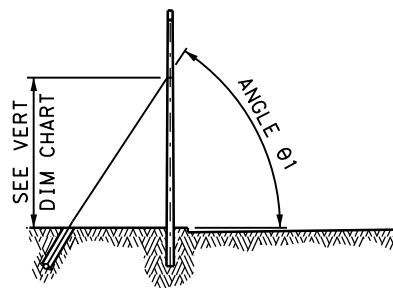
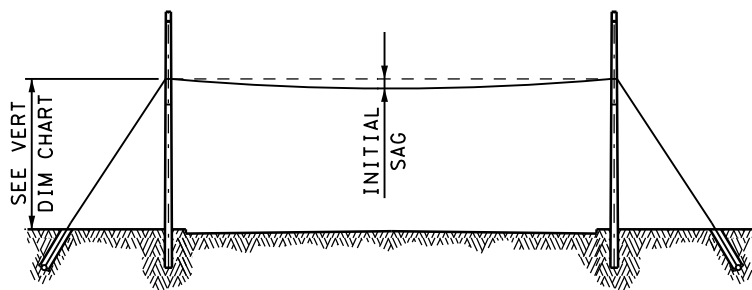


CONSTRUCTION REQUIREMENTS AND SEQUENCING



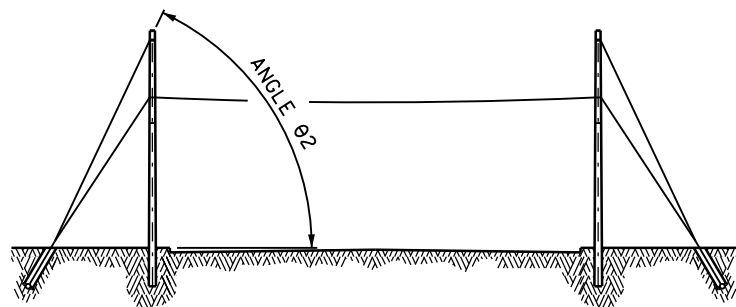
STEP 1 - SET POLE & STRESS LOWER GUY WIRE

- STEP 1 NOTES:
1. CONSTRUCTION MAY PROCEED IN ONLY ONE DIRECTION AT A TIME.
 2. SET THE POLES PLUMB AND THE EXPANDING ANCHORS PER MANUFACTURER'S RECOMMENDATIONS.
 3. BACKFILL HOLES FOR ANCHOR, ANCHOR ROD & POLES PER ITEM 627.
 4. STRESS LOWER GUY WIRE TO:
INITIAL TENSION = $500 \text{ LB} / \cos \theta 1$ ②



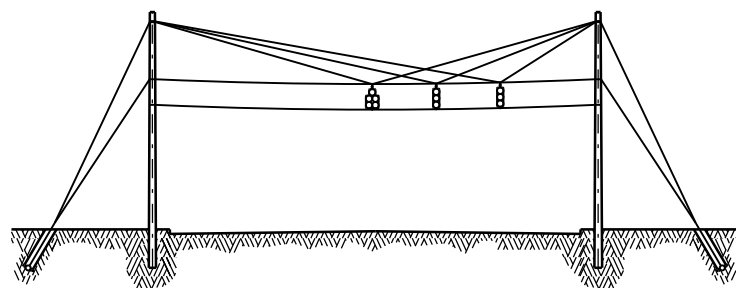
STEP 2 - STRESS SWAY CABLE

- STEP 2 NOTES:
1. INSTALL AND STRESS THE STEEL SWAY CABLE PER THE INITIAL SWAY CABLE PROFILE CHART.
 2. INITIAL SAG IS THE MAXIMUM DISTANCE BETWEEN THE SWAY CABLE AND A STRAIGHT LINE BETWEEN THE SUPPORT POINTS ON THE TIMBER POLES.
 3. INITIAL SAG REQUIREMENTS DO NOT ACCOUNT FOR WEIGHT OF CONDUCTOR CABLE. CONDUCTOR CABLE IS TO BE ATTACHED IN STEP 4.
 4. THIS IS THE FINAL STEP FOR THE OPEN END (SPAN WITHOUT SIGNALS) IN THE C-BOX CONFIGURATION.



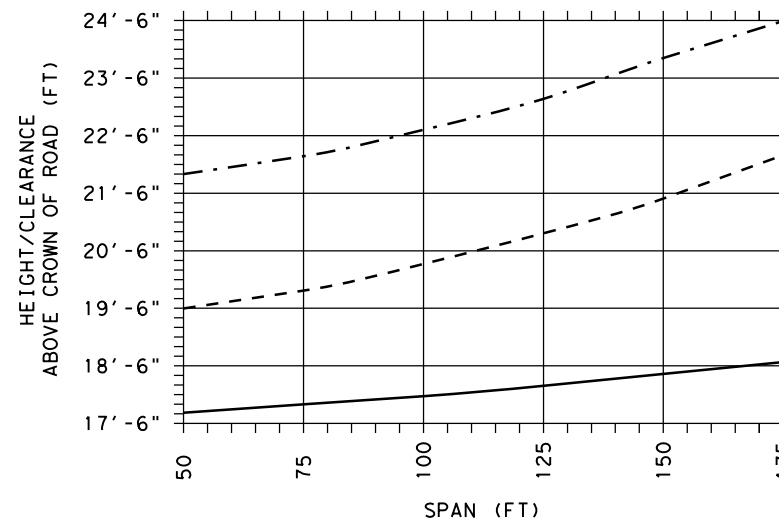
STEP 3 - STRESS UPPER GUY WIRE

- STEP 3 NOTES:
1. INSTALL THE UPPER STEEL GUY WIRE. CONNECT TO ANCHOR ROD FROM STEP 1.
 2. DETERMINE HORIZONTAL COMPONENT OF STRESSING FORCE BASED ON THE SPAN LENGTH AND THE NUMBER OF SIGNAL HEADS FROM UPPER GUY WIRE INITIAL TENSION CHART.
 3. STRESS UPPER GUY WIRE TO:
INITIAL TENSION = $\text{HORIZ COMPONENT} / \cos \theta 2$ ③



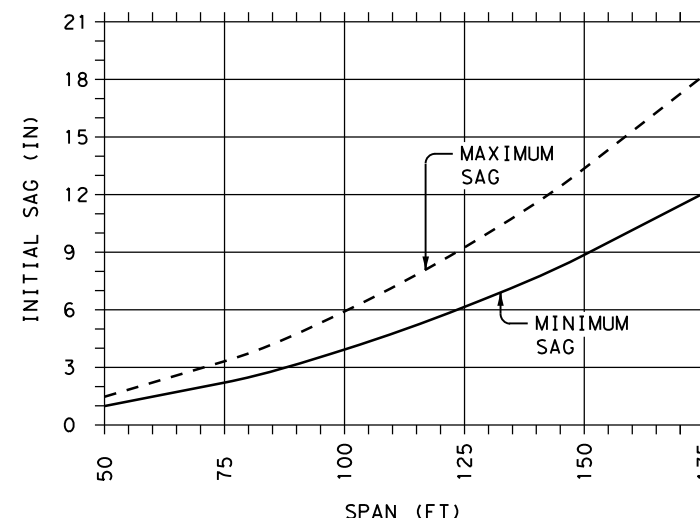
STEP 4 - INSTALL SIGNAL HEADS & ATTACHMENTS

- STEP 4 NOTES:
1. ATTACH SIGNAL HEADS TO STEEL SWAY CABLE.
 2. INSTALL STEEL SPAN WIRE CABLES AND SIGNALS. STRESS SPAN WIRE CABLES UNTIL THE SIGNALS CAN BE ATTACHED TO SWAY CABLE AND NOT CAUSE DEFLECTION IN THE SWAY CABLE FROM THE WEIGHT OF THE SIGNAL HEADS.
 3. FOLLOWING THE STRESSING OF ALL SPAN WIRE CABLES, CONSTRUCTION MAY PROCEED IN THE PERPENDICULAR DIRECTION OR PROCEED WITH THE INSTALLATION OF THE TETHER CABLE, CONDUCTOR CABLE AND ALL OTHER ATTACHMENTS.
 4. VERIFY MINIMUM FINAL CLEARANCE AFTER ALL ATTACHMENTS.



VERTICAL DIMENSIONS

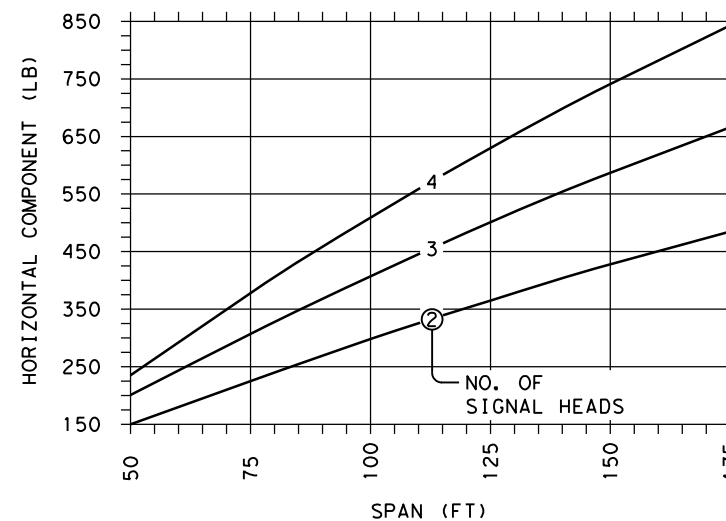
- - - - RECOMMENDED HEIGHT OF SWAY CABLE SUPPORT W/ VERTICAL SIGNALS ①
 - - - - RECOMMENDED HEIGHT OF SWAY CABLE SUPPORT W/ HORIZONTAL SIGNALS ①
 - MINIMUM FINAL CLEARANCE AFTER ALL ATTACHMENTS ②
- ① RECOMMENDED HEIGHT DOES NOT ACCOUNT FOR INTERSECTION OR SITE GRADING AND ADJUSTMENTS MAY BE NECESSARY. CONTRACTOR MUST VERIFY THAT THE MINIMUM FINAL CLEARANCE BETWEEN THE PAVEMENT AND SIGNAL HEAD OR TETHER CABLE IS SATISFIED.
- ② FINAL CLEARANCE ALLOWS DEFLECTION DUE TO ICE LOADING.



SWAY CABLE PROFILE

- - - - TENSION = 700 LB ③
 - TENSION = 1,050 LB
- ③ TENSIONS SHOWN ARE CABLE FORCES AND DO NOT ACCOUNT FOR FRICTION IN EQUIPMENT DURING STRESSING OPERATIONS.

- NOTES:
1. SEE SHEET 1 OF 3 FOR GENERAL NOTES.
 2. MINIMUM ALLOWABLE SOIL STRENGTH IS 20 BLOWS/12" PER THE TEXAS CONE PENETRATION TEST (TCP).



UPPER GUY WIRE INITIAL TENSION

SHEET 2 OF 3

Texas Department of Transportation
Fort Worth District

**TRAFFIC SIGNAL
SUPPORT STRUCTURES
TIMBER POLE ASSEMBLIES**
(80 MPH WIND ZONE)
TP-80(2)-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.			

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LEVELS DISPLAYED	
1	
2	