immediately before placing any concrete the contractor shall remove all loose and uncompacted material from the bottom of the hole.

BACKFILL: All soil used for the backfilling of footing excavation shall be thoroughly compacted as it is placed. The backfill shall be brought up to the finished ground line adjacent to footings.

Design Note: The design of these footings is based on the use of Union Metal Drawing 72070-E56 Towers and 10 Holophane No. 1100 Lamps.

PAYMENT: All material and labor nessary to complete the light tower footings shall be included in the per each bid item, "Light Tower Footing."

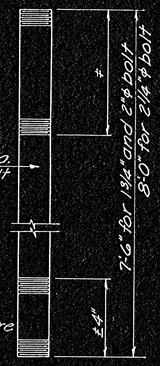




4 bolt base elevation

6 bolt base elevation

TOWER ATTACHMENT DETAILS
(Towers under separate contract)



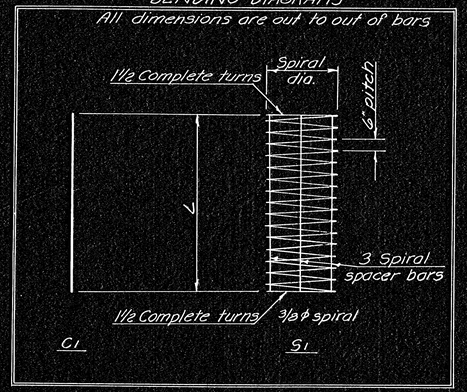
‡ Install one nut and washer on bottom of bolt before placing concrete.

ANCHOR BOLT DETAILS

Note: Contractor shall supply two hex nuts and two washers at the top of each bolt.

BENDING DIAGRAMS

All dimensions are out to out of bars



NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1	1-16-73	Rev. to conform to 1973 Std. Specs	L.E.S.	E.E.W.

STATE HIGHWAY COMMISSION OF KANSAS

LIGHTING TOWERS

FOOTING DETAILS

SHEET NO. 2 OF 2	SCALE Varies	APP'D	
DESIGNED L.E.S.	DETAILED L.E.S.	QUANTITIES	TRACED
DESIGN CK. D.R.S.	DETAIL CK. D.R.S.	QUAN. CK.	TRACE CK.

ORIGINAL FROM DR. NO. PROJECT 35W-87-135W-1(33)46 SEDGWICK COUNTY

DESIGN	I.B. F. McCollum	DATE 10-70	CHECK K.F. Hurst DATE 10-70
DETAIL	I.B. F. McCollum	DATE 10-70	K.E. Hurst DATE 10-70
QUANTITIES		DATE	DATE
TRACING	R.B. Alexander	DATE 9-72	L.E. Shanks DATE 9-72

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64-100 J