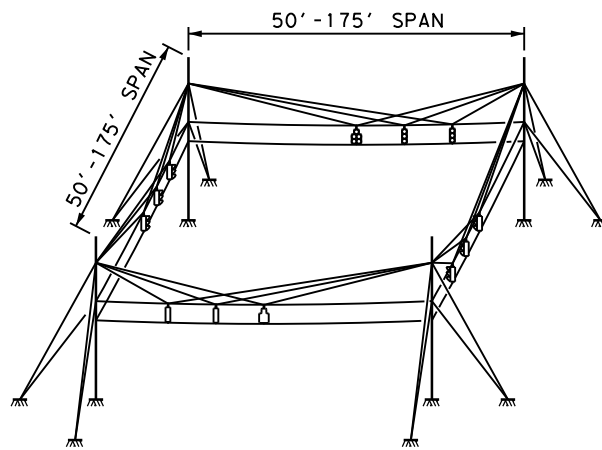
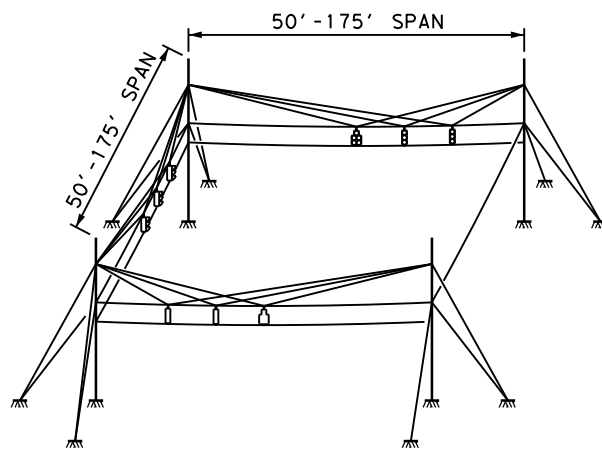


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LEVELS DISPLAYED	
1	
2	



RECTANGULAR BOX CONFIGURATION



C-BOX CONFIGURATION

SIGNAL HEAD TYPE	'Y'
HORIZONTAL	1'-8" ±
VERTICAL	4'-0" ±

DESIGN CRITERIA:

1. SIGNAL HEAD DESIGN DEAD LOADS AND WIND AREAS SHOWN IN TABLE BELOW. VALUES INCLUDE BACKPLATES.
2. DESIGN IS BASED ON ONE 5 OR 4-SECTION HEAD AND ONE OR MORE ADDITIONAL 3-SECTION HEAD(S).
3. WEIGHT OF INDIVIDUAL 3/8" CABLE IS 0.273 LB/FT AND 3/16" CABLE IS 0.080 LB/FT.
4. WEIGHT OF SWAY CABLE IS ASSUMED TO BE 0.65 LB/FT, WHICH INCLUDES AN ALLOWANCE FOR CONDUCTOR CABLE AND MISCELLANEOUS HARDWARE.
5. DESIGN WIND SPEED EQUALS 80 MPH PLUS A 1.3 GUST FACTOR (CURRENT AASHTO SPECIFICATIONS FOR SIGNS, LUMINAIRES AND TRAFFIC SIGNALS USE EQUIVALENT 90 MPH WITH A 1.14 GUST FACTOR).
6. IMPORTANCE FACTOR = 0.71 (10-YEAR DESIGN LIFE)
7. DESIGN WIND PRESSURE ON CABLES ARE ASSUMED AS 1.0 LB/FT.
8. DESIGN CONTAINS ALLOWANCE FOR A MAXIMUM 30 SQ. FT. OF 0.100 IN. THICK ALUMINUM SIGNS PER SPAN.
9. DESIGN CONTAINS ALLOWANCE FOR A 60 LB. LUMINAIRE HAVING AN EFFECTIVE PROJECTED AREA (ACTUAL AREA TIMES DRAG COEFFICIENT) OF 1.6 SQ. FT.
10. DESIGN ICE LOAD OF 3 PSF IS CONSIDERED AROUND SURFACES OF SUPPORTS, WIRES, SIGNALS AND ONE FACE OF SIGN PANELS ONLY.

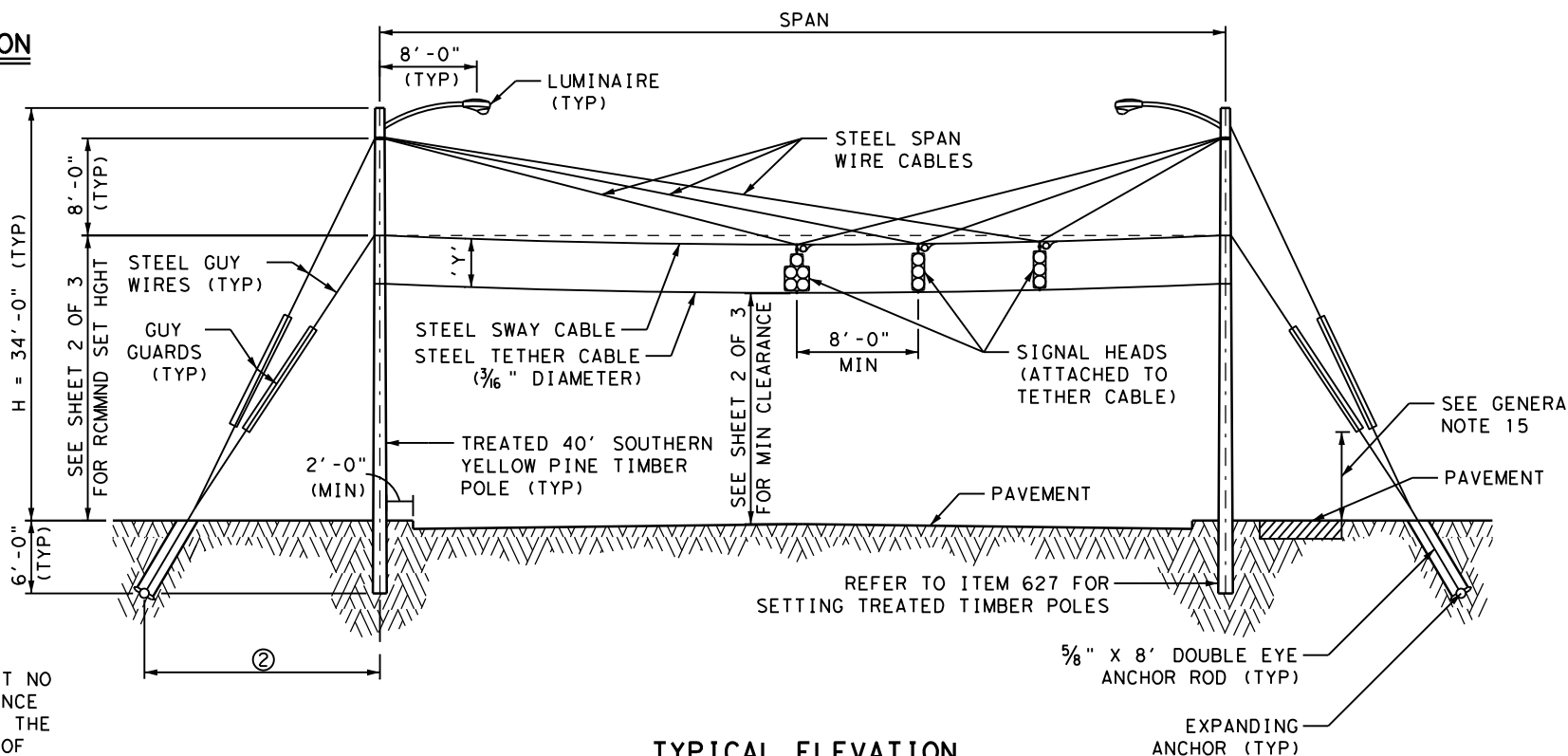
SIGNAL HEAD DESIGN VALUES		
SIGNAL HEAD TYPE	WT. PER HEAD	WIND AREA ♦
5-SECTION, 12" LENS	125 LBS	9.6 SQ. FT.
4-SECTION, 12" LENS	100 LBS	7.6 SQ. FT.
3-SECTION, 12" LENS	75 LBS	5.6 SQ. FT.

♦ EFFECTIVE PROJECTED DESIGN WIND AREA (ACTUAL AREA TIMES DRAG COEFFICIENT)

MATERIALS	
TIMBER POLE	ANSI CLASS 2 TREATED TIMBER POLE
STEEL CABLE	ASTM A475, 7 WIRE, UTILITIES GRADE, GALVANIZED, 3/8" DIAMETER EXCEPT AS NOTED
SIGNAL HEADS	POLYCARBONATE HOUSING & LENS, LED LAMP WITH 12" LENS

SHIPPING PARTS LIST		
DESCRIPTION	QUANTITY	UNIT
40' TIMBER POLE ①		EA
3/8" STEEL CABLE		FT
3/16" STEEL CABLE		FT
8' LUMINAIRE ARM		EA

① SHIP EACH POLE WITH THE FOLLOWING: A BARE #6 AWG (AMERICAN WIRE GAUGE) COPPER ELECTRICAL CONDUCTOR FROM THE TOP OF THE POLE TO THE BUTT WRAP OR COPPER BUTT PLATE, PROTECTIVE ELECTRICAL CONDUCTOR TO A HEIGHT OF 8 FT. ABOVE FINISHED GRADE, BRANDING OF SUPPLIER, PLANT, SPECIES, PRESERVATIVE CODE & CLASS LENGTH 2 CLAMP-ON SIMPLEX. FOR A PROJECT REQUIRING 10 POLES OR LESS, THE CONTRACTOR MAY PURCHASE POLES LOCALLY IF SOURCE AND TREATMENT ARE DOCUMENTED.



TYPICAL ELEVATION
(VERTICAL SIGNALS SHOWN, HORIZONTAL SIGNALS SIMILAR)

② LOCATE THE EMBEDDED TIP OF GUY ANCHOR A DISTANCE FROM PILE BUTT NO GREATER THAN THE VERTICAL DISTANCE MEASURED ALONG THE POLE BETWEEN THE GROUND LINE AND THE ATTACHMENT OF LOWEST GUY AND NEVER ANY LESS THAN 1/3 OF THAT DISTANCE.


GENERAL NOTES:

1. DESIGN CONFORMS TO AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 5TH EDITION.
2. THIS STANDARD IS ONLY APPLICABLE FOR RECTANGULAR OR C-BOX CONFIGURATIONS (AS SHOWN) WITH SPAN LENGTHS RANGING FROM 50' TO 175' IN EITHER DIRECTION.
3. FOR CONSTRUCTION REQUIREMENTS AND SEQUENCING, SEE SHEET 2 OF 3.
4. FOR ELECTRICAL AND MISCELLANEOUS DETAILS, SEE SHEET 3 OF 3.
5. SEE LAYOUT FOR LOCATIONS OF SIGNALS, SIGNS AND LUMINAIRES.
6. MINIMUM ALLOWABLE SOIL STRENGTH IS 20 BLOWS/12" PER THE TEXAS CONE PENETRATION TEST (TCP).
7. SEE SHEET 3 OF 3 FOR LUMINAIRE ARM AND CONNECTION DETAILS.
8. TEMPORARY TRAFFIC SIGNALS SHALL BE PAID FOR AND IN ACCORDANCE WITH ITEM 681.
9. ZINC-COATED STEEL WIRE STRAND SHALL BE IN ACCORDANCE ITEM 625.
10. TREATED TIMBER POLES SHALL BE IN ACCORDANCE WITH ITEM 627. FOR A PROJECT REQUIRING 10 POLES OR LESS, CONTRACTOR MAY PURCHASE LOCAL POLES IF SOURCE AND TREATMENT ARE DOCUMENTED.
11. VEHICLE AND PEDESTRIAN SIGNAL HEADS SHALL BE IN ACCORDANCE WITH ITEM 682.
12. TRAFFIC SIGNAL CABLES SHALL BE IN ACCORDANCE WITH ITEM 684.
13. CONTRACTOR SHALL NOT INSTALL ANY SPAN WIRE, SWAY, OR GUY WIRE CABLES AROUND EXISTING AERIAL UTILITIES. CLEARANCE SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE NATIONAL ELECTRIC CODE (NEC).
14. IF PEDESTRIAN ACCOMMODATIONS ARE TO BE INSTALLED, PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS SHOULD BE INSTALLED ON SEPARATE PEDESTAL POLES.
15. A MINIMUM 8' VERTICAL CLEARANCE SHALL BE PROVIDED BETWEEN SIDEWALK AND GUY WIRE. THE CLOSEST GUY WIRE TO THE SIDEWALK SHALL HAVE YELLOW PLASTIC TUBING.
16. DRILLED HOLE DIAMETER SHALL BE 18" MINIMUM OR A MINIMUM HOLE SIZE EQUAL TO THE POLE BUTT DIAMETER PLUS 8".
17. FILL MATERIAL SHALL BE TAMPED IN 6" LIFTS. A GRADE 7 OR 8 CONCRETE AGGREGATE OR DRILL CUTTINGS (IF GRANULAR AND NOT LARGER THAN 3/4") MAY BE USED AS FILL.

EXPANDING ANCHOR NOTES:

1. HOLE SHALL BE DRILLED AT AN ANGLE INLINE WITH THE GUY (45° TO 60° TYPICAL).
2. OTHER ANCHOR TYPES (DISC OR SCREW TYPE) MAY BE USED WITH ENGINEER'S APPROVAL.
3. HOLE SIZE SHALL BE SLIGHTLY LARGER THAN THE UNEXPANDED ANCHOR, PER MANUFACTURER'S SPECIFICATIONS.
4. ALL ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL BLADES SHALL BE WEDGED INTO UNDISTURBED SOIL.
5. FOLLOWING INSTALLATION OF THE ANCHOR AND ANCHOR ROD, BACKFILL HOLE AND THOROUGHLY TAMP.

SHEET 1 OF 3


TRAFFIC SIGNAL SUPPORT STRUCTURES
TIMBER POLE ASSEMBLIES
 (80 MPH WIND ZONE)
TP-80(1)-12 (FTW)

FILE# TP80.DGN	DN# JDS	CK# RSW	DW# JDS	CK# RSW
© TxDOT SEPTEMBER 2012	CONT	SECT	JOB	HIGHWAY
REVISIONS		DIST	COUNTY	SHEET NO.