

Index 17725 Concrete Poles (Rev. 06/17)

Design Criteria

AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals (LRFDLTS-1); Structures Manual Volume 3, FDOT Modifications to LRFDLTS-1; ***Structures Manual*** Introduction, I.6 References

Design Assumptions and Limitations

The maximum span length for the Concrete Poles with Signal Cable is 250 feet. See [PPM](#), Volume 1, Chapter 29 for more information.

See notes on the ***Design Standard*** and ***Structures Manual*** Volume 3.

The following computer-based design programs available for use on the [Structures Design Office Website](#):

- University of Florida Bridge Software Institute ATLAS Program v7 or higher.

For Pole Types P-III through P-VIII, design poles within the following limits:

30 ft. \leq Length (L) \leq 65 ft.

Pole Height (H) \leq 50 ft.

Foundation Depth (D) \geq 7 ft.

Determine maximum loads to be placed on poles, and select the required pole type meeting the requirements of Table 17725-I shown below.

Table 17725-1

Factored Flexural Resistance $M_r = \phi M_n^*$ at Finished Grade

H (feet)	Type of Strain Pole				
	P-IV (kip-ft)	P-V (kip-ft)	P-VI (kip-ft)	P-VII (kip-ft)	P-VIII (kip-ft)
20	84	150	184	263	350
22	88	155	190	271	359
24	92	161	195	279	368
26	96	166	201	286	378
28	100	172	207	294	387
30	104	178	212	301	397
32	109	183	218	309	406
34	113	189	224	316	415
36	117	195	229	324	425
38	121	200	235	332	434
40	125	206	241	339	443
42	130	212	246	347	453
44	134	217	252	354	462
46	138	223	257	362	471
48	142	228	263	369	481
50	146	234	269	377	490

* $M_r \geq M_u$

Plan Content Requirements

Complete the "Strain Pole Schedule" provided with the FDOT CAD Bar Menu and include in the Roadway Plans.

See [PPM](#), Volume 2, Chapter 24.

Payment

Item number	Item Description	Unit Measure
641-2-AB	Prestressed Concrete Poles	EA

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